

erwin Data Intelligence

# erwin Data Quality

Software Installation Guide - Windows

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## 1. Purpose

The document provides the end-to-end instructions to install the DQLabs application on a Windows environment. The audience of this document are personnel with a working technical knowledge of Windows Server and PowerShell. The document also assumes that the users have administrator privileges to complete the setup.

## 2. System Requirements

This section provides the minimum system requirements & mandatory requirements which are required to install the DQLabs application in the windows environment successfully.

### 2.1 System Requirements

<b>Operating System</b>	Windows Server 2019 64 bit
<b>CPU Cores</b>	16 or above
<b>RAM</b>	32 GiB or Above
<b>Disk Space</b>	Minimum 512 GB
<b>Processor</b>	64-bit Operating System

### 2.2 Software Requirements/Prerequisites

(Auto installed with the script)

<b>PostgreSQL Server 12</b>	64 bit
<b>Python3.7 with pip3.7</b>	64 bit
<b>IIS Server</b>	N/A
<b>Java</b>	1.8 JDK 64 bit
<b>MSSQL, Oracle, PostgreSQL, MySQL ODBC/JDBC driver</b>	64 bit

### 2.3 Mandatory Requirements:

- **Dedicated Server** - DQ labs needs a dedicated server for installation, and we recommend installation of Erwin DI and DQ on separate servers
- **Internet Access** - The server should have access to internet at the time of installation to successfully complete the installation and activate the application using a valid license key. Internet can be disabled upon successful set up of the DQLabs product.
- **License key** - A new DQ license key is required for activating the product upon installing the product
- **Administrator Privileges** - Should be able to run Windows Power Shell ISE with administrator privileges

## 3. Installation Process

### 3.1 Prerequisites Installation

#### Step 3.1.1:

Open "PowerShell ISE" as administrator (Press Win key and search for "PowerShell ISE")

(Right Click on Windows PowerShell ISE and click on "Run as administrator")

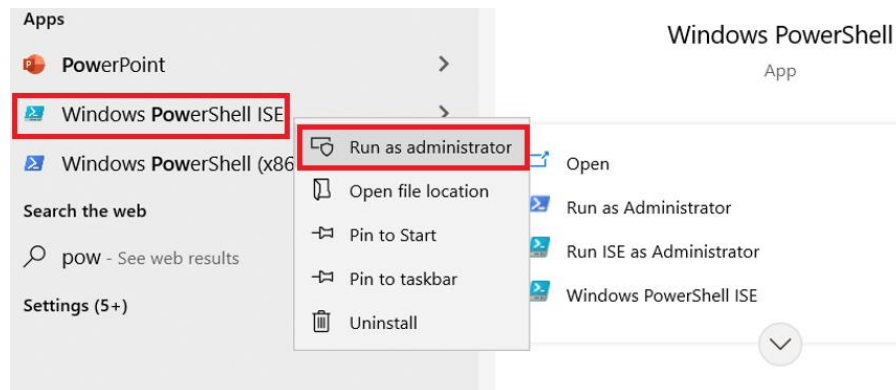
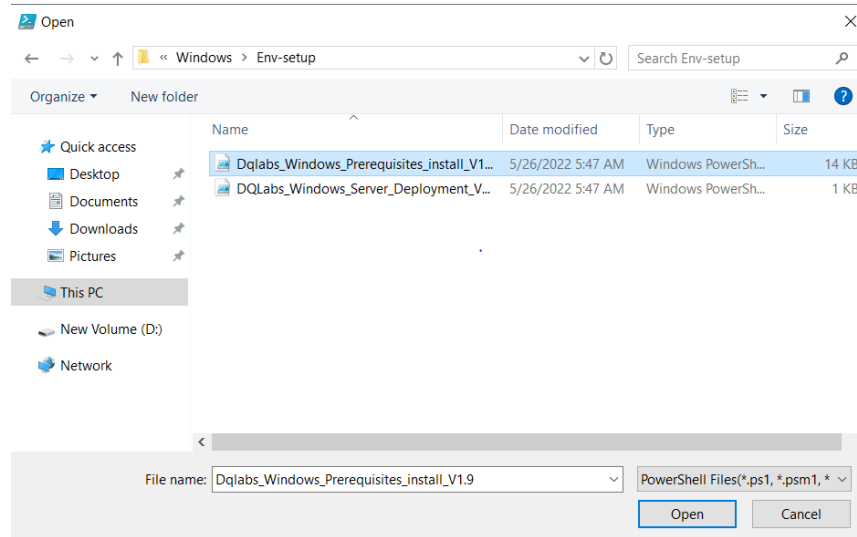


