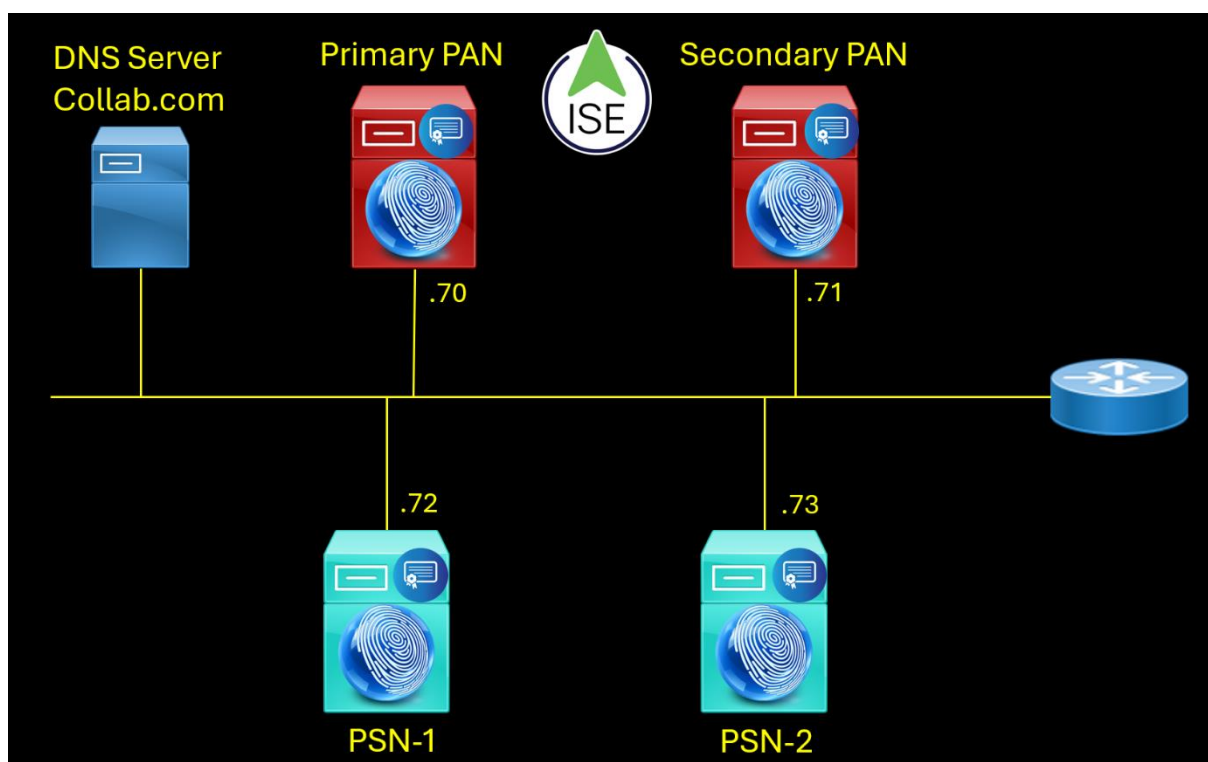


## Demystifying PKI Infrastructure and Certificate Management With Cisco ISE Cluster Distributed Deployment



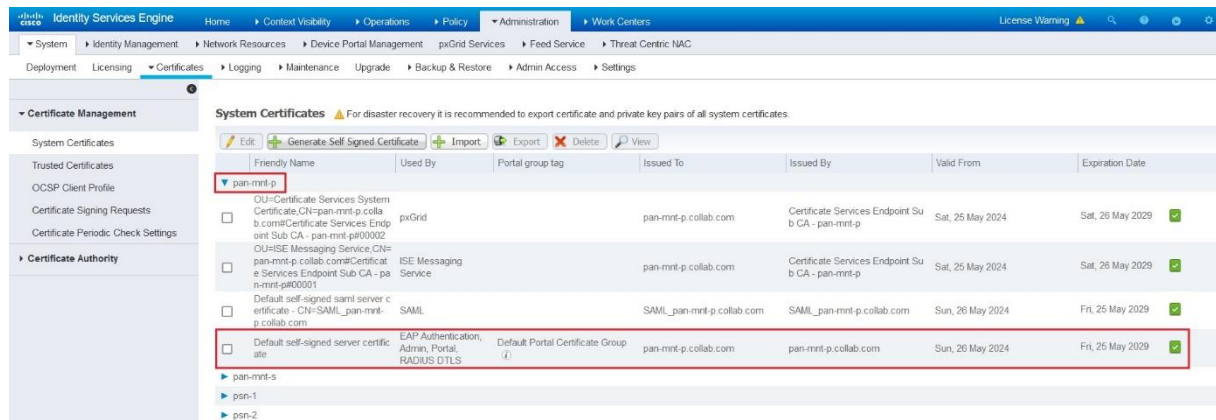
Redouane MEDDANE

In distributed deployment, each node installs a self-signed certificate signed by the system and has the Object Type : Certificate Authority. This certificate is unique in that it's self-signed, essentially ensuring for its own authenticity. It doesn't require validation from an external or superior entity because it already sits at the top of the trust hierarchy.

This self-signed certificate is used by the following services admin, EAP authentication, RADIUS DTLS and portals.

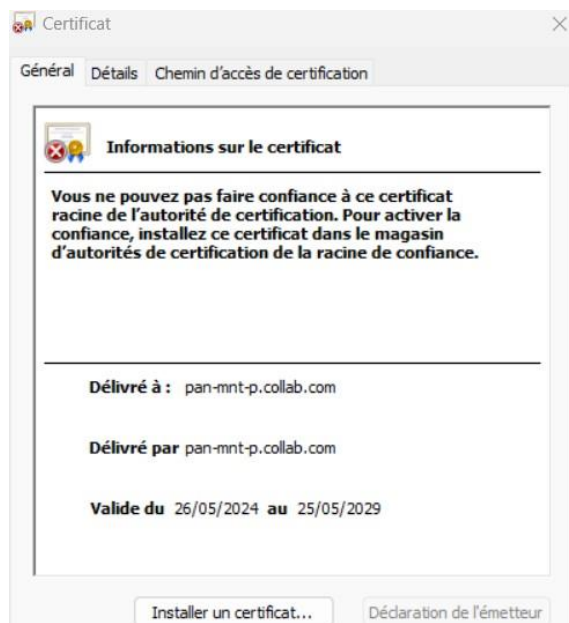
Below the list of the self-signed certificate used by each node. Each certificate has the Common Name equal to the FQDN of the node.

