# SAP Business One Integration Framework

## Configure Connectivity to SAP Business One Service Layer

PUBLIC

Global Roll-out

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The Service Layer is only available for SAP Business One, version for SAP HANA.

## 1. OBTAIN A VALID CERTIFICATE

SAP cannot give recommendations for when to use a self-signed certificate or a signed certificate from a trusted third party. The selection depends on the specific use and the selected environment, for example, VPN, dev/test systems, intranet/internet solutions, value/type of transferred information, an incentive for someone to attack the connection, security needs, etc.

### 1.1 Purchase a Signed Certificate from a Trusted Third-Party Certification Authority (CA) Vendor

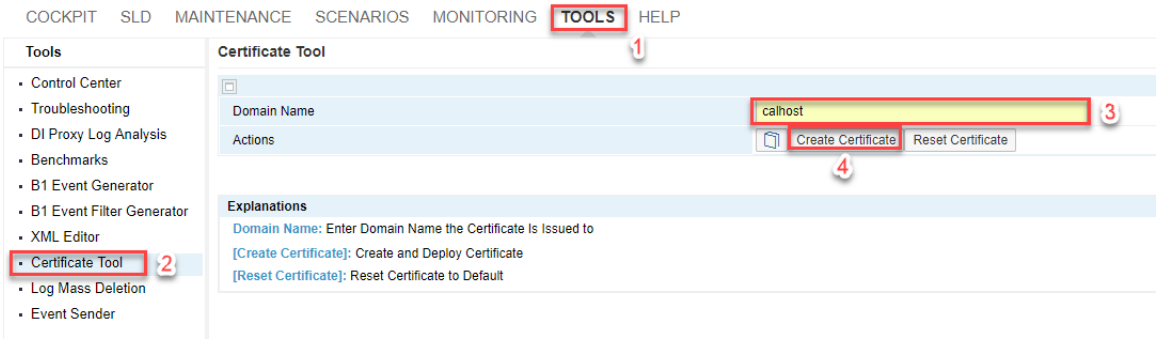
Follow the steps provided by the CA vendor to receive a trusted CA-signed certificate for the system.

### 1.2 Create a Self-Signed Certificate Using the Certificate Tool

1.2.1 Get the host name of the Linux server, where the Service Layer service is running.

```
calhost:/ # hostname
calhost
calhost:/ #
```

1.2.2 Open the Certificate Tool in the integration framework and generate the certificate based on the previously identified host name.

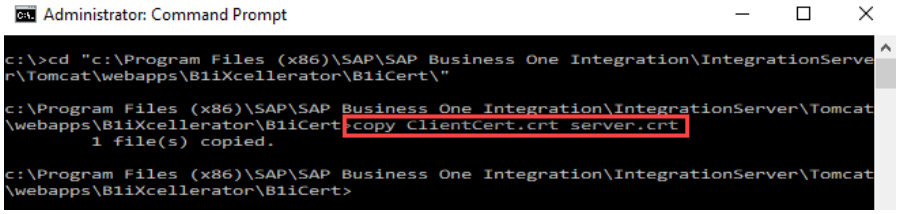


## 2. COPY THE CERTIFICATE TO A LINUX SERVER LOCATION

The following section demonstrates how to copy the self-signed certificate, because for the trusted third-party authority certificate, the file names and certificate structure might have a different format, based on the provider.

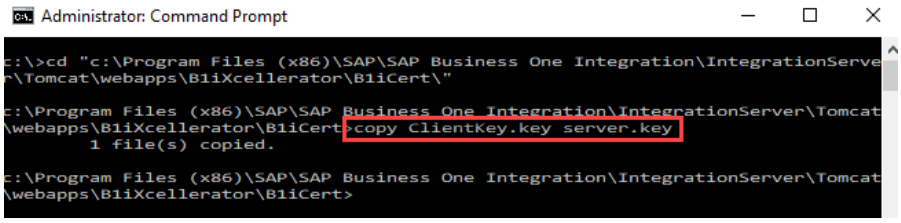
### 2.1 Prepare Certificate File - *server.crt*

Copy the *ClientCert.crt* file to the ***server.crt*** file in the */B1iXcellerator/B1iCert* folder of the integration framework installation folder.



