

Archive Shuttle 11.4 **Installation 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, TIP, MOBILE OR VIDEO: An information icon indicates supporting information.

Archive Shuttle
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Introduction

This guide contains detailed information on installing the Archive Shuttle Core Server and modules and includes common installation scenarios.

Key terms

The following table introduces the terminology that is used throughout Archive Shuttle documentation, videos, and the user interface.

TERM	ITEM + DESCRIPTION
Link	Enterprise Vault A Link is a Vault Store Exchange A Link is an Exchange database Office 365 A connection to Office 365 PST A connection to a PST Output Area Proofpoint A connection to a Proofpoint output area EAS A connection to an EAS IIS Server Metalogix A connection to a Metalogix server
Container	Enterprise Vault A Container is a Vault / Archive Exchange A Container is an Exchange mailbox Office 365

TERM	ITEM + DESCRIPTION
	<p>A Container is an Office 365 mailbox or Personal Archive</p> <p>PST</p> <p>A container is a PST file</p> <p>Proofpoint</p> <p>A container currently has no applicable context</p> <p>EAS</p> <p>A container is an archive relating to a user.</p> <p>Metalogix</p> <p>A container is an archive</p>
Item	<p>Enterprise Vault</p> <p>An Item is an archived Item.</p> <p>Exchange</p> <p>An Item is an item in the mailbox</p> <p>Office 365</p> <p>An Item is an item in the mailbox or personal archive</p> <p>PST</p> <p>An item is an item inside a PST file</p> <p>Proofpoint</p> <p>An item currently has no applicable context</p> <p>EAS</p> <p>An item is a message in the archive</p> <p>Metalogix</p> <p>An item is a message in the archive</p>

Installing Archive Shuttle

This section describes how to install Archive Shuttle Core and the Archive Shuttle Modules.

i | NOTE: Some components of Archive Shuttle have the capability to perform work using MAPI or EWS. These are:

- Enterprise Vault collector module (which can collect shortcuts from mailboxes)
- Shortcut Processing module (which can fix shortcuts, or delete them)

The use of MAPI for these, and other activities, is deprecated and will be removed in a future release of the product.

Before starting the installation of Archive Shuttle, make sure that the following are available:

- Installation MSI files
- License file
- Login credentials for each of the servers where components are to be installed

i | NOTE: Ensure migration environments are deployed with EWS configurations.

Archive Shuttle licensing

Archive Shuttle uses a license file that is bound to the domain name where the Archive Shuttle Core Server is installed. A license file must be obtained that covers the features and user/data amounts that are to be migrated.

The following types of Archive Shuttle license are available:

- **Production license:** This license has no time limits associated with it and has the amount of user licenses / data extraction licenses that have been purchased.
- **Trial license:** This license is time limited and allows testing the full functionality of Archive Shuttle for a limited time only. When the license expires, the software continues to run in a restricted, read-only mode, which allows for many Archive Shuttle activities to be performed except export/import of data.

Installing Archive Shuttle license files

The license file has to be installed on the Archive Shuttle Core Server.

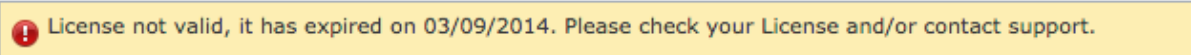
The license file is requested during the Archive Shuttle Core installation.

License file update

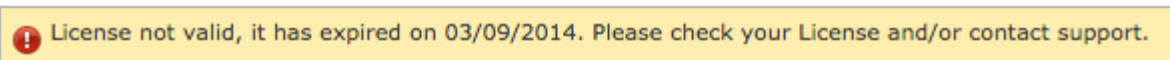
The Archive Shuttle license file needs to be updated if, for example, the license expires, or more data resp. users are required to be migrated. This section explains how to replace and update the license file.

Should an updated license file be required, please contact your Quest partner or representative to acquire the file.

The following messages may be displayed on the System Health screen, tab Events:



and on the License screen:



License Information	
Customer:	[REDACTED]
Created on:	8/4/2014 6:23:45 PM
Type:	Trial
Expiration Date:	09/03/2014 00:00:00
Licensed Users:	2490
Licensed Amount:	12 TiB
Licensed Domain(s):	ev.local rowiev.local

License Usage Summary				
Type	Licensed	Usage	Free	Free %
User Licenses	2490	6	2484	99.8
Volume License	12 TiB	1.32 GiB	12 TiB	100.0

Name	Amount	Last Update (UTC)
vs1	1.32 GiB	9/21/2014 9:12:48 AM

To replace/update the license file, perform the following steps:

1. Obtain a new license.lic file from Quest and copy it to a temporary location on the Archive Shuttle server.
2. If the file is NOT called license.lic, rename it so that it has such name.
3. Copy the file to \Program Files\Quest\Archive Shuttle\WebServices\Bin (or an alternate location, if Archive Shuttle is installed on a different path or drive). The license also needs to be placed to \Program Files\Quest\Archive Shuttle\Service.
4. Confirm overwriting of the existing license.lic file.

5. Run an elevated command prompt.
6. Issue the command IISRESET.

Verify that the new license has taken effect by going to the License screen. You should not get any messages about the license being expired, or consumed. It should look like this:

License Information				
Customer:	[REDACTED]			
Created on:	9/21/2014 11:22:06 AM			
Type:	Trial			
Expiration Date:	10/21/2014 00:00:00			
Licensed Users:	5050			
Licensed Amount:	50 TiB			
Licensed Domain(s):	ev.local rowiev.local			

License Usage Summary				
Type	Licensed	Usage	Free	Free %
User Licenses	5050	6	5044	99.9
Volume License	50 TiB	1.32 GiB	50 TiB	100.0

Name	Amount	Last Update (UTC)
vs1	1.32 GiB	9/21/2014 10:12:50 AM

Installing Archive Shuttle Core Server

i **NOTE:** Before installing Archive Shuttle, check that all the prerequisites for the planned installation have been fulfilled.

To install Archive Shuttle:

1. Log in to the designated Archive Shuttle Core Server.
2. Double-click the ArchiveShuttle.xx-x.x.xxxx.x.msi file to start the installation.

i **NOTE:** Setup scans the server to determine whether it meets the prerequisites and displays a report. Install any missing prerequisites, and restart setup

3. Install the required Archive Shuttle components for this computer.

The requirements for an Archive Shuttle Core server are as follows:

- **Core Service:** Installs the Archive Shuttle Service that periodically runs Archive Shuttle tasks.
- **Web Service:** Installs the Archive Shuttle Web Services. These communicate with the Archive Shuttle modules by HTTP(S).

- **Web Interface:** Install the Archive Shuttle Web Interface. This is a web-based interface that enables administrators to manage Archive Shuttle.
4. Enter the account under which the components to be installed should run.
 5. Enter the Archive Shuttle SQL Instance where the Archive Shuttle databases will be created. This can be:

Default instance: `mySqlServerName.MyDomain.com`

Named instance: `mySqlServerName.MyDomain.com\MyInstanceName`
 6. Enter the folder where the Archive Shuttle logs should be stored.
 7. Select the Archive Shuttle license file.

i | **NOTE:** It is essential to verify that the license information is correct. Otherwise, Archive Shuttle functionality may be deactivated.

Post installation tasks

After installation, open the Web Interface in Internet Explorer using one of the following URLs:

- `http://<hostname>/ArchiveShuttle`
- `http://<hostname>/ArchiveShuttle`
- `http://<ipaddress>/ArchiveShuttle`

<hostname> is the name of the server where Archive Shuttle Core was installed. This can either be the fully qualified name, or just the hostname.

<ipaddress> is the IP Address of the server where Archive Shuttle Core was installed.

- For example, IPv4: 192.168.0.1
- For example, IPv6: [2001:db8:85a3::8a2e:370:7334]

i | **NOTE:** You may need to add the IP address of the Archive Shuttle server to the trusted zones in Internet Explorer.

The Archive Shuttle Web Interface Homepage should be displayed.

Installing the Archive Shuttle modules

i | **NOTE:** Before installing any Archive Shuttle Modules, check that all the prerequisites for the planned installation have been fulfilled.

To determine which modules to install on which servers, refer to the *Archive Shuttle Planning Guide*. Archive Shuttle modules are 32 Bit and can be installed on Windows 2003 servers if required (for example, when extracting data from older versions of Enterprise Vault).