## PAN-MNT-P.



The screenshot shows the Cisco Identity Services Engine (ISE) Administration console. The 'System Certificates' section is active, displaying a table of certificates. The table has columns for Friendly Name, Used By, Portal group tag, Issued To, Issued By, Valid From, and Expiration Date. A red box highlights the 'Default self-signed server certificate' row, which is used by 'EAP Authentication, Admin, Portal, RADIUS DTLS' and issued to 'pan-mnt-p.collab.com'.

Friendly Name	Used By	Portal group tag	Issued To	Issued By	Valid From	Expiration Date
pan-mnt-p						
OU=Certificate Services System Certificate CN=pan-mnt-p.collab.com	pxGrid		pan-mnt-p.collab.com	Certificate Services Endpoint Sub CA - pan-mnt-p	Sat, 25 May 2024	Sat, 26 May 2029
OU=ISE Messaging Service CN=pan-mnt-p.collab.com	ISE Messaging Service		pan-mnt-p.collab.com	Certificate Services Endpoint Sub CA - pan-mnt-p	Sat, 25 May 2024	Sat, 26 May 2029
Default self-signed saml server certificate - CN=SAML_pan-mnt-p.collab.com	SAML		SAML_pan-mnt-p.collab.com	SAML_pan-mnt-p.collab.com	Sun, 26 May 2024	Fri, 25 May 2029
Default self-signed server certificate	EAP Authentication, Admin, Portal, RADIUS DTLS	Default Portal Certificate Group	pan-mnt-p.collab.com	pan-mnt-p.collab.com	Sun, 26 May 2024	Fri, 25 May 2029





## PAN-MNT-S.

pan-mnt-s								
<input type="checkbox"/>	Default self-signed saml server certificate - CN=SAML_pan-mnt-s.collab.com	Not in use		SAML_pan-mnt-s.collab.com	SAML_pan-mnt-s.collab.com	Sun, 26 May 2024	Fri, 25 May 2029	<input checked="" type="checkbox"/>
<input type="checkbox"/>	OU=Certificate Services System Certificate,CN=pan-mnt-s.collab.com#Certificate Services Endpoint Sub CA - pan-mnt-s#00003	pxGrid		pan-mnt-s.collab.com	Certificate Services Endpoint Sub CA - pan-mnt-s	Sat, 25 May 2024	Sat, 26 May 2029	<input checked="" type="checkbox"/>
<input type="checkbox"/>	OU=ISE Messaging Service,CN=pan-mnt-s.collab.com#Certificate Services Endpoint Sub CA - pan-mnt-s#00003	ISE Messaging Service		pan-mnt-s.collab.com	Certificate Services Endpoint Sub CA - pan-mnt-s	Sat, 25 May 2024	Sat, 26 May 2029	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Default self-signed server certificate	EAP Authentication, Admin, Portal, RADIUS DTLS	Default Portal Certificate Group	pan-mnt-s.collab.com	pan-mnt-s.collab.com	Sun, 26 May 2024	Fri, 25 May 2029	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Default self-signed saml server certificate - CN=SAML_pan-mnt-p.collab.com	SAML		SAML_pan-mnt-p.collab.com	SAML_pan-mnt-p.collab.com	Sun, 26 May 2024	Fri, 25 May 2029	<input checked="" type="checkbox"/>





## PSN-1.

pan-mnt-s								
psn-1								
<input type="checkbox"/>	Default self-signed saml server certificate - CN=SAML_pan-mnt-p.collab.com	SAML		SAML_pan-mnt-p.collab.com	SAML_pan-mnt-p.collab.com	Sun, 26 May 2024	Fri, 25 May 2029	✓
<input type="checkbox"/>	Default self-signed server certificate	EAP Authentication, Admin, Portal, RADIUS DTLS	Default Portal Certificate Group (i)	psn-1.collab.com	psn-1.collab.com	Sun, 26 May 2024	Fri, 25 May 2029	✓
<input type="checkbox"/>	Default self-signed saml server certificate - CN=SAML_psn-1.collab.com	Not in use		SAML_psn-1.collab.com	SAML_psn-1.collab.com	Sun, 26 May 2024	Fri, 25 May 2029	✓
<input type="checkbox"/>	OU=Certificate Services System Certificate,CN=psn-1.collab.com#Certificate Services Endpoint Sub CA - psn-1#00003	pxGrid		psn-1.collab.com	Certificate Services Endpoint Sub CA - psn-1	Sat, 25 May 2024	Sat, 26 May 2029	✓
<input type="checkbox"/>	OU=ISE Messaging Service,CN=psn-1.collab.com#Certificate Services Endpoint Sub CA - psn-1#0003	ISE Messaging Service		psn-1.collab.com	Certificate Services Endpoint Sub CA - psn-1	Sat, 25 May 2024	Sat, 26 May 2029	✓
psn-2								



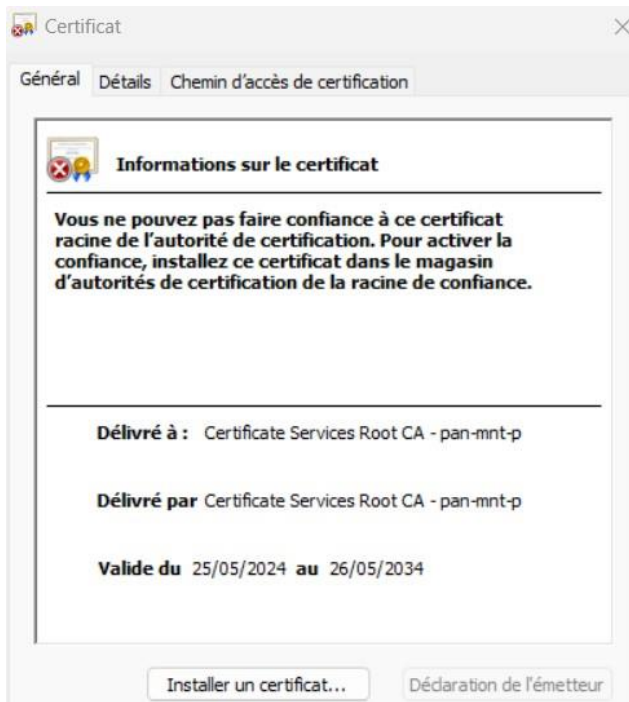
## PSN-2.

