Quest

Quest® Stat® 6.3.0
User Guide

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Legend

CAUTION: A CAUTION icon indicates potential damage to hardware or loss of data if instructions are not followed.

IMPORTANT NOTE, **NOTE**, **TIP**, **MOBILE**, or **VIDEO:** An information icon indicates supporting information.

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Contents

Introduction to Stat 6
Stat Solutions 6
Version Control 6
Change Management Support 6
Project Management 7
Information Management 8
Stat Security 8

Connecting to Stat 10
Logging in to Stat 10
Login Errors 11
Disconnecting from Stat 12
The Application Change Management Window 12
Menus 12
Navigating the Menus 16
The Stat Toolbar 17

Change/Service Requests 18
Opening a CSR 18
New CSRs 18
Opening an Existing CSR 19
The Record Lock Warning 19
The CSR Window 19
Details Tab 20
Tasks Tab 23
Attachments Tab 24
Logs Tab 24
Environment Refresh Tab 25
Patches Tab 26
History Tab 26
Issues Tab 26
Workflow Tab 27
Resolution Tab 27
Advanced Editing 28
Creating CSR Templates 28
Environment Refresh Events 29
Documenting Environment Refresh Events 29
Canceling Environment Refresh Records 31
State-Based and Activity-Based Reports 31
Patches - PeopleSoft and Generic Applications 32
CSR Workflows 33
Workflow Rules 33
Transferring Statuses 36
Approving Status Transfers 37

Emailing a CSR 38
CSR Security 39

Stat Consoles 40
The Support Console 40
The Console Buttons 41
CSR List 42
Project List 45
User Object List 45
User Approval List 45
User Task List 46
Customizing the Support Console 46
Migration Console 48
Main Console Window 48
Migration Details Window 50
Patch Application History 51

Tasks and Time Entries 53
Relationship between Activities and Tasks 53
The Tasks Tab 53
The Task Fields 54
Auto Tasks 55
User-defined Tasks 55
Posting Time to Tasks 56

Stat Projects 59
Opening Projects 59
The Project Window 59
The General Project Information Region 60
The Project Detail Information Region 60
The CSRs Tab 61
The Task/Activity Tab 62
The Issues Tab 63
Understanding Project Security 64

Search Engines 65
The Search CSR Engine 65
The CSR Search Wizard 66
The Customer Search Engine 67
The Search PeopleSoft Customer Engine 68

Reports and Graphs 69
About Stat Reports 69
Running Reports 70
Selecting Reports 70
Specifying Report Criteria 70
Running Reports through Stat Web 74
Scheduling Reports 75

Personal Rules 78
Defining Personal Rules 78
Adding a New Rule 78
Defining Rule Criteria 80
Defining Message Content 81
Viewing Rule History 82
Viewing the Status of Stat Central Agents 82
Viewing the Status of Oracle Agents (Oracle Apps Only) 83

Object Tools and Wizards 84
CSR Purge Wizard 84
Exporting and Purging CSRs 84
Importing CSRs 85
Impact Wizard 86
Running the Impact Wizard from a CSR 87
Running the Impact Wizard from the Object Management Menu 88
Object History Wizard 88
Undocumented Object Wizard 90
Prime the Stat Repository 90
Audit the System 91
Identify Schema Changes in an Environment 91
Assist with PeopleSoft Compare Reports 91
The Wizard and Version Control 91
Migration History Wizard 93
Object Archive Search Wizard 95
Rapid Recovery Window 96
Release Recovery Window 97
Archive Set Synchronization Wizard 97
Archive Set Purge Wizard 98
Undocumented Patch Tool 99
Object Comparison Tools 100
Comparing Different Object Classes 101
The Object Compare Wizard 101
Viewing and Merging Object Definitions 103

Change Management for PeopleSoft 109
Object Management (PeopleSoft) 109
Setting Up Your PeopleSoft Connections 109
Classification of Supported Objects (PeopleSoft) 110
Object Locking and Reservations (PeopleSoft) 112
Associating Objects with CSRs (PeopleSoft) 115
Comparing Objects (PeopleSoft) 127
Viewing your Object Environment (PeopleSoft) 128
CSR Object Documentation (PeopleSoft) 130
Object Archives (PeopleSoft) 132
About Archive Sets 132
Creating Archive Sets (PeopleSoft) 135

Object Migrations (PeopleSoft) 142
Migration Overview 142
Running a Migration (PeopleSoft) 144
Migration Approvals and Mass Migrations (PeopleSoft) 151
Documenting Migrations (PeopleSoft) 157

Change Management for Oracle Applications 160
Object Management (Oracle Applications) 160
Classification of Supported Objects 160
Object Locking and Reservations (Oracle Applications) 162
Associating Objects with CSRs (Oracle Applications) 164
Comparing Objects (Oracle Applications) 175
Viewing your Object Environment (Oracle Applications) 176
CSR Object Documentation (Oracle Applications) 177
Patch Management 179
The Oracle Apps Management Console 179
Merging Patches 182
Comparing Patches 183
Setting Up Maintenance Steps 184
Associating Patches with CSRs 187
Approving Patches 187
Scheduling Patch Applications and Impact Analysis 189
Viewing Process Request Results 194
Object Archives (Oracle Applications) 198
About Archive Sets 198
Creating Archive Sets (Oracle Applications) 201
Object Migrations (Oracle Applications) 206
Migration Overview 206
Running a Migration (Oracle Applications) 209
Migration Approvals and Mass Migrations (Oracle Applications) 213
Documenting Migrations and Process Requests (Oracle Applications) 219

Change Management for Generic Applications 221
Object Management (Generic Applications) 221
Classification of Supported Objects 221
Object Locking and Reservations (Generic Applications) 223
Associating Objects with CSRs (Generic Applications) 224
Comparing Objects (Generic Applications) 234
Viewing your Object Environment (Generic Applications) 234
CSR Object Documentation (Generic Applications) 236
Object Archives (Generic Applications) 238
About Archive Sets 238
Creating Archive Sets (Generic Applications) 241
Object Migrations (Generic Applications) 245
Migration Overview 245
Running a Migration (Generic Applications) 248
Migration Approvals and Mass Migrations (Generic Applications) 251
Documenting Migrations (Generic Applications) 257

Appendix: Troubleshooting Chart 259
Stat Database 259
Login/Connection 259
CSRs 260
Stat Web 261
Archiving and Migrating 261
Printing 261

Appendix: Migration Options 262

Appendix: User-Specific Parameters 263

Appendix: Supported PeopleSoft Proprietary Objects 264

Appendix: Stat Reports 268
Approval Reports 268
Compliance Reports 269
CSR Reports 269
Environment Refresh Reports 271
Graph Reports 271
Issue Tracking Reports 271
Maintenance - General Reports 272
Maintenance - Agent Reports 273
Maintenance - Security Settings Reports 273
Maintenance - Service Domain-Specific Reports 274
Migrations Reports 275
Migrations-Pre 5.7.0 Reports 276
Objects Reports 277
Patch Support Reports 278
PeopleSoft Options Reports 278
Statistics Reports 278
Table Reports 279
Table_Dump Reports 279
Task Reports 280

About us 281
We are more than just a name 281
Our brand, our vision. Together. 281
Contacting Quest 281
Technical support resources 281

Glossary 282

Index 1

1

Introduction to Stat

- Stat Solutions
- Stat Security

Stat Solutions

Quest® Stat® is a multi-purpose application, capable of automating many complex tasks. Whether you take advantage of its sophisticated change management and version control functionality or use it simply as a help desk tool, Stat provides a variety of technological benefits and advantages.

Stat delivers a complete solution for the management of PeopleSoft®, Oracle® Applications, and other file-based environments. One of the greatest risks developers face is the loss of customizations during upgrades and development. Lost customizations can result in costly re-work and even enterprise downtimes. The control, coordination, and documentation tools in Stat virtually eliminate the risk of overwriting customized objects. Stat is the only application that provides in a single package version control, change control, project management, and issue tracking functionality.

Version Control

With Quest® Stat®, all versions of your objects are archived and stored indefinitely. This allows development to proceed without the risk of overwrites and lost changes.

You version objects by adding them to a work packet called an archive set. Before development begins, Stat automatically takes a snapshot or baseline archive set. During development, developers can make as many additional archive sets (containing some or all of the objects) as needed. At any time, deleted or modified objects can be recovered or rolled-back to a prior version without performing a database restore. Using the Stat Rapid Recovery Wizard, objects can be moved, individually or in groups, from Stat to any supported database or file directory. Recovery is even possible if the object no longer exists.

Change Management Support

Quest® Stat® provides comprehensive change management support for both PeopleSoft®, Oracle® Applications, and file-based application environments. With Stat, the development, migration and documentation cycle of objects (including PeopleSoft proprietary objects, business objects, and file objects) is never broken. Audit trails provide increased accountability during and after the initial implementation. As developers document the modifications they make to objects, these changes are automatically user, date, and time stamped.

The following sections provide a brief overview of the change management capabilities featured in Stat. For more detailed explanations and instructions, see the change management chapters.

Object Locking

Quest® Stat® eliminates development conflicts by creating isolated work environments and managing access to objects. It also accelerates the development cycle by coordinating object development across all environments with its exclusive locking/reservation capabilities.

Through Stat, objects are secured at all times. In order to make changes to objects, a developer must first obtain a lock through Stat. Once an object is locked and assigned to a developer in Stat, that developer has sole rights to work on the object throughout its native computing environment.

Developers have the added advantage of receiving reservations for objects locked by other Stat users. When the objects become available, the next developer with a reservation is automatically notified and the reservation is then converted to a lock.

Migration Management

Quest® Stat® provides a number of change management utilities that greatly facilitate object migrations to and from PeopleSoft, Oracle, and generic application environments. When configuring Stat, system administrators define migration paths for specific purposes; for example, a standard path for updates and fixes, an emergency short-cut path for quick fixes, or a path designated for enhancements.

In Stat, migrating file objects entails moving them from the source file locations of one environment to the source file locations of another environment, or to users' working directories. For PeopleSoft® proprietary objects, Stat first moves copies of the archived objects into a staging database, which serves as a temporary holding bin for objects. Stat then creates a PeopleSoft project, which contains references to the objects you just staged. At this point, depending on the configuration of the target database, Stat either logs on to PeopleSoft and completes the migration automatically, or you can complete the migration yourself by logging on to PeopleSoft and manually pushing the project into the target database.

In addition, Stat can also be set up to support auto-migrating archive sets to multiple environments distributed over a network. This is configured by system administrators who designate particular environments in a migration path as distribution environments and then associate them with lists of interrelated environments. This way, when you migrate an archive set to a distribution environment, Stat automatically migrates the archive set to all the other environments as well.

Impact Analysis

The Quest® Stat® Impact Analysis Wizard helps developers avoid costly rework and delays by identifying potential impacts on objects before changes are made. Once an object is associated with a Change/Service Request (CSR) the user can execute the wizard to do the following:

- Identify objects that may be impacted by a change to the locked/reserved object
- Generate a report listing the impacted objects
- Add some or all of the impacted objects to the CSR
- Search each database (independently) in a designated migration path

For more information, see Impact Wizard on page 86.

Project Management

Quest® Stat® projects let you manage business changes from one central location. By incorporating multiple Change/Service Requests (CSRs), activities, and tasks (the individual steps necessary to solve a problem or complete a request), a Stat project is an easy way to assemble and track a variety of activities for an enhancement or upgrade project. This is essential when a complex project encompasses multiple phases, requires a variety of resources, and crosses over service domains (logical business units).

Stat supports project management in a number of ways, including automated workflows, auto tasks, and Gantt charts.

For more information, see The Project Window on page 59.

Automated Workflow and Auto Tasks

With automated workflow and auto tasks, you can customize Quest® Stat® to enforce your own particular business practices. In Stat, workflow rules determine a set of conditions that must be met before a Change/Service Request (CSR) can move to the next stage in its development life cycle. Stat features an interactive workflow tool that allows you to define these rules graphically, which you then save as a template. Workflow templates apply to specific combinations of service domains and CSR Types.

You can also configure Stat to generate auto tasks triggered by system events. Auto tasks automatically assign work to users, sometimes multiple users. For example, once a change request is approved, Stat can be configured to generate auto tasks for development and testing teams. Auto tasks reduce the time it takes to complete repetitive tasks always associated with certain jobs.

All time spent on auto tasks (as well as user-defined tasks, which are manually added to CSRs) can be tracked together in a CSR or project. The status of all tasks can be viewed on-line at any time.

For more information on workflows and auto tasks, see Chapter 3, “Change/Service Requests,” and Chapter 5, “Tasks and Time Entries.”

Information Management

Quest® Stat® is an excellent tool for tracking, resolving and documenting reported issues. You can use Stat as your primary help desk application, or integrate it seamlessly with an existing enterprise help desk tool. After receiving an email request from a user, non-user, or another help desk application, Stat can open a Change/Service Request (CSR) and route it to the appropriate queue or individual based on business rules that you define. Throughout the life cycle of a request or issue, Stat serves as the knowledge repository for your documentation, which in turn assists other users who may experience similar problems in the future.

To further decrease the amount of non-productive time spent on a request or issue, you can configure Stat to automatically communicate with customers when their service requests are updated or resolved.

Stat Security

System administrators control Quest® Stat® security on two levels. At the first level, users are assigned to user classes. A user class is a grouping of rights that controls what members of that class can do and what fields and data they can see. User class rights control most of the functionality in Stat, including the ability to run various wizards, edit Change/Service Requests (CSRs), define new users, and open projects.

At the second level, users can be assigned to different user classes for each service domain. For every service domain, a user can have the security rights of one or more user classes or even be given no access whatsoever. This prevents users from performing actions or seeing data in an area of the business that does not pertain to them. The following table shows how a user’s security might be defined.

Service Domain	Access	Primary	User Class
Change Control	Yes	Yes	Developer
Information Systems	Yes	No	Staff
Information Systems	Yes	No	Projects
Human Resources	No	No	N/A

In this example, the user is assigned to the Developer user class in the Change Control service domain, which lets the user edit and create CSRs, lock objects, and create archive sets. However, the user cannot edit maintenance

tables, add new users, or migrate archive sets. In the Information Systems service domain, the user is assigned to two user classes: Staff and Projects. The Staff user class gives the user very limited access to the service domain; it only lets users create new CSRs and view existing CSRs. The Projects user class, however, lets users create and edit projects in the service domain. Finally, in the Human Resources service domain, the user has no access.

The indication of primary in the Change Control domain means that when Stat prompts the user to select a service domain (for example, when opening a new CSR), the default choice is Change Control.

For more detailed information, see the *Stat System Administration Guide*, Chapter 3, “Stat Security.”

2

Connecting to Stat

- Logging in to Stat
- The Application Change Management Window

Logging in to Stat

User access to Quest® Stat® is controlled by standard logon security and user class rights. To connect to the Stat Client, you must enter both a valid user ID and password and be granted the user class right to access the Stat Client (which by default is granted to all user classes but can be removed by system administrators). Once your logon information is authenticated, Stat grants you access and opens the Application Change Management window.

NOTE: Access to the Stat Web Client is similarly controlled by logon security and a separate user class right.

Each Stat user is assigned a unique user ID or user name. The ID, which is between 1 and 10 characters, identifies you in the system. The ID is not case sensitive. The system administrator creates all user IDs.

NOTE: For customer sites that maintain LDAP user directories, Stat supports authenticating login credentials based on a user's LDAP password rather than the default password defined directly in Stat. This allows sites that maintain a large number of user accounts to avoid maintaining an additional set of Stat-specific passwords. LDAP enabled users can login to both the Stat Windows® client and web client and have their accounts authenticated with their LDAP passwords. For more information on configuring LDAP support, see the *Stat System Administration Guide*, Chapter 4, "General Maintenance Tables."

The first time you log in to Stat, you are prompted to create a password. Your system administrator can configure Stat so that users are required to use any combination of upper or lower case, numeric, and non-alphanumeric characters in their passwords. However, the password must be between 6 and 20 characters in length. As with all passwords, you should not share your Stat password with anyone.

System administrators can also configure passwords to expire at certain intervals, requiring that they be changed from time to time. Your system administrator determines if this option is used. You can also change your password at any time by selecting **User Options | Passwords | Change My Password**.

TIP: You can also change your password in Stat Web.

Contact your system administrator if you forget your password.

For more information on Stat security settings, see the *Stat System Administration Guide*, Chapter 3, "Stat Security."

To log in to Stat:

1. Double-click the Stat icon on your desktop or select the **Stat** option on your Windows Start menu.
2. The Stat Login window appears. Your system administrator defines your databases. The default database is already displayed. To switch to another database, select one in the **Database** field. Enter your user name in the **Username** field.

3 If you had previously logged in and defined your password, or if your system administrator has configured Stat to use LDAP, enter your password in the **Password** field.

> **NOTE:** Your LDAP password will be the same one you use to log into Windows and will not be maintained in Stat.

4 If this is your first time logging in and you are not using LDAP, do the following to create your new Stat password:

   a Click **OK**.

   b In the Change Password window, enter the password you want in the **New Password** field.

   c Enter the same password in the **Verify Password** field and click **OK**.

   At this point, Stat attempts to connect you to the selected database. Once it has established the connection, Stat then validates your user ID. If validation is successful, Stat logs you in and opens its main window, Application Change Management. During the connection and validation process, Stat displays progress information in the **Connection Status** section of the Stat Login window.

After you have created your new password and successfully logged in for the first time, you can log in to Stat again at a later time simply by entering your user name and password in their respective fields and clicking **OK**.

Login Errors

For a variety of reasons, you may receive an error message while logging in to Quest® Stat®. The following are common, fairly simple errors. More involved, technical errors are discussed in detail in Appendix: Troubleshooting Chart on page 259 and in the *Stat System Administration Guide*, Chapter 3, “Stat Security.”

Login Error	Description
Unable to Connect to Database	If this error is encountered, make a note of any additional message information and report it to the system administrator. This may indicate that the database is not available.
User ID Is Not Valid	The user ID you entered is not valid in the database. Check your entry for accuracy and retry. If the problem persists, contact your system administrator.
Password Is Not Valid	The password you entered does not match the password for your user ID in the database. Check your entry for accuracy and retry. If the problem persists, contact your system administrator.
Password Has Expired	If you encounter this message, you must change your password or the application will terminate. This message is encountered under the following circumstances: • Your system is configured to deactivate user passwords at certain time intervals and it is time to change your password • This is the first time you are logging in to Stat • Your password has been reset by a system administrator
Intruder Detected	If you enter the incorrect password 6 times in a single login attempt, Stat suspects that you are attempting to break into the system, and locks your account and does not allow any further login attempts. Your password must be reset by a system administrator before you can login again.

Login Error	Description
Connection Privileges Revoked Due to an Intruder Alert	Your ID is disabled because someone attempted to log in with your ID and incorrect password at least 6 times. Your password must be reset by a system administrator before you can login again.
LDAP Server Login Messages	If your username or password is incorrect, you will receive two messages. The first comes directly from the LDAP server and will help your security administrator in troubleshooting. The second is more user friendly.

Disconnecting from Stat

System administrators have the ability to disconnect users from the Quest® Stat® database. Whenever you are disconnected, either by a system administrator or due to an issue encountered on the network, Stat displays the Connection Manager window, alerting you that you have been disconnected from Stat and that you must exit the application. Any work that has not been saved at the time you were disconnected will be lost.

The Application Change Management Window

Once you have successfully logged in, Quest® Stat® opens its main window, Application Change Management, and activates the Support Console for the current user.

The status bar at the bottom of the window shows information about the current state of the application, such as Ready or Retrieving data.

For more information on the Stat Support Console, see The Support Console on page 40.

Menus

Depending on the service domain and your assigned user class, you may not have access to certain menu options. The following tables provide a brief description of the menu options available to users who have basic change control rights, such as editing and creating Change/Service Requests (CSRs), locking objects, and creating archive sets.

File Menu

The items on the File menu are used for navigation and performing actions such as opening, finding, closing, and saving Change/Service Requests (CSRs) and Projects. Other options available include **Toolbars** and **Print Configuration**.

Menu Option	Description
New CSR | From Template, From Blank	Opens a new Change/Service Request window. If from a template, Quest® Stat® populates certain fields in the window with data values that you predefined for the selected service domain. If from blank, it opens a blank CSR window.
New Project	Opens a new Project window where you can create a new project
Open CSR...	Opens the Search CSR Engine which you can use to locate a specific CSR by number, customer, open date, or department
Open Project...	Opens the Search Project Engine window where you can open any currently saved project

Menu Option	Description
Save	Saves any changes made to the Stat database
Save CSR as Template	Sets the values displayed in certain fields of the active CSR window as your personalized default values for new CSRS created in the same service domain
Close	Closes the active window
Recent |	Displays a submenu listing all CSRs that have been opened during the current session. To reopen a CSR, select it from the submenu.
Print	Prints the contents of the active window
Print Setup	Opens the Print Setup window
Mail CSR...	Opens the Send Mail window where you specify the types of CSR information you want to include in an email message sent by the Stat Central Agent. This option is only available when a CSR is open.
Toolbars	Opens the Toolbars window where you can change the position and other properties of the Stat toolbar
Log Off	Closes Stat without prompting you to save
Exit	Closes Stat after prompting you to save your work

Maintenance Menu

The Maintenance menu allows access to Quest® Stat® configuration tables. Your security level determines the items you can access on this menu. Please refer to the *Stat System Administration Guide* for a list of items.

Consoles Menu

Consoles in Quest® Stat® are work areas. There are three consoles which you can open via the Consoles menu.

Menu Option	Description
Support Console	Opens the Support Console window
Oracle Applications Console	Opens the Oracle Applications Management Console
Migration Console	Opens the Migration Console window

Reports Menu

Stat includes a variety of report templates. The Reports menu gives you access to Quest® Stat® reports.

Menu Option	Description
Report Wizard	Opens the Stat Report Wizard window displaying a list of all the available reports

Tools Menu

The Tools menu gives access to special Quest® Stat® tools and utilities, such as search wizards and administrative database tools.

Menu Option	Description
CSR Search Wizard	Opens the CSR Search Wizard which you can use to locate Change/Service Requests (CSRs) that meet specified criteria
Customer Search Utility	Opens the Search Customer Utility which you can use to locate customers in the Stat database

Menu Option	Description
Time Entry	Opens the Time Entry window where you can post time against tasks on a daily basis without having to access each task
Stat Central Agent Status	Opens the Stat Central Agent Status window which displays the current status of each agent (Responding or Not Responding) for each service domain
Stat Oracle Agent Status	Opens the Oracle® Agent Status window which displays the current status of each agent (Responding or Not Responding) for each node. This option is available only for customers licensed to use the Oracle E-Business change management module.
CSR Purge Wizard	Opens the CSR Purge Wizard which you can use to import, export, or purge CSRs.
Data Replicator	Opens the Stat Data Replicator which you can use to copy configuration data between databases
Table Dump Utility	Opens the Table Dump Utility which you can use to dump the contents of a maintenance table so that it can be emailed to the Quest® Support staff for evaluation
Configuration Guide	Opens the Configuration Guide which you can use to enter and track your Stat configuration tables.
Re-cache Codes	Re-caches the memory system so that certain operational changes you made during the work session can take effect immediately

Migration Management Menu

The Migration Management menu provides access to certain object migration functions featured in Quest® Stat®.

Menu Option	Description
Mass Migration	Opens the Mass Migration window which you can use to migrate objects selected from multiple archive sets
Migration Approvals	Opens the Migration Approvals window which shows any migrations that require your approval or the approval of other users
Rapid Recovery	Opens the Rapid Recovery window which you can use to migrate objects to environments regardless of migration path
Release Recovery	Opens the Release Recovery window which you can use to perform a mass migration based on the application release number of the archive sets
Migration History Wizard	Opens the Migration History Wizard which you can use to locate migrations tracked in the Stat database
Archive Sets - Ready to Migrate	Opens the Archive Sets - Ready to Migrate window which allows you to mark archive sets as ‘ready to migrate,’ meaning that either they can be included in a mass migration or that they require user approval before they can be migrated

Object Management Menu

Quest® Stat® includes a number of wizards that aid in change management and version control functionality. The Object Management menu provides access to a variety of wizards.

Menu Option	Description
Archive Purge Wizard	Opens the Archive Purge Wizard which you can use to delete unwanted archive sets from the Stat database
Archive Set Sync Wizard	Opens the Archive Sync Wizard which helps ensure that your databases contain the same versions of objects
Object Compare Wizard	Opens the Object Compare Wizard which you can use to compare two objects or the two versions of the same object. In the case of PeopleSoft and file-based objects, you can also merge the two object definitions and archive the merged definition.

Menu Option	Description
Object Archive Search Wizard	Opens the Object Archive Search Wizard which you can use to locate and recover any version of an archived object
Object History Wizard	Opens the Object History Wizard which you can use to track the changes made to a specified object
Object Impact Wizard	Opens the Object Impact Wizard which you can use to determine if changes to one object will affect other objects
Undocumented Object Wizard	Opens the Undocumented Object Wizard which you can use to locate undocumented objects and associate them with Change/Service Requests (CSRs)
Undocumented Patches	Opens the Undocumented Patches window which you can use to locate any PeopleSoft® or Oracle® Applications patch that is yet not documented in the Stat Repository

Approvals Menu

Menu Option	Description
CSR Status Transfer Approvals	Opens the Status Transfer Approvals window which shows any CSR status transfer in a workflow that requires your approval or the approval of other users
Migration Approvals	Opens the Migration Approvals window which shows any migrations that require your approval or the approval of other users

User Options Menu

The User Options menu gives access to security functions, such as **User Maintenance**, **Administer Passwords**, and **Change My Password**.

Menu Option	Description
User Maintenance	Opens the User Maintenance table where you can define new users and edit the profile of existing ones
PeopleSoft Options	Opens the PeopleSoft Options window where you can configure your connection to PeopleSoft® databases
User Options	Opens the Stat User Options window where you can configure certain version control and change management parameters in your installation of Stat
Passwords | Change My Password	Opens the Change Password window where you can create a new Quest® Stat® login password. This option is only available if you are non-LDAP enabled.
Passwords | Administer Passwords	This option is available if you have the user class rights to reset the passwords of other users. Displays a list of all the non-LDAP enabled active users in Stat. Select the users you want to reset the passwords for and click **Reset**.
Pre/Post Migration User Parms	Opens the Pre/Post Migration User Parameters window where you can specify user-specific parameters to be used in the definition of pre and post migration custom command steps.

Window Menu

The Window menu provides access to standard window functions, such as minimize, restore, and arrange.

Menu Option	Description
Cascade	Arranges all the currently open windows in a cascading manner
Layer	Layers the currently open windows on top of each other
1,2,3...	Lists all the currently open windows. Double-click on a window to open it.

Help Menu

The Help menu provides access to the Stat About box, the online help and information regarding the Java® files for the Quest® Stat® database and client.

Menu Option	Description
About Stat...	Displays the version number of the Stat program, copyright and licensing information, URL of Stat Web (if installed), and support information
Books | User Guide, System Administration, Web User Guide	Opens the PDF versions of the Stat manuals, including User Guide, System Administration Guide, and the Web User Guide.

Navigating the Menus

You can navigate the menus using your mouse or keyboard.

Navigating with the Mouse

Click on a menu. A list of items available in that menu will display. Click on an item to execute a specific action.

Navigating with the Keyboard

You can access menus using the up, down, left, and right arrow keys.

When you first open Quest® Stat®, no shortcut keys are displayed on the menus. To display the shortcut keys, press <ALT>. The shortcuts are displayed (underlined letters). Press the indicated shortcut key to execute the desired menu option. For example, after pressing <ALT>, pressing <F> opens the File menu and then pressing <W> opens the New Project window.

You can also invoke certain menu options using shortcut keys in combination with the <Ctrl> modifier key. These options include:

Key Combination	Command
<Ctrl>+<S>	Save
<Ctrl>+<O>	Open CSR
<Ctrl>+<R>	Open Project
<Ctrl>+<T>	New CSR from Template
<Ctrl>+<N>	New CSR from Blank
<Ctrl>+<P>	Print
<Ctrl>+<W>	Open CSR Search Wizard

If a menu is open, you can move between menu options using the up and down arrow keys, and you can move to different menus using the left and right arrow keys. After selecting the menu option you want, press the <Enter> key to execute the command, or you can use the shortcut keys if indicated.

The Stat Toolbar

The Stat toolbar provides one-click access to the most commonly used features in Quest® Stat®. For example, the toolbar button representing a blank page creates a new CSR.

You can move the toolbar by clicking **File | Toolbars** and selecting the position you want in the Toolbars window.

	Log off from Stat
	Open new CSR from Blank
	Open new CSR from a Template
	Open existing CSR
	Save
	CSR Search Wizard
	Customer Search Engine
	Print
	Support Console
	Oracle Applications Management Console
	Migration Console
	Report Wizard

3

Change/Service Requests

- Opening a CSR
- The CSR Window
- Creating CSR Templates
- Environment Refresh Events
- Patches - PeopleSoft and Generic Applications
- CSR Workflows
- Emailing a CSR
- CSR Security

Opening a CSR

A Change/Service Request, or CSR, is basically a change request documented, managed, and resolved in Quest® Stat®. The request itself can be for anything from issue tracking to complex object migrations across multiple environments. But regardless of its complexity, every change request is handled in a separate CSR window, which serves as a central location in which to compile all the information related to the request, as well as manage all the steps taken to resolve it. Most of the user activity in Stat takes place in CSR windows.

When working to resolve a service request or problem, the first step is to open a CSR. If this request is not already documented, you need to create a new CSR.

New CSRs

You can create a new Change/Service Request (CSR) in either a blank CSR window, or you can use a CSR template if you created one previously for the service domain in which you are working. CSR templates are personalized default settings that save time by populating certain fields in a CSR window with predefined values. For more information, see Creating CSR Templates on page 28.

To open a new CSR:

1 Do one of the following:

- If you want to create a new CSR, select **File | New CSR From Blank** and choose the desired Service Domain. or click the **Open New CSR from Blank** button on the Stat toolbar.
- If you want to create a new CSR in the Default Service Domain, click the **New CSR From Blank** button on the toolbar.
- If you want to create a new CSR using a CSR template, select **File | New CSR From Template**, or click the **Open New CSR from Template** button on the Stat toolbar.

Opening an Existing CSR

To open an existing CSR:

1 Select **File | Open CSR**, or click the **Open Existing CSR** button on the toolbar.

Stat opens the **Search CSR** window, which locates CSRs according to specified search criteria.

2 In the Search CSR window, specify the search criteria by which you want to locate the CSR. Then click **Search**.

For more information, see The Search CSR Engine on page 65.

3 Do one of the following:

- Double-click on the located CSR, or select it and click **OK**.
- In the Support Console window, select the desired CSR and click **Open CSR**. The Support Console window is discussed in greater detail in the next chapter, Stat Consoles on page 40.
- If you opened the CSR recently before, select **File | Recent**. Then on the submenu select the CSR. The submenu lists the last 10 opened CSRs.

The Record Lock Warning

When you open a new or an existing CSR, Quest® Stat® puts a lock on it so that other users cannot make changes to the CSR while you are updating it. If you attempt to open a CSR that someone else is currently updating, Stat opens the CSR window in read-only mode and displays an **Override Lock** link in the top-right corner.

- Click the **Override Lock** link to open a dialog which provides information about who has the lock on the CSR and when it was locked. This dialog allows you to take ownership of the CSR lock allowing you to edit the CSR. The user from which you took the lock will not be able to save his or her changes.

! **CAUTION: When you override a record lock, Stat automatically generates a system log stating that you overrode someone else's record lock. Record unlock messages can be viewed under CSR detail logs. A report entitled CSR Lock Overrides is also available**

The CSR Window

A CSR window displays tabs on the left side. Each tab allows you to navigate to a specific section of the open CSR.

The tabs displayed for all CSRs include:

- The Details tab
- The Resolution tab
- The Description tab
- The Logs tab
- The Attachments tab (if activated)
- The History tab

Depending on service domain or CSR type, CSRs can also include the following tabs:

- The Tasks tab (depending on service domain)
- The Patches tab (depending on service domain and CSR type)
- The Environment Refresh tab (depending on service domain and CSR type)

- The Issues tab (depending on service domain)
- The Workflow tab (depending on service domain and CSR type)
- The Migration Path tab
- The Objects tab
- The Archive Sets tab

Details Tab

The global section of a CSR window contains fields with general information about the customer and the request. Access to these fields is controlled by your system administrator.

Customer Field

The customer is the person who makes a request or reports an issue. Stat-generated emails regarding this CSR are addressed to this person. The customer is the main contact for the CSR.

You can enter a customer's name manually or Quest® Stat® can find it for you (if it exists in the system). If you don't know the customer's name or aren't sure, you can use the following Quick Pick shortcut methods to locate the customer in the Stat database:

- Enter the customer's last and first name separated by a comma and a space (e.g., Adams, William) and press the <Tab> or <Enter> key
- Enter a partial last name (e.g., Ada) and press the <Tab> or <Enter> key
- If only the first name is known, enter a first name (complete or partial) preceded by a comma (for example, ",William" or ",Wi") and press the <Tab> or <Enter> key
- Enter "EID" followed by a space and the customer's PeopleSoft employee ID number (e.g., EID 398) and press the <Tab> or <Enter> key

Stat searches the customer table for a match. If a match is found, the customer's name appears in the field. The customer's department, telephone number, and extension appears in the space to the right of the **Alt#** field. If the customer's email address is in the database, a small envelope icon is displayed next to the **Tracking #** field. This is your visual cue that the customer can receive automatic email about this CSR. Email configuration is discussed in greater detail in the *Stat System Administration Guide*, Chapter 7, "Email Configuration."

If a single match is not found, Stat brings up the Search Customer Engine window where you can further refine your search against the Stat Customer table, or you can search through each PeopleSoft database. For more information, see The Customer Search Engine on page 67.

If you cannot find a customer name using the Search Customer Engine and you want to add it, use the Customer Maintenance window. To open this window, click **New Customer...** in the Search Customer Engine window, or right-click on the **Customer** field in the CSR window and in the pop-up menu select **New Customer**.

When entering a new customer, select the country where the customer resides in the **Country** field. Depending on the country you selected, the labels of certain fields may change in keeping with the postal conventions of that country. Stat comes installed with predefined field labels for USA, Canada, Australia, and the United Kingdom. Your system administrator defines any other countries you may need to include. The required fields in this window are **Last Name**, **First Name**, and **Department**. In order to maintain high quality data, it is best to enter as much information as possible.

> **NOTE:** You can use the **Search PeopleSoft Country/Department Engine** to retrieve country information from PeopleSoft® environments. For more information, see The Search PeopleSoft Customer Engine on page 68.

Alt. Number (Optional)

This field allows you to enter an alternate telephone number for the customer, if necessary. This information is stored with the current CSR only.

Customer Priority

The value displayed in this field indicates what priority the customer believes his or her request should have. Although the value may actually be different than what you decide the priority should be (as indicated in the **Priority** field), this is a way to record the customer's sense of urgency in resolving the issue. Customer priority values are service domain-specific and are defined by your system administrator.

Tracking Number (Optional)

If the customer has a tracking number for the issue documented in the CSR or if the request initially came from an external help desk system, you can record it in this free form text field.

Application (Required)

An application defines what product or facet of your enterprise is represented in the CSR. Applications are defined by your system administrator. An example of an application might be PeopleSoft Ver. 7. The user assigned to the CSR must have access to the selected application.

Environment (Dependent on Application)

Environments further define an application. However, not all applications need to have environments. Environments are defined by your system administrator. If your application is Financial, your environments might be, or AP, AR, and GL.

NOTE: Environments in this context should not to be confused with the generic application environments for which Stat provides version control and change management support.

Project

By default, the Project field is optional. The Stat administrator can set the Project field to be required in CSR Type Maintenance. Double-clicking on the project drop-down opens the Project window for that project. If this field is blank, it means that the CSR does not belong to a project. You may add CSRs to projects from either the CSR window or the Project window. For more information, see The Project Window on page 59.

Title (Required)

This field displays a brief explanation of the request (50 characters).

NOTE: It is good practice to put key words in this field. Search wizards may use this field to locate CSRs in the Stat database.

Created By (Auto)

When a user opens a new CSR, Stat automatically populates this field with the user's name. If this CSR was opened via email the default name is "Account, System." If you have proper security, you can change the value displayed in this field.

CSR Type (Required)

CSR types divide CSRs into categories. They help identify what kind of problem or request the CSR represents. They are defined by your system administrator. Examples of CSR types might be Fix, Enhancement, and Standard Change.

Status (Required)

This field displays the current status of the CSR. CSR statuses are associated with CSR types. They represent the states or conditions that a CSR of a particular type can go through during its development lifecycle. Your system administrator can define several CSR statuses. However, all CSR statuses are variations of three major types:

- **Open** – This indicates that the CSR has not been completed and is still being addressed. You will probably have several variations of open, such as Pending Approval, In Progress, and in Testing.
- **Closed** – This indicates that a CSR has been completed. CSRs of a closed status no longer appear on the Support Console list of CSRs. There could be various closed statuses, such as Completed and Cancelled. The Support Console is discussed in detail in Chapter 4, “Stat Consoles.”
- **Closed for Statistics** – If a CSR is still open but should not be counted in departmental statistics as such, you can give it a Closed for Statistics status. This special status lets you filter information on reports. For example, if you are waiting on a fix from a vendor, you no longer have control of the issue. You may decide to place the CSR in a holding state.

NOTE: Depending on the service domain and selected CSR type, your ability to change CSR statuses may be restricted by workflow rules. See CSR Workflows on page 33 for more information.

Opened (Auto)

When a new CSR is opened, Stat automatically populates this field with the current date and time.

Priority (Required)

Priorities indicate the urgency of the request as determined by the user (as opposed to the customer, which is documented in the **Cust Prio** field). When your system administrator defines priorities, a turnaround time is associated with the priority. The turnaround time determines the due date of the CSR. A priority of Urgent might have a turnaround time of 24 hours, which sets the due date to 24 hours after the open date. However, since some organizations may define turnaround time in business days only, 24 hours can mean the following Monday if the CSR was opened on a Friday.

Workflow (Dependent on CSR Type)

Workflows are sets of rules that regulate the sequence and conditions by which CSRs can change from one status to another. Your system administrator defines workflows based on a combination of service domain and CSR type. When you select a CSR type, this field automatically displays the default workflow defined for that type (if any). You can select a different workflow if more than one has been defined. However, if no workflows have been defined for the selected CSR type, this field is grayed out.

When you save a CSR in which a workflow has been assigned (as shown in the **Workflow** field), the function specific Workflow tab appears. For more information, see CSR Workflows on page 33.

Due (Auto)

When you make a selection in the **Priority** field, Stat automatically populates this field with the appropriate date and time.

Queue (Required)

A queue is a specific group of Stat users with similar skill sets or responsibilities available to work on a particular CSR. A user who is not a member of the assigned queue cannot be assigned to the CSR. Your system administrator defines queues and their members. Queues might include Development, Training Staff, Management, and Support Services.

NOTE: With proper user class rights, one member of a queue can edit or take ownership of a CSR assigned to another member of the same queue.

Assigned User (Required)

The Assigned User indicates the owner of the CSR. Throughout Stat, this user is called the assigned user. The list of available users depends on the queue selected. The assigned user may change several times through out the life of a CSR. When the assigned user needs to change, Stat selects the default user according to the **CSR assigned user rule** defined in the global settings.

NOTE: The list of users that can be assigned the CSR is filtered based on the selected queue and application. The assigned user must be a member of the selected queue and must have access to the selected application.

Closed (Auto)

When a CSR is changed to a status equaling closed, Stat automatically updates this field with the current date and time. Before a CSR is set to a closed status, this field is disabled and displays the default value, “01Jan1900 00:00.”

Description

The Description field is located in the lower portion of the Details tab and contains a textual explanation of the CSR. Using free form text, you can describe a request in as much detail as you want. For example, suppose you open a CSR to address a customer’s request that a particular PeopleSoft panel be changed so that it properly allows for saves. You might enter the following information in the Description field: “User states that the panel only saves from 9 to 12 and then it does not save any longer.”

Because the information contained in the Description field is so critical to the success of a CSR, you can use advanced editing to enhance the quality of that information. Rich text editing, which is also supported on the Resolution tab, includes text formatting, copying and pasting text from other applications, and inserting hyperlinks. For more information, see Advanced Editing on page 28.

To promote consistency, a system administrator can define Description field templates. Templates help you gather all mandatory information from the customer making the request. A system administrator can define many different templates, depending on users’ needs. Which template you use is determined by Application and CSR Type. If a template is defined for a particular combination of Application and CSR Type, Stat automatically loads that template into the Description field.

Templates define required fields in the Description field, which are enclosed by double angle brackets: << >>. You must enter data in required fields. If the field is not required, the field name is enclosed in single angle brackets: < >.

Before you can save a CSR, you must enter some information in the Description field.

Tasks Tab

The Tasks tab is displayed depending on the current service domain. It lists all of the tasks associated with the CSR. You can associate an unlimited number of tasks with a single CSR. Tasks detail all of the steps necessary to solve a problem or complete a request.

For detailed information on this tab, see The Tasks Tab on page 53.

Attachments Tab

The Attachments tab displays files attached to the CSR. Files attached to a CSR are saved in the Stat Repository and downloaded to the file download directory. This is the difference between attaching a file to a CSR and creating a link to a file in the **Description** tab. Linked files are not saved in the Stat Repository or downloaded and therefore cannot be opened by users who do not have access to the linked directory.

NOTE: You must have the proper user class rights to add attachments to a CSR.

To attach a file to a CSR:

1. Click the **Add** button.
2. Click the **Browse** button (**...**).
3. In the **Attachments File Selection** dialog box, locate and select the file you want to attach to the CSR. Then click **Open**.

   The full path and file name is displayed in the **File** field.
4. Type a comment about the file in the **Comments** field.

   This step is required.
5. Click **Add**. Then click the Save button in the Stat toolbar.

   The file is saved in the Stat Repository and attached to the CSR.

   NOTE: By default, the maximum size of files you can attach to CSRs is 50MB, but this limit can be changed by system administrators in the System Maintenance table. The default 50MB size of CSR attachments is the recommended maximum. Attachments larger than 50MB can adversely affect performance. If you attempt to attach a file that exceeds the maximum size limit, Stat displays an error message. For more information, see the *Stat System Administration Guide*, Chapter 4, “General Maintenance Tables.”
6. Click **Download** to download the selected file. Click **Download All** to download all attachments.

To open an attached file, double-click it or select it in the Attachments tab and click **Open**. Stat opens the file in whichever application you have configured your computer to use when opening files of the selected type. If your computer is not configured to open the selected file type, you are prompted to specify the program you want to use. Also, system administrators can restrict certain file types (such as executables) from being opened from the Attachments tab.

If you want to delete an attached file and have the user class right to do so, select it and click **Delete**.

NOTE: Stat records whenever a file is attached or deleted from a CSR in the History tab.

Logs Tab

The Logs tab is divided into two sections. The left section displays a tree view of all the logs with each branch representing a predefined category. The right section displays details of the currently selected log, which you can modify as needed.

The left section allows you to navigate through logs and sort the results in a specific way. Each of the branches sorts the logs differently. To open a branch click the plus sign (+) located to the left of the branch or double-click on the branch itself.

The divider between the left and right sections can be moved to make one or the other side larger or smaller. Drag your cursor over the bar to get the <-> symbol. Click and drag/drop to resize.

Dates Branch

The Dates branch sorts your logs by the date you created them. The Dates branch opens up to at least two new branches: All Dates and Today. The All Dates branch displays all the logs sorted by dates starting with the earliest.

If the CSR is more than one day old, you see a branch for each day that has passed since the open date. These branches display only the logs created on their respective date.

Users Branch

The Users branch sorts logs by user. The Users branch opens to separate branches for each user. If you are looking for the logs of a specific user, you can open his or her respective branch from the Users branch. In this case the logs are sorted by date, starting with the earliest.

Topics Branch

Logs also can be sorted by topic. Like the other two branches, the Topics branch opens to separate branches for each topic.

NOTE: Stat automatically creates a log when it sends or receives an email associated with a CSR, or when a CSR lock is overridden. Logs created by Stat appear with the user ID “Account,System.”

Log Confidentiality

You can flag a log as confidential by selecting the Confidential check box. Confidential logs are not emailed to customers. These logs can be viewed and printed only by Stat users with proper authority. You can recognize that a log is confidential if the Confidential check box is selected and a yellow warning icon precedes the log.

Summary View

If a CSR has many log entries, you can view them all at once by selecting the Summary branch. Log entries listed in the Summary branch are sortable by topic and specific time intervals (last 7, 14, 30, or 60 days). You can also remove system-generated entries and entries flagged Confidential from the list.

Adding and Modifying a Log

To add a log:

1. Click the **New Log** button.
2. Select the log Topic.

   (Optional) Select the **Confidential** check box.
3. Type information in the **Details** field.
4. Click the **Create** button.
5. Save the CSR.

With proper security rights, you can modify the text and topic value of your own logs as well as logs written by other users after the logs have been saved. However, you cannot delete logs once they are saved, and you cannot modify system-generated logs.

To modify a log:

1. Open the log you want to modify.
2. Modify the text or change the Topic value, as needed. Click **Update**.
3. Save the CSR.

Environment Refresh Tab

An environment refresh is the replacement of one environment (target) with the copy of another environment (source). The source environment can be either an existing environment, or it can be a backup of an environment (including the target). The Environment Refresh tab is where you document in Stat any environment refreshes that

you have performed or are planning to perform. This tab is displayed based on a combination of service domain and CSR type. For more information, see Environment Refresh Events on page 29.

Patches Tab

The Patches tab is where you document and associate patches with a CSR. These can include patches delivered by PeopleSoft, Oracle Applications, as well as user-defined patches for generic applications. The functionality and information displayed in this tab differs depending on the change management module of the CSR. For Oracle Applications, the Patches tab displays information specific to Oracle patches and works in conjunction with the Oracle Applications Patch Management Console. For more information, see Patch Management on page 179. For more information on the Patches tab as it relates to PeopleSoft and Generic Applications, see Patches - PeopleSoft and Generic Applications on page 32.

History Tab

As a CSR moves from one stage to another during its life cycle, many of its values are changed and updated. The History tab maintains a record of these changes, allowing you to determine which values were changed, when, and by whom. The History tab records:

- Changes to the values in the general information fields of a CSR
- Changes to the information displayed in the Description and Resolution tabs
- The addition and deletion of attachments
- If a change management tab is activated on the CSR, whenever objects are added, locked, unlocked, reserved, or removed.

Viewing Object Activities

If a change management tab is activated on the CSR, the History tab displays a record whenever objects are added, locked, unlocked, reserved, or removed. To view detailed information, double-click a record labeled **Object Activity**. This opens the Object Activity History window for that record.

For each activity, the window displays the type of activity, the object name and type, the environment the object is located in, and the developer who initiated the action.

Viewing Changes to the Description and Resolution Tabs

You can use the History Detail Comparison window to view changes to the contents of the Description and Resolution tabs and easily identify differences. To open this window, select the row representing the change in the Description or Resolution tab and click **View**. The History Detail Comparison window functions much the same way as the File Comparison Tool. For more information, see Comparing File and Schema Objects on page 107.

Issues Tab

The Issues tab is where you can document and keep track of problems and concerns specific to a CSR. An issue can be anything that in some way affects a CSR, such as a technical question or a scheduling conflict.

Like CSRs, issues are assigned to users who are responsible for resolving the problem they represent. However, the Issues tab is meant for informational purposes only. Unresolved issues do not prevent you from closing a CSR.

In Stat, you can also document project issues. For more information, see The Project Window on page 59.

To add a CSR issue:

1 In the Issues tab, click **New.** Stat opens the New Issue window.

> **NOTE:** If the CSR belongs to a project, you can also open the Edit Issue window for the CSR from the Issues tab of the Project window. See The Project Window on page 59 for more information.

2 In the **Assigned To** field, select the user responsible for resolving the issue.

3 In the **Status** field, select the current status of the issue.

Available options are defined by your system administrator.

4 Enter information in the two custom label fields as determined by your system administrator.

> **NOTE:** The custom label fields and Status options are defined in the Issue Tracking maintenance table. For more information, see the *Stat System Administration Guide*, Chapter 4, "General Maintenance Tables."

5 In the **Description** field, enter a detailed description of the issue.

6 Click **OK**.

To close an issue:

1 In the Issues tab, select the issue you want to close. Then click **Edit**.

Stat opens the Edit Issue window.

2 In the **Status** field, select the appropriate closed-type status.

When you select a closed-type status, the **Closed** field automatically displays the current date and time.

3 In the **Resolution** field, enter a description of how the issue was resolved.

4 Click **OK**.

Workflow Tab

The Workflow tab appears whenever you save a CSR that has a workflow assigned to it (as indicated in the **Workflow** field). From here you can change the status of the CSR, view the workflow diagram defined by your system administrator, and view information concerning workflow rules and the history of status changes. For more information, see CSR Workflows on page 33.

> **NOTE:** In addition to service domain and CSR type, the application you select can also determine whether or not a workflow is assigned to a CSR. This is because an application can determine which change management tab is displayed on a CSR, and if a workflow specifies a migration path, then the change management module which that path belongs to must be the same module called for by the application. For example, if a workflow specifies a PeopleSoft-based migration path, but the application you select requires that the CSR display the Generic Tab, then the workflow cannot be applied to the CSR.

Resolution Tab

To change a CSR to a closed-type status, you must enter a resolution in the Resolution tab. The information entered here should be as complete and accurate as possible, as it will become part of your knowledge-based system. For example, a resolution may list the steps taken to solve a problem. Other users with similar problems may refer to this information to resolve recurring issues.

As with the CSR Description field, system administrators can define Resolution templates. Templates help you gather information deemed critical to the success of the CSR. A system administrator can define many different templates, depending on users' needs. Which template you use is determined by Application and CSR Type. If a template is defined for a particular Application or CSR Type, Stat automatically loads that template into the Resolution tab.

The Resolution tab features the same rich text editing capabilities as the Description field in the Details tab. For more information, see Advanced Editing on page 28.

Advanced Editing

Because the information contained in the Description and Resolution fields is so critical to the success of a CSR, you can use advanced editing to enhance the quality of that information. Advanced editing includes text formatting, copying and pasting text from other applications, and inserting hyperlinks.

Spell Checking (Not Available for Windows 7)

You can use spell checker to correct misspellings and typing mistakes in text displayed in the Description and Resolution fields. Misspelled words are underlined with a red squiggle. Right-click a misspelled word (SHIFT+F10) to access a menu of possible corrections. Stat uses the Windows native Spell Checker.

Creating CSR Templates

You can specify default CSR values by saving a CSR as a template. When you save a CSR as a template, the values displayed in certain fields of that CSR are saved as the default settings for new CSRs created within the same service domain. This can be an effective time-saving technique if many of the CSRs you create within a service domain have the same values. For example, if you work primarily with the Benefits application while in the HR service domain, you could create a template with **Benefits** as the default value displayed in the **Application** field of new CSRs.

CSR templates capture the following information:

- Application
- Environment
- CSR type
- CSR status
- CSR priority
- Workflow
- Queue
- User ID

To create a CSR template:

1. Open the CSR that you want to use as a template.
2. Select **File | Save CSR as Template**.

   If you have previously saved a CSR as a template, Stat displays a message box asking you if you want to override the template with new values.
3. Click **OK**.
4. Once the template is stored, you can quickly create new CSRs by clicking on the Open new CSR from Template button in the Stat Toolbar, or navigate to **File | New CSR From Template**.

Environment Refresh Events

An environment refresh is the replacement of one environment (target) with a copy of another environment (source), which can be either an existing environment or a backup of an environment. In Stat, you document any environment refresh that you have performed or are planning to perform so Stat reporting properly reflects refresh activities and the state of each environment. This is done in the Environment Refresh tab of the CSR window, which is displayed based on a combination of service domain and CSR type.

When you document an environment refresh event, the Stat Repository is updated to reflect any changes the refresh has made to the definition of the target environment. This is done by specifying the start and complete dates of the refresh event. When the specified completion date has elapsed, a process request is submitted automatically to the Stat Central Agent to update the definition of the target environment in the Stat Repository. Start and completion dates are explained in greater detail below.

NOTE: Although documenting environment refresh events updates the definition of the target environment in the Stat Repository, the history of environment before it was refreshed is retained. This allows you to run an activity-based report on the environment that does not take the refresh event into account. Activity-based reports are explained in greater detail below.

For each environment refresh event, the Environment Refresh tab displays the following information:

- The current state of refresh record, which can be either Canceled for deleted records or Active for records that are still in effect.
- The status of the process request submitted to the Stat Central Agent
- A description of the refresh event
- The target environment of the refresh
- The source environment of the refresh
- An optional start date and completion date
- A backup date, if the source of the refresh is a backup of an environment
- The user documenting the refresh event and the time the record was last updated

NOTE: The ability to document or edit environment refresh records is controlled by user class security. Without this right, users have read-only access to the Environment Refresh tab.

Documenting Environment Refresh Events

Documenting an environment refresh in Stat entails specifying the source and target environments and the time frame in which the refresh occurred or is scheduled to occur. Specifying a time frame is done in terms of start and completion dates. If you are using a backup of an environment as the source of the refresh, you must also specify the date that the backup of the source environment was taken.

To document an environment refresh event:

1. Click **New** in the Environment Refresh tab, or in the case of an existing refresh event record, select the record and click **Edit**.

   This opens the Environment Refresh window.

2. In the Environment refresh window, select the environment that is being refreshed in the **Target Database** field.

3. In the **Source Database** field, select the environment that is the source for the refresh.

   The source environment must be the same application version as the target environment. Also, if you select the same environment as the target environment, you must also select the **Refresh From Backup** check box, meaning that the source of the refresh is a backed up version of the target environment.

4. (Optional) Select **Refresh From Backup** if you are using a backed up version of an environment as the source for the refresh.

The backed up environment can be the same environment as the target environment. Then specify the date the source environment was backed up in the **Backup Date** field.

5 (Optional) Specify the time frame of the refresh event, either in terms of actual dates or scheduled dates:

- In the **Actual Start Date** field, specify the date and time the environment refresh began or is scheduled to begin. Then in **Actual Date Completed** field, specify the date and time the environment refresh was completed or is scheduled to be complete. You can enter the date, hour, and minute manually or you can click the **Browse** button in either field and use the Calendar tool. Remember that you can specify an actual start date without specifying an actual complete date, but you cannot specify an actual complete date without first specifying an actual start date. Also, the actual complete date must be later than the time specified in the **Actual Start Date** field.
- In the **Scheduled Start Date** field, specify the date and time the environment refresh is scheduled to begin. Then in **Scheduled End Date** field, specify the date and time the environment refresh is estimated to be complete. You can enter the date, hour, and minute manually or you can click the **Browse** button in either field and use the Calendar tool. Remember that you cannot specify a scheduled start date without also specifying a scheduled end date, and that the scheduled end date must be later than the scheduled start date.

> **NOTE:** If you have specified an actual completion date and saved the refresh event record, you cannot change the completion date or otherwise edit the record in any way. Instead, you should cancel the record and document the refresh event a second time. Also, try to make actual start and complete times as precise as possible because any time discrepancy could result in lost or inaccurate data. For more information, see the following section, Actual Dates, Scheduled Dates, and Backup Dates on page 30.

6 In the **Description** field, briefly describe the refresh event.

7 When finished, click **OK**.

The status of the event changes to **New**.

8 Save the CSR.

The status of the event changes to **In Process**. After about a minute, the status changes to **Agent in Process**. The **Cancel** button on the edit screen is enabled once the status is either **Agent in Process** or **Waiting for Agent**.

Actual Dates, Scheduled Dates, and Backup Dates

When you document an environment refresh event in Stat, you have the option of specifying the date, hour, and minute the refresh event started or is scheduled to start, as well as the date, hour, and minute the refresh event completed or is schedule to complete. You can specify this time frame in terms of either actual dates or scheduled dates. In addition if you are using a backup of an environment as the source for the refresh, you must also specify the date, hour, and minute that the backup of the source environment was taken.

Actual Dates

You specify the time frame using actual dates if the environment has already been refreshed and you want to document the refresh event after the fact, or if you know that the environment will be refreshed at some specific time in the future. When you specify a future actual start date, Stat locks the target environment and prevents users from working within that environment beginning at the time specified in the **Actual Start Date** field. At this point, users will receive an error message if they attempt any activity within the target environment. The target environment remains locked until the time specified in the **Actual Complete Date** field, if any, has elapsed. When you first document a refresh event, you can specify an actual start date without specifying an actual complete date. Once the refresh has been completed, you can then edit the refresh record and specify an actual complete date, which removes the lock on the target environment. The actual complete date must be later than the time specified in the **Actual Start Date** field. Also, you cannot specify an actual complete date without first specifying an actual start date.

The Stat Central Agent does not process a refresh event until the time specified in the **Actual Complete Date** field has elapsed. If you are documenting an environment refresh event that has already occurred and specified the actual completion date, the Stat Central Agent processes the request immediately after you save.

NOTE: In the case of PeopleSoft environments, the Stat Central Agent also runs the PS Lock Sync job when the completion date has elapsed. This enables any object locks defined in CSRs for the target environment to be duplicated after the environment is refreshed.

Scheduled Dates

You specify the time frame using scheduled dates when there are tentative plans to refresh the environment at some future time. When you use scheduled dates, users can still work within the target environment during the scheduled refresh event but will receive a warning message stating that the environment may be in the process of being refreshed. At any time before or after the refresh event, you can edit the refresh record and change the scheduled dates to actual dates.

As with actual dates, the scheduled end date must be later than the time specified in the **Scheduled Start Date** field. Unlike actual dates, however, scheduled dates require that you specify both a start and an end date.

Backed Up Dates

If you are using as the source of the refresh a backup of an environment, you need to specify the date and time when that backup of the environment was taken. This information allows Stat to refresh the target environment with the history of the source environment up to the date and time of the backup.

Canceling Environment Refresh Records

If you have not specified an actual completion date, at any time you can remove a refresh event record by selecting it on the Environment Refresh tab and clicking **Delete**. If you have specified an actual completion date, or if the completion date has elapsed and you want to undo the update of the Stat Repository, select the record in the Environment Refresh tab and click **Edit**. Then in the Environment Refresh window, click **Cancel Request.** When you cancel a request after the completion date has elapsed, the definition of the target environment in the Stat Repository is returned to its original state before the Stat Central Agent processed the refresh request.

State-Based and Activity-Based Reports

Updating the Stat Repository by documenting environment refresh events allows you to run state-based reports. A state-based report takes into account changes made to an environment due to a refresh event. It shows the objects and archive sets that exist in an environment at a particular moment in time. This is in contrast to activity-based reports that show the history of activities that have occurred within an environment, such as migrations and upgrades. Stat supports both types of reports for your environments, even those that have been refreshed. If an environment has been refreshed, however, an activity-based report may not accurately reflect the state of the environment as it exists after being refreshed. State-based reporting of environment refresh events is supported in the Migration History Wizard, the Oracle Apps Patch Level Compare feature, and the Stat Report Library.

To illustrate the differences between state and activity-based reporting, suppose you migrated an archive set into your Test environment and then later refreshed that environment with another environment named Production. A state-based report run after the refresh event would accurately show that the archive set no longer exists in Test, since this data would have been overwritten when Test was refreshed with Production. An activity-based report, however, would show that the archive set had been migrated into Test, which would be accurate in an activity-based sense but would not take into account the fact that after the migration the environment had been refreshed, thereby creating the false impression that the archive set still existed in Test.

Patches - PeopleSoft and Generic Applications

For PeopleSoft and generic applications, the Patches tab displays general information about patches, such as its name or ID, a brief description, and comments. More specific patch information is displayed in the Patch window, including the incidents addressed by the patch and any dependencies that must be resolved before the patch can be applied.

The ability to add, edit, or delete patches is controlled by user class security rights.

System administrators associate the Patches tab with certain CSR types. Whenever a user selects one of these associated CSR types, the Patches tab is displayed in the CSR window.

NOTE: Access to the Patch tab, as well as the ability to add, edit and delete patches, is controlled by security rights. If you only have access rights, you can view patch definitions, but you cannot edit them in any way.

For PeopleSoft version 8 and higher, you can use the Read Project Wizard to read in the objects of a PeopleSoft patch (defined in the form of a maintenance project). This way, Stat automatically populates the Patches tab with the information contained in the project. For more information on using the Read Project Wizard to read in PeopleSoft patches, see Object Management (PeopleSoft) on page 109.

Although the Read Project Wizard works only in conjunction with PeopleSoft, you can manually document a patch (including incidents and dependencies) for any application.

To document a patch:

1. In the Patches tab, click **New**. Stat opens the New Patch window.

   In the General tab, you assign the patch a name or ID and, optionally, enter a brief description and any additional comments.

2. In the **Patch ID** field, enter a name or ID that uniquely identifies the patch and, optionally, enter a brief description and comments in the remaining fields. Then, optionally, click the Incidents tab.

   The Incidents tab displays a separate record for each incident addressed by the patch. Documenting incidents is optional.

3. Click **New**. Then in the **Incident ID** field, type the name or ID of the incident. To delete an incident record, select it and click **Delete**.

4. (Optional) Click the Dependencies tab.

   The Dependency tab displays a list of incidents that are addressed in other patches and must be resolved before the current patch can be applied. When you click **Calculate**, Stat identifies which patches and CSRs, if any, were used to resolve the specific dependencies. The results may include patches and CSRs in other service domains since dependencies are not service domain-specific. Using the Dependency tab is optional.

5. Click **New**. Then in the **Incident ID** field, enter the ID that uniquely identifies the incident addressed in another patch. To delete a dependency record, select it and click **Delete**.

6. (Optional) Click **Calculate**.

   Stat searches for the incident ID on CSRs documenting patches already within the system. If the incident is located, the name of the CSR and patch ID are displayed in their corresponding fields.

7. (Optional) For PeopleSoft patches, click the Dependency Application tab.

   The Dependency Application tab is only displayed for PeopleSoft patches of version 8 and higher. It shows whether each incident listed on the Dependency tab has been applied to each PeopleSoft database on the migration path. For each applied incident, the tab also displays the date it was applied, the IDs of the user

who defined the incident and applied it, and general information about the release date and label of the patch. When you click **Calculate**, Stat creates/updates the information displayed on the tab.

NOTE: The Dependency Application tab is populated using information taken from the maintenance log of each PeopleSoft environment on the migration path.

8 (Optional) Click **Calculate** to create or update the display.

9 Click **OK** to save your work and close the Patch window.

CSR Workflows

Workflows are based on a combination of service domain and CSR type. They regulate the sequence and conditions by which CSRs can change from one status to another.

Workflow Rules

In addition to the sequence of status changes enforced by the template diagram, workflows can include rule definitions that stipulate conditions which must be met before you can change a CSR from one status to another. For example, before you can change a CSR to a closed-type status, a workflow rule can require that all the tasks associated with an activity be completed or that a migration to a specific environment take place. Workflow rules consist of transfer rules and status rules.

For more information on workflow rules, see the *Stat System Administration Guide*, Chapter 5, “Service Domain-Specific Maintenance.”

Transfer Rules

Transfer rules define conditions which must be met before you can move a CSR from one status to another. A transfer rule can stipulate the following:

- The queue the CSR must belong to
- The tasks that must be performed (identified by activity codes)
- The environments that objects must be migrated to
- The user who can perform the actual status change
- Whether or not the transfer requires the approval of other users, and if so, which users are authorized to make the approvals
- For the Oracle Applications module, the environments that a patch must be applied to

NOTE: The user class right, Status Transfer Override, enables users to perform status changes even if the transfer rules are incomplete.

In the diagram, status icons are connected by lines with arrows that indicate the direction or sequence in which you can change the CSR from one status to another. A hollow arrow signifies the transfer is set to be auto-advanced if all required approvals and other conditions of the rule are met, while a two-tone arrow signifies that it is advanced by the user. A square at the tip of an arrow indicates the presence of transfer rules. A hollow square indicates that the transfer rule is incomplete, while a solid square means all transfer rules are completed. The color of the arrow works similar to a traffic light. Red means the transfer cannot occur; green means transfer can occur. Black means that the transfer has no rule or it is not yet to be processed.

Arrow	Meaning
	User-advance transfer with no status transfer rules defined.

Arrow	Meaning
	User-advance transfer with status transfer rules defined.
	User-advance transfer with incomplete transfer status rules. Invalid transfer.
	User-advance transfer with complete transfer status rules. Valid transfer.
	Auto-advance transfer with incomplete status rules. Invalid transfer.
	Auto-advance transfer with complete status rules. Valid transfer.

To view the details of the transfer rules, double-click on the arrow. This opens the Transfer Rules Status window.

The Transfer Rules tab displays a summary of the rules defined for the transfer. It also shows whether the conditions of the rules are complete. The tab displays the words “In Process” until all the rules are marked complete and any approvals have been granted. When all the conditions for the transfer have been met, the tab displays “Complete.”

Transfer Approval Lists

If the transfer requires user approval, the second tab of the window, Approval List, displays the name of each user who can approve the transfer. The list can include individual users, entire user classes, queues, or a combination of the three. Also, the approval of any user, user class, or queue can be either required or optional. Required approvers are displayed in bold.

A green check mark indicates that the user has approved the status transfer, whereas a red X indicates that the user has rejected the status transfer, thereby preventing the status transfer from taking place until the rejection status has been resolved.

NOTE: A status transfer cannot go forward if just one approver rejects the status transfer, even if that user’s approval is not otherwise required. Before the status transfer can occur, either the user or another user authorized to override status transfer approvals must change their approval status from Rejected to Approved or to Pending.

Your approval can be made either as an individual or as the member of a user class. Also, approvals are either required or optional:

- If required, Stat cannot perform the status transfer until you approve it. With a required user class approval, every user in the class must approve the status transfer.
- If optional, then you are one out of a number of users authorized to approve the status transfer. Whenever an approval is marked as optional, the Min Approval column displays the minimum number of optional users who must approve the status transfer.

  If you are a designated approver, in the Approval List tab you can approve or reject the status transfer. With proper security rights, you can also approve the status transfer for other users and change approval decisions they previously made.

To approve or reject status transfers:

1. In the approval list, double-click your name and in the pop-up menu select **Approve** if you approve the status transfer. If you do not approve the transfer, select **Reject**.

   If you reject the transfer, Stat prompts you to document your reasons for doing so.
2. If prompted, document the reasons why you are rejecting the status transfer.
3. (Optional) Do the following if you have the right to override status transfer approvals:
   a. Double-click each approval assigned to other users and approve or reject the status transfer as needed.

If you change a status transfer approval for yourself or another user, Stat prompts you to document your reasons for doing so.

b If prompted, document the reasons why you are changing your own or another user's status transfer approval.

4 Click **OK** or **Apply** to save your changes.

TIP: You can also approve status transfers in the Status Transfer Approvals window. For more information, see Approving Status Transfers on page 37.

Delayed Approval Requests

System administrators can configure workflow rules so that requests to approve a status transfer are not generated until all the other rules defined for the status transfer (if any) have been marked as complete. This ensures that a status is ready to be transferred before users are asked to approve it and reduces the number of approval requests open at any one time.

If the delayed approvals option has been selected, the Approval List tab for a particular status will be empty until all the other transfer rules are completed. Once status is ready to be transferred, a user can generate the approval requests either by transferring the status using drag-drop, (as described in the section, Transferring Statuses on page 36) or by opening the Transfer Rules Status window. Users with proper security rights can override the delayed approvals configuration and generate approval requests by clicking **Generate**. This button is only enabled for users that have been assigned the user class right, Status Transfer Approval Generate.

NOTE: Once the approval list has been generated, the **Generate** button changes to **Regenerate**.

Approval Request Notifications

If you want to notify users about status transfers that are still pending their approval, you can email a message predefined by system administrators. In the tree list of approvers, select the node representing the user, class, or queue that you want to notify and click **Email**. An email job request is sent to the Stat Central Agent, which processes the request and sends an email to the user you selected or to each member of the selected class or queue. A "@" sign is displayed for that approver node in the Envelope field of the Approval List tab.

NOTE: The **Email** button is disabled once the approval requirements of a status transfer have been satisfied.

System administrators can also configure the Stat Central Agent to include links in the reminder message that the recipient can click to approve or reject the status transfer. This sends an email back to the Stat Central Agent, which processes the response email and changes the approval status to **Approve** or **Reject**, depending on which link the approver selected.

NOTE: When an approval status is changed by responding to a reminder message, the **Update Date** field in the Approval List will be automatically populated and the **Update By** field will display the value, **Via Email**.

Approval notification reminder messages can also be sent for migrations and Oracle Apps patch applications. For more information, see the *Stat System Administration Guide*, Chapter 7, "Email Configuration."

Updating Approval Lists

Occasionally one of the classes or queues designated to approve status transfers needs to be updated, either because new users have been added to the class or queue or existing users have been removed. When this is the case, you can update the approved users list based on class or queue by clicking **Regenerate**. This removes obsolete users belonging to a class or queue from the list and adds new ones. It also resets approval statuses to Pending.

NOTE: Clicking the **Regenerate** button only affects users belonging to classes or queues and is enabled only for users that have been assigned the user class right, Status Transfer Approval Refresh.

Viewing Approval Logs

A log entry is generated each time a status transfer is rejected. Click **View Log** to view any log history for the status transfer. The Approver Name column records the actual person who did the approval, not the person the

approval was originally assigned to. The log records if the actual approver is not the designated approver, i.e., when a user with the override security right rejects a status transfer on behalf of someone else.

Transfer History

In the Transfer History tab, you can view the time and date a transfer occurred between two statuses, as well as the ID of the user who performed the transfer. If the connection between the two statuses in the workflow is bi-directional, meaning that the CSR can go to one status and then back again, a separate record is kept each time the transfer takes place, as indicated in the Seq No column.

If a transfer required user approvals, you can view a transfer approval history from the Transfer History tab. To view the approval history for a transfer, right-click on the transfer and in the pop-up menu, select View Transfer Approvals. This opens the Approval Rules History window, which displays a list of all the users who approved the transfer and when their approvals were made.

Status Rules

Status rules apply restrictions to a CSR while it is in a particular status, such as what queue(s) it can belong to, to what environments you can migrate the objects associated with the CSR, and for the Oracle Applications only, to what environments you can apply a patch.

In a workflow diagram, the presence of a status rule is indicated by an asterisk displayed next to the name of the graphic representing the status. To view the details of status rules, double-click on the graphic. This opens the Status Rules window.

Transferring Statuses

To change the status of the CSR, you cannot use the drop down list displayed in the **Status** field, which is deactivated. Instead you must use the drag and drop technique, as described below.

> **NOTE:** Before a CSR assigned to a workflow has been saved for the first time, if you have the security right, “Status Transfer Override” you can change the start status of the workflow to any status within the workflow diagram. You can only do this before saving the CSR. After you save, you begin the workflow in whichever status you selected and the sequence and direction of statuses defined in the workflow diagram is enforced.

To change the status of a CSR in a workflow:

1. Before attempting to transfer the status, make sure any transfer rules and applicable status rules are complete.

   System administrators can designate certain status transfers to take place automatically once all the conditions of a transfer rule are met. The auto advance option is only applicable to transfer rules that require user approvals. In this case, the status of the CSR is automatically changed when all the approval requirements and other conditions (if any) are met upon saving the CSR. If the user does not have the CSR open, there is a 1-2 minute delay between the last approval that satisfied the rule and the time the status is transferred.

2. In the Workflow tab, click and hold on the graphic representing the current status of the CSR.

   The name of the current status is displayed in bold and the color of the status icon changes to blue.

3. Drag to the graphic representing the status to which you want to transfer the CSR and which is permitted by the sequence of the workflow. Then release the mouse button.

   The former status is now displayed in green with an added set of footprints and the current status is displayed in blue and bold.

Approving Status Transfers

Before you can transfer a CSR status in a workflow, you may need to get the transfer approved by certain users authorized to approve status transfers in that workflow. Conversely, if you have been designated as a status transfer approver in a particular workflow by your system administrator, other users may need your approval before they can execute a status transfer.

Status transfer approval lists can include individual users, entire user classes, queues, or a combination of the three. Also, approvals can be either required or optional.

NOTE: The procedure for approving transfers closely resembles the procedure for approving migrations. For more information on migration approvals, see the “Object Migrations” section in the appropriate change management chapter.

To approve a status transfer

1 Select **File | Status Transfer Approvals**.

Stat opens the Status Transfer Approvals window.

The first tab, My Open Approvals, shows all the pending status transfers (if any) for which you are a designated approver. The data is grouped by CSR in a tree view, along with the proposed status change. Open the tree to see the approval status of a specific pending status transfer. A green check mark indicates that the approval requirements for the status transfer have already been satisfied by other users, whereas a red X indicates that one or more users have rejected the status transfer, thereby preventing the status transfer from taking place until the rejection status has been resolved.

NOTE: A status transfer cannot go forward if just one approver rejects the status transfer, even if that user’s approval is not otherwise required. Before the status transfer can occur, either the user or another user authorized to override status transfer approvals must change the approval status from Rejected to Approved or to Pending.

Your approval can be made either as an individual or as the member of a user class. Also, approvals are either required or optional:

- If required, Stat cannot perform the status transfer until you approve it. With a required user class approval, every user in the class must approve the status transfer.
- If optional, then you are one out of a number of users authorized to approve the status transfer. Whenever an approval is marked as optional, the Min Approval column displays the minimum number of optional users who must approve the status transfer.

TIP: Double-click an approval record to open its associated CSR.

The second tab, All Open Approvals, shows the same information as the My Open Approvals tab, except it shows the approval records for all users for each pending status transfer. This tab is for informational purposes only unless you have the user class right to override status transfer approvals, in which case you can approve status transfers for other users and change approvals they previously made. Each user’s approval record is displayed until the status transfer has taken place.

2 In the My Open Approvals tab, select **Approved** in the Status column for each status transfer that you want to approve. If you do not approve the transfer, select **Rejected**.

If you reject the transfer, Stat prompts you to document your reasons for doing so.

3 If prompted, document the reasons why you are rejecting the status transfer.

4 Click **OK** or **Apply** to save your changes.

If you selected **Rejected**, the approval record stays on the My Open Approvals tab until you change it to **Approved**, or the transfer approval is overridden, or a transfer to a different status occurs.

5 (Optional) Do the following if you have the right to override status transfer approvals:

a Open the All Open Approvals tab and approve or reject status transfers for other users or change their approvals as needed.

TIP: With proper security rights, you can also change your own approvals.

If you change a status transfer approval for yourself or another user, Stat prompts you to document your reasons for doing so.

b If prompted, document the reasons why you are changing your own or another user's status transfer approval.

c Click **OK** or **Apply** to save your changes.

A record of the approval remains on the All Open Approvals tab until the status transfer takes place.

TIP: You can also approve a status transfers in the Approval List tab of the Transfer Rules Status window. For more information, see Transfer Approval Lists on page 34.

Emailing a CSR

The Stat Central Agent automatically manages most communications for you. Based on your service domain configuration, the Stat Central Agent can automatically send emails to customers updating them on CSR statuses or to Stat users informing them of CSR assignments.

Still, there may be occasions when you need to manually email CSR information. For such occasions, Stat can compose emails with data you specify. When you send the email, the Stat Client sends the request to the Stat Central Agent, which processes the request as an outbound email job and then transmits the email to the recipient you identify. Since the CSR information is embedded in the email, the recipient does not need access to Stat.

NOTE: To email CSR information, the Stat Central Agent first must be configured to manage outbound email. See the *Stat System Administration Guide*, Chapter 7, "Email Configuration" for more information.

To manually email CSR information:

1 Open the CSR.

2 Do one of the following:

- Select **File | Email CSR**.
- Click the Mail CSR button in the Stat toolbar.

From the list of available fields, check those you want included in the email.

NOTE: If you select the **Most Recent Log** option and the most recent log entered on the CSR is flagged as confidential, the log is not included in the email message. If you select the **Attachments** option, any attachments on the original CSR will be forwarded with the email message.

TIP: You can save the options you select for mailing CSRs as your personal defaults. The next time you mail a CSR from the same service domain, Stat defaults these options for you. To save the options as personal defaults, click **Save Opts**.

3 (Optional) In the **Message Header** field, type text that will introduce the information to the recipient.

4 (Optional) In the **Message Footer** field, type text that will follow the information.

After specifying the content of the email message, the next step is to specify a distribution list of mail recipients.

5 Click the **Send To** tab.

This is where you define the distribution for the email. You must define at least one recipient.

6 In the **Send To** field, select a value. Options include:

- **Customer** – The customer on the CSR
- **Assigned User** – The user assigned to the CSR
- **Queue Owner** – The owner of the queue on the CSR
- **Specific User** – A specific Stat user
- **Other Address** – A manually entered email address

7 In the **Field** field, select how you want the message addressed to the recipient.

   Options include **To**, **CC**, and **Blind CC**.

8 If you selected **Specific User** in the **Send To** field, select the Stat user you want in the **Other Address** field.

9 If you selected **Other Address** in the **Send To** field, enter the email address in the **Other Address** field.

10 Click **Add**.

   Stat adds the recipient(s) to the list. If you need to remove a recipient, select it and click **Remove**.

11 Click **Send...**.

   The Stat Client sends the request to the Stat Central Agent, which processes the request as an outbound email job and then transmits the email.

CSR Security

Several security features are associated with a CSR. These options are set by your system administrator. Some functions controlled by Security are:

- Viewing a CSR
- Creating a CSR. You can create a CSR and lose access to it the moment you save it if you only have security rights to create a CSR.
- Modifying and saving an open CSR
- Modifying and saving a closed CSR. Once a CSR is closed, you can make changes to it if you have the proper security. Stat also enables your system administrator to completely lock a CSR after a predetermined amount of time has passed. If this is the case and you don't have the security rights to modify a closed CSR, you cannot make additional changes to the CSR once it is locked.
- Modifying each field. You may have the rights to modify only specific fields.
- Adding and deleting tasks
- Creating, opening, and editing a CSR for specific applications. Your system administrator can restrict which applications you can use.
- Adding and modifying detail logs
- Adding and modifying issues

If a field appears grayed out, it means that you lack the security rights to modify that field.

4

Stat Consoles

- The Support Console
- Migration Console

NOTE: The Oracle Apps Console is documented in Patch Management on page 179.

The Support Console

When you login to Stat, the first active window you see is the Support Console, which is your central work area. For Oracle Applications, Stat also features the Oracle Application Patch Management Console. Because this console is module-specific, it is documented separately in Patch Management on page 179.

The Support Console contains two default tabs that display the CSRs and tasks assigned to you. However, you can configure the Support Console by adding tabs that display information you regularly access, such as project information and CSRs and tasks assigned to other Stat users.

Each Support Console has at least two tabs:

- **My CSRs** – This tab displays a list of all the open CSRs assigned to you. Closed CSRs are not displayed.
- **My Tasks** – This tab displays a list of all the tasks assigned to you. Please note that you can have tasks assigned to you from CSRs that are not assigned to you.

Stat enables you to create groups of tabs known as list groups. For example, you can define a list group that only contains tabs related to PeopleSoft and another list group which only contains tabs related to SAP. For instructions on creating a list group, see the section Customizing the Support Console on page 46.

The Support Console includes the following components:

- **Tabs** – A tab represents a grouping of similar CSRs, tasks, objects, approvals, or projects
- **List** – A list gives detailed information about the CSRs, tasks, or projects of the selected tab
- **Console Buttons** – Depending on what kind of list is displayed, the available buttons vary
- **List Group** – A list group is a group of tabs displayed on the console at the same time. In the title bar of the Support Console window, the name of the currently opened list group is enclosed in parentheses.

A tab displays a list of CSRs, tasks, objects, approvals, or projects. You access items by opening a corresponding tab. The My CSRs and My Tasks tabs are always displayed on the console. They are required tabs and cannot be removed.

Adding and removing tabs allows you to configure Stat for your preferences. There are 13 types of tabs:

My CSRs: This tab is always displayed. It lists all open CSRs assigned to you. My CSRs lets you see your workload at a glance.
My Tasks: This tab is always displayed. It displays all tasks assigned to you, regardless of CSR. To access a task, double-click on it. This opens the associated CSR and brings up the Task/Time Window.
Application: Application tabs show all open CSRs for a given application. An application defines what product or facet of your enterprise is represented in the CSR. Examples of applications are PeopleSoft and Benefit Change.

Assigned User: Assigned User tabs display all open CSRs assigned to a specific user. All the CSRs listed here are owned by one user. This is a good way to see the current workload of an employee or team member.

Department: Department tabs list all open CSRs for a given department. A department can be an internal department or an external client. Internally, it can be a department or division of your business, such as Accounting, Administration, or Development. Externally, a department could be the name of a client company.

Global: Global tabs contain a large list of CSRs based on specific criteria. Possible lists are All Open CSRs or All Open and Closed CSRs.

CSR Priority: Priority tabs show all open CSRs for a selected priority. The priority indicates the urgency of the issue. A priority can be descriptive, such as Urgent, High, or Low, or it can be an actual due date, such as 4 hours or 7 days.

Project: The project tab lists all projects in the system according to status. You can see either All Open or All Open and Closed projects. These tabs list all projects, not just those projects owned by a specific user. A project in Stat is a central location used to track all CSRs related to a specific job, such as an upgrade or a software release.

Queue: A Queue tab displays all open CSRs owned by members of a queue. A queue in Stat is a group of users that work in a related area, such as testing, training, or management.

Service Domain: Service Domain tabs list all open and closed CSRs for a given service domain.

CSR Status: CSR Status tabs display all CSRs based on the status of the CSR. A status indicates the current state of a CSR, such as proposed, completed, or in testing.

CSR Type: CSR Type tabs list open CSRs of a specific type. These types categorize the problem or issue stated in the CSR. Examples of types might be enhancements, bug fixes, or emergency changes.

User Tasks: User Task tabs display all tasks assigned to a specific user, regardless of CSR. All tasks listed here are assigned to a particular user. This tab varies from the Assigned User tab, in that these tabs list tasks, while the other lists CSRs.

User Approvals: User Approvals tabs list the migrations and status transfers for which a specific user is designated as an approver. A user's approval can be required or optional.

