Contents

Introduction

This document describes configuration process on how to install CA signed certificate for Unified Contact Center Enterprise (UCCE) Diagnostic Framework Portico tool.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- Active Directory
- Domain Name System (DNS) server
- CA infrastructure deployed and working for all servers and client
- Diagnostic Framework Portico

Accessing Diagnostic Framework Portico tool by typing the IP address in the browser without receiving certificate warning is out of scope of this article.

Components Used

The information in this document is based on these software and hardware versions:

- Cisco UCCE 11.0.1
- Microsoft Windows Server 2012 R2
- Microsoft Windows Server 2012 R2 Certificate Authority
- Microsoft Windows 7 SP1 OS

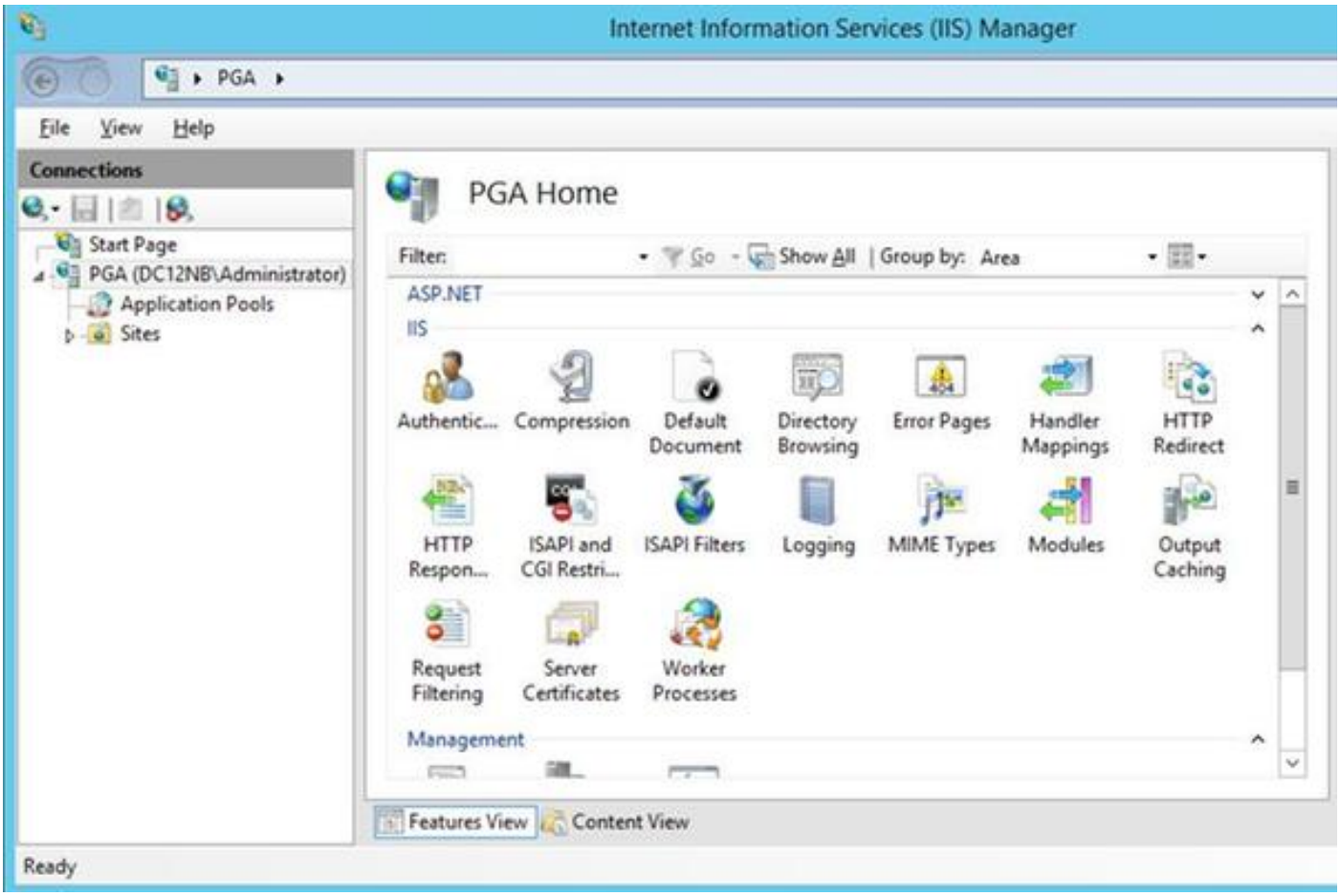
The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is

live, make sure that you understand the potential impact of any command.

