使用 Cisco pxGrid 部署 Lancope StealthWatch

目录

关于本文档

本文档面向使用思科平台交换网格 (pxGrid) 部署 Lancope Stealthwatch 的思科现场工程师、技术营销工程师、合作伙伴和客户。

Lancope Stealthwatch 6.6.1 或更高版本和思科身份服务引擎 (ISE) 1.3 或更高版本都是必需的。

本文档假定已安装 Stealthwatch 和 ISE 并将详述以下内容：

- 为用于 pxGrid 操作的证书颁发机构 (CA) 签名证书和自签名证书配置 Stealthwatch 管理控制台 (SMC)。
- Cisco（自适应网络控制）ANC pxGrid 缓解操作配置。
- 在 ISE 独立环境中使用自签名证书的 ISE pxGrid 节点和 SMC pxGrid 客户端配置的分步示例。

如果使用 CA 签名证书在生产环境中部署 pxGrid，请参阅：“在 ISE 分布式环境中配置 pxGrid”：
http://www.cisco.com/c/en/us/support/security/identity-services-engine/products-implementation-design-guides-list.html

简介

Lancope 的 Stealthwatch 是一种网络安全解决方案，可实时掌握有关异常行为检测、APT、内部威胁、DDOS 和其他恶意软件的网络与用户流量的情况。Lancope 还会在事件请求对这些终端实时执行缓解操作前、中、后，收集和分析整体网络跟踪记录并对这些威胁作出响应。

思科平台交换网格 (pxGrid) 是支持生态系统合作伙伴从思科的身份服务引擎 (ISE) 获取用户和设备情景信息的统一框架。ISE 将发布相关的信息主题，生态系统合作伙伴也会订用这些发布的主题，从而获取 ISE 会话信息以及对终端执行自适应网络控制 (ANC) 缓解操作。ANC 以前称为 EPS“终端保护服务”。

Lancope Stealthwatch 将作为客户端注册到 ISE pxGrid 节点，还将订用终端保护服务功能并对终端执行 ANC 缓解操作。这些缓解操作包括隔离/取消隔离，以及由 ISE 执行的 IEEE 802.1X 终端身份验证。

本文档假设已安装 Stealthwatch 6.6 或更高版本，以及 ISE 1.3 或更高版本。

作为 pxGrid 客户端，Stealthwatch 需要用于 pxGrid 操作的证书颁发机构 (CA) 签名证书或自签名证书。本文档包括两种证书的使用案例。

- 签名证书使用案例包括导入 CA 受信任的根证书，以及在由同一 CA（ISE pxGrid 节点证书由该 CA 签名）签名的 SMC 上生成公钥/私钥对。假设已在 ISE 受信任的系统证书库中安装 CA 根证书，并且已在 ISE 系统证书库中安装 pxGrid ISE 节点证书。