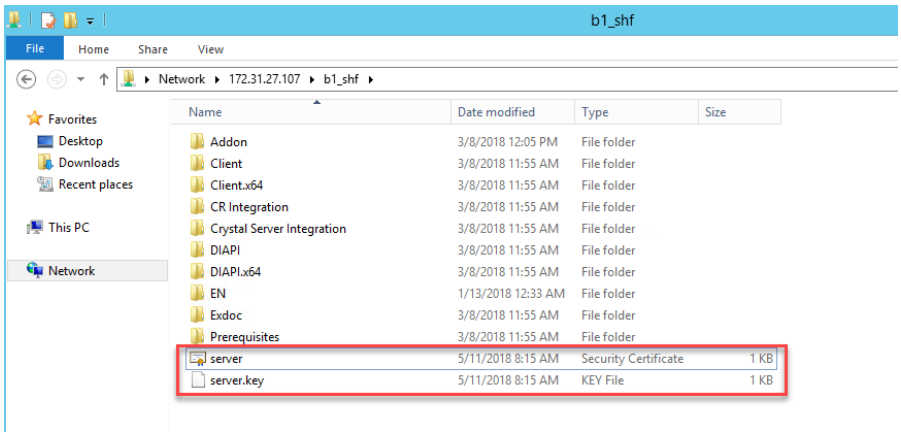

### 2.2 Prepare Public and Private key file - *server.key*

Copy the *ClientCert.key* file to the ***server.key*** file in the */B1iXcellerator/B1iCert* folder of the integration framework installation folder.




### 2.3 Move the Certificate and the Key File to the Linux Machine

You can use the SAP Business One shared folder to transfer the ***server.crt*** and ***server.key*** files to the Linux server.



## 3. APPLY THE CERTIFICATE TO THE SERVICE LAYER

To establish a secure connection to the Service Layer, apply the previously generated certificate and key.

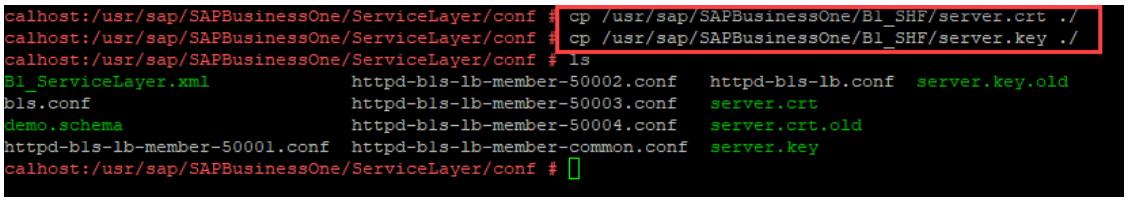
### 3.1 Back Up the Default Certificate and Key of the Service Layer

By default, certificated-related information for the Service Layer is stored in the */usr/sap/SAPBusinessOne/ServiceLayer/conf* folder. If you installed the Service Layer to a different path, change the commands accordingly.

Rename the *server.key* and *server.crt* files to *server.key.old* and *server.crt.old*

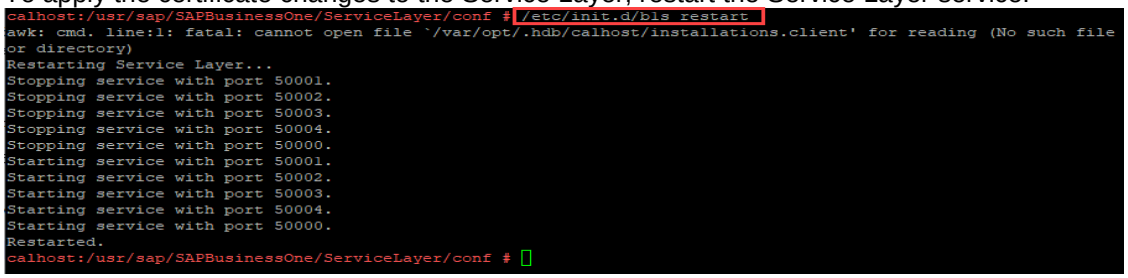

### 3.2 Copy the Certificate and the Key File to the Service Layer Folder

Previously, we used the SAP Business One shared folder to copy the certificate and the key file from the integration framework host to the Service Layer host. Now, we work with the shared folder directory to move the certificate-related files to the Service Layer.