▶ pan-mnt-s								
▶ psn-1								
▼ psn-2								
<input type="checkbox"/>	Default self-signed saml server certificate - CN=SAML_pan-mnt-p.collab.com	SAML	SAML_pan-mnt-p.collab.com	SAML_pan-mnt-p.collab.com	Sun, 26 May 2024	Fri, 25 May 2029	✓	
<input type="checkbox"/>	Default self-signed saml server certificate - CN=SAML_psn-2.collab.com	Not in use	SAML_psn-2.collab.com	SAML_psn-2.collab.com	Sun, 26 May 2024	Fri, 25 May 2029	✓	
<input type="checkbox"/>	Default self-signed server certificate	EAP Authentication, Admin, Portal, RADIUS DTLS	Default Portal Certificate Group	psn-2.collab.com	psn-2.collab.com	Sun, 26 May 2024	Fri, 25 May 2029	✓
<input type="checkbox"/>	OU=Certificate Services System Certificate,CN=psn-2.collab.com #Certificate Services Endpoint Sub CA - psn-2#00003	pxGrid	psn-2.collab.com	Certificate Services Endpoint Sub CA - psn-2	Sat, 25 May 2024	Sat, 26 May 2029	✓	
<input type="checkbox"/>	OU=ISE Messaging Service,CN=psn-2.collab.com#Certificate Services Endpoint Sub CA - psn-2#0004	ISE Messaging Service	psn-2.collab.com	Certificate Services Endpoint Sub CA - psn-2	Sat, 25 May 2024	Sat, 26 May 2029	✓	

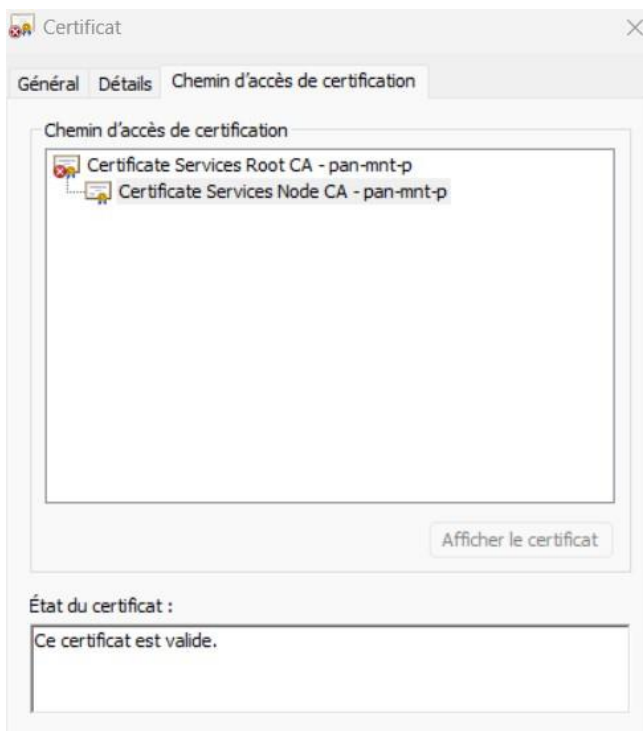


When you install Cisco ISE cluster, an internal PKI hierarchy is built. The certificate management are centralized on the Primary PAN where you can create, delete and renew the nodes certificates.

First the primary PAN has the Root CA certificate representing the top of trust hierarchy as shown below.

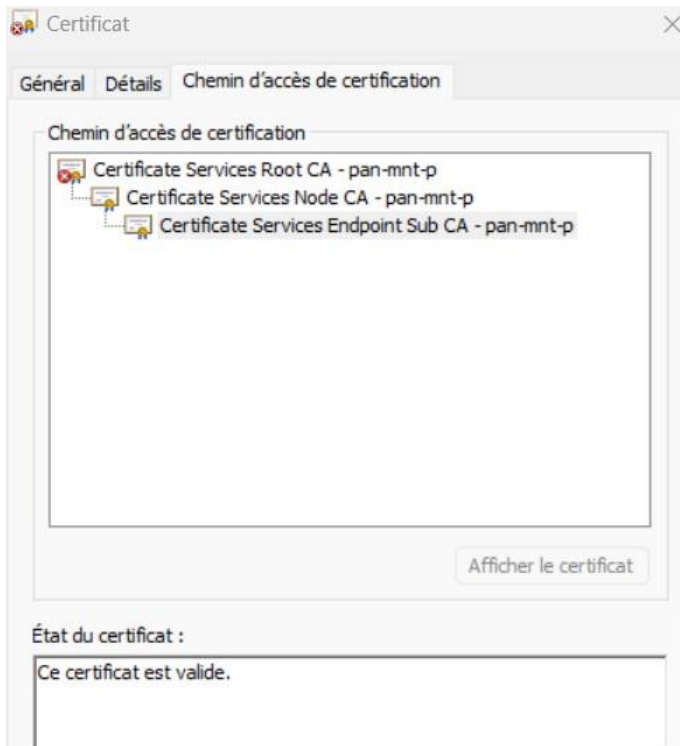
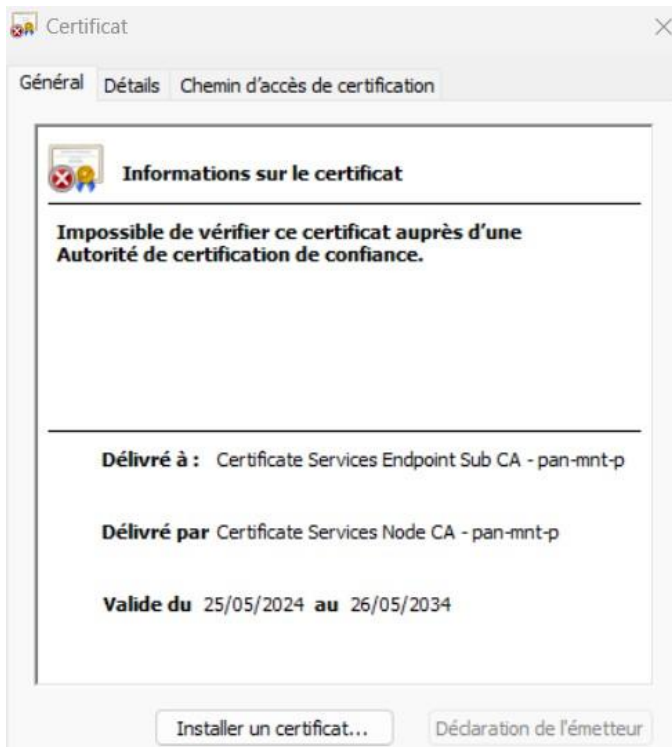


The PAN has also a subordinate certificate called Certificate Services Nodes CA - pan-mnt-p signed by its Root CA certificate as shown below.