- 自签名证书分步完成完整的 ISE pxGrid 配置和自签名公钥/私钥 SMC 创建过程。ISE 以独立配置进行部署。

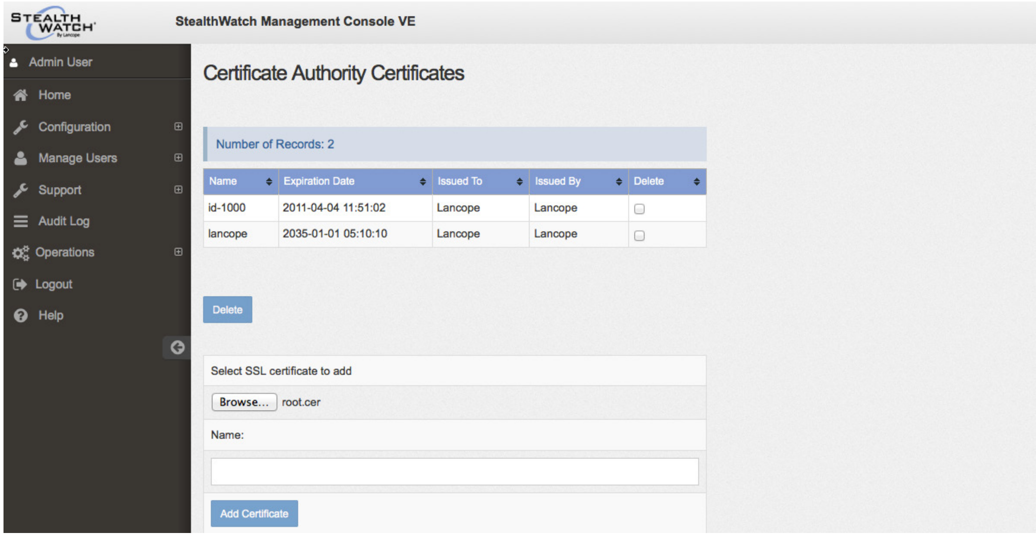
两个使用案例均包括 SMC 缓解操作配置和示例。

组合使用 CA 签名证书与 SMC

上传 CA 根证书

此处导入的是受信任的 CA 根证书，此根证书也位于 ISE 受信任的系统证书库中。

步骤 1. Admin User -> Administer Appliance -> Configuration -> Certificate Authority -> Browse，然后上传 CA 根证书 -> Add。



StealthWatch Management Console VE

Certificate Authority Certificates

Number of Records: 2

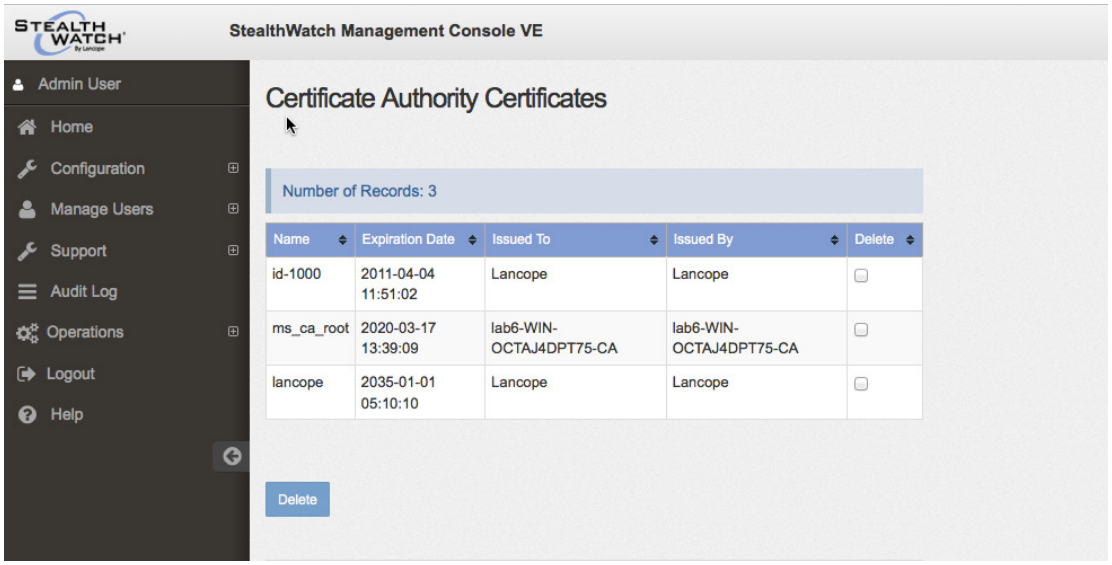
Name	Expiration Date	Issued To	Issued By	Delete
id-1000	2011-04-04 11:51:02	Lancope	Lancope	□
lancope	2035-01-01 05:10:10	Lancope	Lancope	□

Select SSL certificate to add

root.cer

Name:

