

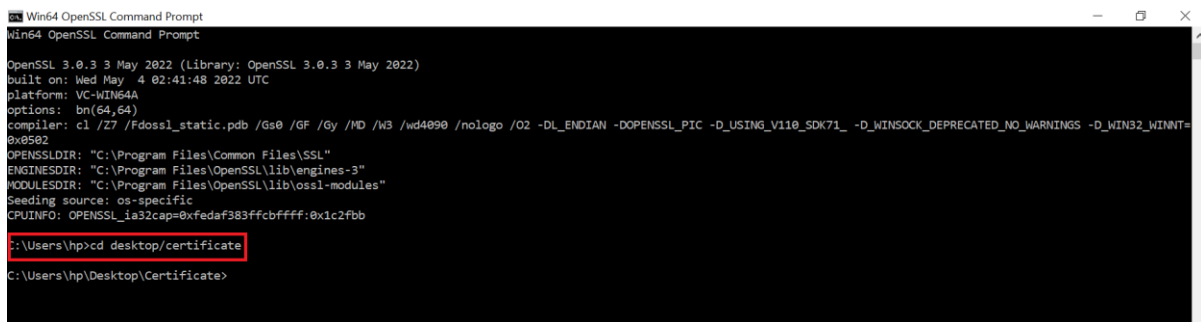
## Certificate Creation for accessing SDR User Interface and API's

Certificate can be created by using any one of the below two options.

- PowerShell
- Open SSL

### Option 1: Certificate generation with Open SSL

1. Install the Open SSL.
2. Run the OpenSSL Command Prompt and set the directory to the folder where certificate to be stored.



```
Win64 OpenSSL Command Prompt
Win64 OpenSSL Command Prompt

OpenSSL 3.0.3 3 May 2022 (Library: OpenSSL 3.0.3 3 May 2022)
built on: Wed May 4 02:41:48 2022 UTC
platform: VC-WIN64A
options: bn(64,64)
compiler: cl /Z7 /Fdssl_static.pdb /Gs0 /GF /Gy /MD /W3 /wd4090 /nologo /O2 -DL_ENDIAN -DOPENSSL_PIC -DUSING_V110_SOCKET -D_WINSOCK_DEPRECATED_NO_WARNINGS -D_WIN32_WINNT=0x0502
OPENSSLDIR: "C:\Program Files\Common Files\SSL"
ENGINESDIR: "C:\Program Files\OpenSSL\lib\engines-3"
MODULESDIR: "C:\Program Files\OpenSSL\lib\ossl-modules"
Seeding source: os-specific
CPUINFO: OpenSSL_ia32cap=0xfedaf383ffcbffff:0x1c2fbb

C:\Users\hp>cd desktop/certificate
C:\Users\hp\Desktop\Certificate>
```

3. Run the below command → provide **Enter PEM pass phrase** and save the pass phrase to provide it on the command to generate .pfx certificate.

```
openssl req -x509 -newkey rsa:4096 -sha256 -keyout my.key -out my.crt -subj
"/CN=test.com" -days 600
```



```
C:\Users\hp>cd desktop/certificate
C:\Users\hp\Desktop\Certificate>openssl req -x509 -newkey rsa:4096 -sha256 -keyout my.key -out my.crt -subj "/CN=test.com" -days 600
.....
Enter PEM pass phrase:
Verifying - Enter PEM pass phrase:
.....
```

4. Run the below command to generate the .pfx certificate

```
openssl pkcs12 -export -name "test.com" -out my.pfx -inkey my.key -in my.crt
```

Provide the below details

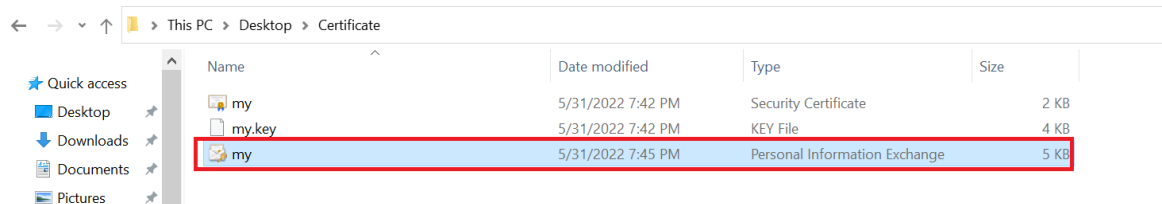
Enter pass phrase for my.key: Provide the pass phrase passed on step 3