In addition the Primary PAN generates a subordinate certificate called Certificate Services Endpoint Sub CA – pan-mnt-p and it is signed by the Node Certificate of the primary PAN called "Certificate Services Nodes CA - pan-mnt-p".





Identity Services Engine Administration Work Centers

System Identity Management Network Resources Device Portal Management pxGrid Services Feed Service Threat Centric NAC

Deployment Licensing Certificates Logging Maintenance Upgrade Backup & Restore Admin Access Settings

Certificate Management

Certificate Authority

Overview

Issued Certificates

Certificate Authority Certificates

Internal CA Settings

Certificate Templates

External CA Settings

CA Certificates

Import Export Delete View Refresh

Friendly Name	Status	Trusted For	Serial Number	Issued To	Issued By	Valid From	Expiration Date	Expiration Status
pan-mnt-p								
Certificate Services Node CA - pan-mnt-p#00002	Enabled	Endpoints,Infrastructure	1C 82 22 93 1F EC 4D D7 99 D4 A4 6D B1 E7 8D 7D	Certificate Services Node CA - pan-mnt-p	Certificate Services Root CA - pan-mnt-p	Sat, 25 May 2024	Fri, 26 May 2034	✓
Certificate Services Endpoint Sub CA - pan-mnt-p#00003	Enabled	Infrastructure,Endpoints	35 24 7E 17 4A 85 4A CC 95 2B 2F 06 9C 5E 02 F5	Certificate Services Endpoint Sub CA - pan-mnt-p	Certificate Services Node CA - pan-mnt-p	Sat, 25 May 2024	Fri, 26 May 2034	✓
Certificate Services Root CA - pan-mnt-p#00001	Enabled	Infrastructure,Endpoints	31 FE AA E8 D7 AB 4D 93 AD 36 61 05 12 6C B2 92	Certificate Services Root CA - pan-mnt-p	Certificate Services Root CA - pan-mnt-p	Sat, 25 May 2024	Fri, 26 May 2034	✓
Certificate Services OCSP Responder - pan-mnt-p#00004	Enabled	Infrastructure,Endpoints	77 02 00 56 87 76 91 0F B0 C7 39 DC 57 F1 93 58	Certificate Services OCSP Responder - pan-mnt-p	Certificate Services Node CA - pan-mnt-p	Sat, 25 May 2024	Sat, 26 May 2029	✓
pan-mnt-s								
psn-1								
psn-2								

When you register the secondary PAN two subordinate certificates are generated.

pan-mnt-s

Certificate Services Node CA - pan-mnt-s#00007	Enabled	Infrastructure,Endpoints	59 2B 6E BB 0D 3F 48 EF 82 64 8A 9A 8F AF B7 CF	Certificate Services Node CA - pan-mnt-s	Certificate Services Root CA - pan-mnt-p	Sat, 25 May 2024	Fri, 26 May 2034	✓
Certificate Services Endpoint Sub CA - pan-mnt-s#00008	Enabled	Infrastructure,Endpoints	0E C0 0F C0 47 AD 45 AF 91 08 D3 45 60 07 72 DF	Certificate Services Endpoint Sub CA - pan-mnt-s	Certificate Services Node CA - pan-mnt-s	Sat, 25 May 2024	Fri, 26 May 2034	✓
Certificate Services OCSP Responder - pan-mnt-s#00009	Enabled	Infrastructure,Endpoints	37 71 2D 9F 3B 65 49 70 AF 55 D3 D0 54 ED B2 1A	Certificate Services OCSP Responder - pan-mnt-s	Certificate Services Node CA - pan-mnt-s	Sat, 25 May 2024	Sat, 26 May 2029	✓
psn-1								
psn-2								

Certificate Services Nodes CA - pan-mnt-s signed by the primary PAN Root CA.

Certificat

Général Détails Chemin d'accès de certification

Informations sur le certificat

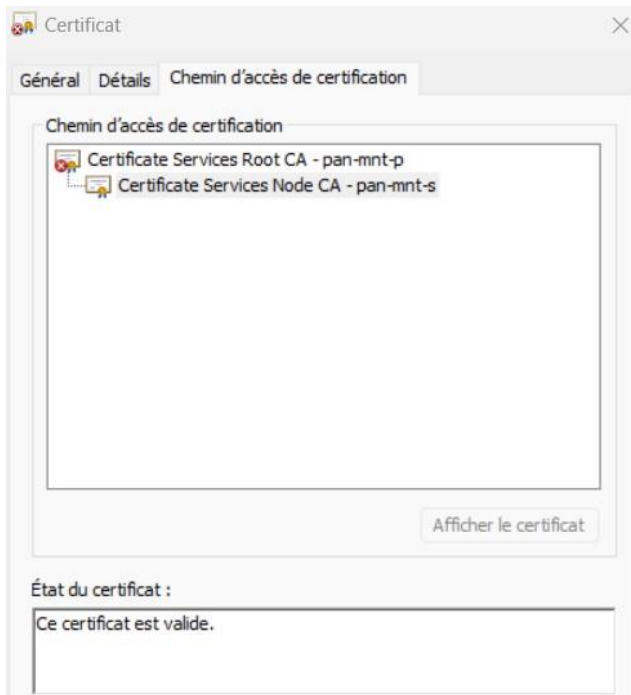
Impossible de vérifier ce certificat auprès d'une Autorité de certification de confiance.