User Objects: User Objects tabs display all the objects assigned to a specific user. This tab varies from the Assigned User and User Tasks tabs, in that these tabs list objects, while the others list CSRs and tasks, respectively.

The Console Buttons

The console buttons let you perform certain actions. If an action is not available, the button is grayed out. For example, if the currently displayed CSR list is empty, the **Open CSR** button is disabled since there is nothing to open. Buttons include:

- **Export List** - Exports the data in the Support Console to a file
- **Print CSR** – Prints the selected CSR to your default printer

  NOTE: If you want to print the displayed CSR list, export the data to an Excel file and print the list from there.

- **Refresh** – Refreshes the current list, reflecting any changes that have been made or new CSRs entered in the system. Pressing <F5> also refreshes the console.
- **View** – Opens the Setup Console View window which allows the user to format and specify the information they want displayed in a tab
- **Setup** – Opens the Personal Configuration window where you can change the display characteristics and other properties of the Support Console

CSR List

As the name indicates, the CSR list is a list of specific CSRs. The selections displayed in a CSR list depend on the criteria of the chosen tab. If you open a PeopleSoft application tab, the list displays open CSRs with PeopleSoft as the application. If you open the Technical queue tab, the list displays all CSRs currently assigned to the Technical queue.

CSR List Columns

A CSR list displays information regarding the CSRs in a series of columns that correspond to the fields and properties of a CSR window. You can customize a CSR list so that is displays only the columns you want. For more information, see the section Customizing Support Console Lists on page 42.

Although you can select which columns you want displayed, a typical CSR list will include the following:

- **CSR #** - This is a unique number assigned to a CSR by Stat. It identifies the CSR within the system. Each CSR number is given a prefix that indicates the name of the service domain to which the CSR is associated.
- **Title** - The CSR description as it appears in the **Title** field of the CSR
- **Application**- The application for which this CSR was opened. An application defines what product or facet of your enterprise is represented in the CSR. Examples of applications are PeopleSoft version 8 and Oracle Applications. The available choices vary in each environment and are determined by the system administrator.
- **Status** - This field displays the current status of a CSR. Examples of statuses are Open, In process, and Closed. The available choices vary in each environment and are determined by the system administrator.
- **Type** - CSR types divide CSRs into categories. The type helps to identify what kind of problem or request the CSR represents. Examples of types are Hardware Change and Emergency Change. The available choices vary in each environment and are determined by the system administrator.
- **Customer Name** - This field lists the name of the person that reported the problem or made the request. Following the name is the department or organization in which the customer works.
- **Priority** - Every CSR is assigned a priority indicating the urgency of the request. Examples of priorities are Emergency, Urgent, and Low. The available choices vary in each environment and are determined by the system administrator.
- **Customer Priority** - The value displayed in this field indicates what priority the customer believes his or her request should have. Although the value may actually be different than what you decide the priority should be (as indicated in the **Priority** field), this is a way to record the customer's sense of urgency in resolving the issue. Customer priority values are service domain-specific and are defined by your system administrator.
- **Tracking Number** - If the customer has a tracking number for the issue documented in the CSR or if the request initially came from an external help desk system, you can record it in this free form text field.
- **Due Date** - This field displays the date the CSR is due to be completed. An exclamation mark (!) next to the date means that the due date/time has passed.
- **Day** - If the CSR status is open, this is the number of days the CSR has been opened. If the CSR status is closed, this is the number of days that the CSR was open.
- **Assigned To** - This field displays the Stat user assigned to the CSR
- **Unread** - Indicates if the assigned user has not yet read the CSR.

Customizing Support Console Lists

You can customize a list displayed in a tab of the Support Console by specifying the columns you want displayed and in what order. You can also apply filter and sort settings.

To customize a CSR list:

1 On the Support Console, select the tab containing the list you want to customize and click **View...**.

This opens the Setup Console View window.

2 Do any of the following to customize the CSR list:

- Specify the columns you want displayed in the list using the right and left arrow buttons.
- Specify the order in which you want the columns displayed using the up and down arrow buttons.
- Apply sort settings, as described in the section Sorting List Columns on page 43.
- Apply filter settings, as described in the section Filtering List Columns on page 43.

3 (Optional) To save the customized settings between Stat sessions, select the **Save for future session** option.

4 Click **OK**.

Sorting List Columns

You can sort the information displayed in list columns in ascending or descending order. By default the items in a list are sorted in the order they were opened. You can sort columns one at a time or several at once.

When you click on any of the column headings, the sort changes based on that column. If you want to sort a particular column in ascending order, click once on the column heading. If you click on the same column again, Stat changes the sorting to descending. If you click on another column, the sorting changes to that newly sorted column. When you exit, Stat asks you if you want to save your new sort order as a permanent preference.

You can simultaneously sort multiple columns via the Specify Sort Columns dialog box.

To sort multiple columns:

1 On the Setup Console View window, click **Sort**.

This opens the Specify Sort Columns dialog box.

2 In the **Source Data** field, click and hold on the name of the column you want to sort. Then drag and drop the column into the **Columns** field.

3 If you want the column sorted in descending order, deselect the **Ascending** option.

Otherwise the column is sorted in ascending order. It is possible to sort some columns in ascending order and others in descending order.

4 Repeat for each column you want to sort.

5 When finished, click **OK**.

Filtering List Columns

You can apply a filter to a list to provide a quick drill-down to only the items you want to see. For example, you may want your list to show all CSRs that are due after a certain date.

To filter a list:

1 In the Setup Console View window, click **Filter...**.

This opens the Specify Filter dialog box.

2 Create a filter equation using the Operator tool buttons and statements listed in the **Functions** and **Columns** fields.

For example, if you want to filter out CSRs with a due date earlier than 20 NOV 2000, you would create a filter equation that read: “date(due_dt) >date('11/20/00').”

TIP: Stat filter equations use standard SQL syntax. If you have any questions regarding syntax, please call Quest Technical Support. Date format should match the shortdate setting on your PC.

3 Click **Verify** to check the validity of your equation.

   Stat displays a message box telling you if your equation is valid or not.

4 Click **OK** to close the message box.

5 In the Specify Filter window, click **OK**.

Stat displays a message on the right side of the Support Console alerting you that a filter is in use and that a certain number of records are hidden from view:

Console Notifications

When you login to Stat, the Support Console automatically queries the system for any CSRs or tasks that have been assigned to you since you last logged in. You can configure the Support Console to check periodically for new assignments and to notify you right away if it finds anything. Additionally, if a Stat user changes a CSR in such a way that it impacts your list, that change is automatically reflected at each refresh. The Support Console also automatically refreshes the list whenever you select a different tab. Setting refresh time intervals is discussed later in this chapter.

At each refresh, if Stat finds a new CSR it displays the Stat Alert message box.

Click **Acknowledge** to tell Stat that you acknowledge the new CSRs and close the message box. Stat will not remind you again.

Click **Snooze** to close the message box. Stat displays the same message box each time you refresh the current list.

NOTE: The alert window automatically goes into snooze mode when you are within one minute of the next automatic refresh of your CSR list, or if you click on another window within Stat.

Navigating the List

You can navigate the CSR list using either your mouse or the keyboard.

Navigating with the Mouse

You can quickly access many of the Support Console's most frequently used functions by right-clicking anywhere on the CSR list view and selecting from the following options on the pop-up menu that appears:

- **Open CSR** – Opens the highlighted CSR or Project
- **Print CSR** – Prints the highlighted CSR (disabled from Project list)
- **Print List** – Prints the entire list (disabled from Project list)
- **Refresh Data** – Refreshes the list with any new CSRs or Projects
- **Filter Data** – Opens the Specify Filter dialog box, which is described above in the section Filtering List Columns on page 43.
- **Sort Data** – Opens the Specify Sort Columns dialog box, which is described above in the section Sorting List Columns on page 43.
- **Select List Group** – Allows the user to display a different list group

Navigating with the Keyboard

You can scroll up or down the CSR list by pressing the Up and Down Arrow keys. Pressing the <Enter> key opens the currently selected CSR.

Project List

The Project list displays a list of all projects. For more information on projects, see The Project Window on page 59.

The Project list is arranged in columns. Each line of the list represents a single project. A grayed out line means the project has been completed.

The Project list displays the following fields:

- **Project Code** - The user-assigned code for the project. These codes are unique across all service domains in Stat.
- **Description** - A description of the project.
- **Start Date** - The date the project started or is scheduled to start.
- **End Date** - The date the project is scheduled to be completed.
- **Project Owner** - The user primarily responsible for the project.

User Object List

The User Object list displays a list of the objects assigned to a specific user. For more information on objects, see the “Object Management” section in the appropriate change management chapter.

The User Objects list is arranged in columns. Each line of the list represents an object assigned to the user.

The User Object list displays the following fields:

- **CSR #** - The CSR that the object is associated with.
- **Flags** - Displays icons that represent various types of information about the object. For more information on objects, see the “Object Management” section in the appropriate change management chapter.
- **Type** - The type of object.
- **Object** - The name of the object.
- **Database** - The PeopleSoft database or generic application environment in which the object resides.
- **Mod** - Indicates whether or not the object has been modified. Values include No if the object has not been modified, Yes if it has, and Unk if Stat cannot make a determination. New if the object does not exist.

User Approval List

The User Approval list displays a list of the migrations and status transfers that a specific user has either yet to approve or has rejected. A user’s approval can be required or optional. For more information on migration approvals, see the “Object Migrations” section in the appropriate change management chapter. For more information on status transfer approvals, see Approving Status Transfers on page 37.

The User Approval List displays the following fields:

- **CSR #** - The CSR on which the migration or status transfer is documented.
- **Title** - The title of the CSR.
- **Status** - If blank, the approval is pending. Displays the value Rejected if the user declined to approve the migration or status transfer.
- **Approval Type** - Indicates if the approval is for a migration or status transfer.
- **Database** - For migration approvals only. Displays the name of the target database.
- **Archive ID** - For migration approvals only. The ID of the archive set in this migration.
- **Archive Type** - For migration approvals only. Indicates the archive set type: base, interim, or final.

- **Archive Description** - For migration approvals only. The description of the archive set.
- **From Status** - For status transfer approvals only. The status that the CSR is to transfer from.
- **To Status** - For status transfer approvals only. The status that the CSR is to transfer to.
- **Approver Type** - Indicates whether the user is authorized to make the approval on either an individual basis or as the member of a user class.
- **Required** - Indicates whether the approval is required or optional.
- **Min Approvals** - Displays the minimum number of optional users in a class who must approve the migration or status transfer.
- **Assigned Date** - The time and date that the migration or status transfer was assigned to the user for approval.

User Task List

The Task list displays the open tasks assigned to specific users. Remember that the My Tasks tab displays all the tasks assigned only to you. For more information, see The Tasks Tab on page 53.

As with the CSR list, the User Task list is divided in multiple sections:

- The List section displays all the tasks in column format
- The Summary section displays a brief summary of the tasks shown in the List section. This lets you clearly understand a user's work load. From this section you can learn how many tasks are assigned to a user and how many are past due. Additionally, you can determine the total hours estimated to complete the tasks, the number of actual hours worked towards finishing the tasks, and the total hours remaining.
- The CSR Info section displays information about the CSR to which the currently selected task belongs

The User Task List displays the following fields:

- **CSR #** - The CSR to which the task belongs.
- **Activity Code** - The activity code for the task. These codes represent different types of tasks and are defined within service domains.
- **Task Description** - A short description of the task. This can be the description associated with the activity code, a description entered automatically by Stat, or a description entered by the user adding the task.
- **Hours Estimate** - The estimated number of hours needed to complete the task.
- **Hours Actual** - The number of hours users have worked towards completion of this task. If the actual number of hours exceeds the estimated hours, this value is displayed in red.
- **Hours Remain** - The difference between the estimated and actual number of hours for the task. If the actual hours exceed the estimated hours, or there is no estimate for this task, the value is zero.
- **Has Comments** - Indicates whether comments have been entered for the task.
- **Due Date** - The date and time the task is to be completed. As with CSRs, past-due tasks are flagged with a blue exclamation mark.
- **Assigned To** - The Stat user assigned to the task.

Customizing the Support Console

You can customize the Support Console to meet your particular needs. Clicking **Setup** on the console opens the Personal Configuration window. From here you can:

- Add additional CSR, task or project tabs
- Add additional list groups
- Change the display properties of list views and tabs

- Set up personal reports. This lets you schedule report printing. For more information, see About Stat Reports on page 69.
- Set up personal rules. This advance functionality is discussed further in Personal Rules on page 78.

The Personal Configuration window contains four tabs: CSR Lists, List Options, Scheduled Reports, and Personal Rules.

The CSR Lists Tab

From here you can add, remove, or change the display order of tabs in an existing list group or create new list groups.

Defining List Groups

From here you can create an unlimited number of list groups.

To create a list group:

1. On the CSR List tab of the Personal Configuration window, click **Add/Delete...**.

   Stat opens the Select List Group dialog box.
2. Type the name of the new list group. Then click **Add**.

   The new list group is displayed in the **Group** field on the CSR List tab.
3. In the **Available Lists** field, click on the arrow and select the tab list containing the tab or tabs you want to add.
4. Double-click on the tab you want to add to your list group, or select the tab and click **Add >>**.
5. Click **OK**.

To delete a list group:

1. On the CSR List tab, click **Add/Delete...**.
2. In the Select List Group dialog box, select the list group you want to delete. Then click **Delete...**.

   Stat displays a message box prompting you to confirm the deletion.
3. In the message box, click **Yes**.

NOTE: The Default list group cannot be deleted. All users must have the Default list group.

Adding, Removing, and Changing Tabs

To add tabs:

1. In the **Group** field, select the list group you want.
2. In the **Available Lists** field, select the type of list you want. If you want to see all the available lists, select **All Lists** from the drop down menu.
3. Double-click on the desired tab, or select it and click **Add>>**.

   The tab is moved to the **Group** field and the icon changes to a tab folder to indicate that it is a personal tab.

To remove tabs:

1. In the Personal Configuration window, select the list group you want in the **Group** field.
2. Select the tab you want to remove and click **<<Remove**, or drag the tab from the right column and drop it in the left column.

   The tab is removed from the list on the right and the item picture is changed from a tab folder icon to the appropriate picture.

To change the tab sequence:

1. In the Personal Configuration window, click and hold on the tab you want to move.
2. Drag and drop the tab at the desired position.

NOTE: To save changes, click Apply. To save and return to the Support Console, click OK. To abandon your changes, click Cancel.

The List Options Tab

This tab lets you customize the appearance and behavior of the tabs.

Show Tab Tips

When working in the console, if you position your mouse over a tab, a pop-up window appears displaying the entire name of the tab. You can disable this capability by deselecting Show Tab Tips.

Show Tab Pictures

Each tab can be displayed with or without an icon. Icons are visual clues that help you recognize the tab type. For example, user tabs are preceded by an icon of a human face, whereas tasks are preceded by a checkmark icon. Deselecting the Show Tab Pictures removes the icons from the tabs.

Multi-Line Tabs

If this item is selected, the tabs “wrap” to show all of the tabs in the window, using multiple rows if necessary. If deselected, there is one row of tabs. If additional tabs exist that are not displayed on the row, a set of scrolling arrows appears.

Abbreviate Tab Labels

This option truncates long tab labels to a specified number of characters. For example, if set to 20, the label “Department of Fiscal Responsibility” appears as “Department of Fiscal....” Use the scroll buttons to increase or decrease this value.

CSR List Refresh Rate

This setting controls how often Stat alerts you of changes to CSRs, tasks, and projects. The minimum and maximum allowable settings are defined by your system administrator.

CAUTION: If the settings you choose are outside the range established by the system administrator, Stat uses the closest allowed setting.

Migration Console

The Migration Console displays information regarding past, present, scheduled, and planned migrations. The console initially displays only the migrations initiated by the user logged in to Stat, but you can expand the list to see migrations performed by all users.

Main Console Window

By default, the console displays all the migration jobs that have been submitted to the Stat Central Agent within the last 7 days, but this time frame can be modified by system administrators.

Select the **Show All Migrations** option to view all the migrations run by all users.

From here you can print or export the list by pressing the appropriate button. You can also filter the list using SQL commands. For PeopleSoft users, you can check the lock status of staging databases.

The main console window displays the following information about a migration. Double-click a migration to see more detailed information, including log reports, approval statuses, and the migration status of individual objects.

Column	Description
Migr ID	The number that identifies the migration.
Status	The current status of the migration. Options include: Scheduled PS Waiting for Lock (PeopleSoft only) PS Lock Removed (PeopleSoft only) Canceled OA Generation Error (Oracle Apps only) Submitted Completed In Process PS Pending (PeopleSoft only) PS in Process (PeopleSoft only) Complete with Warning Complete with Error Waiting for Pre-Step Waiting for Post-Step Planned
Auto	(PeopleSoft) Indicates if the archive set was auto-migrated.
Schedule Date	If the migration was scheduled, the scheduled date and time
Start Date	Date and time the Stat Central Agent began migrating the archive set.
End Date	Date and time the Stat Central Agent completed migrating the archive set.
Duration	How long it took to complete the migration in hours, minutes, and seconds
Description	The description of the migration, either the Stat-assigned default description or the description the user assigned.
Archive ID	CSR archive set number.
Target Environment	The environment the archive set was migrated to.
Release	The release label assigned to the archive sets.
Module	The change management module in which the migration took place. Options include **PeopleSoft**, **Generic Applications**, and **Oracle Applications**.
Migration Type	Indicates how the migration was initiated. Options include: **CSR Migration** (drag and drop), **Rapid Recovery**, **Release Recovery**, **Mass Migration**, **Point-to-Point**, **Archive Sync**, and **Object Sync**.
Stage Environment	(PeopleSoft) the environment in which the PeopleSoft objects in the archive set were staged.
Staged	(PeopleSoft) Indicates if the PeopleSoft objects in the archive set were copied to the Staging database.
PS Project	(PeopleSoft) The PeopleSoft project that the archive set is associated with. This field is blank if the archive set did not include any PeopleSoft proprietary objects or if only the file objects of the archive set were migrated.

Column	Description
Canceled By	If the migration was canceled, the user who canceled it.
Submit Date	The date and time the migration job was submitted to the Stat Central Agent.
Migrator	The user who ran the migration.

Migration Details Window

The Migration Details window shows additional information about a migration, including the migration status of the individual objects, approval statuses, pre and post migration steps, and logs. To open the Migration Details window, do one of the following:

- In the Migration Console, select a migration and click the **Migration Details** button or double-click a migration row.
- In the Migration History Wizard, select a migration and click **Details**.
- Double-click an environment, either in the Migration Path tab or in the CSR window.

  NOTE: When you open the Migration Details window by double-clicking an environment, the window shows information regarding all the migrations that have targeted that environment.

The top portion of the Migration Details window displays much of the same general information as the main console window, but with additional information, such as:

- **Submit Date**— The date and time the user ran the migration
- **Schedule Date** — In the case of scheduled migrations, the date and time the migration was scheduled
- **Maintenance** — For migrations to Oracle Apps environments, indicates whether Maintenance Mode was enabled or not.
- **Migration Exit Option** — Indicates whether Stat is configured to stop the migration if any errors are encountered
- **Edition** — For migrations to Oracle Apps R12.2 environments or higher, indicates the file system to which file objects were migrated. Options include **Run**, **Patch**, or **Both**.

The bottom portion of the Migration Details window displays the migration status of each object contained in the archive set, migration approval statuses, pre and post migration steps, and migration logs.

NOTE: In the case of migrations to distributed environments, the Objects tab displays the migration status of each object to each environment.

In the Migration Details window:

- If you are a user with appropriate user rights, you can change the status of a migration that has not yet been processed from **Submitted** to **Completed** or **Canceled** and from **Planned** to **Submitted** or **Canceled**. If you change the status to **Completed**, however, the migration is assigned the status **Completed with Errors** since the Stat Central Agent had not yet migrated all the objects.
- You can use the **Pre and Post Migration Steps** tab to run steps, view logs, or update migration step status.
- To view migration approval statuses, select the Approvals tab, which shows who approved the migration and when.
- (PeopleSoft) To view the audit flags and other PeopleSoft project settings, click the Audit Flags button. This opens the Upgrade Options window in read-only format which shows whether these properties were set to be copied into the target environment during the migration or whether the settings as defined in the target environment were retained.
- Use the refresh button to update the status of migrations.
- The Log tab displays a list all the Stat-generated migration logs, including (for PeopleSoft) the PeopleSoft project copy log. Double-click a log to open it.

Patch Application History

(Oracle Applications only) If patches have been applied to the selected environment, the Migration Details window features an additional Patch Application History tab, which is divided into two sections. The top section displays information concerning each patch that has been applied to the selected environment. When you select a patch, the bottom section of the window shows information about each object included in the patch file. From here you can also access information about patch application approvals and the driver files contained in the patch.

In the Patch Application History tab, all the patches applied to the selected environment appear in descending order with the most recently applied patch set appearing first.

The Patch Application History tab displays the following information:

Column	Description
Patch Name	The ID number that Oracle Support assigns the patch for tracking purposes.
Apply ID	A unique ID number assigned to each patch application request.
Process Order	If the patch was included in a multiple patch application request, the order in which it was scheduled to be applied. The default order number is 1.
Process Status	Shows if AutoPatch encountered an error when processing a patch. Possible statuses include Completed, Completed with Warnings, and Completed with Errors (Pending requests have a status of Pending/New, Sent to Agent, Received by Agent, or In Process. The status Not Processed means AutoPatch failed the process event before processing the driver).
Date Applied	The time and date the patch was applied to the selected environment.
Applied By	The user who applied the patch.
Process Type	The type of patch application request. options include Apply Patch, Roll Back, and Patch Impact.

Impacted Objects Tab

When you select a patch application in the top portion of the Patch Application History tab, the Impacted Objects tab lists all the objects (if any) that were modified during a patch application request. The information includes the class, type, name, navigation path, its pre- and post-patch version number, and application name.

If applicable, you can view the navigation paths that access an object (for example, the responsibilities and menus that access a form) by selecting the object and clicking **Navigational Path**. Stat displays the navigation paths in the View Navigation Path window. Only active navigation paths associated with one or more active users are included.

Drivers Tab

The Drivers tab displays the driver files for each platform and language targeted by the patch. The Process Order column displays the position of the file in the processing order. The Process Status column shows if AutoPatch encountered an error when processing a driver file. Possible statuses include Completed, Completed with Warnings, and Completed with Errors (Pending requests have a status of Pending/New, Sent to Agent, Received by Agent, or In Process. The status Not Processed means AutoPatch failed the process event before processing the driver).

Approvals Tab

If patch applications in a target environment require approvals, you can view who approved the patch application request and when.

5

Tasks and Time Entries

- Relationship between Activities and Tasks
- The Tasks Tab
- Posting Time to Tasks

Relationship between Activities and Tasks

Tasks detail all of the steps necessary to solve a problem or complete a request. For example, a CSR for the setup of a new employee may include numerous tasks, such as getting a confidentiality agreement signed, creating a user ID, and scheduling computer training. A CSR can contain an unlimited number of tasks, which you can assign to many users. Tasks are associated with activity codes that group related tasks.

Stat groups related tasks into what are called activities. Activities are commonly performed, high-level jobs that consist of several tasks. They are defined by a system administrator and are identified by activity codes.

Activities categorize your tasks for reporting purposes. Examples of activities and associated tasks might be:

Activity: Invoicing

Tasks: Prepare Invoice
Enter Invoice in System
Send Invoice

Activity: Code Documentation

Tasks: Document Changes - Post Change
Document Changes - Pre Change

Activity: Communication

Tasks: Notify User
Notify Team
Email Sponsor
Contact Vendor

Activity: Installation

Tasks: Complete Installation Checklist
Cut CD
Install Software

The Tasks Tab

The Tasks tab is displayed in a CSR window. It lists all the tasks associated with the displayed CSR. This tab is optional by service domain. Your system administrator determines if a service domain uses this tab. When tasks are assigned to a user, they automatically appear on that user's My Tasks tab on the Support Console.

The Task Fields

The Tasks tab displays the following information:

Status

The status of the task is indicated by one or more icons:

	A small pink star next to the task indicates that it was added by the system automatically
	A white checkmark indicates that hours have been posted, but it has not been marked as completed
	A green checkmark indicates that the task has been completed
	An exclamation mark next to a task indicates that it is past due

No icon indicates that no hours have been posted, the task has not been marked as completed, and it is not past due.

% (Pct Complete)

The percentage of the estimated time required to complete the task that has been worked.

Task Description

A brief description of the task.

NOTE: Task descriptions can include comments that have been added to the task. To hide comments, click **Hide Cmt**. To show comments, click **Show Cmt**.

Activity Code

Each task must be associated with an activity code. An activity code is a category of tasks.

Start Date

The date when the task is scheduled to start.

Due Date

The date when the task is due to be completed.

Estimated Hrs

The estimated number of hours required to complete this task.

Actual Hrs

The total number of hours posted to this task thus far.

Assigned

The user assigned to the task.

Average Pct Complete

The average completion percentage of all the tasks associated with the CSR.

Auto Tasks

As you create a new CSR or change the information on a CSR, Stat evaluates your entry and adds new tasks as needed. This type of task is called an auto task. Stat's auto task capabilities let you quickly define advance workflows, including what takes place, when, and by whom. For example, as the status of your CSR changes from Approved to Move to Production, Stat can automatically create and assign to different users various tasks, such as “backup database,” “inform users PeopleSoft will be unavailable from 2 to 3,” and so on.

Auto tasks are activated by the **Application**, **CSR Type**, and **Status** fields of a CSR. If your CSR contains an application, type, or status that has an associated auto task, Stat automatically adds it to the Task/Time tab. A pink star in the status field of a task indicates that it is an auto task.

The user assigned to the task is determined by how your system administrator configured the task. It can be the user who opened the CSR, a predefined user, the user assigned to the CSR, the user currently logged on, or a user which you must select. Remember that each task in a CSR can be assigned to a different user.

User-defined Tasks

You can manually add tasks to a CSR at any time and assign them to other users in the CSR’s service domain. When you add new tasks, one of two windows appears, depending on the service domain.

If the service domain uses the Time Entry feature, Stat opens an Edit Activity window with the Daily Time Entries section. The Time Entry feature and Daily Time Entries are discussed later in this chapter.

If the service domain doesn’t access the Time Entry feature, the Edit Activity window without the Daily Time Entries section is opened instead.

To add a task:

1. On the Tasks tab of a Change/Service Request window, click **New**.
2. In the **Activity Code** field, select an activity code from the list.

   Activity codes identify job categories that group related tasks. If the task does not fall into one of the predefined categories, select **Other**.

   > **NOTE:** When a new task is added, Stat enters the selected activity code in the Description field. If this task is defined to allow editing of the field, you can change the description. Otherwise, this field is grayed out.

3. In the **Assigned To** field, select the user you want to assign this task.

   The list includes all active users for the service domain.
4. In the **Estimated Hrs** field, enter the estimated number of hours it will take to complete the task.

   A value in this field is necessary for the system to determine the complete percentage.
5. In the **Comments** field, type any comments regarding this task.

   Some tasks may require a comment when completed. Stat notifies you of this by displaying the word “Required” next to this field.
6. To scan through all of the tasks of a CSR, click **Next >>** or **<< Previous**.

   Next >> takes you to the next task of the CSR, while **<< Previous** takes you to the previous task of the CSR.

   The **Start Date** field defaults to today’s date, but you can modify it if necessary.

   The **Due Date** automatically defaults. The due date of an auto task is determined by the system administrator. For example, the system administrator can specify that the task is due three days before the due date of the CSR. When you manually add a new task, the due date defaults to the CSR due date. You can also modify the due date if necessary.

   Stat automatically updates the **Pct. Complete** field if you select the **Auto-update % complete** option.

7 Click **OK** when you are finished, or add another task if you want by pressing the New button.

Updating and Deleting Tasks

To edit a task:

1 Open the Edit Activity window from one of four locations:

- Select the task you want to edit and click **Edit...** button.
- From a Project window, select the Task/Activity tab. Then double-click on a task, or select it and click **Edit...** button. This is discussed further in Chapter 6, “Stat Projects.”
- Select **Tools | Time Entry.** Then double-click the task in the Time Entry window, which displays a list of all your open tasks with time entry fields for each day in the current week.
- Select the My Tasks tab in the Support Console. Then double-click the task you want to edit.

2 In the Edit Activity window, modify the task as needed. Then Click **OK**.

To delete a task:

On the Tasks tab of the Change/Service Request window, select the task and click **Delete** button. The task is deleted immediately. Once you have deleted a task it cannot be recovered.

Posting Time to Tasks

Stat provides two useful ways for you to update and keep track of how much time users spend on particular tasks:

- If the Time Entry feature is activated for the service domain you are working in, you can use Daily Time Entries to update all the tasks associated with a CSR or project, including tasks not assigned to you. All the tasks associated with a single CSR are listed together to allow for quick updates.
- You can use the Weekly Time Entry feature to store and post time against all your tasks from one location. All open tasks assigned to you are displayed in list format with each day of the current week in its own column, which provides a convenient way for you to post time at the end of each week. You use this feature when you only want to post time entries on your own tasks.

Daily Time Entries List

In the Edit Activity window, Daily Time Entries show the hours posted to a task by a single user on a given date. With the proper security, you can post hours worked by you or another user.

If the **Auto-update % complete** check box is selected, a task is considered complete when the actual hours posted meets or exceeds the estimated hours. If the check box is not selected, you have to specify this number yourself.

If you select the **Complete** check box, the **Pct. Complete** field is automatically set to 100%. Either way, when the percentage complete reaches 100%, Stat automatically updates the **Complete Date** field with the current date and time.

NOTE: You can also mark a task as complete directly from the Task/Time tab. To do this, select the task and click Complete, or right-click a task and in the pop-up menu select Mark as Complete. This automatically sets the % column to 100%.

Date

This field displays the date when hours were posted. When you add time, the date defaults to today’s date. You can override the default by clicking in the field and typing a different date.

User

This field displays the user who worked the posted hours. Even though the task might be assigned to a specific user, another user with appropriate rights can also work on the task. When you add time, you are the user by default. You can override the default by clicking the arrow button and selecting another user.

Hours

This field displays the number of hours spent working on the task. Minutes are expressed in terms of percentages. For example, if a task took 2 hours and 45 minutes, you would enter the value 2.75. The number of hours posted is automatically added to the value displayed in the **Actual Hrs.** field.

Working with Daily Time Entries

1 Open the Edit Activity window from one of three locations:

- On the Tasks tab of the Change/Service Request window, double-click on the task you want to edit or select it and click **Edit...** button.
- On the Tasks tab of a Change/Service Request window, click **New**.
- From a Project window, select the Task/Activity tab. Then double-click on a task, or select it and click **Edit...** button. This is discussed further in Chapter 6, “Stat Projects.”
- Select **Tools | Time Entry.** Then double-click the task in the Time Entry window, which displays a list of all your open tasks with time entry fields for each day in the current week.

2 Do any of the following:

- To add a new time entry, click **Add Time** to post new time to the task.
- To delete a time entry, select the time entry you want to delete and click **Delete Time**.
- To sort time entries, click on the column heading you want to sort. Clicking once sorts it in ascending order. Clicking a second time sorts it in descending order.
- To enter comments, double-click the blank space in the left hand column (which displays a pencil and paper icon) for the time entry. Then in the Edit/View comments window, type the comment you want. Then click **OK**. Stat displays a green checkmark beside the time entry. To view a comment, double-click the icon. You cannot sort using this column.

  NOTE: Unless given proper security rights, you cannot add comments to another user’s time entry.

- To view time entries on different tasks, click **Next>>** and **<<Previous**, accordingly.

Weekly Time Entries

The Weekly Time Entry feature lets you post time entries to your own tasks on a week-to-week basis.

To post a weekly time entry:

1 Select **Tools | Time Entry**.

Stat opens Time Entry window, which displays a list of all your open tasks with time entry fields for each day in the current week.

If you want to post time entries for an earlier week, click **Select Week...**. Then in the Select Week End Date dialog box, click the Browse button (**...**) and select the week you want from the calendar. Click **OK** to close the dialog box.

2 Configure the display properties of the Time Entry window as needed by selecting from the following options:

- **Hide tasks with no hours** – Check this box to hide from view tasks with no hours posted

- **Auto-Update% Complete** – Check this box if you want Stat automatically to update the % field for each task based on the total actual hours

3 Select the daily time entry field corresponding to the task and day for which you want to post hours. Then enter the number of hours you worked.

4 Click **Apply**.

5 Repeat for each time entry you want to post. When finished, click **OK**.

6

Stat Projects

- Opening Projects
- The Project Window
- The Issues Tab
- Understanding Project Security

Opening Projects

Stat projects let you manage complex business changes from one location. By incorporating multiple CSRs and tasks, Stat projects help users understand high-level functions that span across service domains. For example, you can run a bill report on a project and determine the cost of every task involved in implementing an overall business strategy.

By way of illustration, consider a project created to address the many issues surrounding a PeopleSoft upgrade. PeopleSoft has many functions, changes to which impact other business units in your organization, such as CSRs in different service domains. Let's say you have a training domain, a change management domain, and an infrastructure domain; since your upgrading effort is supported by CSRs in each of these domains, you can group them all in a project and monitor them from a single window.

To open a new project, select **File | New Project**. Stat opens a blank Project window.

To open an existing project, do one of the following:

- From a Project tab in the Support Console, double-click on a project, or select it and click **Open Project**.
- If a CSR is associated with a project, you can open that project by double-clicking in the **Project** field within the CSR.

To search for a project:

1. Select **File | Open Project**.

   Stat opens the Search Project Engine window.
2. Select the search criteria and enter the search value in the **Search Value** field.
3. To locate open projects only, select the **Open Projects Only** option.
4. Click **Search**.

   Stat returns a list of projects matching your search criteria.
5. Double-click the project you want to open, or select it and click **OK**.

The Project Window

Projects associate multiple CSRs with a single entity. They are a good way to track large jobs that have many steps or tasks. You can track as a project any job that encompasses many phases, requires a variety of resources, and crosses over service domains.

The Project window is divided into 2 regions:

- The General Project Information region
- The Project Detail Information region, which includes the CSRs, Task/Activity, and Issues tabs

The General Project Information Region

The top portion of a Project window contains general information about the project.

Project Code

The unique, user-defined number that identifies the project across all service domains in Stat.

Description

A short description of the project. The description appears on project lists.

Project Owner

The Stat user primarily responsible for the project.

Comments

A free-form, 2000-character field for comments.

Start Date

The date the project is scheduled to start.

End Date

The date the project is due to be completed.

Completed

If checked, indicates that the project is complete.

Service Domains

This field indicates which domains are included in the project. Only the domains to which you have access appear this field.

Before adding new CSRs or tasks, check the corresponding service domain. When you deselect a service domain, the CSRs and tasks that belong to the domain are removed from the project. Stat displays a message box prompting you to confirm this action.

The Project Detail Information Region

The Project window displays more specific information about a project in a series of tabs. These include the CSRs tab, the Task/Activity tab, and the Issues tab.

The CSRs Tab

This tab contains a list of all the CSRs associated with the project. It functions the same way as the CSR list on the Support Console. To open a CSR, double-click on it, or select it and click **Open CSR** button, or right-click on it and in the pop-up menu select Open CSR.

Associating CSRs to Projects

You can associate existing CSRs with a project from either the CSR window or the Project window.

To associate a CSR to a project from the Project window:

1. In the CSRs tab, click **Lookup...**.

   Stat opens the Search CSR Engine window.
2. In the **Service Domain** field, select the service domain of the CSR you want.
3. Select one of the **Search By** options to specify the search criteria.
4. Depending on the search criteria you selected, enter the search value in the **Search Value** field.
5. Select the **Open CSRs Only** option if you want to locate only open CSRs.
6. Click **Search** button.

   Stat returns a list of CSRs matching the search criteria.
7. Select the CSR you want to add and click **Add**.

You can also associate a CSR to a project from the CSR window

You can also associate a CSR to a project by dragging and dropping it from the Support Console when the Enable drag and drop from console check box is selected in the Project window.

You can associate a CSR with only one project. Stat displays an error message box when you try to associate a CSR that's already associated with another project.

To remove a CSR from a project:

Select the CSR you want to remove on the CSRs tab and click **Remove**.

Exporting CSR Reports and Lists

From the CSRs tab you can export the list of the CSRs displayed on the tab, or you can export the details of individual CSRs in the form of a CSR PDF report.

To export the CSR list, click **Export** and select the format to export.

To export the CSR in PDF format, select CSR and click **Export CSR**.

The Task/Activity Tab

The Task/Activity tab displays a list of all project tasks. It is similar to the Task/Time tab on a CSR window with the exception that this list has an additional column indicating the number of the CSR to which the task belongs.

NOTE: If you want to sort a particular column on the Task/Activity tab in ascending order, click once on the column heading. If you click on the same column again, Stat changes the sorting to descending.

Adding a New Task

You can add tasks to a project at any time.

To add a task:

1 On the Task/Activity tab, click **New...**.

Because tasks are always associated with a CSR, you need to select an available CSR from the project list before adding the new task.

2 In the Select CSR dialog box, select a CSR and click **OK**.

Stat opens the Edit Activity window.

3 Follow the procedure for creating tasks in Tasks and Time Entries on page 53.

The CSR/Task List Region

The CSR/Task list region displays read-only information about CSRs and tasks.

CSR/Task Column

Displays the CSR number and a brief description, followed by its tasks. The list is sorted chronologically by start date.

Start Column

The start date and time of the CSR and task.

End Column

The due date and time of the CSR and task.

Duration Column

The life cycle of the CSR or task measured in days and hours.

% Complete Column

The completion percentage of the tasks.

Assigned To Column

The user responsible for the CSR or task.

The Issues Tab

The Issues tab is where you can document and keep track of problems and concerns specific to a project or to any of the CSRs it contains. An issue can be anything that in some way affects a project, such as a technical question or a scheduling conflict.

Like CSRs, issues are assigned to users who are responsible for resolving the problem they represent. However, the Issues tab is meant for informational purposes only. Unresolved issues do not prevent you from closing a CSR or project.

From the Issues tab of the Project window, you can also document and track issues affecting any of the CSRs contained in the project. To view or add CSR issues from the Project window, click **CSR Issues**. This changes the view of the Issues tab from project issues to CSR issues. For more information, see Issues Tab on page 26.

To add a CSR issue from the Project window:

1 In the Issues tab, click **New**.

Stat displays the Select CSR dialog, which displays a list of all the CSRs that belong to the project.

2 Select the CSR for which you want to add an issue. Then click **OK**.

3 Complete the remaining steps for adding a CSR issue as described in Change/Service Requests on page 18.

4 To switch back to the project issues view, click **Project Issues**.

To add a project issue:

1 In the Issues tab, click **New**. Stat opens the Edit Issue window.

2 In the **Assigned To** field, select the user responsible for resolving the issue.

3 In the **Status** field, select the current status of the issue. Available options are defined by you system administrator.

4 Enter information in the two custom label fields as determined by your system administrator.

> **NOTE:** The custom label fields and Status options are defined in the Issue Tracking maintenance table. For more information, see the *Stat System Administration Guide*, Chapter 4, "General Maintenance Tables."

5 In the **Description** field, enter a detailed description of the issue.

6 Click **OK**.

7 In the Project window, click **Refresh** to see the issue just created.

To close an issue:

1 In the Issues tab, select the issue you want to close. Then click **Edit**. Stat opens the Edit Issue window.

2 In the **Status** field, select the appropriate closed-type status. When you select a closed-type status, the **Closed** field automatically displays the current date and time.

3 In the **Resolution** field, enter a description of how the issue was resolved.

4 Click **OK**.

5 In the Project window, click **Refresh**. Closed issues are displayed in gray.

Understanding Project Security

Security rights are determined by a system administrator and assigned by user class. When you work with projects, your user class determines the functions you can perform.

With projects, the security options determined by your user class are:

- **Access different service domains** – Although projects can cross service domains, you must specify which service domains apply to a project. You can only apply service domains that your user class has access to.
- **Open new projects** – If your user class does not include this right, the New Project option is disabled on your menu
- **Edit projects assigned to other users** – Security may restrict you from being able to modify a project assigned to a different user
- **Add CSRs** – Your user class determines if you are able to add CSRs to a project
- **View all CSRs associated with a project** – You can only see the CSRs from the service domains to which you have access
- **Adding and editing project and CSR issues**

7

Search Engines

- The Search CSR Engine
- The CSR Search Wizard
- The Customer Search Engine
- The Search PeopleSoft Customer Engine

The Search CSR Engine

The Search CSR Engine helps you find a specific CSR in the database by number, customer, open date, department, or tracking number. Like the other search engines, the Search CSR Engine is triggered by search criteria. When you initiate a search, Stat retrieves all the CSRs that match your criteria. From here you can open any retrieved CSR.

To search for CSRs:

1 Select **File | Open CSR....**

Stat opens the Search CSR Engine.

2 In the **Search Domain** field, select the service domain the CSR belongs to.

If you aren't sure or don't know the service domain, select **Any Service Domain**.

3 Select a **Search By** option.

Options include:

- **Number** – Select this option if you want Stat to return CSRs that match a specified CSR number
- **Customer** – Select this option if you want Stat to return CSRs requested by a specified customer
- **Open Date** – Select this option if you Stat to return CSRs that were opened on a specified date
- **Department** – Select this option if you want Stat to return CSRs assigned to a specified department
- **Tracking Number** – Select this option if you want Stat to return CSRs that match a specified tracking number

4 In the **Search Value** field, select or enter a proper search value.

The function of this field changes depending on the **Search By** option you selected in step 5.

- If you selected **Number**, the field changes to a CSR number entry field
- If you selected **Customer**, the field features a browse button (**...**) that opens the Search Customer Engine
- If you selected **Open Date**, the field features a browse button that opens a calendar dialog box
- If you selected **Department**, the field changes to a department drop down list
- If you selected **Tracking Number**, the field changes to a **Tracking Number** entry field

5 Select the **Open CSRs Only** option if you want the results list to exclude closed CSRs.

6 Click **Search** or press <Enter>.

You can open any retrieved CSR by double-clicking on it, or by selecting it and pressing the **OK** button.

The CSR Search Wizard

Similar to a search engine, the CSR Search Wizard is a powerful tool that guides you through the process of tracking and investigating the history of recurring issues. Using this wizard, you can locate any CSR, open or closed, that addresses a specified problem. This way you can determine how similar problems were solved in the past or perhaps why a particular problem keeps recurring.

The CSR Search Wizard assists you in finding the resolution to these recurring issues by retrieving all the CSRs, regardless of status, that match a keyword search criteria you specify. Since CSRs are never purged from the system, valuable information is always available.

To use the CSR Search Wizard:

1 Select **Tools | CSR Search Wizard**.

Stat opens the CSR Search Wizard, which walks you through the steps of conducting your search.

2 Click **Next >**.

3 In the **Service Domain** field, select a service domain.

By default, the search wizard searches in your default service domain. You can also search all service domains that you have access to by selecting Any Service Domain. If you select this option, the service domain-specific options **Application Is** and **CSR Type Is** are disabled.

4 Do one of the following:

- If you want to search for CSRs with an open-type status, select **Open CSRs**. Then, if you want to search for CSRs that were opened during a specific time range, specify the time range you want in the **CSR Open Date** field.
- If you want to search for CSRs with a closed-type status, select **Closed CSR**. Then, if you want to search for CSRs that were closed during a specific time range, specify the time range you want in the **CSR Closed Date** field.
- If you want to search for CSRs regardless of closed or open status, select **Both**. Then, if you want to search for CSRs that were opened or closed during specific time ranges, specify the time ranges you want in the **CSR Open Date** and **CSR Closed Date** fields.

5 If searching by application, select **Application Is**. Then select an application.

6 If searching by CSR type, select **CSR Type Is**. Then select a CSR type.

7 Select where in the CSR you want to search for matching keywords.

Options include various tabs and fields, as well as the various comments windows. Click **Select All** or **Select None** to select or deselect all the options.

8 In the **Search For** field, enter the keywords you want to search for. Then in the **Advanced** field, select one on the following:

- Select **Exact Phrase Match** if you want to search for text that matches the keywords exactly as entered in the **Search For** field
- Select **Matches on all words (AND)** if you want to search for text that matches each keyword you entered
- Select **Matches on all words (OR)** if you want to search for text that matches any one of the keywords you entered

NOTE: You can enter partial words. For example, if you search for the word “print,” the wizard retrieves CSRs that contain the words “print,” “printed,” “printing,” and “printer.”

The CSR Search Wizard searches against all CSRs in the selected domain. If you selected **Application Is** and specified a value, the wizard searches in the selected domain for only CSRs which contain the

selected application. Similarly, if you also selected **CSR Type** and specified a value, the wizard only returns CSRs from that service domain with a matching application and a matching type.

9 Click **Next**.

The CSR Search Wizard displays a list of all the CSRs matching the keyword criteria you specified. Scroll to the right to view where on the CSR the words were located, as indicated by checkmarks. You can open a CSR by double-clicking on it.

The Customer Search Engine

The Customer Search Engine assists you in locating customers in your Stat database when you are not sure of the customer's name. Triggered by search criteria, the Customer Search Engine can search for customers by a number of values, including last name, first name, and department. From here, you can also locate customers in your PeopleSoft databases by opening the Search PeopleSoft Customer Engine, which is discussed in the next section.

The Search Customer Engine is activated via the **Customer** field on a CSR. You can open it in a number of ways:

- Enter a partial name in the **Customer** field and press the <Tab> or <Enter> keys
- Click the Browse button (**...**) next to the **Customer** field
- In the **Customer** field and press the <F4> key

To use the Search Customer Engine:

1 Select a **Search By** option. Options include:

- **Last Name** – You can search for customers by a complete or partial last name. For example, if you search for the letter "S," the search engine returns a list of all customers whose last name begins with S.
- **First** – You can search for customers by a complete or partial first name. For example, a search for "T," returns customers whose first name begins with T.
- **Full Name** – You can search on partial or complete full names. Any combination of partial or full last and first names returns a list of records, as long as a comma appears between the two names. You can enter a partial last name followed by a comma and a partial first name. For example, all of the following would return the name Osborn, Harris: "o,h," "osborn, h," "os, ha."
- **Department** – You can use the drop down list to locate a department. You can also enter the first letter of a department. The cursor highlights that section of the list. To find additional entries that begin with that letter, use the arrow button on the drop down list or scroll down using the <,> key.

  NOTE: If you select Department as the Search By option but the department you want to use is not displayed in the drop down list, it may be included in the PeopleSoft database but not the Stat database. In this case, click Country/Department Search and use the Search PeopleSoft Country/Department engine to find the department in the PeopleSoft environment and add it to Stat, as described later in this chapter.

- **Phone** – You can search with a partial or whole phone number. Enter numeric values only with no spaces. All records containing phone numbers that begin with the entered value are returned.
- **Ext** – You can search with a partial or whole phone extension. Enter numeric values only with no spaces. All records containing extensions that begin with the entered value are returned.
- Email - You can search by a partial or complete email address.

2 In the **Search** field, enter a proper value.

3 (Optional) Deselect **Active Only** if you want Stat to search for inactive customers as well. Then press the <Enter> key.

Stat searches for matching customers and displays them in the lower window.

4 Select the customer whose CSR you want to open and click **OK**.

If you cannot find a customer in the Stat database, you can search a PeopleSoft database and transfer the customer's information into Stat by using the Search PeopleSoft Customer Engine. This feature is explained further in the next section.

If you still cannot find the customer, you can click **New Customer...**, which opens the Customer Maintenance table. For more information, see Customer Field on page 20.

The Search PeopleSoft Customer Engine

If you open a new CSR and cannot find the customer in the Stat database, you can search a PeopleSoft database using the Customer Search Engine. This feature allows you to retrieve customers from a PeopleSoft database and add them to the Stat database automatically.

It also automatically checks if the customer's department or country are defined in Stat. If the department or country are not defined, it adds the new information to the database before adding the customer. If the department is already defined, it updates the information (it does not update country information). The transfer of information between the PeopleSoft and Stat databases occurs instantly.

You open the Search PeopleSoft Customer Engine by clicking the **PS Employee...** button in the Search Customer Engine window.

To use the Search PeopleSoft Customer Engine:

1 Select a **Search By** option. Options include:

- **Employee ID** – You can search by a partial or complete number. Any record containing ID numbers beginning with the entered value is returned.
- **Name** – You can search on a last name only. You can search on a partial or whole name. Entering a partial name returns a list of all last names that begin with that string.
- **Department** – You can search on a partial or whole department name. The field is case sensitive, so you must enter capitals if applicable. Entering a partial value returns a list of all departments beginning with that string.
- **Social Security** – You can search with a partial or whole Social Security number. You can enter the value with spaces or dashes between numbers or with no spacing at all.
- **Social Insurance** – You can search by a partial or whole Social Insurance number. Do not use spaces or dashes between numbers.

NOTE: The Search By options are deactivated if the PeopleSoft Search Configuration maintenance table does not contain any data. For more information, see the *Stat System Administration Guide*, Chapter 4, "General Maintenance Tables."

2 In the **PeopleSoft Database** field, select the database to search.

3 In the **Search** field, enter a proper value. Then press the <Enter> key.

Matching customers are displayed in the lower half of the window.

4 If you want to add one or more customers to your Stat database, hold down the <Ctrl> or <Shift> key and select each customer you want. Then click **Add/Update**.

This updates or transfers information to the Stat database and returns you to the previous window.

8

Reports and Graphs

- About Stat Reports
- Running Reports
- Scheduling Reports

About Stat Reports

A Stat report is a formatted presentation of information retrieved from the Stat Repository and displayed as either a pdf or Excel file. When you run a report, you can select the type of report you want to view from the comprehensive Report Library provided by Stat. This library includes predefined reports as well as any custom reports defined by users. You can run a report at any time manually, or you can configure Stat to run a report automatically at specified time intervals. Stat reports can also be viewed in a web browser via Stat Web.

NOTE: For a complete list of predefined reports in the Stat Report Library, see Appendix: Stat Reports on page 268.

Stat Reports are displayed in the following formats:

- **Standard Format** - Standard reports are formatted with several records per page. Each record is divided by a solid line.
- **List Format** - List reports are most commonly used for reporting summary information on a large number of records. With few exceptions, most Stat maintenance table reports are in list format.
- **Landscape List and Standard Formats** - Landscape list and standard reports are used when information requires a wider display area than is available on a regular list or standard report. If you want to print a landscape-type report, make sure to change the orientation of your printer to landscape before generating the report.
- **Bar Graph Format** - A bar graph report is a graphical representation of items and usually represents activity counts, such as the number of CSRs by department.
- **Pie Chart Format** - A pie chart report is a graphical representation of items as they relate to a total number. Each item in a pie chart is represented by a wedge.
- **Crosstab Format** - Crosstab reports display the relationship between two lists such as Stat Users and CSR types. For example, you can run a crosstab report that displays a list of Stat Users along the left side and a list of CSR types across the top. At the intersection of each item is a count.
- **Excel Formats** - Excel reports are spreadsheets of CSR data formatted for export to Excel. This report does not include code descriptions. If you want to print an Excel-type report, make sure to change the orientation of your printer to landscape before generating the report.

Running Reports

To run a report you first select the type of report you want from the Report Library and specify additional criteria as needed.

NOTE: Stat reports can also be viewed in a web browser via Stat Web. For more information, see Running Reports through Stat Web on page 74. Also, report security is defined by your system administrator. Depending on your user security setting, some reports may b unavailable. The default user security is 50.

NOTE: Central Agent may throw an **Out of memory** error and stop working when a requested report generates more than 35,000-50,000 rows. Unfortunately, Stat relies on a third-party tool (Jasperreports) that has a problem with generating large reports. To prevent Central Agent from crashing, use the global parameter **max number of rows** for the generated report. If the report request exceeds the max number of rows, then a user-friendly message would suggest setting additional criteria to decrease the number of retrieved rows.

Selecting Reports

To select a report:

1. Select **Reports | Report Wizard**.

   Stat opens the Report Wizard.

   The Report Wizard groups reports into categories. When you select a category, the window displays a list of all the reports included in that category, including predefined and custom reports. For your convenience, the first category, Recently Viewed Reports, lists the last 10 reports you have run.

2. Select the category of reports you want.
3. Select the **View** Report Action option.

   You can also schedule a report to be printed or emailed at specified times. For more information, see Scheduling Reports on page 75.

4. Double-click on the report you want to view, or select it and click **Next**.

   The Report Wizard prompts you to specify additional report criteria.

Specifying Report Criteria

After selecting the report, you then specify additional criteria so that the report contains only the information you want. Depending on the type of report you selected, certain criteria fields may be grayed out. After you set the report criteria, you can save the criteria for future use. Reports that are based on the same parameters can share saved criteria

To specify report criteria:

1. Do one of the following:
   - Specify the criteria you want in the available fields.

     See the section, Report Criteria Options on page 71 for more information.
   - If you have saved report criteria you would like to use for this report, select it in the **Saved Criteria** field.

     You can modify the values of saved criteria and then save your modifications. For more information, see Saving Report Criteria on page 73.

2 Specify if you want to include a cover page with the report and if you want to close the wizard after the report is generated.

NOTE: The cover page option is not enabled for Excel reports.

3 Click **Generate**.

The Stat Report Wizard generates the report and, depending on the type of report. displays it either as a pdf or an Excel file.

Report Criteria Options

The following is a brief description of the most commonly used report criteria. Depending on the type of report you want to generate, certain fields may not be available. Also, the options available in certain fields may vary depending on your configuration.

There are dependencies between criteria values. Changing the value of one set of criteria may trigger refresh data in another. Dependencies include:

Criteria	Dependencies
Service Domain	All service domain-specific parameters
Change Management Module	Migration Path Workflow Database Object Type
CSR Type	CSR Status Workflow
Migration Path	Database

Service Domain

By default, this field displays your primary service domain, with additional service domains listed according to your access rights. The options available in many fields vary depending on the service domain you select.

Record Status

The **Record Status** field is used only with certain reports in List format. This includes maintenance table reports and some data related reports where you are looking for something to be active or inactive. By selecting or deselecting the appropriate record status check box, the report includes values that are currently open or complete or both in your system

Change Management Module

Select a specific change management module from the drop down or select **Any** to select all of the modules you have configured. Depending on your configuration, the options are **PeopleSoft**, **Oracle Applications**, **Generic Applications**, **None** or **Any**. Selection of a specific module determines the data displayed in the **CSR Application**, **CSR Type**, **Workflow**, **Migration Path**, **Database**, and **Object Type** fields.

CSR Application

Select a specific application from the list or select **Any** to include all applications.

CSR Type

Select a specific CSR type or select **Any** to include all CSR types.

Workflow

Select a specific a workflow or select **Any** to include all workflows. The value displayed in this field can be determined by the values selected in the **Service Domain**, **Change Management Module**, and **CSR Type** fields. The field is disabled if there is no workflow available. Also, selecting a specific workflow can determine the value displayed in the **Migration Path** field.

Priority

Select a specific CSR priority from the list or select **Any** to include all priorities.

CSR Status

From the drop-down list, select a specific status or select **Any** to select all the statuses. The value displayed in this field can be determined by the values selected in the **Service Domain**, **Change Management Module**, and **CSR Type** fields. If you select a specific status, the **Closed Status** and **Closed for Statistics** options are automatically set to **Any**.

The **Closed Status** option defaults to **Open**. This displays all CSRs with a status equal to **Open**, such as **Active**, **Pending Approval**, and **Assigned**. If set to **Closed**, the report includes all CSRs with a status equal to **Closed**.

The **Closed for Stats** option defaults to **Any**. If set to **Closed**, the report displays CSRs with a status equal to **Closed for Statistics**.

Statuses are defined as **Closed** or **Closed for Statistics** by a system administrator.

The following table shows which settings to select for a particular result.

To See:	Set CSR Status To:	Set Closed Status To:	Set Statistics Status To:
All CSRs	Any	Any	Any
All CSRs excluding Closed for Statistics	Any	Any	Open
All CSRs excluding Closed	Any	Open	Any
All Closed CSRs	Any	Closed	Any
All Closed for Statistics	Any	Any	Closed
CSRs both Closed and Closed for Statistics	Any	Closed	Closed
Closed only	Any	Closed	Open
Closed for Statistics only	Any	Open	Closed
All Open CSRs	Any	Open	Open
A specific status	Desired status	Any	Any

CSR Open Date

Select a date option, such as **Yesterday**, from the drop down list. Stat enters the correct date information in the **From** and **To** date fields. To manually enter a specific date range, select **Specific Date Range** from the drop down list. To select the system default range, select **Any** from the drop down list. Then click the Browse button (**...**) in the **From** and **To** fields, and in the Calendar dialog boxes select the dates you want. You can also specify the hour and minutes of the date range. To retrieve CSRs without regard to Open Date, select the **Any** option from the list and keep the default settings in the **From** and **To** fields.

CSR Due Date

Select a date option, such as **Past Due**, from the drop down list. Stat enters the correct date information in the **From** and **To** date fields. To manually enter a specific date range, select **Specific Date Range** from the drop down list. To select the system default range, select **Any** from the drop down list. Then click the Browse button (**...**) in the **From** and **To** fields, and in the Calendar dialog boxes select the dates you want. You can also specify the

hour and minutes of the date range. To retrieve CSRs without regard to **Open Date**, select the **Any** option from the list and keep the default settings in the **From** and **To** fields.

NOTE: Saved sets of criteria does not store specific dates. It stores the value from the dropdown list which is relative to current date.

CSR ID

Enter a specific CSR ID to view a report on single CSR or select **Any** to include all CSRs.

CSR Assigned Queue

Select a specific queue from the list or select **Any** to include all the queues.

CSR Assigned User

Select a specific user from the list or select **Any** to include all the users.

Department

Select a specific department from the list or select **Any** to include all departments.

Customer

Select a specific customer from the list or select **Any** to include all customers.

Developer

Select a specific developer from the list or select **Any** to include all developers.

Object Type

If your report concerns objects, select the type of object you want information about or select **Any** to include all objects regardless of type.

NOTE: To select a specific object type, you must first specify a specific change management module in the Change Management Module field.

Application Database

Select a specific environment from the list or select **Any** to include all the environments. The environments displayed in this field are determined by the value selected in the **Change Management Module** field.

Project Code

For CSR reports, select the user-assigned code for the project the CSRs you are interested in belong to.

Saving Report Criteria

You can save your criteria to use later with this report or with other reports that use the same format. You can also grant other users access to your criteria, if you have proper security rights, or you can save it for your own personal use.

NOTE: Saving report criteria enables you to generate reports directly through Stat Web. For more information, see the section, Running Reports through Stat Web on page 74.

To save report criteria:

1 After defining the criteria you want, click the Save icon.

This opens the Save Report Criteria dialog box.

2 Select the type of access you want other users to have to your criteria.

- Select the **Personal** option if you don't want to grant access to other users. You can then use this criteria to run reports at a later time, or you can open the Personal Configuration window and on the Scheduled Reports tab schedule the Stat Central Agent to run the reports automatically.
- Select the **System** option if you want to make the criteria available for report scheduling jobs to be run by Stat Central Agents, as defined in the Job Maintenance window. Any user who has access to the Job Maintenance window has access to this criteria. If you select the **System** option, the **Available to all users** option is enabled. Selecting this check box makes the criteria available to all members of the service domain for scheduling reports or running them interactively.

3 In the **Description** field, enter a brief description of the criteria.

The description can be up to 35 characters. This description helps you identify the criteria for later use.

4 Click **OK**.

Running Reports through Stat Web

Users that do not have access to the Stat Windows client can still view reports 'on demand' through Stat Web. Reports generated through Stat Web are displayed as .pdf files in the browser window or as Excel files. They are considered 'on demand' reports because they can be viewed by Stat Web account holders at any time, not according to the time the reports are scheduled in the Stat Windows client to be emailed, exported, or printed.

To view a report in Stat Web, the report must have available criteria that was previously defined and saved in the Stat Windows client.

To run reports in Stat Web:

1 Open your internet browser and go to the URL address for Stat Web, as configured by your system administrator.

> **NOTE:** The URL address for Stat Web is displayed on the About box of the Stat Windows client. Select Help | About Stat.... to open the About box.

2 Enter your user name in the **User Name** field.

3 Enter your password in the **Password** field.

4 Click **Log in** or press <Enter>.

After you successfully login, Stat opens the CSR Console main window.

5 Click **Reports** in the user account drop-down menu.

This opens the Stat Web Report Viewer. To run reports through Stat Web, the report criteria must have already been defined in the Stat Windows Client.

6 Select the category of the report.

7 Select the report you want to run.

8 Select the report criteria.

Options include both system criteria or personal criteria. After you make your selection, the Stat Web Report Viewer shows the criteria values.

9 Specify if you want to include a cover page with the report.

> **NOTE:** The cover page option is not enabled for Excel and crosstab reports.

10 Click **Generate**.

Stat Web generates the report and, depending on the type of report. displays it either as a pdf or an Excel file.

Scheduling Reports

You can configure Stat to print, export, or email certain reports automatically at scheduled time intervals. Stat can do this while you are away, and it does not require your computer to be on. For example, you can schedule a CSR by Status report to be emailed every Monday at 7 A.M. to all the members of your development team.

Automatically printing, exporting, or emailing reports are jobs performed by the Stat Central Agent. For more information, see the *Stat System Administration Guide*, Chapter 6, “Configuring the Stat Central Agent.”

To schedule a report you need to know:

- The type of report you want printed, exported, or emailed
- The saved report criteria that you want to use. You can use your own report criteria or a criteria created by your system administrator.
- When you want the report printed, exported, or emailed
- If printing the report, the printer you want the Stat Central Agent to use. The print job is routed to the Stat Central Agent and doesn’t have to be a printer connected to your computer, just one that the Agent can access. In most instances, Stat Central Agents use network printers.
- If exporting the report, its destination. When specifying the export destination, use the drive mappings of the Stat Central Agent application, not the mappings of your PC.
- If emailing the report, the names and email addresses of the people that you want the report sent to

You can schedule report jobs either through the Stat Report Wizard or the Schedule Reports tab of the Personal Configuration window:

- In the Stat Support Console, click **Setup**. Then in the Personal Configuration window, select the Schedule Reports tab.
- Select **Reports | Report Wizard**. Then in the Report Action section, select the **Schedule** option and click **Next**.

Both the Stat Report Wizard and the Scheduled Reports tab list all your scheduled print or email report jobs by service domain. To edit or view the details of a scheduled job, select it and then click **Details...**. This opens the Job Maintenance window. From here you can temporarily disable the job, change the day/time it runs, or just verify the schedule. This window is discussed in greater detail in the *Stat System Administration Guide*, Chapter 6, “Configuring the Stat Central Agent.”

To permanently remove a job from the system, select the job and click **Delete**. Stat displays a message box prompting you to confirm the deletion. Click **Yes**. If you want to run this job again in the future, you must reschedule it. If you only want to prevent a job from running temporarily, disable it rather than deleting it.

The Scheduled Reports tab displays the following information:

- **Service Domain** - The selected service domain is the data source for the report.
- **Enabled** - If this box is checked, the report runs according to the schedule you specify. The report is disabled if the box is deselected.
- **Job ID** - A system generated number which uniquely identifies your scheduled report in Stat.
- **Description** - Displays the report description.
- **Last Updated** - The date and time the job was last modified.
- **Updated By** - The user who last updated the job.

To schedule a job:

1. In the **Service Domain** field, select the service domain from which you want to run the report.
2. Depending on the type of job you want to schedule, click **Print Job...** (which is also used for exporting reports) or **Email Job...**.

   This opens the Job Maintenance window.
3. In the **Description** field, enter a description that will identify the job on the Scheduled Report tab.

The defaults are **Print Report** and **Email Report**. It is recommended that you enter a unique description if you have multiple jobs scheduled. For example, a job that prints all CSRs assigned to you could be “Print All My CSRs.”

> **NOTE:** If you schedule an Email Report job, your system administrator can configure Stat to execute the job only when data is actually written to the report. This way, if a report is blank, it will not be emailed to users. For more information, see the *Stat System Administration Guide*, Chapter 4, “General Maintenance Tables.”

4 If you want to temporarily prevent Stat from processing this job, deselect the **Job Enabled** option. To resume the scheduled job, select the option.

For more information on the Job Definition tab, see the *Stat System Administration Guide*, Chapter 6, “Configuring the Stat Central Agent.”

5 Open the Report tab.

6 In the **Category** field, select the report category you want.

7 In the **Report** field, scroll down and select the report you want to print or email.

> **NOTE:** Not all Stat reports can be scheduled. The **Report** field displays only the reports in the selected category that can be scheduled.

8 In the **Criteria** field, scroll down and select the previously saved criteria you want to use to run this report.

Only criteria compatible with the selected report are displayed. In addition, if no criteria profile has been saved for the selected report, the job cannot be scheduled. For more information on saving report criteria, see Saving Report Criteria on page 73.

9 Open on the Schedule tab.

10 In the **Day Schedule** field, select the type of schedule you want:

- The **Day of Week** option allows you to run the job on specific days of the week
- The **Day of Month** option allows you to run the job on the first or last day of the month

11 In the **Time Schedule** field, select the type of schedule you want:

- Select the **Scheduled Hours** option if you want to run the job at specific hours of the day. Select the hours you want the job to run by checking the appropriate boxes. The hours are listed in military format. If you want the report to run at a time other than on the hour, you can also specify the exact minute by entering the value directly in the minutes after hour field.
- Select the **Minute Intervals** option if you want to run the report throughout the day at intervals of less than one hour. Enter the number of minutes between printings.

12 Open the Destination tab.

Depending on the type of job you selected, either the Print section or the email section of the Destination tab will be disabled.

13 Do one of the following:

- If scheduling a print job, select **Printer** in the **Print Report To** field. Then in the **Printer** field, select a printer from the list of available printers. Printers are defined by your system administrator.
- If scheduling an export job, select **File** in the **Print Report To** field. Then in the **Destination** field, type the location where you want to export the file, or click the Folder icon and select the location. When specifying a location, remember to use the drive mappings of the Stat Central Agent and not those of your PC.

  > **NOTE:** Reports can only be saved in the style they have been formatted (.PDF,.xlsx).

- If scheduling an email job, specify the recipients in the **email** field. The procedure for specifying email recipients in Stat is described in the *Stat System Administration Guide*, Chapter 7, “Email Configuration.” For more information, see your system administrator.

14 Open the Error Notification tab.

In the Error Notification tab, you can configure an agent to send emails to certain Stat users or user classes when errors are encountered processing the print, export, or email job. Setting up error notifications is optional. If you do not set up error notifications for a job, Stat sends an email to each user in the error notification list defined for the Stat Central Agent.

15 Click **New**.

16 In the **Recipient Type** field and either select **User** if you want to add an individual user or select **Class** if you want to add a user class.

17 In the **Recipient** field, select either the individual user or user class you want to add.

18 Repeat previous 3 steps for each recipient you want to add.

19 Click **OK** or **Apply**.

20 Click **Refresh** to see your job displayed in the Scheduled Reports tab.

The Stat Central Agent processes your job the next time it rebuilds its job schedule, which can be the same day if you do a force rebuild on the agent, or you can wait until the following day when it rebuilds its schedule automatically. For more information on job schedules, see the *Stat System Administration Guide*, Chapter 6, “Configuring the Stat Central Agent.”

9

Personal Rules

- Defining Personal Rules
- Viewing the Status of Stat Central Agents
- Viewing the Status of Oracle Agents (Oracle Apps Only)

Defining Personal Rules

The Stat Central Agent monitors and responds to actions taken on a CSR. You can configure the agent to keep you informed when events that you specify occur within the Stat system.

You can also configure the Stat Central Agent to execute personal rules. A personal rule is a set of instructions that you define for the agent. Through rules editors, you can define event criteria that when met, trigger the agent to send you an email notification. Each time an action is taken on a CSR, the Stat Central Agent evaluates and determines if any rules have been triggered and if so, sends you an email with the information you requested.

For example, if you want to be informed each time a new CSR is opened for the Human Resources application, you can define a personal rule that configures the agent to send you an email each time this event occurs

Access to personal rules is controlled by user class. See your system administrator if you have questions about your access.

To view personal rules:

1 Click **Setup...** on the Support Console. Stat opens the Personal Configuration window.

2 Click on the **Personal Rules** tab.

3 In the **Service Domain** field, select the service domain that you want to define/view personal rules for. Stat displays a list of rules belonging to you.

Adding a New Rule

A personal rule is a set of instructions that directs the Stat Central Agent to send you an email notification whenever an event occurs on a CSR that meets a predefined set of criteria.

Perhaps you want to be notified immediately whenever you are assigned a CSR with a status of Urgent. You could check Stat throughout the day to accomplish this, but a personal rule is a more efficient method.

To add a personal rule:

1 In the Personal Rules tab of the Personal Configuration window, click **New...**.

This opens the Rule Editor window.

Your user ID is automatically displayed in the **Owner ID** field. The **Rule ID** field displays (New) until you save the rule. When you save, Stat assigns it a unique number.

2 In the **Description** field, enter a brief description of your rule, such as “New Urgent CSRs.”

3 In the **Event** field, select an event.

The event is the trigger of your rule. Available events are:

- **Any** – When any of the events mentioned below occurs. This is the default event for personal rules.
- **CSR Close** – When a CSR changes from an open status to a closed status
- **CSR Open** – When a new CSR is entered into the system by either a Stat user or the Stat Central Agent
- **CSR Open-Entry** – When a new CSR is entered into the system by a Stat user
- **CSR Open-Mail** – When a new CSR is entered into the system by the Stat Central Agent in response to an email from a customer or another application. Customers can email their requests to a predefined Stat Central Agent email address. Upon receiving the email, the Stat Central Agent automatically opens a new CSR for that request.
- **CSR Re-Open** – When a CSR changes from a closed status to an open status
- **CSR Update** – When a change is made to a CSR.
- **Migration Notification** - When a migration occurs or is scheduled involving specific migration statuses, migrators, modules or target environments.
- **OraApps Patch Application Complete** – When the Stat Oracle Agent is done processing the Patch Application request
- **OraApps Patch Application Scheduled** – When a Patch Application is scheduled via a CSR or Patch Mgmt Console
- **OraApps Patch Rollback Complete** – When the Stat Oracle Agent is done processing the Patch Rollback request
- **Past Due CSR Escalation** – When a CSR is past due for a specified amount of time
- **Past Due Migration Approval Escalation** – When a migration has not been approved after a specified amount of time
- **Past Due Project Escalation** – When a project is past due for a specified amount of time
- **Past Due Status Approval Escalation** – When a status transfer that has not been approved after a specified amount of time
- **Past Due Status Transfer Escalation** – When a status transfer that has been marked as Ready has not been transferred after a specified amount of time
- **Past Due Task Escalation** – When a task is past due for a specified amount of time
- **Unopen CSR Escalation** – When a CSR has remained unopened by the assigned user for a specified amount of time

NOTE: The fields Type and Value appear whenever you select a past due escalation-type event. Here you specify the amount of time that the item must be past due to trigger the rule.

4 If you selected a past due escalation-type event, in the **Type** field, select the type of time interval you want to use.

Options include **Business Days**, **Days**, and **Hours**. Then in the **Value** field, enter a numerical value for the time interval. For example, if you select **Hour** and enter a value of 6, the personal rule is triggered when the item is six hours past due.

5 (Optional) Select the **Fire only once per CSR** option.

This configures the Stat Central Agent to fire the rule the first time the rule criteria are met for a CSR and no time thereafter. In the case of past due escalation events, this option applies to the specified approval, task, project, and so on. For example, consider a business rule based on an Update trigger event and a CSR status of In Process. If you do not select **Fire only once per CSR**, you will receive an email each time a user saves a CSR with a status of In Process. By selecting Fire only once per CSR, you will receive an

email only the first time a CSR is saved with an In Process status. Later changes made to the CSR will not trigger the rule.

NOTE: Selecting the **Fire only once per CSR** check box adds the History tab to the Rule Editor window. This tab displays a list of CSRs that have triggered the personal rule. Deselecting the **Fire only once per CSR** check box removes the History tab from the window. For more information, see Viewing Rule History on page 82.

Defining Rule Criteria

After selecting the trigger event, you need to specify additional criteria that qualify the trigger event under your rule definition. Stat needs to know what values in the CSR apply to you.

You specify the criteria by selecting the criteria type (CSR fields) and the matching value. You may concatenate multiple CSR values.

Field

Fields correspond to certain types of information contained in a CSR. For most rules, the Field list displays the following options:

Application Environment	Application
Assigned Queue	Assigned User
CSR Opened by User	CSR Priority
CSR Status	CSR Type
Customer	Customer Department

NOTE: Depending on the trigger event, the Field list may include different options:

- For personal rules triggered by past due escalation events, the list above also includes options specific to that event. For example, for the event Past Due Task Escalation, the list includes the option **Assigned User of Task**.
- For migration events, the list includes the **Migration Status**, **Migrator**, **Module**, and **Target Environment**.
- For the Oracle Apps business rules, OraApps Patch Application Complete and OraApps Patch Rollback Complete, the list of fields includes the option **Process Status**, which corresponds to the field in the Oracle Applications Patch Management Console.

Operator

After you select a CSR field type, you need to establish its relationship to a value or set of values you specify. Options include:

- **Is** – Select if the CSR field must equal the specified value, meaning a match must occur
- **Not** – Select if the CSR field cannot equal the specified value. This tells Stat to initiate the rule whenever a trigger event occurs in a CSR with a value different than the one you specify.
- **Change From** – Select if upon saving the CSR, the field has changed from one specified value to another
- **Not Change From** – Select if upon saving the CSR, the field has not changed from one specified value to another. In this case, Stat initiates the rule whenever a trigger event occurs on a CSR with a field value that has not changed exactly as specified.

Value

The list of value options depends on the CSR field you select. If you select the **Is** operator, the corresponding value found in the CSR must match your selection for the personal rule to take effect. Likewise, if you select Not, the corresponding value cannot equal your selection.

The table below shows some examples of rule criteria. You can define several criteria for one personal rule.

Field	Operator	Value	Explanation
CSR Status	Is Not	Cancelled OR Denied	Business rule takes effect whenever a trigger event occurs on a CSR where the status is neither Cancelled nor Denied
Assigned Queue	Is	Dev	Business rule takes effect whenever a trigger event occurs on a CSR assigned to the queue Development (Dev)
Application	Changed From	Self Service to HR, or Benefits to Payroll, or HR to Benefits	Business rule takes effect whenever a trigger event occurs on a CSR where the Application has changed from Self Service to HR, or Benefits to Payroll, or HR to Benefits

If you define more than one set of criteria for a personal rule, each set must be met for the rule to take effect. The exception to this is when you define more than one value on a CSR field. In this case, the rule takes effect if the CSR field matches one of the possible values.

For example, let's say you add a personal rule based on an Open trigger event that uses each set of criteria shown in the preceding table. This means that you will receive an automatic email notification whenever a Stat user or the Stat Central Agent opens a CSR with a status that is anything but Cancelled or Denied, is assigned to the Development queue, and that has an application value changed from one specified value to another.

To add criteria to a rule:

1. In the **Field** field, select the CSR field you want.
2. In the **Operator** field, select an operator.
3. In the **Value** field, select a value for the field.
4. Click **Add**.

   Your new criteria appears in the window with an indicator that it has been added to your rule.
5. Repeat for each additional criteria. To remove criteria, select the row and click **Remove**.

Defining Message Content

Whenever a trigger event occurs that meets all the rule criteria, the Stat Central Agent sends you an email notification. You can specify the content of the rule's email message. After you define the event and criteria for your rule, configure the Stat Central Agent to email you the information you want.

To define email message content:

1. In the Rule Editor window, click the email Message tab.
2. Select the checkboxes corresponding to the CSR information you want included in the email message.

   NOTE: The Most Recent Log option only applies to logs that are not flagged as confidential. Also, the Telephone Number, Telephone Extension and email options are associated with the user assigned to the CSR and are only activated when the Assigned User option is selected.

3 (Optional) Enter any header and footer information you want inserted in the email.

It is a good idea to put information in the message header about the rule itself. The Stat Central Agent includes the rule ID number in the message subject, but does not include any information about the event or rule criteria.

NOTE: Personal rules can only trigger emails to the rule owners. To send emails to a distribution list, use business rules. For more information, see the *Stat System Administration Guide*, Chapter 5, “Service Domain-Specific Maintenance.”

Viewing Rule History

When you select the Fire only once per CSR check box in the Rule Definition tab, Stat adds the History tab to the Rule Editor window. This tab displays a list of all the CSRs that have been triggered by the personal rule. For each CSR or past due item, the tab also shows the date and time that the rule fired.

Managing Rule History

Occasionally, you may want to reset a rule that fires only once so that it can be triggered again. To do this, open the History tab for the rule. Select the CSR or past due item that you want to reset. Click **Delete**. Then click **Apply** or **OK**.

Saving Rules

Click **OK** to save your rule. Stat checks your rule for errors. If an error is found, Stat displays a message telling you what you need to correct. When Stat saves your rule, it assigns it a unique number. To see the rule displayed on the Personal Rules tab of the Personal Configuration window, click **Refresh**.

When Rules Become Effective

The Stat Central Agent checks the repository for new rules at the beginning of each day. Consequently, new rules go into effect at midnight on the day you define them.

Your system administrator may also configure the Stat Central Agent to check periodically for new or changed rules throughout the day.

Disabling a Rule

To prevent a rule from triggering, open the rule in the Rule Editor window and deselect the Rule Enabled check box. The Stat Central Agent does not process disabled rules. This change goes into effect the next time the Stat Central Agent checks for new rules.

You can also permanently remove a rule by selecting it on the Personal Rules tab and pressing the **Delete** button.

Viewing the Status of Stat Central Agents

You can check the status of Stat Central Agents by selecting **Tools | Stat Central Agent Status**. This opens the Stat Central Agent Status window, which displays the status of all the agents currently defined in Stat.

If the agent in question has a status of Not Responding, it may be because it is currently processing a large job. Wait a few moments and click **Refresh**. If the agent status remains Not Responding, contact your system administrator.

The Status window indicates the log level of each agent the last time it wrote to the database, even if the agent is currently not responding and assumed to be down.

Viewing the Status of Oracle Agents (Oracle Apps Only)

You can check the status of Oracle Agents by selecting **Tools | Oracle Agent Status**. This opens the Oracle Agent Status window, which displays the status of all the Oracle agents currently defined in Stat.

If the agent in question has a status of Not Responding, it may be because it is currently processing a large job. Wait a few moments and click **Refresh**. If the agent status remains Not Responding, contact your system administrator.

The Status window indicates the log level of each agent the last time it wrote to the database, even if the agent is currently not responding and assumed to be down.

10

Object Tools and Wizards

- CSR Purge Wizard
- Impact Wizard
- Object History Wizard
- Undocumented Object Wizard
- Migration History Wizard
- Object Archive Search Wizard
- Rapid Recovery Window
- Release Recovery Window
- Archive Set Synchronization Wizard
- Archive Set Purge Wizard
- Undocumented Patch Tool
- Object Comparison Tools

CSR Purge Wizard

With proper security rights, you can use the CSR Purge Wizard to export closed CSRs to a .csr file and then permanently them from the Stat database. When exporting CSR data, you select what pieces of CSR information you want to archive. This way, if for any reason you want to retrieve a CSR after it has been deleted, you can use the wizard to import that same data back into the Stat database.

NOTE: Depending on your user class rights, you may not be able to run the CSR Purge Wizard, or you may not have the option of purging CSRs without first exporting the data. Also, there is a user class right (typically reserved for system administrators) that enables the user to purge open CSRs.

To open the CSR Purge Wizard, select **Tools | CSR Purge Wizard**.

Exporting and Purging CSRs

You can use the CSR Purge Wizard to export closed CSRs to a .csr file and then permanently delete them from the Stat database.

When creating the export file, you can pick which items to include. If an item is NOT included in the export file, it cannot be restored. Exportable CSR items include:

- Detail logs
- Issues
- Tasks
- Attachments
- Migration path

- Object list
- Object history (dates of addition, locking, unlocking)
- Archive history (name, source, object list, but not the actual archive)

To export and purge a CSR:

1 Open the CSR Purge Wizard and do one of the following:

- Select **Export** to export CSR data without deleting the CSRs from the database.
- Select **Purge** to delete selected CSRs from the database. Optionally, select the **Export before purge** option (recommended).

NOTE: The **Export before purge** option remains selected unless the user has the right to purge without an export.

2 Click **Next**.

The next window displays a list of all the closed CSRs in the service domains that you have access to. The list can also include open CSRs if you have the user class right to purge open CSRs.

3 If you opted to export the CSR, do the following

a Click the magnifying glass icon and browse for the .csr file you want to export the CSR to, or specify a new file.

TIP: It is suggested that this be a network location or a location that is routinely backed-up.

b Click **Save**.

c Select the CSR(s) you want to export or purge.

CAUTION: Be careful when clicking the select all button as this would cause all closed CSRs to be purged.

d Select the CSR items you want to export.

NOTE: CSR items not selected for export are not written to the .csr file and therefore cannot be restored.

4 Click **Next**.

If you are purging the CSR, you are prompted to confirm.

5 Click **Yes** to confirm.

If you opted to export the CSR, the CSR Purge Wizard exports the CSR data to the file. If you opted to purge the CSR, the CSR Purge Wizard deletes it from the Stat database. Tables and CSRs are displayed as they are exported and then purged.

A log file is generated in the same location as the .csr file detailing the export and purge operations.

6 Click **Finish** to close the wizard.

Importing CSRs

If you used the CSR Purge Wizard to delete a CSR but first exported its data to a .csr file, you can use the CSR Purge Wizard to retrieve the CSR information and recreate the deleted CSR in the Stat Database.

To import a CSR:

1 Open the CSR Purge Wizard and select the **Import** option.

2 Click **Next**.

3 Browse for the .csr file containing that contains the data of the previously exported and deleted CSR.

The CSR Purge Wizard parses the .csr file and displays a list of each CSR contained in the file.