### 3.3 Restart the Service Layer Service

To apply the certificate changes to the Service Layer, restart the Service Layer service.

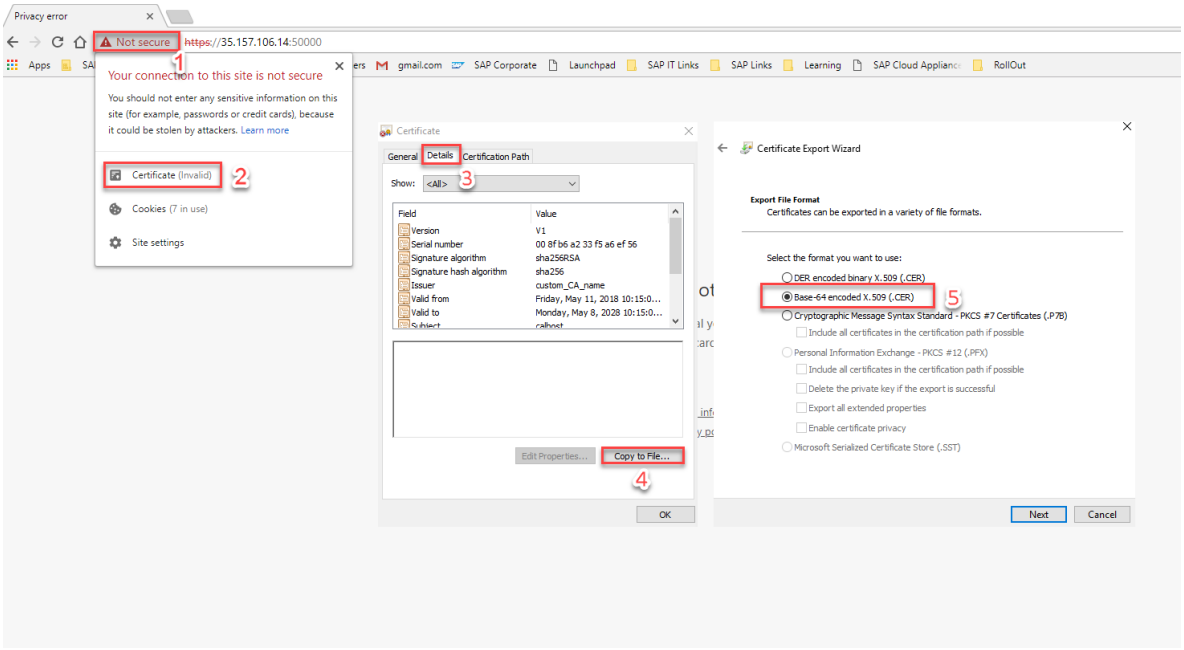


## 4. STORE THE KEYS IN THE JAVA KEYSTORE

You cannot use the Microsoft Certificate Manager to store the certificates used by the integration framework, because the integration framework uses the Java KeyStore. A Java KeyStore (JKS) is a repository of security certificates – either authorization certificates or public key certificates – plus the corresponding private keys, used for instance in SSL encryption.