Délivré à : Certificate Services Node CA - pan-mnt-s

Délivré par Certificate Services Root CA - pan-mnt-p

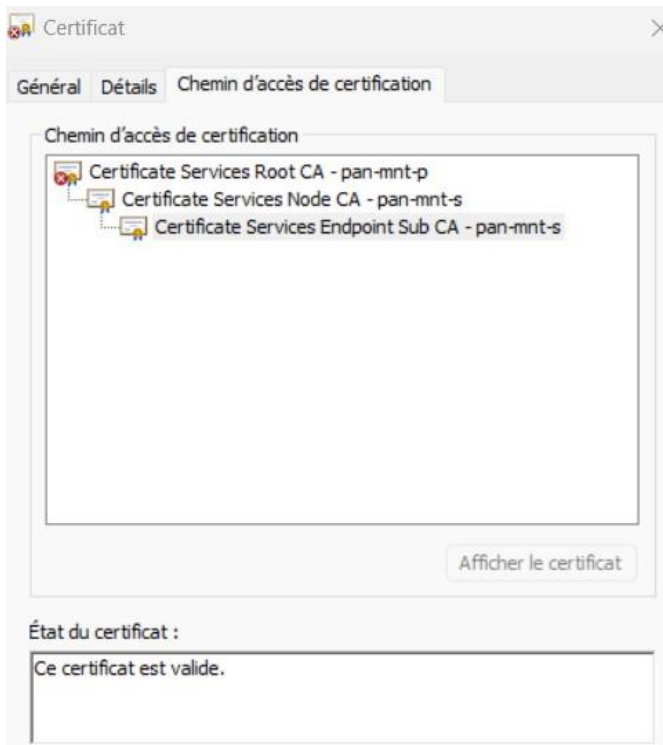
Valide du 25/05/2024 au 26/05/2034

Installer un certificat... Déclaration de l'émetteur

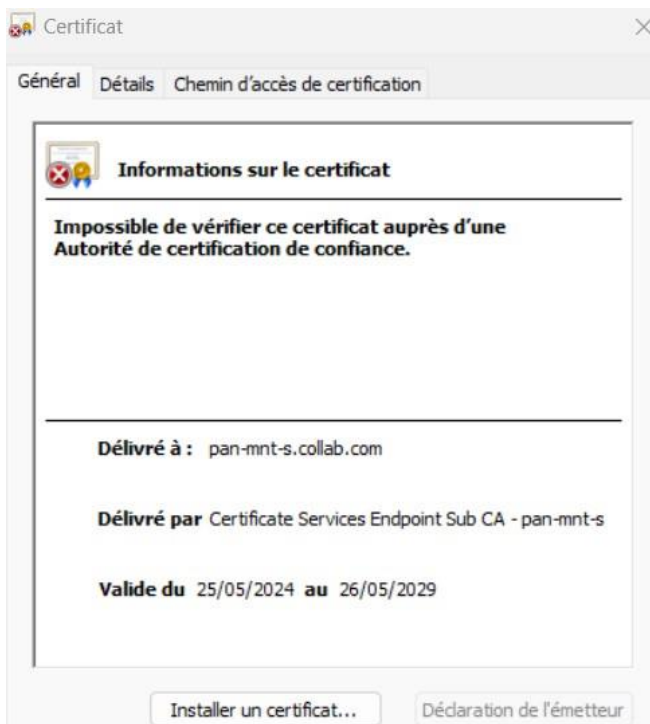


Certificate Services Endpoint Sub CA - pan-mnt-s signed by the subordinate certificate Services Nodes CA - pan-mnt-s.





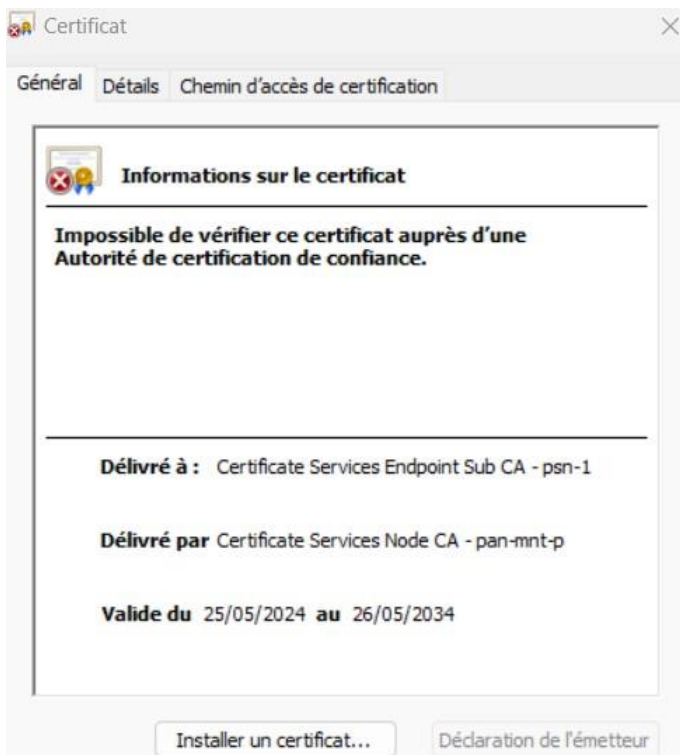
In addition, a server or entity certificate is generated for the secondary PAN with the Common Name equal to the FQDN pan-mnt-s.collab.com, this server certificate is signed by the subordinate certificate Services Endpoint Sub CA - pan-mnt-s.collab.com.

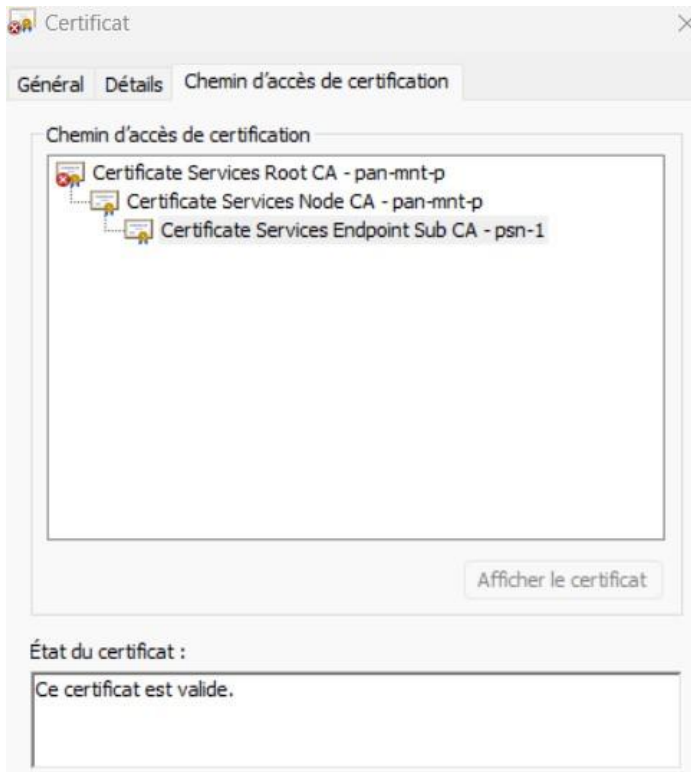




When you register the Policy Service Node PSN, each PSN node is provisioned a subordinate certificate called Certificate Services Endpoint Sub CA and it is signed by the Node Certificate of the primary PAN called "Certificate Services Nodes CA - pan-mnt-p".

