



Configure CA Certificate for Windows host

SnapCenter Software 6.0

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Configure CA Certificate for Windows host

Generate CA Certificate CSR file

You can generate a Certificate Signing Request (CSR) and import the certificate that can be obtained from a Certificate Authority (CA) using the generated CSR. The certificate will have a private key associated with it.

CSR is a block of encoded text that is given to an authorized certificate vendor to procure the signed CA certificate.



CA Certificate RSA key length should be minimum 3072 bits.

For information to generate a CSR, see [How to generate CA Certificate CSR file](#).



If you own the CA certificate for your domain (*.domain.company.com) or your system (machine1.domain.company.com), you can skip generating the CA Certificate CSR file. You can deploy the existing CA certificate with SnapCenter.

For cluster configurations, the cluster name (virtual cluster FQDN), and the respective host names should be mentioned in the CA certificate. The certificate can be updated by filling the Subject Alternative Name (SAN) field before procuring the certificate. For a wild card certificate (*.domain.company.com), the certificate will contain all the hostnames of the domain implicitly.

Import CA certificates

You must import the CA certificates to the SnapCenter Server and the Windows host plug-ins using the Microsoft management console (MMC).

Steps

1. Go to the Microsoft management console (MMC), and then click **File > Add/Remove Snapin**.
2. In the Add or Remove Snap-ins window, select **Certificates** and then click **Add**.
3. In the Certificates snap-in window, select the **Computer account** option, and then click **Finish**.
4. Click **Console Root > Certificates – Local Computer > Trusted Root Certification Authorities > Certificates**.
5. Right-click on the folder “Trusted Root Certification Authorities”, and then select **All Tasks > Import** to start the import wizard.
6. Complete the wizard, as follows:

In this wizard window...	Do the following...
Import Private Key	Select the option Yes , import the private key, and then click Next .
Import File Format	Make no changes; click Next .

In this wizard window...	Do the following...
Security	Specify the new password to be used for the exported certificate, and then click Next .
Completing the Certificate Import Wizard	Review the summary, and then click Finish to start the import.



Importing certificate should be bundled with the private key (supported formats are: *.pfx, *.p12, and *.p7b).

7. Repeat Step 5 for the "Personal" folder.

Get the CA certificate thumbprint

A certificate thumbprint is a hexadecimal string that identifies a certificate. A thumbprint is calculated from the content of the certificate using a thumbprint algorithm.

Steps

1. Perform the following on the GUI:
 - a. Double-click the certificate.
 - b. In the Certificate dialog box, click the **Details** tab.
 - c. Scroll through the list of fields and click **Thumbprint**.
 - d. Copy the hexadecimal characters from the box.
 - e. Remove the spaces between the hexadecimal numbers.

For example, if the thumbprint is: "a9 09 50 2d d8 2a e4 14 33 e6 f8 38 86 b0 0d 42 77 a3 2a 7b", after removing the spaces, it will be: "a909502dd82ae41433e6f83886b00d4277a32a7b".

2. Perform the following from PowerShell:
 - a. Run the following command to list the thumbprint of the installed certificate and identify the recently installed certificate by the subject name.

```
Get-ChildItem -Path Cert:\LocalMachine\My
```

- b. Copy the thumbprint.

Configure CA certificate with Windows host plug-in services

You should configure the CA certificate with Windows host plug-in services to activate the installed digital certificate.

Perform the following steps on the SnapCenter Server and all the plug-in hosts where CA certificates are already deployed.

Steps

1. Remove the existing certificate binding with SMCORE default port 8145, by running the following command:

```
> netsh http delete sslcert ipport=0.0.0.0: _<SMCore Port>
```

For example:

```
> netsh http delete sslcert ipport=0.0.0.0:8145
```

2. Bind the newly installed certificate with the Windows host plug-in services, by running the following commands:

```
> $cert = "_<certificate thumbprint>_"  
> $guid = [guid]::NewGuid().ToString("B")  
> netsh http add sslcert ipport=0.0.0.0: _<SMCore Port>_ certhash=$cert  
appid="$guid"
```

For example:

```
> $cert = "a909502dd82ae41433e6f83886b00d4277a32a7b"  
> $guid = [guid]::NewGuid().ToString("B")  
> netsh http add sslcert ipport=0.0.0.0: _<SMCore Port>_ certhash=$cert  
appid="$guid"
```

Configure CA certificate with SnapCenter site

You should configure the CA certificate with SnapCenter site on Windows host.

Steps

1. Open IIS Manager on the Windows Server where SnapCenter is installed.
2. In the left navigation pane, click **Connections**.
3. Expand the name of the server and **Sites**.
4. Select the SnapCenter website on which you want to install the SSL Certificate.
5. Navigate to **Actions > Edit Site**, click **Bindings**.
6. In the Bindings page, select **binding for https**.
7. Click **Edit**.
8. From the SSL certificate drop-down list, select the recently imported SSL Certificate.
9. Click **OK**.



The SnapCenter Scheduler site (default port: 8154, HTTPS) is configured with self-signed certificate. This port is communicating within the SnapCenter Server host and it is not mandatory to configure with a CA certificate. However, if your environment mandates you to use a CA Certificate, repeat steps 5 to 9 using the SnapCenter Scheduler site.



If the recently deployed CA certificate is not listed in the drop-down menu, check if the CA certificate is associated with the private key.



Ensure that the certificate is added using the following path: **Console Root > Certificates – Local Computer > Trusted Root Certification Authorities > Certificates.**

Enable CA certificates for SnapCenter

You should configure the CA certificates and enable the CA certificate validation for the SnapCenter Server.

Before you begin

- You can enable or disable the CA certificates using the `Set-SmCertificateSettings` cmdlet.
- You can display the certificate status for the SnapCenter Server using the `Get-SmCertificateSettings` cmdlet.





The information regarding the parameters that can be used with the cmdlet and their descriptions can be obtained by running `Get-Help command_name`. Alternatively, you can refer to the [SnapCenter Software Cmdlet Reference Guide](#).

Steps

1. In the Settings page, navigate to **Settings > Global Settings > CA Certificate Settings**.
2. Select **Enable Certificate Validation**.
3. Click **Apply**.

After you finish

The Managed Hosts tab host displays a padlock and the color of the padlock indicates the status of the connection between SnapCenter Server and the plug-in host.

-  indicates that there is no CA certificate enabled or assigned to the plug-in host.
-  indicates that the CA certificate is successfully validated.
-  indicates that the CA certificate could not be validated.
-  indicates that the connection information could not be retrieved.



When the status is yellow or green, the data protection operations completes successfully.

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