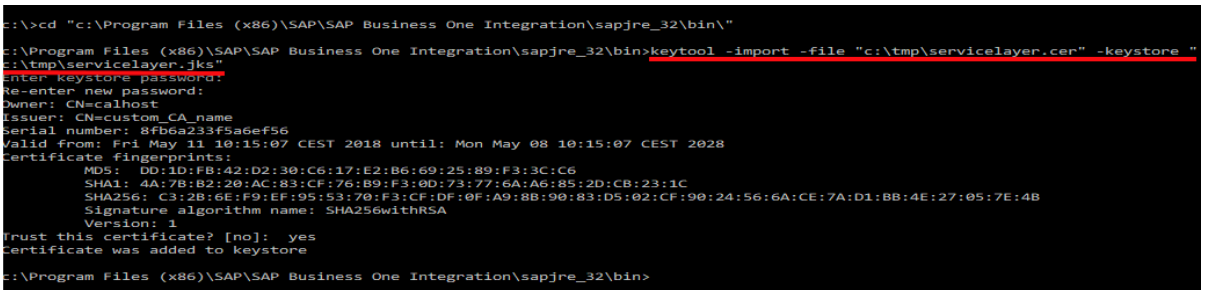
### 4.1 Download and Save the Certificate from the Service Layer

- On the integration framework server, open the Service Layer using Microsoft Internet Explorer or Google Chrome using the following address: https://<ServiceLayerHost>:50000
- To display the certificate in the Web browser, open the *Certificates* information of the Web browser.
- Click the *Certificate* information link.
- To save the certificate to **servicelayer.cer**, choose the *Details* tab and then, click the *Copy to file* button.
- In the *Certificate Export* wizard, set the format to *Base-64 encoded X.509 (.CER)*.
- Save the file to a folder and finish the wizard. For example, the file **servicelayer.cer** will be saved to the **C:\tmp** folder.




### 4.2 Generate the Java KeyStore

Use the **keytool** utility to generate the Java KeyStore. The utility is installed by the integration framework setup by default.




It is necessary to define the password for the keystore. Enter ***yes*** to confirm the trust for the certificate.

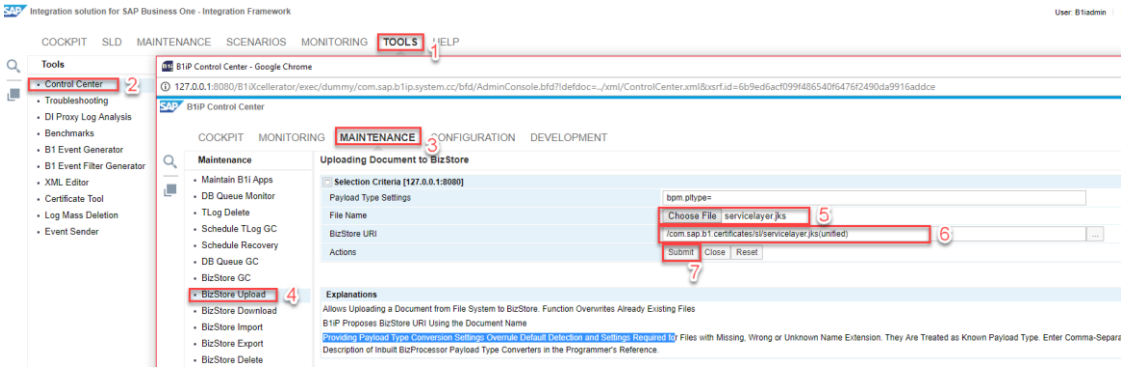
## 5. IMPORT JAVA KEYSTORE TO THE INTEGRATION FRAMEWORK

### 5.1 Upload the Java KeyStore to the Integration Framework BizStore

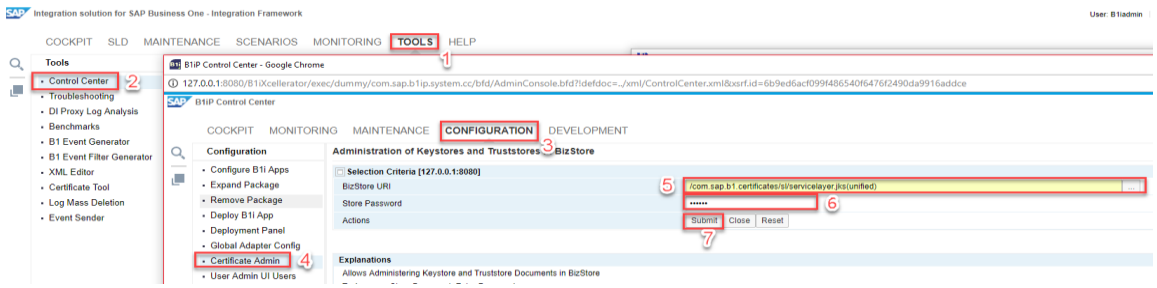
The upload enables the access to the certificate using the Java KeyStore in the SAP Business One.