步骤 2. 您将看到以下内容：



StealthWatch Management Console VE

Certificate Authority Certificates

Number of Records: 3

Name	Expiration Date	Issued To	Issued By	Delete
id-1000	2011-04-04 11:51:02	Lancope	Lancope	□
ms_ca_root	2020-03-17 13:39:09	lab6-WIN-OCTAJ4DPT75-CA	lab6-WIN-OCTAJ4DPT75-CA	□
lancope	2035-01-01 05:10:10	Lancope	Lancope	□

创建 CA 签名的 SMC 证书

此处生成的是 SMC 私钥，即由 CA 机构签名的证书签名请求 (CSR)。用于 pxGrid 的 CA 模板必须同时包含对 pxGrid 操作有效的客户端身份验证和服务器身份验证的 EKU。

步骤 1. 在 SMC 上创建私钥。

```
openssl genrsa -out smc.key 4096
Generating RSA private key, 4096 bit long modulus
.............................................................................................................
..............................................................................++
..........++
e is 65537 (0x10001)
```

步骤 2. 创建要由 CA 服务器签名的 SMC CSR 请求。

```
openssl req -new -key smc.key -out smc.csr

You are about to be asked to enter information that will be incorporated
into your certificate request.
What you are about to enter is what is called a Distinguished Name or a DN.
There are quite a few fields but you can leave some blank
For some fields there will be a default value,
If you enter '.', the field will be left blank.
-----
Country Name (2 letter code) [AU]:
State or Province Name (full name) [Some-State]:
Locality Name (eg, city) []:
Organization Name (eg, company) [Internet Widgits Pty Ltd]:
Organizational Unit Name (eg, section) []:
Common Name (e.g. server FQDN or YOUR name) []:
Email Address []:

Please enter the following 'extra' attributes
to be sent with your certificate request
A challenge password []:
An optional company name []:
```

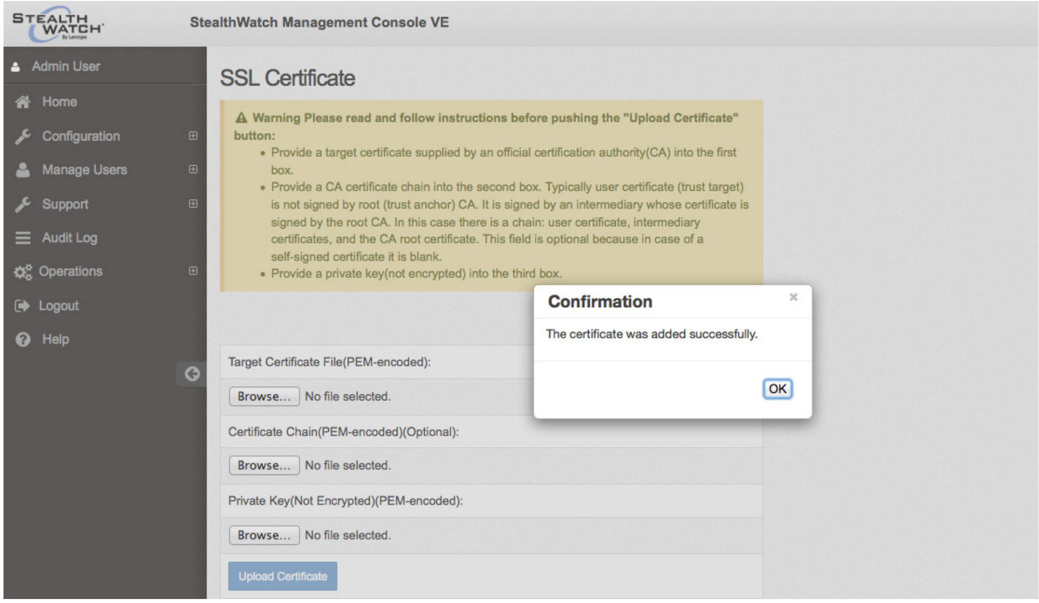
步骤 3. 获取对 SMC 的根访问权限，使用 SCP 将 SMC.CSR 和 SMC.key 文件复制到安全的 PC。此 PC 用于将 SMC.CSR 复制/粘贴到 pxGrid 自定义模板的高级用户请求中。