For a list of supported operating systems for the Archive Shuttle modules, see the *Archive Shuttle Compatibility Guide*.

The following modules require .NET Framework 4.8:

- EVCollectorModule40
- ExchangeExportModule
- ExchangeImportModule
- ImageMasterModule
- ImapModule
- Office365Module
- NativeformatImportModule
- NativeFormaMapiImportModule
- PowerShellModule
- PowerShellScriptExecutionModule
- ShortcutProcessModule40
- SourceOneModule
- Storage Import Module

Configuring Outlook for modules

i NOTE: The Office 365 module requires PowerShell v3 and the Azure AD Commandlets and may need to be installed on some Operating Systems.

If the module installer does not find this prerequisite on the system where it is being run it will provide an option to connect to the Internet in order to download it.

Supported Outlook versions

Archive Shuttle has several modules requiring Outlook. For a list of supported Outlook versions, see the *Archive Shuttle Compatibility Guide*.

i NOTES:

- There are special situations where 64-bit modules, using 64-bit Outlook may be used. Contact Quest Support for more information.
- 32-bit Outlook 2013 has been shown by some customers to not work too well when migrating data to PST file. If this is a target for the migration, use Outlook 2010 instead.

Outlook profile configuration

The Outlook Profile should be configured as follows:

- The profile should be for the appropriate mailbox (e.g., if ingesting to Exchange 2010/2013, then the profile should be for the user account that is running the service and performing the ingestion)
- The profile should be created for the appropriate user (if different accounts are used for different modules, make sure the profile is created after logging into Windows as that user)
- The profile should be an online profile (not cached mode)

Max recipients and max attachments

Archive Shuttle recommends that the following registry key be configured:

HKEY_CURRENT_USER\Software\Microsoft\Office\<version>\Outlook\Options\Mail

Key	Type	Value
RecipientMax	DWORD	0xffffffff
AttachmentMax	DWORD	0xffffffff

This will enable MAPI to better handle messages with many recipients and many attachments.

Additional information on this setting is available from the Microsoft Knowledgebase.

SharedMemMaxSize

Archive Shuttle recommends that the following registry key be configured:

HKEY_LOCAL_MACHINE\Software\Microsoft\Windows Messaging
Subsystem\Applications\Outlook

Key	Type	Value
SharedMemMaxSize	DWORD	800000

This will enable better memory handling for MAPI.

Configuring the Office 365 module

The Archive Shuttle Office 365 module ingests data into Office 365 mailboxes using the Advanced Ingestion Protocol (AIP) and optionally Exchange Web Service (EWS), utilizing an Azure Registered Application.

Configure the Office 365 Module

The Office 365 module needs credentials so it can connect to Office 365.

For authentication under modern authentication (OAuth) in Archive Shuttle, go to the *Archive Shuttle Planning Guide*.

Configure Application Impersonation

For the Azure Registered Application to be used to ingest data into Office 365 mailboxes, the EWS Application impersonation rights need to be assigned to the registered application. This can be done in the Microsoft Azure portal. To perform the required steps, click [here](#).

Configure Access to Office 365 Through a Proxy Server

This information only applies to users using proxy servers. Click [here](#) for more information.

Providing credentials to connect to Office 365

You can use Modern Authentication (OAuth) to provide credentials to connect to Office 365. To do this, add the Modern Authentication (OAuth) credentials using the Credential Editor. Go to the *Archive Shuttle Planning Guide* for more information.

i **NOTE:** As of Archive Shuttle 11.1, basic authentication in Windows Remote Manager (WinRM) needs to be enabled only in the case of collecting retention labels. Click [here](#) for more information.

Configuring Application Impersonation

In order for the accounts specified above to be used to ingest data into Office 365 mailboxes of Personal Archives, the Application Impersonation role needs to be assigned to the user. This can be done in the Office 365 Portal or via PowerShell.

To do the required steps using PowerShell, follow the steps below:

1. Log in to a server that has Windows PowerShell installed
2. Issue the following commands in PowerShell, comments and responses are noted below each command:

```
$User-Credential = Get-Credential
```

Supply values for the following parameters:

Credential

A pop-up will appear asking for a username and password. The Global Administrator that needs to have Application Impersonation granted to them should be input.

i | **NOTE:** The Exchange Online Management PowerShell module is required. To learn more, [click here](#).

Connect-ExchangeOnline -UserPrincipalName name@domain.com

This connects a PowerShell session to Office 365 using the credentials that were just entered.

Import-PSSession \$Session

This activates the above session. It may take a few seconds for this to return to the command prompt.

**New-ManagementRoleAssignment -Name:VaultAdminImpersonation –
Role:ApplicationImpersonation –User:<upn>**

This grants the user specified the Application Impersonation role.

i | **NOTE:** Customers may have a standard system for naming role assignments. That naming convention can be used, but the required role is fixed by Office 365 – Application Impersonation.

For more on Application Impersonations, [click here](#).

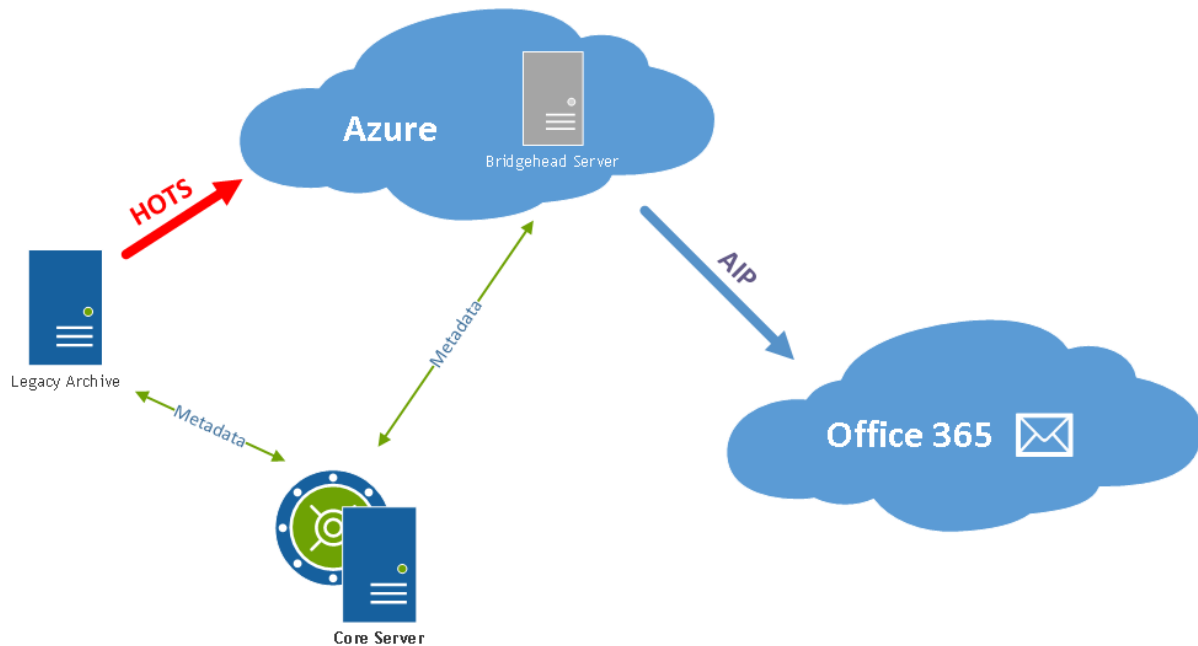
Configuring Office 365 connection rather than autodiscover

Normally the Office 365 Module will use the default configuration and be able to contact Office 365. In some situations it might be necessary to configure a specific URL to access Office 365. This can be done on the System Configuration page as follows:

1. Go to the System Configuration page in Archive Shuttle.
2. Click on Office 365 Module
3. Locate the Connection URL entry near the bottom, and update it to show the required value.
4. Click **Save** to commit the changes.

Configuring modules to use HOTS

HOTS is a feature with Archive Shuttle which allows for less bandwidth usage for migrations to Office 365 by combining a highly-optimised transfer system with storage of extracted data taking place in Microsoft Azure. The following diagram presents an overview of HOTS:



Requirements

For migrations from legacy archives to Office 365 using HOTS the following needs to be considered:

- Using HOTS is supported for all currently supported sources, when migrating to Office 365 mailboxes or Personal Archives.
- More CPU uses might be needed on the source environment in order to create the HOTS-format data
- An Azure Storage Account must be configured and used for storing the extracted data
- All export and import modules must have been configured with the connection string to the Azure Storage Account
- A bridgehead server running the ingest and shortcut processing module should be deployed in Azure to facilitate the ingestion of the data from the Azure Storage Account.