In the integration framework, we save the Java KeyStore to the following BizStore URI:
*/com.sap.b1.certificates/sl/servicelayer.jks(unified)*

Since this address is not yet available in the BizStore, we generate the address by entering the information.



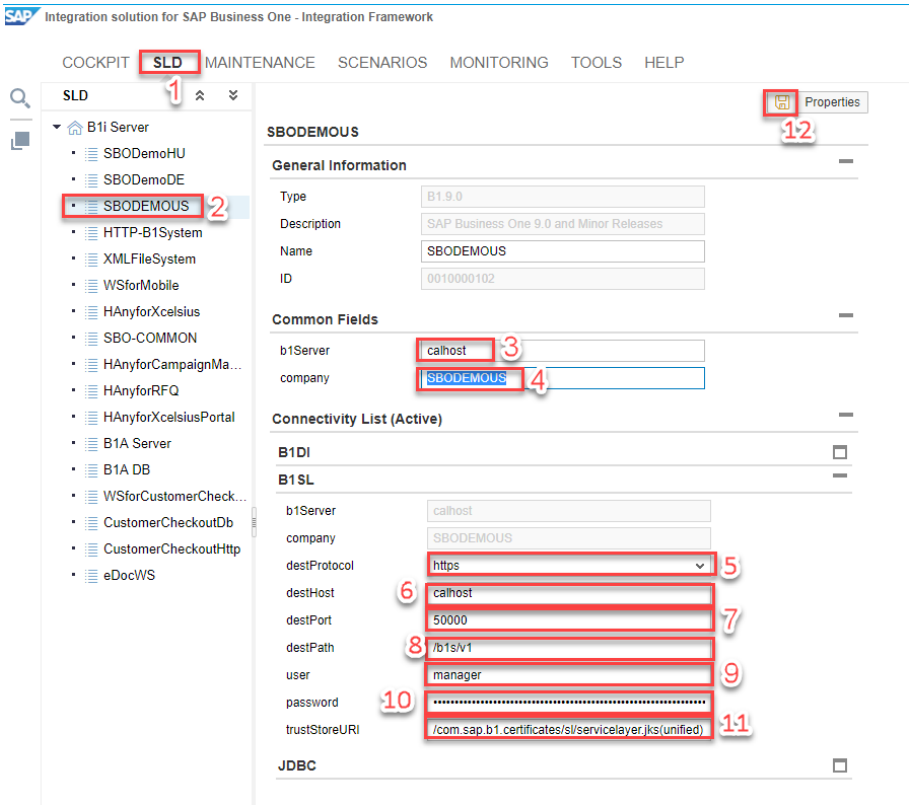

### 5.2 View the Java KeyStore Content in the Integration Framework BizStore



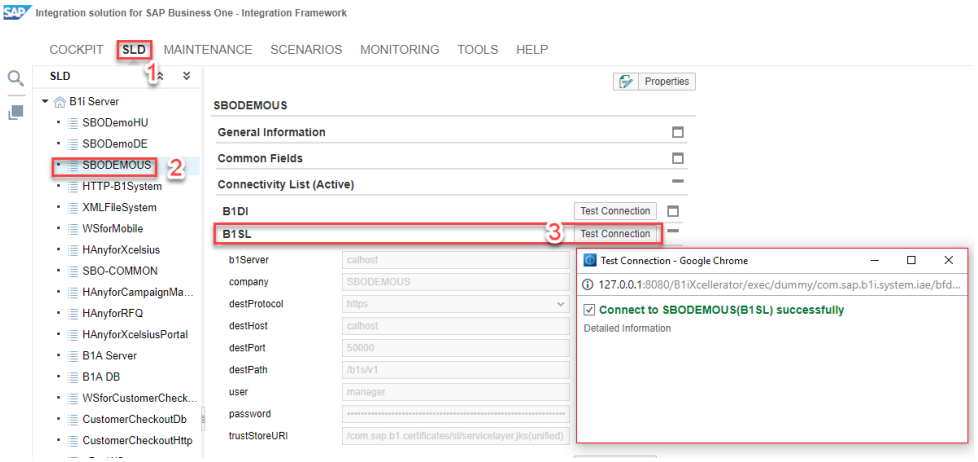
## 6. CONFIGURE SLD ENTRY FOR THE SAP BUSINESS ONE SYSTEM IN THE INTEGRATION FRAMEWORK