Figure 1 (Running PowerShell as Administrator)

#### Step 3.1.2:

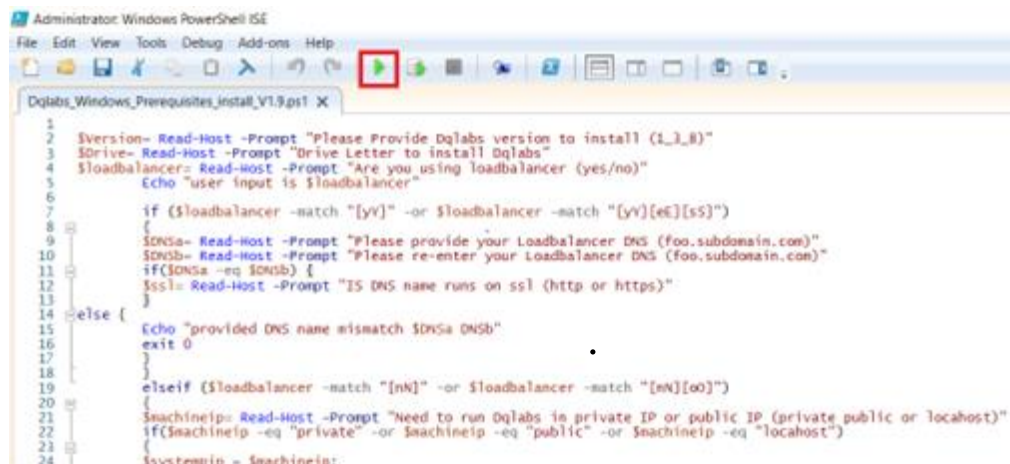
- On the PowerShell ISE window, Click on File → To open a Power shell script file
- Locate the prerequisites installation script "Dqlabs\_Windows\_Prerequisites\_install\_V1.9" in the path "erwin Quest\_DQlabs\_Linux\_Windows\_Installation\Windows\Env-setup\"
- Select the file "Dqlabs\_Windows\_Prerequisites\_install\_V1.9"



**Figure 2 (Installation script)**

### Step 3.1.3:

Click the "Run Script" button in PowerShell (as shown in below reference image)



**Figure 3 (Run Script)**

### Step 3.1.4:

Provide which DQLabs Version to install (for example: **1\_3\_8**)

**Please verify the version number to be installed from the erwin Quest team**

```

1 $Version= Read-Host -Prompt "Please Provide Dqlabs version to install (1.3.8)"
2 $Drive= Read-Host -Prompt "Drive Letter to install Dqlabs"
3 $loadbalancer= Read-Host -Prompt "Are you using loadbalancer (yes/no)"
4 Echo "user input is $loadbalancer"
5
6 if ($loadbalancer -match "[yY]" -or $loadbalancer -match "[yY][eE][sS]")
7 {
8     $DNSa= Read-Host -Prompt "Please provide your Loadbalancer DNS (foo.subdomain.com)"
9     $DNSb= Read-Host -Prompt "Please re-enter your Loadbalancer DNS (foo.subdomain.com)"
10    if ($DNSa -eq $DNSb) {
11        $ssl= Read-Host -Prompt "IS DNS name runs on ssl (http or https)"
12    }
13 }
14 else {
15     Echo "provided DNS name mismatch $DNSa DNSb"
16     exit 0
17 }
18 elseif ($loadbalancer -match "[nN]" -or $loadbalancer -match "[nN][oO]")
19 {
20     $machineip= Read-Host -Prompt "Need to run Dqlabs in private IP or public IP (private public or localhost)"
21     if ($machineip -eq "private" -or $machineip -eq "public" -or $machineip -eq "localhost")
22     {
23         $systemtempip = $machineip;
24     }
25 }
26
27 PS C:\Users\Administrator> C:\Users\Administrator\Desktop\erwin Quest_Dqlabs_Linux_Windows_Installation\Windows\Env-setup\Dq
Please Provide Dqlabs version to install (1.3.8): 1.3.8
  
```

Figure 4 (Version)

### Step 3.1.5:

Enter the **Disk Drive name** where the Dqlabs application is to be installed (for example: **D** in below ref. image)