Bridgehead server

The bridgehead server in Azure should consist of a virtual machine with the following specification:

i **NOTE:** Microsoft Azure machine classes change frequently so a specific machine class is not specified here.

Component	Configuration
Processors (cores)	Minimum 4, Recommended 8

Component	Configuration
CPU Speed	2 GHz
Memory	Minimum 16 GB, Recommended 32 GB
Hard disk	Minimum 2 GB of free space

PowerShell execution module

This module is responsible for executing PowerShell commands in the Stage 2 Workflow for a mapping. It is recommended to have one of these installed in the environment.

It is not necessary to associate this module with a particular link, that process is done automatically, and is controlled by the Core.

i | NOTE: This module requires .Net Framework 4.5.2.

Using a proxy

Configuring the Archive Shuttle modules to use a web proxy

When using Archive Shuttle Cloud it may be necessary to configure the Archive Shuttle modules to communicate with the Archive Shuttle via a web proxy. Each of the module .exe.config files can be modified as shown below:

```
<startup><supportedRuntime version="v2.0.50727"/></startup>
<system.net>
  <defaultProxy enabled="true" useDefaultCredentials="true">
    <proxy proxyaddress="http://proxy:8080" />
  </defaultProxy>
  <connectionManagement>
    <add address="*" maxconnection="100"/>
  </connectionManagement>
</system.net>
```

You may need to bypass some of the addresses, and therefore it needs to add the addresses you want to bypass into the config file:

```
<system.net>
  <defaultProxy enabled="true">
    <bypasslist>
      <add address="[a-z]+\..contoso\.com" />
      <add address="192\..168\..*" />
    </bypasslist>
    <proxy bypassonlocal="True" proxyaddress="http://proxy:8080"/>
  </defaultProxy>
```

</system.net>



NOTE: The lines highlighted are only needed if a proxy is used, but it is not configured in Microsoft Edge. Review this article for more details about bypass list.

Installing Archive Shuttle modules with Core via proxy

Sometimes the installation of the Archive Shuttle modules may fail if the communication between the modules and the Core is via a web proxy.

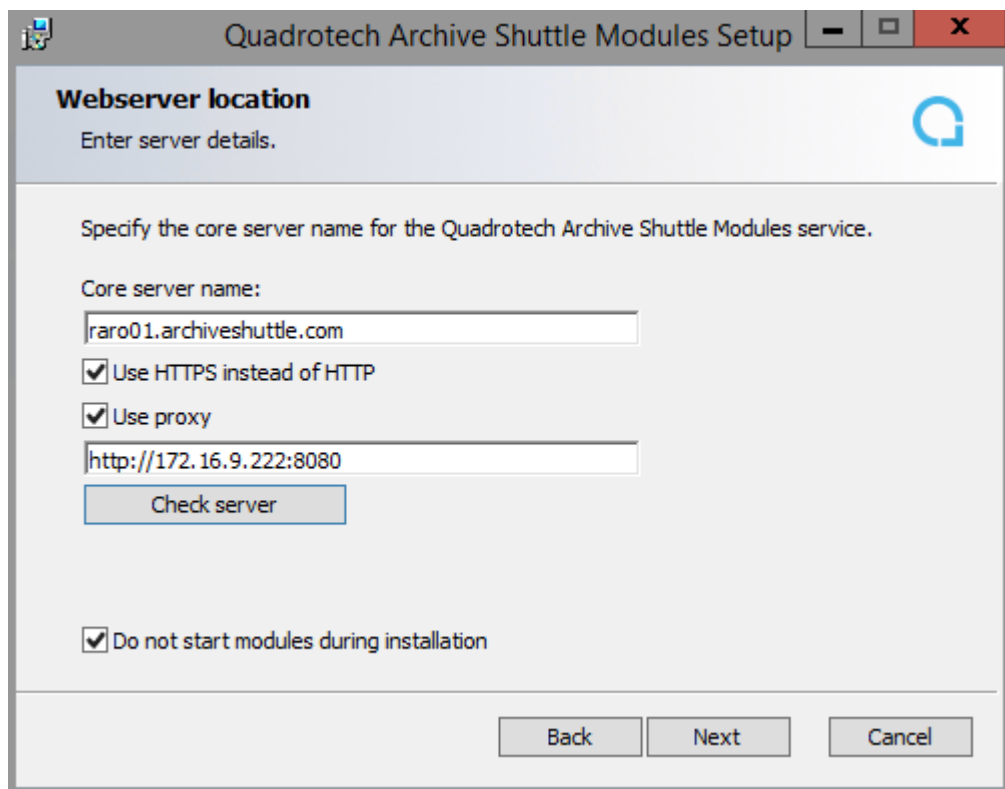
It is possible to launch the MSI file with a parameter to prevent the installer from checking that it can communicate with Archive Shuttle Core. The installation of the modules will then be successful. To install the modules in this manner, execute the following:

```
MSIEXEC /i ProductName.msi DONT_CHECK_WEBSERVICE="1"
```

(Replacing "ProductName" with the full name of the MSI)

Later in the installer wizard, the below notation of proxy setting is important to pass the test:0

1. Tick **Use proxy**.
2. Use the following URL in the box underneath: `http://yourproxyip:port`
3. Hit **Check server**. If the syntax is correct and the proxy is reachable the test will pass like on the picture below:



Configuring access to Office 365 through a proxy server

If the migration environment needs to use a web proxy to access HTTP or HTTPS sites on the internet, then the Office 365 module needs to be configured to also route traffic that way.

1. Log in to the server or workstation where the Office 365 Module is currently deployed using the account that is used to run the Archive ShuttleOffice 365 Service.
2. Browse to the folder where the module is installed, and locate the file 'ArchiveShuttle.Module.Office365.exe.config' and open it in a text edit.

You can choose set the proxy configuration for the Office 365 Module by inheriting the config from either IEConfig, AutoDetect, WinHTTP or by specifying a web proxy URI in the config file.

a. By inheriting the config from either IEConfig, AutoDetect, WinHTTP

3. Remove the <!-- from the beginning of the line containing the '<add key="ProxyAccessType" value="None"/>' and remove the --> from the end of the line:

```
<!-- ProxyAccessType needs to be set occasionally. Following are valid options:
      None (default), IEConfig, AutoDetect, WinHttpConfig, NoProxyServer
-->
<!--<add key="ProxyAccessType" value="None"/> -->
```

4. Set the ProxyAccessType value to be one of:

- IEConfig
- AutoDetect
- WinHttpConfig
- NoProxyServer

See this Microsoft article for correct usage.

5. Save and close 'ArchiveShuttle.Module.Office365.exe.config' file.

6. Restart the Office 365 Module service.

b. Specifying web proxy URI

3. Remove the <!-- from the beginning of the line containing the 'defaultProxy' and remove the --> from the end of the line:

```
<system.net>
  <defaultProxy enabled="true" useDefaultCredentials="true">
    <proxy bypassonlocal="True" usesystemdefault="True"/>
  </defaultProxy>
```

```

<connectionManagement>
  <add address="*" maxconnection="500"/>
</connectionManagement>
<!--<defaultProxy useDefaultCredentials="true">
  <proxy bypassonlocal="true" usesystemdefault="true"
proxyaddress=http://192.168.1.20:8080 />
</defaultProxy-->
</system.net>

```

4. Update the required proxyaddress URI to use. Then, save and close 'ArchiveShuttle.Module.Office365.exe.config' file.
5. Restart the Office 365 Module service.