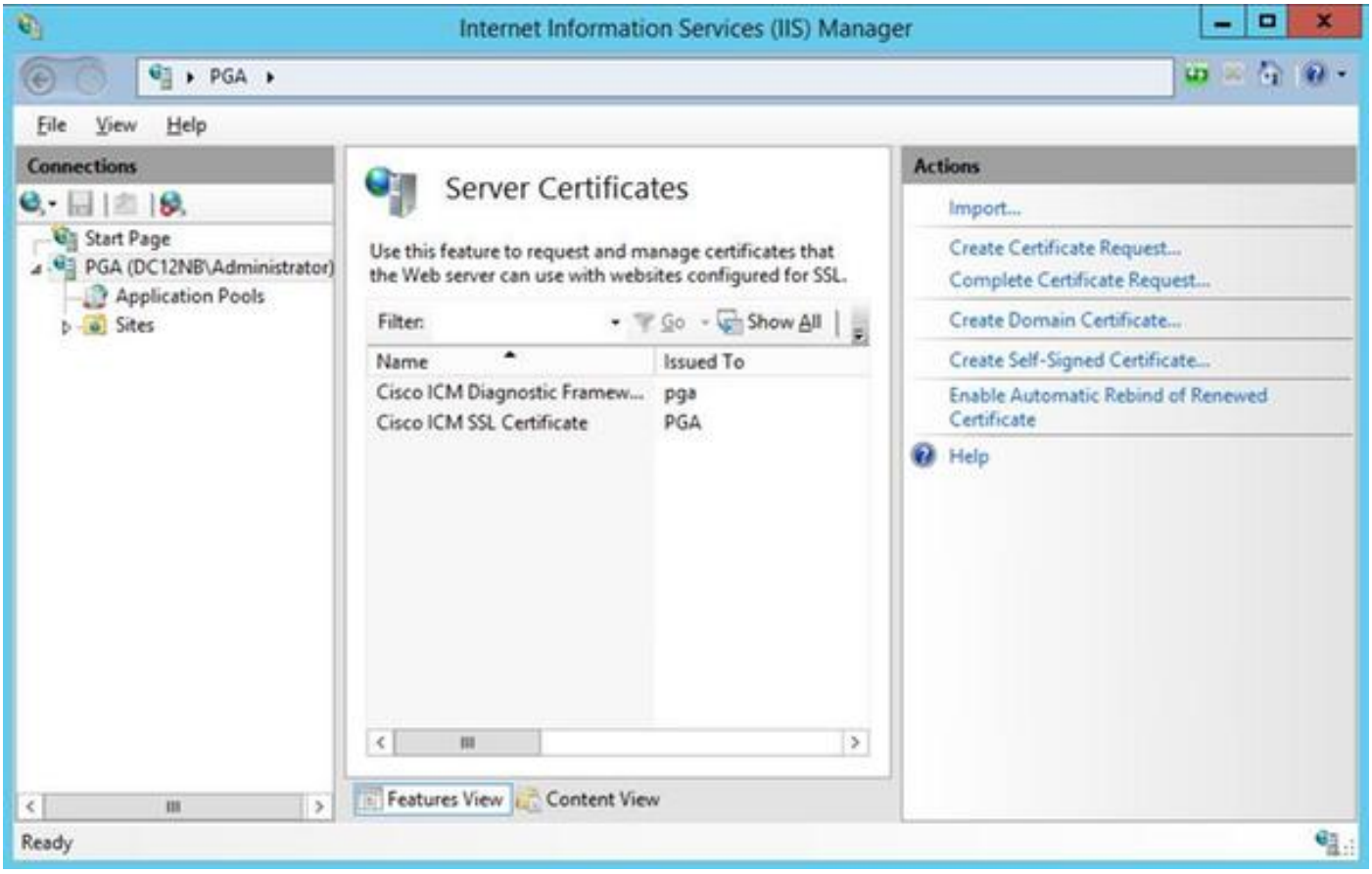
Configure

Generate Certificate Signed Request

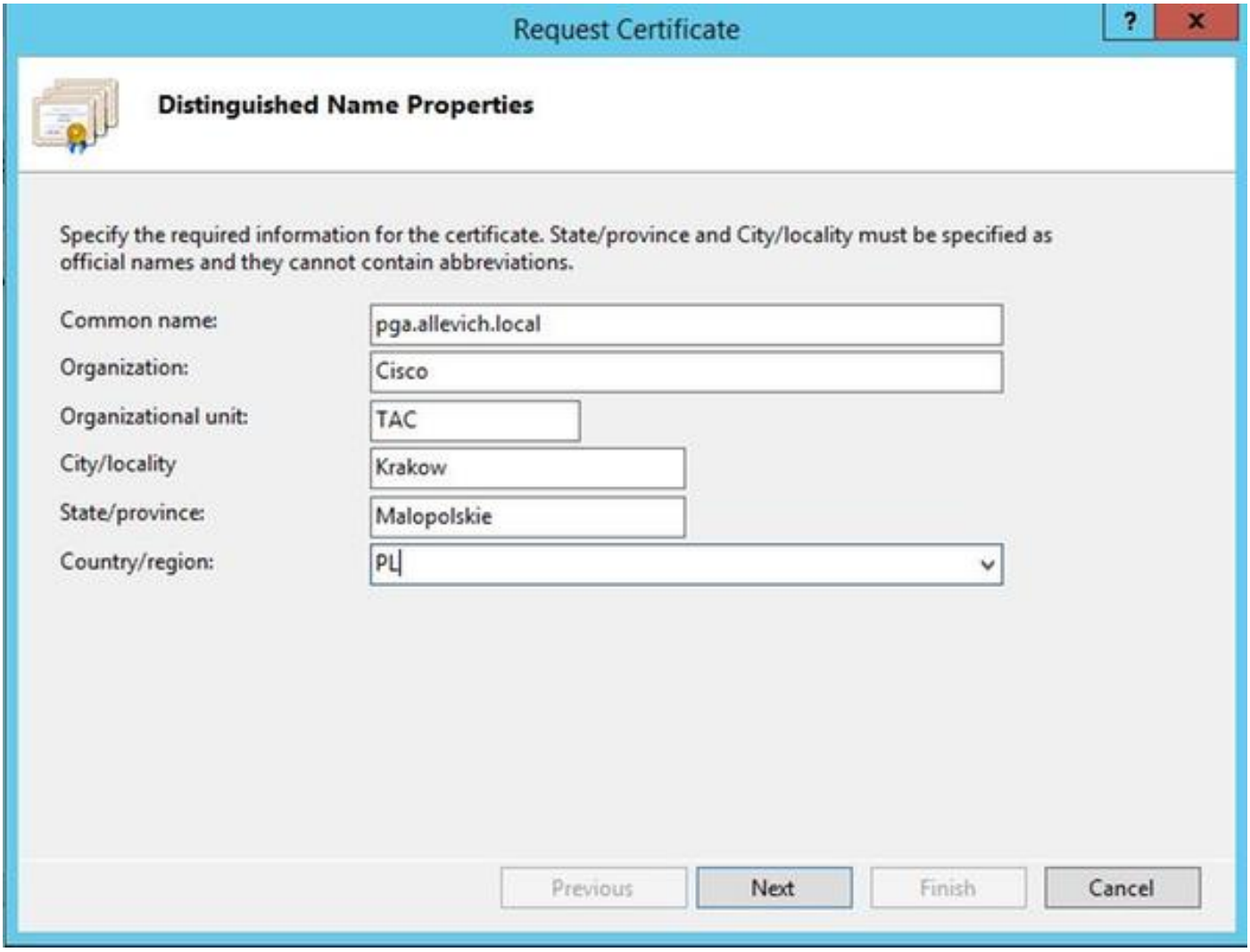
Open Internet Information Services (IIS) Manager, select your site, Peripheral Gateway A (PGA) in the example, and **Server Certificates**.