Please **do not** enter the ":" symbol after the entering the drive letter name

```

1 $Version= Read-Host -Prompt "Please Provide Dqlabs version to install (1.3.8)"
2 $Drive= Read-Host -Prompt "Drive Letter to install Dqlabs"
3 $loadbalancer= Read-Host -Prompt "Are you using loadbalancer (yes/no)"
4 Echo "user input is $loadbalancer"
5
6 if ($loadbalancer -match "[yY]" -or $loadbalancer -match "[yY][eE][sS]")
7 {
8     $DNSa= Read-Host -Prompt "Please provide your Loadbalancer DNS (foo.subdomain.com)"
9     $DNSb= Read-Host -Prompt "Please re-enter your Loadbalancer DNS (foo.subdomain.com)"
10    if ($DNSa -eq $DNSb) {
11        $ssl= Read-Host -Prompt "IS DNS name runs on ssl (http or https)"
12    }
13 }
14 else {
15     Echo "provided DNS name mismatch $DNSa DNSb"
16     exit 0
17 }
18 elseif ($loadbalancer -match "[nN]" -or $loadbalancer -match "[nN][oO]")
19 {
20     $machineip= Read-Host -Prompt "Need to run Dqlabs in private IP or public IP (private public or localhost)"
21     if ($machineip -eq "private" -or $machineip -eq "public" -or $machineip -eq "localhost")
22     {
23         $systemtempip = $machineip;
24     }
25 }
26
27 PS C:\Users\Administrator> C:\Users\Administrator\Desktop\erwin Quest_Dqlabs_Linux_Windows_Installation\Windows\Env-setup
Please Provide Dqlabs version to install (1.3.8): 1.3.8
Drive Letter to install Dqlabs: D
  
```

Figure 5 (Disk Drive Name)

### Step 3.1.6:

Enable or disable Load balancer service

- If you don't have a load balancer, enter **no** and hit enter

```

1 $Version= Read-Host -Prompt "Please Provide Dqlabs version to install (1.1.8)"
2 $Script= Read-Host -Prompt "Please enter to install Dqlabs"
3 $loadbalancer= Read-Host -Prompt "Are you using loadbalancer (yes/no)"
4 echo user input is $loadbalancer
5 if ($loadbalancer -match "[yy]" -or $loadbalancer -match "[yY][eE][sS]")
6 {
7     $DNSa= Read-Host -Prompt "Please provide your loadbalancer DNS (foo.subdomain.com)"
8     $DNSb= Read-Host -Prompt "Please re-enter your Loadbalancer DNS (foo.subdomain.com)"
9     if ($DNSa -eq $DNSb) {
10         $ssl= Read-Host -Prompt "IS DNS name runs on ssl (http or https)"
11     }
12 }
13 else {
14     Echo "provided DNS name mismatch $DNSa $DNSb"
15     exit 0
16 }
17 elseif ($loadbalancer -match "[nN]" -or $loadbalancer -match "[nN][oO]")
18 {
19 }
20

```

Figure 6.1 (Load Balancer - Option)

- If you are using load balancer type **"yes"** and hit enter
  - Then type your Load balancer DNS name (for example: demo.dqlabs.ai) and hit enter
  - Re-enter the same DNS name (for example: demo.dqlabs.ai) and hit enter
  - If DNS name runs on SSL, select **"https"** Or **"http"** and hit enter

```

Are you using loadbalancer (yes/no): yes
user input is yes
Please provide your Loadbalancer DNS (foo.subdomain.com): demo.dqlabs.ai
Please re-enter your Loadbalancer DNS (foo.subdomain.com): demo.dqlabs.ai
IS DNS name runs on ssl (http or https): |

```

Figure 6.2 (Loadbalancer)

### Step 3.1.7:

Depending on your hosting server IP address type, please enter public or private

### Example

- If the hosting server is on a Public IP, please type **public** and hit enter (Fig., 7.1)
- Else if the hosting server is on a Private IP, then please type **private** and hit enter

```

Are you using loadbalancer (yes/no): no
user input is no
Need to run Dqlabs in private IP or public IP (private public or localhost): public

```

Figure 7.1 (If hosted in Public IP)

```
Are you using loadbalancer (yes/no): no
user input is no
Need to run Dqlabs in private IP or public IP (private public or localhost): private
```

Figure 7.2 (If hosted in Private IP)

**Step 3.1.8:**

- Once the script execution is success, the below status message will appear. (Please refer figure 8 below)
- Close the PowerShell prompt window if it is a success. It is important to close the PowerShell window as the installation script will have set some environment variables.

```
3.90.0.5
Ok.
Still running: ChromeInstaller
Still running: ChromeInstaller
Still running: ChromeInstaller
Still running: ChromeInstaller
Still running: ChromeInstaller
Still running: ChromeInstaller
Still running: ChromeInstaller
Still running: ChromeInstaller
Still running: ChromeInstaller
Still running: ChromeInstaller
Still running: ChromeInstaller
VERBOSE: Performing the operation "Remove File" on target "C:\Users\Administrator\AppData\Local\Temp\2\ChromeInstaller.exe".
Service "Spark_job_server" installed successfully!

Service "Dqlabs-server" installed successfully!

PS D:\nssm-2.24\nssm-2.24\win64> |
```

Figure 8 (DQLabs Server Installation Status)

**Step 3.1.9:**

Once the DQLabs Server installation is complete, we need to restart the Spark Job Server. To restart the Spark Job Server, please follow the below steps.