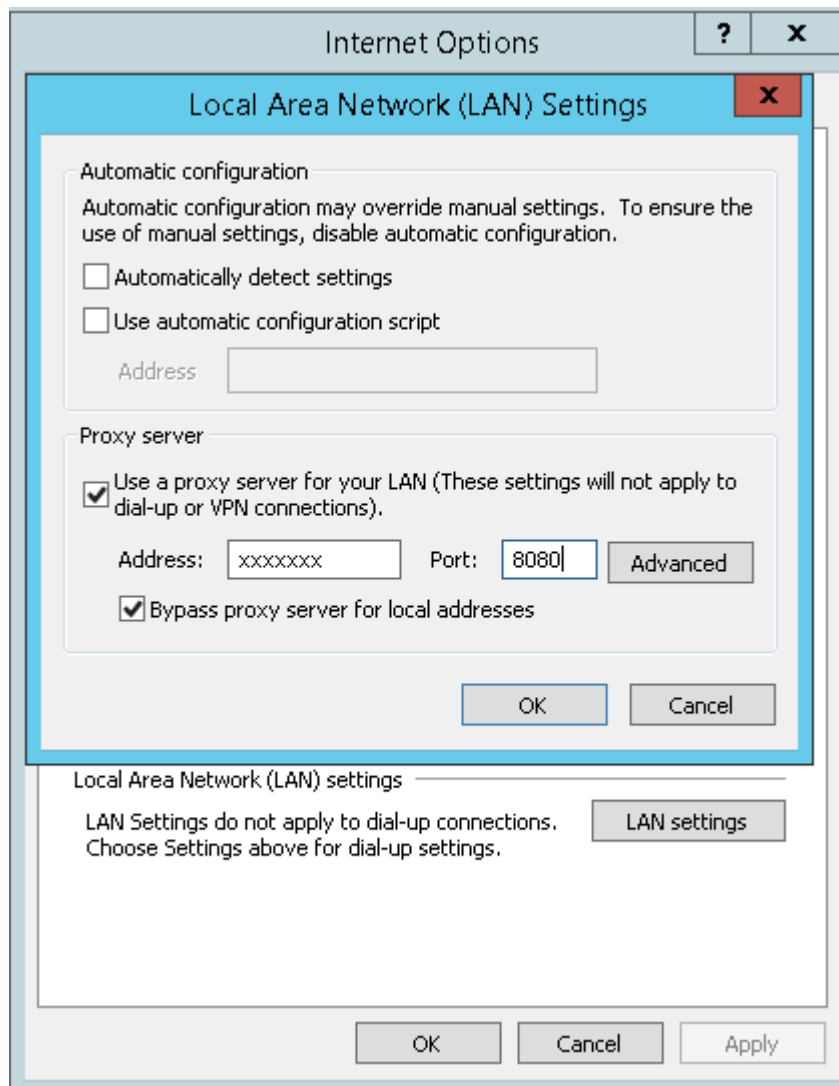
See this Microsoft article for correct usage.

Force configuration of proxy settings

In some environments, even when a proxy server is configured in the Archive Shuttle installer, there are still problems with connectivity. These problems are either between the module and the Core, or the module and a cloud service (e.g. Office 365).

It is possible in some situations to force all traffic through a proxy configuration. The first step is to ensure that Microsoft Edge works as expected.

From Microsoft Edge configuration, we can verify if the Proxy setting are configured. Go to Start > Control Panel > search 'Internet options' > Connections (Tab) > LAN settings > Proxy server:

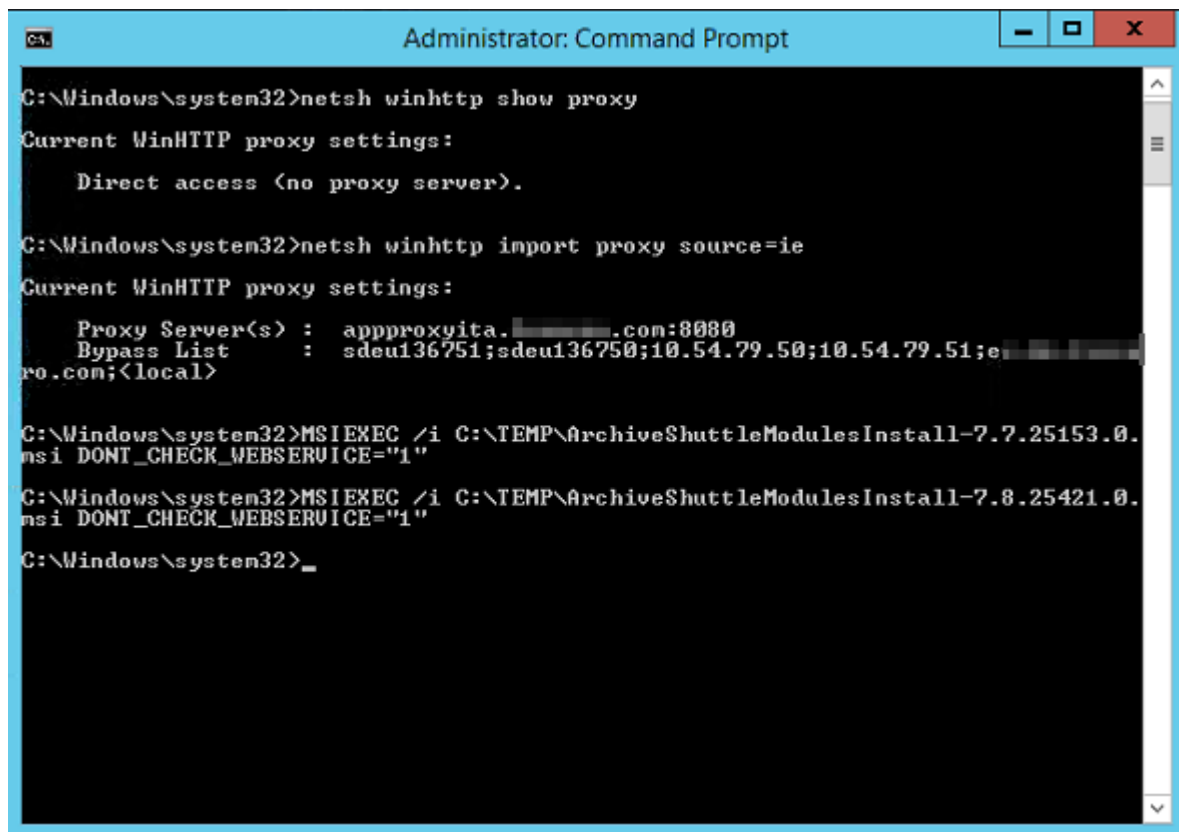


To check the proxy setting, issue following command:

```
netsh winhttp show proxy
```

Then, issue the following command:

```
netsh winhttp import proxy source=ie
```



```
Administrator: Command Prompt

C:\Windows\system32>netsh winhttp show proxy
Current WinHTTP proxy settings:
    Direct access (no proxy server).

C:\Windows\system32>netsh winhttp import proxy source=ie
Current WinHTTP proxy settings:
    Proxy Server(s) : appproxvita.████████.com:8080
    Bypass List    : sdeu136751;sdeu136750;10.54.79.50;10.54.79.51;e
ro.com;<local>

C:\Windows\system32>MSIEXEC /i C:\TEMP\ArchiveShuttleModulesInstall-7.7.25153.0.
nsi DONT_CHECK_WEBSERVICE="1"

C:\Windows\system32>MSIEXEC /i C:\TEMP\ArchiveShuttleModulesInstall-7.8.25421.0.
nsi DONT_CHECK_WEBSERVICE="1"

C:\Windows\system32>_
```

If you are installing the Archive Shuttle modules where communication to the Core is via a proxy, review this page for more details. This will help in situations where:

1. Using a proxy on a bridgehead server

When PowerShell tries to connect to Office 365 or Azure, it may not be able to connect. It does not follow the Microsoft Edge proxy settings.

2. If a proxy PAC script is used in Microsoft Edge

In this case, the installation of Archive Shuttle modules will likely fail.