Enter Export Password: Provide the password for .pfx certificate and save it for later use.

```
C:\Users\hp\Desktop\Certificate>openssl req -x509 -newkey rsa:4096 -sha256 -keyout my.key -out my.crt -subj "/CN=test.com" -days 600
Enter PEM pass phrase:
Verifying - Enter PEM pass phrase:
-----
C:\Users\hp\Desktop\Certificate>openssl pkcs12 -export -name "test.com" -out my.pfx -inkey my.key -in my.crt
Enter pass phrase for my.key:
Enter Export Password:
Verifying - Enter Export Password:
```

5. Exported .pfx certificate will be stored on the folder path provided on step 1.

**Note:** Share the .pfx certificate and the export password to get access to SDR API's.



### Option 2: Certificate generation with PowerShell

1. Open PowerShell and run the below command to generate the self-signed certificate

```
New-SelfSignedCertificate -certstorelocation cert:\CurrentUser\My\ -dnsname example.com
```

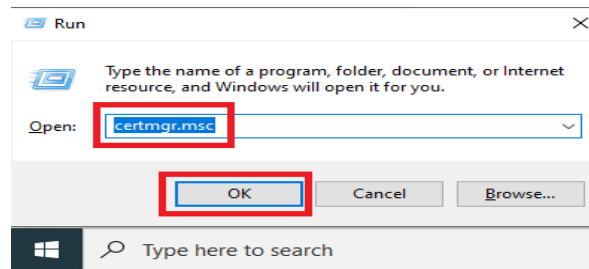
```
Windows PowerShell
PS C:\> New-SelfSignedCertificate -certstorelocation cert:\CurrentUser\My\ -dnsname example.com

PSParentPath: Microsoft.PowerShell.Security\Certificate::CurrentUser\My

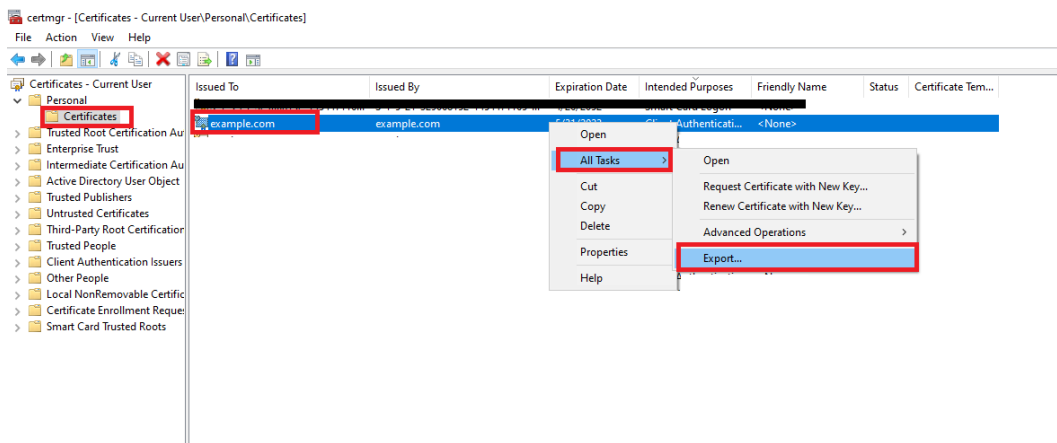
Thumbprint                               Subject
-----
6627DBCEEAB7A9AF558009FC04FF5CA1FFF8CE1B CN=example.com

PS C:\>
```

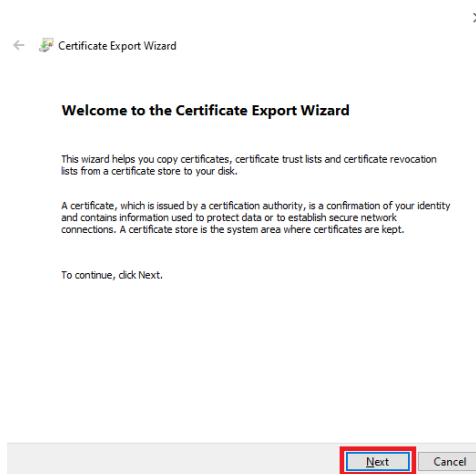
2. To Export the certificate in .pfx format, go to run → type certmgr.msc and click ok