Restarting the Spark Job Server.

- Open **Command Prompt** with Administrator privilege and follow below steps
  - Navigate to the Drive where the spark\_job\_server is installed (it is the same Drive name mentioned in **Step 3.1.5**). (e.g., in the command prompt type D: and press enter)
  - Open sparkjobserver folder using command **cd spark-job-server**. Please refer the below screenshot (Figure 9.1).
  - Now, restart the Spark job server using the command **sbt "~ job-server-extras/reStart"**



```
C:\> Administrator: C:\Windows\System32\cmd.exe - sbt "~ job-server-extras/reStart"

Microsoft Windows [Version 10.0.17763.2928]
(c) 2018 Microsoft Corporation. All rights reserved.

D:\spark-job-server> sbt "~ job-server-extras/reStart"
[info] welcome to sbt 1.5.2 (OpenLogic-OpenJDK Java 1.8.0-262)
[info] loading settings for project spark-job-server-build from plugins.sbt ...
[info] 1. Monitoring source files for root/job-server-extras/reStart...
[info] Press <enter> to interrupt or '?' for more options.
```

Figure 9.1 (Restart the Spark Job Server)

- When prompted, Press enter key, and this will close the command prompt

## 3.2 Verify - Prerequisites Installation

### 3.2.1: Environment Variables

- On the Windows taskbar, right-click the Windows icon and select **System**.
- In the Settings window, under Related Settings, click **Advanced system settings**.
- On the Advanced tab, click **Environment Variables**. On the Environment Variables windows, select **Path** under the System Variables section and click on **Edit**

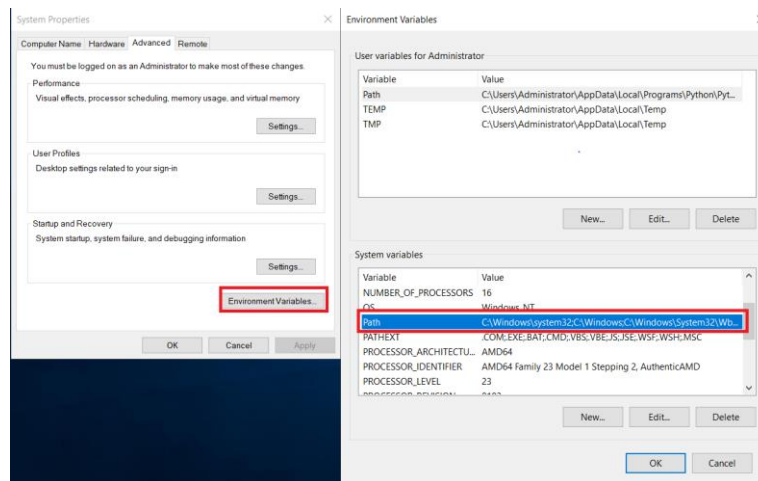


Figure 10.1 (Environment Variable)

### 3.2.2: Java Home Check

Make sure you see **"JAVA\_HOME"** as shown in Fig then Click on **'OK'** and exit.

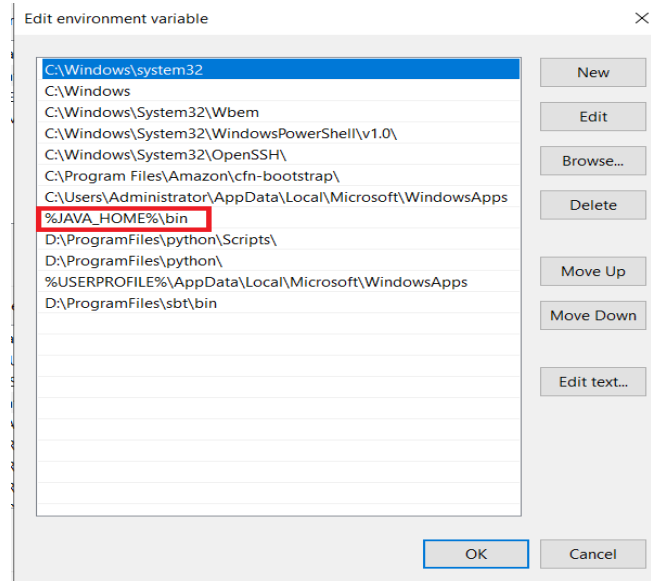


Figure 10.2 (Java Home path in Environment Variable)