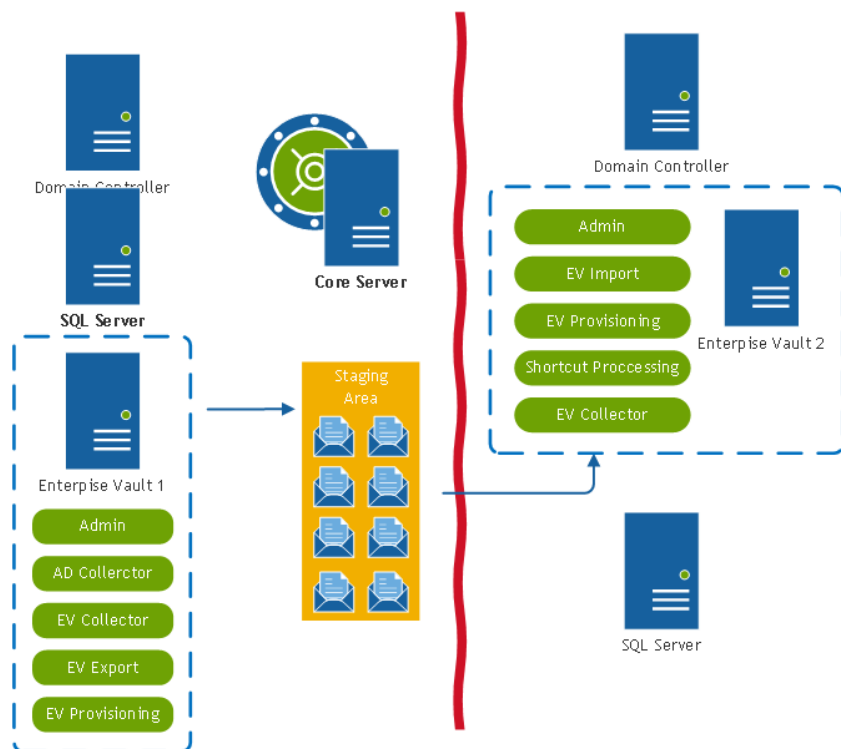
Enterprise Vault installation scenarios

The following topics give some example installations showing which components are installed on which servers.

Enterprise Vault to Enterprise Vault - cross site

The following diagram shows one possibility of where the Archive Shuttle modules can be installed in order to support the migration of Enterprise Vault archives between Enterprise Vault sites. This scenario can also be used to migrate archived data between Enterprise Vault servers and Vault Stores in the same Enterprise Vault site.

The migration configuration shown will also support migration between different versions of Enterprise Vault. This is possible because the EV Export Module is installed on a source EV server, and the EV Import Module is installed on a target EV server.

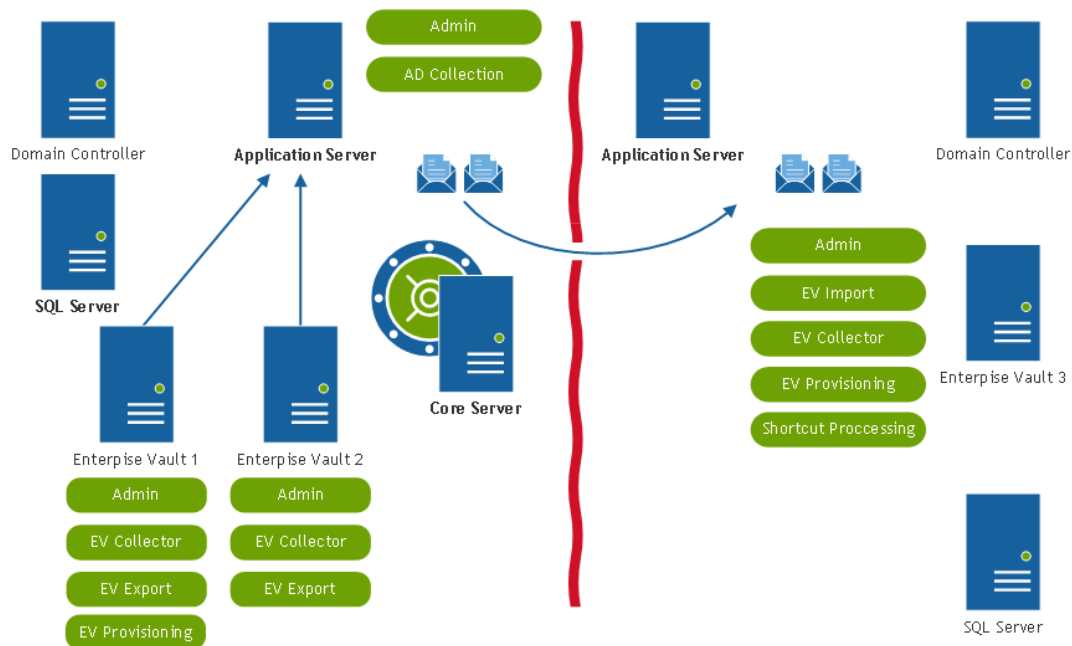


Enterprise Vault to Enterprise Vault - Cross forest/org/geography

The following diagram shows a slightly more complex migration scenario that also involves more data than the first scenario.

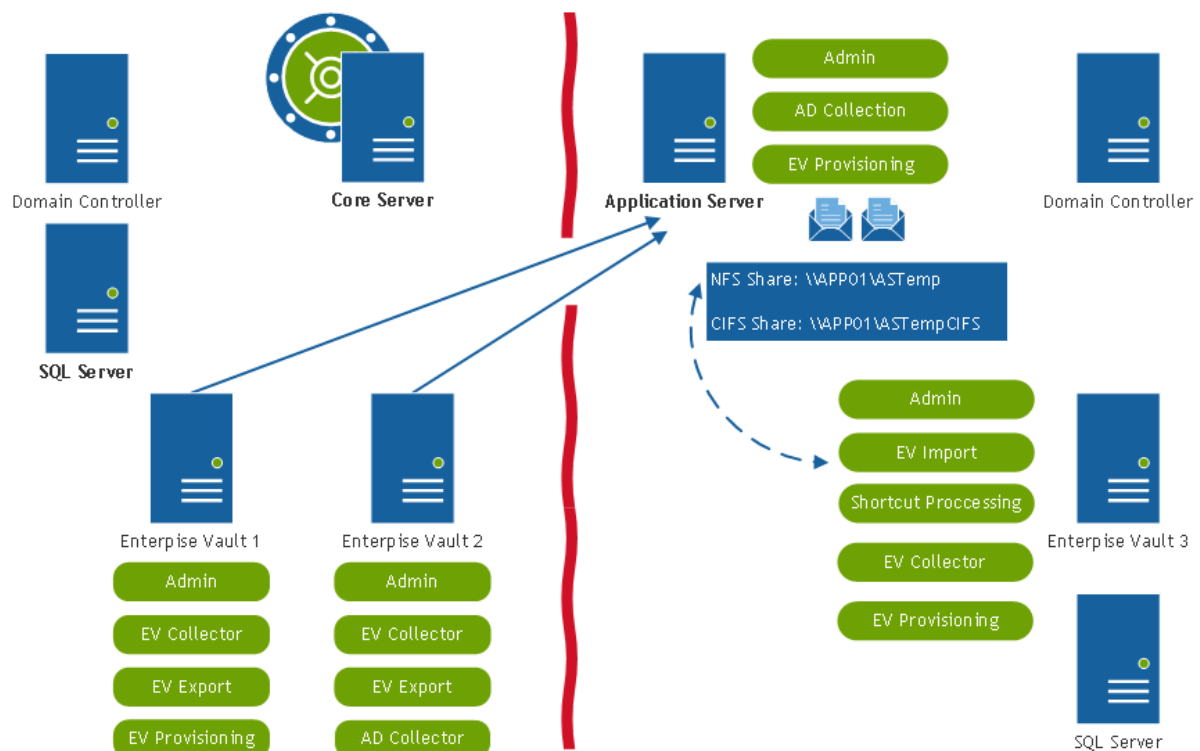
In this example, the dotted red line shows the possibility that the data is manually shipped between the two environments. There are several ways that this can be achieved, for example:

Physically ship the data on tape or other media between the environments. The import modules used in the target environment then need to be configured to point to the location where the copy is mounted.



Copy the data through restricted ports or firewalls. Again, the import modules used in the target environment need to be configured to point to the location where the copy is mounted.

NFS and CIFS in tandem. With this approach, the Staging Area needs to be shared via a generic username/password using NFS and again shared as a normal CIFS share. If appropriate to the environment, firewall ports for NFS then need to be opened to allow the export module to write to the NFS share. For this reason, this approach normally means that the Staging Area is located on the target environment. This is shown in the diagram below.



Note that the same approach can be used for migration to other target environments.