4 If more than one CSR is contained in the selected .csr file, select the CSR you want to import.

5 Click **Next**.

The CSR Purge Wizard retrieves the CSR data from the file and recreates the CSR in the Stat database. A log file is generated in the same location as the original .csr file detailing the import operation.

Impact Wizard

When a developer modifies an object, sometimes other objects are affected unexpectedly or without your knowledge. Before any changes are made to an object, you can run the Impact Wizard to determine which object types might be affected and how many instances of these object types exist in selected environments.

The Impact Wizard can be run from a CSR, or from the **Object Management** menu:

- When run from a CSR, it runs 'against' the objects you select on the CSR's object list (the objects you plan to modify), and it runs 'on' selected object types that you think might be affected by these modifications.
- When run from the **Object Management** menu, you must specify the change management module, the environment, the object type, and then the individual objects you want to run the wizard 'against,' after which you specify the object type(s) you want to run the wizard 'on.'

Although you can run the Impact Wizard for all the object classes supported by Stat (PeopleSoft proprietary objects, file objects, data objects, and schema objects), the methods used by the wizard to return the list of possibly affected objects vary depending on the classification of the objects it is run 'against' vs. the classification of object types it is run 'on'. The following table presents the 16 possible object class combinations and describes the impact analysis method used by the wizard for each. A description of 'N/A' means that no impact is possible between the object class the wizard is run 'against' and the object class it is run 'on.'

Against	On	Method
PS Object	PS Object	Returns related objects (such as records and pages that reference fields)
PS Object	File Object	Searches for the string displayed in the Object Name column in the CSR's object list.
PS Object	Schema Object	N/A
PS Object	Data Object	N/A
File Object	PS Object	N/A
File Object	File Object	Searches for the Object Name string in the file, including the file extension
File Object	Schema Object	N/A if the file object is not marked as a 'db script.' If a file object is marked as a "db script", it parses the script and returns schema objects referenced in script. If the objects returned from the script do not contain the schema owner, Stat finds the schema owner of the object by referencing the database that the impact is run against. If more than one schema owner has an object with the same name, the user is prompted to select the schema owner they want returned. Schema objects are stored in Stat with their schema owner.
File Object	Data Object	N/A
Schema Object	PS Object	N/A

Against	On	Method
Schema Object	File Object	String search all selected file object types for Schema Object name, returns all files that had a match
Schema Object	Schema Object	N/A
Schema Object	Data Object	N/A
Data Object	PS Object	N/A
Data Object	File Object	Searches for the string displayed in the Object Name column in the CSR's object list. This column is always a concatenation of the key fields separated by '-'
Data Object	Schema Object	N/A
Data Object	Data Object	N/A

In addition to the analysis methods detailed in the above table, keep in mind the following considerations when running the wizard:

- The wizard cannot search for impacts on file objects that contain inserted objects, such as graphics.
- When searching for impacts on file objects, the wizard temporarily copies files to the **Log Destination Directory** defined in the Stat User Options window. When the search is complete, the wizard deletes the files.
- When run on a file object designated as a database script, the wizard identifies the schema objects impacted by the script and automatically adds those objects to the CSR.

Running the Impact Wizard from a CSR

When you run the Impact Wizard from a CSR, you can only run it against objects that are associated with the CSR and contained in environments that are part of the CSR's assigned migration path. When run from the **Object Management** menu, you can run the wizard against any object type or environment. For more information, see the next section, Running the Impact Wizard from the Object Management Menu on page 88.

To run the Impact Wizard from a CSR:

1. Select the Objects tab.
2. In the Object List, right-click on the object you want to run the wizard against. Then in the pop-up menu, select **Impact Analysis Wizard**.

   Stat launches the Object Impact Wizard.
3. Click **Next>**.

   In the next window, the Impact Wizard prompts you to specify the search parameters you want.
4. (Optional) Select the **Analyze impact on all objects on CSR** option if you want the wizard to analyze the impact of all of the objects in your CSR.
5. Select the environment(s) you want the wizard to search.

   You can have the wizard search any of the environments in the migration path.
6. Select the object types you want analyzed in the search. Click **Select All** if you want the wizard to analyze the impact of your change on all object types. Click **Select None** to deselect all objects.
7. (Optional) Select the **Find any occurrence** option if you want the wizard to return any object that references the name of the object.

   For example, if you are running the wizard against an object named "employee," then the wizard will return any file that contains the string "employee" regardless of what's to the left or right of the string, such as

"PS_EMPLOYEE" or "stat.employee." If you do not select this check box, then the wizard returns only those objects that reference the object name exactly.

8 Click **Next>** to continue with the wizard. Click **Finish** if for some reason you want to exit the wizard.

> **NOTE:** Stat displays an error message if for some reason it is unable to establish a connection to one of the selected environments. However, you can continue searching any of the other environments you may have selected.

In the next window, the wizard displays a message telling you that it is ready to begin processing. It also tells you that while it is processing you can cancel the search by pressing the **Stop Search** button.

9 Click **Next>**.

In the next window, the wizard starts compiling data and reports its progress. The results of the analysis are displayed by object type. When finished, the wizard displays the total number of impacted objects.

The wizard is now ready to generate a report from the search results

10 Click **Next** to see the report.

From here, you can add objects to the CSR, print the report, or export the report.

11 To add one or more of the objects to your CSR, select the objects and click **Finish**.

You can select single objects or you can use the <Shift> and <Ctrl> keys to select a range of objects. The wizard displays above the **Finish** button the number of objects you select. If you want to add all of the objects, click the **Select All** button. Then click **Finish**. The selected objects are added to the CSR.

12 To print or export this list, click the appropriate button.

Running the Impact Wizard from the Object Management Menu

When you run the Impact Wizard from the **Object Management** menu, you must specify the change management module, the environment, the object type and the individual objects you want to run the wizard against. You then specify the object type(s) you want to run the wizard on.

After you specify the search criteria you want, the wizard functions in the same manner as when it is run from a CSR, except that if the wizard identified any impacted objects, you can add the objects to any CSR you want (using the Search CSR Engine), or you can add them to a new CSR.

Object History Wizard

CSRs maintain a complete a history of all the changes made to the objects they are associated with. These changes are documented either in the Object Comments window, the Description, Detail Logs, and Resolution tabs, or in the objects themselves. With the Object History Wizard, you can view a history of these changes by conducting a search either by object type or by CSR:

- If by object type, the wizard returns a list showing every object of the selected type in a particular environment that has a history of changes recorded in Stat.
- If by CSR, the wizard returns a list showing every object associated with a selected CSR. At this point, you can conduct a second search on individual objects. After specifying the search criteria you want, the wizard returns a list of CSRs that the selected objects are associated with. You can then open any one of these CSRs to learn more about the object changes documented in that CSR.

The Object History Wizard is especially useful during an application upgrade:

- After running the Impact Analysis Wizard on the database scripts and identifying which schema object definitions will be affected, you can run the Object History Wizard to determine if any of these schema objects have been customized.

- If you are going through a PeopleSoft upgrade and you have been using Stat for some time, you can use the Object History Wizard in conjunction with PeopleSoft Compare Reports to obtain the business reasons for your customizations as well as a listing of all the objects affected by the customizations. The Object History Wizard tells you which objects have been changed and why, thus eliminating a time-consuming step of the Compare process.

To run the Object History Wizard, select **Object Management | Object History Wizard**. By default, the wizard searches by object type, but whether you search by object type or by CSR, after returning the list of objects, the remaining steps of the wizard are identical.

To search for objects by object type:

1 In the **Search by** field, select **Object Type**.

2 In the **Module** field, select the change management support module in which you want to run the wizard.

Options include **PeopleSoft**, **Oracle Applications**, and **Generic Applications**.

> **NOTE:** You can set a default value to be displayed in the Module field. To do this, select User Options | Stat Options. Then in the Stat User Options window, select the value you want in the Default Module field.

3 In the **Environment** field, select the environment that contains the object.

If you do not select an environment, the wizard searches on all the active environments defined in Stat.

4 In the **Object Type** field, select the object type.

The wizard displays a list of matching objects. If you do not select an object type, the wizard displays all objects contained in the selected environment.

5 In the list of matching objects, select the object whose history you want to view.

If you do not select an object, the wizard searches for the object type and displays the history for all objects of that type.

6 Click **Next>**.

At this point, the wizard is ready to conduct a search for the CSRs associated with the objects you selected.

To search for objects by CSR:

1 In the **Search by** field, select **CSR**.

The window changes to facilitate a search by CSR.

2 Click the Browse button (**...**) next to the **Select CS**R field.

This opens the Search CSR Engine.

3 Use the Search CSR Engine to locate the CSR you want. When finished, select it and click **OK**.

The wizard displays a list of all the objects associated with the selected CSR.

4 In the list of matching objects, select the objects whose history you want to view.

If you do not select an object, the wizard searches the history for all objects associated with the CSR.

5 Click **Next>**.

At this point, the wizard is ready to conduct a search for the CSRs associated with the objects you selected.

To search for CSRs associated with selected objects:

1 In the **Service Domain** field, select a service domain.

By default, the wizard searches all the service domains that you have access to. If you select this option, the **Application Is** and **CSR Type Is** options are disabled, since these items are service domain-specific.

2 If searching by application, select the **Application Is** option. Then select the application.

3 If searching by type of CSR, select the **CSR Type Is** option. Then select the type.

4 (Optional) Enter keywords in the **Title** fields.

5 Click **Next>**.

In the next window, the wizard prompts you to select additional display and search options.

6 In the Display Options section, specify one of the following three display options:

- **Show Default Search Results** - select if you want to the view the default list of objects in the results
- **Show Object Comments in Search Results** - select if you want to include any comments regarding the object in the results
- **Show only Objects with Related Custom Objects in Search Results** - select if you only want to view objects that were used as the basis for custom objects in the results, along with the custom objects themselves

7 If you want to view the object in all environments, select **Disregard Object Environment**.

If selected, Stat ignores the environment selected on the first screen and searches for any CSR containing the object in question.

8 Click **Next>**.

The wizard displays the search results. A blank results window indicates that the object is not associated with any CSR. Objects are sorted by update date in descending order, most recent first. To open a CSR, double-click on the object. To close the wizard, click **Finish**.

You can print or export the list by clicking the **Export** or **Print** buttons.

NOTE: You can use this wizard to find all objects in a module which have been modified. Open the wizard, select the module you want, and click Next> without selecting an Environment or Object Type. Continue pressing the Next> button until the report is generated. This report contains all objects that have been changed within the selected module.

Undocumented Object Wizard

The Undocumented Object Wizard searches a selected environment and identifies any objects that are either undocumented or version-changed. An object is considered undocumented if it has been modified but is either not associated with a CSR or, if it is associated with a CSR, it has been modified after the CSR was closed or the object was unlocked. An object is considered version-changed if it is associated with CSR but is in the process of being modified. After the wizard has identified any undocumented objects, you can then associate them with CSRs. Because version-changed objects are already associated with CSRs, they are reported for informational purposes. This provides project managers with the ability to see what objects are being modified during a PeopleSoft project.

The Undocumented Object Wizard has five functions:

- Prime the Stat Repository with existing customizations in your application environments
- Audit the system for undocumented changes
- Identify undocumented schema changes in environments running on Oracle 10 or higher
- Assist with compare reports when performing an upgrade
- Facilitate version control

Prime the Stat Repository

The Undocumented Object Wizard supports the initial implementation of Stat. When run at this time, the wizard locates all the objects in your environments that have been modified since the last application stamping. It does this by comparing the release date and time fields in the application's release table to the last update time field in the definition table for each object.

After it finds all the undocumented objects, you can use the wizard to associate them with a CSR. The goal is to associate all modified objects with a CSR at all times.

Audit the System

You can run the wizard to find all objects that were changed but not documented in Stat, as well as new, undocumented objects created in your application environments. This ensures that developers are documenting changes they make to objects.

The wizard reports modified objects as being either “undocumented” or “version-changed.” A modified object is reported as undocumented if it has not been associated with a CSR in Stat, or, if it has been associated with a CSR, it has been modified after the CSR was closed or the object was unlocked. A modified object is reported as version-changed if its CSR is open and the object is locked in its application environment but its version number has been changed in its application environment after the object lock was obtained.

Undocumented objects indicate that at some point proper business practices were not followed. Remember that the goal is to have all modified objects documented in a CSR at all times. Version-changed objects, on the other hand, are reported for informational purposes only. They can be used by Project Managers to keep tabs on what is currently being modified in the application environments during project life cycles.

When proper business procedures are followed, it is not necessary to run the wizard very often. Since this is not always the case, the wizard can be run on a periodic basis to monitor undocumented changes and add undocumented objects to CSRs.

Identify Schema Changes in an Environment

With the Undocumented Object Wizard, you can scan the schema object definitions in a selected PeopleSoft, Oracle Applications, or generic application environment and identify any modifications to these objects that are not recorded on a CSR. The Wizard compares the date-time stamping of schema objects with the stamping documented in Stat; if a schema object has a later date-time stamp, the wizard reports it as undocumented.

Assist with PeopleSoft Compare Reports

If you install Stat during a PeopleSoft upgrade, the wizard assists you with your PeopleSoft compare reports. The wizard tells you which objects have been changed, eliminating this time-consuming step in the compare process.

The Wizard and Version Control

The Undocumented Object Wizard facilitates version control by automatically adding all the undocumented objects that it finds in the application environment to a CSR. You can then lock these objects on the CSR and create an archive set that serves as the baseline archive of the objects. If you run the wizard against the base environment in a migration path, Stat creates a base archive set automatically after you lock the objects on the CSR; for all other environments, an interim archive set must be created manually.

NOTE: If you simply want to document the objects located by the wizard, lock them after they are added to a CSR, save the CSR and then unlock the objects. This documents the objects. When you run the Undocumented Object Wizard again, these objects will not appear in the results.

To run the Undocumented Object Wizard:

1. Select **Object Management | Undocumented Object Wizard**.
2. In the **Module** field, select the appropriate change management module.
3. In the **Database** field, select the environment you want.

4 In the **Object Type(s)** field, scroll through the list of object types and select the type(s) you want. To select more than one object type, hold down the <Shift> or <Ctrl> key while you make your selections.

   For application environments running on SQL Server 2005/2008 or on Oracle version 10 or higher, the list includes schema object types. For PeopleSoft environments, the list also includes PeopleSoft proprietary object types, except the following:

   - Access Groups
   - Cube Definitions
   - Cube Definition Instances
   - Dimensions
   - Indexes

   These object types are excluded because they do not include date stamps or user ids. For a complete list of PeopleSoft proprietary object types supported by Stat, see Appendix: Supported PeopleSoft Proprietary Objects on page 264.

5 Click **Next>**.

   If you selected PeopleSoft Proprietary object types, the wizard prompts you to specify compare criteria. If you selected schema object types, the wizard skips this window and searches the selected environment.

6 Select the compare criteria you want and specify any additional parameters as needed.

   You can select one of three options:

   - **PeopleSoft Date/Time Stamping** — When you select this (default) option, the wizard displays a list of release dates contained in the PS Release table. The wizard then compares the release date you select to the date and time that each object was last updated. If an object date is more recent, the wizard then checks if that object is documented in Stat.
   - **Date/Time** — This option allows you to specify a date that is different than a release date. After you specify a date, the wizard then compares it to the date and time that each object was last updated. If an object date is more recent, the wizard then checks if that object is documented in Stat
   - **PeopleSoft Oprid** — This option allows you to specify a PeopleSoft OPRID that is either equal or not equal to the OPRID of the objects. If you selected Equals (=), the wizard identifies the objects with a matching OPRID and then checks if each object is documented in Stat. If you selected Not Equals (<>), the wizard identifies the objects that do not have a matching OPRID and checks if they are documented.

7 Click **Next>**.

   The wizard processes your search and displays the number of modified objects it has found and of these how many are undocumented. If you want to cancel the search during processing, click **Stop Search**. The Modified Object Count number is always equal to or greater than the Undocumented Count.

8 If the wizard found undocumented objects and you want to add these objects to a CSR, click **Next>**. If the wizard did not find any undocumented objects, or you do not want to add any objects to a CSR, click **Finish**.

   In the next window, you can associate the undocumented objects with a CSR. The left side of the window lists the undocumented objects and/or version-changed objects. Undocumented objects are separated from version-changed objects by a header within the list. The header shows the number of objects in that category. When the list shows both undocumented and version changed objects, you can only work with one category at a time. You cannot cross-select.

   > **NOTE:** You can export the list of undocumented and version-changed objects by clicking the Export button. The report includes the date and time the objects were last updated and by which user (as identified by Operator ID).

   Objects under the Versions Changed heading, if any, need to be updated to the PeopleSoft environment version. To do this, select the object and click **Update** button. This updates the version of the object in Stat so that it matches the version in the PeopleSoft environment.

You can add undocumented objects to existing CSRs or to new CSRs. When selecting a CSR or creating a new one, you need to make sure of three things:

- That the current status of the CSR allows users to add and lock objects. Workflows can contain status rules that do not allow users to add or lock objects while the CSR is in a certain status. When this is the case, you will be unable to add or lock objects until the CSR status changes to one that allows objects to be added and locked.
- That the change management tab displayed on the CSR matches the module of the objects you want to add. The wizard cannot add objects to a CSR that displays the wrong change management tab
- That the CSR has a migration path that includes the base environment for the objects you want to add. You receive an error message if you attempt to add an object to a CSR that does not have a migration path or the migration path it does have does not include the base environment of the selected object(s).

To specify existing CSRs, click **Lookup CSRs...**. This opens the Search CSR Engine, which you can use to locate the CSRs you want. In the Search CSR Engine window, select the CSRs in the results list and click **Add**.

If you want to create a new CSR, click **New CSR...**. After you create the CSR and save it, it is automatically added by the wizard.

9 Specify the CSR(s) to which you want to add the undocumented objects.

10 After you have added CSRs, select a CSR and the objects you want to add to it. To select multiple objects, use the <Shift> and <Ctrl> keys or the **Select All** or **Select None** buttons.

11 Click **Add>>**.

This adds the object(s) to the CSR only. It does not request a lock or reservation for the object.

12 Click **Finish**.

Migration History Wizard

You use the Migration History Wizard to locate any migration that has been performed in Stat. This allows you to view all changes that have occurred in a particular environment or in all environments. The wizard searches for all migrations that meet your selected criteria. For example, you can search by a specific date range, service domain, release label, or migration path. Access to this wizard is controlled by user class rights.

To run the Migration History Wizard:

1 Select **Migration Management | Migration History Wizard**.

The wizard prompts you to specify search criteria, including module (PeopleSoft, Oracle Applications, or Generic Applications), service domain, migration path, target environment, CSR type, and release label. You also specify a date range in which to search, or you can opt to search for all migrations regardless of date. You can also specify if you want to the results to be reported in a state-based format.

2 In the **Module** field, select **PeopleSoft**, **Oracle Applications**, or **Generic Applications**, depending on the change management module you are using.

> **NOTE:** You can set a default value to be displayed in the Module field. To do this, select User Options | Stat Options. Then in the Stat User Options window, select the value you want in the Default Module field.

3 In the **Service Domain** field, select a service domain.

The drop down list shows all service domains to which you have access.

4 (Optional) Select a migration path.

All active paths for the selected domain appear in the drop down list. To disregard the path, select **Any**.

5 (Optional) Select a target environment.

This is the environment to which the archive set was migrated. If you selected a migration path was selected, the drop down list will include only those environments on the path. Otherwise, all environments appear. To disregard the environment, select **Any**.

6 (Optional) Select a CSR type.

Only the active types for the selected domain appear in the drop down list. To disregard the type, select **Any**.

7 (Optional) In the **Release** field, select a release label.

This configures the wizard to locate migrations in which an archive set has been assigned a Release Label. For more information on migrating archive sets based on application release labels, see the “Object Migrations” section in the appropriate change management chapter.

> **NOTE:** Although release labels are typically used during mass migrations, the Migration History Wizard can locate any migration in which the selected release label has been assigned to a migrated archive set.

8 Select a date range or choose to show all migrations.

9 (Optional) Select the **State Based Report** option.

This configures the wizard to take environment refresh events into account when reporting the results of its search. For more information on environment refresh events and state based reporting, see Environment Refresh Events on page 29.

10 Click **Next>**.

In the next window, the wizard displays its search results in the Migration History Report window.

From here you can print or export the list by pressing the appropriate button. You can also open the CSR for the migration by double-clicking on the corresponding row.

If you selected the **State Based Report** option, the Migration History Wizard includes migrations in the results window that are documented in environments due to environment refresh events.

The Migration History Report window resembles the Migration Console and functions much the same way (see Migration Console on page 48). The Migration History Report window, however, displays more information about the migration, including:

Column	Description
Archive Set	The number of the CSR the archive set is associated with followed by the archive set number.
Archive Type	The type of archive set. Options include **Base**, **Interim**, and **Final**.
Archive Description	The description that identifies the archive set.
Object Count	The number of objects contained in the archive set.
CSR Description	The entry in the **Title** field of the associated CSR
CSR Type	The type ID of the CSR.
Migration Path	The migration path used to migrate the archive set.
To Working	Indicates if file objects in the archive set (if any) were migrated to the developers’ working directories.
To Distributed	Indicates if the target environment is a distribution environment.

Object Archive Search Wizard

You can use the Object Archive Search Wizard to locate all CSRs which contain an archive copy of a specific object. While the Object History Wizard finds all CSRs with which an object is associated, this wizard locates only those CSRs which contain an archive set with that object. This wizard is useful in finding object versions for recovery purposes.

To run the Object Archive Search Wizard:

1. Select **Object Management | Object Archive Search Wizard**.
2. Click **Next>**.

   In the next window, the wizard prompts you to specify the module, the source environment from which the object was archived, and the object type.
3. In the **Module** field, select **PeopleSoft**, **Oracle Applications,** or **Generic Applications**, depending on the change management module you are using.

   NOTE: You can set a default value to be displayed in the Module field. To do this, select User Options | Stat Options. Then in the Stat User Options window, select the value you want in the Default Module field.
4. In the **Source Environment** field, select the environment from which the object was copied.

   All environments are listed regardless of migration path.
5. In the **Object Type** field, select the object type of the object.

   The wizard displays a list of all objects of that type that have been archived from that environment. The Max Version column shows the highest version number assigned to the object. Stat assigns a version number to an object each time it is archived from an environment.
6. Select the object you want and click **Next>**.

   In the next window, the wizard prompts you to specify additional search criteria.
7. In the **Service Domain** field, select a service domain.

   The drop down list shows all service domains to which you have access.
8. (Optional) Enter the date that the archive set was created on or before.

   You can manually enter the date or click the Browse button (**...**) to access a calendar.
9. (Optional) Select the CSR type of the archive set, the current status of the associated CSR or the current status of the archive set.

   To disregard any of these options, select **Any**.
10. Select the archive set type.

    You can select up to all four types.
11. Click **Next>**.

    In the next window, the wizard displays a list of archive sets that contain an archive of the selected object.

From the Search Results window, you can do the following:

- Open a CSR by double-clicking on its corresponding archive set.
- Open the Migration window for the objects in an archive set. To do this, select the archive set and click **Recover...**.
- Print or export the list by clicking the appropriate button.
- Compare two different versions of an object archived on different archive sets by selecting the two versions you want and clicking the **Compare** button. This opens Stat's object comparison tools (either the Object Compare Wizard or the File Comparison Tool, depending on the class of the selected object). For detailed instructions on using the object comparison tools, see Object Comparison Tools on page 100.

Rapid Recovery Window

In addition to migrating archive sets in a CSR, Stat also assists with object recovery. This is done in the Rapid Recovery window. In this window you can migrate an archive set to any environment, not just those environments on the CSR's original migration path. You can also recover an archive set from a closed CSR where there are no locks on the objects.

Since you can migrate to environments not on the CSR's migration path, any security right having to do with a migration path does not apply to the Rapid Recovery window, such as the security right that allows a user to migrate to the Base environment.

The Rapid Recovery window should only be used in emergency situations since it overrides several CSR migration rules, including migration approvals, workflow status, and object locks. Because overriding object locks creates the risk of overwriting another user's work, access to the Rapid Recovery window is controlled by its own security right and should be restricted.

When you use the Rapid Recovery window to migrate an archive set to an environment that is not on the original migration path, the migration is documented in the Migration Details window but not the CSR where the archive set originated. On the other hand, if you do recover to an environment on the original migration path, the migration is documented in the CSR as it would be normally.

To run the Recovery Wizard:

1. Select **Migration Management | Rapid Recovery**.

   Stat opens the Rapid Recovery window.

2. (Optional) If you want the Stat Central Agent to process the migration job at some later time, enter the date and time in the **Migration Date** field.

   The field defaults to the current date and time. You can schedule the migration up to 90 days in the future.

3. (Optional) In the **Description** field, enter a unique description of the migration.

   The field defaults to "Rapid Recovery".

4. In the **Target** field, select the migration's target environment.

   > **NOTE:** You are only able to select environments that you have permission to access, as specified in User Maintenance window.

5. (Optional) Select the **Stop on Error** option if you want the Stat Central Agent to terminate the migration at the first error it encounters.

   System administrators may set this option to be selected or de-selected by default.

6. (Oracle Apps only) If you are on Oracle Applications version AD.I and want Stat to put the environment in Maintenance Mode when the backing out the patch, select **Maintenance Mode**.

7. The **Maintenance Mode** field is disabled if you are on an earlier version than AD.I. For more information on Maintenance Mode, see your Oracle Applications documentation.

8. Click the Browse button (**...**) next to the **Select CSR** field.

   This opens the Search CSR Engine, which you use to locate the CSR you want. In the Search CSR Engine window, select the CSR in the results list and click **OK**. The wizard displays a list of archive sets associated with the CSR.

9. Select the archive set you want to migrate.

   The window displays a list of all the objects contained in the selected archive set.

10. (Optional) If the archive set contains both file objects and database objects, deselect the class of objects you do not want to migrate.

    With the appropriate security rights, you can choose which object classes you want to migrate.

    > **NOTE:** You are only able to recover object types that you have permission to access, as specified for your user account in the User Maintenance window. Also, file objects can be recovered only to an environment's source file directory and not the user's working directory.

11 (Optional) In the list of objects, deselect any objects that you do not want included in the migration.

12 (Optional) If migrating to a distribution environment, de-select any environment in the list of active target environments you want to exclude from the migration.

13 (PeopleSoft only) Select a staging database and a name for the Stat-created PeopleSoft project.

These parameters are documented in Object Migrations (PeopleSoft) on page 142.

14 Click **Migrate>**.

At this point, Stat checks if any of the objects in the archive set are locked in the target environment on other CSRs. If it finds any locks, it displays a message identifying the object, the CSR that has the lock, and the assigned developer. Click **Cancel** if you want to discontinue the recovery and resolve the locking conflict, or click **OK** if you want to proceed.

CAUTION: Recovering objects that are locked on other CSRs can result in users inadvertently overwriting each other's work.

The remaining steps of object recovery are identical to drag and drop object migrations. For more information, see the "Object Migrations" section in the appropriate change management chapter.

Release Recovery Window

Like the Mass Migration window, the Release Recovery window allows you to mass migrate archive sets based on application release labels. Unlike the Mass Migration window, however, mass migrations conducted in the Release Recovery window override workflow rules, approval requirements, and object locks. This can be an effective way of preserving crucial object definitions during an emergency when time is a factor. Due to its ability to circumvent security measures, access to the Release Recovery window is controlled by specific user class rights and should be restricted to development managers.

To open the Release Recovery window, select **Migration Management | Release Recovery**. The procedure for mass migrating archive sets based on application release labels in the Release Recovery window is exactly the same as it is in the Mass Migration window, except in the Release Recovery window you can mass migrate any eligible archive set to any environment you want, regardless of workflow rules, pending approvals, or object locks that may exist in other environments (but not, however, regardless of your environment access permissions, as specified for your user account in the User Maintenance window). For more information on mass migrating archive sets, see the "Object Migrations" section in the appropriate change management chapter.

Archive Set Synchronization Wizard

The Archive Set Synchronization Wizard helps you ensure that your environments contain the same versions of objects. After searching selected environments and identifying objects with differing archive set IDs, the wizard gives you the option of migrating the object versions you want from the source environment to a target environment that you select. This way, you can update your environments with the most recent version of objects, or, if necessary, you can use the wizard to roll back your environments to earlier versions.

To run the archive Set Synchronization Wizard:

1 Select **Object Management | Archive Set Sync Wizard**.

2 In the **Select Module** field, select your change management module.

If you select **PeopleSoft**, in the **PS Version** field, select the version number of your PeopleSoft environments.

NOTE: You can set default values to be displayed in the Module and PS Versions fields. To do this, select **User Options | Stat Options**. Then in the Stat User Options window, select the values you want in the Default Module and Default PS Version fields.

3 In the left side of the window, select the environments you want to run the wizard against. Hold down the <Shift> or <Ctrl> key to make multiple selections.

> **NOTE:** You cannot run the Archive Set Synchronization Wizard for a distributed environment. Archive sets contained in a distributed environment are not identified by the wizard. Also, the wizard does not display archive sets located in your working directory.

4 In the right side of the window, select the object type(s) whose archive set IDs you want the wizard to compare. Hold down the <Shift> or <Ctrl> key to make multiple selections.

5 Click **Next>**.

The wizard searches the environments for archive sets containing the selected objects. In the next window, the wizard displays a list of objects with differing archive set IDs.

6 To print or export this list click the appropriate button

7 Click **Finish** if you want to exit the wizard, or click **Next>** if you want to synchronize your environments by migrating selected versions of objects from one environment to another.

In the next window, you select certain migration parameters, including the source and target environment and the objects you want to migrate.

8 In the **Source of Synchronization** field, select the environment that contains the object versions you want to migrate.

The wizard displays a list of the out of sync objects contained in the selected environment.

9 Select the objects you want to migrate. Hold down the <Shift> or <Ctrl> key to make multiple selections.

10 In the **Target of Synchronization** field, select the environment to which you want to migrate the selected objects.

11 Click **Migrate**.

The wizard opens a migration window that closely resembles the Mass Migration window. From here you can synchronize your environments by migrating the selected objects into the target environment. For detailed instructions on performing a mass migration, see the “Object Migrations” section in the appropriate change management chapter.

Archive Set Purge Wizard

The Archive Set Purge Wizard allows you to free up space in your Stat Repository by permanently purging it of unnecessary archive sets. Be careful when using this wizard, since you cannot recover purged archive sets. Access to this wizard is controlled by your user class rights.

To run the Archive Set Purge Wizard:

1 Select **Object Management | Archive Purge Wizard**.

The wizard prompts you to specify the module, service domain, and additional CSR information about the archive set you want to purge.

2 In the **Module** field, select **PeopleSoft**, **Oracle Applications**, or **Generic Applications**, depending on the change management module you are using.

> **NOTE:** You can set a default value to be displayed in the Module field. To do this, select User Options | Stat Options. Then in the Stat User Options window, select the value you want in the Default Module field.

3 In the **Service Domain** field, select the service domain from which you want to purge the archive set.

4 (Optional), Specify additional search criteria:

- Enter the date that the archive set was created on or before. You can manually enter the date or click the Browse button (**...**) to access a calendar.

- Select the environment from which the archive set was migrated. To disregard the source environment, select **Any**.
- Select the CSR type of the archive set. To disregard the type, select **Any**.
- Select the current status of the associated CSR. To disregard the status, select **Any**.
- Select the current status of the archive set. To disregard the archive set status, select **Any**.

5 Select each archive set type you want to purge. Options include **Base**, **Interim**, and **Final**.

For Oracle Applications, you can also select a fourth type, **Patch**. A patch archive is automatically created by Stat whenever a patch is applied to an environment. This archive contains all the objects impacted by the patch in the target environment and is used for patch backout purposes. You can use the Archive Purge Wizard to remove these archives from the Stat Repository.

6 Click **Next>**.

In the next window, the wizard displays a list of archive sets that match your search criteria.

7 Select the archive sets you want to purge. To select all the archive sets in the list, click **Select All**.

> **NOTE:** To open the CSR to which an archive set is associated, double-click on it. To print or export this list, click the appropriate button.

8 Click **Next>**.

In the next window, the wizard tells you that it has flagged the selected archive sets for purging, which is performed by the Stat Central Agent.

9 Click **Process Purge**.

The wizard processes the purge and reports its progress in a meter bar.

10 Click **Finish**.

The archive is purged the next time it is processed by the Stat Central Agent. Remember that a purged archive cannot be recovered.

Undocumented Patch Tool

The Undocumented Patch Tool searches selected PeopleSoft or Oracle Applications environments and identifies any patches that are not documented in the Stat Repository (meaning not associated with a CSR). If it finds any undocumented patches, you can add this information to either a new or an existing CSR.

To run the Undocumented Patch Tool:

1 Select **Object Management | Undocumented Patches**.

2 In the **Module** field, select the change management module you are using.

Options include **PeopleSoft** and **Oracle Applications**.

3 In the **Environment** field and from the list of active environments select the one in which you want to search for undocumented patches.

Stat queries the selected environment and returns any undocumented patches it finds:

- For PeopleSoft environments, the tool identifies undocumented patches as well as undocumented incidents. An undocumented incident may indicate that a patch has been applied to a PeopleSoft environment but its project definition has since been removed, in which case Stat cannot identify the patch directly by its project name. You can document a patch identified by an incident ID by adding the incident to a CSR, but you must first specify the project name of the patch that you want to associate the incident with.

- For Oracle Applications, it displays the Patch Type and Patch Name and also indicates whether the patch is currently uploaded to the Stat Repository.

  NOTE: For Oracle Applications, a patch is considered undocumented for a particular environment if there is no history of that patch being applied to the selected environment in Stat. When you apply a patch associated with a CSR to an environment, Stat records the history and documents the patch. However, if the patch has been applied to an environment before it was uploaded into Stat and associated with a CSR, it is still considered undocumented. To have such a patch documented in Stat, the patch must be added to a CSR with the Undocumented Patch Tool, not through the Objects tab of a CSR.

4 Do one of the following:

- If you want to add a patch to an existing CSR, click **Lookup CSRs**. This opens the Search CSR Engine. Use the Search CSR Engine to locate the CSR(s) that you want to add the undocumented patch to. You can select multiple CSRs if the wizard returns multiple undocumented patches and you want to add different patches to different CSRs. Stat displays an error message if you select a CSR that does not support patches. After selecting the CSR(s) you want, close the Search Engine. For more information, see The Search CSR Engine on page 65.
- If you want to add a patch to a new CSR, click **New CSR...**. Then follow the instructions for creating a new CSR described in Chapter 3, “Change/Service Requests.” Make sure to create a CSR that supports patches. After creating the CSR, close the CSR window.

  NOTE: Before adding the patch definition to a CSR, be aware of the following:

  Workflows can contain status rules that do not allow users to add or lock objects while the CSR is in a certain status. When this is the case, you will be unable to add the patch definition until the CSR status changes to one that allows objects to be added and locked.

  For PeopleSoft, you can use the Undocumented Patch Tool to add patch definitions to a CSR, but you cannot use the tool to add the objects contained in a patch to a CSR and then apply that patch to an environment. To do this, you must add the objects contained in a patch manually or with the Project Read Wizard. For more information, see Object Management (PeopleSoft) on page 109.

  For Oracle Applications, you can use the Undocumented Patch Tool to add patch definitions to a CSR, but you cannot use the tool to upload patch zip files to the Stat Repository. For this reason, you cannot schedule a patch application or impact analysis request for a patch that has been associated to a CSR via the Undocumented Patch Tool unless its corresponding patch zip file has been uploaded to the Stat Repository. For more information, see Patch Management on page 179.

5 (Optional) Repeat step 4 to add more CSRs.

  Do this if the wizard identified more than one undocumented patch and you want to add the patches to different CSRs.

6 In the Undocumented Patches section, select the patches you want to add to a CSR. Then in the Change/Service Requests section, select the CSR you want to add the patches to.

7 (Optional) For PeopleSoft, if you want to document a patch by adding an undocumented incident to a CSR, select the incident and click **Add>>**. Then specify the project name of the patch that you want to associate with the incident.

8 Click **Add>>**. Stat adds the patches to the selected CSR.

9 When finished, click **Close**.

Object Comparison Tools

You can use the Stat’s object comparison tools (the Object Compare Wizard and the File Comparison Tool) to compare the definition of either two objects of the same type or two versions of the same object. For certain

classes of objects, you can use the Object Merge Wizard to combine the definitions into a new object which you can then add to an archive set and migrate.

You can compare object definitions found in the following locations:

- In two different environments
- In two different archive sets
- In one archive set and in one environment on the migration path
- For Oracle Applications, in two different patches or in one patch and in one environment or archive set

Comparing Different Object Classes

The process of comparing object definitions in Stat varies, depending on the class of objects.

PeopleSoft and Data Objects

In the case of PeopleSoft proprietary and data objects, you can use the Object Compare Wizard to compare different objects as long as they are of the same object type. Also, for PeopleSoft proprietary objects, you can use the Object Merge Wizard to combine the two versions into a new object definition. The merged object definition is then automatically archived on a new Stat-generated archive set. This way, you can keep your PeopleSoft proprietary objects updated and synchronized across environments.

NOTE: For PeopleSoft proprietary objects, you can compare and merge blob data fields from UDB/DB2 databases with objects from other UDB/DB2 databases or in Stat archive sets.

You can also use the Object Compare Wizard to compare the scripts of PeopleCode objects. When comparing PeopleCode scripts, the wizard invokes CLI functionality to launch PeopleSoft, decodes the scripts and then compares the scripts as text-based objects, allowing you to quickly identify differences.

File and Schema Objects

For file and schema objects, you can use the File Comparison Tool to compare objects and easily identify differences. For file objects, this tool also functions like the Object Merge Wizard, enabling you to overwrite sections of one object with sections from the second object. The newly merged version can then be saved to the assigned developer's working directory and later included in a new archive set.

Objects in Oracle Applications and Generic Applications

For Oracle Applications, you can compare any type of object defined in the Object Type Maintenance table that is contained in a non-merged, active patch (except setup type objects) currently downloaded in the Stat Repository.

Also for Oracle Applications and generic applications, you can use the Object Compare Wizard to compare Oracle developer objects (form, form libraries and reports). Although file-based, the definition of these objects cannot be merged.

The Object Compare Wizard

You can open an object comparison tool in one of three ways:

- Directly from the **Object Management** menu, in which case you can use the Object Compare Wizard to select multiple objects in any source location that you have access to, including patches in the case of Oracle Applications.

- From a CSR, in which case you can select single objects in the locations associated with that CSR, such as the environments on the migration path and archive sets defined in the CSR.

  NOTE: When opened from a CSR, the Object Compare Wizard can only compare two objects at a time and only objects associated with that CSR. Also, the wizard does not support comparing objects contained in Oracle Applications patches.

- From the Object Archive Search Wizard, in which case you can compare two objects located in two archive sets identified by the wizard. For more information, see the section, Object Archive Search Wizard on page 95.

Opening the Object Compare Wizard from the Object Menu

To run the wizard from the Object menu:

1. Select **Object Management | Compare Wizard**.

   Stat opens the Object Compare Wizard. Here you select the change management module you are using and the type of comparison you want.

2. Select the appropriate change management module.
3. Select the two source locations of object(s) you want to compare.

   For Oracle Applications, you can also select patch locations.

4. Specify the comparison type you want:
   - Select **Detailed Comparison** if you want to compare just two objects of the same type or two versions of the same object
   - Select **Aggregate Report** if you want to compare multiple objects
5. (Optional) For PeopleSoft users, deselect any of columns that you do not want to include in the comparison.

   Because certain PeopleSoft object values (version number, update date and update user ID) can change repeatedly without affecting the definition of the object itself, you may want to exclude these values from the comparison.

6. Click **Next>**.
7. Depending on the two source locations, do one of the following to select the object(s) you want to compare:
   - **If you selected two environments** - Select the first environment and then select the object type. Stat displays a list of matching objects currently in the selected environment. Select the object(s) you want. Then select the second environment.

     NOTE: If you are comparing schema object types, you are prompted to select the object's schema.

   - **If you selected two archive sets** - Use the Search CSR Engine to locate the CSR that contains the first archive set. Then select the archive set and the object(s) you want to compare contained in the archive set. Click **Next** and repeat for the second archive set.
   - **If you selected both an environment and an archive set** - Locate the CSR and archive set and then select the object(s) you want to compare contained in the archive set (You must select the archive set before the environment, even if it is the second source location). Then select the environment.

     NOTE: The list of environments only includes environments on the same migration path as the CSR that the archive set is associated with.

   - **If you selected a patch (Oracle Apps only)** - Select the patch from the list of non-merged, active patches in the Stat Repository. Note that the some patches may be listed multiple times if they target different platforms or languages. After you select the patch and object type, Stat unzips the patch zip file and returns a list of all the objects contained in that patch, excluding setup objects. Select the object you want from the list.

8 Click **Next**.

If you are comparing just two objects, the Object Compare Wizard displays the results of the comparison in the next window. See the section, Viewing and Merging Object Definitions on page 103 for more information.

If running an aggregate report, the Object Compare Wizard displays the Object Compare Report.

The Object Compare Report displays a row by row comparison summary of each object. For each object, possible statuses include Identical, Not Identical, or Does Not Exist (meaning the object does not exist in the second source location).

You filter the Object Compare Report using the operator buttons located in the top left of the window. You can also use the buttons in the top right of the window to print or export the report and to view the log file.

9 Select the object that you want to view more detailed information.

10 Click **Next**.

In the next window, the wizard displays more detailed information about the selected object you are comparing. See the section, Viewing and Merging Object Definitions on page 103 for more information.

Opening the Object Compare Wizard from a CSR

To run the wizard from a CSR:

1 In the Archive Sets tab of a CSR, Environment Info view, select the two objects of the same type you want to compare, or select one object if you want to compare different versions of that object.

2 Do one of the following:

- Right-click and in the pop-up menu, select **Compare Objects**.
- Click **Compare**.

3 Specify the type of comparison you want:

- Select two environments if you want to compare versions residing in two different environments on the migration path, including the assigned developer's working directory and a VCM repository (if your system administrator has defined any VCM records and you have associated one with the CSR).
- Select two archive sets if you want to compare versions archived in two different archive sets on the CSR
- Select archive set and environment if you want to compare one version in an archive set and another version residing in an environment on the migration path, including the assigned developer's working directory

Depending of the comparison type you selected, specify the location of the object(s) you want to compare:

- If you selected an environment as one of the source locations, Stat prompts you to select one of the environment on the migration path associated with the CSR.
- If you selected an archive set as one of the source locations, Stat prompts you to specify the archive set associated with the CSR.

4 After selecting the locations, click **Ok**.

The Object Compare Wizard displays the results of the comparison in the next window. See the next section, Viewing and Merging Object Definitions on page 103 for more information.

Viewing and Merging Object Definitions

After the selecting the objects you want to compare, how you view the results of the comparison depends on the classification of the selected objects. See the following sections for information on viewing the comparison results of different object classes:

- Comparing PeopleSoft Proprietary and Data Objects on page 104
- Merging PeopleSoft Proprietary Objects on page 105
- Comparing Objects in Oracle Applications on page 106
- Comparing File and Schema Objects on page 107

Comparing PeopleSoft Proprietary and Data Objects

You can view a detailed comparison of each data table that defines two PeopleSoft proprietary or data objects. For PeopleSoft proprietary objects, you can then use the Object Merge Wizard to combine the definitions into a new object, which can be added to an archive set and migrated to any environment you want to update. For more information, see the section, Merging PeopleSoft Proprietary Objects on page 105.

In the Object Compare Wizard, the definitions of the first and the second object you selected are displayed in the top and bottom sections of the window, respectively. The names of the data tables that comprise the two objects are displayed on the right. Select a table to view results of the comparison on a row by row basis. When you select a row in either the top or bottom section of the window, the wizard highlights its corresponding row in the other section of the window. If one object contains a row that does not exist in the definition of the second object (no row with same key values), when you select that row, no row is highlighted in the other object, which tells you that this row has no equivalent.

Both the names of the data tables, the rows that make up those tables, and the values contained in each row are color coded to indicate whether differences exist between the two objects. The following colors are used:

Color	Meaning
Green	In the case of a table, indicates that the table is identical for both objects. In the case of a table row, indicates that the values contained in that row are identical for both objects.
Red	In the case of a table, indicates that differences exist between the two objects in every row of the table. In the case of a table row, indicates that every value contained in that row is different between the two objects. The different values are themselves displayed in red.
Pink	In the case of a table, indicates that differences exist in only some of the table rows. In the case of a table row, indicates that only some of the values contained in that row are different between the two objects.
Gray	Indicates that the table is empty for both objects

NOTE: When comparing when two PeopleSoft objects were last updated, the Object Compare Wizard disregards milliseconds, which is not recorded by all supported platforms

You can filter the comparison results with the following toolbar buttons:

If you want to:	Click toolbar button:
Show all tables and rows	
Show only tables and rows with differences (coded red and pink)	
Show only identical tables and rows (coded green)	
Show only empty tables (coded gray)	

Blob Data

If the data table you are comparing contains a Blob field that is textually formatted (as indicated by the value “BLOB” displayed in all caps), you can compare and merge the contents of the Blob field by clicking the **Blob** button. This opens the File Comparison tool, which displays both versions of the Blob field and identifies any differences that may exist. The File Comparison tool cannot compare blob information, however, if the source

environment for one data table is Unicode and the other is non-Unicode; the source environments must be both either Unicode or non-Unicode. For more information, see Comparing File and Schema Objects on page 107.

NOTE: For PeopleSoft proprietary objects, you can compare and merge blob data fields from UDB/DB2 databases with objects from other UDB/DB2 databases or in Stat archive sets.

Image Objects

When you compare two version of a PeopleSoft Image object, the wizard displays an **Image** button that you can use to compare the two versions visually. If differences are reported by the wizard, select a row and click **Image**. This opens the Compare Images window which shows both versions of the image object.

Comparing PeopleCode Scripts

You can also use the Object Compare Wizard to compare the PeopleCode scripts that those objects contain.

Comparing PeopleCode scripts is similar to comparing the text-based Blob field in other PeopleSoft objects. In both cases, the contents are compared textually in the File Comparison tool. When you compare PeopleCode scripts, however, Stat does the following:

- Copies the two PeopleCode objects to a staging database that you select and places them in a temporary project
- Invokes CLI functionality to launch PeopleSoft, extracts and then decodes the PeopleCode scripts.
- Displays the textual contents of both scripts in the File Comparison tool.

To compare PeopleCode object scripts:

1. Select and compare the definitions of the two PeopleCode objects you want.
2. Select a row and click **PeopleCode**.
3. Select a staging database in which will create a temporary project that contains the PeopleCode objects.
4. The staging database you select must be configured to invoke CLI functionality.

   For more information, see Object Management (PeopleSoft) on page 109.
5. Click **Compare**.

   After selecting the staging database, Stat invokes CLI functionality to launch PeopleSoft, decodes the two scripts, and then opens the File Comparison tool, which displays textual contents of both scripts and identifies any differences. For more information, see Comparing File and Schema Objects on page 107.

Merging PeopleSoft Proprietary Objects

If you are comparing two versions of the same PeopleSoft proprietary object, you can merge the two versions to create a new object that is automatically archived by Stat. You can also compare and merge PeopleSoft proprietary objects that contain blob data from UDB/DB2 databases with other UDB/DB2 databases or with the Stat archives.

To merge a PeopleSoft proprietary object:

1. In the Object Compare Wizard, click **Merge**.

   This opens the Object Merge Wizard which displays all the differences identified by the Object Compare Wizard.

   The window displays a list of records that contain different key values, sorted by table. Here you select which records you want included in the merged object definition. You can opt to include records from one object or from both of them.
2. In the left section of the window, select the table whose records you want to view. Then select the records you want included in the archive set.

To select multiple records, hold down the <Shift> or <Ctrl> keys. Records you select from one table stay selected when you select a different table. When finished, click **Next**.

If you selected two records that have the same key values but have other values that are different, in the next window you are prompted to specify which values you want to use in the merged object definition.

The bottom section of the Object Merge Wizard lists all the different values that have been identified between the two versions of the object, sorted by table and column name. When you select a row on this list, the top section of the wizard displays the data values of the associated table for both versions of the object. Different values are color coded red.

3 For each difference listed in the bottom section of the window, in the Source column and select which of the two versions you want to use as the source for the merged object definition. When finished, click **Next**.

The Object Merge Wizard displays a preview of the merged object definition, sorted by table. Click on a table name in the left section of the window to view the values it contains. If you want to change any of the values, click **Back** and modify the values as necessary

4 Click **Next**.

At this point, the Object Merge Wizard is ready to generate a merged archive set for the new object and add it to your CSR. The default message displayed in the **Comments** field reads, “Stat Archive generated by merging 2 objects.”

5 (Optional) Modify the message displayed in the **Comments** field. Otherwise click **Next**.

In the next window, the Object Merge Wizard displays a log as it generates the archive set. If no errors are encountered it displays a Success message.

6 Click **Finish**.

You can now view the newly generated archive set containing the merged object definition on the Archive Sets tab of the CSR window.

Comparing Objects in Oracle Applications

The Object Compare Wizard can show differences that exist between setup or developer object types for Oracle Applications. After you select the source locations and the two setup or developer objects you want to compare (or the two versions of the same object), click **Next.** The wizard processes the request and in the next window compares the properties of the two objects. The left side of the window displays in a merged tree view the structural classes and entities of the two objects. When you select an entity, the right side of the window shows any differences that may exist between the two objects.

NOTE: If you are comparing file (non-developer) type objects, Stat opens the File Comparison window. See the next section, Comparing File and Schema Objects on page 107 for more information.

NOTE: If one object has a property with a null or empty value and the second object does not have this property, the Object Compare Wizard does not display the attribute property in the tree view or report this as a difference between the two objects.

The icons and flags displayed in the tree view indicate whether differences exist between the objects. Also, you can use the action buttons to control how information is displayed in the window. The table below describes the icons and action buttons featured in the window.

Icon/Action Button	Description
	Entities are equal.
	Entities are equal Different
	Classes are equal
	Classes are different
	Properties are equal

Icon/Action Button	Description
	Property does not exist in object 1
	Property does not exist in object 2
	Properties are different
	Button: Show all the entities
	Button: Show different entities only
	Button: Expand all the items in the tree view
	Button: Collapse the tree view to the second level

When you double-click on a property in the tree view, the wizard opens the Text Comparison window, which shows in detail any differences that may exist between the properties shared between the two objects. The Text Compare window functions and behaves the same way as the File Compare Window, except without any merge capabilities. For more information the File Compare window, see the section, Comparing File and Schema Objects on page 107.

Comparing File and Schema Objects

You can use the File Comparison Tool to compare the contents of file and schema objects and easily identify differences.

In the File Comparison window, the contents of the two file or schema objects are displayed side by side separated by a center divider. Differences between the two versions are highlighted with color. The colors may be customized by the user. Using the default color values, the following occurs:

- Differences between two versions are highlighted in red
- Text that only occurs in one version is matched by a corresponding grey area in the other version
- Minor differences, such as whitespaces, are picked out in blue

The tool finds lines of text that correspond to each other and does not depend solely on the line number.

NOTE: When comparing file objects that have been migrated between Unix and Windows environments, it is recommended you only compare objects based on the Image format. FTP inserts carriage returns into ASCII-type objects when they are migrated from a Windows environment to a Unix environment, and this may cause the File Comparison Tool to report differences between what is in fact the same file object. For more information on file formats, see the *Stat System Administration Guide*, Chapter 4, “General Maintenance Tables.”

Optionally, Stat can use an external third party compare tool for comparing files.

To switch to an external compare tool:

1 Install a third party compare tool, for example, WinMerge.

2 Open the Stat.ini file in a text editor and add a line similar to the following to the Options section (the following example is based on using WinMerge):

ExternalCompareTool=C:\Program Files (x86)\WinMerge\WinMergeU.exe %1 %2 /dl "%3" /dr "%4"

Where:

%1 - Placeholder for first file

%2 - Placeholder for second file

%3 - Placeholder for left source description

%4 - Placeholder for right source description

NOTE: The external third party compare tool must be installed separately and is not included with the Stat installation package

11

Change Management for PeopleSoft

- Object Management (PeopleSoft)
- Object Archives (PeopleSoft)
- Object Migrations (PeopleSoft)

Object Management (PeopleSoft)

Setting Up Your PeopleSoft Connections

Before Stat can interact with the objects in your PeopleSoft environments, it must first connect to those environments. For certain activities, such as editing or auto-migrating objects, it does this using the PeopleSoft Operator ID and password assigned to you for each environment. This allows Stat to access these environments and physically lock the objects you want to work with or open the object you want to edit. Your system administrator can specify your operator ID and password for each environment in the User Maintenance table, or you can do it yourself in the PeopleSoft Options window.

The PeopleSoft Options window displays a list of all the PeopleSoft environments defined in Stat that you can connect to. Here you can define a separate PeopleSoft operator ID and password for each environment.

In this window, you can also configure Stat to do the following:

- Open PeopleSoft and automatically log you in to the environment in which you have staged objects during a PeopleSoft migration. This way, you do not have to open the project in PeopleSoft manually to verify the staging of objects.
- Automatically migrate the objects in your project from the staging database to the target environment during a PeopleSoft migration
- Automatically migrate the objects out to all the environments included in the distribution list when migrating to a distribution environment

If you want Stat to perform any of these tasks, you must specify both your PS Operator ID and password for the selected environment.

Staging databases and PeopleSoft environments are defined by system administrators in the PeopleSoft Environment Connection Maintenance table, which is described in the *Stat System Administration Guide*, Chapter 4, “General Maintenance Tables.” Migration paths and distribution environments are defined by system administrators in the PeopleSoft Environment Migration Path Maintenance table, which is described in the *Stat System Administration Guide*, Chapter 5, “Service Domain-Specific Maintenance.”

To set up a PeopleSoft Operator ID and password:

1. Select **User Options | PeopleSoft Options**.

   This opens the PeopleSoft Options window which displays a list of all the PeopleSoft environments that you can connect to.
2. Select the PeopleSoft environment that you want to connect to.
3. Enter a PS Operator ID in the PS Oprid column.

This ID is case-sensitive, must correspond to the PeopleSoft Operator ID for the given environment, and must be no more than 30 characters in length.

4 Click the corresponding **Enter Password** button in the PS Password column.

5 In the Change Password dialog box, enter the password in the **New Password** and **Verify Password** fields.

This password is case-sensitive, must correspond to your PeopleSoft Operator ID's password for the given environment, and must be no more than 32 characters in length.

6 Click **OK**.

A green checkmark icon appears to the right of the **Enter Password** button indicating that a password has been created.

7 (Optional) Select **CLI Open** for any designated staging database.

Selecting this option configures Stat to login automatically to the environment and open the project you just staged. You can then verify the staging of objects and push the project to the target environment.

8 (Optional) Select **CLI Auto-Migr** for any environment designated in a migration path as either the target environment for staged objects and/or as a distribution environment.

For a single target environment, selecting this option automatically migrates objects to the target environment from the staging database. To use CLI functionality for a distribution environment, you must select it for each environment that qualifies for auto-migration within the distribution environment list. For more information, see Auto-Migrating PeopleSoft Projects on page 147.

When migrating PeopleSoft objects, you have the option of disabling the auto-migration feature.

Stat executes a DataMover script to auto-migrate non-App Designer objects.

9 If you selected either **CLI Open** or **CLI Auto-Migration**, specify the directory of the user's PS Tools executable in the **PS Tools Directory** field.

This information is required if you plan to use CLI functionality in any PeopleSoft environment. You can specify a directory location either manually or by browsing for the location:

- If the executable is in the same location as when first installed, keep the default value, "PS_HOME\bin\client\winx86," where PS_HOME is the user's PS_HOME variable defined in the PeopleSoft configuration
- If the executable has been moved to a different location within the %PS_HOME% directory, specify the new subdirectory, for example, "PS_HOME\setup"
- If the executable has been moved to a location outside the %PS_HOME% directory, specify the entire location including the drive, for example, "G:\software\psft\ps815"

10 (Optional) After specifying the PS Tools directory location, test the connection to an environment by selecting it and clicking **Test Connection**.

If Stat cannot connect, it displays a PeopleSoft generated error message, for example, "Unsuccessful CLI connection to PS database."

11 Save your changes by clicking either **Apply** or **OK**.

Classification of Supported Objects (PeopleSoft)

Whether used in conjunction with PeopleSoft, Oracle Applications, or a generic application, Stat enables developers to work with objects in a more secure, controlled, and well-documented manner.

In Stat, any action you take involving an object is handled and recorded on its associated CSR, including editing, archiving, or migrating it to other environments. Also, Stat lets you place a lock on an object once you associate it with a CSR. Object locking promotes coordination between developers by ensuring that they do not overwrite each other's work.

There are four classes of objects that you can associate with CSRs:

- PeopleSoft proprietary objects
- File objects
- Data objects
- Schema objects

PeopleSoft Proprietary Objects

These are objects native to your PeopleSoft environments, such as Records and Pages. With Stat, you can lock, archive, and migrate PeopleSoft proprietary objects version 7 and higher. For a complete list of objects that Stat supports, see Appendix: Supported PeopleSoft Proprietary Objects on page 264.

File Objects

Stat supports change management for file type objects (also called flat files). In addition to the COBOL, COBOL CPY, SQR, and SQC file types Stat automatically supports, system administrators can configure Stat to support any other type of file object residing in your PeopleSoft environments. This configuration includes defining working directories where users can modify file objects assigned to them.

NOTE: In the case of VCM file objects, system administrators can configure Stat to archive the objects entirely or just pointers to those objects, meaning the objects are not physically brought in to Stat.

Data Objects

Data objects are user-defined or third party data sets residing in your PeopleSoft environments that your system administrator has configured Stat to support. You can lock, archive, and migrate data objects the same way you do PeopleSoft proprietary objects and file objects. Stat currently supports data objects in PeopleSoft environments running on Oracle only.

Schema Objects

Stat supports locking, archiving, and migrating schema object definitions on Oracle databases version 9i or higher and on Microsoft SQL Server 2005/2008.

NOTE: Oracle and SQL Server database schema objects include a set of predefined true/false parameters that are executed before the definition of the object is captured in Stat. You can change the true/false values of these parameters in the Schema Object Parameters Maintenance table. For more information, see the *Stat System Administration Guide*, Chapter 4, “General Maintenance Tables.”

Oracle

Stat supports certain schema object definitions for PeopleSoft environments running on Oracle databases version 10 or higher. If you are running PeopleSoft on a supported Oracle database version 10 or higher, you can lock, archive, and migrate schema objects. Stat currently supports the following schema object types:

- Package Specification
- Package Body
- Procedure
- Function
- View
- Trigger
- Table
- Index

- Synonym
- Sequence

SQL Server

The following schema objects may be archived from and migrated to Microsoft SQL Server 2005/2008 databases:

- Table
- Index
- View
- Trigger
- Function
- Procedure
- Synonym

Object Locking and Reservations (PeopleSoft)

Object locking is an important part of any change management practice since it coordinates all of the developers' efforts and prevents work from being overwritten. Stat supports two levels of object locking functionality.

The first level is the locking of the objects in the Stat Repository. This is a logical lock, which means that the lock shows up in the Stat application, but developers can still go directly into PeopleSoft or a file directory and make changes to the object even if the lock on the object isn't theirs. As long as the developers use a CSR to modify objects, the coordination of development is maintained.

The second level is the physical locking of objects in PeopleSoft environments. This second level of locking is optional. It can be turned on for all the environments and file locations in a service domain or a select few. You can also exclude specific PeopleSoft proprietary object types from the physical locking. Your system administrator and file server administrator configure these options. When activated, physical locking works in conjunction with logical locking.

The following sections apply to locking in general, whether you are using just one or both levels of locking. Specific information about physical locking is found in the sections, "Physical PeopleSoft Locking Option" and "Physical File Locking Option" later in this chapter.

Understanding Object Reservations and Locks

Locks and reservations are issued to the developer assigned to the object, regardless of who actually requested the lock. That person may or may not be the assigned developer. This is a security measure determined by user class rights.

A lock indicates that the assigned developer has exclusive change/edit rights on the object. A reservation indicates that the object is currently locked by another developer and you are waiting for the object to become available. Once the object becomes available, Stat converts the reservation to a lock and notifies the holder of the new lock via email. Remember, the holder of the reservation is the developer assigned to the object in the CSR. If you request the lock but are not the assigned developer, you will not receive an email when the reservation turns into a lock.

Stat supports the Physical Locking for the objects types that can be added to a PeopleSoft Definition Security Group.

For certain objects types, PeopleSoft has the following conditions:

- You can physically lock SQL objects if they are of the 'Normal' variety (as opposed to the types, Application Engine and Record View).
- You can physically lock Application Package if they are of the top level variety (there are three levels of Application Package objects)

These conditions are dictated by PeopleSoft object security requirements, not Stat. To see if a particular SQL or Application Package object is of the variety that can be physically locked in Stat, look in PeopleSoft and see if they have been included in the object security group.

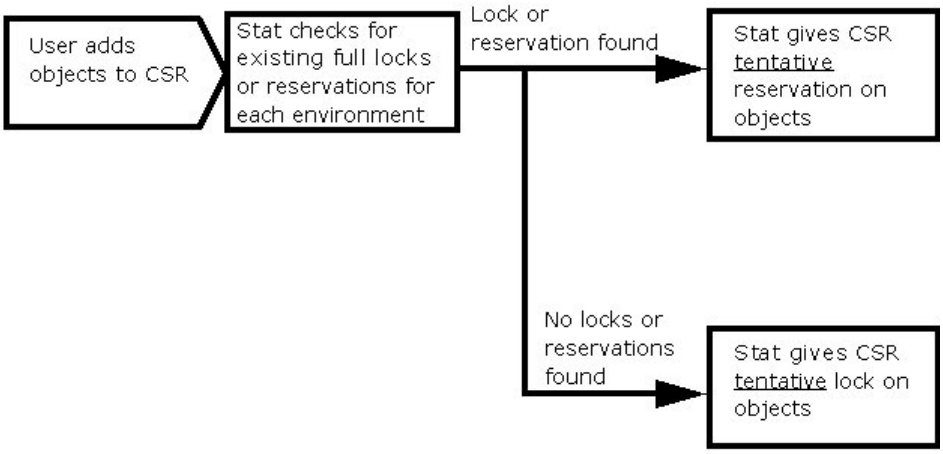
For a complete list of PeopleSoft proprietary object types that you can logically lock in Stat, see Appendix: Supported PeopleSoft Proprietary Objects on page 264.

The Object Locking Process

The object locking process has up to three phases.

Phase 1: Tentative Lock/Reservation

When you associate an object with a CSR, Stat automatically requests a lock for that object in the designated environment(s). Stat checks if there are existing locks or reservations on that object. If a lock or reservation exists, Stat issues a tentative reservation. If not, it issues a tentative lock. The lock or reservation remains tentative until you save the CSR.

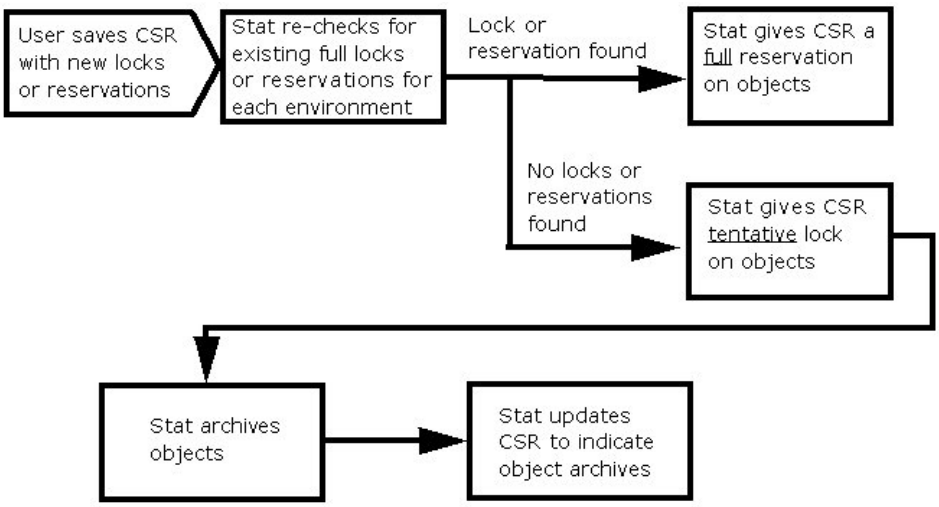


Phase 2: Full Lock/Reservation

Immediately after associating objects with a CSR, you should save your work. Upon saving, Stat checks for existing locks or reservations. If a lock or reservation exists, Stat issues a full reservation. If not, it issues a full lock.

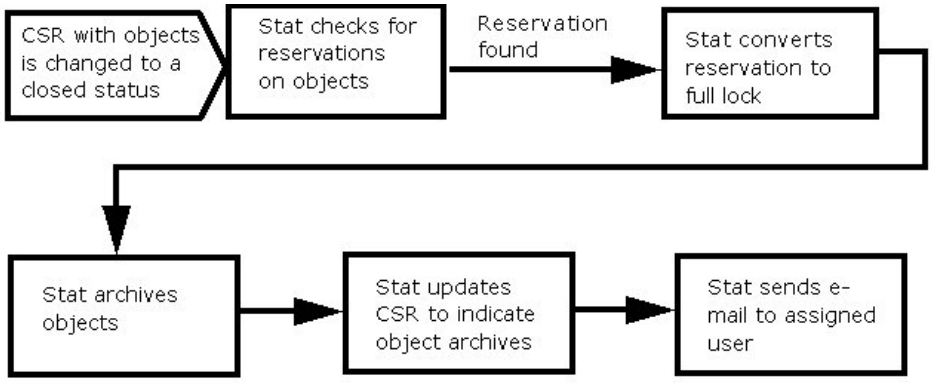
The longer you wait to save your CSR, the greater the likelihood you will lose your place in the queue for that object. For example, while you have a tentative lock on an object, another user could add that same object to a CSR and receive a tentative reservation. If the second user then saves his or her CSR before you do, that user receives the full lock for that object, and when you save your CSR, you receive instead a full reservation.

When Stat issues a full lock, it automatically archives a “pre-change” version of the object to the Stat Repository. Archiving objects is discussed in depth in the next chapter.



Phase 3: Reservation Conversion to Lock

The third phase is the conversion of reservations into locks. Stat releases an object lock when the status of the CSR changes to a closed-type status, or when the developer manually unlocks the object or the object is reassigned to another developer. After unlocking an object, the Stat Central Agent then determines if there are any pending reservations on the object. If reservations on the object have been given to more than one user, these reservations are handled in chronological order, based on the time each lock was requested. The Stat Central Agent converts the first reservation in line into a lock and performs any applicable object archiving.



Locking Facts

Additional information about locking objects in Stat that you should know:

- While not all objects can be physically locked in PeopleSoft, all objects can be logically locked in the Stat Repository
- If an object is locked on a CSR, you cannot lock it on another CSR for the same PeopleSoft environment
- In order to lock objects physically in PeopleSoft, you must have your PeopleSoft operator ID defined in Stat. This is controlled by your security settings.
- Stat supports physical locking of file objects, such as SQRs, COBOLs, and Crystal Reports
- You can logically lock schema objects, data objects, and PeopleSoft proprietary objects that are not governed by PeopleSoft's Object Security, but you cannot physically lock them

Physical PeopleSoft Locking Option

Physical PeopleSoft locking works in conjunction with Stat logical locking. When your system administrator activates the Physical PeopleSoft Locking option in Stat, any object you lock in Stat is also locked in PeopleSoft. Stat utilizes PeopleSoft Object Security to secure the locked objects in each PeopleSoft environment.

Your system administrator defines the scope of PeopleSoft physical locking at the service domain level. Depending on the service domain, object types as well as PeopleSoft environments may be excluded from the physical locking option. Even specific PeopleSoft users can be excluded from this functionality.

The developer assigned to the physically locked object is the only user that has Write access to the object in PeopleSoft. Other users are restricted to Read Only access. If the object is reassigned to a different user and the CSR is saved, the new user has Write access and the previous user has Read Only access to the object.

An object that is not physically locked on any CSR can only be opened in Read Only mode in PeopleSoft. In order to make any changes to PeopleSoft proprietary objects, you must first open a CSR and physically lock the objects in that CSR. This ensures that all object modifications are documented.

NOTE: For detailed instructions on setting up physical locking between Stat and PeopleSoft, see the *Stat System Administration Guide*, Chapter 8, “Object Security.”

Physical File Locking Option

Like physical PeopleSoft locking, physical file locking works in conjunction with Stat logical locking. When set up appropriately, physical file locking prevents developers from modifying file objects that have not been locked in a CSR and assigned to them. Stat does this by allowing developers to modify only file objects that are in their working directory. Once a file is locked and assigned to a developer, the developer can only use Stat to migrate the file to their working directory as well as all source directories. This enforces that all changes to the file objects are documented and orchestrated through Stat.

System administrators define the scope of the physical file locking. Source file locations, specific users, and environments can be excluded from physical locking.

Associating Objects with CSRs (PeopleSoft)

If a change request requires modifications to objects, you access and work with these objects in a CSR. The CSR becomes the logical grouping of all the affected objects.

Remember that objects are associated with CSRs as opposed to users. In order to lock, archive, or migrate an object, you must first associate it with a CSR. The modifications that you make to objects are still made in PeopleSoft — Stat simply provides tools that manage and track those changes.

You can manually associate objects with a CSR, or you can use one of three wizards to associate objects en masse. These include:

- The PeopleSoft Project Read Wizard, which associates the PeopleSoft proprietary objects in a project
- The Read File Wizard, which associates the file objects in a folder
- The CSR Read Wizard, which associates the objects associated with another CSR

Objects can also be associated with a CSR using the Impact Analysis Wizard and the Undocumented Object Wizard. For more information, see Object Tools and Wizards on page 84.

Selecting a Migration Path

In order to associate objects with a CSR, you must specify the environment you want to copy them from. This is done in the Migration Path tab. In Stat, migration paths are logical groupings of environments that serve as road maps for object migrations. They are set up by your system administrator.

Your system administrator creates migration paths based on your business needs. For different situations you have different paths.

To select a migration path:

1 Open a CSR and select the Migration Path tab.

2 Click the **Select Migration Path** field and select the appropriate migration path. The displayed paths vary, depending on the service domain.

> **NOTE:** If a workflow that specifies a migration path is assigned to the CSR, that path cannot be changed. For more information on workflows, see CSR Workflows on page 33. For more information on migration paths, see Migration Overview on page 142.

3 In the **Select Default Developer** field select the developer you want assigned to the objects by default.

You can assign different developers to different objects, but this is the person to which most of the object will be assigned.

4 (Optional) If you want to associate the CSR with a version control management system (VCM) record, select the record you want in the **VCM Repository** field

This field is enabled only if your system administrator has defined at least one VCM record in the VCM Connection Maintenance table. It lists all the currently defined VCM records. After you add objects to the CSR, this field is disabled and you cannot select a different VCM record.

Note that if your selected Workflow has a default VCM Repository assigned to it, that **VCM Repository** will automatically be assigned on the migration path.

5 Click **Generate Path**.

Stat displays a graphical representation of the migration path. Also, the Objects and Object Management tabs appear.

Each drum represents a PeopleSoft environment. Your system administrator determines which environments are designated as Base and Development. The original, “pre-change” archive of the objects in the CSR is taken from the Base environment. The Development environment is where you change the objects.

After selecting a migration path, select the Objects tab.

Assigning Developers

Before adding the objects to the CSR, you need to decide which Stat user is going to be making the changes to the objects and therefore needs to be assigned the object lock. If the user is the default user in the **Assigned To** field, then you can just add the objects and the default user will obtain the lock. If another user needs the lock on the objects, select that user from the drop down list in the **Assigned To** field. When you add the objects, the user in this field is assigned the object locks. See The Object Locking Process on page 113.

Selecting Objects

You can select the objects you want to add to your CSR manually, or you can use the various wizards to select groups of objects. The procedure for manually selecting the objects you want to associate with your CSR is slightly different depending on the class of objects.

> **NOTE:** Workflows can contain status rules that do not allow users to add or lock objects while the CSR is in a restricted status. When this is the case, Stat prevents you from adding or locking objects until the CSR changes to an unrestricted status. Any object reservations that were in place before the CSR was transferred to a restricted status, however, are treated the same, meaning they are converted into locks when the objects become available.

Selecting PeopleSoft Proprietary, Data, and Schema Objects

To select a PeopleSoft proprietary, data, or schema object, first select the PeopleSoft environment, then the object class and the object type.

To select a PeopleSoft proprietary, data, or schema object:

1 In the CSR window, select the Objects tab.

2 In the **Environment** field select the environment that contains the objects.

Note that only the active environments on the migration path are listed. If you need to select objects from an inactive environment, see your system administrator.

The initial object snapshot, the base archive set, always comes from the Base environment. No matter which environment you select in the **Environment** field, Stat archives the objects from the Base environment. Even if you add objects later, they still come from the Base environment.

Stat gives you this option of environments in order to reduce the number of hits made against your Base, or Production, environment. By selecting another environment, Stat connects to that environment and retrieves the list of objects. Once the objects are selected, the “pre-change” object snapshot is created from the Base environment.

When you select an environment, the **Object Type** field displays a “Loading...” message. During this time, Stat connects to the selected PeopleSoft environment and checks which object types are available.

> **TIP:** If Stat returns a large number of objects, you can quickly locate the particular object you want by typing the first few letters of the object name in the **Quick Filter** field. As you type, Stat filters the list of objects so that only objects with matching names are displayed.

3 In the **Object Type** field, select the type of object you want.

> **NOTE:** If you are adding a schema object type, Stat displays the Select Schema Owner window, which prompts you to specify the object’s schema owner. This reduces the amount of time it takes for Stat to return the list of matching objects. The window includes a **Quick Filter** field which lets you quickly parse the list to the schema owner you want (including Public). Select the owner and click **OK**.

Stat displays object types sorted by object class. When you select an object type, Stat displays a list showing all available objects of that type.

4 In the list of objects, select the object(s) you want. To select multiple objects, hold down the <Shift> or <Ctrl> key as you make your selections.

Selecting File Objects

You can select file objects residing in either a PeopleSoft environment or the assigned developer’s working directory.

To select a file object:

1 In the **Environment** field, do one of the following:

- Select an environment if you want Stat to look through that environment’s source file locations to get the list of file names for a particular file type. Source file locations are the file server directories where file objects reside. You or your system administrator can define multiple source file locations for each environment.
- Select **Working Directory** if you want to add files that exist in the assigned developer’s working directory but not in any of the environments to which Stat has access
- Select **VCM Repository** if you have associated the CSR with a VCM record and you want to archive and migrate objects that reside in the VCM repository

Note that any environments on the migration path that have been inactivated are not listed. If you need to select objects from an inactive environment, see your system administrator.

2 In the **Object Type** field select the type of file you want.

Stat displays a list of all the files that have the matching file extension. No file names are returned if there are no source file locations defined for the selected file type and environment, if no working directory has been defined for the assigned user, or if no matching objects reside in the VCM repository.

3 (Optional) Select **Copy to Working**.

If selected, Stat copies the files from the Base environment to your working directory after adding them to the CSR.

> **NOTE:** This option is selected by default if the Copy Files to Working check box is selected in the Stat User Options window. For information on user-defined working directories, see Defining Working Directories for File Objects on page 122.

4 In the list of files, select the file(s) you want.

Filtering the Object List

If you have added a large number of objects to a CSR, you can filter the list of objects so that only the objects you want to view are visible. You can then save the filter settings so that the object list remains filtered the next time you open the CSR.

To filter the object list:

1 In the Objects tab, click **Filter**.

This opens the standard Specify Filter dialog box

2 Create a filter equation using the Operator tool buttons and statements listed in the **Functions** and **Columns** fields.

3 Click **Verify** to check the validity of your equation.

Stat displays a message box telling you if your equation is valid or not.

4 Click **OK**.

The Objects tab now displays a “Filter On” notification and the number of objects currently hidden by the filter. Any objects you add to the CSR while a filter is on may be hidden from the list of objects.

5 Optionally, if you want to save the filter for the next time you open the CSR, select the **Save Filter** option.

Selecting Lock Options

After you select the object(s), you should decide which locking options to use. By default, the objects are set to be locked in all the environments on the migration path, but with proper security rights you can select a different lock option. For more information on object locking, see Object Locking and Reservations (PeopleSoft) on page 112.

There are four different lock options:

- **All on Migration Path** – The default setting. Select this option to add and lock/reserve the object(s) in all environments. Stat searches in each environment to determine if the object is already locked or reserved on another CSR.
- **Current Environment** – Select this option if you want to add the object from each environment on the migration path but lock/reserve the object(s) only in the current environment. Stat checks for reservations and locks/reserves the object(s) only in the current environment.
- **None** – This option adds the object(s) to the CSR from each environment on the migration path without issuing a lock on any of them. Although you can archive an object that is not locked in an environment, you cannot migrate the object to an environment in which it is not locked. You should select this option if you are associating the object(s) to a CSR for documentation purposes only, and you are not going to make any changes to the object(s).

  > **IMPORTANT:** When you add an object to a CSR without a lock, Stat does not create a base version for the object or mark the object as having been modified. The object is therefore considered “Undocumented” by the Undocumented Object Wizard.

- **Reserve if locked** – This option automatically requests a reservation if the object(s) are locked by another CSR. If this box is not checked and the object(s) are locked by another CSR, Stat prompts you for an action.

  NOTE: It is recommended that you keep the default lock setting, All on Migration Path. Locking only in the current environment could lead to version inconsistencies if another developer modifies the same object in a different environment.

Adding Objects

After assigning a developer and selecting the object(s) and lock options you want, you are ready to add the objects to your CSR.

To associate objects to a CSR:

1. Click **Add Object**.

   At this point, if you selected the lock options **All on Migration Path** or **Current Environment**, Stat connects to the environment(s) and adds the selected objects to the Object List. If Stat is unable to connect to one or more environments, it displays a warning message for each environment it failed to connect to and adds the object to the CSR without a lock.

2. Click the Save button on the Stat toolbar or select **File | Save**.

   This enables the Stat Central Agent to finalize your object locks, if any.

While the Stat Central Agent processes the locks, the Archive Set tab goes into read-only mode and the following occurs:

- The **Read File**, **Read CSR** and **Read Project** buttons are temporarily replaced by a message indicating how many objects are left to process.

  NOTE: If the message does not go away after certain amount of time this may indicate that the agent encountered a problem or timed out.

- The Workflow tab and certain CSR fields are disabled both in the Stat Windows client and in Stat Web. These include the **CSR Type**, **Application**, **Status**, and **Workflow** fields. This is done to prevent users from modifying the CSR while the Stat Central Agent is still processing data.
- While the Stat Central Agent processes your object locks, the Objects tab goes into Read Only mode. During this time, if you attempt to perform any actions such as adding more objects or removing existing ones, Stat displays a warning. Once the Stat Central Agent has completed the locking of your objects, the Objects tab returns to edit mode.

For each object, Stat then:

- Verifies the object is not already on the list of objects associated with the CSR
- Checks for any existing locks or reservations for the object on other CSRs
- If a file object, Stat checks for the object's existence by searching in each source file location defined for each environment along the migration path. If no source locations have been defined for the file type in any of the environments on the migration path, Stat cannot add the object to the CSR.
- If a PeopleSoft proprietary, data, or schema object, Stat checks for the object's existence by searching in each environment on the migration path
- Adds the object to the CSR and, depending on the locking options you select, either locks it or issues a reservation or adds the object without a lock or reservation

When adding an object, Stat connects to all environments or source file locations on your migration path to check for existence. If it finds an object that exists in another environment, but not in the environment that you are working in, it displays an advisory message.

Clicking **Yes** adds the object to the Object List table with a modification status of New. For more information on the Object List table and modification statuses, see CSR Object Documentation (PeopleSoft) on page 130.

TIP: You can update the lock status of objects displayed in the Object List table by clicking **Refresh**. This will show if you any of the reserved objects have since received a lock since the last time you saved the CSR.

When Stat adds the object to the CSR, a row for each environment on the migration path is added to the Object List table. Each row displays information concerning the development, archiving, and migration activity that takes place for that object in that environment.

Viewing the Lock Status of an Object

From the Objects tab of the CSR window, you can identify which objects you have locked and which objects you have reserved. Stat denotes lock and reserve status in the Flags column of the CSR object list with a lock icon and a clock icon, respectively.

To view all the locks and reservations placed on an object, right-click the object. Then in the pop-up menu select View Lock Status. Stat opens the lock summary window for the object.

TIP: You can view the status of the Stat Central Agent responsible for processing object locks by opening the Job Monitor window in Stat Web.

This window displays a list of all locks and reservations for the object across all environments. Any reservation or lock for the current CSR is highlighted in yellow. This allows you to see, at a glance, the position of your reservation in the queue.

The window lists locks first, followed by reservations, in chronological order. Each reservation icon is followed by a number indicating its position in the queue. If no locks or reservations exist for the object, Stat opens a window indicating this.

The name listed in the lock summary window is the developer assigned to the object in the CSR, which may not be the person assigned to the CSR. This depends on your business practices.

Unlocking or Unreserving an Object

To unlock or release a reservation for an object, select it in the Object List, click **Unlock**, and save the CSR. Do not remove an object after you modify it. If you remove it, it is removed from all archive sets in the CSR and Stat cannot accurately report on changes to the object.

NOTE: All objects associated with a CSR are automatically unlocked when the CSR changes to a closed-type status.

You might unlock an object if you want to keep the CSR open but you want to release the lock on a particular object. This may occur when another developer needs that object immediately, or when you have many objects locked and have finished working on some of them.

Until the Stat Central Agent unlocks the object, the CSR still has the object locked. It appears in the window that you no longer have the lock, but if another user attempts to lock the object, that user will receive a reservation. The lock summary window for the object will show that your CSR still has the lock.

If you attempt to save a removal, unlock, or unreserve of an object before the Stat Central Agent has finished processing the initial lock, Stat opens the Object Processing Results window, which displays a list of processing error messages. When this happens, you need to return to the Object tab, reapply your changes, and save the CSR again.

