Deployment Guide

Transport Layer Security (TLS)

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Transport Layer Security (TLS)

Contents

Genesys Web Engagement supports the Transport Layer Security (TLS) protocol to secure data exchanged with other Genesys components. For details about TLS, see the Genesys 8.1 Security Deployment Guide. You can configure TLS for Web Engagement by completing the procedures on this page.

Configuring TLS for Genesys Servers

To configure the TLS parameters for Genesys servers like Configuration Server, Message Server, or Chat Server, see Configuring TLS Parameters in Configuration Manager.

Configuring TLS for Web Engagement Servers

To enable TLS support for the Genesys Web Engagement Backend Server, you must do the following:

1. Have properly installed trusted certificates for the Genesys servers.
2. Configure TLS options for the Web Engagement Backend Server application.
3. Configure the appropriate connections between the Web Engagement Backend server application and the necessary Genesys servers through secure ports.

Configuring TLS Options

The Genesys Web Engagement Backend Server includes the following TLS-related configuration options in its [security] section.

Option	Default Value	Mandatory	Changes Take Effect	Description
trusted-ca-type	none	no	after restart	Type of trusted storage Valid values: MSCAPI, PEM or JKS. If empty, TLS support is disabled.
trusted-ca	none	no	after restart	Specifies the name of the trusted store file which holds the public certificate to verify the server. Applicable for PEM and JKS trusted storage types only. Valid values: valid file name (including path)
trusted-ca-pwd	none	no	after restart	Password for the JKS trusted

Option	Default Value	Mandatory	Changes Take Effect	Description
				storage. Valid values: any string

See Configuring Trusted Stores below for details about configuration for a specific type of store (PEM, JKS, MSCAPI).

Configuring Trusted Stores

PEM Trusted Store

PEM stands for "Privacy Enhanced Mail", a 1993 IETF proposal for securing e-mail using public-key cryptography. That proposal defined the PEM file format for certificates as one containing a Base64-encoded X.509 certificate in specific binary representation with additional metadata headers.

PEM certificate trusted store works with CA certificate from an X.509 PEM file. It is a recommended trusted store to work on Linux systems.

Complete the steps below to work with the PEM certificate trusted store:

Start

1. Configure TLS for Genesys servers to use certificates signed by CA certificate **certificateCA.crt**.
2. Place the trusted CA certificate in PEM format on the Genesys Web Engagement Backend Server application host. To convert a certificate of another format to .pem format you can use the OpenSSL tool. For example:
   - Convert a DER file (.crt .cer .der) to PEM:
     ```
     openssl x509 -inform der -in certificateCA.crt -out certificateCA.pem
     ```
   - Convert a PKCS#12 file (.pfx .p12) containing a private key and certificates to PEM:
     ```
     openssl pkcs12 -in certificateCA.pfx -out certificateCA.pem -nodes
     ```
     You can add **-nocerts** to only output the private key or add **-nokeys** to only output the certificates.
3. In Genesys Administrator, navigate to **Provisioning > Environment > Applications** and open your Backend Server application.
4. Click the **Options** tab and navigate to the [security] section.
5. Set the **trusted-ca-type** option to PEM.
6. Set the **trusted-ca** option to the path and file name for your trusted CA in PEM format on the Genesys Web Engagement Backend Server application host.
7. Click **Save & Close**.

End

JKS Trusted Store

A Java KeyStore (JKS) is a repository of security certificates used, for instance, in SSL/TLS encryption. The Java Development Kit provides a tool named keytool to manipulate the keystore.

Complete the steps below to work with the JKS certificate trusted store:

Start

1. Configure TLS for Genesys servers to use certificates signed by CA certificate **certificateCA.crt**.
2. Import the CA certificate to an existing Java keystore using keytool:
   - Run the `keytool` command with option `-alias` set to `root`:
     ```
     keytool -import -trustcacerts -alias root -file certificateCa.crt -keystore
     /path/to/keysore/keystore.jks
     ```
   - Enter the keystore password in command line prompt - for example:
     ```
     Enter keystore password: somepassword
     ```
3. In Genesys Administrator, navigate to **Provisioning > Environment > Applications** and open your Backend Server application.
4. Click the **Options** tab and navigate to the [security] section.
5. Set the **trusted-ca-type** option to JKS.
6. Set the **trusted-ca** option to the path and file name for your JKS trusted storage type on the Genesys Web Engagement Backend Server application host.
7. Set the **trusted-pwd** option to the password defined for your keystore in Step 2.
8. Click **Save & Close**.