Select **Create Certificate Request** in the actions panel.



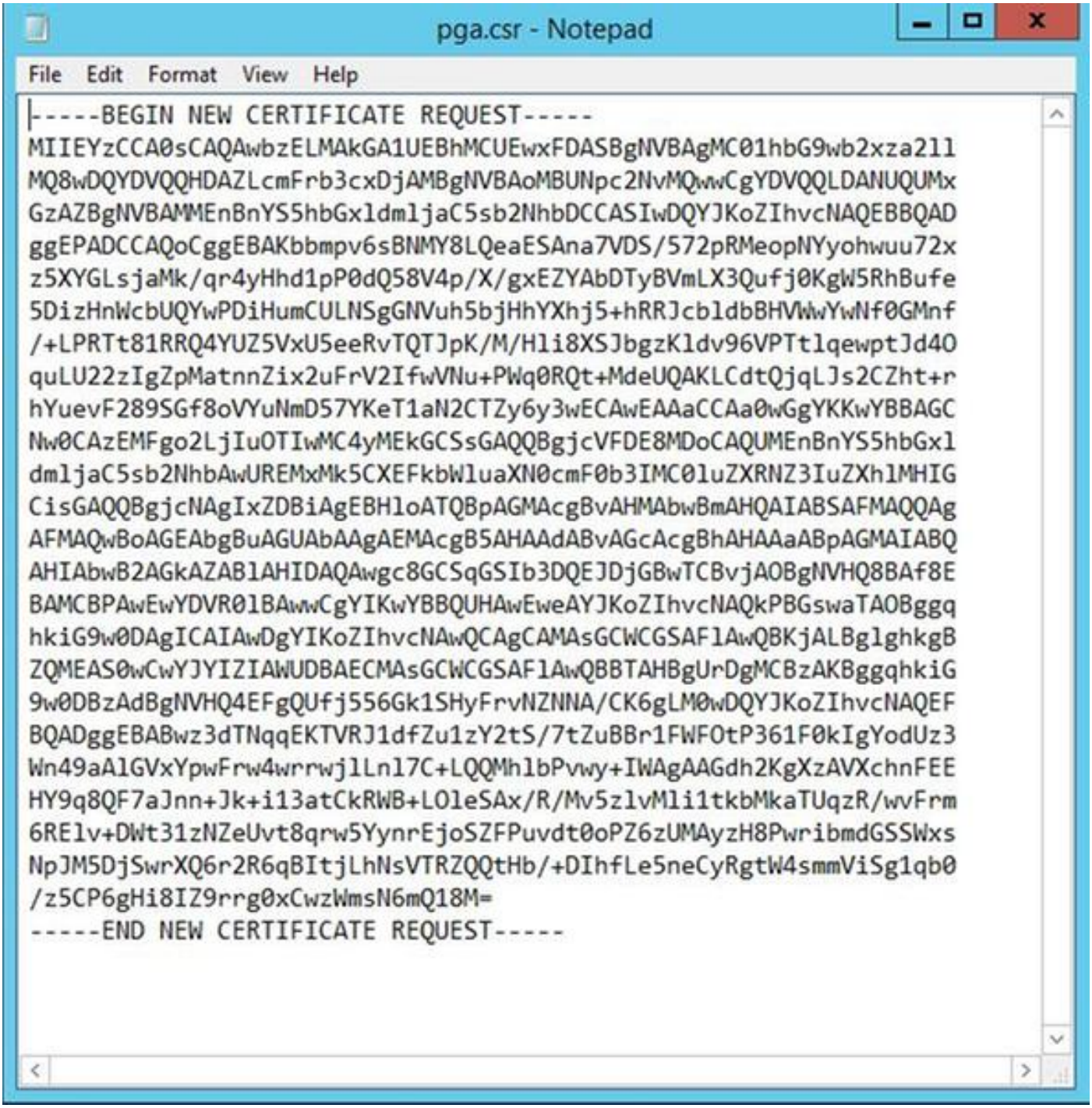
Enter **Common name** (CN), **Organization** (O), **Organization unit** (OU), **Locality** (L), **State** (ST), **Country** (C) fields. Common name must be the same as your Fully Qualified Domain Name (FQDN) hostname + domain name.