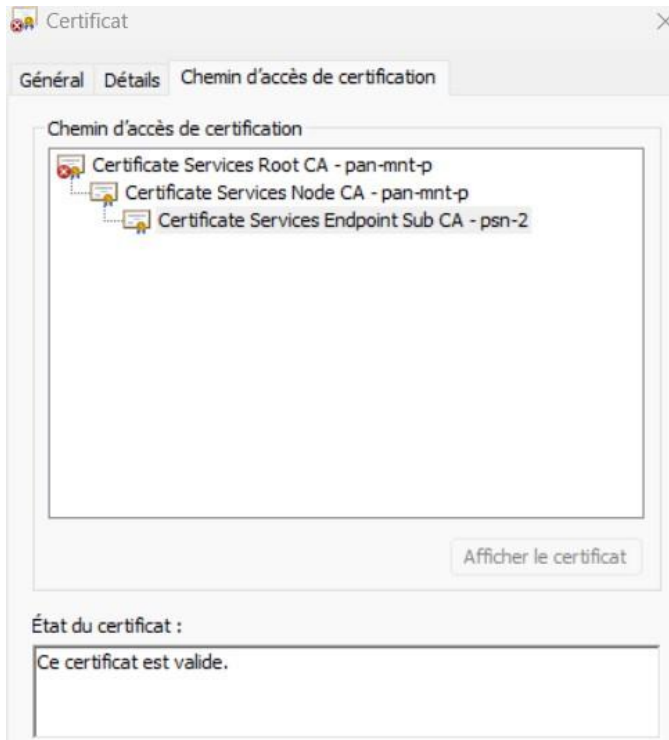
In this example, the PSN-1 is provisioned with a subordinate certificate called "Certificate Services Endpoint Sub CA - PSN-1".



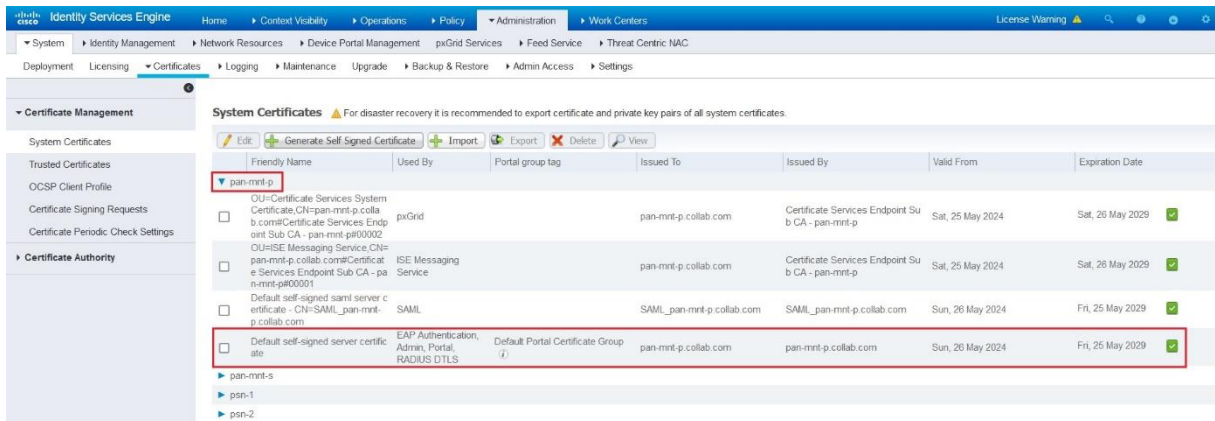


The PSN-2 is provisioned with a subordinate certificate called "Certificate Services Endpoint Sub CA - PSN-2".





By default, each node uses the self-signed certificate for the following services: admin access, EAP authentication, RADIUS DTLS and portals.



pan-mnt-s								
psn-1								
<input type="checkbox"/>	Default self-signed saml server certificate - CN=SAML_pan-mnt-p.collab.com	SAML		SAML_pan-mnt-p.collab.com	SAML_pan-mnt-p.collab.com	Sun, 26 May 2024	Fri, 25 May 2029	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Default self-signed server certificate	EAP Authentication, Admin, Portal, RADIUS DTLS	Default Portal Certificate Group	psn-1.collab.com	psn-1.collab.com	Sun, 26 May 2024	Fri, 25 May 2029	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Default self-signed saml server certificate - CN=SAML_psn-1.collab.com	Not in use		SAML_psn-1.collab.com	SAML_psn-1.collab.com	Sun, 26 May 2024	Fri, 25 May 2029	<input checked="" type="checkbox"/>
<input type="checkbox"/>	OU=Certificate Services System Certificate,CN=psn-1.collab.com#Certificate Services Endpoint Sub CA - psn-1#00003	pxGrid		psn-1.collab.com	Certificate Services Endpoint Sub CA - psn-1	Sat, 25 May 2024	Sat, 26 May 2029	<input checked="" type="checkbox"/>
<input type="checkbox"/>	OU=ISE Messaging Service,CN=psn-1.collab.com#Certificate Services Endpoint Sub CA - psn-1#0003	ISE Messaging Service		psn-1.collab.com	Certificate Services Endpoint Sub CA - psn-1	Sat, 25 May 2024	Sat, 26 May 2029	<input checked="" type="checkbox"/>
psn-2								

pan-mnt-s								
psn-1								
psn-2								
<input type="checkbox"/>	Default self-signed saml server certificate - CN=SAML_pan-mnt-p.collab.com	SAML		SAML_pan-mnt-p.collab.com	SAML_pan-mnt-p.collab.com	Sun, 26 May 2024	Fri, 25 May 2029	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Default self-signed saml server certificate - CN=SAML_psn-2.collab.com	Not in use		SAML_psn-2.collab.com	SAML_psn-2.collab.com	Sun, 26 May 2024	Fri, 25 May 2029	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Default self-signed server certificate	EAP Authentication, Admin, Portal, RADIUS DTLS	Default Portal Certificate Group	psn-2.collab.com	psn-2.collab.com	Sun, 26 May 2024	Fri, 25 May 2029	<input checked="" type="checkbox"/>
<input type="checkbox"/>	OU=Certificate Services System Certificate,CN=psn-2.collab.com#Certificate Services Endpoint Sub CA - psn-2#00003	pxGrid		psn-2.collab.com	Certificate Services Endpoint Sub CA - psn-2	Sat, 25 May 2024	Sat, 26 May 2029	<input checked="" type="checkbox"/>
<input type="checkbox"/>	OU=ISE Messaging Service,CN=psn-2.collab.com#Certificate Services Endpoint Sub CA - psn-2#0004	ISE Messaging Service		psn-2.collab.com	Certificate Services Endpoint Sub CA - psn-2	Sat, 25 May 2024	Sat, 26 May 2029	<input checked="" type="checkbox"/>

We can instruct each node to use another system certificate such as the one used for pxGrid which is signed by the Certificate Services Endpoint Sub CA of each node.

