



Qlik-Cli Installation Notes

This document provides instructions for setting up the PowerShell command line interface for Qlik Sense environments.

Context

Qlik-Cli is a PowerShell module that provides a command line interface for managing a Qlik Sense environment. The module provides a set of commands for viewing and editing configuration settings, as well as managing tasks and other features available through the Qlik Sense APIs.

Requirements and Considerations

- Qlik-Cli is software available "as is" without warranty of any kind. The Qlik Support Agreement does not cover support for this software.
- Qlik-Cli can run on any Windows machine that supports PowerShell 5.0. For instructions on checking the PowerShell version and upgrading to 5.0, see [PowerShell Version](#) below.
- To use Qlik-Cli, the Execution Policy must be set to Unrestricted on the machine that will run the module. For details, see [Execution Policy](#) below.
- Qlik-Cli use two authentication mechanism Windows Credential(best for interactivity activity) and Certificate(best for batch and unattended tasks)
If authentication trough Certificate is choose Qlik Sense client and root certificates must be installed on the machine running Qlik-Cli. If the machine will connect to multiple Qlik Sense sites, certificates for each site must be installed on the machine. For instructions on installing certificates, see [Certificate Installation](#).
- TCP Port 4242 will need to be open incoming to the Sense Central Node
- DNS resolution will need to work for the name of the Sense Central Node and this name must match the hostname in the certificate, normally this would be the FQDN. You should not use IP addresses in the commands, if DNS isn't possible then a workaround could be to add the FQDN into the local HOSTS file of the machine running the script instead

PowerShell Version

PowerShell 4.0 is required to run Qlik-Cli. You can use the following command to check the version installed on your system:

```
PS C:\> $PSVersionTable.PSVersion
```

Major	Minor	Build	Revision
4	0	-1	-1

If you need to update the PowerShell version, see the Microsoft article [Windows Management Framework 5.0](#) for a download link and instructions for installing the software.

Execution Policy

Before using Qlik-Cli, you must verify that the Execution Policy on the server is unrestricted. To view the policy, and change it if necessary, access PowerShell as Administrator and run the following commands:

```
PS C:\> get-ExecutionPolicy
Restricted

PS C:\> Set-ExecutionPolicy RemoteSigned

Execution Policy Change
The execution policy helps protect you from scripts that you do not trust. Changing
the execution policy might expose
you to the security risks described in the about_Execution_Policies help topic at
http://go.microsoft.com/fwlink/?LinkID=135170. Do you want to change the execution
policy?
[Y] Yes [A] Yes to All [N] No [L] No to All [S] Suspend [?] Help (default is
"N"): Y

PS C:\> get-ExecutionPolicy
RemoteSigned
```

Qlik-Cli Module Installation

Begin by downloading the file Qlik-Cli.psm1 from the following address <https://github.com/ahaydon/Qlik-Cli>. Then perform the following steps:

1. Copy Qlik-Cli.psm1 to C:\Windows\System32\WindowsPowerShell\v1.0\Modules\Qlik-Cli.
2. Run the following command to import the file:

```
PS C:\> Import-Module Qlik-Cli.psm1
```

3. Verify that the module has been imported by running the following command. If the module has been imported successfully, a list of Qlik-Cli commands appears.

```
PS C:\> Get-Help Qlik
```

The following is an example of the output. It can vary depending on your Windows version.

```
Do you want to run Update-Help?
The Update-Help cmdlet downloads the most current Help files for Windows
PowerShell modules, and installs them on your
computer. For more information about the Update-Help cmdlet, see
http://go.microsoft.com/fwlink/?LinkId=210614.
[Y] Yes [N] No [S] Suspend [?] Help (default is "Y"): N

Name                Category  Module      Synopsis
----                -
Add-QlikProxy        Function  Qlik-Cli    ...
Add-QlikVirtualProxy Function  Qlik-Cli    ...
Connect-Qlik         Function  Qlik-Cli    ...
Copy-QlikApp         Function  Qlik-Cli    ...
Export-QlikApp       Function  Qlik-Cli    ...
Export-QlikCertificates Function  Qlik-Cli    ...
Get-QlikAbout        Function  Qlik-Cli    ...
Get-QlikApp          Function  Qlik-Cli    ...
Get-QlikAccessTypeInfo Function  Qlik-Cli    ...
Get-QlikCertificateDistributio... Function  Qlik-Cli    ...
```