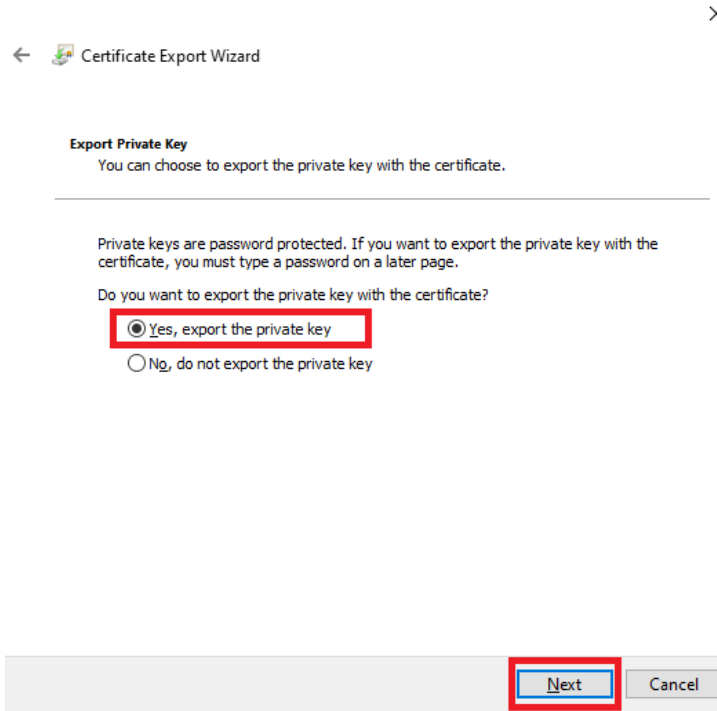
3. In certificate manager go to personal → certificates → select the generated certificate and right click select All Tasks → Select Export.



4. In Certificate Export Wizard click Next to continue.



5. Select export the private key option and click next.



← Certificate Export Wizard

**Export Private Key**  
You can choose to export the private key with the certificate.

Private keys are password protected. If you want to export the private key with the certificate, you must type a password on a later page.

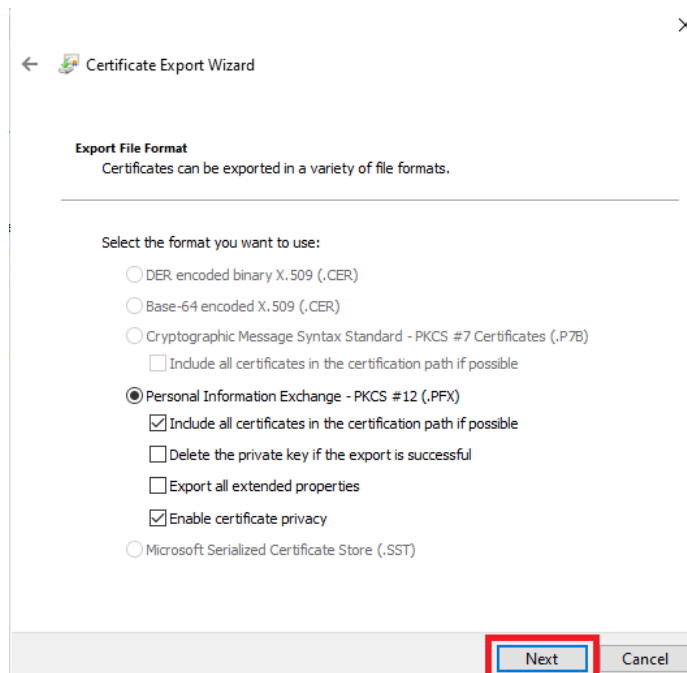
Do you want to export the private key with the certificate?

☒ Yes, export the private key

☐ No, do not export the private key

Next Cancel

6. Leave the defaults and click next.



← Certificate Export Wizard

**Export File Format**  
Certificates can be exported in a variety of file formats.

Select the format you want to use:

☐ DER encoded binary X.509 (.CER)

☐ Base-64 encoded X.509 (.CER)

☐ Cryptographic Message Syntax Standard - PKCS #7 Certificates (.P7B)

☐ Include all certificates in the certification path if possible

☒ Personal Information Exchange - PKCS #12 (.PFX)