Reference:

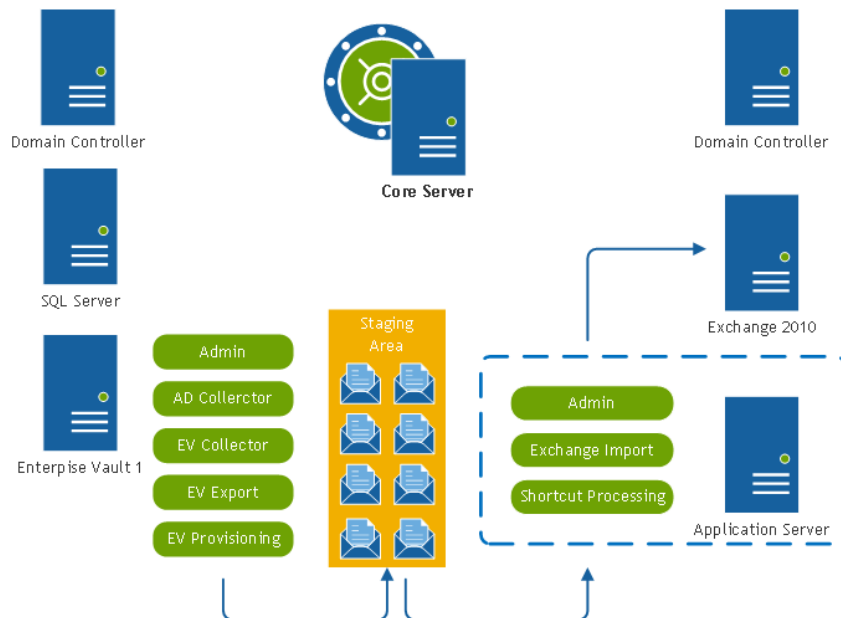
<http://technet.microsoft.com/en-us/library/dd758767%28v=ws.10%29.aspx>

<http://blogs.technet.com/b/filecab/archive/2012/09/14/server-for-nfs-in-windows-server-2012.aspx>

Enterprise Vault to Exchange 2010

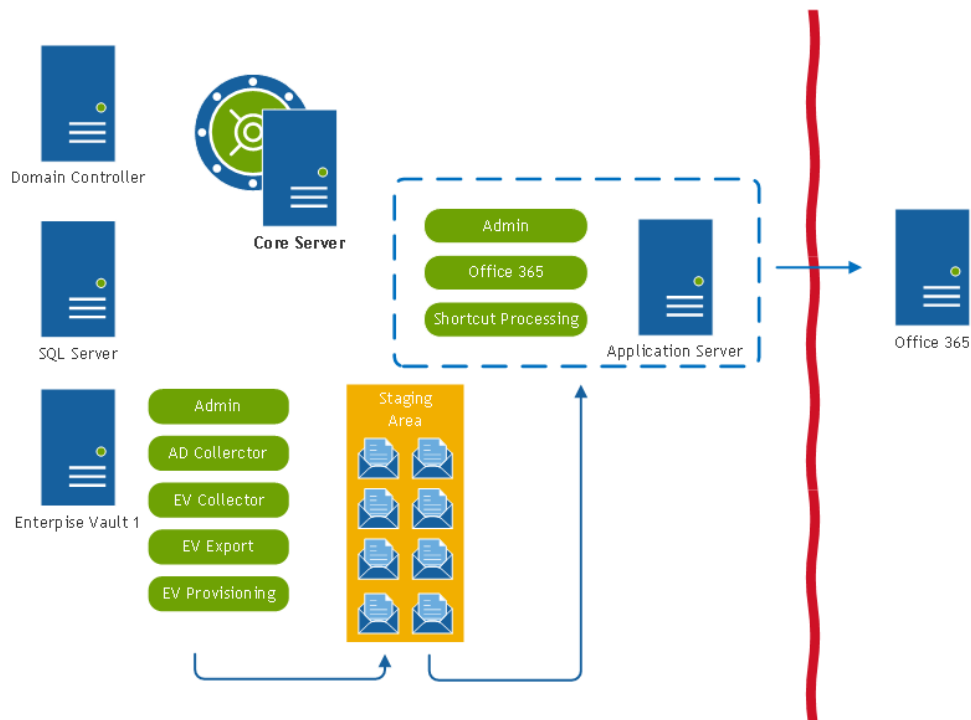
In the following diagram, Archive Shuttle is being used to migrate data from Enterprise Vault to Exchange 2010 (either primary mailbox or secondary mailbox/personal archive). The data involved is not particularly large; therefore, many of the modules are installed on regular, already-deployed, servers. The Archive Shuttle application server in many ways is operating as a plug-and-play appliance and also houses the data location used for export and import of the data involved in the migration.

i | NOTE: This same configuration can be used to migrate to Exchange 2013.

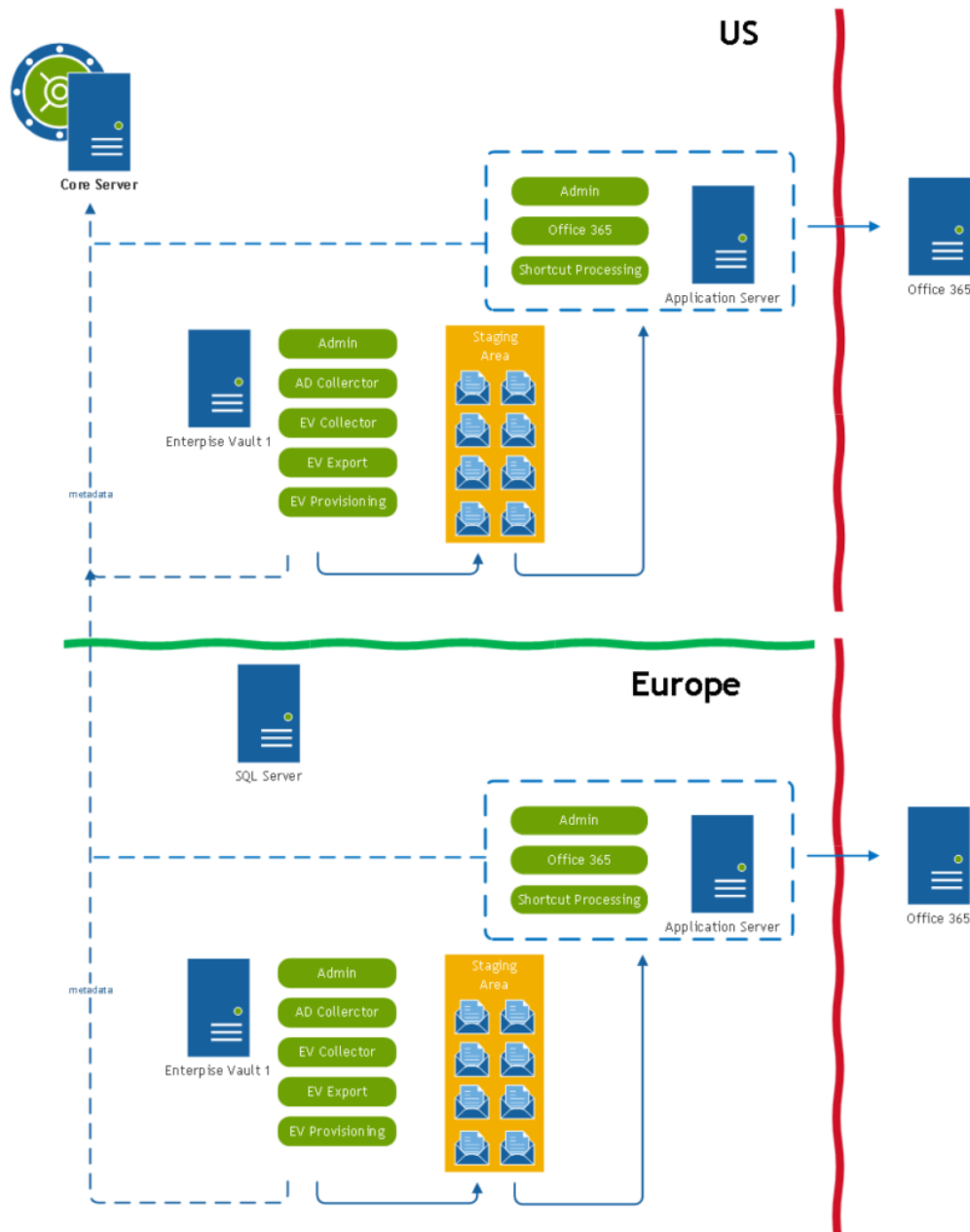


Enterprise Vault to Office 365

In the following diagram, Archive Shuttle is being used to migrate data from Enterprise Vault to Office 365. The communication to Office 365 allows mapping of Enterprise Vault archives to mailboxes in the cloud. The migration can be performed to either primary mailboxes or Personal Archives.