Get-QlikContentLibrary	Function	Qlik-Cli	...
Get-QlikCustomProperty	Function	Qlik-Cli	...
Get-QlikDataConnection	Function	Qlik-Cli	...
Get-QlikEngine	Function	Qlik-Cli	...
Get-QlikExtension	Function	Qlik-Cli	...
Get-QlikLicense	Function	Qlik-Cli	...
Get-QlikLoginAccess	Function	Qlik-Cli	...
Get-QlikNode	Function	Qlik-Cli	...
Get-QlikProxy	Function	Qlik-Cli	...
Get-QlikRelations	Function	Qlik-Cli	...
Get-QlikRule	Function	Qlik-Cli	...
Get-QlikReloadTask	Function	Qlik-Cli	...
Get-QlikScheduler	Function	Qlik-Cli	...
Get-QlikStream	Function	Qlik-Cli	...
Get-QlikTag	Function	Qlik-Cli	...
Get-QlikTask	Function	Qlik-Cli	...
Get-QlikUser	Function	Qlik-Cli	...
Get-QlikUserDirectory	Function	Qlik-Cli	...
Get-QlikValidEngines	Function	Qlik-Cli	...
Get-QlikVirtualProxy	Function	Qlik-Cli	...
Import-QlikApp	Function	Qlik-Cli	...
Import-QlikExtension	Function	Qlik-Cli	...
Import-QlikObject	Function	Qlik-Cli	...
New-QlikCustomProperty	Function	Qlik-Cli	...
New-QlikDataConnection	Function	Qlik-Cli	...
New-QlikNode	Function	Qlik-Cli	...
New-QlikRule	Function	Qlik-Cli	...
New-QlikStream	Function	Qlik-Cli	...
New-QlikTag	Function	Qlik-Cli	...
New-QlikVirtualProxy	Function	Qlik-Cli	...
New-QlikUserAccessGroup	Function	Qlik-Cli	...
Publish-QlikApp	Function	Qlik-Cli	...
Register-QlikNode	Function	Qlik-Cli	...
Remove-QlikApp	Function	Qlik-Cli	...
Remove-QlikCustomProperty	Function	Qlik-Cli	...
Remove-QlikDataConnection	Function	Qlik-Cli	...
Remove-QlikRule	Function	Qlik-Cli	...
Remove-QlikStream	Function	Qlik-Cli	...
Remove-QlikTag	Function	Qlik-Cli	...
Remove-QlikTask	Function	Qlik-Cli	...
Remove-QlikUser	Function	Qlik-Cli	...
Remove-QlikUserDirectory	Function	Qlik-Cli	...
Remove-QlikVirtualProxy	Function	Qlik-Cli	...
Restore-QlikSnapshot	Function	Qlik-Cli	...
Set-QlikLicense	Function	Qlik-Cli	...
Start-QlikTask	Function	Qlik-Cli	...
Update-QlikApp	Function	Qlik-Cli	...
Update-QlikCustomProperty	Function	Qlik-Cli	...
Update-QlikDataConnection	Function	Qlik-Cli	...
Update-QlikEngine	Function	Qlik-Cli	...
Update-QlikNode	Function	Qlik-Cli	...
Update-QlikProxy	Function	Qlik-Cli	...
Update-QlikRule	Function	Qlik-Cli	...
Update-QlikScheduler	Function	Qlik-Cli	...
Update-QlikReloadTask	Function	Qlik-Cli	...
Update-QlikUser	Function	Qlik-Cli	...
Update-QlikVirtualProxy	Function	Qlik-Cli	...

Certificate Installation

If we use Certificates to connect to Qlik Sense then Qlik Sense client and root authorities certificates must also be installed on the machine running Qlik-Cli. If the machine will connect to multiple Qlik Sense sites, certificates for each site must be installed on the machine.

If we use Windows authentication, the root authorities certificates must also be installed on the machine running Qlik-Cli and again if we connect to multiple Qlik Sense sites, root authorities certificates for each site must be installed on the machine.

Certificate installation involves the following high-level steps. Repeat these steps as needed to install the certificates for multiple sites.

- I. **Export the certificates from the Qlik Sense site and copy them to the machine running Qlik-Cli.** For instructions, see [Exporting certificates](#) on the Qlik Sense help site.
- II. **Import the client certificate on the Qlik-Cli machine.** For instructions, see the Microsoft TechNet article [Import a Certificate](#). Select the following options when importing the certificate:
 - When opening the Certificate snap-in, select **My user account**.
 - For the logical store, select **Personal**.
 - When prompted to select a **Certificate Store**, select **Place all certificates in the following store** and use **Personal folder** as the store.
- III. **Import the root certificate on the Qlik-Cli machine.** Use the same procedure as in the previous step, but select the following options:
 - When opening the Certificate snap-in, select **Computer account** and then select **Local computer**.
 - For the logical store, select **Trusted Root Certification Authorities**.
 - When prompted to select a **Certificate Store**, select **Place all certificates in the following store** and use **Trusted Root Certification Authorities** as the store.

Connecting to a Qlik Sense Site

Connecting using Windows credentials

Using Windows credentials Qlik-Cli connect to Qlik Sense site and execute the below API call, the user must be authorized to run the command based on Qlik Sense security rules

We run the following command to connect to the Qlik Sense site:

```
PS C:\> Connect-Qlik servername -UseDefaultCredentials
```

The example below illustrates the command and the output that verifies the connection:

```
PS C:\> Connect-Qlik APCD-QS01.apc.priv -UseDefaultCredentials

buildVersion      : 2.2.4.0
buildDate         : 9/20/2013 10:09:00 AM
databaseProvider  : Devart.Data.PostgreSql
nodeType          : 1
schemaPath        : About-Cli.psm1
```

Connecting using certificates

After importing the certificates, run the following command to connect to the Qlik Sense site:

```
PS C:\> Connect-Qlik servername -username domain\userid
```