Re-Prioritizing Reservations

Stat normally processes reservations on a first in, first out basis, meaning the first CSR to request a reservation on an object is the first CSR to obtain a lock when the object becomes available.

However, Stat lets you move your reservation to the head of the queue if necessary. This is called re-prioritizing. Access to this feature is usually limited to users responsible for managing development projects.

To re-prioritize object reservations:

1. Select the object(s) and click **Reprioritize**.

   Stat displays a message box telling you that the re-prioritization is complete.

2 Click **OK** in the message box.

Stat moves the object(s) to the first reservation position in the selected environment(s).

NOTE: Stat re-prioritizes the reservation for an object only in the environment in which you selected it. If you want to re-prioritize a reservation in multiple environments, make sure you select the object(s) in each of those environments.

Assigning Objects to a Different Developer

To assign an object to a different developer:

1 Select the object(s) in the object list.

2 In the **Assigned To** field, select the developer you want to assign the object(s) to.

3 Click **Reassign**.

If you are reassigning a file object and **Copy to Working** is selected, Stat displays a message box prompting you to specify if you want to copy the file object to the new developer's working directory, and if so, whether to copy the file either from the original developer's working directory or from the base environment's source file location.

4 Select the options you want and click **OK**.

5 Save the CSR.

Stat updates the **Assigned To** field in the object list with the new developer's user ID. The new developer now has the lock on the object(s).

IMPORTANT: You must save the CSR before the reassignment can take effect.

Removing Objects from a CSR

To remove objects from a CSR, select them and click **Remove**. The objects are removed from the CSR List and all archive sets.

NOTE: You should remove an object only if it was added to the CSR in error. Modified objects should remain associated with a CSR for historical purposes.

Download File Objects

To download a single file object from environment, select the object in the list of objects and click **Download**.

Objects in the Base Environment

There are several situations when an object may exist in other PeopleSoft environment or source file locations on the migration path but not in the Base environment. Since the initial archive of objects comes from the Base environment, these objects are not included in the base archive set.

Possible reasons an object exists in one environment but not in others are:

- You create a new object in the Development environment, which means it would not exist in any other environment
- You work on an object that was previously created in the Development environment but not yet migrated to any other environment
- You work on a new object that exists in the AUD, Demo, or System environment but not in any other
- You create a new file object in your working directory, which means it would not exist in any other environment

If you want to archive an object that does not exist in the Base environment, there are two different ways to do it for two different types of situations.

To add objects that do not exist in the Base environment:

1. On the Objects tab of the CSR window, select the environment in which the object exists.
2. In the **Object** field select the object.
3. In the **Lock in environment** field select **Current environment**.

To add objects that exist inside and outside the Base environment:

1. On the Objects tab of the CSR window, select the environment in which the object exists.
2. In the **Object** field select the object.
3. In the **Lock in Environment** field select **All on Migration Path**.

By choosing the second method, the objects that exist in the Base environment are included in the base archive set. Those that do not exist are not added to the base archive set. You can include these latter objects in any interim or final archive sets taken from the environment where they reside.

Stat cannot create a base archive set if the objects in your CSR do not exist in your Base environment. While attempting to locate the objects, Stat permanently displays the value In Process in the **Status** field of the Archive Set window, and it will be unable to complete the archive set. If this happens, create an interim or final archive set from the environment that contains the objects and use this archive set to update the other environments with the new objects.

Defining Working Directories for File Objects

When you are assigned a file object, Stat places a copy of that object in one of your predefined working directories. These working directories are defined either by a system administrator in a maintenance table, or you can define them yourself in the User Default Directories tab of the Stat User Options window.

The User Default Directories tab displays a list of the active file types defined in Stat for PeopleSoft environments. From here you can define your default working directory and a separate working file directory for each file type. Defining a working directory for a file type is optional. If a file type working directory is not defined, Stat places copies of the migrated file objects in your default working directory.

To set up a default working directory:

1. Select **User Options | Stat Options**. Then open the User Default Directories tab of the Stat User Options window.
2. Click in the **Default Working File Server** field and select the server for the default working directory.
3. In the **Default Working File Path** field, enter the path of the default working file location starting after the file server's root or home path.
4. Click **Apply** or **OK**.

To set up a file type working directory:

1. Select **User Options | Stat Options**. Then click the User Default Directories tab of the Stat User Options window.
2. In the **Module** field, select **PeopleSoft**.
3. In the File Type column, select the file type you want to have a working directory for.

   This activates the text box in the corresponding Working File Srv column.
4. Click in the Working File Srv column and select the server of the working directory.
5. In the Working File Path column, enter the path of the working file location starting after the file server's root or home path.
6. Click either **Apply** or **OK**.

Associating Related PeopleSoft Proprietary Objects

Certain types of PeopleSoft proprietary objects are related to other PeopleSoft proprietary objects. Using default Stat settings, you must add these objects individually to your CSR. However, you can configure Stat to add these related objects automatically. You do this by selecting a user preference that prompts you for related objects whenever you add a supported object type. This feature behaves in a similar manner to the prompt in PeopleSoft when inserting objects into a project.

To configure Stat to prompt you to add related objects, select **User Options | Stat Options**. Stat displays the Stat User Options window. Select **Prompt for PS Related Objects**. If the option is not selected, Stat will not prompt for related objects and will not add them automatically.

NOTE: If you select related pages, Stat identifies all related standard pages as well as secondary pages and subpages.

Stat supports subobjects of Record and Field object types (Record Fields for Records and Field Labels for Fields). Associating subobjects allows you to modify their values in an archive set separately from the values of their parent objects. For example, in a PeopleSoft patch or upgrade, a Record object definition might have a CopyProp Action value, while one of its Record Field subobjects might have a Delete Action value.

NOTE: When you opt to add a related subobject to a CSR, it is not listed in the Object tab. Its existence is indicated by the Subobjects flag for its parent object. Subobjects, however, are automatically displayed in archive sets where they can be managed separately from their parent objects.

You should add subobjects to a CSR only when you need to mark their Upgrade and Action values separately from their parent objects. For more information, see Modifying Object Upgrade and Action Values on page 138.

PeopleSoft projects may also include ‘orphaned’ subobjects, meaning that the project does not include parent objects. If this is the case, Stat adds the parent objects automatically to the CSR when you add the orphaned subobjects through the Read Project Wizard (described in the following section, Associating Objects in PeopleSoft Projects on page 124).

Parent objects added by Stat for orphaned subobjects are indicated by a red folder icon in the **Flags** column of the Object List. This is for informational purposes only. If for any reason you want to change the designation of a parent object in relation to orphaned subobjects, select the parent object, right-click and in the pop-up menu, select either **Mark as parent for orphans** to flag the object as a parent object or **UnMark as parent for orphans** to remove the flag.

To associate related PeopleSoft proprietary objects to a CSR:

1. In the Objects tab of the CSR window, associate a supported object with the CSR, as described in Adding Objects on page 119.

   After you select the object you want, Stat displays the Related Object dialog box, which displays all the object types related to the selected object. If you are associating a Field or Record object, their respective subobjects, Field Label and Record Field, are included in the list of related objects.

2. If you want to add one or more objects types, select the object types you want.

   NOTE: Once you select an object type, the **Add** button is activated and the **Ignore** button is deactivated. Also, you can use the Select All and Deselect All icon buttons to select or deselect all the listed object types.

3. (Optionally) Keep the **Apply for all objects** option selected if you want Stat to apply the same action you are currently specifying (Add or Ignore) to any other affected object being added to the CSR.

   If you de-select this option Stat will prompt you to specify an action for each affected object.

4. Do one of the following:

   - If you want to add the selected object types, click **Add**.
   - If you do not want to add the related objects, click **Ignore**.

Adding Objects from VCM

You can use the Add Objects to a CSR from VCM feature to add multiple file objects at once to your CSR from a VCM repository

To add objects from a VCM repository using Add Objects to a CSR from VCM:

1 On the Objects tab, click the Add Objects from VCM... button. The Add Objects to a CSR from VCM window will display. The window, by default, displays (in the right pane) all of the files from all of the existing directories and subdirectories in the VCM repository. The left pane displays all of the existing directories and subdirectories. To filter the files displayed, select the desired directory and subdirectories in the left pane. Once a directory/subdirectory is selected, only the files in that directory/subdirectory will be displayed.

User Controls	Description
Revision	(Optional) Allows you to specify the VCM repository's revision/label from which to display any and all associated file objects. A revision/label can be manually entered along with the Retrieve button or to get a list of existing revisions/labels click the Retrieve button. The list of shown directories and file objects are filtered by the selected Revision.
Object Type	Allows you to assign a specific object type to the selected file objects in the file object list (the right pane). Select one or more file objects in the right pane and choose an object type in the list to associate those file objects with the object type.
Copy to Working	*(Optional)* If selected, the selected file objects (in the right pane) are copied from the VCM repository to your working directory as well as added to the CSR (upon clicking *Add to CSR* and saving the CSR).
Overwrite Existing Files	*(Optional)* Used in conjunction with *Copy to Working*, when selected any chosen file objects (in the right pane) of the same filename as any files in your working directory, will replace those files in your working directory. Otherwise, when unchecked, files of the same filename won't be overwritten.
Summary	Displays the total number of file objects (by Object Type) that have been selected (in the right pane); so that you can see how many total files of each Object Type and the total number of files in all will be added to the CSR. Note: Selected file objects that have not been associated with an Object Type are not counted in the Summary totals. Selected file objects must be associated with an Object Type before they can be added to the CSR (via Add to CSR).
Add to CSR	Closes the window and adds the selected files (in the right pane) to the CSR. Note: If and when a selected file or files are not associated to an Object Type, you will be prompted to associate the selected file or files with an Object Type. All selected files must be associated with an Object Type before they can be added to the CSR.
Cancel	Closes the window without adding any selected files to the CSR.

2 Search for and select the file objects (in the right pane) that you want to add from the VCM repository to the CSR.

3 Associate the desired/selected file objects with the appropriate Object Type. This can be done in few ways: You can select a file or multiple files and then choose a type in the Object Type list box. Upon selecting an Object Type, the selected files in the files pane will be associated with that Object Type. You can associate a file individually with an Object Type by clicking on the Object Type field in the files pane for that file. A list of available object types will display allowing you to select one.

4 Once all the desired file objects are associated with an Object Type and are selected, click Add to CSR. The Add Objects to a CSR from VCM window will close and the selected file objects will be added to the CSR

Associating Objects in PeopleSoft Projects

Stat can read a PeopleSoft environment and add all the PeopleSoft proprietary objects associated with a project to your CSR. This is done with the PeopleSoft Project Read Wizard. Use this wizard to associate multiple PeopleSoft proprietary objects to a CSR.

For PeopleSoft, you can also use the Project Read wizard to read in the objects of a PeopleSoft patch (defined in terms of a maintenance project). This way, Stat automatically populates the Patches tab of the CSR with the information contained in the project, such as incidents and dependencies.

TIP: If you want to migrate a PeopleSoft project that contains a large number of objects, but you do not necessarily want to spend the time required to archive all these objects, you can use Stat simply as a migrating tool by performing a point-to-point migration. For more information, see Point-to-Point PeopleSoft Project Migrations on page 150.

To read in a patch with the Project Read Wizard, the patch must be designated as a Maintenance Project in PeopleSoft. In addition, to display this information in Stat, the Patches tab must activated for the CSR.

For more information on the Patches tab, see Patches Tab on page 26.

IMPORTANT: Before running the Wizard, make sure you select your desired lock option.

To run the PeopleSoft Project Read Wizard:

1. On the Objects tab, click **Read Project...**.

   You are prompted to select the PeopleSoft environment that contains the project.
2. In the **PeopleSoft database** field select the environment containing the project.
3. (Optional) Select the check box if you only want environments that are in the current migration path listed.

   The wizard displays a list of all projects in that database.
4. (Optional) Enter a part or all of a project name in the Project Filter field to filter the list of projects.
5. Select the project you want and click **Next>**.

   The wizard displays a list of the PeopleSoft proprietary object types in that project.
6. Select the object types you want, or select them all by clicking **Select All**.

   IMPORTANT: If you select a Field or Record object type, any related subobjects that are listed out in the project are automatically associated with the CSR as well. The existence of subobjects is indicated by the Subobjects flag in the Object List ( ). These subobjects retain their Upgrade and Action values as specified in the project. Also, if you select a subobject (Field Label or Record Field) that does not have its parent object included in the project, Stat automatically adds a parent object to the CSR for these 'orphaned' subobjects. Parent objects added to a CSR automatically by Stat are indicated by the Parent of Orphaned Subobjects flag in the Object List. You have the option of marking or unmarking a Field or Record object as a parent object for orphaned subobjects. For more information on Field and Record subobjects and unmarking parent objects, see the previous section, Associating Related PeopleSoft Proprietary Objects on page 123. For more information on Upgrade and Action values, see Modifying Object Upgrade and Action Values on page 138.
7. (Optional) Select any of the following options:
   - Select **Add project definition to CSR** if you want to add the PeopleSoft project definition to the CSR, where it can be locked, archived, and migrated along with the other objects. A comment is automatically written for each object saying that it was added by way of the Read Project Wizard and the name of the project used to bring in the object. This allows you to track the project by name throughout the lifecycle of the CSR. For more information, see Archiving PeopleSoft Project Definitions on page 141.
   - Select **Add only objects with a changed target status** if the project contains an especially large number of objects and you want to decrease processing time by adding only the objects that have been modified to your CSR.

- Select **Overwrite properties for existing objects** if you want to update the existing CSR objects' upgrade and copy properties to reflect the objects' upgrade and copy properties in the project. This will also update the subobjects and their properties.
- Select **Make selected project the CSR managed project** if you want to keep the project's object list as defined in App Designer synchronized with the project's object list as managed in the CSR. Selecting this option enables you to quickly update the objects associated with a CSR via the Project Read Wizard whenever the project is changed in App Designer. For more information, see the following section Synchronizing Project Definitions on page 125.

8 Click **Next>**.

In the next wizard window, Stat processes your request and displays its progress in a status bar.

9 When the status bar reaches 100%, click **Finish**.

Stat adds all PeopleSoft proprietary objects of the selected types to your CSR. This step may take some time, depending on the number of objects being added. Before the status bar reaches 100% you can interrupt the process by pressing the <Enter> key.

Synchronizing Project Definitions

If you used the Project Read wizard to add objects to your CSR and selected the option, **make the selected project the CSR's managed project**, you can quickly keep the project definition synchronized between App Designer and your CSR. This way, whenever the project definition is changed in App Designer (either by adding objects, removing objects, or modifying object properties in the project such as the delete vs. copy flag), you can update the object list in your CSR to reflect these changes.

After adding the objects to your CSR with the Project Read wizard, the project name appears in a drop down list next to the **Sync** button, which replaces the **Read Project** button.

When you click **Sync**, Stat obtains the project definition from any database as defined in the CSR's migration path and updates the CSR's object list in the following ways:

- If the project contains an object that is not in the CSR's object list, the object will be added to the CSR.
- If the CSR contains an App Designer object that is not part of the project definition, you are prompted to remove this object from the CSR's object list. Note that this does not apply to file objects, data objects or Non-App Designer objects. Also, objects are removed only if you have the security right to remove objects from a CSR.
- If the copy and upgrade properties of an object are different from the properties in the CSR, the object properties in the CSR are updated (same as selecting the Overwrite properties of existing objects check box in the Read Project Wizard).
- If the project definition is not associated with the CSR, it will be added to the CSR.

If Stat cannot find the project in the selected environment when you click **Sync**, an error message is displayed. Also, if you want to run the Read Project Wizard again after synchronizing a project in a CSR, delete the name of the project in the **Project Name** field. This switches the **Sync** button back to **Project Read**. If you have multiple projects associated with a CSR, the name of each project appears in the **Project Name** field dropdown list. Select the one you want to synchronize.

Associating Objects in File Folders

As with a PeopleSoft project, Stat can read a folder and add all the file objects it contains to a CSR. This is done with the Read File Wizard, which functions much the same way as the PeopleSoft Project Read Wizard.

IMPORTANT: Before running the wizard, make sure you select your desired lock option and specify whether or not you want to copy the file objects to your working directory.

To run the Read File Wizard:

1 On the Objects tab, click **Read File...**.

2 Click the **Browse** button. Then locate the folder containing the file objects you want to associate with the CSR and click **OK**.

3 Select the file objects you want to associate with the CSR. To select all the objects, click **Select All**. To deselect objects, click **Select None**.

> **NOTE:** The Read File Wizard adds only file types defined in the Object Type Maintenance table.

4 Click **Next>**.

Stat processes your request and displays its progress in a status bar.

5 When the status bar reaches 100%, click **Finish**.

Stat adds the file objects to your CSR and associates each file with a file type, as determined by that file's extension. For example, if you select files with the .sql extension, Stat will associate these files with the file type defined by your system administrator with the .sql extension. If more than one file type has been defined with the same extension, Stat prompts you to select which file type you want.

This final step may take some time, depending on the number of objects being added. A status bar advises you of Stat's progress. Before the status bar reaches 100% you can interrupt the process by pressing the <Enter> key.

Associating Objects from Other CSRs

You can use the Read CSR Wizard to add objects to your CSR that are associated with another CSR.

To run the Read CSR Wizard:

1 On the Objects tab, click **Read CSR...**. Stat opens the CSR Read Wizard.

2 Click the Lookup button.

Stat opens the Search CSR Engine, which locates specific CSRs in the database based on the selected search criteria, including CSR number, customer, open date, department, and tracking number. For more information on the Search CSR Engine, see The Search CSR Engine on page 65.

3 Locate the CSR you want in the Search CSR Engine. Then click **OK**.

Stat closes the Search CSR Engine and displays all the objects associated with the CSR in the bottom portion of the Read CSR Wizard.

4 Select the objects you want. Use the <Shift> and <Ctrl> keys to make multiple selections, or click **Select All** to select all the objects.

5 Click **OK**.

Stat adds the selected objects to your CSR. If the objects happened to be locked on the other CSR for the same environments specified in your CSR's migration path, Stat reserves them on your CSR.

> **NOTE:** The assigned developer and lock options specified on the Objects tab of the CSR are applied to any objects added to the CSR by way of the Read CSR Wizard.

Creating File Objects

With proper security rights, you can create a new file object, add it to a CSR, and move it to the assigned developer's working directory. When you create a file object, you can either use a file template, or you can base it on an existing object.

In Stat, file templates are associated with particular file types. They help standardize development by defining in a reusable format the basic characteristics and structure of new file objects. This way, when you need to create a file object of a particular type, you can use an associated template as a starting point. This helps enforce adherence to development standards and saves time.

To create a file object:

1 On the Objects tab, select an environment and object type. Then click **New Object**.

Stat opens the New Object window, with the assigned developer and object type that you previously selected displayed as default values.

2 (Optional) In the **Assigned To** field select a different developer.

3 If you want to base the new file object on an existing object, select **Existing Object** in the **Source** field.

4 (Optional) In the **File Type** field select a different file type.

5 Do one of the following:

- If basing the new file object on a template and your system administrator has defined more than one template for the selected file type, select the file template you want to use in the **Template** field.
- If basing the new file object on an existing object, in the **Existing Object** field, locate and select the file object you want to use.

6 In the **New Object** name field, enter a name for the new object. Then click **Create**.

Stat displays a series of warning messages telling you that the object does not exist in each environment in the migration path. For each environment, Stat asks you if you want to add the file object to the CSR.

IMPORTANT: If source file locations have not been defined for an environment, you cannot add a new file object to a CSR for that environment.

7 Click **Yes** for each instance of the object that you want to add to the CSR. Click **No** for each instance of the object that you do not want to add.

Stat adds each instance of the new object that you selected to the CSR. At this point, the file object exists only in the working directory of the assigned developer but is not yet archived. For more information on archiving, see About Archive Sets on page 132.

Editing Objects

You can open PeopleSoft file objects directly from Stat for editing purposes. Stat opens the file object in whichever program your operating system uses to open files of that type.

Remember that when you edit an object, you are editing only the version of the object that exists in the particular environment you selected. The same object may exist in other environments, and these versions are not affected by any changes you make to the edited version. For example, a file object may exist in three different environments. Because you can edit only one version of the object at a time, the changes you make to the object in the one environment do not affect the versions in the other two environments. If you want all your environments to contain the same version of an object, you have to archive the object and then migrate it to each environment. For more information, see Migration Overview on page 142.

Editing File Objects

If you want to edit a file object associated with a CSR, you can open it directly from Stat with whichever program your operating system uses to open files of that type. When selecting a file object to edit, remember that you can choose from different versions of the same object. These include the versions that exist in users' working directories as well as all the source file locations defined for any of the environments on the migration path of the CSR. However, because source file locations do not include drive information, Stat cannot open a file object from the same location in which it resides for a selected environment. Instead, Stat copies the file to the file download directory. For Windows 7/8 it's *C:\Program Data\Quest Software\Stat\temp*.

Comparing Objects (PeopleSoft)

After adding objects to a CSR, you can use Stat's object comparison tools to compare the definition of two objects or two versions of the same object. The object comparison tools can be used to compare objects in the following ways:

- Versions residing in two different environments on the migration path, including objects in the assigned developer's working directory and a VCM repository (if your system administrator has defined any VCM records and you have associated one with the CSR).
- Versions archived in two different archive sets on a CSR
- One version in an archive set and another version residing in an environment on the migration path, including the assigned developer's working directory

In the case of PeopleSoft proprietary objects and data objects, you can use the Object Comparison Wizard to compare two different objects as long as they are of the same object type. Also, for PeopleSoft proprietary objects and data objects that do not contain blob data, you can use the Object Merge Wizard to combine the two versions into a new object definition. The merged object definition is then automatically archived on a new Stat-generated archive set. This way, you can keep your PeopleSoft proprietary objects and data objects updated and synchronized across environments.

You can also use the Object Comparison Wizard to compare the scripts of PeopleCode objects. When comparing PeopleCode scripts, the wizard invokes CLI functionality to launch PeopleSoft, decodes the scripts and then compares the scripts as text-based objects, allowing you to quickly identify differences.

For file objects, you can use the File Comparison Tool to compare the contents of two file objects and easily identify differences. Like the Object Merge Wizard, this tool also enables you to merge the two objects by overwriting sections of one file with sections of the other file. The newly merged versions can then be saved to the assigned developer's working directory and later included in a new archive set.

For detailed instructions on using Stat's object comparison tools, see Object Tools and Wizards on page 84.

Viewing your Object Environment (PeopleSoft)

The Archive Sets tab displays information pertaining to object development within PeopleSoft. From here, you can view information regarding all the environments in a migration path as well as create and migrate object archives. For more information, see Creating Archive Sets (PeopleSoft) on page 135.

This Archive Sets tab is divided in two sections. The left section is a tree view showing all of the possible groupings of the information that appears on the right section of the tab. The tree allows you to navigate through the objects associated with the CSR as well as all the archives created for the CSR.

The buttons located on the top of the tap page, **Environment Info** and **Archive Sets**, control what type of information you see in the right section of the tab. When you click **Environment Info**, the window displays object information. When you click **Archive Sets**, the window displays object archive information.

The Tree Structure

The highest-level tree node is the CSR node. When you select this node, all of the objects associated with the CSR appear in the Environment Info table. Second level tree nodes include All Objects, Migration Path, and Developers.

For PeopleSoft, the All Objects node sorts objects in the CSR by PeopleSoft proprietary object and file object types. When you select one of these nodes, the Environment Info table is filtered to show only objects of the selected type. For generic applications, this node includes all the file objects associated with the CSR.

The Migration Path node sorts objects by the environments on the migration path. The first node is the Base environment, the second is the Development environment, and the remaining nodes correspond to the additional environments on the migration path. When you select an environment node, the list shows the objects in that environment. The Developers node sorts objects according to their assigned developer. When you select a developer node, the list on the right shows only the objects assigned to that developer.

The **Archive Sets** button becomes activated when you select any object or developer tree node. If the **Archive Sets** toggle button is active and you select one these nodes, the **Environment Info** toggle button automatically becomes active. This is because archive set information is not specific to these nodes and therefore cannot be filtered.

Click **Refresh** to refresh the tree view if there are changes to the CSR, such as an object reassigned to a different developer or a newly added object.

Environment Info Table

When you click **Environment Info**, the Environment Info table appears in the right section of the tab page. This table displays information concerning versions of each object residing in each environment. Click the column headings to sort the rows of information in the Environment Info table.

The Environment Info table displays the following information:

Status

Indicates if the object is locked or reserved for the particular environment. If the object is exclusively locked by this CSR then the Status column displays a lock icon. If the object is reserved for the particular environment then the column displays a reservation icon.

Class

Indicates the class of object. Object classes include PeopleSoft proprietary, data, schema, and file.

Type

Indicates the type of object.

Object

Displays the name of the object. For a PeopleSoft proprietary object, this is usually the common identifier, such as the name of a page. In the case of a file object, such as a COBOL program, this is the file name.

Environment

The environment in which the object resides. For each file object in the CSR, the Environment Info table displays an additional row to represent the archiving and migrating activities in the user's working directories. For these rows, the Environment column displays the value "Work."

Mod

Indicates whether or not the object has been modified. For more information on this field, see CSR Object Documentation (PeopleSoft) on page 130.

Assigned To

Displays the user name of the Stat user assigned to the object and therefore has the lock on the object. This does not have to be the same user who owns the CSR, and it can vary by object and environment.

Current Archive ID

Indicates the current archive of the object in the specified environment. This value can come from the following types of activities:

- If the most recent archive set activity for the object and environment came from the creation of an archive where the specified environment was the source of the archive, then the Current Archive ID column displays the ID of that archive set.
- If the most recent archive set activity for the object and environment came from a migration of an archive set where the specified environment was the target, then the Current Archive ID column displays the ID of the migrated archive set
- If no archive set was created from or migrated to the specified environment for the object, then the Current Archive Set column displays a dash, "-"

Archive Set Source

For PeopleSoft proprietary objects, this column displays the name of the PeopleSoft environment that was the source of the object archive. For file objects, the column displays the environment as well as the exact file location from which the archive was taken.

Last Updated

The last date and time that changes were made to this object in Stat.

CSR Object Documentation (PeopleSoft)

Stat is an effective source of information about the changes made to an object, but only if they are properly documented. Many processes are automated by Stat, but it is still the responsibility of developers to document their changes.

All information pertinent to a change should be readily available from the CSR. There are several areas in a CSR where you can document your changes. For instance, you can document the reason for the change in the Description tab. The information entered in the Description tab can be standardized through the use of templates. Other places to store pertinent information, such as affected modules and technical specifications, are the Detail Logs tab, the Resolution tab, and the Task/Time tab. You can also add external documents like test scripts to a CSR by inserting hyperlinks.

The Object List Table

More object-specific information is documented in the Object List table of the Objects tab, which shows all objects associated with a CSR. The Object List table shows such information as the lock status and object type, the environment in which it is locked or reserved, the assigned user, and the date when it was last modified. You can also read any comments attached to an object and access migration paths.

To sort information in the Object List, click a column heading to have the rows sorted based on that column, or click **Sort**. This opens the Specify Sort Columns dialog window, in which you can specify a sort order based on multiple columns.

Flags

The Flag columns display various icons that represent various types of information about an object.

Object Locked

Indicates that the object is exclusively locked by this CSR. As long as this icon is displayed, no other CSR can have a lock on the same object.

Object Reserved

Indicates that the current CSR has a reservation for this object.

Comments

Indicates that the object has comments associated with it. Comments can be accessed by double-clicking on the icon.

Single Archive Indicator

Indicates that a copy of the object has been stored in an archive set. This snapshot serves as a backup of the object prior to making changes.

Subobject Indicator

For Record or Field objects, indicates the existence of subobjects associated with the object.

Stat-Provided Parent Object Indicator

For Record or Field objects, indicates that the object was added to the CSR by Stat automatically to serve as the parent object for orphaned subobjects added to a CSR though the Project Read Wizard.

Multiple Archives Indicator

Indicates that the object has been archived by multiple archive sets.

PeopleSoft Proprietary Object

Indicates that the object is a PeopleSoft proprietary object type.

File Object

Indicates that the object is a file object type.

Data Object

Indicates that the object is a data object type.

Schema Object

Indicates that the object is a schema object type.

Class

Indicates the object class. Options include PeopleSoft proprietary, data, schema, and file.

Type

Indicates the object type.

Object

Indicates the name of the object. This is usually the common identifier for the object in PeopleSoft, such as the name of a page. In the case of a file type object, such as a COBOL program, this is the file name.

Environment

The PeopleSoft environment in which the object resides.

Mod

Indicates whether or not a locked object has been modified. Initially, the field displays the value **PND** prior to the Stat Central Agent locking the object and determining its modification status. This means that objects with a reservation always display the value **PND**. If for any reason the agent cannot add the object to the CSR, it returns a value **ERR**.

When a PeopleSoft proprietary object is added to a CSR, the Stat Central Agent attempts to determine if it has been modified since the last PeopleSoft stamp. The field displays four possible values, including **No** if the object has not been modified, **Yes** if it has, **New** if the object does not exist in one of the environments, and **Unk** if the agent cannot make a determination.

A file object has a modified status of **Unk** for each environment that contains the file objects in at least one of its source locations. For each environment that does not contain the file object in any of its source locations, the file object has a modified status of **New**. Data objects have the same modified values as file objects, meaning it displays the status **Unk** if it does exist in an environment and **New** if it does not exist.

Assigned To

Indicates the Stat user who has the lock on the object. This can be different from the user who owns the CSR, and it can vary by object and environment.

Last Updated

The last date and time that changes were made to this object in Stat, followed by the name of the user who made the changes. If the record was last modified by the Stat Central Agent, the user ID defaults to “SYSTEM.”

Start Version

For PeopleSoft proprietary objects, the version number of the object when it was locked on the CSR. For schema objects, the last update date when it was locked on the CSR. Does not apply to data objects and file objects.

End Version

For PeopleSoft proprietary objects, the version number of the object when it was unlocked on the CSR. For schema objects, the last update date when it was unlocked on the CSR. Does not apply to data objects and file objects.

Object Comments

To open the Object Comments window, double-click on a selected object on the PeopleSoft CSR Object list or right-click and in the pop-up menu select **Edit Comments**.

In this window you can edit or add comments to an object. You should use this space to document the changes made, why they were made, and any other pertinent information. You can also cut, copy, and paste into this window. You can add comments up to 2,000 characters in length.

For objects that have been added via the Read CSR Wizard or the Read Project Wizard, Stat automatically inserts a comment noting the method by which the object was added, the source CSR or project, the date and time, and the user who performed the action.

Object Archives (PeopleSoft)

About Archive Sets

Using Stat, developers can take ‘snapshots’ of objects as they exist in a particular environment and archive them indefinitely in the Stat Repository. Because archive sets are stored in the Stat Repository and not a PeopleSoft environment, you can archive different versions of objects and rollback to previous versions when necessary.

Once a developer locks the objects that he or she wishes to change, Stat automatically takes a snapshot of those objects before any changes occur. This is called a base archive set. The base archive set is the “pre-change” version of all the objects locked in the CSR. You can use this snapshot, like all archive sets, to restore PeopleSoft proprietary objects, data objects, and file objects to their previous state.

As you make changes to the objects, you can also create interim archive sets. This is effectively backing up your work as you go along.

The ability to create the archive sets that include file objects, data objects, and PeopleSoft proprietary objects is activated at the service domain level by your system administrator.

Archive Set Types

You use archive sets to recover objects to PeopleSoft environments and migrate completed changes. There are three main types of archive sets: Base, Interim, and Final. There are also two other types called Merged and Point-to-Point which are created automatically by Stat. A Merged archive set is the result of using the Object Merge Wizard to combine the definition of two versions of the same PeopleSoft proprietary or data object, whereas a Point-to-Point archive set is the result of using the Point To Point Wizard to not migrate a PeopleSoft project directly between environments.

You can use any archive set type to restore or move objects. Each archive set contains objects that belong to one CSR, while the CSR itself may contain one or more archive sets, including the base, the final, and all the interim or merged archive sets.

When you create an interim or final archive set, you tell Stat what environment the archives of the objects should come from. For the PeopleSoft proprietary objects and data objects, the archives come from the selected PeopleSoft environment. For the file objects, the archives come from the source file locations defined for each file type. For each active PeopleSoft environment, your system administrator can define as many possible file locations for each file type as needed. When archiving a file object, Stat looks for the file in the first location. If the file is not found, Stat looks in the second location, and so on. Stat archives the first instance of the file that it finds.

Source file locations are where the files for that environment reside. In Stat, each user also has a working directory defined for them. This is where users make changes to the file objects assigned to them. File object archives can be taken from either the environment source locations or from the user's working directory.

Base Archive Sets

The base archive set is the most important because it contains the “pre-change” version of all the objects in the CSR. Stat automatically creates the base archive set when you save your CSR after locking objects. The base archive set is created from the Base environment in your migration path. Your system administrator defines which environment is the Base environment for each migration path. Your system administrator also defines each file type's source file locations for the Base environment. It is from these locations that Stat takes the “pre-change” version of the file objects locked in the CSR.

NOTE: If objects are removed from a CSR, those objects are also removed from all the archive sets on that CSR. This keeps the base archive set accurate and up-to-date.

A CSR can contain only one base archive set, which contains all the locked objects. The base archive set is dynamic, meaning that Stat automatically adds to it objects that are locked in the Base environment after the set is initially created. The base archive set continues to grow as Stat issues more locks on objects in the CSR.

You should never delete base archive sets from the system, since they contain objects in their original, “pre-change” state. The moment you request a lock on objects, Stat places a holder in the system for the base set. Before you save the CSR, the status of the base set is In Process. If you do not save the CSR, the objects are not locked and the base archive is not created.

Interim Archive Sets

As you make changes to objects, you can save the modified objects in interim archive sets. Interim archive sets contain objects that are currently being modified and can be taken from any environment on your migration path, although by default the source environment is Development. If the archive set contains file objects, the archive of the file objects is taken either from the first source location defined for the specified environment or the developer’s working directory. For PeopleSoft proprietary objects and PeopleSoft files, when an object does not exist, the interim archive set will complete with warning. For other object types, when an object does not exist, the interim archive set will complete with error.

You can create an unlimited number of interim archive sets. An interim archive set is also dynamic. Stat can add objects to it after it is created. However, you cannot add or delete objects from an interim archive set once it has been migrated. This is to keep referential integrity intact. If you need to archive an object that is not in one of your interim archive sets, just create a new interim archive set for that object.

An interim archive set can contain some or all the objects associated with a CSR. You create interim sets to save objects after significant changes have been made throughout the development process.

For the Development environment, your system administrator defines source file locations for each file type just like all other environments. Your system administrator also defines working directories for each developer. Working directories are where developers make their changes. When creating an archive set from the Development environment, you can take the file archives either from the source file locations of the Development environment or from the developer’s working directory.

Final Archive Sets

Once your changes are completed and approved, you should create a final archive set. The final archive set is static, and although it is not mandatory that you create one, it is strongly recommended. A CSR can contain only one final archive set, and objects cannot be added to it once it is created. When the final archive set is created, Stat automatically adds to it all objects of the CSR.

You can create a final archive set from any environment on the migration path of the CSR. As with interim archive sets, if the final archive set contains file objects, the archive of the file objects is taken either from source locations defined for the particular file types or the developers’ working directories.

Merged Archive Sets

Merged archive sets are automatically created by Stat when you use the Object Compare Wizard to combine the definition of two versions of the same PeopleSoft proprietary or data object. Merged archive sets are automatically

added to the CSR from which the original versions of the object were selected. A CSR can contain an unlimited number of merged archive sets. For more information, see The Object Compare Wizard on page 101.

Point-to-Point Archive Sets

Point-to-point archive sets are created automatically when Stat uses CLI functionality to open PeopleSoft and migrate the objects in a PeopleSoft project directly from a source environment to a target environment. Stat does not stage the objects and does not archive them. This means that point-to-point archive sets are created strictly for reporting purposes and cannot be used to roll back the migration since none of the objects in the project were archived. For more information on point-to-point migrations, see Point-to-Point PeopleSoft Project Migrations on page 150

Archive Sets Table

The Archive Sets table shows the archive sets that have been created for a particular CSR. You can create and migrate archive sets whenever this table is displayed. To open the Archive Sets table, select the **Archive Sets** tab in the CSR window. The table appears in the right section of the tab page.

The **Archive Sets** button becomes activated whenever you select the CSR node, the All Objects node, or the Migration Path node in the tree view on the left side of the tab page. If you select any object or developer node in the tree structure while the Archive Set table is displayed, the view switches to the Environment Info table and the **Archive Sets** button becomes dithered. This is because archive set information is not specific to these nodes and cannot be filtered.

To view archive set information by environment, select any of the environment nodes under the Migration Path node. This filters the archive set table to show information about only the archive sets created from that environment.

To sort rows of information in the archive set table, click on the column headings.

The archive set table displays the following information:

ID

This is the archive set ID, which Stat automatically generates. Archive sets appear in the order you create them.

Source

This is the source environment from which you copied the objects in the archive set. It must be an environment in the migration path defined for the CSR. A “-w” appears at the end of the environment name if the archive set was taken from the Development environment and it contains files that were taken from the users' working directories rather than the source file locations of the development environment. If it was taken from a VCM repository, a “-v” appears on the end of the environment name.

NOTE: If the base archive set contains file objects, these are copied from the source file locations of the Base environment. Interim archive sets are copied from the Development environment by default.

Type

This is the type of archive set. Options include Base, Interim, Final, Merged, and Point-to-Point.

Description

The description you entered when you created the archive set. Descriptions help distinguish between different interim archive sets. Base archive sets always contain the description: “Stat Baseline Set.”

Objects

This indicates how many objects the archive set contains. For a base or final archive set, this number is the total number of objects contained in the CSR. An interim archive set may contain less than that number.

Archive Set Status

This indicates the current status of the archive set. Possible statuses include:

- **In Process** – Indicates that Stat is currently archiving the objects. When you add objects to a CSR, the archive set is in this initial status until all objects are archived. When the Stat is finished archiving, the status changes to Complete.
- **Complete** – Indicates that all objects are archived
- **Complete/With Errors** – Indicates that the archive set is created but errors were detected during the archiving process. For PeopleSoft, this could mean that PeopleSoft SysAudit or PeopleSoft DDDAudit are not clean, or it could mean that Stat could not find the file objects you wanted to archive, or that the file location information was not set up correctly. Some errors are so severe that the archive set is unusable. Refer to the Logs window for further information.
- **Complete/With Warnings** – Indicates that the archive set is created but warnings were issued during the archiving process. You can still migrate an archive set in this status. Refer to the Logs window and investigate further.
- **Delete Pending** – Indicates that the archive set is set for deletion. It remains in this status until Stat completes its tasks.
- **Deleted** – Indicates that Stat deleted the archive set

Ready to Migrate

If selected, this indicates one or both of the following:

- The archive set is to be included in a mass migration with other archive sets that target the same environment
- The migration of the archive set must be approved before it can be moved into the target environment

For more information, see Migration Approvals and Mass Migrations (PeopleSoft) on page 151.

Migration Status

This indicates the status of any archive set that you marked as Ready to Migrate. Before you select the target environment(s) for the archive set, the status is N/A. After you select the target environment(s), the status is In Process. Once the archive set has been migrated to all the selected environment(s), the Ready to Migrate check box is unchecked and the status reverts to N/A.

Create Date

This is the date that the archive set was created.

Buttons

The archive sets table features the following short cut buttons:

- **New** – Opens the Archive Set window where you can define new archive sets
- **Edit** – Opens the Archive Set window where you can edit the selected archive set
- **Delete** – Deletes the selected archive set
- **Refresh** – Refreshes the window with the most up-to-date information from the environment. You can also press <F5> to refresh.
- **Print** – Prints the contents of the archive set table
- **Migration Target** – Opens the Target Environments window for the source environment of the selected archive set. This button is activated when the Ready to Migrate check box is selected for the archive set.

Creating Archive Sets (PeopleSoft)

As you make your changes to objects, you should periodically make interim archive sets. This lets you save your work at that point in time. When all your changes are completed and approved, you should make a final archive set. The procedure for both is the same.

To create an archive set:

1 In the Archive Sets tab of the CSR window, click **New**.

This opens the Archive Set window.

In the Archive Set window you enter basic information about an archive set. From here you define the archive type and source environment and add a description and comments. This window also provides you with read only information, such as number of objects and the time and date the archive set was created.

> **NOTE:** You can re-size this window as needed by clicking and holding an edge of the window and dragging to size you want.

2 In the **Type** field select the type of archive set you want to create. Your options include **Interim** and **Final**. Base sets are automatically created by Stat.

> **NOTE:** You can create unlimited number of interim archive sets, but only one final archive set.

3 In the **Environment** field select the environment containing the objects you want to include in the archive set.

This environment should be the one in which you made your changes. The default environment for interim archive sets is Development.

> **IMPORTANT:** If the CSR contains a reserved object for the selected environment, you cannot create a final set. If the CSR contains an unlocked object for the selected environment, you can create a final archive set but Stat displays a warning message.

4 In the **Description** field enter a short description of the changes you made to the objects.

This entry helps identify the archive set elsewhere in Stat.

5 If you are adding file objects to the archive set, do one of the following in the **Files From** field:

- Select **Environment** if the source environment is Development and you want to take the file archives from the environment's source file locations
- Select **Working** if the source environment is Development and you want to take the file archives from the assigned user's working directories. Or select **No** if you want to take the archives from the source file locations of Development.
- Select **VCM** if you have associated the CSR with a version control management record and you want to take the file archives from the VCM repository. After selecting this option, a VCM-specific field is displayed (**Revision** for SVN and P4, **Tag/Branch** for CVS and Git, **Label** for PVCS, and **Version** for TFS). In this field you can specify the particular version of the objects you want to add from the VCM repository. Your system administrator may have configured a default value, but you can override it either by entering the version you want manually or by clicking the control button and selecting the version from the dropdown list. If left blank, Stat adds the most recent version of the objects in the repository.

> **NOTE:** When you save the archive set, Stat retrieves the objects from VCM repository. Your system administrator can configure Stat to archive the objects themselves or pointer to those objects.

6 (Optional) If you intend to include the archive set in a mass migration based on application release label, select the release label you want in the **Release** field. For more information, see Mass Migrating Objects on page 155.

7 (Optional) Enter comments about the archive set.

Comments can include a longer description of the changes or any other helpful information.

8 Click on the Objects tab and click **Add**.

Stat opens the Select Objects window, which displays a list of the objects contained in the base archive set.

> **NOTE:** When creating a final archive set, Stat automatically adds all the objects in the base archive set and does not open the Select Objects window.

To sort the rows in the Select Objects window, click a column heading to have the rows sorted based on that column.

9 Select the objects you want to add to the archive set.

An interim archive set can contain one, some, or all the objects in the CSR.

10 If you have performed previous migrations or deleted objects on the CSR, check the existence of each object by selecting it and clicking **Check Existence**.

Stat goes out to the source environment and looks for the object. If it finds the object it displays the value **Yes** in the corresponding **Exists** field. If the object does not exist, Stat displays the value No. Objects that do not exist in the source environment cannot be included in the archive set.

If the CSR has managed a PeopleSoft project, then the **Synchronize PeopleSoft Ugrade/Action flags** option would appear. When the option is selected and objects are included to the PeopleSoft managed project, the Stat Central Agent will synchronize the Upgrade/Action flags against the source environment.

11 Click **OK**.

This returns you to the Archive Sets tab in the CSR window, which shows your new archive set at the bottom of the archive set table. The Status column will display the value In Process until the Stat Central Agent finishes archiving all the objects.

Archive Set Object Information

To see the details of your archive set, double-click on the new row in the archive set table. This re-opens the Archive Set window. The Details tab should look familiar since this is the tab you filled out when you created the archive set. The next tab, Objects, now contains all of the object information for the archive set.

NOTE: After adding objects to an archive set, the Migration Flags tab is added to the Archive Set Window. For more information, see Modifying Object Upgrade and Action Values on page 138.

The Objects tab displays the following information:

Migr Order

N/A. Oracle Applications only.

Class

Indicates the class of object. Archivable object classes include PeopleSoft proprietary, data, schema, and file.

Type

The object type.

Object

The object name.

Status

Reflects the current status of the object. Possible statuses include:

- **Archived** – Indicates the Stat Central Agent finished archiving the object
- **Archive Pending** – Indicates the Stat Central Agent is in the process of archiving the object
- **Wait Lock** – Indicates the Stat Central Agent is in the process of locking the objects. You can archive only locked objects.
- **Delete Pending** – Indicates the Stat Central Agent is in the process of deleting the objects
- **Re-archive Pending** – Indicates the Stat Central Agent is in the process of archiving the object again

Errors

Indicates the number of errors found. See the Logs window for further details.

Warning

Indicates the number of warnings found. See Logs window for further details.

Source Information

If the object is a PeopleSoft proprietary object, this field shows the number of tables and rows in Stat used to complete the archive. If it is a file object, the field shows the exact file location of the archive source in the archive set.

Object Count

This information is displayed at the bottom of the window. It shows the total number of objects in the archive set and how many of these have been archived.

Buttons

The Objects tab features the following short cut buttons:

- **Add** – Adds selected objects to the archive set. Click this button and Stat displays a list of the objects.
- **Delete** – Deletes all of the objects in the selected archive set. You cannot delete objects from a base or final archive set.
- **Re-Archive** – Re-archives the objects
- **Refresh** – Refreshes the current display
- **Print** – Prints the contents of the window
- **Export** – Exports the contents of the window

  IMPORTANT: Once an archive set has been migrated, you cannot add or delete objects from it. You should create a new archive set instead.

- **Default Order** – N/A. Oracle Applications only.
- **Reorder** – N/A. Oracle Applications only.
- **View** – For file or schema object types only, displays the definition of the selected object in a separate window.
- **Download** – Allows users to download the selected file or schema object from archive.

Modifying Object Upgrade and Action Values

After PeopleSoft proprietary objects have been archived in an archive set, you can modify their default Upgrade and Action values. You can change an object's Upgrade value to "do not upgrade" and its Action value from "copy" to "delete." Then, when you migrate the archive set, you have the option of using a Stat-created PeopleSoft project, in which case the project uses the objects' Upgrade and Action values specified in the archive set.

Be aware the Upgrade and Action values for objects specified in the archive set are only used in a migration when a Stat-created PeopleSoft project is used. They are not used when you use a PeopleSoft project contained within an archive set to perform the migration. In this case the Upgrade and Action values are set at the time you archived the project definition, and the Upgrade and Action settings in the archive set are ignored. For more information, see Migration Overview on page 142.

Deleting Objects

Stat lets you delete unwanted objects from selected PeopleSoft environments on a migration path. After adding the unwanted objects to an archive set, you can mark them for deletion. When you migrate an archive set containing objects marked for deletion to an environment, Stat deletes them from that environment. However, you can always recover deleted objects since they remain archived in the Stat Repository.

To mark objects for deletion:

1. Add the objects to the archive set.
2. When the Archive Set has completed, open the Migration Flags tab of the archive set.
3. In the **Action** field, change the setting to **Delete**.
4. Click **OK**.

If you decide that you do not want to delete an object marked for deletion before you migrate it, go back to the Migration Flags tab and in the Action field change the setting to **Copy**. Stat is now configured to migrate the object as it normally would by placing a copy of the object in the target environment rather than deleting it.

TIP: When you migrate an object marked for deletion, the object is deleted from that environment and cannot be included in any later archive sets taken from that environment. Because of this, it is recommended that you create an interim archive set of all of the objects that are marked for deletion before you migrate them. You can then migrate the interim archive set to each environment in which you want to delete the objects.

Modifying Object Upgrade Values

When you first add an object to an archive set, the **Upgrade** option is selected by default, as indicated in the Migration Flags tab. You can de-select this option for any object in an archive set. When the object is migrated to an environment, the PeopleSoft project created by Stat in the staging database includes the object's modified Upgrade value.

To modify the upgrade value of an object:

1. Add the objects to the archive set, as described in the previous section, Associating Objects with CSRs (PeopleSoft) on page 115.
2. Open the Migration Flags tab.
3. Select or de-select the **Upgrade** option for each object you want.
4. Click **Ok** to save the CSR.

Modifying Subobject Upgrade and Action Values

Stat supports subobjects of Record and Field object types (Record Fields for Records and Field Labels for Fields). Adding a subobject to an archive set allows you to modify its values separately from the values of its parent object. For example, in a PeopleSoft patch or upgrade, a Record object definition might have a CopyProp Action value, while one of its Record Field subobjects might have a Delete Action value.

For more information on associating subobjects to CSRs, see Associating Related PeopleSoft Proprietary Objects on page 123.

IMPORTANT: Changing the Action and Upgrade values in an archive set only affects the objects when they are migrated with Stat-created projects. If the user migrates an archive set using a project contained in the archive set, PeopleSoft uses the flags that are set in the project itself regardless of whether or not they match what was set on the archive set.

To modify the upgrade and action value of a subobject:

1. Create an archive set with Records and/or Fields along with their subobjects.
2. Open the Migration Flags tab.

   By default, all subobjects are marked **Upgrade** with an Action value of **Copy** (unless associated to the CSR by means of the Read Project Wizard, in which case they retain the values specified in the project).

   The default Action value of parent objects is **CopyProp.** This indicates that PeopleSoft will take action on just the property of the parent object, and it will look to the individual subobject for what action to take - **Copy** or **Delete**. This is primarily used when a user is trying to delete a field from a record, or trying to add new fields.

If a user overrides the default value **CopyProp** of a parent objects and sets it to **Copy**, then all of the subobjects will be copied, regardless of the flags set on them.

3 For each subobject that you want to unmark for upgrade, deselect its corresponding **Upgrade** option.

4 For each subobject that you want to change the Action value, click in the Action column and select **Delete** or **Copy** depending on the action you want taken on the subobject.

5 Click **Ok** to save the CSR.

Copying Archive Sets

When you copy an archive set, the copy retains the migration order and any object upgrade and action values set on the source archive set.

To copy an archive set:

1 In the Archive Sets table, select the archive set you want to copy and click **Copy**.

NOTE: Only archive sets with a complete-type status can be copied.

This opens the Archive Set window where you can edit the properties of the copied archive set as needed, including the archive type and source environment. You can also modify the object upgrade and action value settings.

When copying archive sets, be aware of the following:

- You can select a different source environment, but if the objects don't exist in the new source, you have to add the missing objects if you want to include them in the copy.
- When you save a copy as a final archive set, the number of objects in the archive set must equal the number of objects in the base archive set. If not, Stat prompts you to add the objects when you try to save the archive set.

2 Add a description of the archive set, and (optionally) edit the properties of the archive set as needed.

3 Click **OK**.

Archive Set Logs

The Logs tab of the archive set window displays any messages Stat logged during the archive process.

This tab provides you with a complete list of messages logged by Stat. It is a running log of the activities involved with the archive sets.

The Logs tab displays the following information:

Date and Time

The date and time the message was logged.

Object

Archive sets are created by processes run by different objects in Stat. These object processes each have their own capabilities and tasks. The Object column displays the Stat object that reported the message. These objects include:

- **Mgr** – The manager object creates, destroys, and instructs all the other objects
- **Trg** – Indicates the target environment
- **Src** – Indicates the source environment

Type

There are three types of messages: Information, Error, and Warning.

Information

The text of the message.

Buttons

The Objects tab features the following short cut buttons:

- **Next Error** – Navigates you through your error/warning messages
- **Print** – Prints the contents of the window. Pressing this button automatically sends a job to the printer. There are no print options.
- **Export** – Exports the information in this window. Pressing this button opens a Save As window. Several file types are available for selection using the vertical scroll. An Excel format is most useful for evaluating this data.
- **Clear** – Clears the logs generated for this archive set

Re-archiving Objects

If for some reason the Stat Central Agent is unable to create an archive set without errors, rather than creating a second archive set, you can simply re-archive selected objects in the original archive set. When you re-archive objects, the Stat Central Agent deletes the original archive set and creates a new archive set containing only those objects you selected.

Although you can re-archive objects in any archive set, even those that were created without errors, you should only re-archive objects that were not successfully archived the first time. If you want to re-archive objects in an archive set that was created without errors, you should create an interim archive set.

IMPORTANT: When re-archiving a Record or Field type object that has already been archived successfully, Stat does not re-archive information in the following tables: PSDBFIELD, PSIDXDDLPARM, PSINDEXDEFN, PSKEYDEFN, PSRECDEFN, PSRECFIELD, PSBUSPITEMIMG, PSBUSPITEMLANG, PSBUSPROCITEM.

To re-archive objects, in the Objects tab, select the objects you want to re-archive and click **Re-Archive**.

Archiving PeopleSoft Project Definitions

- In addition to modifying Upgrade and Action values, you can view the audit flags and DDL settings for any PeopleSoft project definition that you have archived. You can also view the settings for portal structure permission list references. This way, if you wish to modify the project properties, you can do so in App Designer and then re-archive the project.

In addition to the objects contained in a PeopleSoft project, you can archive and migrate PeopleSoft project definitions as separate object types. You can associate PeopleSoft project definitions to a CSR in two ways:

- You can associate a project definition manually the same way you would any other PeopleSoft proprietary object type by selecting it in the Objects tab of the CSR window
- You can use the PeopleSoft Project Read wizard to associate a project definition to a CSR

Stat records how certain project definition properties have been set in the archive's source environment, including audit flag and DDL settings. Stat also records the settings for portal structure permission lists, display size page property, and the database field format. Stat records whether these properties will be copied into the target environment during a migration or whether the settings as defined in the target environment will be retained. After you have archived or migrated a project definition, you can view its property settings as recorded in Stat in the Upgrade Options window.

To open the Upgrade Options window, double-click on the project definition in the Objects tab of the Edit Archive Set window. You can also open this window by double-clicking on a project definition in the Migration History Wizard.

Object Migrations (PeopleSoft)

Migration Overview

The previous chapter explained how to archive objects by creating archive sets. This chapter explains how to migrate archive sets between your PeopleSoft environments.

Migrating objects updates your environments with the most recent version of those objects, or, if necessary, lets you roll back your environments to earlier versions.

In Stat, migrating file objects entails moving them to designated source file directories or developers' working directories. For PeopleSoft proprietary objects, Stat creates a PeopleSoft project that contains the archived objects. This project is created in a staging database, which is simply a temporary holding bin for objects. Once the objects are staged, Stat completes the migration by pushing the project from the staging database to the target PeopleSoft environment.

There are two places in a CSR window where you can initiate a migration: the Migration Path tab and the Archive Sets tab. Migrations can also be initiated outside CSRs using certain tools and Wizards. Migrations in Stat are not linear; a migration can go in any direction. For example, you can bypass the Development environment and migrate an archive set from the QA environment directly into the Production environment.

> **NOTE:** For a comparison of the various migration tools and techniques supported by Stat, see Appendix: Migration Options on page 262.

System administrators can set up Stat to support auto-migrating archive sets to multiple environments distributed over a network. This is done by designating particular environments on a migration path as a distribution environments and then associating them with lists of interrelated environments. This way, when you migrate an archive set to a distribution environment, Stat automatically migrates the archive set to all the associated **distributed** environments as well. This spares you the time-consuming task of migrating an archive set to each environment separately and is especially helpful when a migration path calls for more environments than the limit of nine that can be represented graphically.

When you migrate an archive set that contains both PeopleSoft proprietary objects and file objects, with the proper security rights you can choose to migrate just the PeopleSoft proprietary objects in the archive set, just the file objects, or both. System administrators can enforce that certain users only migrate file objects while others only migrate PeopleSoft proprietary objects.

Synchronizing Your Development Workspace

It is good practice to synchronize your development workspace with your base archive set. This ensures that you are making changes to the correct version of the objects. This is true of all your environments. As you make changes, you should create interim archive sets that document those changes and then migrate them to the appropriate environments. The migration process is virtually the same, regardless of the type of archive set.

The development workspace is where you make the changes. For PeopleSoft proprietary objects, this is the Development environment. For file objects, it can be either the Development environment's source file locations or the assigned developers' working directories. It is recommended that each developer make changes to file objects in their own working directories so that the changes can be documented and controlled. System administrators can enforce that developers modify objects only in either their working directories or in the source file locations.

Migrating PeopleSoft Proprietary Objects

When an archive set contains PeopleSoft proprietary objects, Stat first moves copies of the archived objects into a staging database, which is simply a temporary holding bin for objects. Stat then creates a PeopleSoft Project, which contains references to the objects in the staging database. At this point, if the CLI Auto-Migration option has been activated for the target environment, Stat completes the migration automatically using the PeopleTools

command. Optionally, you can complete the migration by logging in to PeopleTools in the staging environment and manually pushing the project into the target environment.

NOTE: Stat also provides migration support for PeopleSoft proprietary objects that cannot be included in a project. For more information, see Migrating Non-App Designer PeopleSoft Proprietary Objects on page 151.

Migrating Data Objects

Data object definitions are archived in the Stat Repository. When you migrate an archive set that contains data objects, Stat copies the data object definitions from the Stat Repository to the target environment. If the data object already exists in the target environment, Stat replaces that object definition with the archived copy using the delete and insert method.

Migrating File Objects

When an archive set contains file objects, the file archives are stored in the Stat repository. When you migrate the archive set to a PeopleSoft environment, Stat copies the file archives from the Stat Repository to the file locations defined for the target environment. If the file objects already reside in any of these source file locations, Stat replaces each existing instance with the archive copy. If the files exist in none of the source file locations, Stat either copies the files to all the source locations defined for the target environment or copies the files to the designated default location. These options are set up by system administrators when configuring the target environment.

To migrate file objects in an archive set to the developers' working directories, you migrate the archive set to the Development environment. Stat gives you the option of migrating the file objects to the Development environment's source file locations, the developers' working directories, or to both. To migrate an archive set taken from the Development environment's source file locations to the developer's working directories, or vice versa, the migration must be initiated from the Archive Sets tab, not the Migration Path tab.

If two or more environments on a migration path share the same source file locations for a particular file type, whenever you migrate an archive set that contains file objects of that type to one of the environments, by default the file objects are also migrated to the other environment(s) that share the same source file locations. For example, if the Development environment and Test environment share the same source file locations for COBOL file objects, and you migrate an archive set containing a COBOL file object to Development, Stat documents that the same file object was also migrated to Test. This eliminates the time consuming process of having to perform multiple migrations in order to document the migration of the same file objects to each environment on the migration path.

IMPORTANT: Unix and Windows-based file servers have different formats for ASCII type file objects. Accordingly, when you migrate a ASCII type file object via SFTP, the Stat Central Agent checks its destination file server. If the server is Unix, the agent converts the file to the Unix ASCII format, which means singly occurring carriage returns followed by linefeed characters are converted to linefeed characters. If the destination server is Windows, the agent converts the file to the Windows ASCII format, which means singly occurring linefeed characters are converted to carriage returns followed by linefeed characters. In either case, the size of the migrated file may be smaller or larger than it was before it was migrated.

Migrating to Distributed Environments

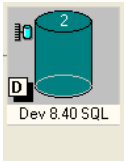
When you migrate objects to a distribution environment, by default Stat migrates those objects to all the environments on its distribution list. However, you can opt to exclude certain environments from the migration.

When defining a migration path, system administrators designate distribution environments and add other environments to their distribution lists. For example, let's say you have ten production environments and each one physically resides in a different location. All of your development work is done centrally, and when ready, changes are migrated out to all the production environments at the same time. Most likely your system administrator would define the local or 'in-house' production environment as the distribution environment and connect it to the nine other production environments.

Although connected to the distribution environment, the other environments are not represented graphically and are not technically part of the migration path. This means that objects cannot be locked in the environments on a distribution list. Also, objects can only be migrated to them, not from them.

TIP: Because objects are not locked when migrated to the environments connected to a distribution environment, it is recommended that your system administrator not include these environments in any other migration path. This eliminates the possibility of two developers accidentally overwriting each other's work.

Graphically, distribution environments are designated by a small icon displayed to the left of the environment graphic, as shown below:



To view a listing of the environments connected to the distribution environment, double-click on the distribution icon. Stat opens the Distributed Environments window, which shows a list of all the environments connected to the distribution environment.

In this window, you can deactivate any environment you do not want to include in a migration. This way, when you migrate an archive set to a distribution environment, Stat migrates the objects only to the active environments in the distribution list. To deactivate all the environments, click **Set All Inactive**. If you want to reactivate an environment, you can do so at any time by selecting the Active check box, or if you want to reactivate all the environments, click **Set All Active**.

NOTE: Be aware of the following:

- Deactivating an environment excludes it from any migration initiated from the current CSR. You can also exclude environments on a per-migration basis, which is addressed in the following section.
- The user is required to have a security right that allows activating/inactivating distributed databases.

For more information see "PeopleSoft Environment Migration Path Maintenance," in the *Stat System Administration Guide*, Chapter 5, "Service Domain- Specific Maintenance."

For Stat to migrate PeopleSoft proprietary objects automatically to a distribution environment and its associated environments, the CLI Auto-Migration option must be activated for the distribution environment, as well as each environment on the distribution list. If the CLI Auto-Migration option is activated for just some of the environments in the distribution list, Stat migrates PeopleSoft proprietary objects only to those environments.

Also, Stat displays a warning message if it successfully completes a migration to a distribution environment but not to one or more of its associated environments (which would be the case if, for example, the password to one of the environments was incorrect). This information is also displayed in the Migration Details window. For more information, see Documenting Migrations (PeopleSoft) on page 157.

Running a Migration (PeopleSoft)

To run a migration:

1 Open the CSR window and do one of the following:

- In the Migration Path tab, click and hold your cursor over the source environment for the archive set and drag and drop it in the target environment.
- In the Archive Sets tab, drag and drop the archive set you want from the table to the target environment's tree node.

IMPORTANT: Before you can migrate an archive set into an environment that requires migration approval, one or more authorized users must approve the migration. For more information, see the section Migration Approvals and Mass Migrations (PeopleSoft) on page 151.

Stat opens the Migration window.

2 (Optional) If you want the Stat Central Agent to process the migration job at some later time, enter the date and time in the **Migration Date** field.

   The field defaults to the current date and time. You can schedule the migration up to 90 days in the future.

3 (Optional) To plan the migration for an unspecified date, clear the **Migration Date** check box. Planned migration can be initiated any time later by Stat Windows Client or by an external third party component using a REST API call. See “Appendix: Stat REST Web Services API” in the *Stat System Administration Guide*.

4 (Optional) In the **Description** field, enter a unique description of the migration.

   The field defaults to CSR ID+Archive ID.

5 (Optional) Select the **Stop on Error** option if you want the Stat Central Agent to terminate the migration at the first error it encounters.

   System administrators may set this option to be selected or de-selected by default.

6 (Optional) De-select the **E-mail Notification** option if a business rule or personal rule triggered by a migration event has been defined for the service domain and you do not want Stat to send email notifications that may be triggered by the migration.

   This option is selected by default and is displayed only if one or more Migration Notification business or personal rules have been defined for the service domain. Fore more information, see Defining Personal Rules on page 78.

7 Select the archive set you want to migrate.

   The window displays a list of archive sets that you can migrate from the selected environment. If you initiated the migration from the Archive Sets tab, the list displays only the archive set that you dragged and dropped onto the target environment.

   By default, all the objects in the archive set are selected for the migration. However, with the appropriate security rights, you can exclude either all the file objects or all the PeopleSoft objects from the migration. You can also exclude individual objects.

8 (Optional) De-select the class of objects (file objects or PeopleSoft objects) you do not want to migrate.

9 (Optional) In the **Migrate** column, de-select the individual objects you do not want to migrate.

   If you are migrating to a distribution environment, the window displays the list of active target environments. By default, each environment in the distribution list is selected as a target. However, with the appropriate security rights, you can exclude certain environments from the migration.

10 (Optional) If migrating to a distribution environment, de-select any environment in the list of active target environments you want to exclude from the migration.

11 If the archive set contains file objects and the target environment is Development, in the **Migrate files to** field select one of the following options:

   - **Development Env**– Select if you want to place the file objects in the source file locations of the Development environment
   - **Working** – Select if you want to place the file objects in the developers’ working directories. Only the file objects assigned to each developer get copied into their working directories.
   - **Dev & Working** – Select if you want to place the file objects in both the source file locations and the working directories.

   IMPORTANT: If the Development environment is a distribution environment and the archive set has both PeopleSoft proprietary objects and file objects selected for the migration, the option **Working** cannot be selected. To migrate file objects to Working, deselect the **DB Objects** option.

   At this point, if you are only migrating file objects, you are ready to start the migration and can skip to Step 14. The remaining fields are dithered if there are no PeopleSoft proprietary objects in the selected archive set.

12 Select a staging database.

> **IMPORTANT:** When migrating archive sets, bear in mind the following:
>
> - The base language of the staging database must be the same as the base language of the environment that the archive set came from (i.e., the source).
> - If the staging database you selected is currently in use, Stat displays a message telling you who is using the environment. You can retry the environment, select another environment, or if you have the proper security rights, click the Unlock button to unlock the environment. This deletes the other developer's objects in the staging database and replaces them with yours.

13 (Optional) If CLI Auto Migrate has been enabled for the target environment, deselect the **Auto Migration** if for some reason you do not want Stat to auto-migrate the PeopleSoft proprietary objects.

It is recommended that you leave the **Auto Migration** option selected. If auto-migration is turned off, you need to manually migrate the PeopleSoft objects to the target environment. This also prevents Stat from executing the DataMover script to migrate non-App Designer objects.

Whenever you migrate an archive set that contains PeopleSoft proprietary objects, Stat creates a unique PeopleSoft project in the staging database. At this point, you need to specify a name for the project and, if you have migrated the archive set more than once, whether you want Stat to restage the objects in the project.

14 Select one of the following options to name the Stat-created PeopleSoft project:

- **Stat defined project** - Select this option if you want Stat to assign a name to the project. Stat-defined project names always use the naming convention, "ST######."
- **User defined project -** Select this option if you want to assign a name to the PeopleSoft project. Then in the **Project Name** field enter the name you want.
- **Project in Archive Set -** Select this option if you added a project definition to the archive set and want to re-use the project name. This option is only available if the archive set and the project definition included in the archive set reference all the same App Designer objects. This also applies to subobjects, meaning the option is not available if the parent objects have been removed either from the archive set or the project definition included in the archive set. The project definition included in the archive set can reference subobjects so long as the subobjects' parents are in the project definition and the archive set. For more information on subobjects, see Associating Related PeopleSoft Proprietary Objects on page 123.

  > **NOTE:** The Upgrade and Action values for objects in the archive set are not used when you use a PeopleSoft project contained in an archive set to perform the migration. In this case the Upgrade and Action values are set at the time you archived the project definition and the Upgrade and Action flags set in the archive set are ignored.

- **Reuse project -** Select this option if you are migrating an archive set that was previously migrated using the same staging database, and you have not modified the archive set after its original migration. If you select this option, by default Stat restages the project in the staging database. However, you can de-select the **Restage objects** option if you do not want to wait for the objects to be restaged and you are sure they were staged successfully the last time.

  > **IMPORTANT:** PeopleSoft project definitions are stored in the Stat Repository, and the only way to update a project definition is through the App Designer interface, which means that even if you change the archive set in Stat by adding or deleting objects, the project definition remains unchanged in Stat.

15 (Optional) Click the Audit Flags button to change the default audit flags and DDL settings for the project.

This opens the Upgrade Options window where you can specify whether these properties will be copied into the target environment during the migration or whether the settings as defined in the target environment will be retained. Additional settings include portal structure permission lists, display size page property, and the database field format.

> **IMPORTANT:** If you selected the **Project in archive set** option, you cannot modify the settings in the Upgrade Options window.

16 Click **Migrate**.

17 At this point, Stat may prompt you to select and order the pre and post migration steps (if any) that have been defined for the target environment or for the objects or object types in the archive set.

   For more information, see Pre and Post Migration Steps on page 148.

18 After selecting the pre and post migration steps, click the **Migrate** button.

   Stat opens the CSR Migrations Console, which shows that the migration job has been submitted to the Stat Central Agent. The Agent either begins processing the migration immediately, or if you scheduled the migration, at the date and time you specified. For more information, see Migration Console on page 48.

   If you are only migrating file objects, Stat copies the file objects into the target environment. If you are migrating PeopleSoft objects, what happens next depends on whether the CLI Auto-Migration feature has been activated for the target environment. For more information, see the section Auto-Migrating PeopleSoft Projects on page 147.

   If you are not auto-migrating, you need to open the PeopleSoft PeopleTools Application Designer and manually push the project from the staging environment to the target environment. For more information, see the section Manually Migrating PeopleSoft Projects on page 147.

Auto-Migrating PeopleSoft Projects

If the CLI Auto-Migration feature has been enabled for the target environment (and you did not de-select the **Auto Migration** option), Stat launches PeopleSoft and tells PeopleSoft to copy the project from staging to target via a command line interface. While this is happening, you may see Application Designer login screen flash on your screen momentarily. For non-App Designer objects, Stat executes the DataMover import script. For more information on CLI options, see Setting Up Your PeopleSoft Connections on page 109.

If the archive set contains a PeopleSoft project definition and you have opted to migrate the archive set using a Stat created project, Stat runs the PeopleSoft project copy CLI twice: once for the Stat created project and once for the PS Project in the archive set. The CLI for the PS project only copies the project definition, but it updates the project version appropriately.

If the CLI Auto-Migration feature has not been activated, or if an error or warning occurs during the auto-migration, you must perform the migration manually by logging into the staging database and pushing the project into the target environment. If CLI-Open is configured for the staging environment, Stat opens App Designer in the staging database for you. For more information, see Manually Migrating PeopleSoft Projects on page 147.

IMPORTANT: Stat does not execute the CLI Open option for the staging database if the CLI Auto-Migration option has been activated for the target environment as well. If you or your system administrator activated the CLI Auto-Migration option for the target environment, Stat ignores the CLI Open function and automatically migrates the project from the staging database to the target environment. This minimizes the likelihood of developers inadvertently making changes to the staging database during a migration. It is therefore recommended that you use the CLI Auto-Migration feature for typical migration needs.

Manually Migrating PeopleSoft Projects

If the CLI Auto-Migration feature has not been activated (or you de-selected the **Auto Migration** check box), you must perform the migration manually by logging into the staging database and pushing the project into the target environment.

- If CLI-Open is configured for the staging environment, Stat opens App Designer in the staging database for you. You need to review the project and push it to the target environment manually.
- If CLI-Open is not configured for the staging environment, you will need to open App Designer in staging on your own, review the project and push the project to the target environment manually.

To migrate a PeopleSoft project manually:

1 With the project Stat just created open in the staging database, verify that you included all the objects in the archive set that you wanted to migrate.

2 Log in to the PeopleTools Application Designer in the staging environment. Select **Tools | Copy Project** to copy the project from the staging database to the target environment.

3 In the Migration Details window in Stat, select the migration and in the **Migration Status** field select **Complete**.

Stat verifies that the PeopleSoft project was successfully migrated. If any errors are encountered, the migration status is changed to **Complete with Errors**.

NOTE: If you decide not to migrate the project for any reason, set the migration status to **Cancel**.

Pre and Post Migration Steps

Pre and post migration steps define certain activities you should perform before and after migrating an archive set. Migration steps are triggered either manually by the user or automatically by the Stat Central Agent.

Pre and post migration steps can be associated with object types, object classes and with target environments. When you initiate a migration with an archive set that includes an associated object type or class, or when you initiate a migration to an associated target environment in either a single or a mass migration, Stat opens a window that allows you to select which pre and post migration steps to run. This window displays a list of recommended steps that should be performed before or after the archive set is migrated.

Although recommended pre and post migration steps are added by default to the migration, you can exclude any step from the list. You can also change migration step order, update pre migration step status, and run pre migration steps. Once a pre migration step is run, it cannot be excluded from the migration. Pre migration steps can only be run before the migration is started. Post migration steps can only be run after the migration is successfully completed. The same is true for updating post migration status.

When a pre migration step completes with an error, the entire migration halts with “Waiting for Pre-Step” status. When a post migration step completes with an error, then migration halts with “Waiting for Post-Step” status. When a step completes with an error, you can fix the issue or manually update the migration step status to “Complete” or “Canceled.” This will trigger the Stat Central Agent to continue the migration.

Manage pre and post migration steps:

- To remove a pre or post migration step, clear the **Include** check box.
- Steps are executed in order from top to bottom. To change migration step order, highlight a step and click the **Arrow Up** or **Arrow Down** button.
- To set a pre migration step status to “Complete,” manually select the step and then select **Complete** from the Update Status drop-down list. Then click the **Update** button beside it.
- To run a pre migration step, select the step and click the **Run** button.
- To view the pre migration step command log, select a step and click the **View History** button. This opens the Migration Step History window, which displays a record of each time Stat successfully executed the command. These records display the date and time the step was run, the user who ran it, and what parameters were used.
- To view the log for the step, click **Log**. To print the history table, click **Print**. To export it to a file format, click **Export**.

Click the **Migrate** button after you finalize with pre and post migration steps.

Running Automatic Pre and Post Migration Steps

Automatic steps consist of predefined custom commands executed by Stat. These steps will be automatically triggered and executed by the Stat Central Agent.

For more information on automatic steps, see the *Stat System Administration Guide,* Chapter 5, “Service Domain-Specific Maintenance.”

Running Data Mover Scripts

When this step is triggered, Stat uses your PS operator ID and password to log in to the PeopleSoft environment (by default, the target environment of the migration) and runs the selected .dms file. Before executing the step, however, Stat displays the DataMover Variables dialog box. Here you can specify a different environment, which

.dms file you want to run, and the location of the script files. For a default location, Stat appends the subdirectory “\script” to the PeopleSoft Home Directory (PS_HOME) defined in the PeopleSoft Configuration Manager.

The default script location is based on the registry entry for the version of PeopleSoft that you were last working in.

After specifying the variables you want, click **Run** to execute the step. You can run this step for each .dms file included in the migration, or you can run this step for the same file but in a different environment or script location.

Running Custom Command Pre and Post Migration Steps

You may run manual pre migration steps before the migration has been initiated in the S**elect Pre and Post Migration Steps to Run** window. Custom commands are operating system commands executed by the Stat Central Agent. To run a pre migration step, select the step and click the **Run** button. This action opens the **Pre Migration Step** dialog where you can review the command and command options, interpret the command, and run the step by clicking the **Run** button. After the migration is initiated, the steps can be run from the Migration Console.

When defining a command, system administrators can include predefined parameters and user and server-based parameters that have been defined in Stat. This provides a convenient way to specify values commonly invoked by operating system commands, such as server names and download directories. In addition, parameters offer a way to secure sensitive information by encrypting values that you do not want visible to users, such as passwords.

Predefined parameters specify values used to login to a target environment during a migration (database name, user name and password), whereas user and server-based parameters generally invoke values specific to the users and file servers defined in Stat. Also, certain parameters may be defined so that their values are different depending on which user or server they are being applied to. For more information on pre and post migration step parameters, see the *Stat System Administration Guide*, Chapter 4, “General Maintenance Tables”.

Creating Project Build Scripts

The Create Project Build Script step is a post migration step applicable for PeopleSoft versions 8 and higher only. When this step is triggered, Stat uses your PeopleSoft operator ID and password to log into the PeopleSoft environment that is the target of the migration and creates the build script for the project that was used during the migration. Stat uses the PeopleSoft command line statement to accomplish this and the build settings from the Windows registry to generate the SQL script for Create or Alter. The build script is placed in the location specified for build settings in your PeopleSoft configuration.

Compiling Cobol Files - Local and Unix File Servers

When this post migration step is triggered, Stat automatically launches the PeopleSoft COBOL Compile program, either CBLBLD for NT or pscbl.mak for Unix. Your system administrator defines the default server and variables required to run the compiler. For Unix, these variables include the PeopleSoft home directory and the Cobol Compile directory. For Windows servers, these variables also include the drive and directory where the compile is to take place. If you want to specify a different server and variables, you can do so in the Cobol Compile Variables dialog box, which Stat opens when you click **Run**.

After specifying the variables you want, click **Preview** to see how the object will be compiled. If satisfied with the results, click **Run** to execute the step.

Compiling Cobol Files - Mainframe

Stat executes a Cobol Compile post migration step on a mainframe server as follows:

- Stat logs in to the Mainframe using the Host id, user name and password defined on the File Server Maintenance table.
- Stat changes the directory based on the values in the **Directory** and **Cobol Compiler Location: Drive and Root Directory** fields of the File Server Maintenance table.
- If the **Directory** field has a value, it is displayed in the **PS Home** field on the Post Migration step window. This field cannot be modified on the Post Migration step window.
- The **Cobol Compiler Location:Drive and Root Directory** value is displayed in the Cobol Compiler field on the Post Migration step window. This field can be modified when the step is run.

- Stat parses the JCL file listed on the File Server Maintenance table and displays it in the preview window

TIP: Before running the step, you can browse and select a different JCL file if there is more than one that could be used.

When running the step, Stat executes the login sequence as follows:

1. open 10.4.23.188 (Host field from File Server Maintenance)
2. USER (User field from File Server Maintenance)
3. PASSWORD (Password field from File Server Maintenance)
4. cd QA.STATSOFF.PARMLIB (Cobol Compiler field from File Server Maintenance)
5. quote
6. site Filetype=jes
7. Put JCL (puts whatever is in the preview portion of the Post Migration step) window
8. disconnect
9. quit

Point-to-Point PeopleSoft Project Migrations

If you want to migrate a PeopleSoft project that contains a large number of objects, but you do not necessarily want to spend the time required to archive all these objects, you can use Stat simply as a migrating tool by performing a point-to-point migration.

During a point-to-point migration, Stat uses CLI functionality to open PeopleSoft and migrate the objects in the project directly from the source environment to the target. Stat does not stage the objects and does not archive them. This means that while a record of the migration is recorded in Stat for reporting purposes, you cannot use Stat to roll back the migration since none of the objects in the project were archived.

To execute a point-to-point migration, you must add the project you want to migrate to a CSR and the CLI Auto-Migration option must be activated for both the source and target PeopleSoft database. For more information on activating CLI functionality, see the section, Setting Up Your PeopleSoft Connections on page 109.

To migrate a PeopleSoft project point-to-point:

1. Open the CSR that contains the project you want to migrate.
2. In the CSR window, select the Objects tab.
3. Open the Migration Path node in the tree view.
4. Click and drag from the source database to the target database.

   This opens the Point To Point Migration Wizard.
5. (Optional) If you want the Stat Central Agent to process the migration job at some later time, enter the date and time in the **Migration Date** field.

   The field defaults to the current date and time. You can schedule the migration up to 90 days in the future.

   IMPORTANT: If Stat is unable to execute the migration at the scheduled time for whatever reason, (the workstation is turned off or the Auto Migration feature is deactivated), the migration will have a status of PS Pending until Stat either completes the migration or you migrate the objects manually.
6. (Optional) In the **Description** field, enter a unique description of the migration.

   The field defaults to “Point-to-Point Migration.”
7. If there are more than one project associated with the CSR, select the project you want to migrate in the **Projects** field.

   The Wizard displays all the objects sorted by object type that are contained in the selected project.
8. Click **Migrate**.

Stat invokes CLI functionality to open PeopleSoft and migrate the project directly from the source database to the target database.

When finished, Stat displays the Migration Console, which records the Point-to-Point archive migration. For more information, see Migration Console on page 48. Point-to-point migrations are also recorded in the Migration Details window, which is described in the section Migration Details Window on page 158.

Migrating Non-App Designer PeopleSoft Proprietary Objects

When Stat migrates PeopleSoft proprietary objects, it first moves copies of the archived objects into a staging database. Stat then creates a PeopleSoft project (called an Application Designer project), which contains references to the objects you just staged. However, there are PeopleSoft proprietary objects that cannot be included in an Application Designer project. For some of these objects, Stat provides an alternative form of migration support. These objects include:

- Record Groups
- Mass Change Types
- Mass Change Datetime Parms
- Import Definitions
- TableSet Control
- Object Security Groups
- Mass Change Templates
- Mass Change Prompt Records
- Strings Table Programs
- nVision Scopes
- TableSet IDs

You archive non-Application Designer objects the same way you do other PeopleSoft proprietary objects. When you migrate them, however, Stat executes the following steps after the archived objects are moved to the staging database:

1. Stat dynamically creates DataMover export and import scripts and stores them in the user's Log Directory as defined in the Stat User Options window.
2. Using CLI functionality, Stat runs the export script using DataMover in the staging database. This creates a .dat file that contains the non-Application Designer object definitions in the user's Log Directory.

   IMPORTANT: To migrate non-Application Designer objects, you must activate CLI Auto Migrate functionality for each target environment.

3. Stat uses CLI functionality to run the import script in the target environment. This import script deletes the non-Application Designer object definitions contained in the target environment. Then it imports the data from the .dat file created by the export script. This data is then imported into the target environment.

   If migrating to a distribution environment, Stat uses CLI functionality to execute the import script in each of the distributed environments.

Migration Approvals and Mass Migrations (PeopleSoft)

Stat provides advanced version control and change management support in the form of migration approvals and mass migrations:

- Migration approvals provide a way for system administrators to maintain data integrity in PeopleSoft environments. Before you can migrate an archive set into an environment that requires migration approval, one or more authorized users must approve the migration.
- Mass migrations allow a user to group multiple archive sets and migrate them as a single unit to the same environment. There are two ways to perform a mass migration, either by flagging individual archive sets as candidates for a mass migration, or by specifying an application release label assigned to certain archive sets within the service domain.

Marking Archive Sets for Migration

When you want to perform a migration that requires approval, or you want to flag an archive set for a mass migration, the first step is to mark the archive set for migration. This is done either by individually selecting the **Ready to Migrate** option on the Objects tab of the CSR window, and then selecting the environment(s) that you want to target, or by marking multiple archive sets in the Ready to Migrate window.

NOTE: The security right, PS Archive Set - Ready to Migrate, allows you to mark an archive for a migration even if you do not have the user class rights to perform migrations. This way, users that have migration rights can migrate your archive set for you.

Marking Individual Archive Sets

To mark an archive set for a migration:

1. On the CSR the archive set belongs to, open the Objects tab of the CSR window. Then click **Archive Sets**.
2. In the Archive Set table, select **Ready to Migrate** for the archive set.
3. Save the CSR.
4. Click **Migration Target**.