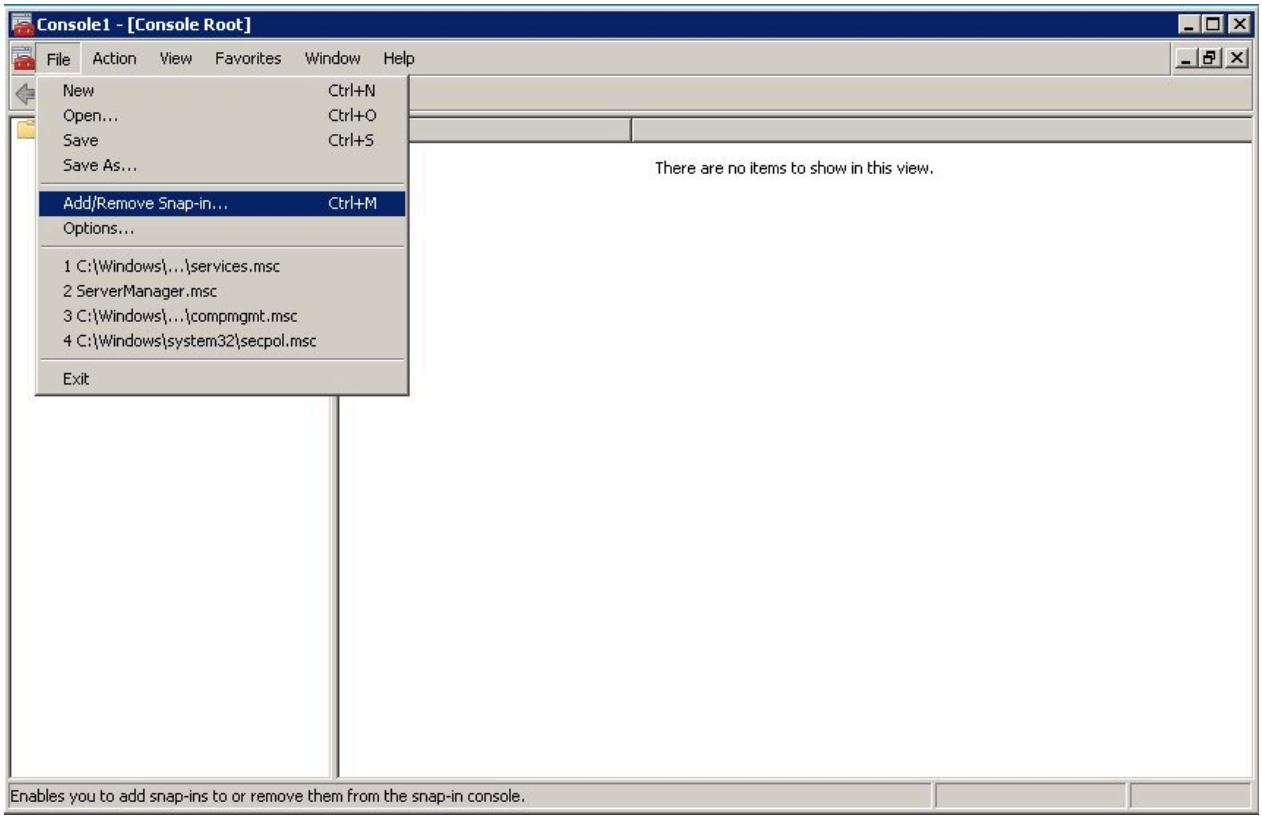
End

MSCAPI Trusted Store

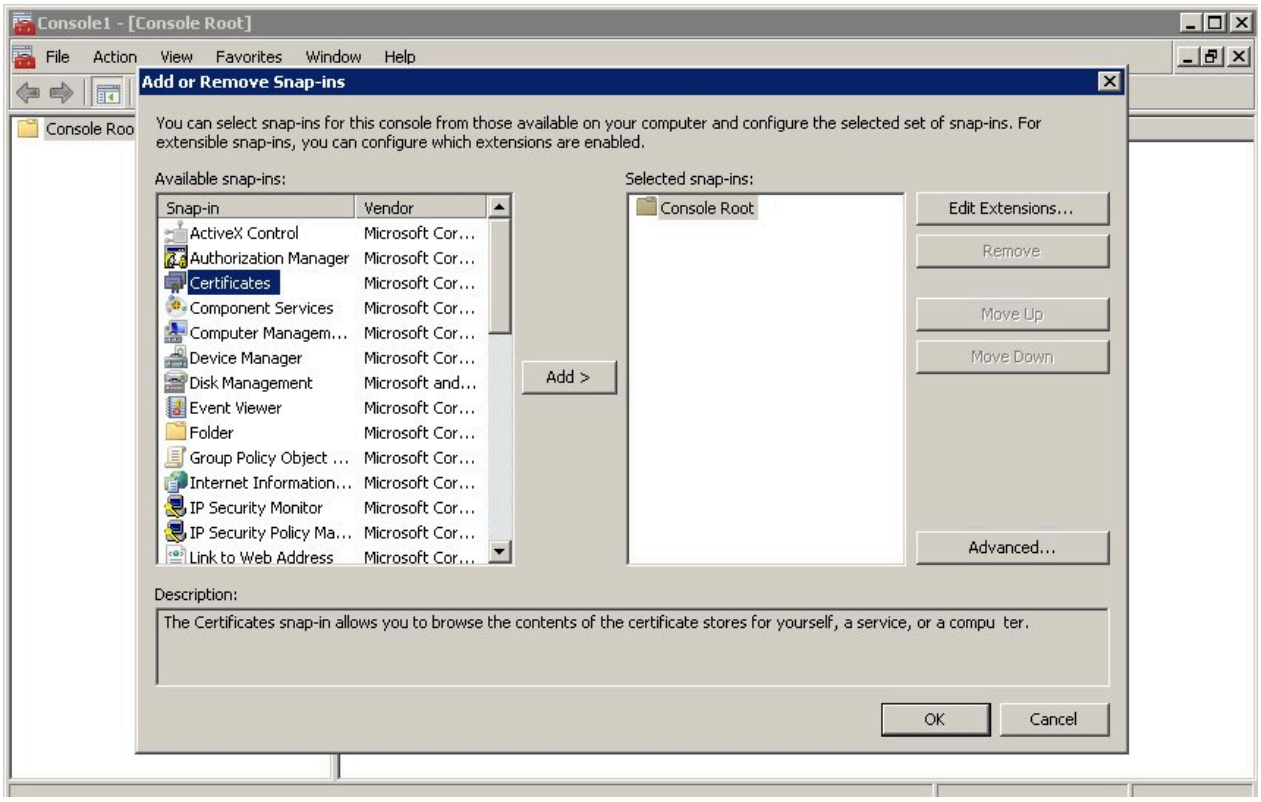
Complete the steps below to work with the MSCAPI certificate trusted store:

Start

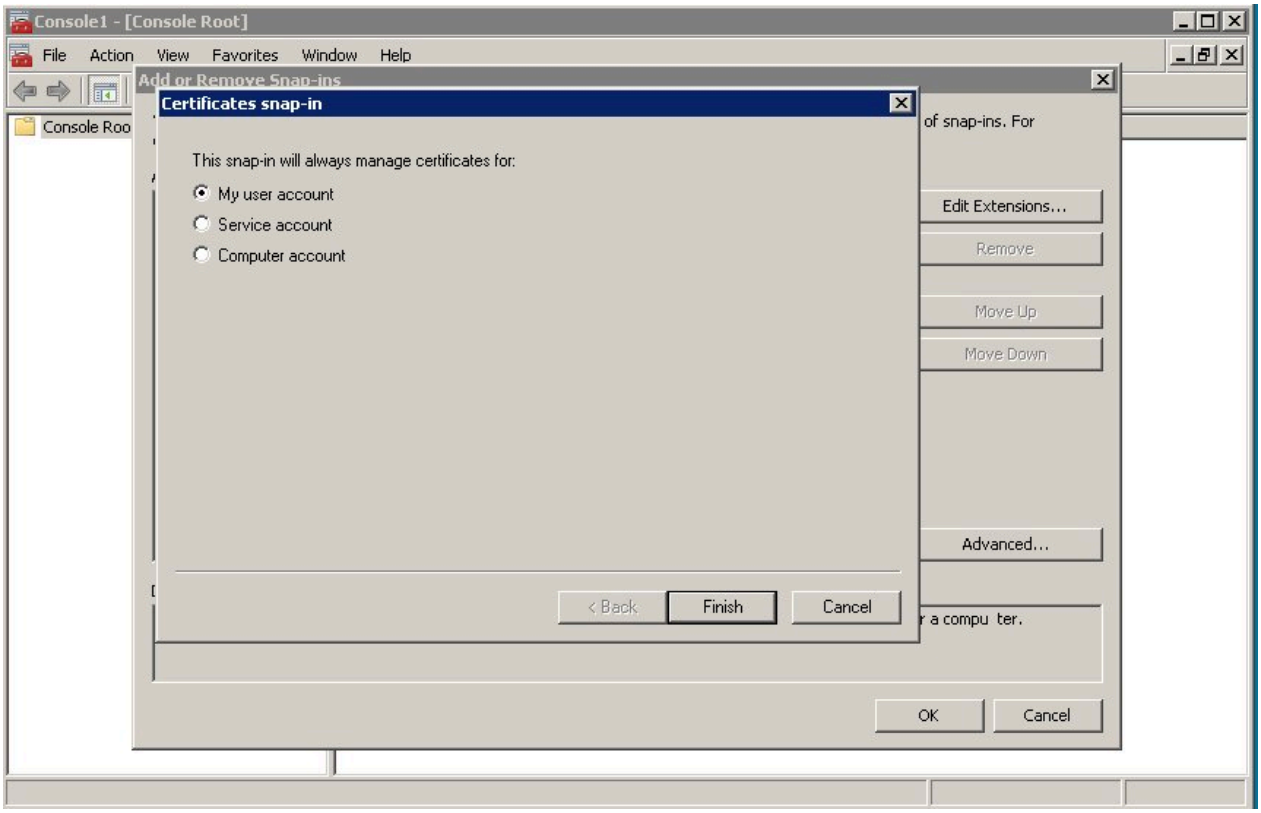
1. Configure and tune TLS for Genesys servers to use certificates signed by the same CA.
2. If the Web Engagement Backend Server is running on a different host, copy the trusted CA certificate to this host.
3. Import the CA certificate to WCS via Certificates Snap-in on the Web Engagement Backend Server host by launching the MMC console. Enter `mmc` at the command line.
4. Select **File > Add/Remove Snap-in...** from the main menu.