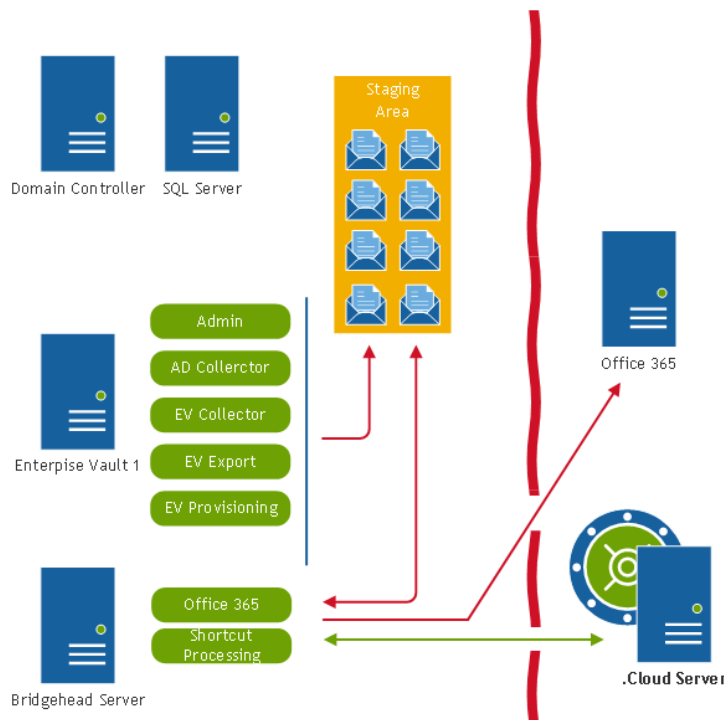
The example below illustrates a more complex environment where the environment is split across two geographies US and Europe. Each of those geographies has it's own internet connection, and there is a corporate wide-area network joining the locations also.



In this situation, one Core can still be deployed. The modules will receive commands and transmit metadata over the corporate network. The export/import is done within each geography.

Enterprise Vault to Office 365 using ArchiveShuttle.cloud

In the following diagram, Archive Shuttle.cloud is being used to migrate data from Enterprise Vault to Office 365 mailboxes. This new option with Archive Shuttle gives a cloud-based instance of Archive Shuttle (and the necessary SQL databases). This leaves customers to simply install the modules required to perform the migration and to provide a Network Share to house the Staging Area.



If you cannot install the modules directly onto the Enterprise Vault servers, then you can install all modules on the bridgehead server or a separate bridgehead server exclusively used for the extraction of data.

NOTE: If the Enterprise Vault modules are installed on a separate server, please ensure to install the Enterprise Vault API.

Planning for the Archive Shuttle databases

Archive Shuttle uses the following Databases:

- The Archive Shuttle Directory database. There is just one of these; it hosts all configuration and non-item based metadata.
- The Archive Shuttle Item database(s). There is one of these for each source Link (e.g. one per Vault Store). These databases do not have to be on the same SQL Server as the Archive Shuttle Directory database. Each Item Database can be on a separate SQL Server, if required.

Microsoft SQL Server must be installed and set up before you install Archive Shuttle. The collation requirement for the SQL Server installation must be case-insensitive, accent-sensitive (CI, AS); case-sensitive and accent-insensitive installations are not supported.

Microsoft SQL Server must be on a dedicated server, either physical or virtual. It is not supported to have it on the same server as the Archive Shuttle Core server. It is not supported to have the Microsoft SQL Server shared with any other software, for production use.

Before installing the Archive Shuttle Core Components, make sure the account that will be used has “dbcreator” rights in Microsoft SQL Server.

i | **NOTE:** SQL is only relevant within your environment when installing **Core** (see *Archive Shuttle Compatibility Guide* for more). If you are installing within the cloud, Archive Shuttle maintains SQL for you.

SQL versions

To see which versions of SQL Server are supported, go to the *Archive Shuttle Compatibility Guide*.

i | **NOTE:** Having the latest service pack installed is recommended.

SQL editions

Although Enterprise Edition of Microsoft SQL Server is recommended, Standard Edition may be used if the SQL instance uses the recommended (not minimum) resources associated with the size of migration you are performing. Planning for additional time will be required to accommodate regularly required offline maintenance.

Item and user level metadata

The following describes the item and user level metadata stored in Archive Shuttle databases.

Data stored by Archive Shuttle relates to these aspects of a migration:

- Users
- Archives/Containers
- Items

Each of these objects has a number of attributes, as shown below:

Users

- *First name, last name, display name, and title of each user (from Active Directory)*
- The user SID
- The email and SMTP address of the user
- The domain and AD container where the user object is located
- User GUID, samAcctName, DN, and UPN
- *Geographical information, including street address, state, office name, company name, department, and country*
- Whether the user is enabled
- The dates the user was created, updated, and deleted

i | **NOTE:** Archive Shuttle collects and stores metadata from Active Directory. If you have concerns about this data, enable the **Do not transmit non-essential Active Directory**

information option in the system configuration. With the option enabled, items mentioned in *italics* above are not collected. Changes do not apply to Microsoft Entra ID.

Archives/Containers

- Archive Name (from the Enterprise Vault Directory Database)
- Archive Description (from the Enterprise Vault Directory Database)
- The Vault Store that a source or target Archive is stored on
- The owning user SID
- The Archive ID (from the Enterprise Vault Directory Database)
- The number of items in the archive, and the overall size
- Mailbox name and Exchange Server name

Items

- Source transaction ID
- Original Size
- Compressed Size
- Target Transaction ID (in the case of a migration to Enterprise Vault)
- Target SaveSet ID (in the case of a migration to Enterprise Vault)
- Target Entry ID (in the case of a migration to Microsoft Exchange)

i | **NOTE:** No identifiable data, such as subject lines, or content of emails/archived items are stored in any of the Archive Shuttle databases.

i | **NOTE:** No migration content will pass through from the modules/staging-area to the cloud. No data leaves the customer network perimeter.

A non-disclosure agreement is available upon request.

Silent (unattended) installation

Archive Shuttle Core and the Archive Shuttle modules can be installed using a silent / unattended method. The general format of the command line is as follows:

`msiexec /i <package> /quiet /! *v <msilog.file> PARAMETER1="Param1 value" PARAMETERx....`

There is a special parameter called ADDLOCAL where it is possible to either specify ALL (for all features to be installed), or list the ones that are required from the tables below.

Unattended Installation of Archive Shuttle Core

Modules Installer		
Features	ASAdminModuleFeature	
	ADCollectorModuleFeature	
	EVCollectorModuleFeature	
	EVExportModuleFeature	
	EVImportModuleFeature	
	EVProvisioningModuleFeature	
	ExchangeImportModuleFeature	
	ShortcutPostprocessModuleFeature	
	NativeFormatImportModuleFeature	
	Office365ModuleFeature	
Parameters	APPLICATIONFOLDER	Modules root installation path, single module can be overridden
	ASADMINMODULEFOLDER	
	ADCOLLECTORMODULEFOLDER	
	EVCOLLECTORMODULEFOLDER	
	EVEXPORTMODULEFOLDER	
	EVIMPORTMODULEFOLDER	
	EVPROVISIONINGMODULEFOLDER	

Modules Installer		
	EXCHANGEIMPORTMODULEFOLDER	
	SHORTCUTPOSTPROCESSMODULEFOLDER	
	NATIVEFORMATIMPORTMODULEFOLDER	
	OFFICE365MODULEFOLDER	
	SERVICEACCOUNT	Service account to be used
	SERVICEPASSWORD	Service account password to be used
	ASWEBSERVER	Archive Shuttle web server
	LOGFOLDER	Log file folder
	USE_HTTPS	USE_HTTPS=1 to enable HTTPS
	ALLOW_OVERRIDE_DATABASE_NAME	This enables an option in the installer to allow the Archive Shuttle Database name to be specified.
	MAINDBNAME	Can be used to specify a different Archive Shuttle Directory Database name.