Leave default settings for cryptographic service provider and specify bit length: 2048.

Select path where to store. For example on the desktop with pga.csr name.

Open newly created request in the notepad.




```
-----BEGIN NEW CERTIFICATE REQUEST-----
MIIEYzCCA0sCAQAwbzELMAkGA1UEBhMCUEwxFDASBgNVBAgMC01hbG9wb2xza2ll
MQ8wDQYDVQQHDAZLcmFrb3cxDjAMBgNVBAoMBUNpc2NvMQwwCgYDVQQLDANUQUMx
GzAZBgNVBAMMEnBnYS5hbGxldmljaC5sb2NhbDCCASIwDQYJKoZIhvcNAQEBBQAD
ggEPADCCAQoCggEBAKbbmpv6sBNMY8LQeaESAna7VDS/572pRMeopNYyohwuu72x
z5XYGLsjaMk/qr4yHhd1pP0dQ58V4p/X/gxEZYAbDTyBVmLX3Qufj0KgW5RhBufe
5DizHnWcbUQYwPDiHumCULNSgGNVuh5bjHhYXhj5+hRRJcbldbBHVWwYwNf0GMnf
/+LPRTt81RRQ4YUZ5VxU5eeRvTQTJpK/M/Hli8XSJbgzKldv96VPTtlqewptJd4O
quLU22zIgZpMatnnZix2uFrV2IfwVNu+PWq0RQt+MdeUQAKLCdtQjqLJs2CZht+r
hYuevF289SGf8oVYuNmD57YKeT1aN2CTZy6y3wECAwEAAaCCAa0wGgYKKwYBBAGC
Nw0CAzEMFgo2LjIuOTIwMC4yMEkGCSsGAQQBgjcVFDE8MDoCAQUMEnBnYS5hbGxl
dmljaC5sb2NhbAwUREMxMk5CXEFkbWluaXN0cmF0b3IMC0luZXRNZ3IuZXhlMHIG
CisGAQQBgjcNAgIxZDBiAgEBHloATQBpAGMAcgBvAHMAbwBmAHQAIABSAFMAQQAg
AFMAQwBoAGEAbgBuAGUAbAAgAEMAcgB5AHAAdABvAGcAcgBhAHAAaABpAGMAIABQ
AHIAbwB2AGkAZABlAHIDAQAwgc8GCSqGSIb3DQEJDjGBwTCBvjAOBgNVHQ8BAf8E
BAMCBPAwEwYDVR0lBAwwCgYIKwYBBQUHAwEweAYJKoZIhvcNAQkPBGswaTAOBggq
hkiG9w0DAgICAIAwDgYIKoZIhvcNAwQCAgCAMAsGCWCGSAFlAwQBKjALBglghkgB
ZQMEAS0wCwYJYIZIAWUDBAECMAsGCWCGSAFlAwQBBTAHBgUrDgMCBzAKBggqhkiG
9w0DBzAdBgNVHQ4EFgQUfj556Gk1SHyFrvNZNNA/CK6gLM0wDQYJKoZIhvcNAQEF
BQADggEBABwz3dTNqqEKTVRJ1dfZu1zY2tS/7tZuBBr1FWFOtP361F0kIgYodUz3
Wn49aAlGVxYpwFrw4wrrwjlLnl7C+LQQMhlbPvwy+IWAgAAGdh2KgXzAVXchnFEE
HY9q8QF7aJnn+Jk+i13atCkRWB+LOleSAx/R/Mv5zlvMli1tkbMkaTUqzR/wvFrm
6RElv+DWt31zNZeUvt8qrw5YynrEjoSZFPuvdt0oPZ6zUMAyzH8PwribmdGSSWxs
NpJM5DjSwrXQ6r2R6qBItjLhNsVTRZQQtHb/+DIhfLe5neCyRgtW4smmViSg1qb0
/z5CP6gHi8IZ9rrg0xCwzWmsN6mQ18M=
-----END NEW CERTIFICATE REQUEST-----
```