### 3.2.3: Check Java and Python Version

- Open new Command Prompt with Administrator privileges.
  - Type '**java -version**' and hit on enter. You should see "**1.8**" as the major version number.

```
C:\Users\Administrator> java -version
openjdk version "1.8.0-262"
OpenJDK Runtime Environment (build 1.8.0-262-b10)
OpenJDK 64-Bit Server VM (build 25.71-b10, mixed mode)
```

Figure 11.1 (Java Version)

- Then type '**python -version**' and hit on enter, to check the python version. You should see "**3.7**" as the major version number.

```
Microsoft Windows [Version 10.0.17763.2928]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Administrator> python --version
Python 3.7.0

C:\Users\Administrator>
```

Figure 11.2 (Python Version)

**Please note if you do not see the correct Java major version and Python major version do not proceed with the installation**

## 3.4 Verify Database Installation

### STEP 3.4.1: PostgreSQL Login

- Click on the Start and search “**pgadmin**”
- Open pgAdmin and enter the below credentials to connect
  - General authentication password: “**postgres**”
  - Localhost PostgreSQL server authentication password “**postgres**”

### STEP 3.4.2: Verify Database

- Verify if the database ‘**dqlabs**’ is created and listed under the databases section as in below image.

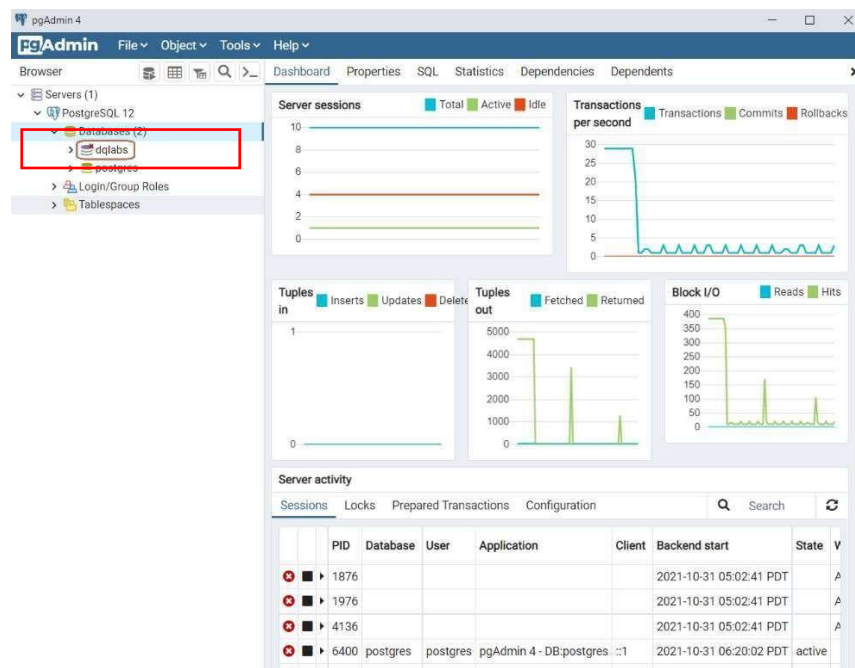


Figure 12.2 (Verify Database)

- Close the pgAdmin application.

## 3.5 Server Deployment

### Step 3.5.1:

Open “PowerShell ISE” as administrator (Press Win key and search for “PowerShell ISE”)

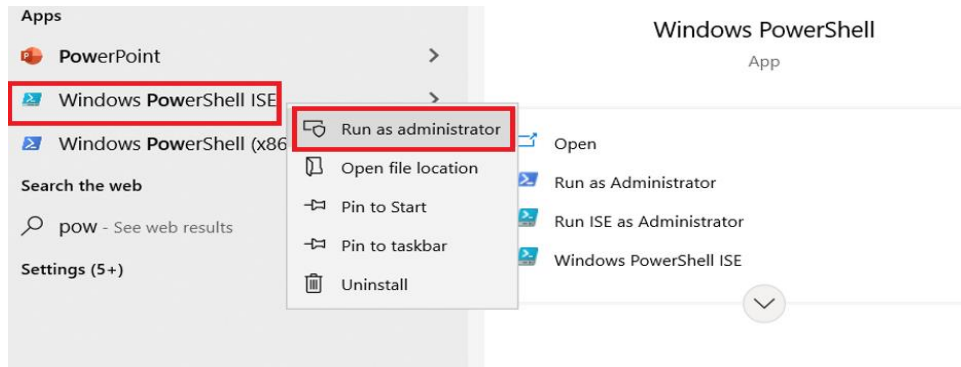


Figure 13.1 (PowerShell with Administrator privilege)