☒ Include all certificates in the certification path if possible

☐ Delete the private key if the export is successful

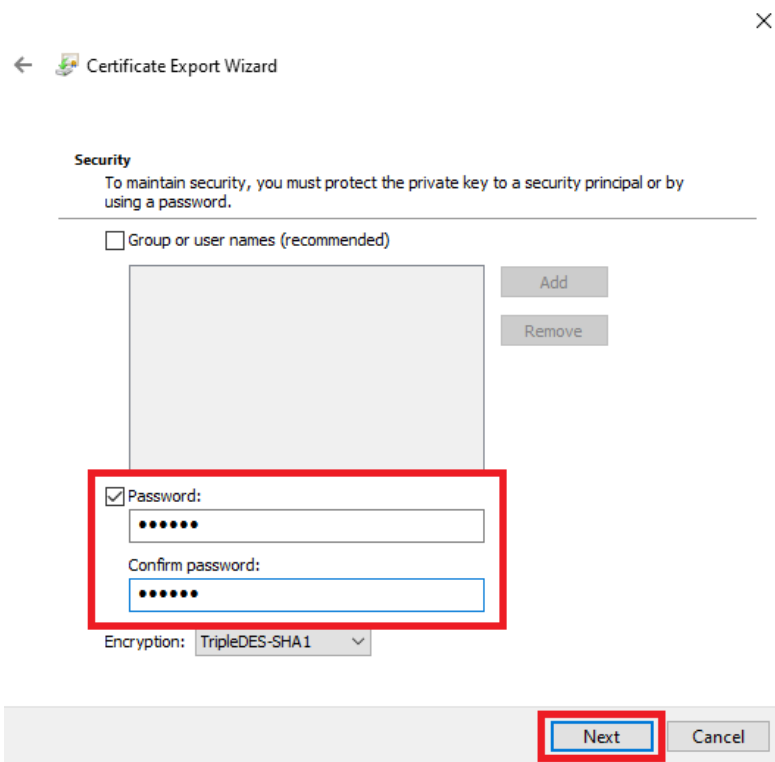
☐ Export all extended properties

☒ Enable certificate privacy

☐ Microsoft Serialized Certificate Store (.SST)

Next Cancel

7. Provide the password for certificate and click next.



← Certificate Export Wizard

**Security**  
To maintain security, you must protect the private key to a security principal or by using a password.

☐ Group or user names (recommended)

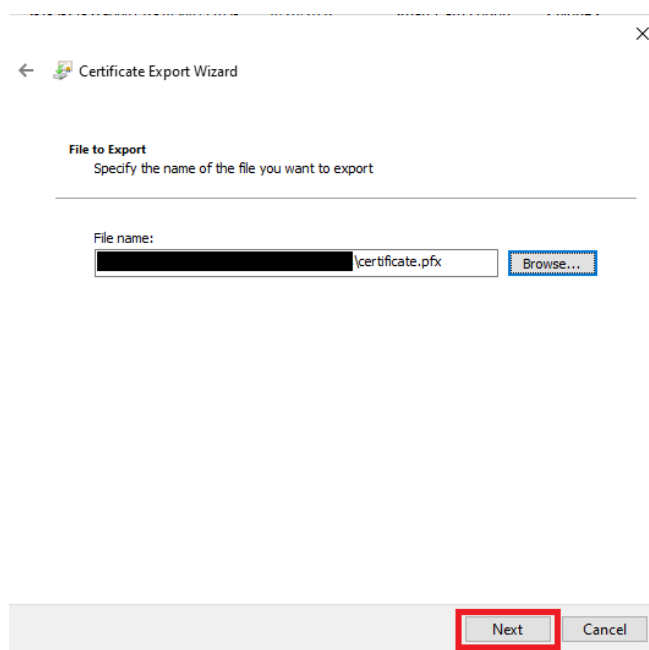
☒ Password:

Confirm password:

Encryption: TripleDES-SHA1

Next Cancel

8. Select the path to save the certificate.



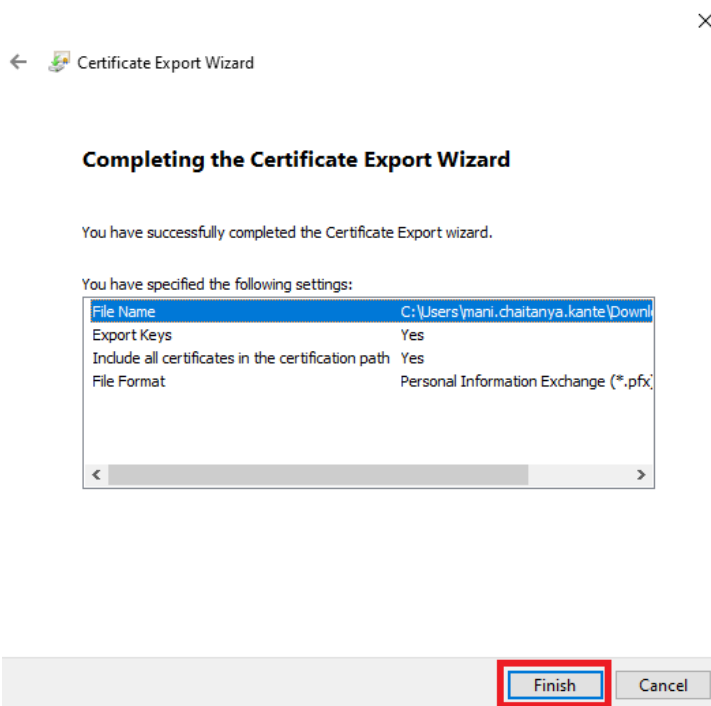
← Certificate Export Wizard

**File to Export**  
Specify the name of the file you want to export

File name: [text box] certificate.pfx Browse...

Next Cancel

9. Click on Finish.



10. Exported .pfx certificate will be stored on the folder path provided on step 7.

**Note:** Share the .pfx certificate and the password provide on step 8 to get access to SDR API's.