Copy the certificate into the buffer with CTRL+C.

Sign the Certificate on the Certificate Authority

> **Note**: If you are using external certificate authority (like GoDaddy) you need to contact them after having CSR file generated.

Sign in to your CA server certificate enroll page.
https://<CA-server-address>/certsrv

Select **Request Certificate**, **Advanced Certificate Request** and paste the Certificate Signing Request (CSR) content to the buffer. Then select **Certificate Template as Web Server**.

Download Base 64 encoded certificate.

Open the certificate and copy the content of the thumbprint field for later usage. Remove spaces from the thumbprint.

Install the Certificate

Copy the certificate

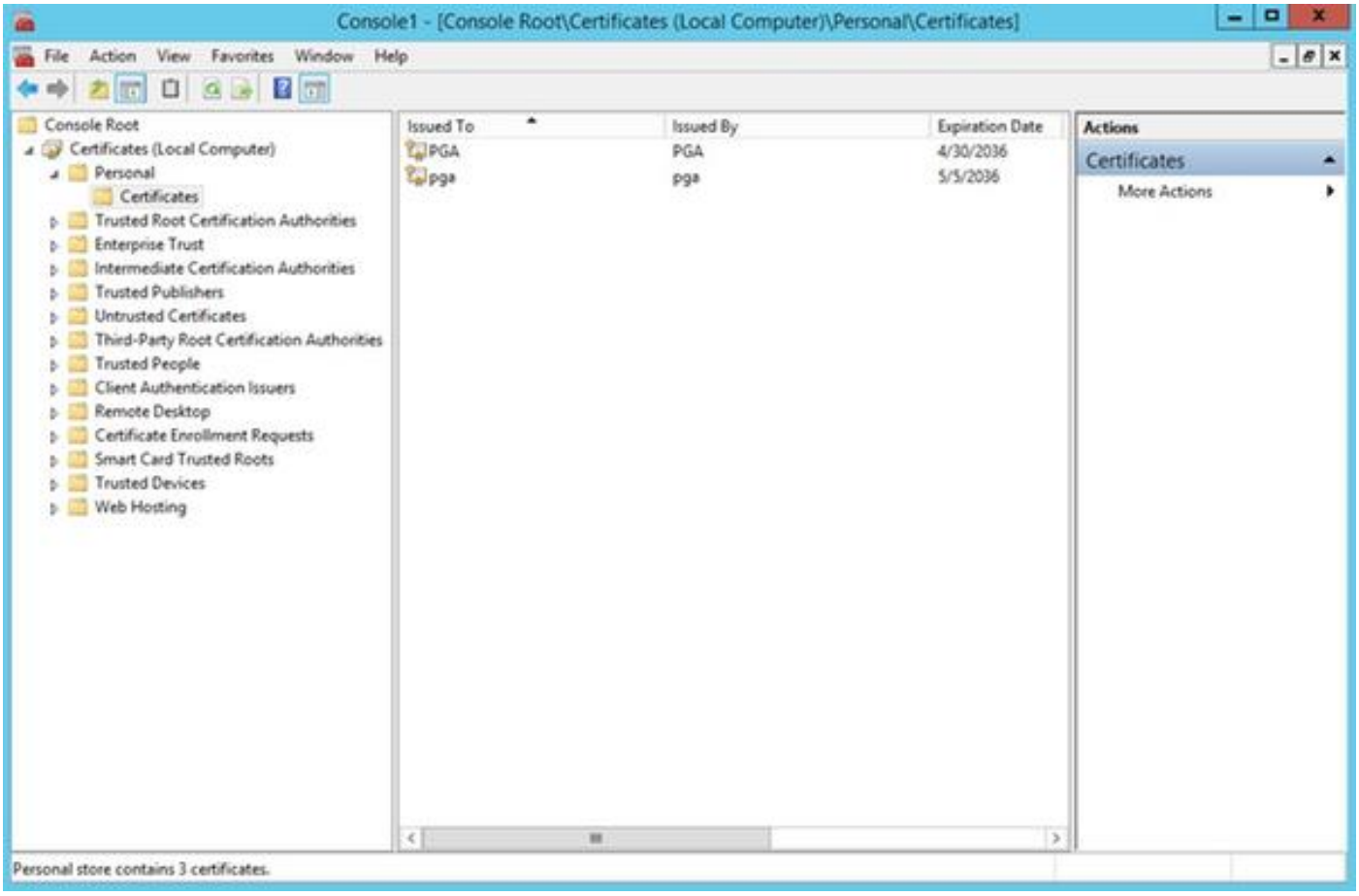
Copy the newly generated certificate file into UCCE VM where Portico tool is located.