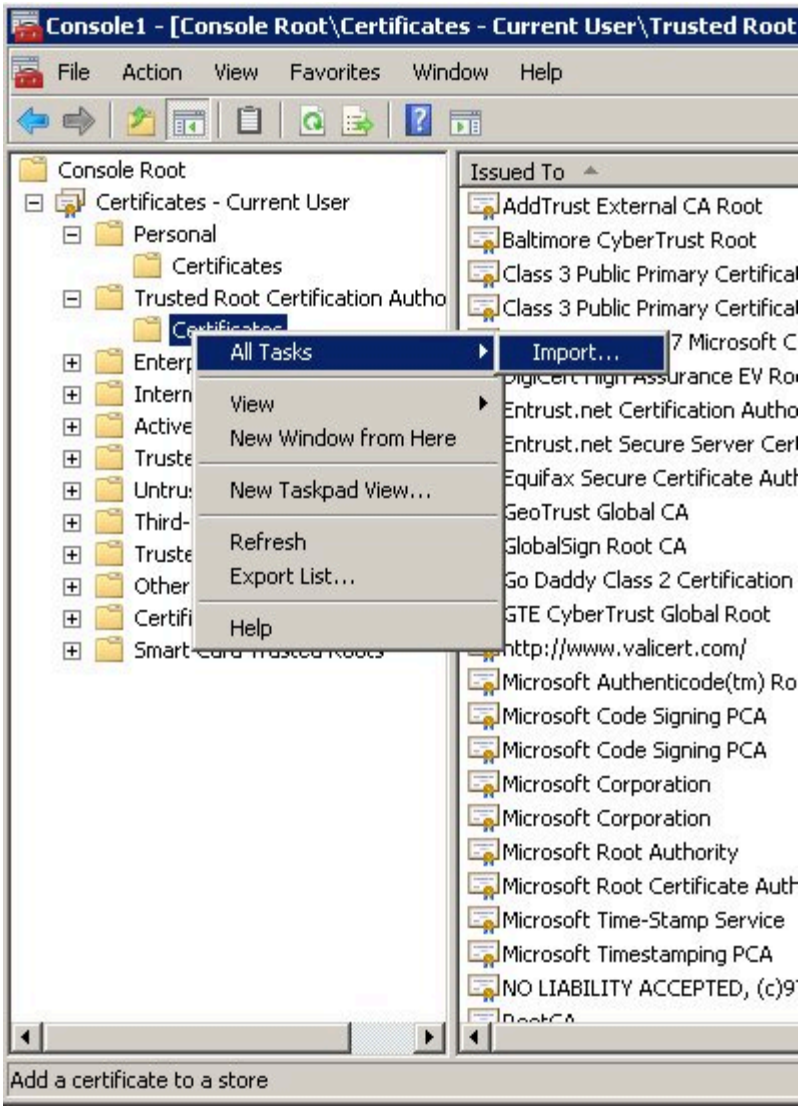
5. Select **Certificates** from the list of available snap-ins and click **Add**.



6. Select the account to manage certificates for and click **Finish**. It is important to place certificates under the correct Windows account. Some applications are run as services under the Local Service or System account, while others are run under user accounts. The account chosen in MMC must be the same as the account used by the application which certificates are configured for, otherwise the application will not be able to access this WCS storage.



7. Click **OK**.
8. Import a certificate. Right-click the "Trusted Root Certification Authorities/Certificates" folder and choose `All Tasks > Import...` from the context menu. Follow the steps presented by the Certificate Import Wizard. Oonce finished the imported certificate appears in the certificates list.



9. In Genesys Administrator, navigate to **Provisioning > Environment > Applications** and open your Backend Server application.
10. Click the **Options** tab and navigate to the [security] section.
11. Set the **trusted-ca-type** option to MSCAP.
12. Click **Save & Close**.

End

Next Steps

- Return to the Genesys Web Engagement Security page.