The example below illustrates the command and the output that verifies the connection:

```
PS C:\> Connect-Qlik APCD-QS01.apc.priv -username apc\qlikadmin
```

```
buildVersion      : 2.2.4.0
buildDate         : 9/20/2013 10:09:00 AM
databaseProvider  : Devart.Data.PostgreSql
nodeType         : 1
schemaPath       : About-Cli.psml
```

Connecting to Multiple Sites using Certificates

If you are using the Qlik-Cli machine to connect to multiple Qlik Sense sites, you must select the correct certificate when connecting to each site. To ensure that you are selecting the correct certificate, you should identify a property that is unique for the certificate and use this proper in the command for connecting to each site. See the following topics for more specific guidance:

- [Viewing Certificates and Identifying Unique Properties](#)
- [Selecting a Certificate to use when Connecting to a Site](#)

Viewing Certificates and Identifying Unique Properties

To view a list of imported certificates, you can run the following command:

```
PowerShell command gci cert:\CurrentUser\My | Format-List
```

In the list of certificates that appears, identify a unique property for the certificates. The Issuer is usually a good option. The example below illustrates a list of two certificates, and the Issuer for each is unique:

```
PS C:\> gci cert:\CurrentUser\My | Format-List
```

```
Subject      : CN=QlikClient
Issuer       : CN=APCD-QS01.apc.priv-CA
Thumbprint   : 44E37A2AA953D4C8E3A0EAA93226B6C6532C15BD
FriendlyName : QlikClient
NotBefore    : 24/05/2016 10:30:17
NotAfter     : 31/05/2026 10:30:17
Extensions   : {System.Security.Cryptography.Oid,
System.Security.Cryptography.Oid, System.Security.Cryptography.Oid}

Subject      : CN=QlikClient
Issuer       : CN=APCD-QS05.apc.priv-CA
Thumbprint   : B19E8F3C32DBC0844A81E6933C58C892D131BFEE
FriendlyName : QlikClient
NotBefore    : 24/05/2016 10:36:10
NotAfter     : 31/05/2026 10:36:10
Extensions   : {System.Security.Cryptography.Oid,
System.Security.Cryptography.Oid, System.Security.Cryptography.Oid}
```

To select a particular certificate, you can modify the list command from above to include the unique property for the certificate:

```
PS C:\> gci cert:\CurrentUser\My | where {$_.issuer -eq 'CN=APCD-QS01.apc.priv-CA'}
```

```
Directory: Microsoft.PowerShell.Security\Certificate::CurrentUser\My
```

Thumbprint	Subject
-----	-----
44E37A2AA953D4C8E9A0EAA93326B6C6532C15BD	CN=QlikClient

Selecting a Certificate to use when Connecting to a Site

To select a particular certificate to use when connecting to a Qlik Sense site, you can combine the commands described above to select a certificate and then connect to a site. The following examples illustrate how to combine the commands to connect to different sites. Notice that in each example the “where” clause provides the unique Issuer property.

```
PS C:\> gci cert:\CurrentUser\My | where {$_.issuer -eq 'CN=APCD-QS01.apc.priv-CA'} | Connect-Qlik APCD-QS01.apc.priv -username apc\qlikadmin
```

```
buildVersion      : 2.2.4.0
buildDate         : 9/20/2013 10:09:00 AM
databaseProvider  : Devart.Data.PostgreSql
nodeType          : 1
schemaPath        : About
```

```
PS C:\> gci cert:\CurrentUser\My | where {$_.issuer -eq 'CN=APCD-QS05.apc.priv-CA'} | Connect-Qlik APCD-QS05.apc.priv -username apc\qlikadmin3
```

```
buildVersion      : 2.2.4.0
buildDate         : 9/20/2013 10:09:00 AM
databaseProvider  : Devart.Data.PostgreSql
nodeType          : 1
schemaPath        : About
```

Command Example

Once connected to a Qlik Sense is possible to use any Qlik-Cli CmdLet. The below example show the usage of Get-QlikApp to retrieve the list all the Apps.

```
PS C:\ > Get-QlikApp
```

```
id                : d081ce9a-5dee-4d29-be27-fb5418fc475c
name              : License Monitor
appId            :
publishTime      : 2016-05-31T08:14:05.904Z
published        : True
stream           : @#{id=a70ca8a5-1d59-4cc9-b5fa-6e207978dcaf;
name=Monitoring apps; privileges=}
savedInProductVersion : 2.2.4
migrationHash    : b974bab406fd96e0864bf11fcfcb2266fff747c0
availabilityStatus : 0
privileges       :
```

```
id                : d9134be7-5c2f-4b59-bc95-8d016117c9c5
name              : Operations Monitor
```

```
appId :  
publishTime : 2016-05-31T08:14:09.745Z  
published : True  
stream : @{{id=a70ca8a5-1d59-4cc9-b5fa-6e207978dcaf;  
name=Monitoring apps; privileges=}  
savedInProductVersion : 2.2.4  
migrationHash : b974bab406fd96e0864bf11fcfcb2266fff747c0  
availabilityStatus : 0  
privileges :
```