步骤 4. 下载 base-64 编码格式的证书。

上传 CA 签名的 SMC 客户端证书

此处为 pxGrid 操作上传的是 CA 签名的 SMC 客户端证书。

步骤 1. Admin User -> Configuration -> SSL Certificates 并将 smc.cer 和 smc.key 均上传到 SMC。



SSL Certificate

Warning Please read and follow instructions before pushing the "Upload Certificate" button:

- Provide a target certificate supplied by an official certification authority(CA) into the first box.
- Provide a CA certificate chain into the second box. Typically user certificate (trust target) is not signed by root (trust anchor) CA. It is signed by an intermediary whose certificate is signed by the root CA. In this case there is a chain: user certificate, intermediary certificates, and the CA root certificate. This field is optional because in case of a self-signed certificate it is blank.
- Provide a private key(not encrypted) into the third box.

Confirmation ×

The certificate was added successfully.

OK

Target Certificate File(PEM-encoded):

Browse... No file selected.

Certificate Chain(PEM-encoded)(Optional):

Browse... No file selected.

Private Key(Not Encrypted)(PEM-encoded):

Browse... No file selected.

Upload Certificate

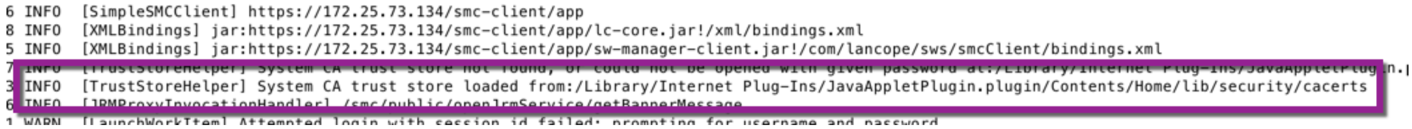
SMC Java 客户端

获取主机 Java 库以信任 CA 证书

注：如果 CA 没有标准公共 CA（因为它是根），则必须将主机 Java 库配置为信任 CA 根证书，以便打开 Java 客户端。

步骤 1. 打开已启用 Java 控制台的 SMC Java 客户端。

步骤 2. 在 Java 控制台中，查找 TrustStoreHelper 的路径。



```
6 INFO  [SimpleSMCClient] https://172.25.73.134/smc-client/app
8 INFO  [XMLBindings] jar:https://172.25.73.134/smc-client/app/lc-core.jar!/xml/bindings.xml
5 INFO  [XMLBindings] jar:https://172.25.73.134/smc-client/app/sw-manager-client.jar!/com/lancope/sws/smcClient/bindings.xml
7 INFO  [TrustStoreHelper] System CA trust store not found, or could not be opened with given password at:/Library/Internet Plug-Ins/JavaAppletPlugin.p
3 INFO  [TrustStoreHelper] System CA trust store loaded from:/Library/Internet Plug-Ins/JavaAppletPlugin.plugin/Contents/Home/lib/security/cacerts
6 INFO  [JRMProxyInvocationHandler] /smc/public/openlrmService/getBannerMessage
1 WARN  [LaunchWorkItem] Attempted login with session id failed; prompting for username and password
```

步骤 3. 在主机上，将 CA 根证书导入到上一步中识别的 cacerts 文件中。大多数 cacerts 文件的默认密码为“changeit”。

```
keytool -keystore cacerts -importcert -alias myca -file myfile
```

```
where: myfile represents the CA root certificate (i.e. root.cer)
```