Import the Certificate into the Local Computer Store

On the same UCCE server launch Microsoft Management Console (MMC) console by selecting start menu, type **run** and **mmc** .

Click **Add/Remove snap-in** and in the dialog box click **Add**.
Then select **Certificates** menu and add.
In the Certificates snap-in dialog box, click **Computer Account > Local Computer > Finish**.

Navigate to the personal certificates folder.



In the actions pane select **More Actions > All Tasks > Import**.

Click **Next**, **Browse** and select the certificate that was generated previously and in the next menu

ensure that certificate store was set to personal. On the last screen verify **Certificate Store** and **Certificate File** selected and click **Finish**.

Bind IIS Certificate

Open CMD application.

Navigate to Diagnostic Portico home folder.

```
cd c:\icm\serviceability\diagnostics\bin
```

Remove the current certificate binding for Portico tool.

```
DiagFwCertMgr /task:UnbindCert
```

Bind CA signed certificate.

> **Tip**: Use some text editor (notepad++) to remove spaces in the hash.

Use the hash saved before with spaces removed.

```
DiagFwCertMgr /task:BindCertFromStore /certhash:bc6bbe23b8b3a26d8446c252400f9264c5c30a29
```

In case the certificate is bound successfully you should see the similar line in the output.
"The certificate binding is VALID"
Ensure that the certificate binding was successful using this command.

```
DiagFwCertMgr /task:ValidateCertBinding
```

Again similar message should be displayed in the output.
"The certificate binding is VALID"

> **Note**: DiagFwCertMgr by default will use port 7890.

Restart the Diagnostic Framework service.

```
sc stop "diagfwsvc" sc start "diagfwsvc"
```

> **Tip**: Service list and especially Portico service name can be checked via tasklist command in CMD tool.

```
tasklist /v
```

Verify

Open Diagnostic Framework page using FQDN and it should not prompt a certificate warning message.

Back out plan

In case you lost the access to Portico tool you can regenerate self-signed certificate and add an exception.
It can be done using this command.

```
DiagFwCertMgr /task:CreateAndBindCert
```

Troubleshoot

Do not use IP address when login to Diagnostic Framework Portico tool. You still receive a certificate warning, because FQDN has to match with the value specified in the certificate CN field.

Verify that all the servers are synchronised with the NTP source.

```
w32tm /monitor
```

If you try to use Subject Alternative Name (SAN) or Elliptic Curve Digital Signature Algorithm (EC DSA) or 4096 key length certificate - first isolate that it is not specific to one of these features.

Related Articles

UCCE\PCCE - Procedure to obtain and upload Windows Server SelfSigned or Certificate Authority (CA) Certificate on 2008 servers

Configure CA Signed Certificate via CLI in Cisco Voice Operating System (VOS)