   This opens the Target Environments window. Here you can specify the environment(s) to which you want to migrate the archive set.
5. In the table on the right side of the window, select **Migrate** for each environment that you want to designate as a target environment.

   NOTE: In the table displayed in the right section of the Target Environments window, distribution environments and their associated distributed environments are designated by small blue and yellow icons, respectively. When you select **Migrate** for a distribution environment, all the environments on its distribution list are selected as well. Also, you cannot select a distributed environment without selecting its distribution environment as well.
6. Click **Premigration List** to view a checklist of any actions you should take before migrating the archive set.

   For more information on pre migration steps, see the section, Pre and Post Migration Steps on page 148.
7. Click **OK** or **Apply** to save your work.

   Once you click **OK** or **Apply**, the archive set appears in the Mass Migration window for the target environment, and the approval requests, if any, are generated and sent out to each user authorized to approve the migration.

   NOTE: If you later decide you do not want to migrate to a particular environment, deselect it in the Target Environments window. When you click **OK** or **Apply**, any approval requests that were generated the first time are deleted.

Marking Multiple Archive Sets

The Ready to Migrate window displays all the archive sets that have not yet been individually marked for migration and which share the same release label and environment on the migration paths of their respective CSRs. After you specify the target environment and release label, Stat retrieves all the qualifying archive sets that have not been marked for migration. Retrieved archive sets are marked for migration by default. You can unmark any archive set you do not want marked as Ready to Migrate.

To mark multiple archive sets for migration:

1. Select **Migration Management | Archive Sets - Ready to Migrate**.
2. In the **Module** field select the change management module you are using.
3. In the **Service Domain** field select the service domain of the archive sets.
4. In the **Environment** field select the migration target environment of the archive sets.

Stat retrieves archive sets that share the selected environment in the migration paths of their respective CSRs.

5 In the **Release** field select a release label.

Stat retrieves archive sets that have been assigned to that release. Release labels can be minor or major and are defined by system administrators.

> **NOTE:** A Minor release is considered a branch of its parent release. This means that when you select a minor release label, Stat retrieves all the archive sets assigned the parent release labels as well. For example, using a typical version sequence, if you select the release label 2.2.1, Stat also retrieves archive sets assigned its parent release labels, 2.2 and 2.0.

6 (Optional) Deselect **Ready to Migrate** for any archive set that you do not want to be marked for migration.

7 Click **OK** to save the archive sets as Ready to Migrate.

Approving Migrations

Before you can migrate an archive set into a PeopleSoft environment, you may need to get the migration approved by users authorized to approve migrations into that environment. Conversely, if you have been designated as a migration approver for a particular environment by your system administrator, other users may need your approval before they can migrate archive sets into that environment. Migration approvals are environment-specific. They provide a way for users (typically managers and development leaders) to monitor and control migrations into environments containing sensitive information, such as object definitions that should not be modified or overwritten.

Approval lists can be either required or optional and can include individual users, entire user classes, or a combination of the two. Although system administrators can add any user or class to an approval list, be aware that only users that have access to an environment (as determined by system administrators in the User Maintenance table) will be able to approve a migration into that environment or receive email notifications regarding their pending approval. If an approver does not have access to the environment, the migration cannot be approved until either the user is granted access to the environment or the migration's approval requirements are overridden by another user with proper security rights.

> **TIP:** To check whether migrations into a particular environment require approvals or not, see the Approval Required column in the environment table of the Target Environments window.

For more information on migration approvals, see the *Stat System Administration Guide*, Chapter 4, "General Maintenance Tables."

To approve a migration:

1 Select **Migration Management | Migration Approvals**.

Stat opens the Migration Approvals window.

The first tab, My Open Approvals, shows all the pending migrations (if any) that are still waiting your approval. The data is grouped by CSR in a tree view, along with archive ID and target environment. Open the tree to see the approval status of specific pending migrations. A green check mark indicates that the approval requirements for the migration have already been satisfied by other users, whereas a red X indicates that one or more users have rejected the migration, thereby preventing the migration from running until the rejection status has been resolved.

> **IMPORTANT:** A migration cannot go forward if just one approver rejects the migration, even if that user's approval is not otherwise required. Before the migration can occur, either the user or another user authorized to override migration approvals must change their approval status from **Rejected** to **Approved** or to **Pending**.

Your approval can be made either as an individual or as the member of a user class. Also, approvals are either required or optional:

- If required, Stat cannot perform the migration until you approve it. With a required user class approval, every user in the class must approve the migration.

- If optional, then you are one out of a number of users authorized to approve the migration. Whenever an approval is marked as optional, the Min Approval column displays the minimum number of optional users who must approve the migration.

TIP: Double-click an approval record to open its associated CSR.

The second tab, All Open Approvals, shows the same information as the My Open Approvals tab, except it shows the approval records for all users for each pending migration. This tab is for informational purposes only unless you have the user class right to override migration approvals, in which case you can approve migrations for other users and change approvals they previously made. Each user's approval record is displayed until the migration has taken place.

2 In the My Open Approvals tab, select **Approved** in the Status column for each migration that you want to approve. If you do not approve the migration, select **Rejected**.

3 Click **OK** or **Apply** to save your changes.

If you selected **Rejected**, the approval record stays on the My Open Approvals tab until you change it to **Approved**, or the migration approval is overridden, or the archive set is changed so that it is no longer ready to migrate.

4 (Optional) Do the following if you have the right to override migration approvals:

a Open the All Open Approvals tab and approve or reject migrations for other users or change the migration approval status other users as needed.

TIP: With proper security rights, you can also change the status of your own migration approvals.

If you change a migration approval status for yourself or another user, Stat prompts you to document your reasons for doing so.

b If prompted, document the reasons why you are changing your own or another user's migration approval.

c Click **OK** or **Apply** to save your changes.

A record of the approval remains on the All Open Approvals tab until the migration takes place.

You can also approve the migration of an archive set in the Target Environments window of the CSR.

To approve a migration in the Target Environments window:

1 Open the CSR to which the archive set belongs. Then follow the instructions for opening the Target Environments window for the archive set as described in the preceding section.

2 In the table on the right side of the window, select the target environment of the archive set. Then click **Approval Lists**.

This opens the Approval List for Target Environment window, which displays all the optional and required approvals that are still pending for the migration of the archive set.

3 Double-click your corresponding row. Then in the popup menu, select **Approved**.

4 Click **OK** or **Apply**.

TIP: With proper security rights, you can make approvals for other users. You can also unapprove all approvals by clicking **Unapprove All**. This allows you to deselect the **Ready to Migrate** check box for the target environment. When you override another user's approval, Stat records you as the approver, not the user originally assigned to make the approval.

You can view records of migration approvals from the Migration Details window. For more information, see Documenting Migrations (PeopleSoft) on page 157.

Approval Request Notifications

If you want to notify users about migrations that are still pending their approval, you can email a message predefined by system administrators. In the tree list of approvers, select the node representing the user or class

that you want to notify and click **Email**. An email job request is sent to the Stat Central Agent, which processes the request and sends an email to the user you selected or to each member of the selected class. A “@” sign is displayed for that approver node in the Envelope field of the Approval List tab.

NOTE: The **Email** button is disabled once the approval requirements of a migration have been satisfied.

System administrators can also configure the Stat Central Agent to include links in the reminder message that the recipient can click to approve or reject the migration. This sends an email back to the Stat Central Agent, which processes the response email and changes the approval status to **Approve** or **Reject**, depending on which link the approver selected.

NOTE: When an approval status is changed by responding to a reminder message, the **Update Date** field in the Approval List window will be automatically populated and the **Update By** field will display the value, **Via Email**.

Approval notification reminder messages can also be sent for workflow status transfers. For more information, see the book *Stat System Administration*, Chapter 7, “Email Configuration”.

Mass Migrating Objects

If you need to migrate several archive sets to the same environment, rather than migrate them one at a time, you can perform a mass migration. There are two types of mass migration supported by Stat:

- Using the Ready to Migrate method, you can include as many archive sets from different CSRs in a mass migration as you want, even if the objects are assigned to different developers and come from different source environments.
- Mass migrating archive sets based on an application release label allows you to quickly update a target environment with the latest version of objects or roll back to earlier versions.

Because mass migrations can include objects assigned to different users and belonging to different CSRs, it is recommended that a limited number of users be allowed to perform mass migrations. With proper security, users can perform mass migrations that override workflow rules and approval requirements. In addition, Stat features the Release Recovery window, which allows users to perform application release mass migrations that override workflow rules, approval requirements, and object locks. For more information, see *Release Recovery Window* on page 97.

To perform a mass migration:

1. Mark each archive set for a migration, as described earlier in this chapter.
2. Select **Migration Management | Mass Migration**.

   Stat opens the Mass Migration window.

   TIP: You can resize the window and the panels as needed to view the complete listing of archive sets and objects.

3. (Optional) If you want the Stat Central Agent to process the migration job at some later time, enter the date and time in the **Migration Date** field.

   The field defaults to the current date and time. You can schedule the migration up to 90 days in the future.

4. (Optional) In the **Description** field, enter a unique description of the migration.

   The field defaults to “Mass Migration”.

5. (Optional) Select the **Stop on Error** option if you want the Stat Central Agent to terminate the migration at the first error it encounters.

   System administrators may set this option to be selected or de-selected by default.

6. In the **Module** field select **PeopleSoft**.

   TIP: You can set a default value to be displayed in the **Module** field. To do this, select **User Options | Stat Options**. Then in the Stat User Options window, select the value you want in the **Default Module** field.

7 In the **Service Domain** field, select the service domain associated with the migration path containing the target environment you want.

The service domain you select filters the list of target environments as well as the list of release labels if you opt to mass migrate objects assigned the same release label.

8 In the **Target** field select the environment to which you want to migrate the archive sets.

If using the Ready to Migrate method, Stat displays a list of each archive set that has been marked as Ready to Migrate into the selected environment.

9 In the **Type** field select one of the following:

- Select **Ready to Migrate** if you want to mass migrate archive sets that have been individually marked for migration
- Select **Migration by Release** if you want to mass migrate archive sets that have been assigned the same application release label. When you select this option, the **Release** field is displayed. Then in the **Release** field select the release label you want. Release labels can be minor or major and are defined by system administrators. After you select a release label, Stat displays a list of archive sets that have been assigned that label.

NOTE: A Minor release is considered a branch of its parent release. This means that when you mass migrate archive sets based on a minor release label, Stat migrates all the archive sets assigned the parent release labels as well. For example, using a typical version sequence, if you mass migrate archive sets labeled release 2.2.1, Stat also migrates archive sets assigned its parent release labels, 2.2 and 2.0. When the same object is found in archive sets with different release labels, Stat migrates the object with the latest release label.

10 (Optional) In the **Sources** section, deselect **Migrate** for each archive set that you do not want to include in the mass migration.

By default, this check box is selected for each archive set that has met migration approval requirements.

NOTE: Using the Ready to Migrate method, if the same object exists in two or more archive sets, Stat displays a message box prompting you to select which object you want to migrate.

11 (Optional) In the **Archive Migr Order** column, change the order in which selected archive sets will be migrated.

By default, Stat assigns archive sets a migration order number. The first archive set is assigned the order number 1, the second 2, and so on. You can change this order by assigning your own order numbers. Lower order numbers are migrated first.

With the proper security rights, you can exclude certain object classes from the migration. You can also exclude individual objects. If the same object is contained in more than one archive set, the most recently archived version is selected by default in the **Migrate** column. You can override this selection by selecting a different version.

12 (Optional) Deselect the class of objects (file objects or PeopleSoft objects) you do not want to migrate.

13 (Optional) In the **Migrate** column, deselect the individual objects you do not want to migrate.

If you are migrating to a distribution environment, the window displays the list of active target environments. By default, each environment in the distribution list is selected as a target. However, with the appropriate security rights, you can exclude certain environments from the migration.

14 (Optional) If migrating to distribution environment, deselect any environment in the list of active target environments you want to exclude from the migration.

15 Specify the migration parameters you want in the remaining fields of the Mass Migration window.

These parameters are the same as those that you would otherwise specify in the Migration window if you were running a typical drag and drop migration. For more information, see Running a Migration (PeopleSoft) on page 144.

> **IMPORTANT:** If you opt to use a Stat-defined name for the PeopleSoft project created by Stat during a mass migration, Stat uses the naming convention, “SM######,” as opposed to “ST######.” Also, if you opt to define your own name for the project, the name must be uppercase and no longer than 28 characters. Stat appends the letters “SM” to the beginning of user-defined names to identify mass migration projects.

16 Click **Migrate>**.

At this point, Stat prompts you to perform the pre-migration steps (if any) that have been defined for the target environment or for the objects or object types in the archive set.

17 Complete any required pre-migration steps.

For more information, see Pre and Post Migration Steps on page 148.

After completing the pre-migration steps, Stat opens the CSR Migrations Console, which shows that the migration job has been submitted to the Stat Central Agent. The Agent either begins processing the migration immediately, or if you scheduled the migration, at the date and time you specified. For more information, see Migration Console on page 48.

Mass Migrating to a Distribution Environment

The following considerations apply to mass migrating to distribution environments:

- When you flag a distribution environment for migration, all of the distributed environments are automatically flagged for migration as well.
- When you mass migrate to a distribution environment, the objects are migrated to all the active environments in the distribution list, excluding any you de-selected.
- You can only mass migrate to a distributed environment by migrating to the distribution environment. Once a migration to a distribution environment is complete, the distribution environment is no longer flagged for migration, and neither are any of distributed environments, even if some of them were not included in the migration.
- The distribution environments can be on different migration paths

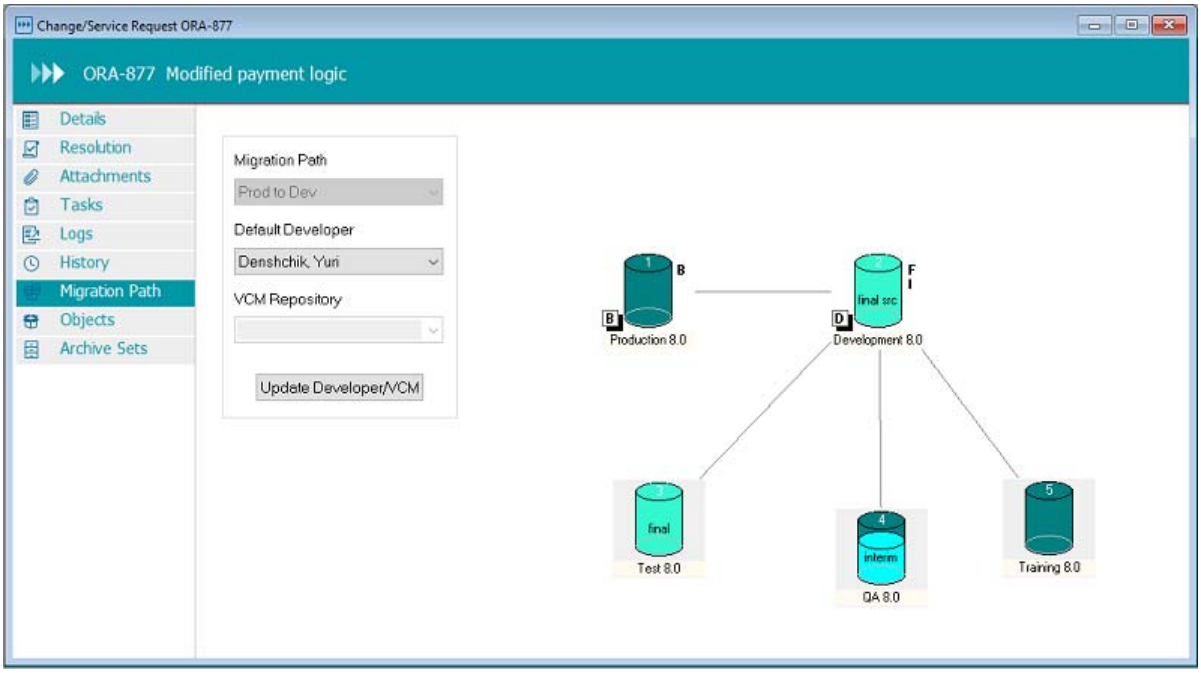
The mass migration cannot proceed for the following situations:

- The selected archive sets have different distribution environment types for their target environments (One is ‘Yes’, the other is ‘—’).
- When distribution environments are selected, the distribution environments have different distributed database lists
- The migration has not received all the necessary approvals. If a distributed environment requires user approvals before a migration can take place, and one or more of the archive sets did not get necessary approvals, none of the archive sets included in the mass migration will be migrated into that environment. Stat only migrates to the distributed environments that either do not require approvals or have received approvals for each archive set included in the mass migration.

If any archive set is causing errors when mass migrating, you can opt not to include that archive set in the mass migration. You can then mass migrate the other archive sets and resolve the issue at a later time.

Documenting Migrations (PeopleSoft)

After creating and migrating a base, interim, and final archive set, a typical migration path may look like this:



The sample migration path above shows:

- The migration path has 5 environments
- At least 3 archive sets have been created: 1 base, 1 final, and at least 1 interim
- The base archive set was migrated to Development 8.0 from Prod 8.0
- An interim archive was created in Development 8.0 and migrated to QA 8.0
- The final archive was created from Development 8.0 and migrated to Test 8.0
- No archive sets have been migrated to Train 8.0 or Prod 8.0

Flag Indicators

Flags appear to the right of environment graphics and indicate that an archive set was created in that environment. Flags include ‘B’ for base, ‘I’ for interim, and ‘F’ for final. If multiple interim archive sets were created in an environment, only one ‘I’ flag is shown.

Migration Indicators

When you migrate an interim archive set, the environment graphic appears half full, and the color changes. When you migrate the final archive set, the environment graphic appears full and the color changes again. Migrating the final archive set fills up both the source and target environments. Also, the graphic for the source environment of the final archive set reads “final src.”

When you migrate an archive set, the line linking the two environment changes color accordingly. When you migrate the base archive set to the Development environment from the Base environment, a curved arc links the two environment graphics.

Migration Details Window

The Migration Details window displays information regarding all the archive set migrations into the selected environment. To open the Migration Details window, double-click on an environment graphic in the Migration Path tab, or right-click on an environment tree node in the Archive Sets tab and select V**iew Migration Status**.

> **TIP:** You can also open the Migration Details window from the Migration History Wizard and the Migration Console. For more information, see Migration Details Window on page 50.

When you open the Migration Details window by double-clicking an environment, the window shows information regarding all the migrations that have targeted that environment.

12

Change Management for Oracle Applications

- Object Management (Oracle Applications)
- Patch Management
- Object Archives (Oracle Applications)
- Object Migrations (Oracle Applications)

Object Management (Oracle Applications)

Classification of Supported Objects

Whether used in conjunction with PeopleSoft®, Oracle® Applications, or a generic application, Quest® Stat® enables developers to work with objects in a more secure, controlled, and well-documented manner.

In Stat, any action you take involving an object is handled and recorded on its associated CSR, including editing, archiving, or migrating it to other environments. In addition, Stat lets you place a lock on an object once you associate it with a CSR. Object locking promotes coordination between developers by ensuring that they do not overwrite each other's work.

For Oracle Applications, there are five classes of objects that you can associate with CSRs:

- File Objects
- Setup Objects
- Data Objects
- Schema Objects
- Patch Objects

File Objects

Quest® Stat® supports change management for file type objects. In addition to the predefined Oracle Applications file type objects (reports, forms, form libraries) that Stat automatically supports, system administrators can configure Stat to support user-defined file object types. These include custom file type objects residing in your Oracle® Applications environments as well as generic file type objects that exist outside the Oracle Applications file structure.

Configuring Stat to support file objects includes defining working directories where users can modify file objects assigned to them.

NOTE: In the case of VCM file objects, system administrators can configure Stat to archive the objects entirely or just pointers to those objects, meaning the objects are not physically brought in to Stat. For more information on the directories Stat uses to access Oracle Applications proprietary file objects, see the *Stat System Administration Guide*, “Appendix: Oracle Applications File Type Directory”.

Setup Objects

Quest® Stat® allows you to archive and migrate configuration data contained in your Oracle® Apps environments by providing change management support for a number of predefined setup object types. Stat supports the foundation setup (AOL) object types.

You archive and migrate setup objects the same way you do file objects. However, because setup objects contain configuration data, they cannot be migrated into users’ working directories. Stat transparently integrates with FNDLOAD, AKLOAD, WFLOAD, XML Importer, XML Exporter, xdfgen.pl, scfcmp.pl, XDoLoader, and XLIFFLoader to process archive and migration requests.

IMPORTANT: Be aware of the following when migrating setup objects:

- The default UPLOAD mode for AOL Menu objects is REPLACE instead of MERGE.
- Stat architecture includes a framework for extending the list of Oracle E-Business setup objects that can be supported by the product. The Resource Kit for Oracle E-Business (maintained and available for download independently of Stat releases) utilizes this framework to add additional setup object types to the list of available object types. The Resource Kit for Oracle E-Business organizes setup objects into logical groupings based on E-Business applications so that you can selectively add the desired types. The latest Resource Kit for Oracle E-Business is available on SupportLink, and includes further documentation on supported application setup objects, and installation instructions.

Data Objects

Data objects are user-defined or third party data sets residing in your Oracle® Applications environments that your system administrator has configured Quest® Stat® to support. You can lock, archive, and migrate data objects the same way you do file objects.

Schema Objects

Quest® Stat® supports certain schema object definitions for Oracle® Applications environments. In the Oracle Applications change management module, schema objects are migrated by the Stat Oracle Agent. This allow Stat to enforce the migration order specified in the archive set.

Stat currently supports the following schema object types:

- Package Specification
- Package Body
- Procedure
- Function
- View
- Trigger
- Table
- Index
- Synonym
- Sequence

- Materialized Views
- Directories

NOTE: Schema objects include a set of predefined true/false parameters that are executed before the definition of the object is captured in Stat. You can change the true/false values of these parameters in the Schema Object Parameters Maintenance table. For more information, see the *Stat System Administration Guide*, Chapter 4, “General Maintenance Tables.”

IMPORTANT: Stat only deletes and replaces schema objects that have drop/create operations in the script. If the schema object does not have drop in the script, then the migrator must delete the object from the target environment prior to migration.

Patch Objects

Quest® Stat® provides comprehensive patch support for Oracle® Applications. You can associate with a CSR any patch that has been downloaded from Metalink, Oracle’s web support service, and uploaded to the Stat Repository.

Like schema objects, you can lock patch objects on a CSR but you cannot archive or migrate them. Instead, you use the Stat Oracle Application Management Console to apply the patch you want to a specified target environment.

To associate Oracle patches to a CSR, the Patches tab must be enabled. The enabling of the Patches tab is determined by CSR type. For more information, see The Oracle Apps Management Console on page 179.

Object Locking and Reservations (Oracle Applications)

Object locking is an important part of any change management practice since it coordinates all of the efforts of the developer and prevents work from being overwritten. Quest® Stat® supports logical locking of objects in the Stat Repository, which means that the lock shows up in the Stat application, but developers can still go directly into their application environments and make changes to the object even if the lock on the object is not their lock. As long as the developers use a CSR to modify objects, the coordination of development is maintained.

Locks and reservations are issued to the developer assigned to the object, regardless of who actually requested the lock. That person may or may not be the assigned developer. This is a security measure determined by user class rights.

A lock indicates that the assigned developer has exclusive change/edit rights on the object. A reservation indicates that the object is currently locked by another developer and you are waiting for the object to become available. Once the object becomes available, Stat converts the reservation to a lock and notifies the holder of the new lock via email. Remember, the holder of the reservation is the developer assigned to the object in the CSR. If you request the lock but are not the assigned developer, you will not receive an email when the reservation turns into a lock.

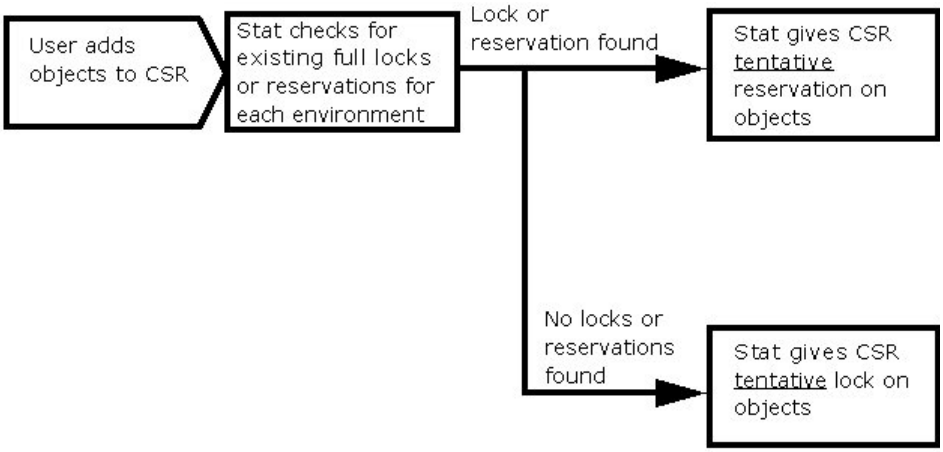
All objects can be logically locked in the Stat Repository, but only by one user at a time.

The Object Locking Process

The object locking process has up to three phases.

Phase 1: Tentative Lock/Reservation

When you associate an object with a CSR, Quest® Stat® automatically requests a lock for that object in the designated environments. Stat checks if there are existing locks or reservations on that object. If a lock or reservation exists, Stat issues a tentative reservation. If not, it issues a tentative lock. The lock or reservation remains tentative until you save the CSR.

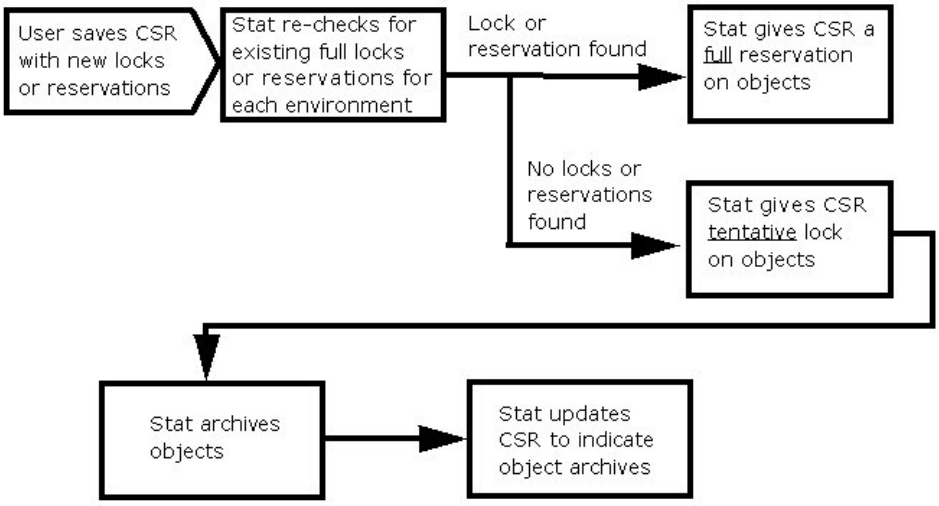


Phase 2: Full Lock/Reservation

Immediately after associating objects with a CSR, you should save your work. Upon saving, Stat checks for existing locks or reservations. If a lock or reservation exists, Stat issues a full reservation. If not, it issues a full lock.

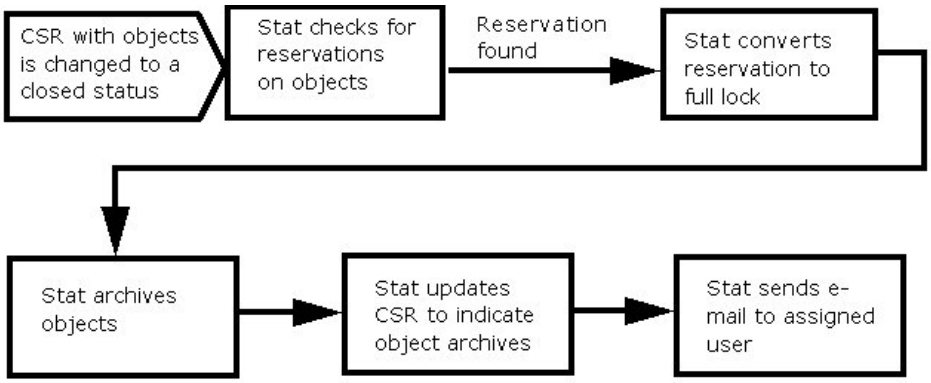
The longer you wait to save your CSR, the greater the likelihood you will lose your place in the queue for that object. For example, while you have a tentative lock on an object, another user could add that same object to a CSR and receive a tentative reservation. If the second user then saves his or her CSR before you do, that user receives the full lock for that object, and when you save your CSR, you receive instead a full reservation.

When Stat issues a full lock, it automatically archives a “pre-change” version of the object to the Stat Repository. Archiving objects is discussed in Chapter 3.



Phase 3: Reservation Conversion to Lock

The third phase is the conversion of reservations into locks. Stat releases an object lock when the status of the CSR changes to a closed-type status, or when the developer manually unlocks the object or the object is reassigned to another developer. After unlocking an object, the Stat Central Agent then determines if there are any pending reservations on the object. If reservations on the object have been given to more than one user, these reservations are handled in chronological order, based on the time each lock was requested. The Stat Central Agent converts the first reservation in line into a lock and performs any applicable object archiving.



Physical File Locking Option

Physical file locking works in conjunction with Stat logical locking. When set up appropriately, physical file locking prevents developers from modifying file objects that have not been locked in a CSR and assigned to them. Stat does this by allowing developers to modify only file objects that are in their working directory. Once a file is locked and assigned to a developer, the developer can only use Stat to migrate the file to their working directory as well as all source directories. This enforces that all changes to the file objects are documented and orchestrated through Stat.

Your system administrator defines the scope of the physical file locking. Source file locations for file types, specific users, as well as for entire environments can be excluded from physical locking.

Associating Objects with CSRs (Oracle Applications)

If a change request requires modifications to objects, you access and work with these objects in a CSR. The CSR becomes the logical grouping of all the affected objects.

Remember that objects are associated with CSRs as opposed to users. In order to lock, archive, or migrate an object, you must first associate it with a CSR. The modifications that you make to objects are still made in the Oracle Applications environment. Quest® Stat® simply provides tools that manage and track those changes.

You can manually associate objects with a CSR, or you can use the CSR Read Wizard, which associates file objects associated with another CSR

To associate objects with a CSR, first select the Oracle Applications Tab.

Oracle Applications Tab

The Oracle Applications tab feature tools that connect directly to your environments and file servers. Because the functionality behind these tabs is specific to a development environment, they are also service domain-specific. When defining a service domain, your system administrator determines which change management tab, if any, is displayed on its CSRs. Access to these tabs should be restricted to developers and migrators. For more information on security settings, see the *Stat System Administration Guide*, Chapter 3, “Stat Security.”

In order to associate objects with a CSR, you must specify the environment you want to copy them from. This is done first by opening the CSR window and selecting the Migration Path tab.

Selecting Migration Paths

In Quest® Stat®, migration paths are logical groupings of environments that serve as road maps for object migrations. They are set up by your system administrator.

Your system administrator creates migration paths based on your Business needs. For different situations you have different paths.

To select a migration path:

1 Open the CSR window and select the Migration Path tab.

2 In the **Migration Path** drop-down, select the appropriate migration path. The displayed paths vary, depending on the service domain. You should select the path most suited to your current needs.

> **IMPORTANT:** If a CSR is assigned to a workflow that specifies a migration path, that path is the default path displayed and cannot be changed. For more information on workflows, see Change/Service Requests on page 18. For more information on migration paths, see Documenting Migrations and Process Requests (Oracle Applications) on page 219.

3 Click the **Select Default Developer** field and select the developer assigned to most of the objects in the CSR. You can assign different developers to different objects, but this is the person that the objects are assigned to by default.

4 (Optional) If you want to associate the CSR with a version control management system (VCM) record, select the record you want in the **VCM Repository** field

This field is enabled only if your system administrator has defined at least one VCM record in the VCM Connection Maintenance table. It lists all the currently defined VCM records. After you add objects to the CSR, this field is disabled and you cannot select a different VCM record.

Note that if your selected Workflow has a default **VCM Repository** assigned to it, that VCM Repository will automatically be assigned on the migration path.

5 Click **Generate Path**.

Stat displays a graphical representation of the migration path. Also, additional tabs appear on the window, including Patches, Process Request, Objects, and Object Management.

Each drum represents an Oracle Applications environment. This includes the file directories that the environment uses for each of the defined file types. Your system administrator determines which environments are designated as Base and Development. The original, “pre-change” archive of the objects in the CSR is taken from the Base environment and its designated source file locations. The Development environment is where you change the objects.

For more information, see About Archive Sets on page 198.

After selecting a migration path, select the Objects tab.

Assigning Developers

Before adding the objects to the CSR, you need to decide which Quest® Stat® user is going to be making the changes to the objects and therefore needs to be assigned the object lock. If the user is the default user in the **Assigned To** field, then you can just add the objects and the default user will obtain the lock. If another user needs the lock on the objects, select that user from the drop down list in the **Assigned To** field. When you add the objects, the user in this field is assigned the object locks. For more information, see Selecting Lock Options on page 169.

Selecting Objects

You can select the objects you want to add to your CSR manually, or you can use the wizards to select groups of objects. The procedure for manually selecting the objects you want to associate with your CSR is slightly different depending on the class of objects.

> **NOTE:** Workflows can contain status rules that do not allow users to add or lock objects while the CSR is in a restricted status. When this is the case, Quest® Stat® prevents you from adding or locking objects until the CSR changes to an unrestricted status. Any object reservations that were in place before the CSR was transferred to a restricted status, however, are treated the same, meaning they are converted into locks when the objects become available.

Selecting Data and Schema Objects

To select a data or schema object, first select the Oracle® Applications environment, then the object class and the object type.

To select a data, or schema object:

1 In the CSR window, select the **Objects** tab.

2 Click in the **Environment** field and select the environment that contains the objects.

Note that any environments on the migration path that have been inactivated are not listed. If you need to select objects from an inactive environment, see your system administrator.

The initial object snapshot, the base archive set, always comes from the Base environment. No matter which environment you select in the **Environment** field, Stat copies the objects from the Base environment. Even if you add objects later, they still come from the Base environment.

Stat gives you this option of environments in order to reduce the number of hits made against your Base, or Production, environment. By selecting another environment, Stat connects to that environment and retrieves the list of objects. Once the objects are selected, the “pre-change” object snapshot is created from the Base environment.

When you select an environment, the **Object Type** field displays a “Loading...” message. During this time, Stat connects to the selected Oracle Applications environment and checks which object types are available.

3 Click in the **Object Type** field and select the type of object you want.

> **NOTE:** If you are adding a schema object type, Stat displays the Select Schema Owner window, which prompts you to specify the object’s schema owner. This reduces the amount of time it takes for Stat to return the list of matching objects. The window includes a **Quick Filter** field which lets you quickly parse the list to the schema owner you want (including Public). Select the owner and click **OK**.

Stat displays object types sorted by object class. When you select an object type, Stat displays a list showing all available objects of that type.

> **TIP:** If Stat returns a large number of objects, you can quickly locate the particular object you want by typing the first few letters of the object name in the **Quick Filter** field. As you type, Stat filters the list of objects so that only objects with matching names are displayed.

4 In the list of objects, select the object(s) you want. To select multiple objects, hold down the <Shift> or <Ctrl> key as you make your selections.

Selecting Setup Objects

Stat supports a number of predefined setup object types by default. Although you can archive and migrate most any supported type of setup object, be aware of the following considerations:

- Archiving and migrating the setup object type Workflow Item Type is not supported in Stat. Instead, the WFT File object type should be used to archive and migrate Oracle Workflows. The Workflow Item Type object type is only used with Patch Impact to display the impacted workflow item types when a patch modifies a WFT file.
- For setup objects that include an application field, Stat returns only objects for installed, shared, or customized applications
- Stat supports archiving and migrating Key Flexfields. However, once the Key Flexfield has been used in Oracle Applications, it should not be modified or migrated in Stat.

To select a setup object:

1 In the CSR window, select the **Objects** tab.

2 Click in the **Environment** field and select any environment other than Working Directory that contains the objects.

> **NOTE:** Any environments on the migration path that have been inactivated are not listed. If you need to select objects from an inactive environment, see your system administrator.

Setup object definitions are not supported in users' working directories.

3 Click in the **Object Type** field and select the type of setup object you want.

Stat displays object types sorted by object class. If **Filter** column is checked in **Stat Object Type Maintenance**, user is presented with an Additional Parameter dialog in order to optionally select additional filters. Stat queries the selected environment and fetches any matching setup objects.

4 In the list of setup objects, select the object(s) you want. To select multiple objects, hold down the <Shift> or <Ctrl> key as you make your selections.

> **CAUTION: Stat currently supports setup objects with names less than 200 characters in length. Any objects that exceed that limit will not be returned.**

> **NOTE:** For multi-language environments, a list of supported languages display. You may select one or more languages for the object to be added to the CSR. Non-US records will automatically be assigned a higher migration order than the US records in the base archive set.

Selecting Patch Objects

You can associate with a CSR any Oracle Applications patch that has been uploaded to the Stat Repository.

To select a patch object:

1 In the CSR window, select the **Objects** tab.

2 Click in the **Environment** field and select **Patch Inventory**.

In the **Object Type** field, **Standard Patch** is automatically selected.

3 In the list of patch objects, select the object(s) you want. To select multiple objects, hold down the <Shift> or <Ctrl> key as you make your selections.

Selecting File Objects

To associate file objects with a CSR, you first select the Oracle Applications environment and the type of file object you want.

To select a file object:

1 In the CSR window, select the **Objects** tab

2 Click in the **Environment** field and do one of the following:

- Select an environment if you want Stat to look through that environment's source file locations to get the list of file names for a particular file type. Source file locations are the file server directories where file objects reside. Your system administrator can define multiple source file locations for each environment.
- Select **Working Directory** if you want to add files that exist in the assigned user's working directory but not in any of environments to which Stat has access.

  > **IMPORTANT:** In the case of OAF file objects, Stat also adds files from any subdirectories in the assigned user's working directory. Be aware, however, that when migrating OAF objects into a working directory, the same subdirectories have to exist. Stat is not able to create them. This is also the case if the **Copy to Working** option is selected (as described below).

- Select **VCM Repository** if you have associated the CSR with a VCM record and you want to archive and migrate objects that reside in the VCM repository.

Note that any environments on the migration path that have been inactivated are not listed. If you need to select objects from an inactive environment, see your system administrator.

3 Click in the **Object Type** field and select the type of file you want.

The list displays both the proprietary file object types that Stat supports by default and any generic and custom file types. If you select a custom file type, you are prompted to specify the product and language of the object type (certain custom file types are defined without a language, in which case you are only prompted to specify a product). After selecting the product and language, click **Fetch**.

> **IMPORTANT:** If the Oracle Agent is not running when you click **Fetch**, Stat is unable to process the request and displays a warning message. When this is the case, re-start the agent and click **Fetch** again. Also, for Stat to locate a user-defined file object, the name of the object must begin with the name of the product it is associated with. See section, Creating File Objects on page 173 for more information.

Stat displays a list of all the files that have the matching file extension. No file names are returned if there are no source file locations defined for the selected file type and environment, if no working directory has been defined for the assigned user, or if no matching objects reside in the VCM repository.

Also, when adding objects from the assigned user's working directory, Stat retrieves the objects based on their file extension. However, certain Oracle file object types share the same extension (such as SQL Reports and SQL Scripts), which means that Stat returns all the objects for both object types. A similar issue occurs with generic file objects of the same type, but for different products or different languages. When you add generic files from a working directory, Stat lists all the files of the matching type for all products and languages.

4 (Optional) Select **Copy to Working**.

If selected, Stat copies the files from the base environment to your working directory after adding them to the CSR.

> **NOTE:** This option is selected by default if the **Copy Files to Working** option is selected in the Stat User Options window. For more information, see Removing Objects from a CSR on page 171.

5 In the list of files, select the file(s) you want.

6 Click **Add Object**.

Stat adds the selected objects to the object list. At this point, you must save your CSR in order to lock the objects.

7 Click **OK**.

8 Click the Save button on the Stat toolbar or select **File | Save**.

> **CAUTION: Be careful when you associate a file object with a CSR if (1) your system administrator has defined migration paths for an Oracle Applications environment and either a PeopleSoft or a generic application environment, and (2) the source file locations are the same in both environments. Stat allows users operating in different modules to associate the same object to a CSR at the same time, which could result in developers overwriting each other's work.**

Filtering the Object List

If you have added a large number of objects to a CSR, you can filter the list of objects so that only the objects you want to view are visible. You can then save the filter settings so that the object list remains filtered the next time you open the CSR.

To filter the object list:

1 In the Objects tab, click **Filter**.

This opens the standard Specify Filter dialog box

2 Create a filter equation using the Operator tool buttons and statements listed in the **Functions** and **Columns** fields.

3 Click **Verify** to check the validity of your equation.

Stat displays a message box telling you if your equation is valid or not.

4 Click **OK**.

The Objects tab now displays a “Filter On” notification and the number of objects currently hidden by the filter. Any objects you add to the CSR while a filter is on may be hidden from the list of objects.

5 Optionally, if you want to save the filter for the next time you open the CSR, select the **Save Filter** option.

Selecting Lock Options

After you select the object(s), you should decide which locking options to use. Your ability to change locking options is determined by security settings. For more information on object locking, see The Object Locking Process on page 162.

NOTE: It is recommended that you keep the default lock setting, All on Migration Path. Locking only in the current environment could lead to version inconsistencies if another developer modifies the same object in a different environment.

Table 1. Lock options

Option	Description
All on Migration Path	The default setting. Select this option to add and lock/reserve the object(s) in all environments. Stat searches in each environment to determine if the object is already locked or reserved on another CSR.
Current Environment	Select this option if you want to add the object from each environment on the migration path but lock/reserve the object(s) only in the current environment. Stat checks for reservations and locks/reserves the object(s) only in the current environment.
None	This option adds the object(s) to the CSR from each environment on the migration path without issuing a lock on any of them. Although you can archive an object that is not locked in an environment, you cannot migrate the object to an environment in which it is not locked. You should select this option if you are associating the object(s) to a CSR for documentation purposes only, and you are not going to make any changes to the object(s). **NOTE:** When you add an object to a CSR without a lock, Stat does not create a base version for the object(s) or mark the object(s) as having been modified. The object(s) are therefore considered “Undocumented” by the Undocumented Object Wizard.
Reserve if locked	This option automatically requests a reservation if the object(s) are locked by another CSR. If this box is not checked and the object(s) are locked by another CSR, Stat prompts you for an action.

Adding Objects

To add objects:

1 After you select the object(s), locking options, and assign a developer, click **Add Object**, or double-click on the object(s), or drag and drop them into the **Object List** field.

At this point, if you selected the lock options **All on Migration Path** or **Current Environment**, Stat connects to the environment(s) and adds the selected objects to the Object List. If Stat is unable to connect to one or more environments, it displays a warning message for each environment it failed to connect to and adds the object to the CSR without a lock.

2 Click **Save** on the Stat toolbar or select **File | Save**.

This enables Stat to finalize your object locks.

While the Stat Central Agent processes the locks, the Archive Sets tab goes into read-only mode and the following occurs:

- The **Read CSR** button is temporarily replaced by a message indicating how many objects are left to process.

  NOTE: If the message does not go away after certain amount of time this may indicate that the agent encountered a problem or timed out.

  The Workflow tab and certain CSR fields are disabled both in the Stat Windows client and in Stat Web. These include the **CSR Type**, **Application**, **Status**, and **Workflow** fields. This is done to prevent users from modifying the CSR while the Stat Central Agent is still processing data.

For each object, Stat then:

- Verifies the object is not already on the list of objects associated with the CSR
- Checks for any existing locks or reservations for the object by other CSRs
- Checks for the object's existence by searching in each source file location defined for each environment along the migration path. If no source locations have been defined for the file type in any of the environments on the migration path, Stat cannot add the object to the CSR.
- Adds the object to the CSR and locks it

When adding an object, Stat connects to all environments on your migration path in order to verify modification status. If it finds an object that exists in another environment, but not in the environment from which you are working, it displays an advisory message.

TIP: You can update the lock status of objects displayed in the Object List table by clicking **Refresh**. This will show if you any of the reserved objects have since received a lock since the last time you saved the CSR.

When Stat adds the object to the CSR, a row for each environment on the migration path is added to the Object List table. Each row displays information concerning the development, archiving, and migration activity that takes place for that object in that environment. For more information on the Object List table, see CSR Object Documentation (Oracle Applications) on page 177.

Viewing the Lock Status of an Object

From the Objects tab of the CSR window, you can identify which objects you have locked and which objects you have reserved. Quest® Stat® denotes lock and reserve status in the Flags column of the CSR object list with a lock icon and a clock icon, respectively.

To view all the locks and reservations placed on an object, right-click the object in the Objects tab of the CSR window. In the right-click menu, select View Lock Status. Stat opens the Lock summary window for the object.

This window displays a list of all locks and reservations for the object across all environments. Any reservation or lock for the current CSR is highlighted in yellow. This allows you to see, at a glance, the position of your reservation in the queue.

The window lists locks first, followed by reservations, in chronological order. Each reservation icon is followed by a number indicating its position in the queue. If no locks or reservations exist for the object, Stat opens a window indicating this.

The name listed in the Lock summary window is the developer assigned to the object in the CSR, which may not be the person assigned to the CSR. This depends on your Business practices.

Unlocking or Unreserving an Object

To unlock or release a reservation for an object, select it in the Object List, click **Unlock** or **Unreserve**, and save the CSR. Do not remove an object after you modify it. If you remove it, it is removed from all archive sets in the CSR and Stat cannot accurately report on changes to the object.

NOTE: All objects associated with a CSR are automatically unlocked when the CSR changes to a closed-type status.

You might unlock an object if you want to keep the CSR open but you want to release the lock on a particular object. This may occur when another developer needs that object immediately, or when you have many objects locked and have finished working on some of them.

Until Stat processes the unlock action, the CSR still has the object locked. It appears in the window that you no longer have the lock, but if another user attempts to lock the object, that user will receive a reservation. The Lock summary window for the object will show that your CSR still has the lock.

Re-Prioritizing Reservations

Quest® Stat® normally processes reservations on a first in, first out basis, meaning the first CSR to request a reservation on an object is the first CSR to obtain a lock when the object becomes available.

However, Stat lets you move your reservation to the head of the queue if necessary. This is called re-prioritizing. Access to this feature is usually limited to users responsible for managing development projects.

To re-prioritize object reservations:

1. Select the object(s) and click **Reprioritize**.

   Stat displays a message box telling you that the re-prioritization is complete.

2. Click **OK** in the message box.

   Stat moves the object(s) to the first reservation position in the selected environment(s).

NOTE: Stat re-prioritizes the reservation for an object only in the environment in which you selected it. If you want to re-prioritize a reservation in multiple environments, make sure you select the object(s) in each of those environments.

Assigning Objects to a Different Developer

To assign an object to a different developer:

1. Select the object(s) in the object list.
2. In the **Assigned To** field, select the developer to which you want to assign the object(s).
3. Click **Reassign**.

   If you are reassigning a file object and the Copy to Working check box is selected, Stat displays a message box prompting you to specify if you want to copy the file object to the new developer's working directory, and if so, whether to copy the file either from the original developer's working directory or from the base environment's source file location.

4. Select the options you want and click **OK**.
5. Save the CSR.

   Stat updates the **Assigned To** field in the object list with the new developer's user ID. The new developer now has the lock on the object(s).

   IMPORTANT: You must save the CSR before the reassignment can take effect.

Removing Objects from a CSR

To remove objects from a CSR, select them and click **Remove**.

NOTE: You should remove an object only if it was added to the CSR in error. Modified objects should remain associated with a CSR for historical purposes.

Objects in the Base Environment

There are several situations when an object may exist in other Oracle® Apps environment or source file locations on the migration path but not in the Base environment. Since the initial archive of objects comes from the Base environment, these objects are not included in the base archive set.

Possible reasons an object exists in one environment but not in others are:

- You create a new object in the Development environment, which means it would not exist in any other environment
- You work on an object that was previously created in the Development environment but not yet migrated to any other environment
- You work on a new object that exists in the AUD, Demo, or System environment but not in any other
- You create a new file object in your working directory, which means it would not exist in any other environment

If you want to archive an object that does not exist in the Base environment, there are two different ways to do it for two different types of situations.

To add objects that do not exist in the Base environment:

1. On the **Objects** tab of the CSR window, select the environment in which the object exists.
2. In the **Object** field, select the object.
3. In the **Lock in environment** field, select **Current environment**.

To add objects that exist inside and outside the Base environment:

1. On the **Objects** tab of the CSR window, select the environment in which the object exists.
2. In the **Object** field, select the object.
3. In the **Lock in Environment** field, select **All on Migration Path**.

By choosing the second method, the objects that exist in the Base environment are included in the base archive set. Those that do not exist are not added to the base archive set. You can include these latter objects in any interim or final archive sets taken from the environment where they reside.

Quest® Stat® cannot create a base archive set if the objects in your CSR do not exist in your Base environment. While attempting to locate the objects, Stat permanently displays the value **In Process** in the **Status** field of the Archive Set window, and it will be unable to complete the archive set. If this happens, create an interim or final archive set from the environment that contains the objects and use this archive set to update the other environments with the new objects.

Defining Working Directories for File Objects

When you are assigned a file object, Quest® Stat® places a copy of that object in one of your predefined working directories. These working directories are defined either by a system administrator in a maintenance table, or you can define them yourself in the User Default Directories tab of the Stat User Options window.

The User Default Directories tab displays a list of the active file types defined in Stat for Oracle® Applications environments. From here you can define your default working directory and a separate working file directory for each file type. Defining a working directory for a file type is optional. If a file type working directory is not defined, Stat places copies of the migrated file objects in your default working directory.

NOTE: In the case of OAF file objects, Stat also copies files from any subdirectories in the assigned user's working directory. Be aware, however, that when migrating OAF objects into a working directory, the same subdirectories have to exist. Stat is not able to create them. This is also the case if the **Copy to Working** option is selected. See Associating Objects with CSRs (Oracle Applications) on page 164 for more information.

To set up a default working directory:

1. Select **User Options | Stat Options**. Then open the User Default Directories tab of the Stat User Options window.
2. In the **Module** field, select **Oracle Applications**.
3. In the **Default Working File Server** field, select the server for the default working directory.
4. In the **Default Working File Path** field, enter the path of the default working file location starting after the file server's root or home path.
5. Click **Apply** or **OK**.

To set up a file type working directory:

1. Select **User Options | Stat Options**. Then click the User Default Directories tab of the Stat User Options window.
2. In the **Module** field, select **Oracle Applications**.
3. In the File Type column, select the file type you want to have a working directory for.

   This activates the text box in the corresponding Working File Server column.
4. In the Working File Server column, select the server that the working directory is on.
5. In the Working File Path column, enter the path of the working file location starting after the file server's root or home path.
6. Click either **Apply** or **OK**.

Adding Objects from VCM

You can use the Add Objects to a CSR from VCM feature to add multiple file objects at once to your CSR from a VCM repository

To add objects from a VCM repository using Add Objects to a CSR from VCM:

1. On the Objects tab, click the Add Objects from VCM... button. The Add Objects to a CSR from VCM window will display. The window, by default, displays (in the right pane) all of the files from all of the existing directories and subdirectories in the VCM repository. The left pane displays all of the existing directories and subdirectories. To filter the files displayed, select the desired directory and subdirectories in the left pane. Once a directory/subdirectory is selected, only the files in that directory/subdirectory will be displayed.

User Controls	Description
Revision	(Optional) Allows you to specify the VCM repository's revision/label from which to display any and all associated file objects. A revision/label can be manually entered along with the Retrieve button or to get a list of existing revisions/labels click the Retrieve button. The list of shown directories and file objects are filtered by the selected Revision.
Object Type	Allows you to assign a specific object type to the selected file objects in the file object list (the right pane). Select one or more file objects in the right pane and choose an object type in the list to associate those file objects with the object type.
Copy to Working	*(Optional)* If selected, the selected file objects (in the right pane) are copied from the VCM repository to your working directory as well as added to the CSR (upon clicking *Add to CSR* and saving the CSR).
Overwrite Existing Files	*(Optional)* Used in conjunction with *Copy to Working*, when selected any chosen file objects (in the right pane) of the same filename as any files in your working directory, will replace those files in your working directory. Otherwise, when unchecked, files of the same filename won't be overwritten.

User Controls	Description
OA Base (Oracle Apps Only)	Allows to associate the correct Server Environment Variable with Generic and/or Custom OA file objects that are in the VCM repository. This allows Stat to associate the correct base directory with the Generic and/or Custom file objects.
Product (Oracle Apps Only)	Allows to associate the correct Product with Predefined, Custom with Prod, and/or Custom with Prod/Lang OA file objects that are in the VCM repository. This allows Stat to associate the correct Product and its directory settings with these files upon adding the file objects to the CSR.
Language (Oracle Apps Only)	Allows to associate the correct Language with Predefined and/or Custom with Prod/Lang OA file objects that are in the VCM repository. This allows Stat to associate the correct Language and its directory settings with these files upon adding the file objects to the CSR.
Set for All (Oracle Apps Only)	(Optional) When selected at the time of setting the value of OA Base, Product, and/or Language then the corresponding fields of each file is set accordingly all at once (in the right pane). When this option is not selected, then only the selected file objects (in the right pane) are assigned the chosen values of OA Base, Product, and/or Language.
Summary	Displays the total number of file objects (by Object Type) that have been selected (in the right pane); so that you can see how many total files of each Object Type and the total number of files in all will be added to the CSR. Note: Selected file objects that have not been associated with an Object Type are not counted in the Summary totals. Selected file objects must be associated with an Object Type before they can be added to the CSR (via Add to CSR).
Add to CSR	Closes the window and adds the selected files (in the right pane) to the CSR. Note: If and when a selected file or files are not associated to an Object Type, you will be prompted to associate the selected file or files with an Object Type. All selected files must be associated with an Object Type before they can be added to the CSR.
Cancel	Closes the window without adding any selected files to the CSR.

2 Search for and select the file objects (in the right pane) that you want to add from the VCM repository to the CSR.

3 Associate the desired/selected file objects with the appropriate Object Type. This can be done in few ways: You can select a file or multiple files and then choose a type in the Object Type list box. Upon selecting an Object Type, the selected files in the files pane will be associated with that Object Type. You can associate a file individually with an Object Type by clicking on the Object Type field in the files pane for that file. A list of available object types will display allowing you to select one.

4 Once all the desired file objects are associated with an Object Type and are selected, click Add to CSR. The Add Objects to a CSR from VCM window will close and the selected file objects will be added to the CSR

Associating Objects from Other CSRs

You can use the Read CSR Wizard to add objects that are associated with another CSR.

To run the Read CSR Wizard:

1 On the Objects tab, click **Read CSR...**. Stat opens the CSR Read Wizard.

2 Click the Lookup button.

Stat opens the Search CSR Engine, which locates specific CSRs in the database based on the selected search criteria, including CSR number, customer, open date, department, and tracking number. For more information, see Search Engines on page 65.

3 Locate the CSR you want in the Search CSR Engine. Then click **OK**.

Quest® Stat® closes the Search CSR Engine and displays all the objects associated with the CSR in the bottom portion of the Read CSR Wizard.

4 Select the objects you want. Use the <Shift> and <Ctrl> keys to make multiple selections, or click **Select All** to select all the objects.

5 Click **OK**.

Stat adds the selected objects to your CSR. If the objects happened to be locked on the other CSR for the same environments specified in your CSR's migration path, Stat reserves them on your CSR.

NOTE: The assigned developer and lock options specified on the Objects tab of the CSR are applied to any objects added to the CSR by way of the Read CSR Wizard.

Creating File Objects

With proper security rights, you can create a new file object, add it to a CSR, and move it to the assigned working directory of the developer. When creating a file object, you can use a file template, or base it on an existing object.

In Quest® Stat®, file templates are associated with particular file types. They help standardize development by defining in a reusable format the basic characteristics and structure of new file objects. This way, when you need to create a file object of a particular type, you can use an associated template as a starting point. This saves time and helps enforce adherence to development standards.

When new Oracle® file objects are created from an existing object, Stat remembers the new objects association with the source object. When the source object is identified during a patch impact analysis, Stat indicates the source object was used to create a new object. This alerts you that a patch may impact this custom object.

To create a file object:

1 On the Objects tab, select an environment and object type.

2 Click **New Object**.

Stat opens the New Object window, with the assigned developer and object type that you previously selected displayed as default values.

3 (Optional) In the **Assigned To** field select a different developer.

4 In the **Source** field, do one of the following:

- Select **Existing Object** if you want to base the new file object on an existing object
- Select **Template** if you want to base the new file object on a template

5 (Optional) In the **File Type** field select a different file type.

6 Do one of the following:

- If basing the new file object on a template and your system administrator has defined more than one template for the selected file type, select the file template you want to use in the **Template** field. Then select the language and product you want to associate with the object in the **New object Language** and **Product** fields.
- If basing the new file object on an existing object, select the active environment in which the object resides in the **Environment** field. At this point, if the object you are basing the new object on is a predefined (i.e. non-custom) Oracle file type, Stat prompts you to select the product and language the existing object is associated with. Select the product and language and click **Fetch**. Stat queries the environment and retrieves all the objects of the selected type, product, and language. Select the object you want and, if applicable, then select the language and product you want to associate with the new object in the **New object Language** and **Product** fields.]

IMPORTANT: If the Oracle Agent is not running when you click **Fetch**, Stat is unable to process the request and displays a warning message. When this is the case, re-start the agent and click **Fetch** again. Also, if you are basing the new object on an existing, custom Oracle file type object, you are not prompted to specify a product or language for either the existing object or the new object. After you select an environment, Stat queries that environment and retrieves all the objects of the custom file type you selected.

7 In the **New Object Name** field, enter a name for the new object.

   The appropriate file extension is automatically appended to the name based on the file type you selected.

8 Click **Create**.

   Stat displays a series of warning messages telling you that the object does not exist in each environment in the migration path. For each environment, Stat asks you if you want to add the object to the CSR.

9 Click **Yes** for each instance of the object that you want to add to the CSR. Click **No** for each instance of the object that you do not want to add.

Stat adds each instance of the new object that you selected to the CSR. At this point, the file object exists only in the working directory of the assigned developer but is not yet archived. For more information on archiving, see Creating Archive Sets (Oracle Applications) on page 201.

Download File Objects

To download a single file object from environment, select the object in the list of objects and click **Download**.

Editing File Objects

You can open file objects directly from Quest® Stat® for editing purposes. Stat opens the object in whichever program your operating system uses to open files of that type.

It is important to remember that when you edit an object, you are editing only the version of the object that exists in the particular environment you selected. The same object may exist in other environments, and these versions are not affected by any changes you make to the edited version. Because you can edit only one version of the object at a time, the changes you make to the object in one environment do not affect the version in the other environment. If you want all your environments to contain the same version of an object, you have to migrate that object to each environment. For more information on migrating, see Documenting Migrations and Process Requests (Oracle Applications) on page 219.

If you want to edit a file object associated with a CSR, you can open it directly from Stat with whichever program your operating system uses to open files of that type. When selecting a file object to edit, remember that you can choose from different versions of the same object. These include the versions that exist in users' working directories as well as all the source file locations defined for any of the environments on the migration path of the CSR. However, because source file locations do not include drive information, Stat cannot open a file object from the same location in which it resides for a selected environment. Instead, Stat copies the file to the file download directory. For Windows 7/8 it is *C:\Program Data\Quest Software\Stat\temp*.

Comparing Objects (Oracle Applications)

After adding objects to a CSR, you can use the Quest® Stat® object comparison tools to compare the definition of two objects or two versions of the same object. The object comparison tools can be used to compare objects in the following ways:

- Versions residing in two different environments on the migration path, including objects in the assigned developer's working directory and a VCM repository (if your system administrator has defined any VCM records and you have associated one with the CSR).
- Versions archived in two different archive sets on a CSR
- Versions residing in any combination of environment, archive set, or patch.

TIP: You can also run the object comparison tools from the Object Management menu. When run from this location, you can compare objects contained in any non-merged, active Oracle Apps patch stored in the Stat Repository. This feature supports any Oracle® Apps object type defined in the Object Type Maintenance table, except setup object types, which cannot be compared from within patches. For more information, see Object Tools and Wizards on page 84.

In the case of data objects, you can use the Object Comparison Wizard to compare two different objects as long as they are of the same object type. Also, for data objects that do not contain blob data, you can use the Object Merge Wizard to combine the two versions into a new object definition. The merged object definition is then automatically archived on a new Stat-generated archive set. This way, you can keep your data objects updated and synchronized across environments.

For file objects, you can use the File Comparison Tool to compare the contents of two file objects and easily identify differences. Like the Object Merge Wizard, this tool also enables you to merge the two objects by overwriting sections of one file with sections from the other file. The newly merged versions can then be saved to the assigned developer's working directory and later included in a new archive set.

For setup objects, you can view the differences between two versions of an object, either in an archive set, in an environment, or between the two.

Developer objects are a type of file object and consist of form (fmb), form library (pll), and report (rdf) objects. If you have configured Stat to support developer object comparison, you can view the differences between developer objects in an archive set, environment, or in any combination of the two. Unlike with other file objects, however, Stat does not support merging developer objects.

TIP: For more information on configuring Stat to support developer object comparison, see the Stat 5.7.0 Install Notes or Upgrade Notes. For detailed instructions on using Stat object comparison tools, see Object Tools and Wizards on page 84.

Viewing your Object Environment (Oracle Applications)

The Archive Sets tab displays information pertaining to object development within Oracle® Applications environments. From here, you can view information regarding all the environments in a migration path as well as create and migrate object archives. For more information, see Creating Archive Sets (Oracle Applications) on page 201 and Documenting Migrations and Process Requests (Oracle Applications) on page 219.

This Archive Sets tab is divided in two sections. The left section is a tree view showing all of the possible groupings of the information that appears on the right section of the tab. The tree allows you to navigate through the objects associated with the CSR as well as all the archives created for the CSR.

The buttons located on the top of the tap page, **Environment Info** and **Archive Sets**, control what type of information you see in the right section of the tab. When you click **Environment Info**, the window displays object information. When you click **Archive Sets**, the window displays object archive information.

The Tree Structure

The highest-level tree node is the CSR node. When you select this node, all of the objects associated with the CSR appear in the Environment Info table. Second level tree nodes include All Objects, Migration Path, and Developers. For Oracle Applications, the All Objects node includes all the file objects, data objects, schema objects, and patch objects associated with the CSR.

The Migration Path node sorts objects by the environments on the migration path. The first node is the Base environment, the second is the Development environment, and the remaining nodes correspond to the additional environments on the migration path. When you select an environment node, the list shows the objects in that environment. The Developers node sorts objects according to their assigned developer. When you select a developer node, the list on the right shows only the objects assigned to that developer.

The **Archive Sets** button becomes activated when you select any object or developer tree node. If the **Archive Sets** toggle button is active and you select one these nodes, the **Environment Info** toggle button automatically becomes active. This is because archive set information is not specific to these nodes and therefore cannot be filtered.

Click **Refresh Tree** to refresh the tree view if there are changes to the CSR, such as an object reassigned to a different developer or a newly added object.

Environment Info Table

When you click **Environment Info**, the Environment Info table appears in the right section of the tab page. This table displays information concerning versions of each object residing in each environment. Click the column headings to sort the rows of information in the Environment Info table.

Table 2. Environment Info table

Column	Description
Class	Indicates the class of object. Object classes include PeopleSoft proprietary, data, schema, and file.
Status	Indicates if the object is locked or reserved for the particular environment. If the object is exclusively locked by this CSR then the Status column displays a lock icon. If the object is reserved for the particular database then the column displays a reservation icon.
Type	Indicates the type of object.
Object	Displays the name of the object. In the case of a file object, such as a COBOL program, this is the file name.
Environment	The environment in which the object resides. For each file object in the CSR, the Environment Info table displays an additional row to represent the archiving and migrating activities in the user's working directories. For these rows, the environment column displays the value "Work."
Mod	Indicates whether or not the object has been modified. For more information on this field, see CSR Object Documentation (Oracle Applications) on page 177.
Assigned To	Displays the user name of the Stat user assigned to the object and therefore has the lock on the object. This does not have to be the same user who owns the CSR, and it can vary by object and database.
Current Archive ID	Indicates the current archive of the object in the specified environment. This value can come from the following types of activities: • If the most recent archive set activity for the object and environment came from the creation of an archive where the specified environment was the source of the archive, then the Current archive ID column displays the ID of that archive set. • If the most recent archive set activity for the object and environment came from a migration where the specified environment was the target, then the Current archive ID column displays the ID of the migrated archive set • If no archive set was created from or migrated to the specified environment for the object, then the Current Archive Set column displays a dash, "-"
Current Archive Set Source	The column displays the environment as well as the exact file location from which the archive was taken.
Last Updated	The last date and time that changes were made to this object in Stat.

CSR Object Documentation (Oracle Applications)

Quest® Stat® is an effective source of information about the changes made to an object, but only if they are properly documented. Many processes are automated by Stat, but it is still the responsibility of developers to document their changes.

All information pertinent to a change should be readily available from the CSR. There are several areas in a CSR where you can document your changes. For instance, you can document the reason for the change in the Description tab. The information entered in the Description tab can be standardized through the use of templates. Other places to store pertinent information, such as affected modules and technical specifications, are the Detail Logs tab, the Resolution tab, and the Task/Time tab. You can also add external documents like test scripts to a CSR by inserting hyperlinks.

The Object List Table

More object-specific information is documented in the Object List table of the Objects tab, which shows all objects associated with a CSR. The Object List table shows such information as the lock status and object type, the environment in which it is locked or reserved, the assigned user, and the date when it was last modified. You can also read any comments attached to an object and access migration paths.

To sort information in the Object List, click a column heading to have the rows sorted based on that column, or click **Sort**. This opens the Specify Sort Columns dialog window, in which you can specify a sort order based on multiple columns.

Flags

The Flag columns display various icons that represent various types of information about an object.

Table 3. Flag column

Icon		Description
	Object Locked	Indicates that the object is exclusively locked by this CSR. As long as this icon is displayed, no other CSR can have a lock on the same object.
	Object Reserved	Indicates that the current CSR has a reservation for this object.
	Comments	Indicates that the object has comments associated with it. Comments can be accessed by double-clicking on the icon.
	Single Archive Indicator	Indicates that a copy of the object has been stored in an archive set. This snapshot serves as a backup of the object prior to making changes.
	Multiple Archives Indicator	Indicates that the object has been archived by multiple archive sets.
	Marked for Deletion	Indicates that the object has been marked for deletion.
Fi	File Object	Indicates that the object is a file object type.
Do	Data Object	Indicates that the object is a data object type.
So	Schema Object	Indicates that the object is a schema object type.
Su	Setup Object	Indicates that the object is a setup object type.
Pi	Patch Object	Indicates that the object is a patch object type.

Table 4. Object List Table

Column	Description
Type	Indicates the object type.
Object	Indicates the name of the object. In the case of a file type object, such as a COBOL program, this is the file name.
Environment	The Oracle Applications environment in which the object resides.
Mod	Indicates whether or not a locked object has been modified. Initially, the field displays the value **PND** prior to the Stat Central Agent locking the object and determining its modification status. If for any reason the agent cannot add the object to the CSR, it returns a value **ERR**. A file object has a modified status of **Unk** for each environment that contains the file object in at least one of its source locations. For each environment that does not contain the file object in any of its source locations, the file object has a modified status of **New**. Data objects have the same modified values as file objects, meaning it displays the status **Unk** if it does exist in an environment and **New** if it does not exist.
Assigned To	Indicates the Stat user who has the lock on the object. This can be different from the user who owns the CSR, and it can vary by object and environment.
Last Updated	The last date and time that changes were made to this object in Stat, followed by the name of the user who made the changes. If the record was last modified by the Stat Central Agent, the user ID defaults to “SYSTEM.”

Object Comments

Right-clicking on a selected object in the object list opens a pop-up menu with additional functions. Select **Edit Comments** from this pop-up menu. This opens the Object Comments window.

In this window you can edit or add comments to an object. You should use this space to document the changes made, why they were made, and any other pertinent information. You can also cut, copy, and paste into this window. You can add comments up to 2,000 characters in length.

For objects that have been added via the Read CSR Wizard, Stat automatically inserts a comment noting the source CSR, the date and time, and the user who performed the action.

Patch Management

The Oracle Apps Management Console

Quest® Stat® provides comprehensive patch support for Oracle® Applications. After downloading the patches you need from Metalink, the Oracle web support service, you can use the Stat Oracle Applications Management Console to manage and keep record of these patches, associate them with a CSR, and apply them to your Oracle Applications environments.

The Oracle Applications Management Console displays a record of each patch that has been uploaded into the Stat Repository. From here you can upload new patches, edit the Stat attributes associated with the patches, merge two or more patches into a single patch, and schedule the execution of particular maintenance steps before or after a patch is applied to an environment. To open the Oracle Applications Management Console, select **Consoles | Oracle Applications Console**.

The Patch Inventory tab displays information in a read-only format. To edit a patch, select it and click Edit. This opens the Edit Oracle App Patch window where you can deactivate the selected patch or modify its definition.

Table 5. Patch definition values

Value	Description
Active	Indicates if the patch is active in the Stat Repository. Only active patches can be associated with a CSR and applied to an environment or merged.
Patch Type	The type of patch.
Patch Name	The ID number that Oracle Support assigns the patch for tracking purposes.
Description	A user-defined description of the patch.
Tar/SR	The Internet service or technical assistance request number that Oracle Support assigns the issue.
In CSR	Indicates if the patch is associated with a CSR.
Merged	Indicates if the patch is a merged patch.
Merged Member	Indicates if the patch has been used to create a merged patch.
Product Family	The Oracle Applications application family targeted by the patch.
Product	The specific Oracle Applications application targeted by the patch.
Version	The Oracle Applications version number for the patch (11i is currently the only option).
Last Update	The date and time the patch record was updated in Stat
Update By	The ID of the user who last modified the patch record in Stat.
Member Patches	If the selected patch is a merged patch, this field displays the ID numbers of the merged member patches.
Associated CSRs	Displays the CSR numbers of the CSRs the patch is associated with, if any.

Uploading Patches

Stat's patch import utility enables you to upload Oracle® Applications patches to the Quest® Stat® Repository. When you upload a patch, Stat automatically unzips the zip file downloaded from Metalink and reads the contents of the Readme file. From this point forward, the zip file is managed within Stat. The Readme file and other information within the zip file is used by Stat to populate several fields in the Patch Inventory tab with default values. You can complete the definition of the patch by specifying additional patch values as needed.

TIP: You can download patch files that have been uploaded to the Stat Repository. For more information, see the next section, Downloading Patches on page 181.

To upload a patch:

1. Click **New**.

   Stat opens the New Oracle Patch window.

2. Click the File tab. Then click **Upload**.

   This opens the New Oracle App Patch dialog box where you specify the location of the patch zip file.

3. Locate the patch zip file and click **Open**.

   Stat opens the Patch Upload dialog box where you can specify a different platform and language for the patch.

   NOTE: An uploaded patch in Stat can contain one or more Oracle patch zip files. For example, a separate platform release zip file may be imported for a patch.

4. (Optional) Select a different platform or language and click **OK**.

   Stat unzips the patch, scans the Readme file, and uses this information to populate certain fields in the patch record. Stat then uploads the zip file into the Stat Repository.

5. (Optional) Click **View** in the Readme column.

This opens the Readme file in the Stat View Blob Data window.

6 Click **OK** or **Apply**.

7 (Optional) Click **Delete Content** if for whatever reason you want to remove the patch file from the Stat Repository.

You may want to delete a patch file if, for example, you have already applied it to an environment and want to free up space in the Stat Repository, or you have uploaded it in error. Clicking **Delete Content** only removes the patch zip file from the Stat Repository. The record of it being uploaded or applied to an environment remains in the Stat patch history.

8 To add another patch zip file for this patch, click **Upload** and repeat the upload process.

Downloading Patches

You can download any Oracle Applications patch that has been uploaded to the Stat Repository. By downloading patches from the Stat Repository instead of Metalink, you can save network bandwidth and also avoid problems where the password to download a patch from Metalink is set to expire soon.

To download a patch from the Stat Repository:

1 Click **Edit**.

Stat opens the Edit Oracle App Patch window.

2 Click the File tab. Then click **Download**.

This opens the Select File dialog box where you specify the location where you want to save the patch file

3 Browse to the location where you want to save the file and click **Save**.

Defining Patches

After you upload a patch and save it to the Stat Repository, Stat populates the New Oracle App Patch window with the values it has read in the patch zip file, including prerequisites and drivers. However, you can specify additional information as needed. This is done on the General tab.

The General tab allows you to edit many of the same values you can view from the Patch Inventory tab on the Oracle Management Console. On the General tab you can also specify AutoPatch options which are additional default parameters passed to the AutoPatch command line during the patch apply process (users can override these parameters at runtime). The syntax for Autopatch options is name=value pairs separated by spaces. Also, an **adop Options** field is displayed for R12.2 patches. Here you can specify adop options which are additional default parameters passed to the adop utility during the Patch Apply process (users can override these parameters at runtime). The syntax for adop options is name=value pairs separated by spaces.Refer to your Oracle documentation for a list of valid AutoPatch command line options and valid adop parameters.

NOTE: At any time you can edit the definition of a patch saved in the Stat Repository. This is done in the Edit Oracle App Patch window, which features the same interface as the New Oracle Patch window. To open this window, select the patch you want to edit in either the Patches tab of the Change Management/Version Control window or the Patch Inventory tab of the Oracle Applications Management Console and click **Edit**.

Prerequisites Tabs

If system administrators have designated an Oracle Applications environment as the default environment, whenever you upload and save a patch file, a process request is automatically sent out to determine if any other patches should be applied before you apply the patch that was just uploaded. The results are displayed in the Prerequisites tab.

NOTE: Stat's prerequisite analysis for Oracle Applications patches utilizes meta-data loaded with Oracle's Patch Information Bundle File. Customers should establish a process to routinely apply the latest file for accurate prerequisite analysis.

The Oracle version the default environment is running on determines the number of tab-pages displayed for patch prerequisites. If the default environment is an 11i instance, only the Prerequisites (UMS) tab is displayed. If the

default environment is a 12R instance, a second tab is displayed, Prerequisites. The Prerequisites (UMS) is for backward compatibility only and will be removed in a future release.

If a default environment has not been designated, or if you want to run the request for an environment other than the default, select it in the list of active Oracle Apps environments and click **Get Prerequisite**. The request is sent to the Stat Oracle Agent. After the request has been processed, you can view the results by clicking **Refresh**. Any prerequisites found by the agent are appended to the list.

> **CAUTION: If the Oracle Agent is not running, Stat is unable to process the request and displays a warning message. When this is the case, re-start the agent and submit the request again. Also, when you click Refresh, any unsaved changes you made to the prerequisite list are undone, including manually defined or deleted prerequisites.**

You can also manually add and delete patch records from the prerequisites list. To add a prerequisite patch, click **New**. Then in the Dependent Patch field, enter the ID of the Prerequisite patch. Optionally, specify additional information such as Platform and Language. To delete a patch prerequisite record, select it and click **Delete**.

If you try to apply a patch to an environment before any patches listed in the Prerequisites tab have been applied, you will receive a warning message. Autopatch may fail the patch application process if you continue with the request.

Drivers Tab

When you upload a patch, Stat reads the contents of the patch zip file and determines what driver files it must process and in what order. In the Drivers tab you can override the default processing order of driver files. This includes configuring Stat to skip a specified driver file.

The Drivers tab displays driver files for each platform and language targeted by the patch, which is determined by the patch zip files you have uploaded for this patch. The Order column displays the position of the file in the processing order. To change the processing order of a driver file, enter a different number in Order column for that file. To skip a driver file, enter “-1” in the Order column. When finished, click **OK** or **Apply**.

Merging Patches

Stat’s patch merging feature serves as an interface with Oracle’s Merge Patch utility, which lets you to merge several Oracle Applications patches into a single patch. After creating a merged patch, you can then perform an impact analysis against it or apply it to an environment. This saves you time especially when upgrading an environment to a certain patch level, for example, when the Test environment has been certified for several patches and the Production environment needs be upgraded with all of those patches at the same time.

Stat reporting also properly reports patch history for merged patches. When applying a merged patch, Stat recognizes each of the member patches as being applied. This information is then added to Oracle’s patch history table, which records the Stat name of the merged patch instead of default value, “merged.”

To merge two or more patches:

1. In the Patch Inventory tab, select the two or more patches you want to merge. Then click **Merge**.

   Stat opens the Merge Patch Request window.

2. In the **Patch Number** field, enter an ID number for the merged patch.
3. (Optional) De-select the **Merge non-US drivers in one** option if you do not want to merge each non-US language driver into one.

   The option is selected by default. Oracle recommends merging all US drivers into one and all non-US drivers into one, which means you will end up with one driver for US and one for non-US languages. If de-selected, you will end up with multiple drivers for each NLS language.
4. In the **Merge Options** field, enter any additional options for merging patches.
5. In the **Environment** field select the environment where you want the merge to take place.
6. In the **Environment Server** field select the server of the environment.

7 In the **Working Directory** field, enter the directory where you want the merged files to be copied.

   This field defaults to the working directory defined for the selected environment server, but you can specify a different directory if the merged patch will be too large to be stored in the default directory.

8 In the **Description** field enter a description of the merged patch.

9 Click **Send Request**.

CAUTION: If the Oracle Agent is not running, Stat is unable to process the request and displays a warning message. When this is the case, re-start the agent and submit the request again.

After the Oracle Agent processes the merge patch request, you can view the log files generated by Oracle's Merge Patch utility in the Process Request tab.

Comparing Patches

The Environment Patch Level Compare Report generates a state-based report that identifies differences in patch levels across multiple environments. This helps you keep environments in sync and identify why an issue is occurring one environment and not another.

IMPORTANT: If you want to compare a patch that was applied outside of Stat, first document the patch in Stat using the Undocumented Patch tool. For more information, see Object Tools and Wizards on page 84.

To select patches for comparison:

1 In the Environment History tab, click **Compare**.

   Stat opens the Environment Patch Level Compare Report window.

2 Select each environment for which you want to compare patch applications. Hold down the <Shift> and <Ctrl> keys to make multiple selections, or click **Select All** to select all the environments.

   If you want to compare patches from a particular date, select **Show patches as of**. Then browse for the date you want. Patch activity before the selected date will not be considered in the comparison.

3 If you only want to see only the differences that exist between patches applied to the selected environments, select **Show only patch differences**.

   The default is to compare all the patches that have been applied.

4 (Optional) select **Grid Compare** if you want the results of the comparison displayed in a grid format.

5 Click **Next**.

   The Results window displays the results of the comparison differently depending on whether or not you selected the **Grid Compare** option. In either case, the Results window is state-based, meaning it includes patches that were applied to environments due to environment refresh events. In addition, any patch applications that were deleted because of refresh events are excluded. For more information on state-based reporting, see Change/Service Requests on page 18.

   In normal mode, the Results window shows only the last request for each patch, along with the last backout request (if applicable). Member patches are displayed when a merged patch is applied. A patch that failed or was backed out will always be displayed, even if only differences are shown.

   In grid mode, the Results window displays environments across the top of the grid and patches down the side. The following visual indicators allow you to quickly identify the status of each patch for each environment:

   - If a patch was successfully applied to an environment, the cell contents are displayed in black
   - If a patch was applied with errors but not backed out, or if a patch was applied (either successfully or with errors) and but then backed out unsuccessfully, the cell contents are displayed in red.
   - If a patch was applied (either successfully or with errors) and then backed out successfully, the cell contents are displayed in orange.
   - An empty cell indicates a patch has not yet been applied to an environment.

6 Click **Export List...** if you want to export the compare results to a file.

NOTE: In grid mode, the compare results are best formatted when exported as a .psr report.

7 Click **Back** if you want to compare different environments or use different comparison settings.

Setting Up Maintenance Steps

Sometimes the instructions for an Oracle patch require that you perform maintenance steps before or after you apply the patch to an environment. These steps may include running a particular command from the adadmin utility or running a script against the target environment. Stat provides a number of predefined maintenance steps that you can schedule before or after the Oracle Agent processes a patch application request. These predefined steps are displayed in the Maintenance Steps tab.

When scheduling maintenance steps and patch application requests, you can enforce that steps are performed as scheduled by specifying dependent events. A dependent event is an event that has to be completed before the current event is submitted to the Oracle Agent. For example, if a certain maintenance step should be run after a patch has been applied to an environment, you can make that patch application request a dependent event for the maintenance step. This way, the maintenance step cannot be executed until after the Oracle Agent has first processed the patch application request.

Editing Maintenance Steps

You can modify the default parameters of predefined maintenance steps. These include both general adadmin parameters as well as command-specific parameters (if any).

TIP: You can also edit the parameters of a maintenance step each time you schedule the Oracle Agent to execute the step.

To edit a maintenance step:

1 Select the maintenance step you want to edit, and click **Edit**.

This opens the Maintenance Step Edit window. The window displays four general adadmin parameters followed by any command-specific parameters.

2 Edit the general adadmin parameters as needed. These include:

- **Ignore Restart** - Selecting this option configures the Oracle Agent to ignore the restart files if previous adadmin session failed
- **Batch Size** - Default value is set to 1000
- **Workers** - Number of workers used to run an adadmin session. Recommended number is between 4 to 8 workers.
- **Products** - Enter all to run the step for all products, or enter a space separated list of products

3 (Optional) Edit any adadmin command-specific parameter values as needed.

4 Click **OK**.

Defining Command Maintenance Steps

You can define maintenance steps in the form of custom commands. These are operating system commands executed by the client server Stat is running on. All drive mappings and file paths are relative to the client server.

When defining a command, you can include predefined parameters as well as user and server-based parameters. This provides a convenient way to specify values commonly invoked by operating system commands, such as server names and download directories. Also, parameters offer a way to secure sensitive information by encrypting values that you do not want visible to users such as passwords.