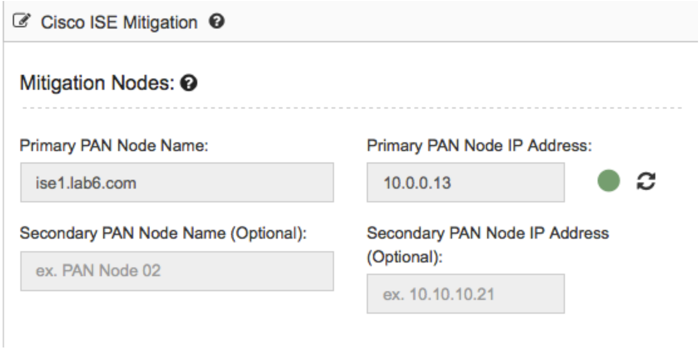
步骤 4. 启动 SMC Java 客户端。

配置 ANC pxGrid 缓解功能

通过 pxGrid ANC 缓解功能，SMC 可以作为 pxGrid 客户端注册到 ISE pxGrid 节点，并订用对经过 ISE 身份验证的终端调用隔离/取消隔离缓解操作的终端保护服务功能。

步骤 1. 添加缓解功能。

步骤 2. Tools -> Settings -> Cisco ISE Configuration 并启用 Cisco ISE Mitigation，输入 ISE pxGrid Node 和 IP 地址。



Cisco ISE Mitigation

Mitigation Nodes:

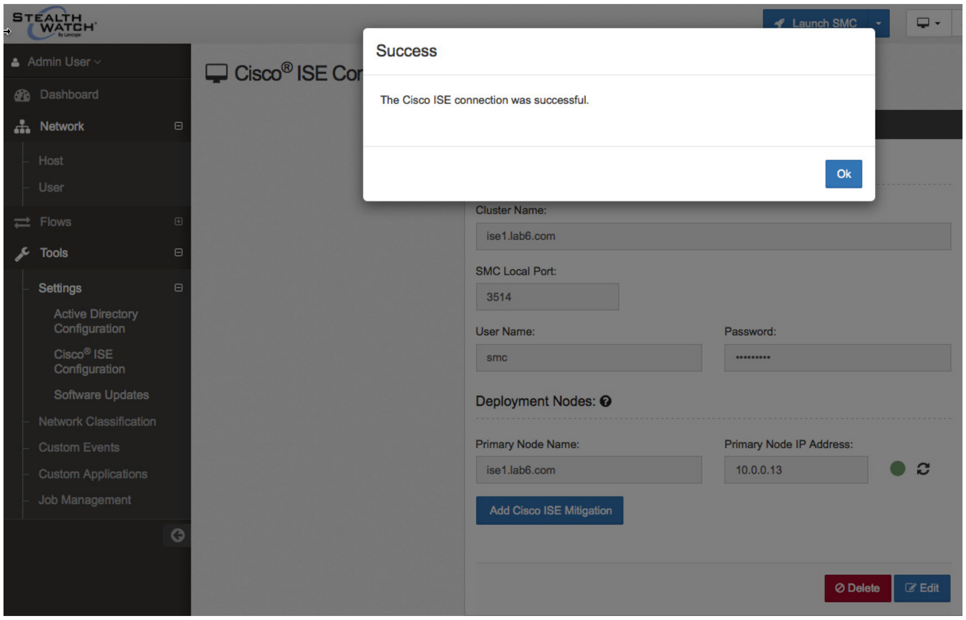
Primary PAN Node Name: ise1.lab6.com

Primary PAN Node IP Address: 10.0.0.13

Secondary PAN Node Name (Optional): ex. PAN Node 02

Secondary PAN Node IP Address (Optional): ex. 10.10.10.21

步骤 3. 连接应该会成功。



Success

The Cisco ISE connection was successful.