#### Step 3.5.2:

- On the PowerShell ISE window, Click on **File** → To open a Power shell script file
- Locate the Server deployment installation script “DQLabs\_Windows\_Server\_Deployment\_V1.9” in the path **erwin Quest DQLabs Linux Windows Installation\Windows\Env-setup\**
- Select the file “**DQLabs\_Windows\_Server\_Deployment\_V1.9**” from the above location

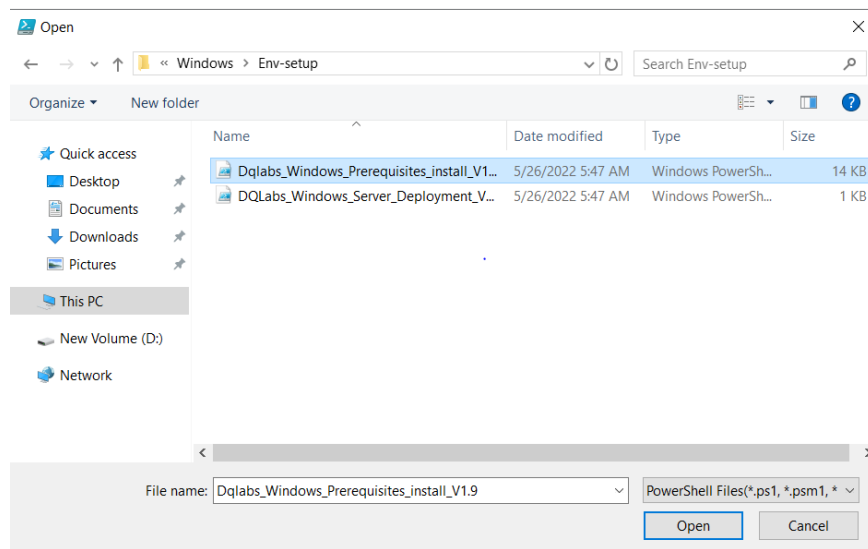


Figure 13.2 (file location)

#### Step 3.5.3:

- Enter the **DiskDrive name** where the Dqlabs application is to be installed (for example: **D**)  
**Ensure you give the same drive name as given in step 3.1.5 of the “Prerequisites Installation” section**  
Do not enter the “:” symbol after the entering the drive letter name

```

Administrator: Windows PowerShell ISE
DQLabs.Windows.Server.Deployment.V1.9.ps1
1 $Drive= Read-Host -Prompt "Enter Drive letter where dqlabs to install"
2 cd $Drive:\checkout-server-windows
3 python -m pip install --upgrade pip
4 pip install -r requirements.txt
5 pip uninstall crypto -y
6 pip uninstall pycryptodome -y
7 pip install pycryptodome
8 pip install mysql-connector
9 pip install openpyxl
10 pip install -r requirements.txt
11 pip install dqlabs-0.1-py3-none-any.whl
12 pip install psutil
13 pip install spark_jobserver_jobs/dqlabs_jobs-0.1-py3-none-any.whl
14 python manage.py makemigrations
15 python manage.py migrate
16 New-Item $Drive:\checkout-server-windows\version.txt
17 cd $Drive:\nssm-2.24\nssm-2.24\win64
18 .\nssm stop Spark_job_server
19 .\nssm start Spark_job_server
20 Start-Sleep -s 60
21 .\nssm start Dqlabs-server
22 Start-Sleep -s 120
23 Invoke-WebRequest http://localhost:8000/api/setting/initialload/
24 Invoke-WebRequest http://localhost:8000/api/setting/initialload/

PS C:\Users\Administrator> C:\Users\Administrator\Desktop\erwin Quest_DQLabs_Linux_Windows_Install
Enter Drive letter where dqlabs to install D
  
```

Figure 14 (DQLabs Server Installation)