- User-specific parameters (such as user names and passwords) apply to particular Stat users, who define the parameters themselves. For more information on user-specific parameters, see Appendix: User-Specific Parameters on page 263.
- Server-specific parameters (such as home directories and version numbers) are defined by system administrators and apply to particular file servers.
- Predefined parameters specify values used to login to a target environment (database name, user name and password) and are resolved automatically by Stat during the execution of a command maintenance step. These parameters are read-only and cannot be modified or removed.

NOTE: User and server-based parameters are also used by system administrators to define custom commands for pre and post migration steps. For more information on pre and post migration parameters, see Chapter 4, “General Maintenance Tables” in the *Stat System Administration Guide*.

To define a maintenance step:

1 Select the maintenance step EXECUTE_COMMAND and click **Edit**.

This opens the Maintenance Step Edit window for the EXECUTE_COMMAND step.

Click the browse button to open the Maintenance Step Command Editor window.

Predefined parameters specify values used to login to a target environment during a migration (database name, user name and password), whereas user and server-based parameters generally invoke values associated with the users and file servers defined in Stat. Also, certain parameters may be defined so that their values are different depending on which user or server they are being applied to.

The Maintenance Step Command Editor also supports special symbols representing different variables:

Symbol	Interpretation	Example
<<YY>>	The current year, 2-digit format	01
<<YYYY>>	The current year, 4-digit format	2001
<<MM>>	The current month, 2-digit format	01
<<DD>>>	The current day of month, 2-digit format	31
<<DDD>>	The current day of week	Monday
<<HH>>	The current hour, 2-digit format	13
<<NN>>	The current minutes, 2-digit format	45
<<SS>>	The current seconds, 2-digit format	23
<<ENV>>	The target environment of the migration	PROD
<<SDCD>>	The service domain that the CSR belongs to	HR
<<CSRID>>	The CSR ID number	6086
<<OBJTYPE>>	The object type the maintenance step is defined for	Panel

For example, if you are defining a command that invokes the current date and time, you could enter the following special symbols:

```
<<<YYYY>>>-<<<MM>>>-<<<DD>>> <<<HH>>>:<<<NN>>>:<<<SS>>>
```

2 In the **Command with parameters** field, enter the command you want Stat to run.

If you want to include parameters in the definition of the command, click the location where you want to insert the parameter and then double-click the parameter you want to insert. When included in a command, parameters are enclosed in %% signs, for example, “%%GL_PWD%%”.

Certain users and file servers may have parameters that have been defined specifically for them, or the value of a particular parameter may be different depending on which user or server it is being applied to. When the Maintenance Step Command Editor is first opened, the parameters are listed as they have been defined for the local client server and the current user. If you want to include parameters defined for a different server, click in the **Server** field and select the server you want. Although you cannot select a different user in the **User** field, when a user executes the command, they will have the option of inserting their own parameters or overriding default values.

3 (Optional) To define additional commands, click <Enter> to create a new line in the **Command with parameters** field and repeat step #2.

4 If you are defining a command for an object type in an archive set, select one or more object types in the **Objects** field.

> **NOTE:** If you do not select an object type when using any of the TARGET_OBJECT_NAME predefined parameters, you will receive an error message.

5 Click **Interpret >>**.

The Interpreted Command field displays how the command is interpreted by the client server. The values of interpreted parameters in the command definition are enclosed in angle brackets. Encrypted values are not displayed but replaced with asterisks.

6 Click **OK**.

The Maintenance Step Edit window for the EXECUTE_COMMAND step now displays the command statement you just defined.

> **NOTE:** If you inserted parameters defined for a server other than the local client server in the command statement, the name of the server is displayed in the Maintenance Step Edit window.

7 Click **OK**.

Scheduling Maintenance Steps

When you schedule the Oracle Agent to run a maintenance step, you specify when you want the Oracle Agent to execute the step (immediately or at some later time) as well as the environment and servers you want the step executed against.

You can also ensure that the maintenance step is executed only after the patch it is associated with has been applied by designating the patch application request as a dependent event. This way, the Oracle Agent will not execute the step until it has first applied the patch.

To edit a maintenance step:

1 Select the maintenance step you want and click **Schedule**.

This opens the Schedule Request window.

2 In the **Environment** field, select the environment you want to run the step against.

The **Servers** field displays all the servers included in the selected environment. You can run the step against each server in an environment, or you can run it against just the servers you select. You must select at least one server, however.

3 (Optional) In the **Servers** field, deselect any server that you do not want to run the step against.

4 In the **Run Time** field select either **Immediate** if you want the Agent to process the request right away (or if you specify a dependent event, immediately after the Oracle Agent processes that event) or select **Select Datetime** if you want to the request to be processed at some future date.

5 If you selected **Select Datetime**, browse for the date you want. You can also specify the time you want the request processed in terms of hour and minute.

Next, if you want to configure the Oracle Agent to execute the maintenance step after a certain patch has been applied, you can designate the corresponding Patch Apply request as a dependent event. The Patch Apply request you want to designate as a dependent event must have a status of “Received by Agent,” “Pending/New,” “In Process,” or “Send to Agent.” Patch Apply requests that have already been processed by the Oracle Agent cannot be selected as dependent events.

> **TIP:** You can configure the Oracle Agent to execute a maintenance step before a patch application is applied by designating the maintenance step as a dependent event when scheduling a patch application request. For more information, see the section, Scheduling Patch Applications and Impact Analysis on page 189.

6 Do the following to specify a dependent event:

a Open the drop-down list in the Event ID field and select the Patch Apply request you want to designate as the dependent event for the maintenance step.

The list of events includes all the currently scheduled patch application requests and maintenance steps that have not yet been processed.

b Click the Apply Option field and specify if you want the Oracle Agent to execute the maintenance step only if the Patch Apply request completes successfully (or completes with warnings), or if you want the Agent to execute the step regardless of the event's status.

NOTE: To clear the values for a dependent event, click the "Undo" button.

7 (Optional) Edit the parameter values of the maintenance step as needed.

The parameter values you edit only apply to this scheduled instance of the step. The default definition of the step is not changed.

8 Click **Save**.

The scheduled maintenance step is assigned an event ID and submitted to the Oracle Agent.

Associating Patches with CSRs

After uploading a patch to the Stat Repository, you can then associate that patch with a CSR. Associating patches with CSRs enables you to apply them to environments and perform impact analyses. In order to associate a patch to a CSR, the CSR must have the Patches tab enabled. The enabling of the Patches tab is determined by CSR type.

NOTE: Access to the Patches tab is controlled by a user class right.

You associate patches with CSRs the same way you associate objects, first by selecting the Patch Inventory environment and then the type of patch you want. The patches that you can add to a CSR are all active patches in Stat's patch inventory.

To select a patch:

1 In the CSR window, select the **Objects** tab.

2 In the **Environment** field select **Patch Inventory**.

3 In the list of patch objects, select the object(s) you want. To select multiple objects, hold down the <Shift> or <Ctrl> key as you make your selections.

4 Click **Add Object**.

Stat adds the selected patches to the object list for each environment on the CSR's migration path. You must save your CSR in order to lock the patches.

5 Select **File | Save**, or click the Save toolbar button.

Approving Patches

Before you can apply a patch to an Oracle Applications environment, you may need to get the patch approved by users authorized to approve patch applications to that environment. Conversely, if you have been designated as a patch approver for a particular environment by your system administrator, other users may need your approval before they can apply a patch to that environment. Patch approvals are environment-specific. They provide a way for users (typically managers and development leaders) to monitor and control patch applications to environments containing sensitive information, such as object definitions that should not be modified or overwritten.

Approval lists can be either required or optional and can include individual users, entire user classes, or a combination of the two. Although system administrators can add any user or class to an approval list, be aware that only users that have access to an environment (as determined by system administrators in the User Maintenance table) will be able to approve a patch application into that environment or receive email notifications

regarding their pending approval. If an approver does not have access to the environment, the patch cannot be approved until either the user is granted access to the environment or the patch's approval requirements are overridden by another user with proper security rights.

TIP: To check whether patch applications into a particular environment require approvals or not, see the Approval Required column in the environment table of the Target Environments window.

To approve a patch:

1. Select the Patch Approvals tab. Then click **My Patch Approvals**.

   The tab shows all the patches (if any) that are waiting your approval. Your approval can be made either as an individual or as the member of a user class. Also, approvals are either required or optional:

   - If required, Stat cannot apply the patch until you approve it. With a required user class approval, every user in the class must approve the patch.
   - If optional, then you are one out of a number of users authorized to approve the patch. Whenever an approval is marked as optional, the Min Approval column displays the minimum number of optional users who must approve the patch before it can be applied to the target environment.
   - When you click **All Patch Approvals**, the tab displays all the patches that are awaiting approvals from other users. With proper security rights, you can make patch approvals for other users.

2. Click in the Status column for each patch that you want to approve and select **Approved**. If you do not approve the patch, select **Rejected**.
3. Click **Save**.

   If you selected **Rejected**, the approval record stays on the My Patch Approvals tab until you change it to **Approved**, or the patch approval is overridden.

4. (Optional) Do the following if you have the right to override patch approvals:

   a. Open the All Patch Approvals list and approve or reject patches for other users or change the patch approval status other users as needed.

      TIP: With proper security rights, you can also change the status of your own patch approvals.

      If you change a patch approval status for yourself or another user, Stat prompts you to document your reasons for doing so.

   b. If prompted, document the reasons why you are changing your own or another user's patch approval.

   c. Click **Save**.

You can also approve patches in the Approval List for Target Environment window.

To approve a patch in the Approval List for Target Environment window:

1. In the Process Request tab, select the Apply Patch event that is awaiting approval. Then click **Approval List**.

   This opens the Approval List for Target Environment window, which displays all the optional and required approvals that are still pending for the patch. The list can include individual users or entire user classes or a combination of the two. Also, the approval of any user or user class can be either required or optional. Required approvers are displayed in bold.

   A green check mark indicates that the user has approved the patch, whereas a red X indicates that the user has rejected the patch, thereby preventing the patch from being applied to the environment until the rejection status has been resolved.

   IMPORTANT: A patch cannot be applied to an environment if just one approver rejects it, even if that user's approval is not otherwise required. Before the patch can be applied, either the user or another user authorized to override patch approvals must change their approval status from **Rejected** to **Approved** or to **Pending**.

2 In the approval list, double-click your name and in the pop-up menu select **Approve** if you approve the patch. If you do not approve the patch, select **Reject**.

   If you reject the patch, Stat prompts you to document your reasons for doing so.

3 If prompted, document the reasons why you are rejecting the patch.

4 (Optional) Do the following if you have the right to override patch approvals:

   a Double-click each approval assigned to other users and approve or reject the patch as needed.

   If you change a patch approval for yourself or another user, Stat prompts you to document your reasons for doing so.

   b If prompted, document the reasons why you are changing your own or another user's patch approval.

5 Click **OK** or **Apply** to save your changes.

> **NOTE:** With proper security rights, you can make approvals for other users. You can also unapprove all approvals by clicking **Unapprove All.** This allows you to deselect **Ready to Migrate** for the target environment. When you override another user's approval, Stat records you as the approver, not the user originally assigned to make the approval.

Approval Request Notifications

If you want to notify users about patches that are still pending their approval, you can email a message predefined by system administrators. In the tree list of approvers, select the node representing the user or class that you want to notify and click **Email.** An email job request is sent to the Stat Central Agent, which processes the request and sends an email to the user you selected or to each member of the selected class. A "@" sign is displayed for that approver node in the Envelope field of the Approval List tab.

> **NOTE:** The **Email** button is disabled once the approval requirements of a patch have been satisfied.

System administrators can also configure the Stat Central Agent to include links in the reminder message that the recipient can click to approve or reject the patch application. This sends an email back to the Stat Central Agent, which processes the response email and changes the approval status to **Approve** or **Reject**, depending on which link the approver selected.

> **NOTE:** When an approval status is changed by responding to a reminder message, the **Update Date** field in the Approval List window will be automatically populated and the **Update By** field will display the value, **Via Email**.

Approval notification reminder messages can also be sent for workflow status transfers and migrations. For more information, see the book *Stat System Administration*, Chapter 7, "Email Configuration".

Scheduling Patch Applications and Impact Analysis

In the Schedule Request window, you can configure the Oracle Agent to apply patches to selected environments or to perform impact analyses on patches. For both process request types, you can specify when you want the Agent to process the requests, either immediately or at some future date. For patch application requests, you can also define additional parameters, including how to handle approval requirements, the order in which to apply multiple patches, and, if necessary, whether to stop and start the four service partitions defined for the server of the targeted environment.

You can open the Schedule Request window either from the Patches tabs of the CSR window or from the Patch Inventory tab of the Oracle Applications Management Console. To open the Schedule Request window, select one or more patches and click **Schedule**.

If you are opening the Schedule Request window from the Management Console, you can only select patches that are already associated with a CSR. Also, if you want to process multiple patches, each patch must be associated with the same CSR.

NOTE: When scheduling requests, note the following

- If the Oracle Agent is not running whenever you submit a request, Stat displays a warning message. When this is the case, re-start the agent and submit the request again.
- Although you can apply patches and perform patch impact analyses on distribution environments, Stat processes these requests only on the distribution environment itself, not the distributed environments associated with it.
- Before scheduling a request for a patch that has been associated with a CSR via the Undocumented Patch Tool, make sure the patch zip file targeting the appropriate platform has been uploaded to the Stat Repository. This information is displayed in the Files tab of the Edit Patch window. For more information on the Undocumented Patch Tool, see Object Tools and Wizards on page 84.

Patching R12.2 Environments

In R12.2 environments, the Application Tier file system maintains 2 copies of all files, both of which are used in Stat: a Run Edition File System, and a Patch Edition File System. Stat archives files from the current Run Edition, and migrates to both editions, depending on which option the user selected.

Patch Cycle

Patching for R12.2 environments is done through a patching cycle. There are 5 phases in a patching cycle: prepare, apply, finalize, cutover, and cleanup. After the cutover stage is run, the Run Edition and Patch Edition file systems are swapped.

If there is at least one active R12.2 environment or higher (meaning that there is an “AD” record in the list of imported products with code level of “C” or higher), a **Patch Cycle** button is displayed on the Patch Inventory tab on the Oracle Apps Management Console window. For these environments, patching is done on the Patch Edition of the environment. A utility called adop is used to manage patch cycle phases, apply patches, and run impact analyses. The **Patch Cycle** button is used to schedule any phase of a patch cycle but cannot be used to schedule Apply Patch or Patch Impact requests (which are scheduled the same way as other environments through the **Schedule** button.)

In the Oracle Apps Management Console, both the **Patch Cycle** button and the **Schedule** button open the Schedule Request window. The **Patch Cycle** button is only displayed if there is at least one active R12.2 or higher environment.

In the Schedule Request window, the **Environment** field lists all active environments. If you select a R12.2 environment, the **Process Type** field includes the patch cycle options **prepare**, **finalize**, **cutover**, **cleanup**, and **status**. Depending on whether the window was opened from the **Patch Cycle** button or the **Schedule** button, The **Process Type** field displays additional options:

- If opened from the **Patch Cycle** button, the **Process Type** field displays additional phases including **Abort**, **fs_clone**, and **actualize_all**.
- If opened from the **Schedule** button, the **Process Type** field displays the Apply patch and Impact Patch options, as well as the patch cycle options **prepare**, **finalize**, **cutover**, **cleanup**, and **status**.

The window displays different input fields based on the option selected in the **Process Type** field. The **Dependent Event** fields allows scheduling the patch cycle request as a dependent event. In the **adop options** field, you can overwrite any adop parameters specified in the New Patch window.

NOTE: The **Maintenance Mode** option is not supported for R12.2 and higher and is not displayed if the environment is R12.2 or higher.

IMPORTANT: You must have “OraApp Patch - Apply” security right to schedule a Patch Cycle event

Patching Multi-Node Instances

For a multi-node instance, there are 2 ways to apply the patch to all nodes.

- The preferred way is by having ssh enabled between the Admin node and all other nodes. If this is the case, we only need to apply the patch on the Admin node. All changes for other nodes will be applied by Admin node.
- If ssh is not enabled between the Admin node and other nodes, the patch will be applied to each node separately

NOTE: For multi-node environments with shared appl_tops, Stat always starts only one agent on the Admin node; therefore it is mandatory to have the ssh utility enabled and thereby enabling adop to be run remotely on other nodes via adop remote invocation.

In a Multi-node environment, by default we assume that ssh utility is running between the Admin node and all other nodes. To override this use the following stat.conf parameter: <env>.env.ssh_disabled:n

Patch Impact Analysis Process Requests

Before applying a patch to an environment, you can have the Oracle Agent perform an impact analysis to determine which objects in the target environment will be affected. After the Agent has processed your request, you can view the list of impacted objects in the Environment History tab as well as the **Process Request** tab of the CSR window.

CAUTION: For Oracle Apps users on a version earlier than 11.5.5, performing a patch impact analysis in Stat may modify the target environment. This is a known bug in Oracle Apps. Customers are advised to upgrade to AD.E. For more information see MetaLink bug 1763615.

If you want to view the AutoPatch log files and any error or warning messages generated by the Agent during processing, you can do so in the Process Request tab of the Oracle Applications Management Console or the CSR window.

If some reason the Agent fails to process your impact analysis request (as indicated on the Process Request tab), you can reschedule your request and try performing an impact analysis a second time. However, it is important to remember that Stat interacts with Oracle tools and these tools may fail for various reasons unrelated to Stat. Stat will report the failure, but you will need to refer to Oracle Support or Metalink to resolve the errors.

To schedule an impact analysis:

1. In the **Process Type** field select **Patch Impact**.
2. In the **Environment** field select the target environment of the patch.
3. In the **Run Time** field select either **Immediate** if you want the Agent to process the request right away or select **Select Datetime** if you want to schedule the request at some future date.
4. If you selected **Select Datetime**, browse for the date you want. You can also specify the time you want the request processed in terms of hour and minute.
5. (Optional) Deselect **Ignore Restart File**.

   If this option is deselected, Stat will fail the request if the AutoPatch utility identifies restart files for a different patch. Unless you deselect this option, Stat will always continue processing a patch if restart files exist for it.
6. Click **Save**.

   The request is submitted to the Stat Central Agent and is assigned a New Event and Apply IDs. The results of the Impact Analysis request are displayed in the Process Request tab. See the section, Viewing Process Request Results on page 194 for more information.

Patch Application Process Requests

To submit a patch application request, you must specify:

- The target environment of the patch
- When you want the request processed

- How you want the Agent to handle any approval requirements
- Whether to specify a dependent event
- If necessary, whether the service partitions defined for the server of the target environment need to be stopped prior to applying the patch and then restarted.

After the Agent has processed your request, you can view the list of objects affected by the patch in the Environment History tab as well as the **Process Request** tab of the CSR window.

If you want to view the AutoPatch log files and any error or warning messages generated by the Agent during processing, you can do so in the CSR Process Request tab in the Oracle Applications Management Console.

You can re-apply a patch to an Oracle Applications environment regardless if that patch was successfully applied the first time or not (as indicated on the Process Request tab). If unsuccessful, you can reschedule your request and try applying it a second time. If successful, Oracle's AutoPatch utility identifies the patch as having already been applied and asks Stat if it should continue processing. Stat always responds “Yes” to this prompt to allow the patch to be re-applied.

To schedule a patch application:

1 In the **Environment** field select the target environment of the patch.

The list of available environments is filtered depending on the migration path of the CSR, workflow rules, and the user’s environment access restrictions, if any.

2 In the **Process Type** field and select **Apply Patch**.

3 (Optional) If you are on Oracle Applications version AD.I, click in the **Maintenance Mode** field and select **Normal**. (This option does not apply to R12.2 environments.)

Starting with version AD.I, Oracle requires that environments be put into Maintenance Mode before changes (e.g., AutoPatch) can be performed. The Maintenance Mode dropdown list is enabled if your target environment is release AD.I or later. For most cases, the default value **Maint** should be used, in which case Stat automatically puts the environment in maintenance mode when applying the patch. If you select **Normal** for hot patches, the Patch Options column must include “options=hotpatch”. Otherwise, AutoPatch will fail since Stat does not put the environment in maintenance mode. For more information on Maintenance Mode, see your Oracle Applications documentation.

4 In the **Run Time** field select either **Immediate** if you want the Agent to process the request right away or select **Select Datetime** if you want to the request to be processed at some future date.

5 If you selected **Select Datetime**, browse for the date you want. You can also specify the time you want the request processed in terms of hour and minute.

> **NOTE:** If you specify a date and time earlier than the current date and time, Stat processes the patch apply request immediately if no approvals are required. If approvals are required, the request is processed immediately after all the approvals have been made. Also, if the associated CSR is set to a closed-type status before the patch has been applied, the patch application request is cancelled along with any pending patch application approvals.

6 (Optional) Deselect **Ignore Restart File**.

If this option is deselected, Stat will fail the request if the AutoPatch utility identifies restart files for a different patch. Unless you deselect this option, Stat will always continue processing a patch if restart files exist for it.

7 (Optional) Select **Disable Patch Backout**.

If this option is selected, Stat does not execute a patch impact analysis when applying the patch, which means it cannot be backed out later. Because applying patches can take time, this option is available for users who do not want to commit the system resources necessary to enable the backout option for a particular patch.

8 If patch application approvals are required for the target environment, in the **Approval Option** field select the action you want the Agent to take regarding these approval requirements.

The options include:

- **Cancel if approvals are not met** - The Agent cancels the patch application if it does not receive all the required approvals
- **Apply once approvals are met** - The Agent applies the patch once all the required approvals are received
- **Apply regardless of approval status** - The Agent applies the patch regardless of approval. This option is enabled only if you have the security rights to override patch approval requirements.

NOTE: The **Approval Option** field is disabled if you selected Immediate in the Run Time field.

9 (Optional) If any server of the target environment has Start and Stop commands defined for any of the four service partitions, select the options that configure the Agent to stop those services before the patch is applied to the environment and then to start the services after the patch is applied.

These options are disabled if a command has not been defined in any server.

CAUTION: If you do not configure the Stat Central Agent to stop any services defined on the server of the target environment, this could result in errors during the patch application process.

10 (Optional) Modify any default AutoPatch options or specify new ones.

The **Patch Options** and **adop Options** columns displays any AutoPatch or adop options that have been defined on the General tab of the New Oracle App Patch window. You can modify the default parameters before applying the patch or you can specify new ones. The syntax for the Autopatch and adop options are name=value pairs separated by spaces. Refer to your Oracle documentation for a list of valid AutoPatch and adop command line options.

Next, if you want to configure the Oracle Agent to execute a scheduled maintenance step before the patch is applied, you can designate that maintenance step as a dependent event. This way, the maintenance step cannot be executed until after the Oracle Agent has first processed the patch application request. The scheduled maintenance step you want to designate as a dependent event must have a status of “Received by Agent,” “Pending/New,” “In Process,” or “Send to Agent.” Maintenance step requests that have already been executed by the Agent cannot be selected as dependent events.

TIP: You can configure the Oracle Agent to execute a maintenance step after a patch application is applied by designating the patch application request as a dependent event when scheduling a maintenance step. For more information, see the section, Scheduling Maintenance Steps on page 186.

11 Do the following to specify a dependent event:

a Open the drop-down list in the Event ID field and select the scheduled maintenance step you want to designate as the dependent event for the patch application request.

The list of events includes all the currently scheduled patch application requests and maintenance steps that have not yet been processed.

b Click the Apply Option field and specify if you want the Oracle Agent to process the patch application request only if the maintenance step executes successfully (or with warnings), or if you want the Agent to process the request regardless of the dependent event’s status.

NOTE: To clear the values for a dependent event, click the “Undo” button.

12 (Optional) Change the processing order of multiple patch application requests.

When processing a multiple patch application request in which one or more of the patches are pre-requites of another patch included in the request (as defined on the Prerequisites tab of the New/Edit Oracle Patch window), the Agent automatically applies those patches first. However, you can override this default processing order by specifying a different number in the Order column. To do this, click in the Order column of a selected patch and change the order in which the Stat Central Agent is configured to apply the patch. When you submit an Apply Request that violates dependency requirements, Stat displays a warning message.

13 If you are scheduling multiple patch application requests, in the Apply Option column of each patch that is scheduled to be processed after the first patch, specify how you want the Agent to process the patch if the Agent fails to apply the patch directly preceding it in the process order.

If you want the Agent to apply the patch only if the preceding patch was applied successfully, select **Prior patch completes successfully**. If you want the Agent to apply the patch even if the preceding patch failed, select **Regardless of prior patches status**. This option does not apply to the first patch in the processing order.

14 Click **Save**.

The request is submitted to the Stat Central Agent and is assigned a New Event and Apply IDs. The results of the Patch Apply request are displayed in the Process Request tab. See the next section, Viewing Process Request Results on page 194 for more information.

Viewing Process Request Results

You can view the results of a process request in one of two ways:

- In the Process Request tab of the CSR window. In addition to archiving and migrating processes, this tab displays information concerning all the patch apply or impact analysis process requests that are either pending or have been completed for patches associated with a particular CSR.
- In the Environment History tab of the Oracle Applications Management Console, which displays a record for all the process requests that are either pending or have been completed for patches in each active Oracle Applications environment.

Process Request Tab

The Process Request tab displays information regarding all the object management requests submitted to the Oracle Agent, including:

- Migrate Object
- Archive Object
- Apply Patch
- Fetch Object List
- Fetch Version for Lock
- Maintenance Step
- Merge patch
- Patch Backout
- Patch Impact
- Patch Prerequisite
- Patch Cycle

The **Process Request** tab in the CSR window displays the same information as the Process Request tab in the Management Console except for the following differences:

- The **Process Request** tab in the CSR window is CSR-specific, meaning that it only displays information concerning process requests for patches and objects associated with the current CSR
- The **Process Request** tab in the CSR window features an **Impact Obj.** button that lets you view the list of objects returned by an impact analysis or patch apply process request.

  Access to this tab is controlled by a user class right.

NOTE: In the Process Request tab, the Create Date field displays when the process request was originally created and the Created By field displays the ID of the user who made the request. Once the request is processed by the agent, the Update Date and Update By fields display the time it was processed and the default value, “SYSTEM”.

Impact Analysis and Patch Apply Process Results

To view the results of an Impact Analysis or Patch Apply request:

1. Select the process request record you want.

   When you select a process request, the bottom portion of the window displays the parameters for the request, including Apply ID, Environment, Object (Patch ID), and for patch application requests, Approval Option.

2. Click **Impact Obj**.

   Stat opens the Impacted Objects window for the selected patch and environment.

The Impacted Objects window lists all the objects that were either returned during an impact analysis request or were modified by a patch application request. The information includes the class, type, name, product and language of each object, its pre- and post-patch version number, application name, modification date for the record, and the name of the requestor. The Custom Object column indicates if the object has been customized, and the Indirect Impact column indicates if the object was used as the source of a new object.

NOTE: Unknown object types display their location in the Product column. For an unknown object, Stat cannot determine the product or language. Also, an unknown object type cannot be added to a CSR. You need to define the object before it can be archived.

If applicable, you can view the navigation paths that access an object (for example, the responsibilities and menus that access a form) by selecting the object and clicking **Nav Path**. Stat displays the navigation paths in the View Navigation Path window. Only active navigation paths associated with one or more active users are included.

Log Files and Agent Messages

In the Process Request tab, you can view the log files and messages generated by the Stat Oracle Agent while processing object management requests (including patch applications, backouts, and impact analysis as well as archiving and migrating objects). These log files include detailed information that pinpoint the source of warnings and errors generated during processing. For more information, see Viewing Log Files and Agent Messages on page 220.

Environment History Tab

The Environment History tab displays a record of all the patch application, patch backout, and impact analysis requests that are either pending or have been completed in each active environment.

If any of the environments displayed in the Environment History tab have been refreshed, you can view the information in the tab in either a state-based or activity-based format. A state-based report takes into account changes made to an environment due to a refresh event. It shows the impact analyses and patches that have been applied to an environment at a particular moment in time. This is in contrast to activity-based reports that show all the impact analyses and patches that have been applied to an environment, even those that have been overwritten due to a refresh event. For more information on environment refresh events and state-based and activity-based reporting, see Change/Service Requests on page 18.

The Environment History tab also features an **Impacted Objs.** button, which functions the same way as the **Impacted Analysis** button described in the section, Process Request Tab on page 194.

To switch the view between patch application, backout, or impact analysis requests, click **Patch Apply** or **Impact Analysis**. Patch backout requests are displayed with patch application requests. To switch between state-based and activity-based reporting, select the corresponding check box.

Changing Patch Process Statuses

In the Environment History tab, the Process Status column shows if AutoPatch encountered an error when processing a patch. Possible statuses include Completed, Completed with Warnings, and Completed with Errors (Pending requests have a status of Pending/New, Sent to Agent, Received by Agent, or In Process. The status Not Processed means AutoPatch failed the process event before processing the driver). There are many reasons why AutoPatch may fail to process a patch, some of which are trivial and can be disregarded. However, because failed patches are treated differently by other functions within Stat (such as environment compare), you can manually

change the status of a patch if you determine the reasons it failed are insignificant (as indicated in the AutoPatch log file). You may also want to assign a patch that completed successfully an error-type status. This feature works in conjunction with manually changing the status of process events and patch driver files. To properly change the status of a patch, users must also change the status of the process event and associated driver files, in addition to the patch itself. For more information, see Changing Process Event Statuses on page 197 and Viewing Patch Approvals and Patch Drivers on page 196.

To change the status of a patch:

1 In the Environment History tab, select the patch with the status you want to change. Then click **Chg Status**.

Stat opens the Change Process Status window.

2 Select the status you want to assign to the patch.

Available options include **Completed**, **Completed with Warnings**, and **Completed with Errors**.

3 In the **Required Explanation** field, describe the reason why you are changing the status in sufficient detail. Then click **Save**.

After changing the event status, the explanation is written to the Agent log file. For more information, see Viewing Log Files and Agent Messages on page 220.

Viewing Patch Approvals and Patch Drivers

You can view driver files or approval information concerning a patch application or backout request by right-clicking it and in the pop-up menu selecting either **View Patch Approvals** or **View Patch Drivers**. The Patch Approvals window shows the name of each user that has approved the patch, if any, and the date when the approval was made. The Patch Drivers window shows the driver files that were processed when AutoPatch executed the patch application request.

In the Patch Drivers window, the Process Status column shows if AutoPatch encountered an error when processing a driver file. Possible statuses include **Completed**, **Completed with Warnings**, and **Completed with Errors** (Pending requests have a status of **Pending/New**, **Sent to Agent**, **Received by Agent**, or **In Process**. The status **Not Processed** means AutoPatch failed the process event before processing the driver).

There are many reasons why AutoPatch may fail to process a driver file, some of which are trivial and can be disregarded. However, because patches with driver files that failed to process may be treated differently by other functions within Stat (such as environment compare), you can manually change the status of a driver file if the reasons it failed to process (as indicated in the AutoPatch log file) are insignificant.

You may also want to assign a patch that completed successfully an error-type status. This feature works in conjunction with manually changing the status of process events and patches. To properly change the status of a driver file, users must also change the status of the process event and the patch, in addition to the driver files. For more information, see Changing Patch Process Statuses on page 195 and Changing Process Event Statuses on page 197.

To change the process status of a patch driver:

1 In the Patch Drivers window, select the driver file with the status you want to change. Then click **Chg Status**.

Stat opens the Change Process Status window.

2 Select the status you want to assign to the driver.

Available options include **Completed**, **Completed with Warnings**, and **Completed with Errors**.

3 In the **Required Explanation** field, describe the reason why you are changing the status in sufficient detail. Then click **Save**.

After changing the event status, the explanation is written to the Agent log file. For more information, see Viewing Log Files and Agent Messages on page 220.

Rescheduling Requests

If the Stat Central Agent is for some reason unable to process your patch application or impact analysis request (for example, because the server that hosts the target environment is down), you can reschedule the request and have the Agent process it a second time. You can initiate a reschedule request from the **Process Request** tab of either the Oracle Applications Management Console or the CSR window.

IMPORTANT: AutoPatch can report a patch process request as having failed for several reasons, some of which are trivial and can be disregarded. If a patch request is reported as having failed but has in fact been successful (as determined by the agent log file), instead of rescheduling the request, you can manually change its status from Complete with Errors to Complete Successfully. For more information, see Changing Process Event Statuses on page 197.

To reschedule a request:

1. In select the Event ID that corresponds to the request you want to reschedule.

   You can reschedule any Apply Patch and Impact Analysis request with a Process Status of either Complete with Warnings or Complete with Errors.

2. Click **Reschedule**.

   Stat opens the Schedule Request window. The **Process Type** and **Environment** fields display in read-only format the same values as the original request.

3. Specify when you want the Stat Central Agent to process the request and any other parameters as needed. When finished, click **Save**.

Changing Process Event Statuses

A process request may fail for several reasons, some minor and others critical. Stat does not distinguish between minor and critical process event errors. In either case, the event receives a Complete with Errors process status. However, because certain functions within Stat (such as environment compare) treat failed process requests differently than requests that were processed successfully or with warnings, you can manually change the status of a process request event that failed for minor or insignificant errors so that it will be treated as having been processed successfully. After changing a status, you must explain the reason why you making the change. This explanation is then written to the Agent log file for auditing purposes.

NOTE: Changing the status of a patch-related event does not change the status of the patch itself or its associated driver files. An Apply Patch or Patch Impact event may include multiple patches, in which case changing the event to **Completed** does not change the associated patches or drivers to **Completed**. This is because the event may have failed for a reason other than a patch or driver failing. To properly change the status of a process event, you must also change the status of the patch and its associated driver files, in addition to the event. For more information, see Changing Patch Process Statuses on page 195 and Viewing Patch Approvals and Patch Drivers on page 196.

To change the status of an event:

1. In the Process Request tab, select the event with the status you want to change. Then click **Chg Status**.

   Stat opens the Change Process Status window.

2. Select the status you want to assign to the event.

   Available options include **Completed**, **Completed with Warnings**, and **Completed with Errors**.

3. In the **Required Explanation** field, describe the reason why you are changing the status in sufficient detail. Then click **Save**.

   After changing the event status, the explanation is written to the Agent log file. For more information, see Viewing Log Files and Agent Messages on page 220.

Backing Out Patches

When a patch is applied to an environment, an archive of all impacted objects is automatically taken from the target environment. If after applying a patch to an environment you decide that you want to return the impacted file objects and schema objects to their original, ‘pre-patch’ state, you can use Stat’s Patch Backout feature.

With Patch Backout, you can restore file objects and the following schema object types: tables, views, indexes, packages, and sequences. However, some changes may not be recovered, while others may be impossible to recover due to transactional activity during or after the patch was applied. Also, new schema objects inserted into an environment by way of a patch may not be deleted.

IMPORTANT: The Patch Backout feature is intended to augment, not replace established IT practices for system backups. The Backout feature does not provide a full system recovery from a patch. If a full system recovery is desired, standard backup and restore procedures should be used.

To backout a patch:

1. In the Environment History tab, click **Backout**.

   Stat opens the Patch Backout window.

2. In the **Environment** field select the environment that you want to back the last applied patch out of.

   The drop down list displays all active Oracle Applications environments. When you select an environment, the bottom section of the window displays information about the last patch that was applied to that environment, including patch name and ID, the CSR it is associated with, and the date/time it was applied.

3. (Optional) If you are on Oracle Applications version AD.I and want Stat to put the environment in Maintenance Mode when the backing out the patch, select **Maint** in the **Maintenance Mode** field. If you do not want the environment put in maintenance mode, select **Normal**.

   The **Maintenance Mode** field is disabled if you are on an earlier version than AD.I. For more information on Maintenance Mode, see your Oracle Applications documentation.

4. Click **Save**.

Object Archives (Oracle Applications)

About Archive Sets

Using Stat, developers can take ‘snapshots’ of objects as they exist in a particular environment and archive them indefinitely in the Stat Repository. These object archives are called archive sets, and they can be used to update your environments with the most recent version of objects or, if needed, to roll them back to an earlier version. This effectively makes Stat the “Undo” feature of Oracle Applications.

Once a developer locks the objects that he or she wishes to change, Stat automatically takes a snapshot of those objects before any changes occur. This is called a base archive set. The base archive set is the “pre-change” version of all the objects locked in the CSR. You can use this snapshot, like all archive sets, to restore data objects and file objects to their previous state.

As you make changes to the objects, you can also create interim archive sets. This is effectively backing up your work as you go along.

The ability to create the archive sets that include file objects and/or data objects is activated at the service domain level by your system administrator.

Archive Set Types

You use archive sets to recover objects to environments and migrate completed changes. There are three types of archive sets: Base, Interim, and Final. There is also a fourth type called Merged, which is the result of using the Object Merge Wizard to combine the definition of two versions of the same data object.

You can use any archive set type to restore or migrate objects. Each archive set contains objects that are locked on one CSR, while the CSR itself may contain one or more archive sets, including the base, the final, and all the interim archive sets.

When you create an interim or final archive set, you tell Stat what environment the archives of the objects should come from. For data objects, the archives come from the selected Oracle Applications environment. For file objects, the archives come from either the source file locations defined for the selected environment or from the working directory of the assigned developer.

System administrators define source file locations for each file type and working directories for each developer. Working directories are where users make their changes. When creating an archive set, you can take the file archives either from the environment's source file locations or from the developer's working directory.

Base Archive Sets

The base archive set is the most important because it contains the "pre-change" version of all the objects in the CSR. Stat automatically creates the base archive set when you save your CSR after locking objects. The base archive set is created from the Base environment in your migration path. Your system administrator defines which environment is the Base environment for each migration path. Your system administrator also defines each file type's source file locations for the Base environment. It is from these locations that Stat takes the "pre-change" version of the file objects locked in the CSR.

NOTE: If objects are removed from a CSR, those objects are also removed from all the archive sets on that CSR. This keeps the base archive set accurate and up-to-date.

A CSR can contain only one base archive set, which contains all the locked objects. The base archive set is dynamic, meaning that Stat automatically adds to it objects that are locked in the Base environment after the set is initially created. The base archive set continues to grow as Stat issues more locks on objects in the CSR.

You should never delete base archive sets from the system, since they contain objects in their original, "pre-change" state. The moment you request a lock on objects, Stat places a holder in the system for the base set. Before you save the CSR, the status of the base set is In Process. If you do not save the CSR, the objects are not locked and the base archive is not created.

Interim Archive Sets

As you make changes to objects, you can save the modified objects in interim archive sets. Interim archive sets contain objects that are currently being modified and can be taken from any environment on your migration path, although by default the source environment is Development. If the archive set contains file objects, the archive of the file objects is taken either from the first source location defined for the specified environment or the developer's working directory.

You can create an unlimited number of interim archive sets. An interim archive set is also dynamic. Stat can add objects to it after it is created. However, you cannot add or delete objects from an interim archive set once it has been migrated. This is to keep referential integrity intact. If you need to archive an object that is not in one of your interim archive sets, just create a new interim archive set for that object.

An interim archive set can contain some or all the objects associated with a CSR. You create interim sets to save objects after significant changes have been made throughout the development process.

Final Archive Sets

Once your changes are completed and approved, you should create a final archive set. The final archive set is static, and although it is not mandatory that you create one, it is strongly recommended. A CSR can contain only one final archive set, and objects cannot be added to it once it is created. When the final archive set is created, Stat automatically adds to it all objects locked on the CSR.

You can create a final archive set from any environment on the migration path of the CSR. As with interim archive sets, if the final archive set contains file objects, the archive of the file objects is taken either from source locations defined for the particular file types or the developers' working directories.

Merged Archive Sets

Merged archive sets are automatically created by Stat when you use the Object Compare Wizard to combine the definition of two versions of the same data object. Merged archive sets are automatically added to the CSR from which the original versions of the object were selected. A CSR can contain an unlimited number of merged archive sets. For more information on the Object Merge Wizard, see Object Tools and Wizards on page 84.

Archive Sets Table

The Archive Sets table shows the archive sets that have been created for a particular CSR. You can create and migrate archive sets whenever this table is displayed.

The **Archive Sets** button becomes activated whenever you select the CSR node, the All Objects node, or the Migration Path node in the tree view on the left side of the tab page. If you select any object or developer node in the tree structure while the Archive Set table is displayed, the view switches to the Environment Info table and the **Archive Sets** button becomes dithered. This is because archive set information is not specific to these nodes and cannot be filtered.

To view archive set information by environment, select any of the environment nodes under the Migration Path node. This filters the archive set table to show information about only the archive sets created from that environment.

To sort rows of information in the Archive Set table, click on the column headings.

The archive set table displays the following information:

ID

This is the archive set ID, which Stat automatically generates. Archive sets appear in the order you create them.

Source

This is the source environment from which you copied the objects in the archive set. It must be an environment in the migration path defined for the CSR. A "-w" appears at the end of the environment name if the archive set was taken from the Development environment and it contains files that were taken from the users' working directories rather than the source file locations of the development environment. If it was taken from a VCM repository, a "-v" appears on the end of the environment name.

NOTE: If the base archive set contains file objects, these are copied from the source file locations of the Base environment. Interim archive sets are copied from the Development environment by default.

Type

This is the type of archive set. Options include Base, Interim, and Final.

Description

This is the description you entered when you created the archive set. Descriptions help distinguish between different interim archive sets. Base archive sets always contain the description: "Stat Baseline Set."

Objects

This indicates how many objects the archive set contains. For a base or final archive set, this number is the total number of objects locked on the CSR. An interim archive set may contain less than that number.

Archive Set Status

This indicates the current status of the archive set. Possible statuses include:

- **In Process** – Indicates that the Stat Central Agent is currently archiving the objects. When you add objects to a CSR, the archive set is in this initial status until all objects are archived. When the Stat is finished archiving, the status changes to Complete.
- **Complete** – Indicates that all objects are archived
- **Complete/With Errors** – Indicates that the archive set is created but errors were detected during the archiving process. For Oracle Applications, this could mean that one of the environments is not clean, or it could mean that Stat could not find the file objects you wanted to archive, or that the file location information was not set up correctly. Some errors are so severe that the archive set is unusable. Refer to the Logs window for further information.
- **Complete/With Warnings** – Indicates that the archive set is created but warnings were issued during the archiving process. You can still migrate an archive set in this status. Refer to the Logs window and investigate further.
- **Delete Pending** – Indicates that the archive set is set for deletion. It remains in this status until Stat completes its tasks.
- **Deleted** – Indicates that Stat deleted the archive set

Ready to Migrate

If selected, this indicates one or both of the following:

- The archive set is to be included in a mass migration with other archive sets that target the same environment
- The migration of the archive set must be approved before it can be moved into the target environment

For more information, see Migration Approvals and Mass Migrations (Oracle Applications) on page 213.

Migration Status

This indicates the status of any archive set that you marked as Ready to Migrate. Before you select the target environment(s) for the archive set, the status is N/A. After you select the target environment(s), the status is In Process. Once the archive set has been migrated to all the selected environment(s), the Ready to Migrate check box is unchecked and the status reverts to N/A.

Create Date

This is the date that the archive set was created.

Buttons

The archive sets table features the following short cut buttons:

- **New** – Opens the Archive Set window in which you can define new archive sets
- **Edit** – Opens the Archive Set window in which you can edit the selected archive set
- **Delete** – Deletes the selected archive set
- **Refresh** – Refreshes the window with the most up-to-date information from the Stat Repository. You can also press <F5> to refresh.
- **Print** – Prints the contents of the Archive Set table
- **Migration Target** – Opens the Target Environments window for the source environment of the selected archive set. This button is activated when the Ready to Migrate check box is selected for the archive set.

Creating Archive Sets (Oracle Applications)

As you make your changes to objects, you should periodically make interim archive sets. This lets you save your work at that point in time. When all your changes are completed and approved, you should make a final archive set. The procedure for both is the same.

To create an archive set:

1 In the Archive Sets tab of the CSR window, click **New**.

This opens the Archive Set window.

In the Archive Set window you enter basic information about an archive set. From here you define the archive type and source environment and add a description and comments. This window also provides you with read only information, such as number of objects and the time and date the archive set was created.

> **TIP:** You can re-size this window as needed by clicking and holding an edge of the window and dragging to size you want.

2 In the **Type** field select the type of archive set you want to create.

Options include **Interim** and **Final**. Base sets are automatically created by Stat.

> **NOTE:** You can create unlimited number of interim archive sets, but only one final archive set.

3 In the **Environment** field select the environment containing the objects you want to include in the archive set.

This environment should be the one in which you made your changes. The default environment for interim archive sets is Development.

> **NOTE:** If the CSR contains a reserved object for the selected environment, you cannot create a final set. If the CSR contains an unlocked object for the selected environment, you can create a final archive set but Stat displays a warning message.

4 In the **Description** field, enter a short description of the changes you made to the objects.

This entry helps identify the archive set elsewhere in Stat.

5 If you are adding file objects to the archive set, do one of the following in the **Files From** field:

- Select **Environment** if the source environment is Development and you want to take the file archives from the environment's source file locations
- Select **Working** if the source environment is Development and you want to take the file archives from the assigned user's working directories. Or select **No** if you want to take the archives from the source file locations of Development.
- Select **VCM** if you have associated the CSR with a version control management record and you want to take the file archives from the VCM repository. After selecting this option, a VCM-specific field is displayed (**Revision** for SVN and P4, **Tag/Branch** for CVS and Git, **Label** for PVCS, and **Version** for TFS). In this field you can specify the particular version of the objects you want to add from the VCM repository. Your system administrator may have configured a default value, but you can override it either by entering the version you want manually or by clicking the control button and selecting the version from the dropdown list. If left blank, Stat adds the most recent version of the objects in the repository.

> **NOTE:** When you save the archive set, Stat retrieves the objects from VCM repository. Your system administrator can configure Stat to archive the objects themselves or pointer to those objects.

6 (Optional) If you want to include the archive set in a mass migration based on application release label, select the release label you want in the Release field.

7 (Optional) Enter comments about the archive set.

Comments can include a longer description of the changes or any other helpful information.

8 Click on the Objects tab and click **Add...**.

Stat opens the Select Objects window, which displays a list of the objects contained in the base archive set.

> **NOTE:** When creating a final archive set, Stat automatically adds all the objects in the base archive set and does not open the Select Objects window.

To sort the rows in the Select Objects window, click a column heading to have the rows sorted based on that column.

9 Select the objects you want to add to the archive set.

An interim archive set can contain one, some, or all the objects in the CSR.

10 If you have performed previous migrations or deleted objects on the CSR, check the existence of each object by selecting it and clicking **Check Existence**.

Stat goes out to the source environment or file locations and looks for the object. If it finds the object it displays the value **Yes** in the corresponding **Exists** field. If the object does not exist, Stat displays the value **No**. Objects that do not exist in the source environment cannot be included in the archive set.

11 Click **OK**.

This returns you to the Archive Sets tab in the CSR window, which shows your new archive set at the bottom of the Archive Set table. The Status column will display the value In Process until the Stat Central Agent finishes archiving all the objects.

NOTE: Archiving objects is an optional function of Stat. If your system administrator sets up Stat to create archive sets, object archiving occurs automatically.

Archive Set Object Information

To see the details of your archive set, double-click on it in the Archive Set table. This re-opens the archive set window. The Details tab should look familiar since this is the tab you filled out when you created the archive set. The next tab, Objects, now contains all of the object information for the archive set.

NOTE: After adding objects to an archive set, the Migration Flags tab is added to the Archive Set Window. For more information, see Deleting Objects on page 205.

The Objects tab displays the following information:

Migr Order

For schema objects, file objects, and setup objects only, indicates the order in which the object will be migrated relative to the other objects in the archive set. Objects assigned a lower number are migrated before objects assigned higher numbers.

NOTE: The default migration order is based on object type and is defined in the Object Type Maintenance table. You can override the default order by specifying a higher or lower value for one or more objects. You can change the migration order values manually, or you can use the **Default Order** and **Reorder** buttons, which are described below.

Class

Indicates the class of object. Object classes include data and file.

Type

The object type.

Object

The object name.

Version

A version number internal to Stat. It indicates the number of times the object has been modified/archived in Stat for a given environment.

Status

Reflects the current status of the object. Possible statuses include:

- **Archived** – Indicates Stat finished archiving the object
- **Archive Pending** – Indicates Stat is in the process of archiving the object

- **Wait Lock** – Indicates Stat is waiting for Stat to issue the objects in this CSR a lock. You can archive only locked objects.
- **Delete Pending** – Indicates Stat is in the process of deleting the objects
- **Re-archive Pending** – Indicates Stat is in the process of archiving the object again

Errors

Indicates the number of errors found. See the Logs window for further details.

Warning

Indicates the number of warnings found. See Logs window for further details.

Source Information

If the object is a data object, this field shows the number of tables and rows in Stat used to complete the archive. If it is a file object, the field shows the exact file location of the archive source in the archive set.

Object Count

This information is displayed at the bottom of the window. It shows the total number of objects in the archive set and how many of these have been archived.

Generation Schema

For any Oracle Apps file type that has been marked as a database script (including SQL Scripts and SPL/SQL, PKB, and PKH file object types as well as custom object types marked as database scripts), this drop-down list displays the list of products that are present in Stat for the source environment. If a value is selected in this column, the object is generated on the target environment using this schema. If the value is blank, the default APPS schema is used.

Buttons

The Objects tab features the following short cut buttons:

- **Add** – Adds selected objects to the archive set. Press this button and Stat displays a list of the objects.
- **Delete** – Deletes all of the objects in the selected archive set. You cannot delete objects from a base or final archive set.
- **Re-Archive** – Instructs Stat to re-archive the objects
- **Refresh** – Refreshes the current display
- **Print** – Prints the contents of the window
- **Export** – Exports the contents of the window

  NOTE: Once an archive set has been migrated, you cannot add or delete objects from it. You should create a new archive set instead.

- **Default Order** – For schema objects, file objects, and setup objects only, restores the migration order of selected objects to the default order as defined in the Object Type Maintenance table
- **Reorder** – For schema objects, file objects, and setup objects only, changes the migration order of selected objects starting with the numerical value specified in the field positioned above the button and in the order in which they are listed in the Objects tab. This provides a convenient way to change the migration order of multiple objects simultaneously. For example, assuming 5 as the starting value, the first selected object is assigned the value 5, the next selected object is assigned 6, and so on.
- **View** – For file, schema, and setup object types only, displays the definition of the selected object in a separate window.
- **Download** – Allows users to download the selected file or schema object from archive.

Copying Archive Sets

When you copy an archive set, the copy retains the migration order set on the source archive set.

To copy an archive set:

1. In the Archive Sets table, select the archive set you want to copy and click **Copy**.

   NOTE: Only archive sets with a complete-type status can be copied.

   This opens the Archive Set window where you can edit the properties of the copied archive set as needed, including the archive type and source environment.

   When copying archive sets, be aware of the following:

   - You can select a different source environment, but if the objects don't exist in the new source, you have to add the missing objects if you want to include them in the copy.
   - When you save a copy as a final archive set, the number of objects in the archive set must equal the number of objects in the base archive set. If not, Stat prompts you to add the objects when you try to save the archive set.

2. Add a description of the archive set, and (optionally) edit the properties of the archive set as needed.
3. Click **OK**.

Deleting Objects

Stat lets you delete unwanted objects from selected Oracle Applications environments along a migration path. After adding the unwanted objects to an archive set, you can mark them for deletion. When you migrate an archive set containing objects marked for deletion to an environment, Stat deletes them from that environment. However, you can always recover deleted objects since they remain archived in the Stat Repository.

To mark objects for deletion:

1. Add the objects to the archive set.
2. When the Archive Set has completed, open the Migration Flags tab of the archive set.
3. In the **Action** field, change the setting to **Delete**.
4. Click **OK**.

If you decide that you do not want to delete an object marked for deletion before you migrate it, go back to the Migration Flags tab and in the Action field change the setting to **Copy**. Stat is now configured to migrate the object as it normally would by placing a copy of the object in the target environment rather than deleting it.

IMPORTANT: When you migrate an object marked for deletion, the object is deleted from that environment and cannot be included in any later archive sets taken from that environment. Because of this, it is recommended that you create an interim archive set of all of the objects that are marked for deletion before you migrate them. You can then migrate the interim archive set to each environment in which you want to delete the objects.

Archive Set Logs

The Logs tab of the Archive Set window displays any messages Stat logged during the archive process.

This tab provides you with a complete list of messages logged by Stat. It is a running log of the activities involved with the archive sets.

The Logs tab displays the following information:

Date and Time

The date and time the message was logged.

Object

Archive sets are created by processes run by different objects in Stat. These object processes each have their own capabilities and tasks. The Object column displays the Stat object that reported the message. These objects include:

- **Mgr** – The manager object creates, destroys, and instructs all the other objects
- **Trg** – Indicates the target environment
- **Src** – Indicates the source environment

Type

There are three types of messages: Information, Error, and Warning.

Information

The text of the message.

Buttons

The Objects tab features the following short cut buttons:

- **Next Error** – Navigates you through your error/warning messages
- **Print** – Prints the contents of the window. Pressing this button automatically sends a job to the printer. There are no print options.
- **Export** – Exports the information in this window. Pressing this button opens a Save As window. Several file types are available for selection using the vertical scroll. An Excel format is most useful for evaluating this data.
- **Clear** – Clears the logs generated for this archive set

Re-archiving Objects

If for some reason the Stat Central Agent is unable to create an archive set without errors, rather than creating a second archive set, you can simply re-archive selected objects in the original archive set. When you re-archive objects, the Stat Central Agent deletes the original archive set and creates a new archive set containing only those objects you selected.

Although you can re-archive objects in any archive set, even those that were created without errors, you should only re-archive objects that were not successfully archived the first time. If you want to re-archive objects in an archive set that was created without errors, you should create an interim archive set.

To re-archive objects, in the Objects tab, select the objects you want to re-archive and click Re-Archive.

Object Migrations (Oracle Applications)

Migration Overview

The previous chapter explained how to archive objects by creating archive sets. This chapter explains how to migrate archive sets between your Oracle Applications environments.

Migrating objects updates your environments with the most recent version of those objects, or, if necessary, lets you roll back your environments to earlier versions.

In Stat, migrating file objects entails moving them to designated source file directories or developers' working directories. For data objects, this means migrating them from one environment to another.

There are two places in a CSR where you can initiate a migration: the Migration Path tab and the Archive Sets tab. Migrations in Stat are not linear; a migration can go in any direction. For example, in the sample migration path shown below, you could bypass the Development environment and migrate an archive set from the Base environment directly into Production.

TIP: For a comparison of the various migration tools and techniques supported by Stat, see Appendix: Migration Options on page 262.

System administrators can set up Stat to support auto-migrating archive sets to multiple environments distributed over a network. This is done by designating particular environments within a migration path as distribution environments and then associating them with lists of interrelated environments. This way, when you migrate an archive set to a distribution environment, Stat automatically migrates the archive set to all the associated environments as well. This spares you the time-consuming task of migrating an archive set to each environment separately and is especially helpful when a migration path calls for more environments than the limit of nine that can be represented graphically.

When you migrate an archive set that contains both data objects and file objects, with the proper security rights you can choose to migrate just the data objects in the archive set, just the file objects, or both. System administrators can enforce that certain users only migrate file objects while others only migrate data objects.

Synchronizing Your Development Workspace

It is good practice to synchronize your development workspace with your base archive set. This ensures that you are making changes to the correct version of the objects. This is true of all your environments. As you make changes, you should create interim archive sets that document those changes and then migrate them to the appropriate environments. The migration process is virtually the same, regardless of the type of archive set.

The development workspace is where you make the changes. For data objects, this is the Development environment. For file objects, it can be either the Development environment's source file locations or the assigned developers' working directories. It is recommended that each developer make changes to file objects in their own working directories so that the changes can be documented and controlled. System administrators can enforce that developers modify objects only in either their working directories or in the source file locations.

Migrating File Objects

When an archive set contains file objects, the file archives are stored in the Stat Repository. When you migrate the archive set to an Oracle Applications environment, Stat copies the file archives from the Stat Repository to the source file locations defined for the target environment. If the file objects already reside in any of these source file locations, Stat replaces each existing instance with the archive copy. If the files exist in none of the source file locations, Stat either copies the files to all the source locations defined for the target environment or copies the files to the designated default location. These options are set up by system administrators when configuring the target environment.

To migrate file objects in an archive set to the developers' working directories, you migrate the archive set to the Development environment. Stat gives you the option of migrating the file objects to the Development environment's source file locations, the developers' working directories, or to both. To migrate an archive set taken from the Development environment to the developer's working directories, or vice versa, the migration must be initiated from the Object Management tab, not the Migration Path tab.

If two or more environments on a migration path share the same source file locations for a particular file type, whenever you migrate an archive set that contains file objects of that type to one of the environments, by default the file objects are also migrated to any other environment that shares the same source file locations. For example, if the Development environment and Quality Assurance environment share the same source file locations for COBOL file objects, and you migrate an archive set containing a COBOL file object to Development, Stat documents that the same file object was also migrated to Quality Assurance. This eliminates the time

consuming process of having to perform multiple migrations in order to document the migration of the same file objects to each environment on the migration path.

NOTE: Unix and Windows-based file servers have different formats for ASCII type file objects. Accordingly, when you migrate a ASCII type file object via SFTP, the Stat Central Agent checks its destination file server. If the server is Unix, the agent converts the file to the Unix ASCII format, which means singly occurring carriage returns followed by linefeed characters are converted to linefeed characters. If the destination server is Windows, the agent converts the file to the Windows ASCII format, which means singly occurring linefeed characters are converted to carriage returns followed by linefeed characters. In either case, the size of the migrated file may be smaller or larger than it was before it was migrated.

Migrating Data Objects

As with file objects, data object definitions are archived in the Stat Repository. When you migrate an archive set that contains data objects, Stat copies the data object definitions from the Stat Repository to the target environment. If the data object already exists in the target environment, Stat replaces that object definition with the archived copy using the delete and insert method.

Migrating to Distributed Environments

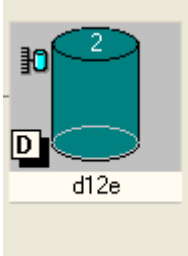
When you migrate objects to a distribution environment, by default Stat migrates those objects to all the environments on its distribution list. However, you can opt to exclude certain environments from the migration.

When defining a migration path, system administrators designate distribution environments and add other environments to their distribution lists. For example, let's say you have ten production environments and each one physically resides in a different location. All of your development work is done centrally, and when ready, changes are migrated out to all the production environments at the same time. Most likely your system administrator would define the local or 'in-house' production environment as the distribution environment and connect it to the nine other production environments.

Although connected to the distribution environment, the other environments are not represented graphically and are not technically part of the migration path. This means that objects cannot be locked in the environments on a distribution list. Also, objects can only be migrated to them, not from them.

TIP: Because objects are not locked when migrated to the environments connected to a distribution environment, it is recommended that your system administrator not include these environments in any other migration path. This eliminates the possibility of two developers accidently overwriting each other's work.

Graphically, distribution environments are designated by a small icon displayed to the left of the environment graphic, as shown below:



To view a listing of the environments connected to the distribution environment, double-click on the distribution icon. Stat opens the Distributed Environments window, which shows a list of all the environments connected to the distribution environment.

In this window, you can deactivate any environment you do not want to include in a migration. This way, when you migrate an archive set to a distribution environment, Stat migrates the objects only to the active environments in the distribution list. To deactivate all the environments, click **Set All Inactive**. If you want to reactivate an environment, you can do so at any time by selecting the Active check box, or if you want to reactivate all the environments, click **Set All Active**.

Also, Stat does displays an error message if it successfully completes a migration to a distribution environment but not to one or more of its associated environments (which would be the case if, for example, the password to one of the environments was incorrect). Instead, this information is displayed in the Migration Details window. For more information, see Documenting Migrations and Process Requests (Oracle Applications) on page 219.

Running a Migration (Oracle Applications)

To run a migration:

1 Open the CSR window and do one of the following:

- In the **Migration Path** tab, click and hold your cursor over the source environment for the archive set and drag and drop it in the target environment.
- In the Archive Sets tab, click Archive Sets to display the Archive Sets table. Then drag and drop the archive set you want from the table to the target environment's tree node.

> **IMPORTANT:** Before you can migrate an archive set into an environment that requires migration approval, one or more authorized users must approve the migration. For more information, see Migration Approvals and Mass Migrations (Oracle Applications) on page 213.

Stat opens the Migration window.

2 (Optional) If you want the Stat Central Agent to process the migration job at some later time, enter the date and time in the **Migration Date** field.

The field defaults to the current date and time. You can schedule the migration up to 90 days in the future.

3 (Optional) In the **Description** field, enter a unique description of the migration.

The field defaults to CSR ID+Archive ID.

4 (Optional) Select the **Stop on Error** option if you want the Stat Central Agent to terminate the migration at the first error it encounters.

System administrators may set this option to be selected or de-selected by default.

5 (Optional) De-select the **E-mail Notification** option if a business rule or personal rule triggered by a migration event has been defined for the service domain and you do not want Stat to send email notifications that may be triggered by the migration.

This option is selected by default and is displayed only if one or more Migration Notification business or personal rules have been defined for the service domain. Fore more information, see Defining Personal Rules on page 78.

6 (Optional) Select the **Maintenance Mode** option if you are on Oracle Applications version AD.I and want Stat to put the environment in Maintenance Mode when migrating objects.

The **Maintenance Mode** field is disabled if you are on an earlier version than AD.I. For more information on Maintenance Mode, see your Oracle Applications documentation.(This option does not apply to R12.2 environments.)

7 Select the archive set you want to migrate.

The window displays a list of archive sets that you can migrate from the selected environment. If you initiated the migration from the Archive Sets tab, the list displays only the archive set that you dragged and dropped onto the target environment.

By default, all the objects in the archive set are selected for the migration. However, with the appropriate security rights, you can exclude either all the file objects or all the database objects from the migration. You can also exclude individual objects.

8 (Optional) De-select the class of objects (file objects, setup, or schema objects) you do not want to migrate.

9 (Optional) In the **Migrate** column, de-select the individual objects you do not want to migrate.

> **NOTE:** If an Oracle Apps file object type is flagged as a database script, the Stat Oracle Agent executes these objects using sqlplus during a migration. The Oracle agent only looks at the return code from sqlplus to determine if the migration was successful or not. The following statement should be included with all scripts to instruct sqlplus to return a non-zero return code if errors are encountered:
>
> ```
> SET VERIFY OFF
> WHENEVER SQLERROR EXIT FAILURE ROLLBACK;
> WHENEVER OSERROR  EXIT FAILURE ROLLBACK;
> ```

If you are migrating to a distribution environment, the window displays the list of active target environments. By default, each environment in the distribution list is selected as a target. However, with the appropriate security rights, you can exclude certain environments from the migration.

10 (Optional) If migrating to a distribution environment, de-select any environment in the list of active target environments you want to exclude from the migration.

11 If the archive set contains file objects and the target environment is Development, select one of the following options in the **Migrate file to** field:

- **Development Env** – Select if you want to place the file objects in the source file locations of the Development environment
- **Working** – Select if you want to place the file objects in the developers' working directories. Only the file objects assigned to each developer get copied into their working directories.
- **Dev & Working** – Select if you want to place the file objects in both the source file locations and the working directories. If the archive set does not contain any file objects or the target environment is not Development, this option is dithered with a value of "NA."

12 If the target environment is version R12.2, select the file system to which you want to migrate file objects in the **Edition** field.

Options include **Run**, **Patch**, or **Both**.

> **NOTE:** R12.2 application tier file system has 2 copies of all files. A "Run File System" where all the services are currently running from, and a "Patch File System" where all patches are applied in a patch cycle. A patch cycle starts when the prepare phase of adop is run and the "Run File System" is copied to the "Patch File System."
>
> Stat archives file objects from the current Run Edition.The **Edition** field is only displayed if the target environment is R12.2 or higher.

13 Click **Migrate**.

At this point, Stat may prompt you to select and order the pre and post migration steps (if any) that have been defined for the target environment or for the objects or object types in the archive set.

14 Select pre and post migration steps, as necessary.

For more information, see Pre and Post Migration Steps on page 210.

15 After selecting the pre-migration steps, click the **Migrate** button.

Stat opens the CSR Migrations Console, which shows that the migration job has been submitted to the Stat Central Agent. The Agent either begins processing the migration immediately, or if you scheduled the migration, at the date and time you specified. For more information, see Migration Console on page 48.

16 If you are only migrating file objects, Stat copies the file objects into the target environment.

Pre and Post Migration Steps

Pre and post migration steps define certain activities you should perform before and after migrating an archive set. Migration steps are performed either manually by the user or automatically by Stat. The steps are meant to promote adherence to development standards and are not mandatory or enforced.

Pre and post migration steps can be associated with object types, object classes and with target environments. This means that when you initiate a migration with an archive set that includes an associated object type or class, or when you initiate a migration to an associated target environment in either a single or a mass migration, Stat opens the Pre Migration Steps window. This window displays a checklist of recommended actions that should be taken before the archive set is migrated.

NOTE: System administrators can define pre migration steps that are not associated with either an object type or an environment. In this case, the step is triggered for all migrations.

Regarding Pre and Post Migration Steps windows:

- If the target environment is also a distribution environment, the distributed environments are listed in italics
- For mass migrations, the CSR id is also listed on the left side of the window
- The windows can also be opened from the Environment Status window and from the search results window of the Migration History Wizard
- Unlike the Pre Migration Steps window, the Post Migration Steps window is not opened automatically. Instead, post migration steps have a default status of **Pending**, which means that until the user changes the status of a post migration step to either **Complete** or **N/A** (Not Applicable), the migration will have a status of **Wait for Post Step** in the Migration Console. This is how Stat prompts users to complete post migration steps as intended. Once all the post migration steps have been marked as Complete or N/A, the status of the migration will change to **Complete**.

Running Custom Command Migration Steps

Automatic steps consist of custom commands defined by your system administrator. For more information on automatic steps, see the *Stat System Administration Guide*, Chapter 5, “Service Domain-Specific Maintenance.”

To execute an automatic step, click **Run**. Depending on the step, Stat may prompt you to specify additional parameters.

Custom commands are operating system commands executed by the client server that Stat is running on. When a custom command step is triggered, Stat opens the Custom Command Variables window. Here you can edit the command by adding or replacing parameters as needed, or you can run the command directly.

When defining a command, system administrators can include predefined parameters and user and server-based parameters that have been defined in Stat. This provides a convenient way to specify values commonly invoked by operating system commands, such as server names and download directories. In addition, parameters offer a way to secure sensitive information by encrypting values that you do not want visible to users, such as passwords.

Predefined parameters specify values used to login to a target environment during a migration (database name, user name and password), whereas user and server-based parameters generally invoke values specific to the users and file servers defined in Stat. Also, certain parameters may be defined so that their values are different depending on which user or server they are being applied to. For more information on pre and post migration step parameters, see the *Stat System Administration Guide*, Chapter 4, “General Maintenance Tables”.

To edit a custom command migration step:

1 In the **Command with parameters** field, enter the command you want Stat to run.

If you want to include parameters in the definition of the command, click the location where you want to insert the parameter and then double-click the parameter you want to insert. When included in a command, parameters are enclosed in double % signs, for example, “%%GL_PWD%%”.

Certain users and servers may have parameters that have been defined exclusively for them, or the value of a particular parameter may be different depending on which user or server it is being applied to. When the Stat Command Editor is first opened, the parameters are listed as they have been defined for the local client server and the current user. If you want to include parameters defined for a different server, click the **Server** field and select the server you want. Although you cannot select a different user in the **User** field,

when a user executes the command when performing a pre or post migration step, they will have the option of inserting their own parameters or overriding default values.

> **NOTE:** System administrators can restrict user access to certain servers at the service domain level. The servers displayed in the **Server** field drop-down list may be limited if the server access of the current user has been restricted. For more information, see *Stat System Administration*, Chapter 3, “Stat Security.”

2 If the command you want to execute opens a window, specify if you want the window minimized, maximized, or normal size.

This value is saved and used at run time.

3 Click **Interpret >>**.

The **Interpreted Command** field displays how the command is interpreted by the client server. Null values and encrypted values are enclosed in angle brackets. Encrypted values are not displayed but replaced with asterisks.

4 (Optional) Verify that you defined the command properly by selecting the server you want to use to test the step in the **Server** field.

> **NOTE:** This is for testing purposes only. During execution of the step a user can select a different server.

5 Click **OK**.

Viewing Migration Step History

To view the history of any automatic step, select it and click **History**. This opens the Post Migration Step History window, which displays a record of each time Stat successfully executed the command. These records display the date and time the step was run, the user who ran it, and what the parameters were used.

To view the log for the step, click **Log**. To print the history table, click **Print.** To export it to a file format, click **Export.**

To run pre and post migration steps:

1 In the Pre or Post Migration Steps windows, run each automatic step you want Stat to perform, specifying any additional parameters you want.

2 Select **Complete** for each step that Stat performs successfully.

> **IMPORTANT:** Stat displays an error message if it is unable to execute an automatic step. Also, Stat does not notify you if it completed the step successfully but the external application encountered errors. For example, when running the Compile Command step, Stat only knows if the command was executed properly. It does not know if the compile was successful or not. In this case, you will need to check the compile yourself.

3 Complete any manual steps, or perform them at a later time as required. Then select **Complete** for each step you perform.

> **NOTE:** Until a post migration step has been marked as either **Complete** or **N/A** (non-applicable or not applied), the migration will have a status of **Wait for Post Step** in the Migration Console. Once all the post migration steps have been marked as **Complete** or **N/A**, the status of migration will change to **Complete**.

When defining a pre and post migration step, system administrators can specify whether the step should be automatically included for each migration or once per target environment. This prevents Stat from prompting users to run the same step unnecessarily multiple times.

4 Click **OK**.

At this point, Stat does one of the following, depending on the type of migration step:

- In the case of pre migration steps, Stat initiates the migration to the target environment.

- In the case of post migration steps, Stat displays the Migration Path tab, which shows the base archive set successfully migrated to the Development environment.

Your migration path now shows the base archive set in your Development environment.

The process is the same for migration of all types of archive sets.

Migration Approvals and Mass Migrations (Oracle Applications)

Stat provides advanced version control and change management support in the form of migration approvals and mass migrations:

- Migration approvals provide a way for system administrators to maintain data integrity in PeopleSoft environments. Before you can migrate an archive set into an environment that requires migration approval, one or more authorized users must approve the migration.
- Mass migrations allow a user to group multiple archive sets and migrate them as a single unit to the same environment. There are two ways to perform a mass migration, either by flagging individual archive sets as candidates for a mass migration, or by specifying an application release label assigned to certain archive sets within the service domain.

Marking Archive Sets for Migration

When you want to perform a migration that requires approval, or you want to flag an archive set for a mass migration, the first step is to mark the archive set for migration. This is done either by individually selecting the **Ready to Migrate** option on the Archive Sets tab of the CSR window, and then selecting the environment(s) that you want to target, or by marking multiple archive sets in the Ready to Migrate window.

NOTE: The security right, OraApp Archive Set - Ready to Migrate, allows you to mark an archive for a migration even if you do not have the user class rights to perform migrations. This way, users that have migration rights can migrate your archive set for you.

Marking Individual Archive Sets

To mark an archive set for a migration:

1. On the CSR the archive set belongs to, open the Archive Sets tab in the CSR window.
2. In the Archive Set table, select **Ready to Migrate** for the archive set. Then click **Apply**.
3. Click **Migration Target**.

   This opens the Target Environments window. Here you can specify the environment(s) to which you want to migrate the archive set.
4. In the table on the right side of the window, select **Migrate** for each environment that you want to designate as a target environment.

   NOTE: In the table displayed in the right section of the Target environments window, distribution environments and their associated distributed environments are designated by small blue and yellow icons, respectively. When you select the **Migrate** check box for a distribution environment, all the environments on its distribution list are selected as well. Also, you cannot select a distributed environment without selecting its distribution environment as well.
5. Click **Premigration List** to view a checklist of any actions you should take before migrating the archive set.

   For more information on pre migration steps, see the section, Pre and Post Migration Steps on page 210.
6. Click **OK** or **Apply** to save your work.

The archive set appears in the Mass Migration window for the target environment, and the approval requests, if any, are generated and sent out to each user authorized to approve the migration.

NOTE: If you later decide you do not want to migrate to a particular environment, deselect it in the Target Environments window. When you click **OK** or **Apply**, any approval requests that were generated the first time are deleted.

Marking Multiple Archive Sets

The Ready to Migrate window displays all the archive sets that have not yet been individually marked for migration and which share the same release label and environment on the migration paths of their respective CSRs. After you specify the target environment and release label, Stat retrieves all the qualifying archive sets that have not been marked for migration. Retrieved archive sets are marked for migration by default. You can unmark any archive set you do not want marked as Ready to Migrate.

To mark multiple archive sets for migration:

1. Select **Migration Management | Archive Sets - Ready to Migrate**.
2. In the **Module** field select the change management module you are using.
3. In the **Service Domain** field select the service domain of the archive sets.
4. In the **Environment** field select the migration target environment of the archive sets.

   Stat retrieves archive sets that share the selected environment in the migration paths of their respective CSRs.
5. In the **Release** field select a release label.
6. Stat retrieves archive sets that have been assigned to that release. Release labels can be minor or major and are defined by system administrators.

   NOTE: A Minor release is considered a branch of its parent release. This means that when you select a minor release label, Stat retrieves all the archive sets assigned the parent release labels as well. For example, using a typical version sequence, if you select the release label 2.2.1, Stat also retrieves archive sets assigned its parent release labels, 2.2 and 2.0.
7. (Optional) Deselect **Ready to Migrate** for any archive set that you do not want to be marked for migration.
8. Click **OK**.

Approving Migrations

Before you can migrate an archive set into an Oracle Applications environment, you may need to get the migration approved by users authorized to approve migrations into that environment. Conversely, if you have been designated as a migration approver for a particular environment by your system administrator, other users may need your approval before they can migrate archive sets into that environment. Migration approvals are environment-specific. They provide a way for users (typically managers and development leaders) to monitor and control migrations into environments containing sensitive information, such as object definitions that should not be modified or overwritten.

Approval lists can be either required or optional and can include individual users, entire user classes, or a combination of the two. Although system administrators can add any user or class to an approval list, be aware that only users that have access to an environment (as determined by system administrators in the User Maintenance table) will be able to approve a migration into that environment or receive email notifications regarding their pending approval. If an approver does not have access to the environment, the migration cannot be approved until either the user is granted access to the environment or the migration's approval requirements are overridden by another user with proper security rights.

TIP: To check whether migrations into a particular environment require approvals or not, see the Approval Required column in the environment table of the Target Environments window.

For more information on migration approvals, see the *Stat System Administration Guide*, Chapter 4, "General Maintenance Tables."

To approve a migration:

1 Select **Migration Management | Migration Approvals**.

Stat opens the Migration Approvals window.

The first tab, My Open Approvals, shows all the pending migrations (if any) that are still waiting your approval. The data is grouped by CSR in a tree view, along with archive ID and target environment. Open the tree to see the approval status of specific pending migrations. A green check mark indicates that the approval requirements for the migration have already been satisfied by other users, whereas a red X indicates that one or more users have rejected the migration, thereby preventing the migration from running until the rejection status has been resolved.

> **IMPORTANT:** A migration cannot go forward if just one approver rejects the migration, even if that user's approval is not otherwise required. Before the migration can occur, either the user or another user authorized to override migration approvals must change their migration approval status from **Rejected** to **Approved** or to **Pending**.

Your approval can be made either as an individual or as the member of a user class. Also, approvals are either required or optional:

- If required, Stat cannot perform the migration until you approve it. With a required user class approval, every user in the class must approve the migration.
- If optional, then you are one out of a number of users authorized to approve the migration. Whenever an approval is marked as optional, the Min Approval column displays the minimum number of optional users who must approve the migration before the archive set can be moved into the target environment.

> **TIP:** Double-click an approval record to open its associated CSR.

The second tab, All Open Approvals, shows the same information as the My Open Approvals tab, except it shows the approval records for all users for each pending migration. This tab is for informational purposes only unless you have the user class right to override migration approvals, in which case you can approve migrations and change approval statuses for other users. Each user's approval record is displayed until the migration has taken place.

2 In the My Open Approvals tab, select **Approved** in the Status column for each migration that you want to approve. If you do not approve the transfer, select **Rejected**.

3 Click **OK** or **Apply** to save your changes.

If you selected **Rejected**, the approval record stays on the My Open Approvals tab until you change it to **Approved**, or the migration approval is overridden, or the archive set is changed so that it is no longer ready to migrate.

4 (Optional) Do the following if you have the right to override migration approvals:

a Open the All Open Approvals tab and approve or reject migrations for other users or change the migration approval status other users as needed.

> **TIP:** With proper security rights, you can also change the status of your own migration approvals.

If you change a migration approval status for yourself or another user, Stat prompts you to document your reasons for doing so.

b If prompted, document the reasons why you are changing your own or another user's migration approval.

c Click **OK** or **Apply** to save your changes.

A record of the approval remains on the All Open Approvals tab until the migration takes place.

You can also approve the migration of an archive set in the Target Environments window of the CSR.

To approve a migration in the Target Environments window:

1. Open the CSR to which the archive set belongs. Then follow the instructions for opening the Target Environments window for the archive set as described in the preceding section.
2. In the table on the right side of the window, select the target environment of the archive set. Then click **Approval Lists**.

   This opens the Approval List for Target Environment window, which displays all the optional and required approvals that are still pending for the migration of the archive set.
3. Double-click your corresponding row. Then in the popup menu, select **Approved**.
4. Click **OK** or **Apply**.

   TIP: With proper security rights, you can make approvals for other users. You can also unapprove all approvals by clicking **Unapprove All.** This allows you to deselect the **Ready to Migrate** check box for the target environment. When you override another user's approval, Stat records you as the approver, not the user originally assigned to make the approval.

You can view records of migration approvals from the Migration Details window. For more information, see Documenting Migrations and Process Requests (Oracle Applications) on page 219.

Approval Request Notifications

If you want to notify users about migrations that are still pending their approval, you can email a message predefined by system administrators. In the tree list of approvers, select the node representing the user or class that you want to notify and click **Email.** An email job request is sent to the Stat Central Agent, which processes the request and sends an email to the user you selected or to each member of the selected class. A "@" sign is displayed for that approver node in the Envelope field of the Approval List tab.

NOTE: The **Email** button is disabled once the approval requirements of a migration have been satisfied.

System administrators can also configure the Stat Central Agent to include links in the reminder message that the recipient can click to approve or reject the migration. This sends an email back to the Stat Central Agent, which processes the response email and changes the approval status to **Approve** or **Reject**, depending on which link the approver selected.

NOTE: When an approval status is changed by responding to a reminder message, the **Update Date** field in the Approval List window will be automatically populated and the **Update By** field will display the value, **Via Email**.

Approval notification reminder messages can also be sent for workflow status transfers and Oracle Apps patch applications. For more information, see the book *Stat System Administration*, Chapter 7, "Email Configuration".

Mass Migrating Objects

If you need to migrate several archive sets to the same environment, rather than migrate them one at a time, you can perform a mass migration. There are two types of mass migration supported by Stat:

- Using the Ready to Migrate method, you can include as many archive sets from different CSRs in a mass migration as you want, even if the objects are assigned to different developers and come from different source environments.
- Mass migrating archive sets based on an application release label allows you to quickly update a target environment with the latest version of objects or roll back to earlier versions.

Because mass migrations can include objects assigned to different users and belonging to different CSRs, it is recommended that a limited number of users be allowed to perform mass migrations. With proper security, users can perform mass migrations that override workflow rules and approval requirements. In addition, Stat features the Release Recovery window, which allows users to perform application release mass migrations that override workflow rules, approval requirements, and object locks. For more information on the Release Recovery window, see Object Tools and Wizards on page 84.

To perform a mass migration:

1 Mark each archive set for a migration, as described earlier in this chapter.

2 Select **Migration Management | Mass Migration**.

Stat opens the Mass Migration window.

> **TIP:** You can resize the window and the panels as needed to view the complete listing of archive sets and objects.

3 (Optional) If you want the Stat Central Agent to process the migration job at some later time, enter the date and time in the **Migration Date** field.

The field defaults to the current date and time. You can schedule the migration up to 90 days in the future.

4 (Optional) In the **Description** field, enter a unique description of the migration.

The field defaults to “Mass Migration”.

5 (Optional) Select the **Stop on Error** option if you want the Stat Central Agent to terminate the migration at the first error it encounters.

System administrators may set this option to be selected or de-selected by default.

6 (Optional) Select the **Maintenance Mode** option if you are on Oracle Applications version AD.I and want Stat to put the environment in Maintenance Mode when migrating objects.

7 In the **Module** field select **Oracle Applications**.

> **TIP:** You can set a default value to be displayed in the **Module** field. To do this, select **User Options | Stat Options**. Then in the Stat User Options window, select the value you want in the **Default Module** field.

8 In the **Service Domain** field, select the service domain associated with the migration path containing the target environment you want.

The service domain you select filters the list of target environments as well as the list of release labels if you opt to mass migrate objects assigned the same release label.

9 In the **Target** field select the environment to which you want to migrate the archive sets.

If using the Ready to Migrate method, Stat displays a list of each archive set that has been marked as Ready to Migrate into the selected environment.

10 In the **Type** field select one of the following:

- Select **Ready to Migrate** if you want to mass migrate archive sets that have been individually marked for migration
- Select **Migration by Release** if you want to mass migrate archive sets that have been assigned the same application release label. When you select this option, the **Release** field is displayed. Then in the **Release** field select the release label you want. Release labels can be minor or major and are defined by system administrators. After you select a release label, Stat displays a list of archive sets that have been assigned that label.

> **NOTE:** A Minor release is considered a branch of its parent release. This means that when you mass migrate archive sets based on a minor release label, Stat migrates all the archive sets assigned the parent release labels as well. For example, using a typical version sequence, if you mass migrate archive sets labeled release 2.2.1, Stat also migrates archive sets assigned its parent release labels, 2.2 and 2.0. When the same object is found in archive sets with different release labels, Stat migrates the object with the latest release label.