The Service Layer connectivity configuration is part of the SLD section of the integration framework. Define the properties for the Service Layer, which are listed for each company database SLD entry.

### 6.1 Configure the SDL




### 6.2 Test the Connection

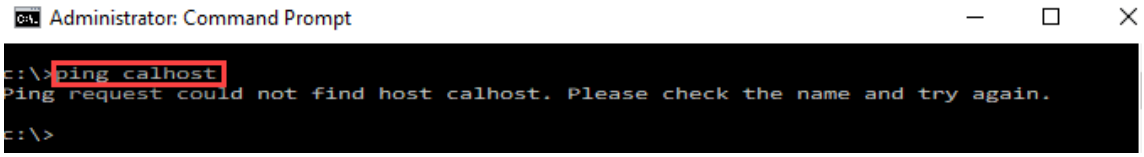


## 7. ENSURE THE DNS ADDRESS FORWARDING TO THE LINUX HOST (OPTIONAL)

If the host name of the Linux machine cannot be resolved on the integration framework host, perform the following steps.

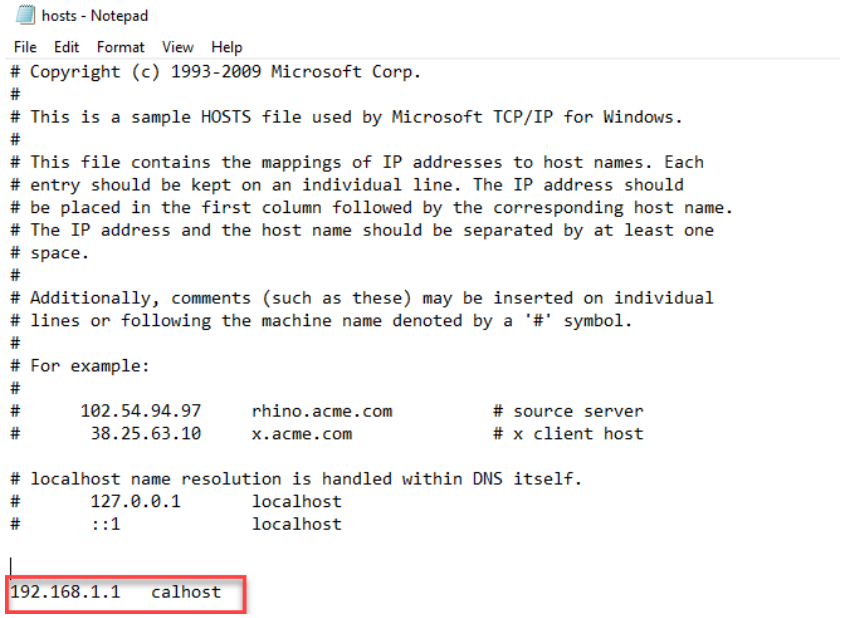
### 7.1 Check the Connectivity to the Linux Host from the Integration Framework

You can use the ping command to check the connection.




### 7.2 Edit the hosts File on the Integration Framework Machine

- On the integration framework host, run notepad.exe with the *Run as Administrator* option.
- Open the *c:\Windows\System32\drivers\etc\hosts* file.
- Enter the IP address of the Service Layer together with the hostname according to the example available in the *hosts* file.
- Save the file.
- Test the connectivity again.



## 8. REFERENCES

SAP Note 2209825 - Providing valid certificate for service layer access from integration framework

SAP Note 2607373 - Service Layer (SL) Troubleshooting Guide

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