#### Step 3.5.4:

- After the installation process is completed, the below screen will be displayed.
- Verify, if status code = 200 and status description = OK

```

StatusCode      : 200
StatusDescription : OK
RawContentStream : Microsoft.PowerShell.Commands.WebResponseContentMemoryStream
RawContentLength : 16
RawContent       : HTTP/1.1 200 OK
                  Vary: Accept, Cookie, Origin
                  Allow: OPTIONS, GET
                  X-Frame-Options: DENY
                  X-Content-Type-Options: nosniff
                  Content-Length: 16
                  Content-Type: text/html; charset=utf-8
                  Date: Wed, 25 May 2022 07:31:15 GMT
                  Server: WSGIServer/0.2 CPython/3.7.0

BaseResponse    : {"status": true}
                  : System.Net.HttpWebResponse
Headers         : {[Vary, Accept, Cookie, Origin], [Allow, OPTIONS, GET], [X-Frame-Options, DENY], [X-Content-Type-Options, nosniff]...}

PS D:\nssm-2.24\nssm-2.24\win64>
  
```

Figure 14 (DQLabs Server Installation Verification)

If status description is not "OK" then follow the below steps:

#### Step 3.5.5:

- Start > Control Panel > Administrative Tool > Services scroll to find **Dqlabs-server**. Right click on **Dqlabs-server** and click on 'Restart'.
- Open the PowerShell terminal.
- Run the command **Invoke-WebRequest http://localhost:8000/api/setting/initialload/**

- Then you should see the **status code = 200** and **status description = OK**

```

StatusCode      : 200
StatusDescription : OK
RawContentStream : Microsoft.PowerShell.Commands.WebResponseContentMemoryStream
RawContentLength : 16
RawContent       : HTTP/1.1 200 OK
                  Vary: Accept, Cookie, Origin
                  Allow: OPTIONS, GET
                  X-Frame-Options: DENY
                  X-Content-Type-Options: nosniff
                  Content-Length: 16
                  Content-Type: text/html; charset=utf-8
                  Date: Wed, 25 May 2022 07:31:15 GMT
                  Server: WSGIServer/0.2 CPython/3.7.0

BaseResponse    : {"status": true}
                  : System.Net.HttpWebResponse
Headers         : {[Vary, Accept, Cookie, Origin], [Allow, OPTIONS, GET], [X-Frame-Options, DENY], [X-Content-Type-Options, nosniff]...}

PS D:\nssm-2.24\nssm-2.24\win64> |

```

Figure 14.1 (DQLBS server installation verification)

If you see the above correct status code and description as shown in Figure 14 (DQLabs Server Installation Verification), the installation is successful. Else do not proceed the next steps and contact Erwin Quest support team.

## 3.6 Verify Spark Job Server Installation

### STEP 3.6.1: Verify Spark Job Server

- Open your Browser
- Type **localhost:8090** in the address bar and the **Spark Job Server UI** will open (as in image below)
- Click on “**Contexts**”.

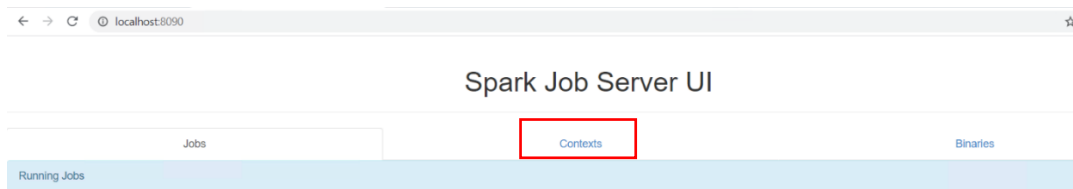


Figure 15.1 (Spark Job Server UI)

### STEP 3.6.2: Verify the IP address of Spark Job Server

- Private IP of the server should be available under the Spark URL column

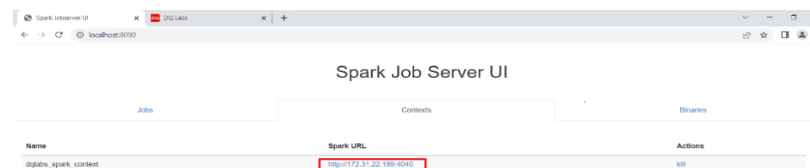


Figure 15.2 (Spark Job Server IP Address)

## 4 Completing the Application set up

### 4.1 Login to the Application

- Go to address bar of any supported browser
- Input the IP address/DNS name where the application was installed (for example: <https://Quest.erwinDQ.io/> or <http://192.168.96>) and hit enter
- The product will be launched on the browser and the login screen will be displayed
- Use the provided Admin Username and Password to login into the application in order to complete the set up