## Primary PAN pan-mnt-p.

The screenshot shows the Cisco Identity Services Engine (ISE) Administration console. The 'System Certificates' section is active, displaying a table of certificates for the 'pan-mnt-p' node. The table includes columns for Friendly Name, Used By, Portal group tag, Issued To, Issued By, Valid From, and Expiration Date. A certificate for 'pxGrid' is highlighted, showing it is issued to 'pan-mnt-p.collab.com' and signed by 'Certificate Services Endpoint Sub CA - pan-mnt-p'. Other certificates for SAML and ISE Messaging Service are also listed.

Friendly Name	Used By	Portal group tag	Issued To	Issued By	Valid From	Expiration Date
OU=Certificate Services System Certificate,CN=pan-mnt-p.collab.com#Certificate Services Endpoint Sub CA - pan-mnt-p#00002	pxGrid		pan-mnt-p.collab.com	Certificate Services Endpoint Sub CA - pan-mnt-p	Sat, 25 May 2024	Sat, 26 May 2029
OU=ISE Messaging Service,CN=pan-mnt-p.collab.com#Certificate Services Endpoint Sub CA - pan-mnt-p#00001	ISE Messaging Service		pan-mnt-p.collab.com	Certificate Services Endpoint Sub CA - pan-mnt-p	Sat, 25 May 2024	Sat, 26 May 2029
Default self-signed saml server certificate - CN=SAML_pan-mnt-p.collab.com	SAML		SAML_pan-mnt-p.collab.com	SAML_pan-mnt-p.collab.com	Sun, 26 May 2024	Fri, 25 May 2029
Default self-signed server certificate	EAP Authentication, Admin, Portal, RADIUS DTLS	Default Portal Certificate Group	pan-mnt-p.collab.com	pan-mnt-p.collab.com	Sun, 26 May 2024	Fri, 25 May 2029



Identity Services Engine Administration Work Centers

System Identity Management Network Resources Device Portal Management pxGrid Services Feed Service Threat Centric NAC

Deployment Licensing Certificates Logging Maintenance Upgrade Backup & Restore Admin Access Settings

**Certificate Management**

- System Certificates
- Trusted Certificates
- OCSP Client Profile
- Certificate Signing Requests
- Certificate Periodic Check Settings

**Certificate Authority**

**Issuer**

Friendly Name: Certificate, CN=pan-mnt-p.collab.com#Certificate Services Endpoint Sub CA - pan-mnt-p#00002

Description:

Subject: CN=pan-mnt-p.collab.com, OU=Certificate Services System Certificate

Issuer: Certificate Services Endpoint Sub CA - pan-mnt-p

Valid From: Sat, 25 May 2024 12:17:21 UTC

Valid To (Expiration): Sat, 26 May 2029 12:17:21 UTC

Serial Number: 26 C9 CA 28 11 DD 43 04 9F 97 2B 31 52 A4 BD A6

Signature Algorithm: SHA256WITHRSA

Key Length: 4096

Certificate Policies:

**Usage**

- Admin: Use certificate to authenticate the ISE Admin Portal
- EAP Authentication: Use certificate for EAP protocols that use SSL/TLS tunneling
- RADIUS DTLS: Use certificate for the RADSec server
- pxGrid: Use certificate for the pxGrid Controller

## Secondary PAN pan-mnt-s.

pan-mnt-s

Default self-signed saml server certificate - CN=SAML_pan-mnt-s.collab.com	Not in use	SAML_pan-mnt-s.collab.com	SAML_pan-mnt-s.collab.com	Sun, 26 May 2024	Fri, 25 May 2029	✓	
<input checked="" type="checkbox"/> OU=Certificate Services System Certificate, CN=pan-mnt-s.collab.com#Certificate Services Endpoint Sub CA - pan-mnt-s#00003	pxGrid	pan-mnt-s.collab.com	Certificate Services Endpoint Sub CA - pan-mnt-s	Sat, 25 May 2024	Sat, 26 May 2029	✓	
<input type="checkbox"/> OU=ISE Messaging Service, CN=pan-mnt-s.collab.com#Certificate Services Endpoint Sub CA - pan-mnt-s#00003	ISE Messaging Service	pan-mnt-s.collab.com	Certificate Services Endpoint Sub CA - pan-mnt-s	Sat, 25 May 2024	Sat, 26 May 2029	✓	
<input type="checkbox"/> Default self-signed server certificate	EAP Authentication, Admin, Portal, RADIUS DTLS	Default Portal Certificate Group	pan-mnt-s.collab.com	pan-mnt-s.collab.com	Sun, 26 May 2024	Fri, 25 May 2029	✓
<input type="checkbox"/> Default self-signed saml server certificate - CN=SAML_pan-mnt-p.collab.com	SAML	SAML_pan-mnt-p.collab.com	SAML_pan-mnt-p.collab.com	Sun, 26 May 2024	Fri, 25 May 2029	✓	

psn-1

psn-2

### Usage

- Admin: Use certificate to authenticate the ISE Admin Portal
- EAP Authentication: Use certificate for EAP protocols that use SSL/TLS tunneling
- RADIUS DTLS: Use certificate for the RADSec server
- pxGrid: Use certificate for the pxGrid Controller
- SAML: Use certificate for SAML Signing
- Portal: Use for portal