11 (Optional) In the **Sources** section, deselect **Migrate** for each archive set that you do *not* want to include in the mass migration.

By default, this check box is selected for each archive set that has met migration approval requirements.

> **NOTE:** Using the Ready to Migrate method, if the same object exists in two or more archive sets, Stat displays a message box prompting you to select which object you want to migrate.

12 (Optional) In the **Archive Migr Order** column, change the order in which selected archive sets will be migrated.

   By default, Stat assigns archive sets a migration order number. The first archive set is assigned the order number 1, the second 2, and so on. You can change this order by assigning your own order numbers. Lower order numbers are migrated first.

   With the proper security rights, you can exclude certain object classes from the migration. You can also exclude individual objects. If the same object is contained in more than one archive set, the most recently archived version is selected by default in the **Migrate** column. You can override this selection by selecting a different version.

13 (Optional) Deselect the class of objects (file objects, setup, or schema objects) you do not want to migrate.

14 (Optional) In the **Migrate** column, deselect the individual objects you do not want to migrate.

   If you are migrating to a distribution environment, the window displays the list of active target environments. By default, each environment in the distribution list is selected as a target. However, with the appropriate security rights, you can exclude certain environments from the migration.

15 (Optional) If migrating to distribution environment, deselect any environment in the list of active target environments you want to exclude from the migration.

16 Click **Migrate>**.

   At this point, Stat prompts you to perform the pre-migration steps (if any) that have been defined for the target environment or for the objects or object types in the archive set.

17 Complete any required pre-migration steps.

   For more information, see Pre and Post Migration Steps on page 210.

   After completing the pre-migration steps, Stat opens the CSR Migrations Console, which shows that the migration job has been submitted to the Stat Central Agent. The Agent either begins processing the migration immediately, or if you scheduled the migration, at the date and time you specified. For more information, see Migration Console on page 48.

Mass Migrating to a Distribution Environment

The following considerations apply to mass migrating to distribution environments:

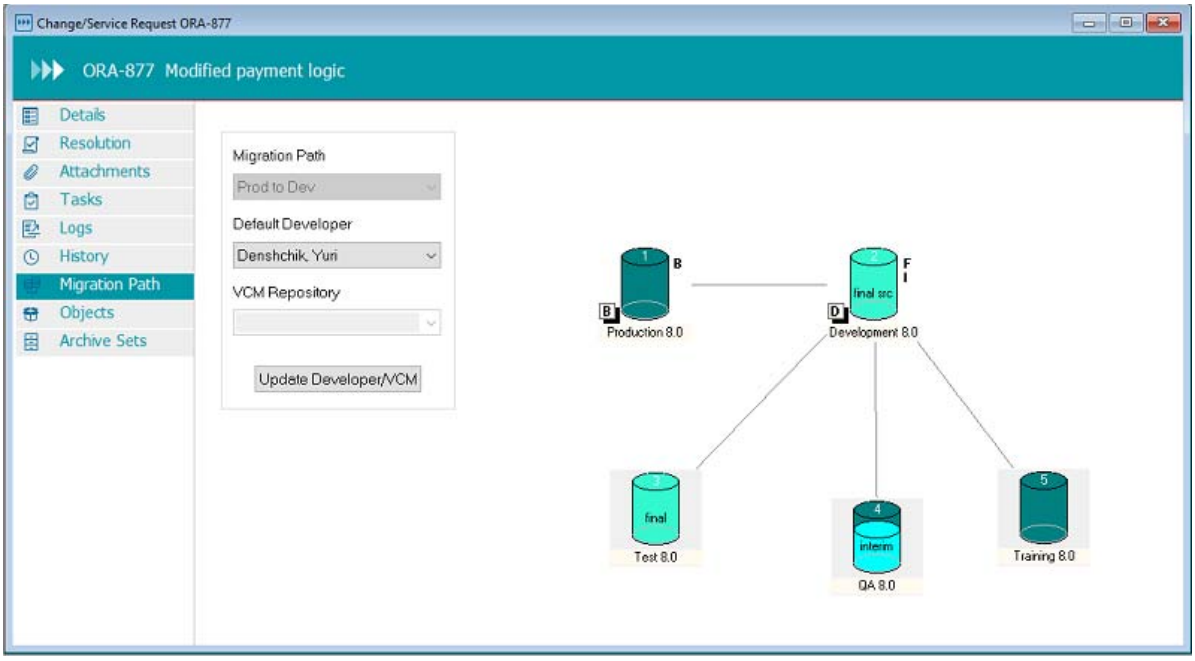
- When you flag a distribution environment for migration, all of the distributed environments are automatically flagged for migration as well.
- When you mass migrate to a distribution environment, the objects are migrated to all the active environments in the distribution list, excluding any you de-selected.
- You can only mass migrate to a distributed environment by migrating to the distribution environment. Once a migration to a distribution environment is complete, the distribution environment is no longer flagged for migration, and neither are any of distributed environments, even if some of them were not included in the migration.
- The distribution environments can be on different migration paths

The mass migration cannot proceed for the following situations:

- The selected archive sets have different distribution environment types for their target environments (One is ‘Yes’, the other is ‘—’).
- When distribution environments are selected, the distribution environments have different distributed database lists
- The migration has not received all the necessary approvals. If a distributed environment requires user approvals before a migration can take place, and one or more of the archive sets did not get necessary approvals, none of the archive sets included in the mass migration will be migrated into that environment. Stat only migrates to the distributed environments that either do not require approvals or have received approvals for each archive set included in the mass migration.
- If any archive set is causing errors when mass migrating, you can opt not to include that archive set in the mass migration. You can then mass migrate the other archive sets and resolve the issue at a later time.

Documenting Migrations and Process Requests (Oracle Applications)

After creating and migrating a base, interim, and final archive set, a typical migration path may look like this:



The sample migration path above shows:

- The migration path has 5 environments
- At least 3 archive sets have been created: 1 base, 1 final, and at least 1 interim
- The base archive set was migrated to Development 8.0 from Prod 8.0
- An interim archive was created in Development 8.0 and migrated to QA 8.0
- The final archive was created from Development 8.0 and migrated to Test 8.0
- No archive sets have been migrated to Train 8.0 or Prod 8.0

Flag Indicators

Flags appear to the right of environment graphics and indicate that an archive set was created in that environment. Flags include ‘B’ for base, ‘I’ for interim, and ‘F’ for final. If multiple interim archive sets were created in an environment, only one ‘I’ flag is shown.

Migration Indicators

When you migrate an archive set, the target environment graphic appears to fill up. When you migrate an interim archive set, the environment graphic appears half full, and the color changes. When you migrate the final archive set, the environment graphic appears full and the color changes again. Migrating the final archive set fills up both the source and target environments. Also, the graphic for the source environment of the final archive set reads “final src.”

When you migrate an archive set, the line linking the two environment changes color accordingly. When you migrate the base archive set to the Development environment from the Base environment, a curved arc links the two environment graphics.

Migration Details Window

The Migration Details window displays information regarding all the archive set migrations into the selected environment as well as patch applications. To open the Migration Details window, double-click on an environment graphic in the Migration Path tab, or right-click on an environment tree node in the Archive Sets tab and select **View Migration Status.**

You can also open the Migration Details window from the Migration History Wizard and the Migration Console. For more information, see Migration Details Window on page 50.

Stat provides more detailed information regarding the archiving and migrating of objects in the log files and messages generated by the Stat Oracle Agent, which are available in the Process Request tab. For more information, see the next section, Viewing Log Files and Agent Messages on page 220.

NOTE: When you open the Migration Details window by double-clicking an environment, the window shows information regarding all the migrations and patch applications that have targeted that environment.

Viewing Log Files and Agent Messages

In the Process Request tabs of the CSR window and the Oracle Applications Management Console, you can view the log files and the messages the Stat Oracle Agent generated while processing object management requests (including patch applications, backouts, and impact analysis as well as archiving and migrating objects). These log files include detailed information that pinpoint the source of warnings and errors generated during processing.

Be aware that the Process Request tab in the CSR window only shows processes specific to that CSR, while the Process Request tab in the Oracle Applications Management Console shows the process requests of all active CSRs. For more information, see Process Request Tab on page 194.

For R12.2 environments, a large number of log files may be generated at the end of each cycle. Typically the following directory is created $NE_BASE/EBSapps/log/adop/<session id> and log files for each phase of the Patch Cycle are placed there. Stat by default captures all *.log and *.lgi files. You can configure the following new environment variable to control this pattern:

<env>.env.ADOP_LOG_PATTERN defaults to "(.*\\.log)|(.*\\.lgi)". This is a regular expression that captures all *.log and *.lgi file extensions. If you also need to capture *.out files, override the pattern like so: <env>.env.ADOP_LOG_PATTERN: (.*\\.log)|(.*\\.lgi)|(.*\\.out).

To view log files and Agent messages:

1. In the Process Request tab, select the Event ID that corresponds to your request.

   Events that have been processed have a Process Status of Completed, Completed with Warnings, or Completed with Errors.

2. Click **View Log**.

The Agent Logs window displays all the log entries generated for the selected process request. The Status field indicates if the log includes an error or a warning. Logs that do not include errors or warnings have a status set to ‘Information.’ Also, if a user has manually changed the status of a process request, that user must submit a written explanation of the reason for the change, which is then processed as an information log by the agent. These information logs display the filenames Process Status Change. For more information, see Changing Process Event Statuses on page 197.

If you want to export the log as a text file, click **Export**, and then specify the file name. Exporting log files may be helpful if the file is especially large (1MB or greater) as indicated in the File Size column of the Agent Logs window, if you intend to view the log at a later time, or if you intend to process the log programmatically.

To view a log, double-click on it or select it and click **View**. Stat displays the log in the Event Log window.

13

Change Management for Generic Applications

- Object Management (Generic Applications)
- Object Archives (Generic Applications)
- Object Migrations (Generic Applications)

Object Management (Generic Applications)

Classification of Supported Objects

Although Quest® Stat® is designed as a complete change management solution for PeopleSoft® and Oracle® Applications, this support can be extended to other file-based (i.e., generic) applications. This is done by system administrators who define in Stat the connection pathways and source directories of the application servers or databases, as well as the types of objects that Stat will support. Once these configuration parameters are in place, users can lock, archive, and migrate objects in generic application environments the same way they do objects in PeopleSoft and Oracle Applications environments.

In Stat, any action you take involving an object is handled and recorded on its associated CSR, including editing, archiving, or migrating it to other environments. Also, Stat lets you place a lock on an object once you associate it with a CSR. Object locking promotes coordination between developers by ensuring that they do not overwrite each other's work.

For generic applications, there are three classes of objects that you can associate with CSRs:

- File objects
- Data objects
- Schema objects

File Objects

Quest® Stat® supports change management for file type objects (also called flat files). In addition to the COBOL, COBOL CPY, SQR, and SQC file types Stat automatically supports, system administrators can configure Stat to support any other type of file object residing in your generic application environments or in a version control management repository (if any). This configuration includes defining working directories where users can modify file objects assigned to them.

NOTE: In the case of VCM file objects, system administrators can configure Stat to archive the objects entirely or just pointers to those objects, meaning the objects are not physically brought in to Stat.

Data Objects

Data objects are user-defined or third party data sets residing in your generic application environments that your system administrator has configured Quest® Stat® to support. You lock, archive, and migrate data objects the same way you do file objects. Stat currently supports data objects in generic application environments running on Oracle only.

Schema Objects

Quest® Stat® supports locking, archiving, and migrating schema object definitions on Oracle® databases and on Microsoft® SQL Server® 2005/2008.

> **NOTE:** Oracle and SQL Server database schema objects include a set of predefined true/false parameters that are executed before the definition of the object is captured in Stat. You can change the true/false values of these parameters in the Schema Object Parameters Maintenance table. For more information, see the *Stat System Administration Guide*, Chapter 4, “General Maintenance Tables.”

Oracle

Stat supports certain schema object definitions for generic application environments running on Oracle databases. If you are running your generic application on a supported Oracle database version 9i or higher, you can lock, archive, and migrate schema objects. For Oracle 8i databases, you can lock schema object types, buy you cannot archive or migrate them. Stat currently supports the following schema object types:

- Package Specification
- Package Body
- Procedure
- Function
- View
- Trigger
- Table
- Index
- Synonym
- Sequence

Although you cannot archive or migrate Oracle 8i schema object types, you can archive and migrate the SQL database scripts that create and alter the schema object definitions. After migrating a database script (which in Stat is treated as a file object), you or your database administrator can run the script and deploy the schema object definitions in the target environment.

SQL Server

The following schema objects may be archived from and migrated to Microsoft SQL Server 2005/2008 databases:

- Table
- Index
- View
- Trigger
- Function
- Procedure
- Synonym

Object Locking and Reservations (Generic Applications)

Object locking is an important part of any change management practice since it coordinates all of the efforts of developers and prevents work from being overwritten. Stat supports logical locking of data objects and file objects in the Quest® Stat® Repository, which means that the lock shows up in the Stat application, but developers can still go directly into their application environments and make changes to the object even if the lock on the object isn't theirs. As long as the developers use a CSR to modify objects, the coordination of development is maintained.

Understanding Object Reservations and Locks

Locks and reservations are issued to the developer assigned to the object, regardless of who actually requested the lock. That person may or may not be the assigned developer. This is a security measure determined by user class rights.

A lock indicates that the assigned developer has exclusive change/edit rights on the object. A reservation indicates that the object is currently locked by another developer and you are waiting for the object to become available. Once the object becomes available, Stat converts the reservation to a lock and notifies the holder of the new lock via email. Remember, the holder of the reservation is the developer assigned to the object in the CSR. If you request the lock but are not the assigned developer, you will not receive an email when the reservation turns into a lock.

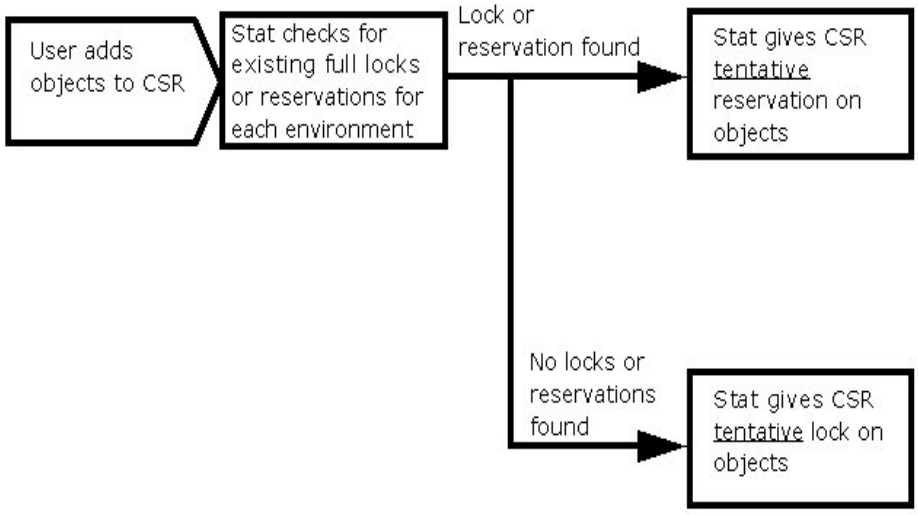
All objects can be logically locked in the Stat Repository, but only by one user at a time.

The Object Locking Process

The object locking process has up to three phases.

Phase 1: Tentative Lock/Reservation

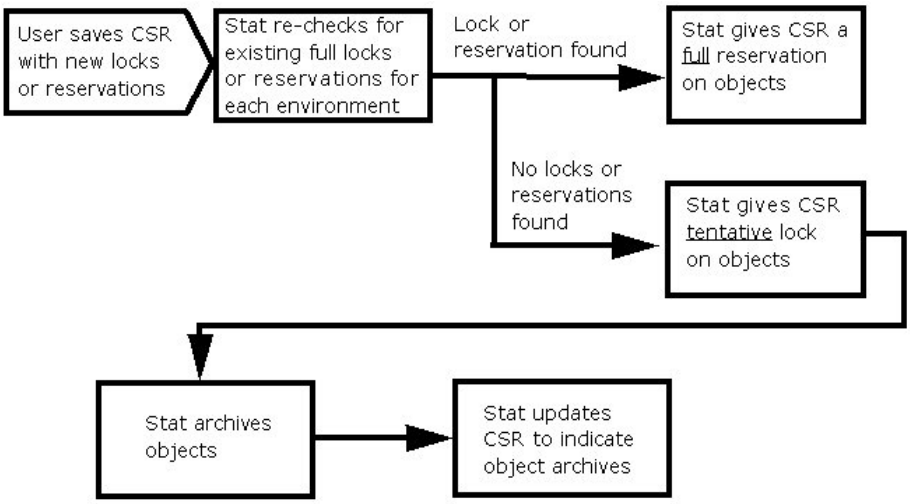
When you associate an object with a CSR, Stat automatically requests a lock for that object in the designated environments. Stat checks if there are existing locks or reservations on that object. If a lock or reservation exists, Stat issues a tentative reservation. If not, it issues a tentative lock. The lock or reservation remains tentative until you save the CSR.



Phase 2: Full Lock/Reservation

Immediately after associating objects with a CSR, you should save your work. Upon saving, Stat checks for existing locks or reservations. If a lock or reservation exists, Stat issues a full reservation. If not, it issues a full lock.

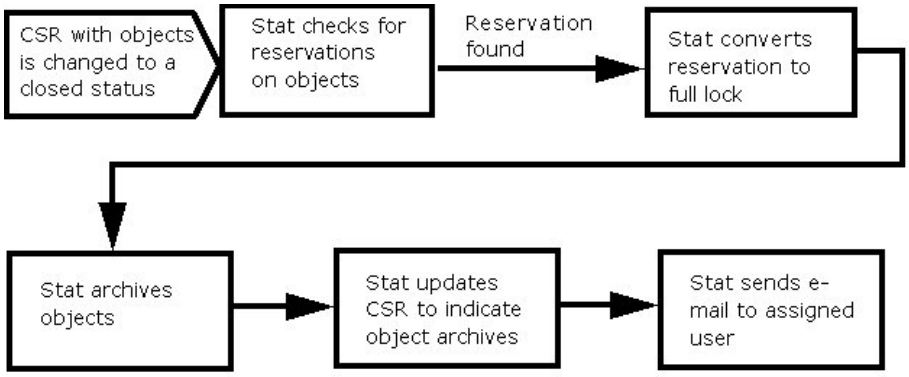
The longer you wait to save your CSR, the greater the likelihood you will lose your place in the queue for that object. For example, while you have a tentative lock on an object, another user could add that same object to a CSR and receive a tentative reservation. If the second user then saves his or her CSR before you do, that user receives the full lock for that object, and when you save your CSR, you receive instead a full reservation.



When Stat issues a full lock, it automatically archives a “pre-change” version of the object to the Stat Repository. Archiving objects is discussed in depth in the next chapter.

Phase 3: Reservation Conversion to Lock

The third phase is the conversion of reservations into locks. Stat releases an object lock when the status of the CSR changes to a closed-type status, or when the developer manually unlocks the object or the object is reassigned to another developer. After unlocking an object, the Stat Central Agent then determines if there are any pending reservations on the object. If reservations on the object have been given to more than one user, these reservations are handled in chronological order, based on the time each lock was requested. The Stat Central Agent converts the first reservation in line into a lock and performs any applicable object archiving.



Associating Objects with CSRs (Generic Applications)

You access and work with objects in a CSR. The CSR becomes the logical grouping of all the affected objects.

Remember that objects are associated with CSRs as opposed to users. In order to lock, archive, or migrate an object, you must first associate it with a CSR. The modifications that you make to objects are still made in the application environment— Stat simply provides tools that manage and track those changes.

You can manually associate objects with a CSR, or you can use two wizards to associate objects en masse. These include:

- The Read File Wizard, which associates the file objects in a folder
- The CSR Read Wizard, which associates the objects associated with another CSR

Objects can also be associated with a CSR using the Impact Analysis Wizard and the Undocumented Object Wizard. For more information, see Object Tools and Wizards on page 84.

Selecting a Migration Path

In order to associate objects with a CSR, you must specify the environment you want to copy them from. This is done first by selecting a migration path. In Stat, migration paths are logical groupings of environments that serve as road maps for object migrations. They are set up by your system administrator.

Your system administrator creates migration paths based on your business needs. For different situations you have different paths.

To select a migration path:

1 Open a CSR window and select the **Migration Path** tab.

2 In the **Select Migration Path** field, select the appropriate migration path.

The displayed paths vary, depending on the service domain. You should select the path most suited to your current needs.

> **NOTE:** If a workflow that specifies a migration path is assigned to the CSR, that path is the default path displayed in the CSR window and cannot be changed. For more information on workflows, see Change/Service Requests on page 18. For more information on migration paths, see Running a Migration (Generic Applications) on page 248.

3 In the **Select Default Developer** field, select a developer.

You can assign different developers to different objects, but this is the person that most of the objects will be assigned to.

4 (Optional) If you want to associate the CSR with a version control management system (VCM) record, select the record you want in the **VCM Repository** field

This field is enabled only if your system administrator has defined at least one VCM record in the VCM Connection Maintenance table. It lists all the currently defined VCM records. After you add objects to the CSR, this field is disabled and you cannot select a different VCM record.

Note that if your selected Workflow has a default **VCM Repository** assigned to it, that VCM Repository will automatically be assigned on the migration path.

5 Click **Generate Path**.

Stat displays a graphical representation of the migration path. Also, the Objects and Archive Sets tabs appear.

Each drum represents a generic application environment. Your system administrator determines which environments are designated as Base (Production) and Development. The original, “pre-change” archive of the objects in the CSR is taken from the Base environment. The Development environment is where you change the objects.

6 After selecting a migration path, select the Objects tab.

Assigning Developers

Before adding the objects to the CSR, you need to decide which Stat user is going to be making the changes to the objects and therefore needs to be assigned the object lock. If the user is the default user in the **Assigned To** field, then you can just add the objects and the default user will obtain the lock. If another user needs the lock on

the objects, select that user from the drop down list in the **Assigned To** field. When you add the objects, the user in this field is assigned the object locks. See Selecting Lock Options on page 227 for more information.

Selecting Objects

You can select the objects you want to add to your CSR manually, or you can use the wizards to select groups of objects. The procedure for manually selecting the objects you want to associate with your CSR is slightly different depending on the class of objects.

IMPORTANT: Workflows can contain status rules that do not allow users to add or lock objects while the CSR is in a restricted status. When this is the case, Stat prevents you from adding or locking objects until the CSR changes to an unrestricted status. Any object reservations that were in place before the CSR was transferred to a restricted status, however, are treated the same, meaning they are converted into locks when the objects become available.

Selecting Data and Schema Objects

To select a data or schema object, first select the generic application environment, then the object type and the object.

To select a data or schema object:

1 In the CSR window, select the **Objects** tab.

2 In the **Environment** field, select the environment that contains the objects.

Note that any environments on the migration path that have been inactivated are not listed. If you need to select objects from an inactive environment, see your system administrator.

The initial object snapshot, the base archive set, always comes from the Base environment. No matter which database you select in the **Environment** field, Stat copies the objects from the Base environment. Even if you add objects later, they still come from the Base environment.

Stat gives you this option of environments in order to reduce the number of hits made against your Base, or Production, environment. By selecting another environment, Stat connects to that environment and retrieves the list of objects. Once the objects are selected, the “pre-change” object snapshot is created from the Base environment.

When you select an environment, the **Object Type** field displays a “Loading...” message. During this time, Stat connects to the selected generic application environment and checks which object types are available.

TIP: If Stat returns a large number of objects, you can quickly locate the particular object you want by typing the first few letters of the object name in the **Quick Filter** field. As you type, Stat filters the list of objects so that only objects with matching names are displayed.

3 In the **Object Type** field, select the type of object you want.

NOTE: If you are adding a schema object type, Stat displays the Select Schema Owner window, which prompts you to specify the object’s schema owner. This reduces the amount of time it takes for Stat to return the list of matching objects. The window includes a **Quick Filter** field which lets you quickly parse the list to the schema owner you want (including Public). Select the owner and click **OK**.

Stat displays object types sorted by object class. When you select an object type, Stat displays a list showing all available objects of that type.

4 In the list of objects, select the object(s) you want.

To select multiple objects, hold down the <Shift> or <Ctrl> key as you make your selections.

Selecting File Objects

You can select file objects residing in a generic application environment, the assigned developer’s working directory, or (if configured) a version control management repository.

To select a file object:

1 In the **Environment** field, do one of the following:

- Select an environment if you want Stat to look through that environment's source file locations to get the list of file names for a particular file type. Source file locations are the file server directories where file objects reside. You or your system administrator can define multiple source file locations for each environment.
- Select **Working Directory** if you want to add files that exist in the assigned developer's working directory but not in any of environments to which Stat has access
- Select **VCM Repository** if you have associated the CSR with a VCM record and you want to archive and migrate objects that reside in the VCM repository.

Note that any environments on the migration path that have been inactivated are not listed. If you need to select objects from an inactive environment, see your system administrator.

2 In the **Object Type** field, select the type of file you want.

Stat displays a list of all the files that have the matching file extension. No file names are returned if there are no source file locations defined for the selected file type and environment, if no working directory has been defined for the assigned user, or if no matching objects reside in the VCM repository.

3 (Optional) Select **Copy to Working**.

If checked, Stat copies the files from the Base environment to your working directory after adding them to the CSR.

> **NOTE:** This option is selected by default if **Copy Files to Working** is selected in the Stat User Options window. For information on user-defined working directories, see Defining Working Directories for File Objects on page 231.

4 In the list of files, select the file(s) you want.

Filtering the Object List

If you have added a large number of objects to a CSR, you can filter the list of objects so that only the objects you want to view are visible. You can then save the filter settings so that the object list remains filtered the next time you open the CSR.

To filter the object list:

1 In the Objects tab, click **Filter**.

This opens the standard Specify Filter dialog box

2 Create a filter equation using the Operator tool buttons and statements listed in the **Functions** and **Columns** fields.

3 Click **Verify** to check the validity of your equation.

Stat displays a message box telling you if your equation is valid or not.

4 Click **OK**.

The Objects tab now displays a "Filter On" notification and the number of objects currently hidden by the filter. Any objects you add to the CSR while a filter is on may be hidden from the list of objects.

5 Optionally, if you want to save the filter for the next time you open the CSR, select the **Save Filter** option.

Selecting Lock Options

After you select the object(s), you should decide which locking options to use. By default, the objects are set to be locked in all the environments on the migration path, but with proper security rights you can select a different lock option. For more information on object locking, see Object Locking and Reservations (Generic Applications) on page 223.

There are four different lock options:

- **All on Migration Path** – The default setting. Select this option to add and lock/reserve the object(s) in all environments. Stat searches in each environment to determine if the object is already locked or reserved on another CSR.
- **Current Environment** – Select this option if you want to add the object from each environment on the migration path but lock/reserve the object(s) only in the current environment. Stat checks for reservations and locks/reserves the object(s) only in the current environment.
- **None** – This option adds the object(s) to the CSR from each environment on the migration path without issuing a lock on any of them. Although you can archive an object that is not locked in an environment, you cannot migrate the object to an environment in which it is not locked. You should select this option if you are associating the object(s) to a CSR for documentation purposes only, and you are not going to make any changes to the object(s).

  IMPORTANT: When you add an object to a CSR without a lock, Stat does not create a base version for the objects or mark the objects as having been modified. The objects are therefore considered "Undocumented" by the Undocumented Object Wizard.

- **Reserve if locked** – This option automatically requests a reservation if the objects are locked by another CSR. If this box is not checked and the objects are locked by another CSR, Stat prompts you for an action.

NOTE: It is recommended that you keep the default lock setting, All on Migration Path. Locking only in the current environment could lead to version inconsistencies if another developer modifies the same object in a different environment.

Adding Objects

After assigning a developer and selecting the object(s) and lock options you want, you are ready to add the objects to your CSR.

To associate objects to a CSR:

1. Click **Add Object**, or double-click on an object, or drag/drop the object to the object list window.

   At this point, if you selected the lock options **All on Migration Path** or **Current Environment**, Stat connects to the environment(s) and adds the selected objects to the Object List. If Stat is unable to connect to one or more environments, it displays a warning message for each environment it failed to connect to and adds the object to the CSR without a lock.

2. Click the Save button on the Stat toolbar or select **File | Save**.

   This enables the Stat Central Agent to finalize your object locks, if any.

While the Stat Central Agent processes the locks, the Archive Sets tab goes into read-only mode and the following occurs:

- The **Read File**, **Read CSR** and **Read Project** buttons are temporarily replaced by a message indicating how many objects are left to process.

  NOTE: If the message does not go away after certain amount of time this may indicate that the agent encountered a problem or timed out.

  The Workflow tab and certain CSR fields are disabled both in the Stat Windows client and in Stat Web. These include the **CSR Type**, **Application**, **Status**, and **Workflow** fields. This is done to prevent users from modifying the CSR while the Stat Central Agent is still processing data.

For each object, Stat then:

- Verifies the object is not already on the list of objects associated with the CSR
- Checks for any existing locks or reservations for the object on other CSRs
- If a file object, Stat checks for the object's existence by searching in each source file location defined for each environment along the migration path. If no source locations have been defined for the file type in any of the environments on the migration path, Stat cannot add the object to the CSR.

- If a data or schema object, Stat checks for the object's existence by searching in each environment on the migration path
- Adds the object to the CSR and either locks it or issues a reservation

When adding an object, Stat connects to all environments or source file locations on your migration path in order to check for existence. If it finds an object that exists in another environment, but not in the environment that you are working in, it displays a warning message.

Clicking **Yes** adds the object to the Object List table with a modification status of New. For more information on the Object List table and modification statuses, see CSR Object Documentation (Generic Applications) on page 236.

> **NOTE:** You can update the lock status of objects displayed in the Object List table by clicking **Refresh**. This will show if you any of the reserved objects have since received a lock since the last time you saved the CSR.

When Stat adds the object to the CSR, a row for each environment on the migration path is added to the Object List table. Each row displays information concerning the development, archiving, and migration activity that takes place for that object in that environment.

When the CSR is saved, the Stat Central Agent processes the object locks and determines the modification status of the object.

While the Stat Central Agent processes your object locks, the Objects tab goes into Read Only mode. During this time, if you attempt to perform any actions such as adding more objects or removing existing ones, Stat displays a warning. Once the Stat Central Agent has completed the locking of your objects, the Objects tab returns to edit mode.

Viewing the Lock Status of an Object

From the Objects tab of the CSR window, you can identify which objects you have locked and which objects you have reserved. Stat denotes lock and reserve status in the Flags column of the CSR object list with a lock icon and a clock icon, respectively.

To view all the locks and reservations placed on an object, right-click the object in the Objects tab of the CSR window. In the right-click menu, select **View Lock Status**. Stat opens the Lock summary window for the object.

> **NOTE:** You can view the status of the Stat Central Agent responsible for processing object locks by opening the Job Monitor window in Stat Web.

This window displays a list of all locks and reservations for the object across all environments. Any reservation or lock for the current CSR is highlighted in yellow. This allows you to see the position of your reservation in the queue.

The window lists locks first, followed by reservations, in chronological order. Each reservation icon is followed by a number indicating its position in the queue. If no locks or reservations exist for the object, Stat opens a window indicating this.

The name listed in the Lock summary window is the developer assigned to the object in the CSR, which may not be the person assigned to the CSR. This depends on your business practices.

Unlocking or Unreserving an Object

To unlock or release a reservation for an object, select it in the Object List, click **Unlock**, and save the CSR. Do not remove an object after you modify it. If you remove it, it is removed from all archive sets in the CSR and Stat cannot accurately report on changes to the object.

> **NOTE:** All objects associated with a CSR are automatically unlocked when the CSR changes to a closed-type status.

You might unlock an object if you want to release the lock on a particular object but also keep the CSR open. This may occur when another developer needs that object immediately, or when you have many objects locked and have finished working on some of them.

Until the Stat Central Agent unlocks the object, the CSR still has the object locked. It appears in the window that you no longer have the lock, but if another user attempts to lock the object, that user will receive a reservation. The Lock summary window for the object will show that your CSR still has the lock.

Re-Prioritizing Reservations

Stat normally processes reservations on a first in, first out basis, meaning the first CSR to request a reservation on an object is the first CSR to obtain a lock when the object becomes available. However, Stat lets you move your reservation to the head of the queue if necessary. This is called re-prioritizing. Access to this feature is usually limited to users responsible for managing development projects.

To re-prioritize object reservations:

1. Select the objects and click **Reprioritize...**.

   Stat displays a message box telling you that the re-prioritization is complete.

2. Click **OK** in the message box.

   Stat moves the objects to the first reservation position in the selected environments.

NOTE: Stat re-prioritizes the reservation for an object only in the environment in which you selected it. If you want to re-prioritize a reservation in multiple environments, make sure you select the objects in each of those environments.

Assigning Objects to a Different Developer

To assign an object to a different developer:

1. Select the object(s) in the object list.
2. In **Assigned To** field, select the developer you want to assign the object(s) to.
3. Click **Reassign**.

   If you are reassigning a file object and the **Copy to Working** option is selected, Stat prompts you to specify if you want to copy the file object to the new developer's working directory, and if so, whether to copy the file either from the original developer's working directory or from the base environment's source file location.

4. Select the options you want and click **OK**.
5. Save the CSR.

Stat updates the **Assigned To** field in the object list with the new developer's user ID. The new developer now has the lock on the object(s).

IMPORTANT: You must save the CSR before the reassignment can take effect

Removing Objects from a CSR

To remove objects from a CSR, select them and click **Remove**.

NOTE: You should remove an object only if it was added to the CSR in error. Modified objects should remain associated with a CSR for historical purposes.

Download File Objects

To download a single file object from environment, select the object in the list of objects and click **Download**.

Objects in the Base Environment

There are several situations when an object may exist in other generic application environments or source file locations on the migration path but not in the Base environment. Since initial archive of objects comes from the Base environment, these objects are not included in the base archive set.

Possible reasons an object exists in one environment but not in others are:

- You create a new object in the Development environment, which means it would not exist in any other environment
- You work on an object that was previously created in the Development environment but not yet migrated to any other environment
- You create a new file object in your working directory, which means it would not exist in any other environment

If you want to archive an object that does not exist in the Base environment, there are two different ways to do it for two different types of situations.

To add objects that do not reside in the Base environment:

1. On the **Objects** tab of the CSR window, select the environment in which the object exists.
2. In the **Object** field, select the object.
3. In the **Lock in environment** field, select **Current environment**.

To add objects that reside inside and outside the Base environment:

1. On the **Objects** tab of the CSR window, select the environment in which the object exists.
2. In **Object** field, select the object.
3. In the **Lock in Environment** field, select **All on Migration Path**.

By choosing the second method, the objects that exist in the Base environment are included in the base archive set. Those that do not exist are not added to the base archive set. You can include these latter objects in any interim or final archive sets taken from the environment where they reside.

Stat cannot create a base archive set if the objects in your CSR do not exist in your Base environment. While attempting to locate the objects, Stat permanently displays the value **In Process** in the **Status** field of the Archive Set window, and it will be unable to complete the archive set. If this happens, create an interim or final archive set from the environment that contains the objects and use this archive set to update the other environments with the new objects. For more information, see Creating Archive Sets (Generic Applications) on page 241.

Defining Working Directories for File Objects

When you are assigned a file object, Stat places a copy of that object in one of your predefined working directories. These working directories are defined either by a system administrator in a maintenance table, or you can define them yourself in the User Default Directories tab of the Stat User Options window.

The User Default Directories tab displays a list of the active file types defined in Stat for generic application environments. From here you can define your default working directory and a separate working file directory for each file type. Defining a working directory for a file type is optional. If a file type working directory is not defined, Stat places copies of the migrated file objects in your default working directory.

To set up a default working directory:

1. Select **User Options | Stat Options**. Then open the User Default Directories tab of the Stat User Options window.
2. In **Module** field, select **Generic Application**.
3. In **Default Working File Server** field, select the server for the default working directory.

4 In the **Default Working File Path** field, enter the path of the default working file location starting after the file server's root or home path.

5 Click **Apply** or **OK**.

If individual file types have separate directories you may set up file type specific directories. If all files are placed in one folder, you do not need to define file type directories.

To set up a file type working directory:

1 Select **User Options | Stat Options**. Then click the User Default Directories tab of the Stat User Options window.

2 In **Module** field, select **Generic Application**.

3 In the File Type column, select the file type you want to have a working directory for.

This activates the text box in the corresponding Working File Server column.

4 In Working File Server column, select the server that the working directory is on.

5 In the Working File Path column, enter the path of the working file location starting after the file server's root or home path.

6 Click either **Apply** or **OK**.

Associating Objects in File Folders

Stat can read a folder and add all the file objects it contains to a CSR. This is done with the Read File Wizard.

TIP: Before running the wizard, make sure you select your desired lock option and specify whether or not you want to copy the file objects to your working directory.

To run the Read File Wizard:

1 On the Objects tab, click **Read File...**.

2 Click **Next>**.

3 Click the **Browse** button. Then locate the folder containing the file objects you want to associate with the CSR and click **OK**.

4 Select the file objects you want to associate with the CSR. To select all the objects, click **Select All**. To deselect objects, click **Select None**.

NOTE: The Read File Wizard adds only file types defined in the Object Type Maintenance table.

5 Click **Next>**.

Stat processes your request and displays its progress in a status bar.

6 When the status bar reaches 100%, click **Finish**.

Stat adds the file objects to your CSR and associates each file with a file type, as determined by that file's extension. For example, if you select files with the .sql extension, Stat will associate these files with the file type defined by your system administrator with the .sql extension. If more than one file type has been defined with the same extension, Stat prompts you to select which file type you want.

This final step may take some time, depending on the number of objects being added. A status bar advises you of Stat's progress. Before the status bar reaches 100% you can interrupt the process by pressing the <Enter> key.

Adding Objects from VCM

You can use the Add Objects to a CSR from VCM feature to add multiple file objects at once to your CSR from a VCM repository

To add objects from a VCM repository using Add Objects to a CSR from VCM:

1 On the Objects tab, click the Add Objects from VCM... button. The Add Objects to a CSR from VCM window will display. The window, by default, displays (in the right pane) all of the files from all of the existing directories and subdirectories in the VCM repository. The left pane displays all of the existing directories and subdirectories. To filter the files displayed, select the desired directory and subdirectories in the left pane. Once a directory/subdirectory is selected, only the files in that directory/subdirectory will be displayed.

User Controls	Description
Revision	(Optional) Allows you to specify the VCM repository's revision/label from which to display any and all associated file objects. A revision/label can be manually entered along with the Retrieve button or to get a list of existing revisions/labels click the Retrieve button. The list of shown directories and file objects are filtered by the selected Revision.
Object Type	Allows you to assign a specific object type to the selected file objects in the file object list (the right pane). Select one or more file objects in the right pane and choose an object type in the list to associate those file objects with the object type.
Copy to Working	*(Optional)* If selected, the selected file objects (in the right pane) are copied from the VCM repository to your working directory as well as added to the CSR (upon clicking *Add to CSR* and saving the CSR).
Overwrite Existing Files	*(Optional)* Used in conjunction with *Copy to Working*, when selected any chosen file objects (in the right pane) of the same filename as any files in your working directory, will replace those files in your working directory. Otherwise, when unchecked, files of the same filename won't be overwritten.
Summary	Displays the total number of file objects (by Object Type) that have been selected (in the right pane); so that you can see how many total files of each Object Type and the total number of files in all will be added to the CSR. Note: Selected file objects that have not been associated with an Object Type are not counted in the Summary totals. Selected file objects must be associated with an Object Type before they can be added to the CSR (via Add to CSR).
Add to CSR	Closes the window and adds the selected files (in the right pane) to the CSR. Note: If and when a selected file or files are not associated to an Object Type, you will be prompted to associate the selected file or files with an Object Type. All selected files must be associated with an Object Type before they can be added to the CSR.
Cancel	Closes the window without adding any selected files to the CSR.

2 Search for and select the file objects (in the right pane) that you want to add from the VCM repository to the CSR.

3 Associate the desired/selected file objects with the appropriate Object Type. This can be done in few ways: You can select a file or multiple files and then choose a type in the Object Type list box. Upon selecting an Object Type, the selected files in the files pane will be associated with that Object Type. You can associate a file individually with an Object Type by clicking on the Object Type field in the files pane for that file. A list of available object types will display allowing you to select one.

4 Once all the desired file objects are associated with an Object Type and are selected, click Add to CSR. The Add Objects to a CSR from VCM window will close and the selected file objects will be added to the CSR

Associating Objects from Other CSRs

You can use the Read CSR Wizard to add objects to your CSR that are associated with another CSR.

To run the Read CSR Wizard:

1 On the Objects tab, click **Read CSR...**.

Stat opens the CSR Read Wizard.

2 Click the Lookup button.

Stat opens the Search CSR Engine, which locates specific CSRs in the database based on the selected search criteria, including CSR number, customer, open date, department, and tracking number. For more information on the Search CSR Engine, see Search Engines on page 65.

3 Locate the CSR you want in the Search CSR Engine. Then click **OK**.

Stat closes the Search CSR Engine and displays all the objects associated with the CSR in the bottom portion of the Read CSR Wizard.

4 Select the objects you want. Use the <Shift> and <Ctrl> keys to make multiple selections, or click **Select All** to select all the objects.

5 Click **OK**.

Stat adds the selected objects to your CSR. If the objects happened to be locked on the other CSR for the same environments specified in your CSR's migration path, Stat reserves them on your CSR.

NOTE: The assigned developer and lock options specified on the Objects tab of the CSR are applied to any objects added to the CSR by way of the Read CSR Wizard.

Creating File Objects

With proper security rights, you can create a new file object, add it to a CSR, and move it to the assigned developer's working directory. When you create a file object, you can either use a file template, or you can base it on an existing object.

In Stat, file templates are associated with particular file types. They help standardize development by defining in a reusable format the basic characteristics and structure of new file objects. This way, when you need to create a file object of a particular type, you can use an associated template as a starting point. This helps enforce adherence to development standards and saves time.

To create a file object:

1 On the Objects tab, select an environment and object type. Then click **New Object**.

Stat opens the New Object window, with the assigned developer and object type that you previously selected displayed as default values.

2 (Optional) In the **Assigned To** field, select a different developer.

3 If you want to base the new file object on an existing object, select **Existing Object** in the **Source** field.

4 (Optional) In the **File Type** field, select a different file type.

5 Do one of the following:

- If basing the new file object on a template and your system administrator has defined more than one template for the selected file type, select the file template you want to use in the **Template** field.
- If basing the new file object on an existing object, click the Browse button in the **Existing Object** field. Then in the Select File dialog box, locate and select the file object you want to use.

6 In the **New Object Name** field, enter a name for the new object. Then click **Create**.

Stat displays a series of warning messages telling you that the object does not exist in each environment in the migration path. For each environment, Stat asks you if you want to add the file object to the CSR.

IMPORTANT: If source file locations have not been defined for an environment, you cannot add an instance of a new file object to a CSR for that environment.

7 Click **Yes** for each instance of the object that you want to add to the CSR. Click **No** for each instance of the object that you do not want to add.

Stat adds each instance of the new object that you selected to the CSR. At this point, the file object exists only in the working directory of the assigned developer but is not yet archived. For more information, see Creating Archive Sets (Generic Applications) on page 241.

Download File Objects

To download a single file object from environment, select the object in the list of objects and click Download.

Editing File Objects

If you want to edit a file object associated with a CSR, you can open it directly from Stat with whichever program your operating system uses to open files of that type. When selecting a file object to edit, remember that you can choose from different versions of the same object. These include the versions that exist in users' working directories as well as all the source file locations defined for any of the environments on the migration path of the CSR. However, because source file locations do not include drive information, Stat cannot open a file object from the same location in which it resides for a selected environment. Instead, Stat copies the file to the file download directory. For Windows 7/8 it's *C:\Program Data\Quest Software\Stat\temp*.

It is important to remember that when you edit an object, you are editing only the version of the object that exists in the particular environment you selected. The same object may exist in other environments, and these versions are not affected by any changes you make to the edited version. If you want all your environments to contain the same version of an object, you have to migrate that object to each environment. For more information on, see Running a Migration (Generic Applications) on page 248.

Comparing Objects (Generic Applications)

After adding objects to a CSR, you can use Stat's object comparison tools to compare the definition of two objects or two versions of the same object. The object comparison tools can be used to compare objects in the following ways:

- Versions residing in two different environments on the migration path, including objects in the assigned developer's working directory and a VCM repository (if your system administrator has defined any VCM records and you have associated one with the CSR).
- Versions archived in two different archive sets on a CSR
- One version in an archive set and another version residing in an environment on the migration path
- Versions residing in two different patches or between a patch and an environment or an archive set.

For Oracle Applications, you can use the Object Comparison Wizard to compare the setup and developer type objects contained in non-merged patch zip files.

For file (non-developer) type objects, you can use the File Comparison Tool to compare the contents of two file objects and easily identify differences. Like the Object Merge Wizard, this tool also enables you to merge the two objects by overwriting sections of one file with sections of the other file. The newly merged versions can then be saved to the assigned developer's working directory and later included in a new archive set.

You can select the object(s) you want to compare in one of two ways: either directly from Stat, in which case you can select any source location that your user class rights give you access to, or you can open the wizard from a CSR, in which case you can select just the source locations associated with that CSR, such as the environments on the associated migration path, archive sets defined in the CSR, or in the case of Oracle Applications, patches associated with the CSR.

For detailed instructions on using Stat's object comparison tools, see Object Tools and Wizards on page 84.

Viewing your Object Environment (Generic Applications)

The Archive Sets tab displays information pertaining to object development within your generic application. From here, you can view information regarding all the environments in a migration path as well as create and migrate object archives. For more information, see Creating Archive Sets (Generic Applications) on page 241 and Running a Migration (Generic Applications) on page 248.

The Archive Sets tab is divided in two sections. The left section is a tree view showing all of the possible groupings of the information that appears on the right section of the tab. The tree allows you to navigate through the objects associated with the CSR as well as all the archives created for the CSR.

The buttons located on the top of the tap page, **Environment Info** and **Archive Sets**, control what type of information you see in the right section of the tab. When you click **Environment Info**, the window displays object information. When you click **Archive Sets**, the window displays object archive information.

The Tree Structure

The highest-level tree node is the CSR node. When you select this node, all of the objects associated with the CSR appear in the Environment Info table. Second level tree nodes include All Objects, Migration Path, and Developers. For generic applications, this node includes all the file objects associated with the CSR.

The Migration Path node sorts objects by the environments on the migration path. The first node is the Base environment, the second is the Development environment, and the remaining nodes correspond to the additional environments on the migration path. When you select an environment node, the list shows the objects in that environment. The Developers node sorts objects according to their assigned developer. When you select a developer node, the list on the right shows only the objects assigned to that developer.

The **Archive Sets** button becomes activated when you select any object or developer tree node. If the **Archive Sets** toggle button is active and you select one these nodes, the **Environment Info** toggle button automatically becomes active. This is because archive set information is not specific to these nodes and therefore cannot be filtered.

Click **Refresh Tree** to refresh the tree view if there are changes to the CSR, such as an object reassigned to a different developer or a newly added object.

Environment Info Table

When you click **Environment Info**, the Environment Info table appears in the right section of the tab page. This table displays information concerning versions of each object residing in each environment. Click the column headings to sort the rows of information in the Environment Info table.

The Environment Info table displays the following information:

Status

Indicates if the object is locked or reserved for the particular environment. If the object is exclusively locked by this CSR then the Status column displays a lock icon. If the object is reserved for the particular database then the column displays a reservation icon.

Class

Indicates the class of object. Object classes include PeopleSoft proprietary, data, schema, and file.

Type

Indicates the type of object.

Object

Displays the name of the object. In the case of a file object, such as a COBOL program, this is the file name.

Environment

The environment in which the object resides. For each file object in the CSR, the Environment Info table displays an additional row to represent the archiving and migrating activities in the user's working directories. For these rows, the Environment column displays the value "Work."

Mod

Indicates whether or not the object has been modified. For more information on this field, see CSR Object Documentation (Generic Applications) on page 236.

Assigned To

Displays the user name of the Stat user assigned to the object and therefore has the lock on the object. This does not have to be the same user who owns the CSR, and it can vary by object and database.

Current Archive ID

Indicates the current archive of the object in the specified environment. This value can come from the following types of activities:

- If the most recent archive set activity for the object and environment came from the creation of an archive where the specified environment was the source of the archive, then the Current Archive ID column displays the ID of that archive set.
- If the most recent archive set activity for the object and environment came from a migration of an archive set where the specified environment was the target, then the Current Archive ID column displays the ID of the migrated archive set
- If no archive set was created from or migrated to the specified environment for the object, then the Current Archive Set column displays a dash, “-”

Current Archive Set Source

For file objects, the column displays the environment as well as the exact file location from which the archive was taken.

Last Updated

The last date and time that changes were made to this object in Stat.

CSR Object Documentation (Generic Applications)

Stat is an effective source of information about the changes made to an object, but only if they are properly documented. Many processes are automated by Stat, but it is still the responsibility of developers to document their changes.

All information pertinent to a change should be readily available from the CSR. There are several areas in a CSR where you can document your changes. For instance, you can document the reason for the change in the Description tab. The information entered in the Description tab can be standardized through the use of templates. Other places to store pertinent information, such as affected modules and technical specifications, are the Detail Logs tab, the Resolution tab, and the Task/Time tab. You can also add external documents like test scripts to a CSR by inserting hyperlinks.

The Object List Table

More object-specific information is documented in the Object List table of the Objects tab, which shows all objects associated with a CSR. The Object List table shows such information as the lock status and object type, the environment in which it is locked or reserved, the assigned user, and the date when it was last modified. You can also read any comments attached to an object and access migration paths.

To sort information in the Object List, click a column heading to have the rows sorted based on that column, or click **Sort**. This opens the Specify Sort Columns dialog box, in which you can specify a sort order based on multiple columns.

Flags

The Flag columns display various icons that represent various types of information about an object.

Object Locked

Indicates that the object is exclusively locked by this CSR. As long as this icon is displayed, no other CSR can have a lock on the same object.

Object Reserved

Indicates that the current CSR has a reservation for this object.

Comments

Indicates that the object has comments associated with it. Comments can be accessed by double-clicking on the icon.

Single Archive Indicator

Indicates that a copy of the object has been stored in an archive set. This snapshot serves as a backup of the object prior to making changes.

Multiple Archives Indicator

Indicates that the object has been archived by multiple archive sets.

File Object

Indicates that the object is a file object type.

Data Object

Indicates that the object is a data object type.

Schema Object

Indicates that the object is a schema object type.

Type

Indicates the object type.

Object

Indicates the name of the object. This is usually the common identifier for the object in PeopleSoft, such as the name of a page. In the case of a file type object, such as a COBOL program, this is the file name.

Environment

The generic application environment in which the object resides.

Mod

Indicates whether or not a locked object has been modified. Initially, the field displays the value **PND** prior to the Stat Central Agent locking the object and determining its modification status. If for any reason the agent cannot add the object to the CSR, it returns a value **ERR**.

A file object has a modified status of **Unk** for each environment that contains the file object in at least one of its source locations. For each environment that does not contain the file object in any of its source locations, the file object has a modified status of **New**. Data objects have the same modified values as file objects, meaning it displays the status **Unk** if it does exist in an environment and **New** if it does not exist.

Assigned To

Indicates the Stat user who has the lock on the object. This can be different from the user who owns the CSR, and it can vary by object and environment.

Last Updated

The last date and time that changes were made to this object in Stat, followed by the name of the user who made the changes. If the record was last modified by the Stat Central Agent, the user ID defaults to “SYSTEM.”

Object Comments

Right-clicking on a selected object on the CSR Object list opens a pop-up menu with additional functions. Select **Edit Comments** from this pop-up menu. This opens the Object Comments window.

In this window you can edit or add comments to an object. You should use this space to document the changes made, why they were made, and any other pertinent information. You can also cut, copy, and paste into this window. You can add comments up to 2,000 characters in length.

For objects that have been added via the Read CSR Wizard, Stat automatically inserts a comment noting the source CSR, the date and time, and the user who performed the action.

Object Archives (Generic Applications)

About Archive Sets

Using Stat, developers can take ‘snapshots’ of objects as they exist in a particular environment and archive them indefinitely in the Stat Repository. Because archive sets are stored in the Stat Repository and not a generic application environment, you can archive different versions of objects and rollback to previous versions when necessary. This effectively makes Stat the “Undo” feature of your generic application.

Once a developer locks the objects that he or she wishes to change, Stat automatically takes a snapshot of those objects before any changes occur. This is called a base archive set. The base archive set is the “pre-change” version of all the objects locked in the CSR. You can use this snapshot, like all archive sets, to restore data objects and file objects to their previous state.

As you make changes to the objects, you can also create interim archive sets. This is effectively backing up your work as you go along.

The ability to create the archive sets that include file objects and/or data objects is activated at the service domain level by your system administrator.

Archive Set Types

You use archive sets to recover objects to environments and migrate completed changes. There are three main types of archive sets: Base, Interim, and Final. There is also a fourth type called Merged, which is the result of using the Object Merge Wizard to combine the definition of two versions of the same data object.

You can use any archive set type to restore or move objects. Each archive set contains objects that belong to one CSR, while the CSR itself may contain one or more archive sets, including the base, the final, and all the interim or merged archive sets.

When you create an interim or final archive set, you tell Stat what environment the archives of the objects should come from. For data objects, the archives come from the selected generic application environment. For file objects, the archives come from either the source file locations defined for the selected environment or from the working directory of the assigned developer.

System administrators define source file locations for each file type and working directories for each developer. Working directories are where users make their changes. When creating an archive set, you can take the file archives either from the environment’s source file locations or from the developer’s working directory.

Base Archive Sets

The base archive set is the most important because it contains the “pre-change” version of all the objects in the CSR. Stat automatically creates the base archive set when you save your CSR after locking objects. The base archive set is created from the Base environment in your migration path. Your system administrator defines which environment is the Base environment for each migration path. Your system administrator also defines each file

type's source file locations for the Base environment. It is from these locations that Stat takes the “pre-change” version of the file objects locked in the CSR.

NOTE: If objects are removed from a CSR, those objects are also removed from all the archive sets on that CSR. This keeps the base archive set accurate and up-to-date.

A CSR can contain only one base archive set, which contains all the locked objects. The base archive set is dynamic, meaning that Stat automatically adds to it objects that are locked in the Base environment after the set is initially created. The base archive set continues to grow as Stat issues more locks on objects in the CSR.

You should never delete base archive sets from the system since they contain objects in their original, “pre-change” state. The moment you request a lock on objects, Stat places a holder in the system for the base set. Before you save the CSR, the status of the base set is In Process. If you do not save the CSR, the objects are not locked and the base archive is not created.

Interim Archive Sets

As you make changes to objects, you can save the modified objects in interim archive sets. Interim archive sets contain objects that are currently being modified and can be taken from any environment on your migration path, although by default the source environment is Development. If the archive set contains file objects, the archive of the file objects is taken either from the first source location defined for the specified environment or the developer’s working directory.

You can create an unlimited number of interim archive sets. An interim archive set is also dynamic. Stat can add objects to it after it is created. However, you cannot add or delete objects from an interim archive set once it has been migrated. This is to keep referential integrity intact. If you need to archive an object that is not in one of your interim archive sets, just create a new interim archive set for that object.

An interim archive set can contain some or all the objects associated with a CSR. You create interim sets to save objects after significant changes have been made throughout the development process.

Final Archive Sets

Once your changes are completed and approved, you should create a final archive set. The final archive set is static, and although it is not mandatory that you create one, it is strongly recommended. A CSR can contain only one final archive set, and objects cannot be added to it once it is created. When the final archive set is created, Stat automatically adds to it all objects locked on the CSR.

You can create a final archive set from any environment on the migration path of the CSR. As with interim archive sets, if the final archive set contains file objects, the archive of the file objects is taken either from source locations defined for the particular file types or the developers’ working directories.

Merged Archive Sets

Merged archive sets are automatically created by Stat when you use the Object Compare Wizard to combine the definition of two versions of the same data object. Merged archive sets are automatically added to the CSR from which the original versions of the object were selected. A CSR can contain an unlimited number of merged archive sets. For more information on the Object Merge Wizard, see Object Tools and Wizards on page 84.

Archive Sets Table

The Archive Sets table shows the archive sets that have been created for a particular CSR. You can create and migrate archive sets whenever this table is displayed. To open the archive sets table, select the Archive Sets tab of the CSR window. The table appears in the right section of the tab page.

The **Archive Sets** button becomes activated whenever you select the CSR node, the All Objects node, or the Migration Path node in the tree view on the left side of the tab page. If you select any object or developer node in the tree structure while the Archive Set table is displayed, the view switches to the Environment Info table and the **Archive Sets** button becomes dithered. This is because archive set information is not specific to these nodes and cannot be filtered.

To view archive set information by environment, select any of the environment nodes under the Migration Path node. This filters the archive set table to show information about only the archive sets created from that environment.

To sort rows of information in the Archive Set table, click on the column headings.

The archive set table displays the following information:

ID

This is the archive set ID, which Stat automatically generates. Archive sets appear in the order you create them.

Source

This is the source environment from which you copied the objects in the archive set. It must be an environment in the migration path defined for the CSR. A “-w” appears at the end of the environment name if the archive set was taken from the Development environment and it contains files that were taken from the users' working directories rather than the source file locations of the development environment. If it was taken from a VCM repository, a “-v” appears on the end of the environment name.

NOTE: If the base archive set contains file objects, these are copied from the source file locations of the Base environment. Interim archive sets are copied from the Development environment by default.

Type

This is the type of archive set. Options include **Base**, **Interim**, and **Final**.

Description

This is the description you entered when you created the archive set. Descriptions help distinguish between different interim archive sets. Base archive sets always contain the description: “Stat Baseline Set.”

Objects

This indicates how many objects the archive set contains. For a base or final archive set, this number is the total number of objects locked on the CSR. An interim archive set may contain less than that number.

Archive Set Status

This indicates the current status of the archive set. Possible statuses include:

- **In Process** – Indicates that Stat is currently archiving the objects. When you add objects to a CSR, the archive set is in this initial status until all objects are archived. When the Stat is finished archiving, the status changes to Complete.
- **Complete** – Indicates that all objects are archived
- **Complete/With Errors** – Indicates that the archive set is created but errors were detected during the archiving process. For generic applications, this could mean that one of the environments is not clean, or it could mean that Stat could not find the file objects you wanted to archive, or that the file location information was not set up correctly. Some errors are so severe that the archive set is unusable. Refer to the Logs window for further information.
- **Complete/With Warnings** – Indicates that the archive set is created but warnings were issued during the archiving process. You can still migrate an archive set in this status. Refer to the Logs window and investigate further.
- **Delete Pending** – Indicates that the archive set is set for deletion. It remains in this status until Stat completes its tasks.
- **Deleted** – Indicates that Stat deleted the archive set

Ready to Migrate

If selected, this indicates one or both of the following:

- The archive set is to be included in a mass migration with other archive sets that target the same environment

- The migration of the archive set must be approved before it can be moved into the target environment

For more information on mass migrations and migration approvals, see Migration Approvals and Mass Migrations (Generic Applications) on page 251.

Migration Status

This indicates the status of any archive set that you marked as Ready to Migrate. Before you select the target environment(s) for the archive set, the status is N/A. After you select the target environment(s), the status is In Process. Once the archive set has been migrated to all the selected environment(s), **Ready to Migrate** is unchecked and the status reverts to N/A.

Create Date

This is the date that the archive set was created.

Buttons

The archive sets table features the following short cut buttons:

- **New** – Opens the Archive Set window in which you can define new archive sets
- **Edit** – Opens the Archive Set window in which you can edit the selected archive set
- **Delete** – Deletes the selected archive set
- **Refresh** – Refreshes the window with the most up-to-date information from the Stat Repository. You can also press <F5> to refresh.
- **Print** – Prints the contents of the Archive Set table
- **Migration Target** – Opens the Target Environments window for the source environment of the selected archive set. This button is activated when **Ready to Migrate** is selected for the archive set.

Creating Archive Sets (Generic Applications)

As you make your changes to objects, you should periodically make interim archive sets. This lets you save your work at that point in time. When all your changes are completed and approved, you should make a final archive set. The procedure for both is the same.

To create an archive set:

1 In the Archive Sets tab of the CSR window, click **New**.

This opens the Archive Set window.

In the Archive Set window you enter basic information about an archive set. Here you define the archive type and source environment and add a description and comments. This window also provides you with read only information, such as number of objects and the time and date the archive set was created.

> **TIP:** You can re-size this window as needed by clicking and holding an edge of the window and dragging to size you want.

2 In **Type** field, select the type of archive set you want to create.

Your options include **Interim** and **Final**. Base sets are automatically created by Stat.

> **NOTE:** You can create unlimited number of interim archive sets, but only one final archive set.

3 In **Environment** field, select the environment containing the objects you want to include in the archive set.

This environment should be the one in which you made your changes. The default environment for interim archive sets is Development.

> **IMPORTANT:** If the CSR contains a reserved object for the selected environment, you cannot create a final set. If the CSR contains an unlocked object for the selected environment, you can create a final archive set but Stat displays a warning message.

4 In the **Description** field, enter a short description of the changes you made to the objects.

   This entry helps identify the archive set elsewhere in Stat.

5 If you are adding file objects to the archive set, do one of the following in the **Files From** field:

   - Select **Environment** if the source environment is Development and you want to take the file archives from the environment's source file locations
   - Select **Working** if the source environment is Development and you want to take the file archives from the assigned user's working directories. Or select **No** if you want to take the archives from the source file locations of Development.
   - Select **VCM** if you have associated the CSR with a version control management record and you want to take the file archives from the VCM repository. After selecting this option, a VCM-specific field is displayed (**Revision** for SVN and P4, **Tag/Branch** for CVS and Git, **Label** for PVCS, and **Version** for TFS). In this field you can specify the particular version of the objects you want to add from the VCM repository. Your system administrator may have configured a default value, but you can override it either by entering the version you want manually or by clicking the control button and selecting the version from the dropdown list. If left blank, Stat adds the most recent version of the objects in the repository.

   NOTE: When you save the archive set, Stat retrieves the objects from VCM repository. Your system administrator can configure Stat to archive the objects themselves or pointer to those objects.

6 If you want to include the archive set in a mass migration based on application release label, select the release label you want in the **Release** field.

7 (Optional) Enter comments about the archive set.

   Comments can include a longer description of the changes or any other helpful information.

8 Click on the Objects tab.

9 In the Objects tab, click **Add....**

   Stat opens the Select Objects window, which displays a list of the objects contained in the base archive set.

   NOTE: When creating a final archive set, Stat automatically adds all the objects in the base archive set and does not open the Select Objects window.

   In the Select Objects window, click a column heading to have the rows sorted based on that column.

10 Select the objects you want to add to the archive set.

   An interim archive set can contain one, some, or all the objects in the CSR.

11 If you have performed previous migrations or deleted objects on the CSR, check the existence of each object by selecting it and clicking **Check Existence**.

   Stat goes out to the source environment or file locations and looks for the object. If it finds the object it displays the value **Yes** in the corresponding **Exists** field. If the object does not exist, Stat displays the value **No**. Objects that do not exist in the source environment cannot be included in the archive set.

12 Click **OK**.

   This returns you to the Archive Sets tab in the CSR window, which shows your new archive set at the bottom of the Archive Set table. The Status column will display the value In Process until the Stat Central Agent finishes archiving all the objects.

NOTE: Archiving objects is an optional function of Stat. If your system administrator sets up Stat to create archive sets, object archiving occurs automatically.

Archive Set Object Information

To see the details of your archive set, double-click on it in the Archive Set table. This re-opens the archive set window. The Details tab should look familiar since this is the tab you filled out when you created the archive set. The next tab, Objects, now contains all of the object information for the archive set.

NOTE: After adding objects to an archive set, the Migration Flags tab is added to the Archive Set Window. For more information, see Deleting Objects on page 244.

The Objects tab displays the following information:

Migr Order

N/A. Oracle Applications only.

Class

Indicates the class of object. Object classes include data and file.

Type

The object type.

Object

The object name.

Version

A version number internal to Stat. It indicates the number of times the object has been modified/archived in Stat for a given environment.

Status

Reflects the current status of the object. Possible statuses include:

- **Archived** – Indicates Stat finished archiving the object
- **Archive Pending** – Indicates Stat is in the process of archiving the object
- **Wait Lock** – Indicates Stat is waiting for Stat to issue the objects in this CSR a lock. You can archive only locked objects.
- **Delete Pending** – Indicates Stat is in the process of deleting the objects
- **Re-archive Pending** – Indicates Stat is in the process of archiving the object again

Errors

Indicates the number of errors found. See the Logs window for further details.

Warning

Indicates the number of warnings found. See Logs window for further details.

Source Information

If the object is a data object, this field shows the number of tables and rows in Stat used to complete the archive. If it is a file object, the field shows the exact file location of the archive source in the archive set.

Object Count

This information is displayed at the bottom of the window. It shows the total number of objects in the archive set and how many of these have been archived.

Buttons

The Objects tab features the following short cut buttons:

- **Add** – Adds selected objects to the archive set. Press this button and Stat displays a list of the objects.
- **Delete** – Deletes all of the objects in the selected archive set. You cannot delete objects from a base or final archive set.
- **Re-archive** – Instructs Stat to re-archive the objects
- **Refresh** – Refreshes the current display
- **Print** – Prints the contents of the window
- **Export** – Exports the contents of the window

  NOTE: Once an archive set has been migrated, you cannot add or delete objects from it. You should create a new archive set instead.

- **Default Order** – N/A. Oracle Applications only.
- **Reorder** – N/A. Oracle Applications only.
- **View** – For file or schema object types only, displays the definition of the selected object in a separate window.

Copying Archive Sets

When you copy an archive set, the copy retains the migration order set on the source archive set.

To copy an archive set:

1 In the Archive Sets table, select the archive set you want to copy and click **Copy**.

  NOTE: Only archive sets with a complete-type status can be copied.

  This opens the Archive Set window where you can edit the properties of the copied archive set as needed, including the archive type and source environment.

  When copying archive sets, be aware of the following:

  - You can select a different source environment, but if the objects don't exist in the new source, you have to add the missing objects if you want to include them in the copy.
  - When you save a copy as a final archive set, the number of objects in the archive set must equal the number of objects in the base archive set. If not, Stat prompts you to add the objects when you try to save the archive set.

2 Add a description of the archive set, and (optionally) edit the properties of the archive set as needed.

3 Click **OK**.

Deleting Objects

Stat lets you delete unwanted objects from selected generic application environments along a migration path. After adding the unwanted objects to an archive set, you can mark them for deletion. When you migrate an archive set containing objects marked for deletion to an environment, Stat deletes them from that environment. However, you can always recover deleted objects since they remain archived in the Stat Repository.

To mark objects for deletion:

1 Add the objects to the archive set.

2 When the Archive Set has completed, open the Migration Flags tab of the archive set.

3 In the Action field, change the setting to **Delete**.

4 Click **OK**.

If you decide that you do not want to delete an object marked for deletion before you migrate it, go back to the Migration Flags tab and in the Action field change the setting to **Copy**. Stat is now configured to migrate the object as it normally would by placing a copy of the object in the target environment rather than deleting it.

TIP: When you migrate an object marked for deletion, the object is deleted from that environment and cannot be included in any later archive sets taken from that environment. Because of this, it is recommended that you create an interim archive set of all of the objects that are marked for deletion before you migrate them. You can then migrate the interim archive set to each environment in which you want to delete the objects.

Archive Set Logs

The Logs tab of the Archive Set window displays any messages Stat logged during the archive process.

This tab provides you with a complete list of messages logged by Stat. It is a running log of the activities involved with the archive sets.

The Logs tab displays the following information:

Date and Time

The date and time the message was logged.

Object

Archive sets are created by processes run by different objects in Stat. These object processes each have their own capabilities and tasks. The Object column displays the Stat object that reported the message. These objects include:

- **Mgr** – The manager object creates, destroys, and instructs all the other objects
- **Trg** – Indicates the target environment
- **Src** – Indicates the source environment

Type

There are three types of messages: Information, Error, and Warning.

Information

The text of the message.

Buttons

The Objects tab features the following short cut buttons:

- **Next Error** – Navigates you through your error/warning messages
- **Print** – Prints the contents of the window. Pressing this button automatically sends a job to the printer. There are no print options.
- **Export** – Exports the information in this window. Pressing this button opens a Save As window. Several file types are available for selection using the vertical scroll. An Excel format is most useful for evaluating this data.
- **Clear** – Clears the logs generated for this archive set

Re-Archiving Objects

If for some reason the Stat Central Agent is unable to create an archive set without errors, rather than creating a second archive set, you can simply re-archive selected objects in the original archive set. When you re-archive objects, the Stat Central Agent deletes the original archive set and creates a new archive set containing only those objects you selected.

Although you can re-archive objects in any archive set, even those that were created without errors, you should only re-archive objects that were not successfully archived the first time. If you want to re-archive objects in an archive set that was created without errors, you should create an interim archive set.

To re-archive objects, in the Objects tab, select the objects you want to re-archive and click **Re-Archive**.

Object Migrations (Generic Applications)

Migration Overview

The previous chapter explained how to archive objects by creating archive sets. This chapter explains how to migrate archive sets between your generic application environments.

Migrating objects updates your environments with the most recent version of those objects, or, if necessary, lets you roll back your environments to earlier versions.

In Stat, migrating file objects entails moving them to designated source file directories or developers' working directories. For data objects, this means migrating them from one environment to another.

Migrations in Stat are not linear; a migration can go in any direction.

TIP: For a comparison of the various migration tools and techniques supported by Stat, see Appendix: Migration Options on page 262.

System administrators can set up Stat to support auto-migrating archive sets to multiple environments distributed over a network. This is done by designating particular environments within a migration path as distribution environments and then associating them with lists of interrelated environments. This way, when you migrate an archive set to a distribution environment, Stat automatically migrates the archive set to all the associated environments as well. This spares you the time-consuming task of migrating an archive set to each environment separately and is especially helpful when a migration path calls for more environments than the limit of nine that can be represented graphically.

When you migrate an archive set that contains both data objects and file objects, with the proper security rights you can choose to migrate just the data objects in the archive set, just the file objects, or both. System administrators can enforce that certain users only migrate file objects while others only migrate data objects.

Synchronizing Your Development Workspace

It is good practice to synchronize your development workspace with your base archive set. This ensures that you are making changes to the correct version of the objects. This is true of all your environments. As you make changes, you should create interim archive sets that document those changes and then migrate them to the appropriate environments. The migration process is virtually the same, regardless of the type of archive set.

The development workspace is where you make the changes. For data objects, this is the Development environment. For file objects, it can be either the Development environment's source file locations or the assigned developers' working directories. It is recommended that each developer make changes to file objects in their own working directories so that the changes can be documented and controlled. System administrators can enforce that developers modify objects only in either their working directories or in the source file locations.

Migrating File Objects

When an archive set contains file objects, the file archives are stored in the Stat Repository. When you migrate the archive set to a generic application environment, Stat copies the file archives from the Stat Repository to the source file locations defined for the target environment. If the file objects already reside in any of these source file locations, Stat replaces each existing instance with the archive copy. If the files exist in none of the source file

locations, Stat either copies the files to all the source locations defined for the target environment or copies the files to the designated default location. These options are set up by system administrators when configuring the target environment.

To migrate file objects in an archive set to the developers' working directories, you migrate the archive set to the Development environment. Stat gives you the option of migrating the file objects to the Development environment's source file locations, the developers' working directories, or to both. To migrate an archive set taken from the Development environment to the developer's working directories, or vice versa, the migration must be initiated from the Archive Sets tab, not the Migration Path tab.

If two or more environments on a migration path share the same source file locations for a particular file type, whenever you migrate an archive set that contains file objects of that type to one of the environments, by default the file objects are also migrated to any other environment that shares the same source file locations. For example, if the Development environment and Quality Assurance environment share the same source file locations for COBOL file objects, and you migrate an archive set containing a COBOL file object to Development, Stat documents that the same file object was also migrated to Quality Assurance. This eliminates the time consuming process of having to perform multiple migrations in order to document the migration of the same file objects to each environment on the migration path.

NOTE: Unix and Windows-based file servers have different formats for ASCII type file objects. Accordingly, when you migrate an ASCII type file object via SFTP, the Stat Central Agent checks its destination file server. If the server is Unix, the agent converts the file to the Unix ASCII format, which means singly occurring carriage returns followed by linefeed characters are converted to linefeed characters. If the destination server is Windows, the agent converts the file to the Windows ASCII format, which means singly occurring linefeed characters are converted to carriage returns followed by linefeed characters. In either case, the size of the migrated file may be smaller or larger than it was before it was migrated.

Migrating Data Objects

As with file objects, data object definitions are archived in the Stat Repository. When you migrate an archive set that contains data objects, Stat copies the data object definitions from the Stat Repository to the target environment. If the data object already exists in the target environment, Stat replaces that object definition with the archived copy using the delete and insert method.

Migrating to Distributed Environments

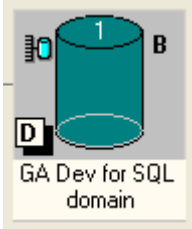
When you migrate objects to a distribution environment, by default Stat migrates those objects to all the environments on its distribution list. However, you can opt to exclude certain environments from the migration.

When defining a migration path, system administrators designate distribution environments and add other environments to their distribution lists. For example, let's say you have ten production environments and each one physically resides in a different location. All of your development work is done centrally, and when ready, changes are migrated out to all the production environments at the same time. Most likely your system administrator would define the local or 'in-house' production environment as the distribution environment and connect it to the nine other production environments.

Although connected to the distribution environment, the other environments are not represented graphically and are not technically part of the migration path. This means that objects cannot be locked in the environments on a distribution list. Also, objects can only be migrated to them, not from them.

TIP: Because objects are not locked when migrated to the environments connected to a distribution environment, it is recommended that your system administrator not include these environments in any other migration path. This eliminates the possibility of two developers accidently overwriting each other's work.

Graphically, distribution environments are designated by a small icon displayed to the left of the environment graphic, as shown below:



To view a listing of the environments connected to the distribution environment, double-click on the distribution icon. Stat opens the Distributed Environments window, which shows a list of all the environments connected to the distribution environment.

In this window, you can deactivate any environment you do not want to include in a migration. This way, when you migrate an archive set to a distribution environment, Stat migrates the objects only to the active environments in the distribution list. To deactivate all the environments, click **Set All Inactive**. If you want to reactivate an environment, you can do so at any time by selecting the Active check box, or if you want to reactivate all the environments, click **Set All Active**.

Also, Stat does displays an error message if it successfully completes a migration to a distribution environment but not to one or more of its associated environments (which would be the case if, for example, the password to one of the environments was incorrect). Instead, this information is displayed in the Migration History window. For more information, see Documenting Migrations (Generic Applications) on page 257.

Running a Migration (Generic Applications)

To run a migration:

1 Open the CSR window and do one of the following:

- In the Migration Path tab, click and hold your cursor over the source environment for the archive set and drag and drop it in the target environment.
- In the Archive Sets tab, drag and drop the archive set you want from the table to the target environment's tree node.

> **IMPORTANT:** Before you can migrate an archive set into an environment that requires migration approval, one or more authorized users must approve the migration. For more information, see the section Migration Approvals and Mass Migrations (Generic Applications) on page 251.

Stat opens the Migration window.

2 (Optional) If you want the Stat Central Agent to process the migration job at some later time, enter the date and time in the **Migration Date** field.

The field defaults to the current date and time. You can schedule the migration up to 90 days in the future.

3 (Optional) In the **Description** field, enter a unique description of the migration.

The field defaults to CSR ID+Archive ID.

4 (Optional) Select the **Stop on Error** option if you want the Stat Central Agent to terminate the migration at the first error it encounters.

System administrators may set this option to be selected or de-selected by default.

5 (Optional) De-select the **E-mail Notification** option if a business rule or personal rule triggered by a migration event has been defined for the service domain and you do not want Stat to send email notifications that may be triggered by the migration.

This option is selected by default and is displayed only if one or more Migration Notification business or personal rules have been defined for the service domain. Fore more information, see Defining Personal Rules on page 78.

6 Select the archive set you want to migrate.

The window displays a list of archive sets that you can migrate from the selected environment. If you initiated the migration from the Archive Sets tab, the list displays only the archive set that you dragged and dropped onto the target environment.

By default, all the objects in the archive set are selected for the migration. However, with the appropriate security rights, you can exclude either all the file objects or all the database objects from the migration. You can also exclude individual objects.

7 (Optional) De-select the class of objects (file objects or database objects) you do not want to migrate.

8 (Optional) In the **Migrate** column, de-select the individual objects you do not want to migrate.

If you are migrating to a distribution environment, the window displays the list of active target environments. By default, each environment in the distribution list is selected as a target. However, with the appropriate security rights, you can exclude certain environments from the migration.

9 (Optional) If migrating to a distribution environment, de-select any environment in the list of active target environments you want to exclude from the migration.

10 If the archive set contains file objects and the target environment is Development, select one of the following options in the **Migrate file to** field:

- **Development Env** – Select if you want to place the file objects in the source file locations of the Development environment
- **Working** – Select if you want to place the file objects in the developers' working directories. Only the file objects assigned to each developer get copied into their working directories.
- **Dev & Working** – Select if you want to place the file objects in both the source file locations and the working directories. If the archive set does not contain any file objects or the target environment is not Development, this option is dithered with a value of "NA."

11 Click **Migrate**.

At this point, Stat prompts you to perform the pre-migration steps (if any) that have been defined for the target environment or for the objects or object types in the archive set.

12 Complete any required pre-migration steps.

For more information, see Pre and Post Migration Steps on page 249.

After completing the pre-migration steps, Stat opens the CSR Migrations Console, which shows that the migration job has been submitted to the Stat Central Agent. The Agent either begins processing the migration immediately, or if you scheduled the migration, at the date and time you specified. For more information, see Migration Console on page 48.

If you are only migrating file objects, Stat copies the file objects into the target environment.

Pre and Post Migration Steps

Pre and post migration steps define certain activities you should perform before and after migrating an archive set. Migration steps are performed either manually by the user or automatically by Stat. The steps are meant to promote adherence to development standards and are not mandatory or enforced.

Pre and post migration steps can be associated with object types, object classes and with target environments. This means that when you initiate a migration with an archive set that includes an associated object type or class, or when you initiate a migration to an associated target environment in either a single or a mass migration, Stat opens the Pre Migration Steps window. This window displays a checklist of recommended actions that should be taken before the archive set is migrated.

NOTE: System administrators can define pre migration steps that are not associated with either an object type or an environment. In this case, the step is triggered for all migrations.

As with Pre Migration steps, after you successfully migrate an archive set that contains an associated object type or class, or after you migrate to an associated target environment, Stat opens the Post Migration Steps window.

Regarding Pre and Post Migration Steps windows:

- If the target environment is also a distribution environment, the distributed environments are listed in italics

- For mass migrations, the CSR id is also listed on the left side of the window
- The windows can also be opened from the Environment Status window and from the search results window of the Migration History Wizard

Unlike the Pre Migration Steps window, the Post Migration Steps window is not opened automatically. Instead, post migration steps have a default status of **Pending**, which means that until the user changes the status of a post migration step to either **Complete** or **N/A** (Not Applicable), the migration will have a status of **Wait for Post Step** in the Migration Console. This is how Stat prompts users to complete post migration steps as intended. Once all the post migration steps have been marked as Complete or N/A, the status of the migration will change to **Complete**.

Running Automatic Migration Steps

Automatic steps consist of custom commands defined by your system administrator. For more information on automatic steps, see the *Stat System Administration Guide*, Chapter 5, “Service Domain-Specific Maintenance.”

To execute an automatic step, click **Run**. Depending on the step, Stat may prompt you to specify additional parameters.

Custom commands are operating system commands executed by the client server that Stat is running on. When a custom command step is triggered, Stat opens the Custom Command Variables window. Here you can edit the command by adding or replacing parameters as needed, or you can run the command directly.

When defining a command, system administrators can include predefined parameters and user and server-based parameters that have been defined in Stat. This provides a convenient way to specify values commonly invoked by operating system commands, such as server names and download directories. In addition, parameters offer a way to secure sensitive information by encrypting values that you do not want visible to users, such as passwords.

Predefined parameters specify values used to login to a target environment during a migration (database name, user name and password), whereas user and server-based parameters generally invoke values specific to the users and file servers defined in Stat. Also, certain parameters may be defined so that their values are different depending on which user or server they are being applied to. For more information on pre and post migration step parameters, see the book, *Stat System Administration*, Chapter 4, “General Maintenance Tables”.

To edit a custom command migration step:

1 In the **Command with parameters** field, enter the command you want Stat to run.

If you want to include parameters in the definition of the command, click the location where you want to insert the parameter and then double-click the parameter you want to insert. When included in a command, parameters are enclosed in double % signs, for example, “%%GL_PWD%%”.

Certain users and servers may have parameters that have been defined exclusively for them, or the value of a particular parameter may be different depending on which user or server it is being applied to. When the Stat Command Editor is first opened, the parameters are listed as they have been defined for the local client server and the current user. If you want to include parameters defined for a different server, click in the **Server** field and select the server you want. Although you cannot select a different user in the **User** field, when a user executes the command during a post migration, they will have the option of inserting their own parameters or overriding default values.

> **NOTE:** System administrators can restrict user access to certain servers at the service domain level. The servers displayed in the **Server** field drop-down list may be limited if the server access of the current user has been restricted. For more information, see *Stat System Administration*, Chapter 3, “Stat Security.”

2 If the command you want to execute opens a window, specify if you want the window minimized, maximized, or normal size.

This value is saved and used at run time.

3 Click **Interpret >>**.

The **Interpreted Command** field displays how the command is interpreted by the client server. Null values and encrypted values are enclosed in angle brackets. Encrypted values are not displayed but replaced with asterisks.

4 (Optional) Verify that you defined the command properly by selecting the server you want to use to test the step in the **Server** field.

> **NOTE:** This is for testing purposes only. During execution of the step a user can select a different server.