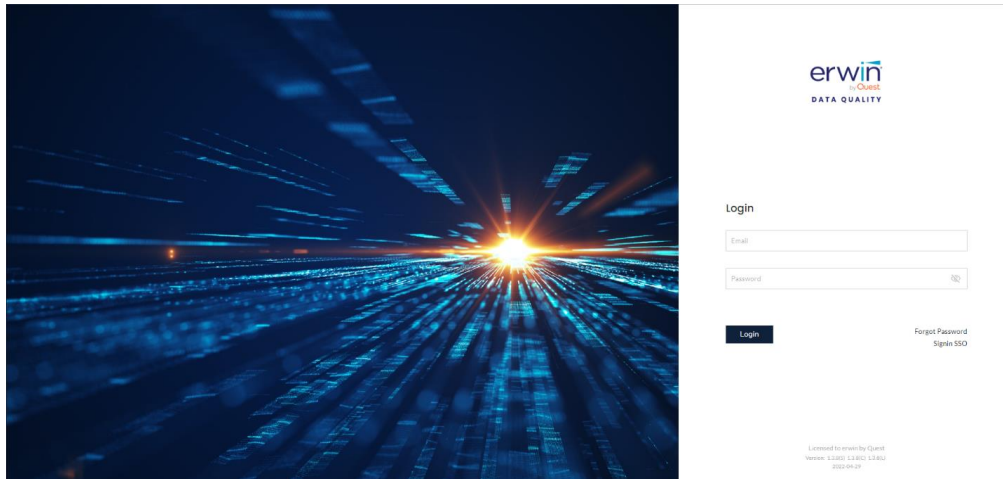
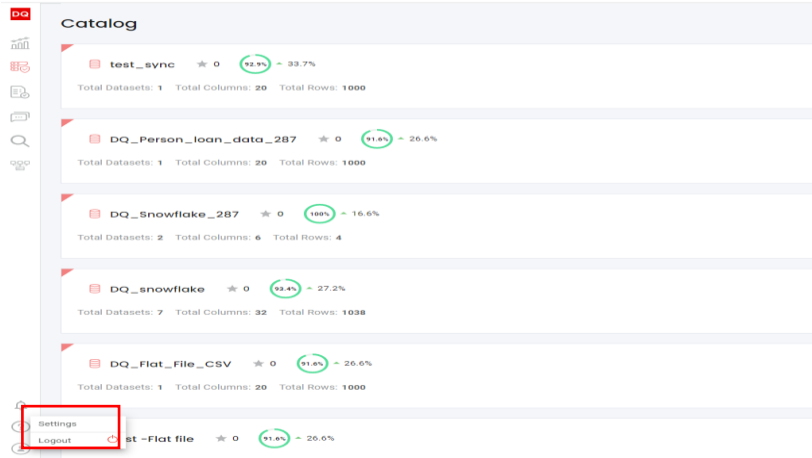


Figure 16 (DQLabs Login Screen)

**Note:** Reach out to your erwin by Quest contact to obtain the Admin login credentials (email/password) to login to the DQ application. Once the Admin logs in, they need to activate the instance using a valid license key (see next step).

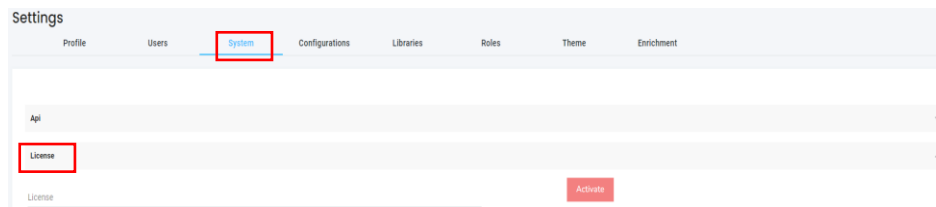
### 4.2 Activate License

- After logging in to the application, click on **settings** icon (left bottom corner) as show in below image



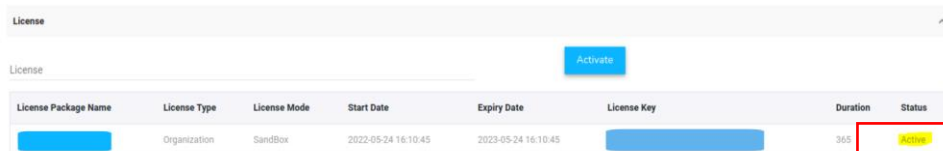
**Figure 17.1 (License Activation)**

- Click on "System" tab and then click on "License" dropdown
- Enter the license key {shared by the Erwin Quest License team} as show in the image below



**Figure 17.2 (License Activation)**

- Click on "Activate" button
- Please verify the License status to be "Active" (as shown in below ref. image), to ensure that the License is successfully activated



**Figure 17.3 (License Activation)**

**Important Note\*\*:** If any errors are encountered during the installation process, the install script will exit with an appropriate error message. If you encounter any issues, reach out to the Erwin support or professional services team so we can provide the necessary assistance.

End of document