### Renew Self Signed Certificate

## Policy Service Node PSN-1.

pan-mnt-s

psn-1

Default self-signed saml server certificate - CN=SAML_pan-mnt-p.collab.com	SAML	SAML_pan-mnt-p.collab.com	SAML_pan-mnt-p.collab.com	Sun, 26 May 2024	Fri, 25 May 2029	✓	
<input type="checkbox"/> Default self-signed server certificate	EAP Authentication, Admin, Portal, RADIUS DTLS	Default Portal Certificate Group	psn-1.collab.com	psn-1.collab.com	Sun, 26 May 2024	Fri, 25 May 2029	✓
<input type="checkbox"/> Default self-signed saml server certificate - CN=SAML_psn-1.collab.com	Not in use	SAML_psn-1.collab.com	SAML_psn-1.collab.com	Sun, 26 May 2024	Fri, 25 May 2029	✓	
<input checked="" type="checkbox"/> OU=Certificate Services System Certificate, CN=psn-1.collab.com#Certificate Services Endpoint Sub CA - psn-1#00003	pxGrid	psn-1.collab.com	Certificate Services Endpoint Sub CA - psn-1	Sat, 25 May 2024	Sat, 26 May 2029	✓	
<input type="checkbox"/> OU=ISE Messaging Service, CN=psn-1.collab.com#Certificate Services Endpoint Sub CA - psn-1#00003	ISE Messaging Service	psn-1.collab.com	Certificate Services Endpoint Sub CA - psn-1	Sat, 25 May 2024	Sat, 26 May 2029	✓	

psn-2

## Usage

Admin: Use certificate to authenticate the ISE Admin Portal

EAP Authentication: Use certificate for EAP protocols that use SSL/TLS tunneling

RADIUS DTLS: Use certificate for the RADSec server

pxGrid: Use certificate for the pxGrid Controller

SAML: Use certificate for SAML Signing

Portal: Use for portal

\* Portal group tag Default Portal Certificate Group ⓘ

Portal(s) using this tag	BYOD Portal (default)	Blacklist Portal (default)
	Certificate Provisioning Portal (default)	Client Provisioning Portal (default)
	Hotspot Guest Portal (default)	MDM Portal (default)
	My Devices Portal (default)	Self-Registered Guest Portal (default)
	Sponsor Portal (default)	Sponsored Guest Portal (default)

## Renew Self Signed Certificate

### Policy Service Node PSN-2.

▶ pan-mnt-s								
▶ psn-1								
▼ psn-2								
<input type="checkbox"/>	Default self-signed saml server certificate - CN=SAML_pan-mnt-p.collab.com	SAML		SAML_pan-mnt-p.collab.com	SAML_pan-mnt-p.collab.com	Sun, 26 May 2024	Fri, 25 May 2029	✓
<input type="checkbox"/>	Default self-signed saml server certificate - CN=SAML_psn-2.collab.com	Not in use		SAML_psn-2.collab.com	SAML_psn-2.collab.com	Sun, 26 May 2024	Fri, 25 May 2029	✓
<input type="checkbox"/>	Default self-signed server certificate	EAP Authentication, Admin, Portal, RADIUS DTLS	Default Portal Certificate Group ⓘ	psn-2.collab.com	psn-2.collab.com	Sun, 26 May 2024	Fri, 25 May 2029	✓
<input checked="" type="checkbox"/>	OU=Certificate Services System Certificate,CN=psn-2.collab.com#Certificate Services Endpoint Sub CA - psn-2#00003	pxGrid		psn-2.collab.com	Certificate Services Endpoint Sub CA - psn-2	Sat, 25 May 2024	Sat, 26 May 2029	✓
<input type="checkbox"/>	OU=ISE Messaging Service,CN=psn-2.collab.com#Certificate Services Endpoint Sub CA - psn-2#0004	ISE Messaging Service		psn-2.collab.com	Certificate Services Endpoint Sub CA - psn-2	Sat, 25 May 2024	Sat, 26 May 2029	✓

### Usage

Admin: Use certificate to authenticate the ISE Admin Portal

EAP Authentication: Use certificate for EAP protocols that use SSL/TLS tunneling

RADIUS DTLS: Use certificate for the RADSec server

pxGrid: Use certificate for the pxGrid Controller

SAML: Use certificate for SAML Signing

Portal: Use for portal

\* Portal group tag  ⓘ

Portal(s) using this tag

BYOD Portal (default)

Certificate Provisioning Portal (default)

Hotspot Guest Portal (default)

My Devices Portal (default)

Sponsor Portal (default)

Blacklist Portal (default)

Client Provisioning Portal (default)

MDM Portal (default)

Self-Registered Guest Portal (default)

Sponsored Guest Portal (default)

### Renew Self Signed Certificate

The primary PAN is now using the system certificate for admin access and signed by its own subordinate CA certificate called Certificate Services Endpoint Sub CA – pan-mnt-p.

## Certificat

pan-mnt-p.collab.com

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<b>Nom du sujet</b>	
Unité organisationnelle	Certificate Services System Certificate
Nom courant	pan-mnt-p.collab.com

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<b>Nom de l'émetteur</b>	
Nom courant	Certificate Services Endpoint Sub CA - pan-mnt-p

The secondary PAN is now using the system certificate for admin access and signed by its own subordinate CA certificate called Certificate Services Endpoint Sub CA – pan-mnt-s.

## Certificat

<a href="https://pan-mnt-s.collab.com">pan-mnt-s.collab.com</a>	Certificate Services Endpoint Sub CA - pan-mnt-s	Certificate Services Node CA - pan-mnt-s	Certificate Services Root CA - pan-mnt-p
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**Nom du sujet**

Unité organisationnelle	Certificate Services System Certificate
Nom courant	pan-mnt-s.collab.com

**Nom de l'émetteur**

Nom courant	<a href="#">Certificate Services Endpoint Sub CA - pan-mnt-s</a>
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The Policy Service Node PSN-1 is now using the system certificate for admin access/portals and signed by its own subordinate CA certificate called Certificate Services Endpoint Sub CA – psn-1.

## Certificat

<a href="https://psn-1.collab.com">psn-1.collab.com</a>	Certificate Services Endpoint Sub CA - psn-1	Certificate Services Node CA - pan-mnt-p	Certificate Services Root CA - pan-mnt-p
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**Nom du sujet**

Unité organisationnelle	Certificate Services System Certificate
Nom courant	psn-1.collab.com

**Nom de l'émetteur**

Nom courant	<a href="#">Certificate Services Endpoint Sub CA - psn-1</a>
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The Policy Service Node PSN-2 is now using the system certificate for admin access/portals and signed by its own subordinate CA certificate called Certificate Services Endpoint Sub CA – psn-2.

# Certificat

[psn-2.collab.com](https://psn-2.collab.com)

Certificate Services  
Endpoint Sub CA - psn-2

Certificate Services  
Node CA - pan-mnt-p

Certificate Services  
Root CA - pan-mnt-p

## Nom du sujet

Unité organisationnelle	Certificate Services System Certificate
Nom courant	psn-2.collab.com

## Nom de l'émetteur

Nom courant	<a href="#">Certificate Services Endpoint Sub CA - psn-2</a>
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