5 Click **OK**.

Viewing Migration Step History

To view the history of any automatic step, select it and click **History**. This opens the Migration Step History window, which displays a record of each time Stat successfully executed the command. These records display the date and time the step was run, the user who ran it, and what parameters were used.

To view the log for the step, click **Log**. To print the history table, click **Print.** To export it to a file format, click **Export**.

To run pre and post migration steps:

1 In the Pre or Post Migration Steps windows, run each automatic step you want Stat to perform, specifying any additional parameters you want.

2 Select **Complete** for each step that Stat performs successfully.

> **NOTE:** Stat displays an error message if it is unable to execute an automatic step. Also, Stat does not notify you if after it completed the step successfully the external application encountered errors. For example, when running the Compile Command step, Stat only knows if the command was executed properly. It does not know if the compile was successful or not. In this case, you will need to check the compile yourself.

3 (Optional) Complete any manual steps, or perform them at a later time as required. Then select **Complete** for each step you perform.

> **NOTE:** Until a post migration step has been marked as either **Complete** or **N/A** (non-applicable or not applied), the migration will have a status of **Wait for Post Step** in the Migration Console. Once all the post migration steps have been marked as **Complete** or **N/A**, the status of migration will change to **Complete**.

When defining a pre and post migration step, system administrators can specify whether the step should be automatically included for each migration or once per target environment. This prevents Stat from prompting users to run the same step unnecessarily multiple times.

4 Click **OK**.

At this point, Stat does one of the following, depending on the type of migration step:

- In the case of pre migration steps, Stat initiates the migration to the target environment.
- In the case of post migration steps, Stat displays the Migration Path tab, which shows the base archive set successfully migrated to the Development environment.

Your migration path now shows the base archive set in your Development environment. You can go into the Development environment and begin making changes to the generic application objects.

The process is the same for migration of all types of archive sets.

Migration Approvals and Mass Migrations (Generic Applications)

Stat provides advanced version control and change management support in the form of migration approvals and mass migrations:

- Migration approvals provide a way for system administrators to maintain data integrity in generic application environments. Before you can migrate an archive set into an environment that requires migration approval, one or more authorized users must approve the migration.
- Mass migrations allow a user to group objects selected from multiple archive sets and migrate them as a single unit to the same environment. There are two ways to perform a mass migration, either by flagging individual archive sets as candidates for a mass migration, or by specifying an application release label assigned to certain archive sets within the service domain.

Marking Archive Sets for Migration

When you want to perform a migration that requires approval, or you want to flag an archive set for a mass migration, the first step is to mark the archive set for migration. This is done either by individually selecting the **Ready to Migrate** option on the Archive Sets tab of the CSR window, and then selecting the environment(s) that you want to target, or by marking multiple archive sets in the Ready to Migrate window.

NOTE: The security right, GenApp Archive Set - Ready to Migrate, allows you to mark an archive for a migration even if you do not have the user class rights to perform migrations. This way, users that have migration rights can migrate your archive set for you.

Marking Individual Archive Sets

To mark an archive set for a migration:

1. On the CSR the archive set belongs to, open the Archive Sets tab of the CSR window.
2. In the Archive Set table, select **Ready to Migrate** for the archive set. Then click **Apply**.
3. Click **Migration Target**.

   This opens the Target Environments window. Here you can specify the environment(s) to which you want to migrate the archive set.
4. In the table on the right side of the window, select **Migrate** for each environment that you want to designate as a target environment.

   NOTE: In the table displayed in the right section of the Target environments window, distribution environments and their associated distributed environments are designated by small blue and yellow icons, respectively. When you select **Migrate** for a distribution environment, all the environments on its distribution list are selected as well. Also, you cannot select a distributed environment without selecting its distribution environment as well.
5. Click **Premigration List** to view a checklist of any actions you should take before migrating the archive set.
6. For more information on pre migration steps, see the section, Pre and Post Migration Steps on page 249.
7. Click **OK** or **Apply** to save your work.

   Once you click **OK** or **Apply**, the archive set appears in the Mass Migration window for the target environment, and the approval requests, if any, are generated and sent out to each user authorized to approve the migration.

   TIP: If you later decide you do not want to migrate to a particular environment, deselect it in the Target Environments window. When you click **OK** or **Apply**, any approval requests that were generated the first time are deleted.

Marking Multiple Archive Sets

The Ready to Migrate window displays all the archive sets that have not yet been individually marked for migration and which share the same release label and environment on the migration paths of their respective CSRs. After you specify the target environment and release label, Stat retrieves all the qualifying archive sets that have not been marked for migration. Retrieved archive sets are marked for migration by default. You can unmark any archive set you do not want marked as Ready to Migrate.

To mark multiple archive sets for migration:

1 Select **Migration Management | Archive Sets - Ready to Migrate**.

2 In **Module** field, select the change management module you are using.

3 In **Service Domain** field, select the service domain of the archive sets.

4 In **Environment** field, select the migration target environment of the archive sets.

Stat retrieves archive sets that share the selected environment in the migration paths of their respective CSRs.

5 In **Release** field, select a release label. Stat retrieves archive sets that have been assigned to that release.

Release labels can be minor or major and are defined by system administrators.

> **NOTE:** A Minor release is considered a branch of its parent release. This means that when you select a minor release label, Stat retrieves all the archive sets assigned the parent release labels as well. For example, using a typical version sequence, if you select the release label 2.2.1, Stat also retrieves archive sets assigned its parent release labels, 2.2 and 2.0.

6 (Optional) Deselect **Ready to Migrate** for any archive set that you do not want to be marked for migration.

7 Click **OK** to save the archive sets as Ready to Migrate.

Approving Migrations

Before you can migrate an archive set into a generic applications environment, you may need to get the migration approved by users authorized to approve migrations into that environment. Conversely, if you have been designated as a migration approver for a particular environment by your system administrator, other users may need your approval before they can migrate archive sets into that environment. Migration approvals are environment-specific. They provide a way for users (typically managers and development leaders) to monitor and control migrations into environments containing sensitive information, such as object definitions that should not be modified or overwritten.

Approval lists can be either required or optional and can include individual users, entire user classes, or a combination of the two. Although system administrators can add user or class to an approval list, be aware that only users that have access to an environment (as determined by system administrators in the User Maintenance table) will be able to approve a migration into that environment or receive email notifications regarding their pending approval. If an approver does not have access to the environment, the migration cannot be approved until either the user is granted access to the environment or their approval is overridden by another user with proper security rights.

> **TIP:** To check whether migrations into a particular environment require approvals or not, see the Approval Required column in the environment table of the Target Environments window.

For more information on migration approvals, see the *Stat System Administration Guide*, Chapter 4, “General Maintenance Tables.”

To approve a migration:

1 Select **Migration Management | Migration Approvals**.

Stat opens the Migration Approvals window.

The first tab, My Open Approvals, shows all the pending migrations (if any) for which you are a designated approver. The data is grouped by CSR in a tree view, along with archive ID and target environment. Open the tree to see the approval status of specific pending migrations. A green check mark indicates that the approval requirements for the migration have already been satisfied by other users, whereas a red X indicates that one or more users have rejected the migration, thereby preventing the migration from running until the rejection status has been resolved.

> **IMPORTANT:** A migration cannot go forward if just one approver rejects the migration, even if that user’s approval is not otherwise required. Before the migration can occur, either the user or another user authorized to override migration approvals must change their migration approval status from Rejected to Approved or to Pending.

Your approval can be made either as an individual or as the member of a user class. Also, approvals are either required or optional:

- If required, Stat cannot perform the migration until you approve it. With a required user class approval, every user in the class must approve the migration.
- If optional, then you are one out of a number of users authorized to approve the migration. Whenever an approval is marked as optional, the Min Approval column displays the minimum number of optional users who must approve the migration before the archive set can be moved into the target environment.

TIP: Double-click an approval record to open its associated CSR.

The second tab, All Open Approvals, shows the same information as the My Open Approvals tab, except it shows the approval records for all users for each pending migration. This tab is for informational purposes only unless you have the user class right to override migration approvals, in which case you can approve migrations and change approval statuses for other users. Each user's approval record is displayed until the migration has taken place.

2 In the My Open Approvals tab, select **Approved** in the Status column for each migration that you want to approve. If you do not approve the transfer, select **Rejected**.

3 Click **OK** or **Apply** to save your changes.

If you selected **Rejected**, the approval record stays on the My Open Approvals tab until you change it to **Approved**, or the migration approval is overridden, or the archive set is changed so that it is no longer ready to migrate.

4 (Optional) Do the following if you have the right to override migration approvals:

a Open the All Open Approvals tab and approve or reject migrations for other users or change the migration approval status other users as needed.

TIP: With proper security rights, you can also change the status of your own migration approvals.

If you change a migration approval status for yourself or another user, Stat prompts you to document your reasons for doing so.

b If prompted, document the reasons why you are changing your own or another user's migration approval.

c Click **OK** or **Apply** to save your changes.

A record of the approval remains on the All Open Approvals tab until the migration takes place.

You can also approve the migration of an archive set in the Target Environments window of the CSR.

To approve a migration in the Target Environments window:

1 Open the CSR to which the archive set belongs. Then follow the instructions for opening the Target Environments window for the archive set as described in the preceding section.

2 In the table on the right side of the window, select the target environment of the archive set. Then click **Approval Lists**.

This opens the Approval List for Target Environment window, which displays all the optional and required approvals that are still pending for the migration of the archive set.

3 Double-click your corresponding row. Then in the popup menu, select **Approved**.

4 Click **OK** or **Apply**.

TIP: With proper security rights, you can make approvals for other users. You can also unapprove all approvals by clicking **Unapprove All.** This allows you to deselect the **Ready to Migrate** check box for the target environment. When you override another user's approval, Stat records you as the approver, not the user originally assigned to make the approval.

You can view records of migration approvals from the Migration Details window. For more information, see Documenting Migrations (Generic Applications) on page 257.

Approval Request Notifications

If you want to notify users about migrations that are still pending their approval, you can email a message predefined by system administrators. In the tree list of approvers, select the node representing the user or class that you want to notify and click **Email.** An email job request is sent to the Stat Central Agent, which processes the request and sends an email to the user you selected or to each member of the selected class. A "@" sign is displayed for that approver node in the Envelope field of the Approval List tab.

NOTE: The **Email** button is disabled once the approval requirements of a migration have been satisfied.

System administrators can also configure the Stat Central Agent to include links in the reminder message that the recipient can click to approve or reject the migration. This sends an email back to the Stat Central Agent, which processes the response email and changes the approval status to **Approve** or **Reject**, depending on which link the approver selected.

NOTE: When an approval status is changed by responding to a reminder message, the **Update Date** field in the Approval List window will be automatically populated and the **Update By** field will display the value, **Via Email**.

Approval notification reminder messages can also be sent for workflow status transfers and Oracle Apps patch applications. For more information, see the book *Stat System Administration*, Chapter 7, "Email Configuration".

Mass Migrating Objects

If you need to migrate several archive sets to the same environment, rather than migrate them one at a time, you can perform a mass migration. There are two types of mass migration supported by Stat:

- Using the Ready to Migrate method, you can include as many archive sets from different CSRs in a mass migration as you want, even if the objects are assigned to different developers and come from different source environments.
- Mass migrating archive sets based on an application release label allows you to quickly update a target environment with the latest version of objects or roll back to earlier versions.

Because mass migrations can include objects assigned to different users and belonging to different CSRs, it is recommended that a limited number of users be allowed to perform mass migrations. With proper security, users can perform mass migrations that override workflow rules and approval requirements. In addition, Stat features the Release Recovery window, which allows users to perform application release mass migrations that override workflow rules, approval requirements, and object locks. For more information on the Release Recovery window, see Object Tools and Wizards on page 84.

To perform a mass migration:

1. Mark each archive set for a migration, as described earlier in this chapter.
2. Select **Migration Management | Mass Migration**.

   Stat opens the Mass Migration window.

   TIP: You can resize the window and the panels as needed to view the complete listing of archive sets and objects.

3. (Optional) If you want the Stat Central Agent to process the migration job at some later time, enter the date and time in the **Migration Date** field.

   The field defaults to the current date and time. You can schedule the migration up to 90 days in the future.

4. (Optional) In the **Description** field, enter a unique description of the migration.

   The field defaults to "Mass Migration".

5. (Optional) Select the **Stop on Error** option if you want the Stat Central Agent to terminate the migration at the first error it encounters.

System administrators may set this option to be selected or de-selected by default.

6 In the **Module** field select **Generic Applications**.

> **TIP:** You can set a default value to be displayed in the **Module** field. To do this, select **User Options | Stat Options**. Then in the Stat User Options window, select the value you want in the **Default Module** field.

7 In the **Service Domain** field, select the service domain associated with the migration path containing the target environment you want.

The service domain you select filters the list of target environments as well as the list of release labels if you opt to mass migrate objects assigned the same release label.

8 In the **Target** field select the environment to which you want to migrate the archive sets.

If using the Ready to Migrate method, Stat displays a list of each archive set that has been marked as Ready to Migrate into the selected environment.

9 In the **Type** field select one of the following:

- Select **Ready to Migrate** if you want to mass migrate archive sets that have been individually marked for migration
- Select **Migration by Release** if you want to mass migrate archive sets that have been assigned the same application release label. When you select this option, the **Release** field is displayed. Then in the **Release** field select the release label you want. Release labels can be minor or major and are defined by system administrators. After you select a release label, Stat displays a list of archive sets that have been assigned that label.

> **NOTE:** A Minor release is considered a branch of its parent release. This means that when you mass migrate archive sets based on a minor release label, Stat migrates all the archive sets assigned the parent release labels as well. For example, using a typical version sequence, if you mass migrate archive sets labeled release 2.2.1, Stat also migrates archive sets assigned its parent release labels, 2.2 and 2.0. When the same object is found in archive sets with different release labels, Stat migrates the object with the latest release label.

10 (Optional) In the **Sources** section, deselect **Migrate** for each archive set that you do not want to include in the mass migration.

By default, this check box is selected for each archive set that has met migration approval requirements.

> **NOTE:** Using the Ready to Migrate method, if the same object exists in two or more archive sets, Stat displays a message box prompting you to select which object you want to migrate.

11 (Optional) In the **Archive Migr Order** column, change the order in which selected archive sets will be migrated.

By default, Stat assigns archive sets a migration order number. The first archive set is assigned the order number 1, the second 2, and so on. You can change this order by assigning your own order numbers. Lower order numbers are migrated first.

With the proper security rights, you can exclude certain object classes from the migration. You can also exclude individual objects. If the same object is contained in more than one archive set, the most recently archived version is selected by default in the **Migrate** column. You can override this selection by selecting a different version.

12 (Optional) Deselect the class of objects (file objects or database objects) you do not want to migrate.

13 (Optional) In the **Migrate** column, deselect the individual objects you do not want to migrate.

If you are migrating to a distribution environment, the window displays the list of active target environments. By default, each environment in the distribution list is selected as a target. However, with the appropriate security rights, you can exclude certain environments from the migration.

14 (Optional) If migrating to distribution environment, deselect any environment in the list of active target environments you want to exclude from the migration.

15 Click **Migrate>**.

At this point, Stat prompts you to perform the pre-migration steps (if any) that have been defined for the target environment or for the objects or object types in the archive set.

16 Complete any required pre-migration steps.

For more information, see Pre and Post Migration Steps on page 249.

After completing the pre-migration steps, Stat opens the CSR Migrations Console, which shows that the migration job has been submitted to the Stat Central Agent. The Agent either begins processing the migration immediately, or if you scheduled the migration, at the date and time you specified. For more information, see Migration Console on page 48.

Mass Migrating to a Distribution Environment

Keep in mind the following when mass migrating to distribution environments:

- When you flag a distribution environment for migration, all of the distributed environments are automatically flagged for migration as well.
- When you mass migrate to a distribution environment, the objects are migrated to all the active environments in the distribution list.
- You can only mass migrate to a distributed environment by migrating to the distribution environment. After migrating to a distribution environment, the distribution environment and distributed environments are no longer flagged for migration, even if some of them were not included in the migration.
- The distribution environments can be on different migration paths

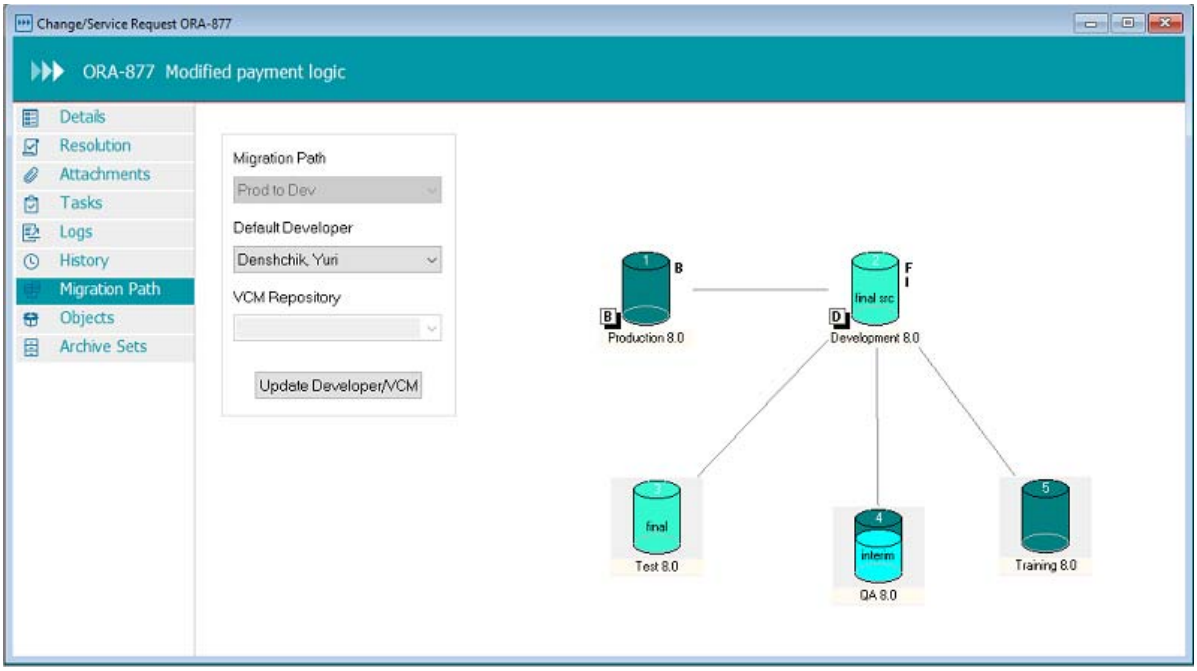
The mass migration cannot proceed for the following situations:

- The selected archive sets have different distribution environment types for their target environments (One is ‘Yes’, the other is ‘—’).
- When distribution environments are selected, the distribution environments have different distributed database lists
- The migration has not received all the necessary approvals. If a distributed environment requires user approvals before a migration can take place, and one or more of the archive sets did not get necessary approvals, none of the archive sets included in the mass migration will be migrated into that environment. Stat only migrates to the distributed environments that either do not require approvals or have received approvals for each archive set included in the mass migration.

If any archive set is causing errors when mass migrating, you can opt not to include that archive set in the mass migration. You can then mass migrate the other archive sets and resolve the issue at a later time.

Documenting Migrations (Generic Applications)

After creating and migrating a base, interim, and final archive set, your migration path may look like this:



The sample migration path above shows:

- The migration path has 5 environments
- At least 3 archive sets have been created: 1 base, 1 final, and at least 1 interim
- The base archive set was migrated to Development 8.0 from Prod 8.0
- An interim archive was created in Development 8.0 and migrated to QA 8.0
- The final archive was created from Development 8.0 and migrated to Test 8.0
- No archive sets have been migrated to Train 8.0 or Prod 8.0

Flag Indicators

Flags appear to the right of environment graphics and indicate that an archive set was created in that environment. Flags include ‘B’ for base, ‘I’ for interim, and ‘F’ for final. If multiple interim archive sets were created in an environment, only one ‘I’ flag is shown.

Migration Indicators

When you migrate an archive set, the target environment graphic appears to fill up. When you migrate an interim archive set, the environment graphic appears half full, and the color changes. When you migrate the final archive set, the environment graphic appears full and the color changes again. Migrating the final archive set fills up both the source and target environments. Also, the graphic for the source environment of the final archive set reads “final src.”

Migration Details Window

The Migration Details window displays information regarding all the archive set migrations into the selected environment. To open the Migration Details window, double-click on an environment graphic in the Migration Path tab, or right-click on an environment tree node in the Archive Sets tab and select **View Migration Status.**

You can also open the Migration Details window from the Migration History Wizard and the Migration Console. For more information, see Migration Details Window on page 50.

When you open the Migration Details window by double-clicking an environment, the window shows information regarding all the migrations that have targeted that environment.

A

Appendix: Troubleshooting Chart

This appendix provides detailed explanations of some error messages you may receive while using Quest® Stat®, along with possible solutions. The information is categorized according to the application component or function that the errors concern. For problems not listed in this section, please contact Quest Technical Support.

- Stat Database
- Login/Connection
- CSRs
- Stat Web
- Archiving and Migrating
- Printing

Stat Database

Problem	Explanation/Solution
Receive the following error when archiving large sets of objects: “Select error: ORA-03232: unable to allocate an extent....”	Have your DBA re-size the temporary segments in the database to a minimum size of 1 MB initially and increase by increments of 1 MB if problem recurs.

Login/Connection

Problem	Explanation/Solution
Receive the following error message when logging in: “Unable to complete ‘First Pass’ login.... Invalid username/password.”	Verify that the login ID field in the Stat.ini is correct. Normally, this is “STATLOGIN.” Verify that the STATLOGIN account is defined at the environment level.
Receive the following error message when logging in: “Unable to complete ‘First Pass’ login.... DBMS (073/MSS) is not supported on your current installation.”	Re-install Quest® Stat®, making sure that you install the appropriate native environment connectivity drivers. Verify that the appropriate environment client software is installed on the workstation (i.e., SQL*Net or SQL Server® client). In the case of Oracle®, verify that the oracle/bin directory is part of the workstation’s path.

Problem	Explanation/Solution
Receive the following error message when logging in: “TNS: Could not resolve service name.”	Verify that the **Server Name** field in the Stat.ini file matches a valid TNSnames.ora entry
Receive the following error message when logging in: “Unable to complete ‘Second Pass’ login.... Invalid user name/password....”	This error indicates that the LOGINID and/or LOGINPWD fields in the STAT_LOGIN table do not match those of the environment owner. Check the password in the Stat.ini file.

CSRs

Problem	Explanation/Solution
CTRL+F Usage: The CTRL+F keystroke that advances the user to the next entry field in the Description tab of the CSR is not functioning.	This is caused when a space is inserted between the adjoining greater than/less than <> brackets in the Application/CSR Template. Access the template which is failing, and verify that no spaces exist between the two brackets.
Deleting CSRs: Is there a way to delete CSRs from the environment?	With proper security rights, you can use the CSR Purge Wizard to permanently delete CSRs from the Quest® Stat® Repository. Before deleting a CSR, however, it is recommended that you first use the wizard to export the CSR to a file for backup purposes.
Deleting Objects and Archive Sets from CSRs: How do I delete objects and archive sets from existing CSRs?	Please contact Quest Software Support for instructions on how to proceed.
CSR Locks: After logging in to Stat, I opened an existing CSR and received the following message: “This message has been locked by...”	This warning message indicates that the CSR is locked by the user noted in the message. You will also receive this error message when a user closes Stat and fails to close the CSR first. Ensure that all CSRs are closed prior to closing Stat. Not doing so will not remove the lock status in the environment and will cause this warning message to appear when another user tries to access the CSR.

Stat Web

Problem	Explanation/Solution
For users running the Quest® Stat® Central Agent on Unix®, graphical workflow diagrams do not display properly in Stat Web.	This problem may occur when either: • The machine hosting the Stat Central Agent doesn't have a windowing system installed in the operating system, as specified in the Stat system requirements • You are connecting to the Stat Central Agent using a telnet session that doesn't have graphical display capability The solution to the second case is to start the Stat Central Agent in a background mode through the telnet session. To do this, execute the following command: `./run.sh &`

Archiving and Migrating

Problem	Explanation/Solution
Base Archive Sets: Base archive set status remains stuck in In Process.	First, verify that the objects in the Base archive set are from the Base Object Source (Base Final). Also, verify that you selected the All on Migration Path radio button in the Lock in Environment box on the Objects tab in the PeopleSoft® Change Management window. A base archive set may remain in process if: Any objects are locked in another CSR (for example, you have a reservation for an object in the Base database) The Quest® Stat® Central Agent lost connectivity to the environment and/or the network There are no objects that can be archived for the base environment on the CSR.

Printing

Problem	Explanation/Solution
When changing the printer (**File | Print Setup**) to generic text only, the font for the open description on CSRs changes to Roman 10cpi. This is the only available font listed until changing the printer back and re-opening the CSR.	Quest® Stat® has no control over font displays. This is a function of Windows®. Similar behavior occurs in Microsoft® Word.
Receive the following error message from the Stat Central Agent when printing a scheduled report "-9 error opening print job in Stat Central Agent scheduled report"	Verify that the printer to which you are trying to print your scheduled job exists on the machine where the Stat Central Agent is running. Also verify that the Host Printer name on the Stat Central Agent matches the printer name on the machine. For more information on the Stat Central Agent Printers, see the book *Stat System Administration*, Chapter 6, "Configuring the Stat Central Agent".

B

Appendix: Migration Options

With the various wizards and migration tools provided by Stat, you can migrate objects in several different ways. However, depending on the kind of migration you want to perform, you must use certain wizards and tools instead of others. For example, you can use the Rapid Recovery Wizard to migrate an archive set that is in a closed CSR, but you cannot use the Archive Sync Wizard.

This appendix compares the various wizards and migration tools and tells you which ones you should use depending on the kind of migration you want to perform.

NOTE: Access to certain migration tools and wizards is controlled by user class rights.

I want to migrate:	CSR Migration	Mass Migration	Rapid Recovery	Release Recovery	Archive Sync Wizard	Object Archive Search Wizard
Objects that are not locked in the target environment	N	N	Y	Y	N	Y
Objects that are locked in the target environment on a different CSR	N	N	Y	Y	N	Y
Archive set that is in a closed CSR	N	N	Y	Y	N	Y
A subset of objects in an archive set	Y	Y	Y	Y	Y	Y
Archive sets that are not marked Ready to Migrate and approvals not required	Y	N	Y	Y	Y	Y
Archive sets that are not marked Ready to Migrate and approvals are required	N	N	Y	Y	Y	Y
To a target environment that requires approvals but the approvals are not met	N	N	Y	Y	Y	Y
Files to distributed environments by migrating to the distribution environment	Y	Y	Y	Y	N	Y
Files directly to distributed environments	Y	Y	Y	Y	N	Y
Files to the assigned developer's working directory	Y	N	N	N	N	Y
Objects marked for deletion to a target environment	Y	Y	Y	Y	Y	Y
Objects to a target environment where workflow does not allow migrations to a target environment in the current CSR status	N	N	Y	Y	Y	Y
To a target environment that is not on a CSR migration path	N	N	Y	Y	N	N

C

Appendix: User-Specific Parameters

This appendix provides instructions for defining user-specific post migration step parameters.

In the Post Migration Step Parameters Maintenance table, system administrators define public user-based parameters that can be included in the definition of post migration command steps. However, because these parameters specify a set of default values that may not be applicable to you, such as user ids or download directories, you can define parameters that apply specifically to you. You can define entirely new parameters, or you can define user-specific values that override the default values of public parameters.

For more information on post migration parameters, see the book *Stat System Administration*, Chapter 5, “General Maintenance Tables”.

To define user-specific parameters:

1 Select **User Options | Pre/Post Migration User Parameters**.

When first opened, the Post Migration User Parameters window displays the public user-based parameters that have been defined by system administrators in the Post Migration Parameters Maintenance table. Here you can create a new parameter that is specific to you, or you can define a value specific to you that overrides the values of a public parameter.

2 To define a new parameter, do the following:

a Click **New**.

b Enter the parameter name.

c Enter the parameter value in the My Value field.

> **NOTE:** If you do not enter a parameter value, the value defaults to null.

d (Optional) Select the encrypted option if you do not want the parameter value to be visible to users executing the post migration custom command step.

3 To define a user-specific value for a public parameter, do the following:

a Select the parameter and enter the value you want in the My Value field.

When used in the definition of a custom command post migration step, this value will be used instead of the public value.

a (Optional) Select the encrypted option if you do not want the parameter value to be visible to users executing the post migration custom command step.

4 Click **OK**.

D

Appendix: Supported PeopleSoft Proprietary Objects

The following is a list of all the PeopleSoft® proprietary objects that you can logically lock, archive, and migrate in Stat. The objects are categorized by the four application versions of PeopleSoft that Quest® Stat® currently supports.

Object
Access Group
Activity
Analytic Model
Analytic/Problem Type
Application Data Set Definition (Also known as Data Set Definition)
Application Engine PeopleCode
Application Engine Program
Application Engine Section
Application Package
Application Package PeopleCode
Approval Rule Set
Archive Object Definition
Archive Template
Archive Templates (Type 2)
BIP Data Src Defn
BIP File Defn
BIP Report Defn
BIP Template Defn
Business Interlink
Business Process
CI Property PeopleCode
Color
Component
Component Interface
Component Interface PCode
Component PeopleCode
Component Rec Field PCode
Component Rec PeopleCode
Composite Query
Connected Query Definition

Object
Cube Definition
Cube Instance Defn
Definition Security (Object Security Group)
Delimited Document
Dependency Document
Diagnostic Plug-In
Dimension
Document
Document Schema
Essbase Cube Connection
Essbase Cube Dimension
Essbase Cube Outline
Essbase Cube Template
Feed Category
Feed Data Type
Feed Definition
Field
Field Format
File Layout Definition
File Reference
File Type Code
HTML
HTML Document
IB Queues
Image
Index
Integration Group
Java® Portlet User Preferences
Job Definition
JSON Document
MAP Admin
Map Layout
Map Store (Supported in version 8.55 and later)
Map Template
Mass Change Datetime Parms
Mass Change Prompt Records
Mass Change Template
Mass Change Type
Menu
Menu PeopleCode
Message Catalog Entry
Message Channel

Object
Message Definition
Message Node
Message PeopleCode
Message Schema
Mobile Page
nVision Scope
Object Security Group (Definition Security)
Optimization Model
Page
Page Field PeopleCode
Page PeopleCode
Permission List
Portal Registry Definition
Portal Registry Structure
Portal Registry User Favorite
Portal Registry User Homepage
Positional Document
Process Definition
Process Type
Project
PS/Query
Record
Record Group
Record PeopleCode
Recurrence Definition
Related Content Configuration
Related Content Definition
Related Content Layout
Related Content Service
Relational Document
Relationship
Role
Search Attributes
Search Category
Search Context
Search Definition
Server Definition
Service Operation
Service Operation Handler
Service Operation Routing
Service Operation Version
Services
SQL

Object
Strings Table
Style
Style Sheet
Subscription PeopleCode
TableSet Control
TableSet ID
Test
Test Case
Tree
Tree Structure
URL Definition
WSDL
WSRP Cloned Portlet Handle
WSRP Remote Portlet
WSRP Remote Producer
Xlat/Translate
XML Document
XMLP Data Src Defn (Also known as BIP Data Src Defn)
XMLP File Defn (Also known as BIP File Defn)
XMLP Report Defn (Also known as BIP Report Defn)
XMLP Template Defn (Formerly named BIP Template Defn)
XSLT

E

Appendix: Stat Reports

- Approval Reports
- Compliance Reports
- CSR Reports
- Environment Refresh Reports
- Graph Reports
- Issue Tracking Reports
- Maintenance - General Reports
- Maintenance - Agent Reports
- Maintenance - Security Settings Reports
- Maintenance - Service Domain-Specific Reports
- Migrations Reports
- Migrations-Pre 5.7.0 Reports
- Patch Support Reports
- PeopleSoft Options Reports
- Statistics Reports
- Table Reports
- Table_Dump Reports
- Task Reports

Approval Reports

Approval reports display information concerning migration approvals and status transfer approvals defined in workflows.

Report	Description
CSR Approval Overrides (Excel format)	List of Workflow Status Transfers, Migrations, and Patch Applies that have been done without approvals, or with approval override, sorted by CSR ID and override time.
CSR Workflow Approvals (List Format)	List of CSRs with historical and current workflow information.
Migration Approvals by Approval Status (List Format)	List of archive sets pending migrations that required approvals. Sorted by Approval Status.
Migration Approvals by Environment (List Format)	List of archive sets pending migrations that required approvals. Sorted by target environment.
Migration History with Approval History (List Format)	List of archive set migrations sorted by migration date. The report also List of the approvers.

Report	Description
PeopleSoft Archive Set Activity Based Migration History (List Format)	PeopleSoft® migration history with approval history sorted by dates.
User Approvals (List Format)	List of migration and status transfer approvals assigned to a user.

Compliance Reports

Compliance reports help satisfy any audit and compliance requirements by answering who changed what and when in the Quest® Stat® Database.

Report	Description
CSR Object History (List Format)	List of object activity (such as Add and Remove) for a particular CSR. This report can only be run on one CSR at a time. User must specify a CSR ID in the criteria.
CSR Status History (List Format)	List of CSR status changes sorted by CSR ID and date.
Maintenance Table Last Update (List Format)	List of all the Stat maintenance table update activity sorted by table and date.
Stat Audit Table (List Format)	List of changes that have occurred to certain Stat maintenance tables. Data is written to this table whenever values are updated, inserted, or deleted in selected maintenance tables. The report shows what values were changed, when they were changed, and by which Stat user.
User Activity History (List Format)	List of CSR activities performed by a particular user sorted by CSR ID and date. The report includes CSR value changes and change management activities.

CSR Reports

CSR Reports display general information about CSRs. This category also includes three reports that concern Quest® Stat® projects.

Report	Description
CSR Quick List (List Format)	Displays a brief description of each CSR.
CSR Quick List by Last Update (List Format)	Displays a brief listing of CSRs sorted by last update, which is similar to the CSR list report which you from the Support Console. This report allows you to view recent activity on CSRs with the most recent date displayed first.
CSR Quick List with Descriptions (List Format)	Displays a brief listing of CSRs with code descriptions, sorted by last update.
CSR Lock Overrides (List Format)	List of system log messages indicating that the lock on a CSR was overridden. Sorted by CSR, then by the date/time of the override.
CSR Update History (List Format)	List of modifications made to a CSR.
CSRs by Application (Standard Format)	Displays a detail list of CSRs sorted by Application. Displays general CSR information only.
CSRs by Application Environment (Standard Format)	Displays a detail list of CSRs sorted by Application Environment. Displays general CSR information only.
CSRs by Assigned User (Standard Format)	Displays a detail list of CSRs sorted by Assigned User. Displays general CSR information only.

Report	Description
CSRs by CSR Type (Standard Format)	Displays a detail list of CSRs sorted by CSR Type. Displays general CSR information only.
CSRs by Closed Date (List Format)	Displays a detailed list of CSRs sorted by closed date. Displays general CSR information only. Closed date and closed by userid are available as selection criteria for this report.
CSRs by Customer (Standard Format)	Displays a detail list of CSRs sorted by Customer. Displays general CSR information only.
CSRs by Customer Priority (Standard Format)	Displays a detail list of CSRs sorted by customer priority. Displays general CSR information only.
CSRs by Customer Tracking Number (Standard Format)	List of CSRs sorted by customer tracking number. Displays general CSR information only.
CSRs by Department (Standard Format)	Displays a detail list of CSRs sorted by Department. Displays general CSR information only.
CSRs by Due Date (Standard Format)	Displays a detail list of CSRs sorted by Due Date. Displays general CSR information only. Displays most current due dates first.
CSRs by Last Update (Standard Format)	Displays a detail list of CSRs sorted by the Last Date modified. Displays general CSR information only. Displays most recent reports first.
CSRs by Log Topic (Standard Format)	Displays a detail list of CSRs sorted by Log Topic. Displays general CSR information only.
CSRs by Priority (Standard Format)	Displays a detail list of CSRs sorted by Priority. Displays general CSR information only.
CSRs by Queue (Standard Format)	Displays a detail list of CSRs sorted by Queue. Displays general CSR information only.
CSRs by Status (Standard Format)	Displays a detail list of CSRs sorted by Status. Displays general CSR information only.
Multi-CSR Print (Standard Format)	Displays all CSR data for multiple CSRs. Includes all CSR information except system logs and confidential logs.
Project Activity List (List Format)	List of projects including assigned CSRs and activity data associated to the CSRs.
Project Activity List 2 (List Format)	List of projects and associated CSR task activity. This report is sorted by Project Owner, Project Code, Task Status, CSR ID, and Activity Sequence. Task Status is Completed, In Process, or Not Started.
Project List (List Format)	List of projects.
Project CSRs (List Format)	List of projects and the CSRs contained in the project. Sorted by project owner.
Projects (List Format)	Composite Project list with CSRs, CSR associated tasks and Project Issues.

Environment Refresh Reports

Report	Description
Environment Refresh Activity Period (List Format)	List of environment refresh activity sorted by time period.
Refresh History by Environment (List Format)	List of environment refresh events sorted by environment.

Graph Reports

Graph Reports display CSR information in either a bar graph or pie chart format.

Report	Description
Graph of Aging Active CSRs (Bar Graph Format)	Displays a bar graph presentation of the amount of time active CSRs have remained opened. This report can be filtered by Application Code, CSR Type, Assigned User Id, Queue Id, and/or Priority Code.
Graph of CSRs by Application (Pie Chart Format)	Displays a pie chart presentation of CSR activity by application.
Graph of CSR Activity by Assigned User (Pie Chart Format)	Displays a pie chart presentation of CSR activity by assigned user.
Graph of CSR Activity by Day of Week (Bar Graph Format)	Displays a bar graph presentation of CSR activity by day of week and priority.
Graph of CSR Activity by Priority (Bar Graph Format)	Displays a bar graph presentation of CSR activity by priority.
Graph of CSR Activity by Time and Prio (Bar Graph Format)	Displays a bar graph presentation of CSR activity by time of day and priority.
Graph of CSR Activity by Department (Bar Graph Format)	Displays a bar graph presentation of CSR activity by department.
Graph of CSR Activity by Type (Pie Chart Format)	Displays a pie chart presentation of CSR activity by Type of CSR.
Graph of Completed CSRs by Month (Bar Graph Format)	Displays a bar graph presentation of CSR activity by month completed. Displays up to three years of comparative data.

Issue Tracking Reports

Issue Tracking Reports display information concerning CSR issues and Stat project issues.

Report	Description
CSR Issue Tracking (Landscape List Format)	List of CSR issues sorted by CSR and issue ID.
Project Issue Tracking (Landscape List Format)	List of project issues sorted by project and issue ID.

Maintenance - General Reports

Maintenance - General Reports display information concerning Stat system parameters defined in general maintenance tables.

Report	Description
Country Custom Labels (Landscape Excel Format)	Displays country definitions, including custom defined labels.
Customer Phone List (Excel Format)	Report List of customer phone numbers.
Customers (Excel Format)	List of customers sorted by customer name.
Customers by Department (Excel Format)	List of customers sorted alphabetically by department. Includes address and telephone information.
Department Codes (Excel Format)	List of department definitions.
File Servers (Excel Format)	List of file servers connected to Quest® Stat®.
File Template Maintenance (Excel Format)	List of file templates defined in Stat.
Generic Application Environments (Excel Format)	Generic Application File Type Location
Generic Application File Type Location (Excel Format)	List of file type locations for generic applications.
Generic File Types (Excel Format)	List of file types defined for generic applications.
Issue Tracking Custom Labels (Excel Format)	List of issue tracking custom labels and the values assigned to them.
Issue Tracking Statuses (Excel Format)	List of issue tracking statuses.
Oracle Applications Environments (Excel Format)	List of defined Oracle® Applications environments including database connections.
Oracle Applications File Type Location (Excel Format)	List of the Oracle Applications file type locations.
Oracle Applications File Types (Excel Format)	List of Oracle Applications File Types.
PeopleSoft Environments (Excel Format)	List of defined PeopleSoft® Environment including database connections.
PeopleSoft File Type Location (Excel Format)	List of the file type locations defined in Stat for PeopleSoft.
PeopleSoft File Types (Excel Format)	List of file types defined in Stat for PeopleSoft.
Service Domains (Excel Format)	List of service domains defined in Stat.
Source File Locations for Generic Files (Excel Format)	List of source file locations for generic applications. This report has the same data as the Generic File Locations Report but is sorted by environment.
Source File Locations for PeopleSoft (Excel Format)	List of source file locations defined in Stat for PeopleSoft. This report has the same data as the PeopleSoft File Locations Report but is sorted by environment.
Stat Reports (Excel Format)	List of Stat reports

Maintenance - Agent Reports

Maintenance - Agent Reports display information concerning the settings defined in the Agent Job and Printer maintenance tables.

Report	Description
Agent Job Schedule (Landscape List Format)	List of Agent jobs including the day of week and time of day that each job is scheduled to run.
Agent Jobs (List Format)	List of jobs assigned to the Quest® Stat® Agent and sorted by service domain.
Agent Printers (List Format)	List of Agent Printers sorted by service domain.

Maintenance - Security Settings Reports

Maintenance - General Reports display information concerning the security settings defined in the User and User Class maintenance tables.

Report	Description
Stat Users with Service Domain Access (Excel Format)	List of Quest® Stat® users and the service domains to which they have access.
User Application Access Maintenance (List Format)	List of Stat users and the applications to which they have access.
User Class by Service Domain (List Format)	List user class membership sorted by service domain, user class, and Stat user.
User Class Right Assignment (Crosstab Format)	Compares the assignment of user class rights across all user classes.
User Classes (Excel Format)	List of user class definitions.
User Classes with Rights Codes (List Format)	List of user classes and the rights associated with them.
User Classes with Rights Descriptions (List Format)	List of user classes and a detailed description of the rights associated with them.
User Default Working Directories (Excel Format)	List of users and the default working directories defined for them.
User Environment Access Maintenance (List Format)	List of allowed Environment Access by User.
User File Type Working Directories (Excel Format)	List of the file type working directories defined for users.
User Maintenance (List Format)	List of Stat user definitions.
User Object Access Maintenance (List Format)	List of allowed Object Access by User.
User Rights Assignment by Service Domain (Crosstab Format)	Rights assignment by service domain for the selected user.
User Rights Inventory (List Format)	List of assigned and unassigned user rights for each user. Distinguishes between service domain and non service domain specific rights. Long Report: 4 pages per service domain per user. (A user with 4 assigned service domains will take 16 pages).

Report	Description
User Service Domain/User Class Maintenance (List Format)	List of the service domains that users can access. For each service domain, the report also shows the user classes that the user belongs to.
Users with Queue Membership (Excel Format)	List of Stat users and the queues that they are members of.

Maintenance - Service Domain-Specific Reports

Maintenance - Service Domain-Specific Reports display information concerning Quest® Stat® system parameters defined in service domain-specific maintenance tables.

Report	Description
Application Codes (Excel Format)	List of application codes defined in Stat.
Application Templates (Excel Format)	List of application templates defined in Stat.
Applications and Environments (Excel Format)	List of applications and their associated environments. Lists only applications which have environments defined.
Auto Tasks for CSR Application (Excel Format)	List of auto tasks created for CSR applications.
Auto Tasks for CSR Status (Excel Format)	List of auto tasks created for CSR statuses.
Auto Tasks for CSR Type (Excel Format)	List of auto tasks created CSR types.
Business Rule History (Excel Format)	List of histories showing for which CSR a business rule was fired and when.
Business Rules (Excel Format)	List of business rules defined for service domains.
Business Rules with Detail (List Format)	List of Business and Personal Rules containing details of the rules. This report is sorted by Business versus Personal rules and then by rule number.
CSR Log Topics (Excel Format)	List of CSR log topics defined in Stat.
CSR Priority Codes (Excel Format)	List of CSR priority codes defined in Stat.
CSR Status Codes (Excel Format)	List of CSR status codes defined in Stat.
CSR Task Activity Codes (Excel Format)	List of CSR task activity codes defined in Stat.
CSR Type Codes (Excel Format)	List of CSR type codes defined in Stat.
CSR Type Templates (Excel Format)	List of CSR type templates defined in Stat.
CSR Types and Statuses (Excel Format)	List of CSR types and their associated CSR statuses.
Customer Priorities (Excel Format)	List of customer priorities defined in Stat.
Domain Specific Report Maintenance Codes (Excel Format)	List of service domain-specific reports.
Generic Application Migration Path Maintenance (Excel Format)	List of migration paths defined in Stat for generic applications.
Oracle Applications Migration Paths (Excel Format)	List of migration paths defined in Stat for Oracle Applications.
PeopleSoft Migration Paths (Excel Format)	List of migration paths defined in Stat for PeopleSoft.

Report	Description
Personal Rules by User (Excel Format)	List of personal rules sorted by the Stat user who owns the rule.
Queues (Excel Format)	List of queues defined in Stat.
Queues with Member Detail (Excel Format)	List of queues along with the users that belong to them.
Workflow Template (Excel Format)	List of workflow templates.

Migrations Reports

Migration Reports display information about object migrations in Quest® Stat®, including migration history sorted by date, environment, and release label.

Report	Description
Archive Sets to Migrate by Release	List of Archive Set to migrate by release sorted by Service Domain, CSR ID, and Archive Set ID.
Archive Sets - Ready to Migrate	List of Archive Set ready to migrate sorted by Service Domain, CSR ID, and Archive Set ID
Deleted Objects by Environment - State Based (Excel Report)	List of deleted objects sorted by Environment, then by Object Type. State Based.
Deleted Objects by Environment (Excel Report)	List of deleted objects sorted by Environment, then by Object Type.
Deleted Objects by Object Type (Excel Report)	List of deleted objects sorted by Object Type, then by Environment.
Migration Complete History (List Format)	Report of compete migration history. Includes approvals, pre/post migration steps, objects, and distributed environments, sorted by migration ID.
Migration History by Object (Excel Report)	List of migrated objects sorted by Target Environment, Object Class, Object Type, Object Name, and Migration Date. Contains a list of the objects migrated.
Migration History with Objects - State Based (Excel Format)	List of state based PeopleSoft Archive Set migrations sorted by target environment, then by migration date. Contains a list of the objects migrated.
Migration History by Date (Excel Format)	List of archive set migrations sorted by migration date, then by target environment.
Migration History by Date with Objects (Excel Format)	List of archive set migrations sorted by migration date, then by target environment. Contains a list of the objects migrated.
Migration History by Environment (Excel Format)	List of archive set migrations sorted by target environment, then by migration date.
Migration History by Environment with Objects (Excel Format)	List of archive set migrations sorted by target environment, then by migration date. Contains a list of the objects migrated.
Objects Ready for Migration (List Format)	List of objects marked as Ready to Migrate. Listed by environment.
Oracle Applications Patch Apply	List of Oracle Applications patches applied through Stat.
Post Migration Checklist (Excel Format)	List of post migration checklists sorted by CSR, Archive ID, and migration date.
Post Migration Step History (Excel Format)	List of Post Migration Steps run for each migration. Listed by CSR, Migration number, Archive ID and Object Type.
Pre Migration Checklist (Excel Format)	List of Pre Migration Checklists by CSR, Migration Date, and Step Order.

Report	Description
Pre Migration Step History (Excel Format)	List of Pre Migration Steps run for each migration. Listed by CSR, Migration number, Archive ID and Object Type.
Release Mgmt - Archive Sets By Release (Landscape Excel Format)	List of archive sets sorted by release label.
Release Mgmt - Migrations By Release (Landscape Excel Format)	List of migrations sorted by release label.
Release Mgmt - Release and Approval (Landscape Excel Format)	List of archive sets sorted by release label with approval information.
Stat Post Migration Steps Maintenance (Excel Format)	List of post migration steps defined in Stat for particular object types.
Stat Pre Migration Steps Maintenance (Excel Format)	List of pre migration steps defined in Stat for particular object types.

Objects Reports

Objects Reports display information about the PeopleSoft objects and file objects contained in your environments.

Report	Description
Object Archive History (Landscape List Format)	List of archived objects sorted by object type, object name, and archive date.
Objects Locked by Assigned Developer (List Format)	List of objects locked on CSRs sorted by assigned developer.
Objects Marked for Deletion on CSR by Db (List Format)	List of objects that have been marked for deletion on their associated CSRs. Sorted by environment.
Objects on CSRs by Assigned Developer (List Format)	List of Objects Locked or Reserved on CSRS sorted by Assigned Developer
Objects Reserved by Assigned Developer (List Format)	List of Objects Reserved on CSRs sorted by Assigned Developer.
Objects Unlocked on Open CSRs (Excel Format)	List of unlocked objects on open CSRs.
Sub Objects on CSR by Environment (List Format)	List of Sub Objects on CSR. Listed by environment, then object type, subobject type.
Sub Objects on CSR by Object Type (List Format)	List of Sub Objects on CSR. Listed by object type, then subobject type.

Patch Support Reports

Patch Support Reports display information about patches supported by Quest® Stat® for your PeopleSoft®, Oracle® Applications, or generic applications change management module.

Report	Description
CSR Patch Info for OraApps (List Format)	List of CSRs containing associated Oracle Apps patches and information on each patch.
CSR Patch Info for PS/GenApps (List Format)	List of CSRs containing associated PeopleSoft and generic applications patches and information on each patch.
Inventory of Oracle Apps Patches (List Format)	Inventory of Oracle Apps Patches that have been uploaded into Stat.

Report	Description
OraApps Patch Impact Analysis (List Format)	List of patch impact analyses with resulting impacted objects.
Oracle Applications Patch Timing Report	List of execution time for patch requests and statistical information.
Oracle Applications Patch Apply	List of Oracle Applications patches applied through Stat

PeopleSoft Options Reports

PeopleSoft® Options Reports display information about PeopleSoft operator IDs defined by environment and by user.

Report	Description
PS Operator IDs by Environment (List Format)	List of PS operator IDs sorted by Environment.
PS Operator IDs by User (List Format)	List of PS operator IDs sorted by user.

Statistics Reports

The Statistics Reports display statistical CSR information in a crosstab format.

Report	Description
Count of CSR Activity by Hour and Prio (Crosstab Format)	Spreadsheet of CSR activity by time of day and priority.
Count of CSR Activity by Hour and Type (Crosstab Format)	Spreadsheet of CSR activity by time of day and CSR type.
Count of CSR Transfers between Queues (Crosstab Format)	Spreadsheet of CSRs that have been transferred between queues.
Count of CSR Transfers between Users (Crosstab Format)	Spreadsheet of CSRs that have been transferred between users.
Count of CSRs by Day Of Week and Prio (Crosstab Format)	Spreadsheet of CSR activity by day of week and priority.
Count of CSRs by Day Of Week and Type (Crosstab Format)	Spreadsheet of CSR activity by day of week and CSR types.
Count of CSRs by Department and Prio (Crosstab Format)	Spreadsheet of CSR activity by department and priority.
Count of CSRs by Dept, Cust, and Prio (Crosstab Format)	Spreadsheet of CSR activity by customer sorted by department and priority.
Count of CSRs by Queue and CSR Type (Crosstab Format)	Spreadsheet of CSR activity by queue and CSR type.
Count of CSRs by Queue and Priority (Crosstab Format)	Spreadsheet of CSR activity by queue and priority.
Count of CSRs by Queue, User, and CSR Type (Crosstab Format)	Spreadsheet of CSR activity by time of queue, user, and CSR type.
Count of CSRs by Queue, User, and Priority (Crosstab Format)	Spreadsheet of CSR activity by queue, user, and priority.

Report	Description
Count of CSRs by User and Priority (Crosstab Format)	Spreadsheet of CSR activity by user and priority.
Count of Days per Status per CSR (Crosstab Format)	Spreadsheet presentation of number of business days each CSR spent in each status. Only closed CSRs are included on this report.

Table Reports

The Table Reports display miscellaneous information concerning active Quest® Stat® connections.

Report	Description
Active Stat Connections (List Format)	List of user currently connected to Stat.

Table_Dump Reports

The Table_Dump Reports display raw data concerning CSRs and issue tracking. These reports are designed to be exported into Excel® for the use of system administrators.

Report	Description
CSR Issues List (Landscape List Format)	List of CSR issues.
CSR Raw Data (Landscape List Format)	Spreadsheet of CSR data formatted for export to Excel. This report does not include code descriptions.
CSR Raw Data with Descriptions (Landscape List Format)	Spreadsheet of CSR data including code descriptions formatted for export to Excel.
CSR Task Time Entry - Raw Data (Landscape List Format)	Spreadsheet of CSR Task and Activity data formatted for export to Excel. This report does not include code descriptions.
Project Issues List (Landscape List Format)	Spreadsheet of project issues formatted for export to Excel.
Stat User Login History	Stat User login history sorted descending by login date. Keep track of users that logged into Quest® Stat®.

Task Reports

Task Reports display information concerning tasks, including uncompleted and past due tasks.

Report	Description
CSR Quick List with Tasks (Standard Format)	General CSR information including associated tasks.
CSR Quick List with Tasks - Closed CSRs (List Format)	List of closed CSRs with their associated tasks.
CSR Task Time Entry by Period (List Format)	Detailed listing of time entered by user, CSR and task for a specified period of time.
CSR Task Time Entry Summary (List Format)	List of time entered by user, CSR and task for a specified period of time. Summarized at the task level.

Report	Description
CSR Task Time Entry Summary (CSR) (List Format)	List of total time entered by a user for a specified period of time. Summarized at the CSR level.
Estimated CSR Completion (List Format)	List of CSR tasks including the percentage completed and the number of hours.
Incomplete Tasks by Assigned User (List Format)	List of uncompleted tasks sorted by assigned user.
Past Due Tasks by Assigned User (List Format)	List of past due tasks sorted by assigned user.

About us

We are more than just a name

We are on a quest to make your information technology work harder for you. That is why we build community-driven software solutions that help you spend less time on IT administration and more time on business innovation. We help you modernize your data center, get you to the cloud quicker and provide the expertise, security and accessibility you need to grow your data-driven business. Combined with Quest's invitation to the global community to be a part of its innovation, and our firm commitment to ensuring customer satisfaction, we continue to deliver solutions that have a real impact on our customers today and leave a legacy we are proud of. We are challenging the status quo by transforming into a new software company. And as your partner, we work tirelessly to make sure your information technology is designed for you and by you. This is our mission, and we are in this together. Welcome to a new Quest. You are invited to Join the Innovation™.

Our brand, our vision. Together.

Our logo reflects our story: innovation, community and support. An important part of this story begins with the letter Q. It is a perfect circle, representing our commitment to technological precision and strength. The space in the Q itself symbolizes our need to add the missing piece—you—to the community, to the new Quest.

Contacting Quest

For sales or other inquiries, visit https://www.quest.com/contact.

Technical support resources

Technical support is available to Quest customers with a valid maintenance contract and customers who have trial versions. You can access the Quest Support Portal at https://support.quest.com.

The Support Portal provides self-help tools you can use to solve problems quickly and independently, 24 hours a day, 365 days a year. The Support Portal enables you to:

- Submit and manage a Service Request.
- View Knowledge Base articles.
- Sign up for product notifications.
- Download software and technical documentation.
- View how-to-videos.
- Engage in community discussions.
- Chat with support engineers online.
- View services to assist you with your product.

Glossary

The following are definitions of many of the terms commonly used in Stat.

A

Activity or Activity codes

A category of tasks and auto tasks. Example: Invoicing or documentation.

Application

A subdivision of a service domain. Example: PeopleSoft or Microsoft Office.

Archive Set

A snapshot of a set of objects that have been grouped together for archiving purposes. There are three types of archive sets: Base, Interim, and Final.

Assigned User

The Stat user who has been assigned to a CSR. Available users depend on the queue selected.

Auto Tasks

Tasks that Stat automatically adds to a CSR. They are triggered by the selection of Applications, Types, and Statuses.

B

Base Archive Set

The original snapshot of the objects in the Base environment. Objects in the base archive set always originate in the Base environment. Only one base archive set exists per CSR.

Base Environment

The source environment from which the base archive set originates. All objects in the base archive set are from the Base environment. This is a PeopleSoft environment.

Business Rule

A rule that triggers an email to a distribution list when a CSR corresponds to the user-defined event.

C

Change Management Module

The change management support modules provided by Stat for PeopleSoft, Oracle Applications, and generic applications.

Critical Threshold

The recommended number of CSRs that an item can have open at one time. An item can be a user, queue, department, or application. The number is defined by the system administrator.

CSR

Stands for Change/Service Request. This a request made by a customer or user that is documented and resolved in Stat. A CSR can belong to only one service domain and can have an unlimited number of tasks defined on it.

Customer

The person who reported the request/problem. Customers may or may not be Stat users. Depending on the business environment, customers can be internal or external.

D

Data Object

User-defined or third party data sets developed for specific application environments.

Department

The business division or organization to which the customer belongs. This can be an outside company name or an internal department within a business.

Development Environment

The environment in which object development occurs.

E

Environment

A database as well as the file servers and file paths associated with it. Also, a subdivision of an application. Its use is optional by application. Example: A/R for PeopleSoft application or Excel for Microsoft Office application.

F

File Objects

File type objects (also called flat files), such as SQL and COBOL files. In Stat, file objects (as well as PeopleSoft proprietary objects) can be included in an archive set and migrated from one PeopleSoft database or generic application environment to another.

Final Archive Set

The final snapshot of all objects taken from the Development environment. The final archive set should be created after all changes have been approved. The final archive set should be migrated to all environments on the migration path so they are all in sync. Only one final archive set exists per CSR.

G

Generic Application

Any file-based application connected to Stat.

H

History

A record of value changes maintained by Stat. These values can include transfers of CSR ownership, CSR status transfers, triggering of business and personal rules, and other of changes.

I

Interim Archive Set

An interim snapshot of objects while they are in the process of being modified. An unlimited number of interim archive sets can be created. Interims should be created from the environments in which objects were modified which would probably be Development. Interim archive sets should be migrated to one or many target environments for testing and evaluation.

L

List Group

A grouping of tabs displayed on the Support Console.

O

Object

A term used in Stat to refer to both PeopleSoft proprietary objects and file objects.

P

PeopleSoft Proprietary Object

An object native to PeopleSoft, such as pages and records. In Stat, PeopleSoft proprietary objects (as well as file objects) can be included in an archive set and migrated from one PeopleSoft environment to another.

Personal rule

A rule that triggers an email to the user who created the rule when a CSR corresponds to the user-defined event. An email generated by a personal rule can only be sent to the creator of the rule.

Priority

The level of urgency associated with the CSR. The priority sets the due date of the CSR.

Project (in Stat)

A larger business process that groups an unlimited number of CSRs and tasks from various service domains. A project can be used to track a number of related CSRs from one location.

Q

Queue

A group of users that possess a similar skill set. The assigned user must be a member of the current queue. Throughout the life of a CSR, ownership can be transferred to various queues. A queue is associated with a specific service domain. All members of the queue must have access to the associated service domain.

S

Schema Object

A schema object definition supported by Stat. Stat supports locking, archiving, and migrating schema object definitions on Oracle databases and on Microsoft SQL Server 2005/2008.

Service Domain

Service domains allow you to divide your business into logical units. CSRs can only belong to one service domain and cannot be reassigned.

Source File Location

The file server plus the file path where file objects originally reside for an environment.

Stat Central Agent

The Stat component that does the actual processing of many behind-the-scenes activities, such as object locking and creating archive sets.

Stat Oracle Agent

A background daemon that runs on each Oracle Applications server. It receives requests from the Stat Central Agent, processes the requests, and sends resulting information back to the Stat Central Agent.

Status

The current phase of a CSR.

T

Target Environment

An environment to which interim archive sets are migrated for testing and evaluation purposes. Examples of target environments are QA, Testing, and Training.

Task

An individual step required to complete a CSR. A CSR can include many tasks. A task can be manually or system generated (auto task). Tasks cannot exist outside of a CSR.

Template

A predefined data entry field on the Description tab. Templates are triggered by Applications and Types. They help save time and ensure data consistency.

Type

The categorization of a CSR.

U

User

A person who uses Stat. A user can also be a customer.

User Class

A security level which determines a user's access within a Service Domain. A user class is assigned rights. Rights exist for a variety of functions from editing fields on a CSR, creating archive sets, and accessing wizards.

W

Workflow

Sets of rules that regulate the sequence and conditions by which CSRs can change from one status to another.

Working Directory

The file servers plus the file paths that are defined for individual users.

Index

A
Activity-based reports 29
Alt # 21
Application Change Management window 12
Application environments 21
Applications 21
Approvals
  migration approvals (Generic Applications) 250, 252
  migration approvals (Oracle Applications) 212, 213
  migration approvals (PeopleSoft) 150, 152
  patches (Oracle Applications) 186, 191
  status transfer approvals 37
  transfer approval lists 34
  User Approval list 45
Archive Set Purge Wizard 98
Archive Set Synchronization Wizard 97
Archive sets
  archive set status (Generic Applications) 239
  archive set status (Oracle Applications) 199
  archive set status (PeopleSoft) 133
  Archive Sets table (Generic Applications) 238
  Archive Sets table (Oracle Applications) 199
  Archive Sets table (PeopleSoft) 133
  base archive sets (Generic Applications) 237
  base archive sets (Oracle Applications) 198
  base archive sets (PeopleSoft) 132
  copying (Generic Applications) 243
  copying (Oracle Applications) 204
  copying (PeopleSoft) 139
  creating (Generic Applications) 240
  creating (Oracle Applications) 200
  creating (PeopleSoft) 134
  final archive sets (Generic Applications) 238
  final archive sets (Oracle Applications) 198
  final archive sets (PeopleSoft) 132
  Generic Applications 237
  interim archive sets (Generic Applications) 238
  interim archive sets (Oracle Applications) 198
  interim archive sets (PeopleSoft) 132
  logs (Generic Applications) 243
  logs (Oracle Applications) 204
  logs (PeopleSoft) 139
  merged archive sets (Generic Applications) 238
  merged archive sets (Oracle Applications) 199
  merged archive sets (PeopleSoft) 132
  migrating (Generic Applications) 244, 247
  migrating (Oracle Applications) 205, 208
  migrating (PeopleSoft) 141, 143, 246
  migrating to distributed environments 141, 142, 206, 207, 245, 246
  Object Archive Search Wizard 95
  Oracle Applications 197
  PeopleSoft 131
  point-to-point archive sets (PeopleSoft) 133, 149
  purging 98
  Ready to Migrate (Generic Applications) 239
  Ready to Migrate (Oracle Applications) 200
  Ready to Migrate (PeopleSoft) 134
  re-archiving (Generic Applications) 244
  re-archiving (Oracle Applications) 205
  re-archiving (PeopleSoft) 140

selecting migration options (Generic Applications) 247
selecting migration options (Oracle Applications) 209
selecting migration options (PeopleSoft) 144
synchronizing 97
VCM file objects (Generic Applications) 240
VCM file objects (Oracle Applications) 201
VCM file objects (PeopleSoft) 135
Archive Sets table
Generic Applications 238
Oracle Applications 199
PeopleSoft 133
Archiving objects 6
Assigning developers
(Generic Applications) 224
(Oracle Applications) 164
(PeopleSoft) 115
assigning objects to different developers (Generic Applications) 229
assigning objects to different developers (Oracle Applications) 170
assigning objects to different developers (PeopleSoft) 120
Auto tasks 8, 55
B
Base archive sets
Generic Applications 237, 240
Oracle Applications 198, 201
PeopleSoft 132, 135
synchronizing workspace (Generic Applications) 245
synchronizing workspace (Oracle Applications) 206
synchronizing workspace (PeopleSoft) 141
C
Change management 6
impact analysis 7
locking objects 7
migrating objects 7
CLI functionality
distribution environments 109
PeopleSoft 109, 141, 146
Closed for Stats 72
Comparing objects
data objects 103
file objects 107
Generic Applications 233
Oracle Applications 174
PeopleSoft 126
PeopleSoft proprietary objects 103
schema objects 107
Connection Manager window 12
Console buttons 41
Consoles menu 13
Copying
archive sets (Generic Applications) 243
archive sets (Oracle Applications) 204
archive sets (PeopleSoft) 139
Countries 68
CSR list
customer, application, and CSR type view 42
filtering 43
list group 47
navigating 44
sorting 43
CSR Search Wizard 66
CSR Status 22, 36
transferring 36
CSR Type 22
CSR window 19
Description tab 23
general information fields 20
History tab 26
Resolution tab 27
Task/Time Information tab 23
Task/Time tab 53
Workflow tab 27
CSRs 129, 176, 235
about 263
application environments 21
applications 21
associating with patches (Oracle Applications) 186
associating with projects 21, 61
creating 18
CSR statuses 22
CSR templates 18
CSR types 22
CSR window 19
customer priorities 21

customers 20
documenting 8
e-mailing 38
finding 65, 66
locking CSRs 19
opening 18
priorities 22
queues 23
resolving 27
security 39
spell checking 28
tasks 53, 59
templates 28
title 21
Tracking # 21
user id 23
workflows 22
Customer Maintenance window 20
Customer priorities 21
Customer, Application, and CSR Type view 42
Customers 20
finding 20, 67
D
Data objects
comparing 100, 103
Generic Applications 221
merging 105
migrating (Oracle Applications) 207
migrating (PeopleSoft) 142, 246
Oracle Applications 160
PeopleSoft 110
Databases
login errors 11
staging database 145
Deleting objects 137, 204, 243
Departments 68
Description
title 21
Description tab 23
Disconnecting from Stat 12
Distributed environments
Generic Applications 245, 246
Oracle Applications 206, 207
PeopleSoft 141, 142
Documenting
CSRs 8
undocumented objects 90
E
Editing objects 107
E-mail
defining for personal rules 81
e-mailing CSRs 38
e-mailing scheduled reports 75
error notification 78, 81
outbound e-mail addresses 38
Enterprise Application Change and Configuration Management Window
Consoles menu 13
File menu 12
Maintenance menu 13
Migration Management menu 14
Object Management menu 14
Report menu 13
Tools menu 13
User Options menu 15
Window menu 15
Enterprise Console 48
Environment refresh events 29
activity-based reports 29
state-based reports 29
Environments 21
distributed environments (Generic Applications) 245, 246
distributed environments (Oracle Applications) 206, 207
distributed environments (PeopleSoft) 141, 142
migrating objects between 7
Error notification 78
message content 81
Event escalation 78
Exporting
scheduled reports 75
F
File menu 12
File objects
comparing 100, 107
creating (Generic Applications) 232
creating (Oracle Applications) 172
creating (PeopleSoft) 125
defining working directories (Generic Applications) 230
defining working directories (Oracle Applications) 171
defining working directories (PeopleSoft)

121
deleting (Generic Applications) 243
deleting (Oracle Applications) 204
deleting (PeopleSoft) 137
editing 107
editing (Generic Applications) 232
editing (Oracle Applications) 174
editing (PeopleSoft) 126
Generic Applications 220
merging 107
migrating (Generic Applications) 245
migrating (Oracle Applications) 206
migrating (PeopleSoft) 142
Oracle Applications 159
PeopleSoft 110
file objects
VCM (Generic Applications) 240
VCM (Oracle Applications) 201
VCM (PeopleSoft) 135
Filtering
CSR lists 43
Final archive sets
Generic Applications 238
Oracle Applications 198
PeopleSoft 132
G
Gantt chart 8
customizing 64
read-only region 62
timescale region 64
Generic Applications change management
adding file objects 231
adding objects 227
adding objects from other CSRs 231
archive sets 237
archive sets creating 240
assigning developers 224, 229
associating objects with CSRs 223
comparing objects 233
creating file objects 232
CSR object documentation 235
data objects 221
editing file objects 232
file objects 220
Generic Applications tab 224
mass migrations 250, 254
migrating archive sets 244, 247
migration approvals 250, 252
Migration History window 257
object locking and reserving 222, 226, 228
objects in Base environment 229
pre and post migration steps 248
removing objects from a CSR 229
schema objects 221
selecting a migration path 224
selecting objects 225
viewing object environment 233
working directories for file objects 230
Generic Applications tab 224
H
Heading1
Viewing your Object Environment 127, 175
History
History tab 26
Migration History Wizard 93
personal rules 82
I
Impact analysis
patches (Oracle Applications) 190
Impact Wizard 7
Information management 8
Interim archive sets
Generic Applications 238
Oracle Applications 198
PeopleSoft 132
Invalid password 11
Invalid user id 11
L
List groups 47
List Options tab 48
Locking
CSRs 19
Generic Applications 222, 226, 228
objects 7
Oracle Applications 161, 168, 169
PeopleSoft 111, 117, 119
physical locking (Oracle Applications) 163
physical locking (PeopleSoft) 114
unlocking (Generic Applications) 228
unlocking (Oracle Applications) 169
unlocking (PeopleSoft) 119
Logging in to Stat 10
Login errors 11

Login window 10
Logs
adding and modifying 25
M
Maintenance menu 13
Maintenance steps (Oracle Applications)
scheduling 185
Mass migrating
Generic Applications 250, 254
Oracle Applications 212, 215
PeopleSoft 150, 154
Menus
Consoles menu 13
File menu 12
Maintenance menu 13
Migration Management menu 14
Object Management menu 14
Report menu 13
Tools menu 13
User Options menu 15
Window menu 15
Merged archive sets
Generic Applications 238
Oracle Applications 199
PeopleSoft 132
Merging objects
data objects 105
file objects 107
PeopleSoft 126
PeopleSoft proprietary objects 105
schema objects 107
Migrating
archive set options (Generic Applications) 247
archive set options (Oracle Applications) 209
archive set options (PeopleSoft) 144
Archive sets (Generic Applications) 244, 247
Archive sets (Oracle Applications) 205, 208
Archive sets (PeopleSoft) 141, 143
auto-migrating PeopleSoft projects 146
CLI functionality (PeopleSoft) 141, 146
data objects (Oracle Applications) 207
data objects (PeopleSoft) 142, 246
distributed environments 141, 142, 206, 207, 245, 246
file objects (Generic Applications) 245
file objects (Oracle Applications) 206
file objects (PeopleSoft) 142
manually migrating PeopleSoft projects 146
mass migrating (Generic Applications) 250
mass migrating (Oracle Applications) 212
mass migrating (PeopleSoft) 150
mass migrations (Generic Applications) 254
mass migrations (Oracle Applications) 215
mass migrations (PeopleSoft) 154
migration approvals (Generic Applications) 250, 252
migration approvals (Oracle Applications) 212, 213
migration approvals (PeopleSoft) 150, 152
Migration Details window (Oracle Applications) 219
Migration History window (Generic Applications) 257
Migration History window (PeopleSoft) 158
non-App Designer proprietary objects 150
objects 7
PeopleSoft proprietary objects 141
point-to-point migrations 133, 149
pre and post migration steps (Generic Applications) 248
pre and post migration steps (Oracle Applications) 209
pre and post migration steps (PeopleSoft) 147
scheduling (Generic Applications) 247, 254
scheduling (Oracle Applications) 208, 216
scheduling (PeopleSoft) 144, 149, 154
staging databases (PeopleSoft) 145
Migration approvals
Generic Applications 250
Oracle Applications 212
PeopleSoft 150

Migration Details window
Oracle Applications 219
Migration History window
Generic Applications 257
PeopleSoft 158
Migration History Wizard 93
Migration Management menu 14
Migration paths
selecting (Generic Applications) 224
selecting (Oracle Applications) 163
selecting (PeopleSoft) 114
O
Object Archive Search Wizard 95
Object Comparison Wizard 100
Object documentation
Generic Applications 235
Oracle Applications 176
PeopleSoft 129
Object locking
Generic Applications 222, 226, 228
Oracle Applications 161, 168, 169
PeopleSoft 111, 117, 119
physical locking (Oracle Applications) 163
physical locking (PeopleSoft) 114
unlocking (Generic Applications) 228
unlocking (Oracle Applications) 169
unlocking (PeopleSoft) 119
Object Management menu 14
Object reserving
Generic Applications 222, 226, 228
Oracle Applications 161, 168, 169
PeopleSoft 111, 117, 119
Objects
adding (Generic Applications) 227
adding (Oracle Applications) 168
adding (PeopleSoft) 118
adding file objects in folders (Generic Applications) 231
adding file objects in folders (Oracle Applications) 172
adding file objects in folders (PeopleSoft) 124
adding objects from other CSRs (Generic Applications) 231
adding objects from other CSRs (Oracle Applications) 172
adding objects from other CSRs (PeopleSoft) 125
archiving 6
associating with CSRs (Generic Applications) 223
associating with CSRs (Oracle Applications) 163
associating with CSRs (PeopleSoft) 114
comparing (Generic Applications) 233
comparing (Oracle Applications) 174
comparing and merging (PeopleSoft) 126
creating file objects (Generic Applications) 232
creating file objects (Oracle Applications) 172
creating file objects (PeopleSoft) 125
deleting (Generic Applications) 243
deleting (Oracle Applications) 204
deleting (PeopleSoft) 137
editing 107
editing (PeopleSoft) 126
editing file objects (Generic Applications) 232
editing file objects (Oracle Applications) 174
editing file objects (PeopleSoft) 126
in base environment (Generic Applications) 229
in base environment (Oracle Applications) 171
in base environment (PeopleSoft) 120
list of objects on CSRs (Generic Applications) 235
list of objects on CSRs (Oracle Applications) 176
list of objects on CSRs (PeopleSoft) 129
locating archives 95
locking 7
migrating 7
non-App Designer proprietary objects 150
Object Comparison Wizard 100
object recovery 96
purging archive sets 98
re-archiving (Generic Applications) 244
re-archiving (Oracle Applications) 205
re-archiving (PeopleSoft) 140
removing from a CSR (Generic Applications) 229

removing from a CSR (Oracle Applications) 170
removing from a CSR (PeopleSoft) 120
selecting (Generic Applications) 225
selecting (Oracle Applications) 164
selecting (PeopleSoft) 115
undocumented objects 90
working directories for file objects (Generic Applications) 230
working directories for file objects (Oracle Applications) 171
working directories for file objects (PeopleSoft) 121
Oracle Applications change management
adding file objects 172
adding objects 168
adding objects from other CSRs 172
approving patches 186, 191
archive sets 197
archive sets creating 200
assigning developers 164, 170
associating objects with CSRs 163
associating patches with CSRs patches 186
backing out patches 197
comparing objects 174
comparing patches 182
creating file objects 172
CSR object documentation 176
data objects 160
defining patches 180
deleting patches 180
downloading patches 180
editing file objects 174
file objects 159
mass migrations 212, 215
merging patches 181
migrating archive sets 205, 208
migration approvals 212, 213
Migration Details window 219
object locking and reserving 161, 168, 169
objects in Base environment 171
Oracle Applications Management Console 178
Oracle Applications tab 163
Patch Management Console 178
patch objects 161
physical object locking and reserving 163
pre and post migration steps 209
removing objects from a CSR 170
rescheduling patches 196
scheduling patches 188
schema objects 160
selecting a migration path 163
selecting objects 164
setting up maintenance steps 183
setup objects 160
uploading patches 179
viewing object environment 175
working directories for file objects 171
Oracle Applications Management Console 178
Oracle Applications tab 163
Outbound e-mail configuration
addresses 38
P
Passwords 10
invalid password 11
Patch application process requests 190
Patch objects
Oracle Applications 161
Patches
application process requests (Oracle Applications) 190
approving (Oracle Applications) 186, 191
associating with CSRs (Oracle Applications) 186
associating with CSRs (PeopleSoft) 123
backing out (Oracle Applications) 197
comparing (Oracle Applications) 182
defining (Oracle Applications) 180
deleting (Oracle Applications) 180
downloading (Oracle Applications) 180
drivers (Oracle Applications) 181
impact analysis (Oracle Applications) 190
merging (Oracle Applications) 181
Oracle Applications Management Console 178
Patch Management Console (Oracle Applications) 178
prerequisites (Oracle Applications) 180, 192
rescheduling (Oracle Applications) 196
scheduling (Oracle Applications) 188

setting up maintenance steps (Oracle Applications) 183
Undocumented Patch Tool 99
uploading (Oracle Applications) 179
PeopleSoft change management
adding file objects 124
adding objects 118
adding objects from other CSRs 125
archive sets 131
archive sets creating 134
archiving PeopleSoft projects 140
assigning developers 115, 120
associating objects in PeopleSoft projects 122
associating objects with CSRs 114
associating related PeopleSoft proprietary objects 121
CLI functionality 109
comparing and merging objects 126
connecting to environments 108
creating file objects 125
CSR object documentation 129
data objects 110
distribution environments 109
editing file objects 126
editing objects 126
file objects 110
mass migrations 150, 154
migrating archive sets 141, 143
migrating non-App Designer proprietary objects 150
migration approvals 150, 152
Migration History window 158
modifying object Upgrade and Action values 137
modifying subobjects 138
object locking and reserving 111, 117, 119
objects in Base environment 120
PeopleSoft Project Read Wizard 122
PeopleSoft proprietary objects 110
PeopleSoft tab 114
physical object locking and reserving 114
pre and post migration steps 147
removing objects from a CSR 120
schema objects 110
selecting a migration path 114
selecting objects 115
synchronizing PeopleSoft project definitions 124
viewing object environment 127
working directories for file objects 121
PeopleSoft customers
finding 68
PeopleSoft Project Read Wizard 122
PeopleSoft projects
adding objects to CSRs 122
archiving 140
auto-migrating 146
manually migrating 146
synchronizing definitions 124
PeopleSoft proprietary objects
adding to CSRs 121
comparing 100, 103
deleting 137
merging 105
migrating 141
subobjects 138
PeopleSoft tab 114
Personal Configuration window 47
Personal rules
creating 78
disabling 82
e-mail content 81
history 82
rule criteria 80
Rule Editor window 78
saving 82
viewing 78
Point-to-point archive sets
PeopleSoft 133, 149
Post migration steps
Generic Applications 248
Oracle Applications 209
PeopleSoft 147
Pre migration steps
Generic Applications 248
Oracle Applications 209
PeopleSoft 147
Printing
scheduled reports 75
Priorities 22
customer priorities 21
Project list 45
fields 45
Project window 59

CSRs tab 61
general information region 60
Task/Activity tab 62
Projects 7
adding tasks 62
associating CSRs 61
associating with CSRs 21
security 64
Purging archive sets 98
Q
Queues 23
R
Rapid Recovery window 96
Re-archiving objects
Generic Applications 244
Oracle Applications 205
PeopleSoft 140
Refresh
environments 29
Release Recovery window 97
Report menu 13
Reports
about 69
billing reports 8
compare reports 91
e-mailing 75
Impact Wizard 88
running 70
scheduling 75
state-based vs. activity-based 29
Reserving
Generic Applications 222, 226, 228
Oracle Applications 161, 168, 169
PeopleSoft 111, 117, 119
Resolution tab 27
templates 28
Rich text editing
Resolution tab 27
special keys 28
Rule Editor window 78
S
Scheduling
maintenance steps (Oracle Applications) 185
migrations (Generic Applications) 247, 254
migrations (Oracle Applications) 208, 216
migrations (PeopleSoft) 144, 149, 154
patches (Oracle Applications) 188
reports 75
rescheduling patches (Oracle Applications) 196
Schema objects 91
comparing 107
Generic Applications 221
merging 107
Oracle Applications 160
PeopleSoft 110
Search CSR Engine 65
Search Customer Engine 20, 67
Search PeopleSoft Country/Department Engine 68
Search PeopleSoft Customer Engine 68
Security 8
CSRs 39
projects 64
Selecting objects
(Generic Applications) 225
(Oracle Applications) 164
(PeopleSoft) 115
Service Domains 8
Setup objects
Oracle Applications 160
Sorting
CSR lists 43
Source file locations
base archive set taken from (Generic Applications) 240
base archive set taken from (Oracle Applications) 201
base archive set taken from (PeopleSoft) 135
Special keys 28
Spell checking 28
Staging databases 145
Stat
change management 6
disconnecting 12
information management 8
logging in 10
main window 12
passwords 10
projects 7
security 8
Stat toolbar 16

version control 6
Stat Central Agent
e-mail schedule reports 75
printing scheduled reports 75
processing e-mail 38, 78
running reports 75
viewing status of 82
Stat Login window 10
Stat Report Wizard 70
Stat Repository
implementing 90
Stat Toolbar 16
State-based reports 29
Status rules 33, 36
approving status transfers 37
Subobjects
modifying Upgrade and Action values 138
Support Console
console buttons 41
CSR list 42
customizing 46
Project list 45
User Approval list 45
User Object list 45
User Task list 46
T
Tabs
CSR list 42
List Options 48
Task list
fields 46
Task/Time tab 23, 53
Tasks
auto tasks 8, 55
Tasks/Time tab 53
updating and deleting 56
User Task list 46
user-defined tasks 55
weekly time entries 57
Templates
CSR templates 18, 28
Resolution tab 28
workflow templates 29
title 21
Tools menu 13
Tracking # 21
Transfer rules 33
transfer approval lists 34
transfer history 36
Transferring statuses 36
U
Undocumented Object Wizard 90
Undocumented Patch Tool 99
Upgrade and Action values
modifying (PeopleSoft) 137
User Approval list 45
User IDs
invalid user id 11
Stat 23
User Object list 45
User Options menu 15
User Task list 46
User-defined tasks 55
V
VCM file objects
associating with CSRs (Generic Applications) 240
associating with CSRs (Oracle Applications) 201
associating with CSRs (PeopleSoft) 135
Version Control 6
W
Weekly time entries 57
Window menu 15
Windows
Application Change Management window 12
Connection Manager 12
CSR window 19
Customer Maintenance window 20
Login window 10
Personal Configuration window 47
Project window 59
Rapid Recovery window 96
Release Recovery window 97
Rule Editor window 78
Wizards
Archive Set Purge Wizard 98
Archive Set Synchronization Wizard 97
Migration History Wizard 93
Object Archive Search Wizard 95
Object Comparison Wizard 100
Undocumented Object Wizard 90
Workflow 8, 22
approving status transfers 37

CSR statuses 22
status rules 33, 36
templates 29
transfer approval lists 34
transfer rules 33
transferring statuses 36
workflow rules 33
Workflow tab 27
Workflow tab 27