Unattended Installation of Archive Shuttle Modules

Modules Installer		
Features	CoreFeature	
	WebserviceFeature	
	WebUIFeature	
Parameters	APPLICATIONFOLDER	Archive Shuttle Core root installation path, specific

Modules Installer		
		features can be overridden.
	ASSERVICEFOLDER	
	ASWEBSERVICEFOLDER	
	ASWEBUIFOLDER	
	SERVICEACCOUNT	Service account to be used
	SERVICEPASSWORD	Service account password to be used
	LOGFOLDER	Log file folder
	LICENSE_FILE	Path to license file to user
	ASWEBSERVER	Archive Shuttle Web Server
	MAINSQINSTANCE	SQL instance of Archive Shuttle Directory database
	USE_HTTPS	USE_HTTPS=1 to enable HTTPS instead of HTTP
	DONT_CHECK_WEBSERVICE	Set DONT_CHECK_WEBSERVICE=1 if it is not required for the installer to check that the modules can communicate with the Archive Shuttle Core.
	SKIP_TRY_START_SERVICES	If specified it will prevent the installer from trying to start the services at the end of the installation

Examples of unattended installation

The following are provided as examples of how to perform an unattended installation:

Install the AD Collector Module

```
msiexec /i ArchiveShuttleModulesInstall-7.x.xxxxx.y /quiet /I*v C:\Temp\ADColl.log
ADDLOCAL=ASAdminModuleFeature,ADCollectorModuleFeature APPLICATIONFOLDER="D:
```

```
\Modules" SERVICEACCOUNT=EV\VaultAdmin SERVICEPASSWORD=xyz123  
ASWEBSERVER=SRV001.EV.LOCAL LOGFOLDER="D:\Logs"
```

Install EV Export Module

```
msiexec /i ArchiveShuttleModulesInstall-7.x.xxxx.y /quiet /! *v C:\Temp\ADColl.log  
ADDLOCAL=ASAdminModuleFeature,EVExportModuleFeature EVEXPORTMODULEFOLDER=  
\file001\exportimport APPLICATIONFOLDER="D:\Modules" SERVICEACCOUNT=EV\VaultAdmin  
SERVICEPASSWORD=xyz123 ASWEBSERVER=SRV001.EV.LOCAL LOGFOLDER="D:\Logs"
```

Changing Archive Shuttle module deployment

From time to time it may be necessary to add additional modules to servers that have already had some Archive Shuttle modules deployed. To do this, perform the following steps:

1. From Windows Control Panel, select **Programs**.
2. Select **Uninstall a program**.
3. From the list of programs, select **Archive Shuttle Modules**.
4. Right click the entry and choose **Change**.
5. Follow the onscreen prompts to add/remove the required components.

Upgrading Archive Shuttle

This section describes how to upgrade an Archive Shuttle migration environments.

Archive Shuttle strongly advises you to read through this section in its entirety before performing any kind of production environment upgrade.

There are three components that will be upgraded:

- **Archive Shuttle Core:** An MSI will be run to perform this upgrade.
- **Archive Shuttle Modules:** An MSI will be run to perform this upgrade.
- **Archive Shuttle databases:** Archive Shuttle Core will upgrade the Archive Shuttle Directory Database, and each Item Database when the Windows services start, following the upgrade.

i | **NOTE:** See the *Archive Shuttle Compatibility Guide* to determine what version of .Net is required for the Archive Shuttle Core server.

Supported upgrade paths

You can upgrade to the current version of Archive Shuttle from any previous version of Archive Shuttle. The specific build that is running will not affect the upgrade.

How to monitor DB upgrade status

Archive Shuttle should handle upgrade with databases' larger than 100GBs without the need for manual intervention.

Getting ready

Archive Shuttle recommends that, whenever possible, you perform the upgrade in a lab environment first. This gives you some familiarity of the upgrade process and allows you to fine-tune the upgrade steps to suit the particular customer, environment, policies, and procedures.

Having access to a lab environment also enables the exploration of the new features that are delivered in the newer version of Archive Shuttle. More information relating to the new features is available in the Release Notes and the Revision Notes.

Before starting the upgrade, it is essential to have the following:

- New Archive Shuttle x.x Core MSI
- New Archive Shuttle x.x Modules MSI
- Access to the username/passwords used during the installation for the Archive Shuttle Core and Modules



NOTE: Any username used during the original installation is remembered. However, the password must be re-entered.

In order for the upgrade to succeed, Archive Shuttle recommends that there is sufficient free space on the SQL server locations for both the database and log files. The space available should be as follows:

Database/Log	Space
Archive Shuttle Directory	2x current size of database
Archive Shuttle Directory Logs	1x current size of log file
Archive Shuttle Item Database	2x current size of database
Archive Shuttle Item Database Logs	1x current size of log file

Sufficient time should also be allocated to the upgrade. Upgrading a large Archive Shuttle Item Database can take several hours. Archive Shuttle recommends you monitor the Core log files after deployment to verify the process has completed when working with large deployments.

If a problem is encountered when upgrading the Archive Shuttle database, there are manual steps that can be performed to resume the upgrade. These are available from Quest Support.

Performing the upgrade

Archive Shuttle recommends that you to perform the upgrade on the Archive Shuttle environment when migration activity is not actively running. Prior to performing the steps below, Archive Shuttle recommends that you disable the Archive Shuttle modules that have been deployed and then allow some time to pass for the modules to complete their queued work before proceeding.

Archive Shuttle also advises you to review the Archive Shuttle Dashboard. If the needles on the activity gauges are showing 0, then exports and imports are not currently running. Other background activity might still be in progress, so it is advised to perform the step of disabling the modules and reviewing the module log files to ensure work has stopped.

The following steps should be performed in order to upgrade the environment:

1. Stop the Archive Shuttle Modules on all servers.
2. Stop the Archive Shuttle Core service on the Archive Shuttle Core Server.
3. Perform a full SQL database backup of:
 - Archive Shuttle Directory Database, and
 - Every Archive Shuttle Item Database
4. Run the new Archive Shuttle xx.x Core MSI on the Archive Shuttle Core Server.
5. Verify that the installation/upgrade completes without errors. When the installation has been completed, open the Archive Shuttle Admin Interface and navigate to some of the pages.
6. Run the Archive Shuttle xx.x Module MSI on each server which have modules installed.

i NOTES:

1. If the migration target is Exchange or Office 365 and the server running the ingestion module is Windows 2008 R2, there is an additional Microsoft component to install.
2. If the Office 365 Leavers functionality is to be used within Archive Shuttle, then there are additional requirements described in this link.
3. For the Office 365 module to process licensing for Leavers, the PowerShell execution policy needs to be set to RemoteSigned or Unrestricted. Verify that the installation/upgrade completes without errors. After the installation the Archive Shuttle modules page in the Admin Interface should show all modules without a red background. This indicates that they are properly communicating with the Archive Shuttle Core.
4. If any changes have been made with regards to the logging levels for the Archive Shuttle Core or Modules, those changes will need to be implemented again once the upgrade has completed.

When the upgrade has been completed, perform the following post upgrade checks and ensure the step relating to Environment Sync is performed.

Post upgrade checks

Following the installation and upgrade of the migration environment, verify the upgrade by performing the followings tasks:

1. Open the Archive Shuttle administration page, and verify that the page opens without errors.
2. Verify the build number in the lower left hand corner of the administration page. It should be: XX.X.X.NNNNN (NNNNN will be five digits indicating the exact build number)
3. Go to the EV Environment page, and perform a Sync All EV Environments operation. This will take a few minutes to run, and is an essential post-upgrade step.
4. Open the Modules page from the Archive Shuttle administration page, and verify that all of the modules are accessible (none should show red, indicating that the Archive Shuttle Core has had issues contacting the module).
5. Verify that all the Archive Shuttle services are started using the Windows Service Control Manager on each server in the environment.
6. In each of the Archive Shuttle databases (Directory Database, and each Item Database) there is a table called SchemaVersion. The versions reported should be as follows:
 - Archive Shuttle Directory Database: xx.x.0.0
 - Archive Shuttle Item Database: xx.x.0.0

i NOTE: If the SchemaVersion tables do not show these versions, contact Quest Support. Archive Shuttle also recommends that you perform another full database backup prior to using Archive Shuttle for further archive migrations.

Uninstalling Archive Shuttle

To uninstall Archive Shuttle:

1. From Windows Control Panel, select **Programs**.
2. Select **Uninstall a program**.
3. From the list of programs, select **Archive Shuttle 64-bit**.

i | NOTE: The uninstaller does not delete any data or databases.

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- Chat with support engineers online
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