Ok

Cluster Name: ise1.lab6.com

SMC Local Port: 3514

User Name: smc

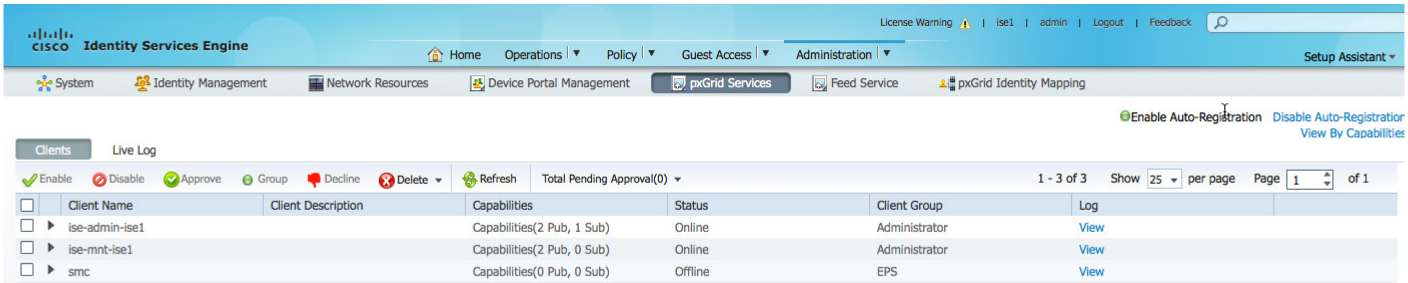
Password: •••••••••

Deployment Nodes:

Primary Node Name: ise1.lab6.com

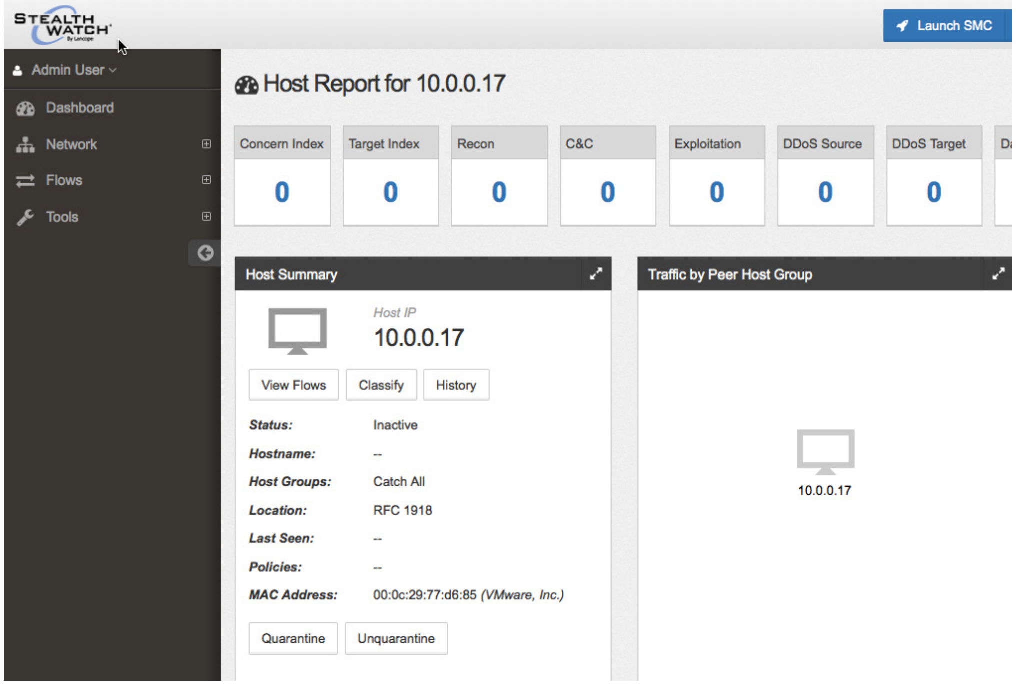
Primary Node IP Address: 10.0.0.13

步骤 4. 您将看到 SMC 注册为 pxGrid 客户端，客户端组从 Session 更改为 EPS 。Administration -> pxGrid Services。



	Client Name	Client Description	Capabilities	Status	Client Group	Log
□	ise-admin-ise1		Capabilities(2 Pub, 1 Sub)	Online	Administrator	View
□	ise-mnt-ise1		Capabilities(2 Pub, 0 Sub)	Online	Administrator	View
□	smc		Capabilities(0 Pub, 0 Sub)	Offline	EPS	View

步骤 5. 选择要隔离的主机，然后选择 Quarantine。



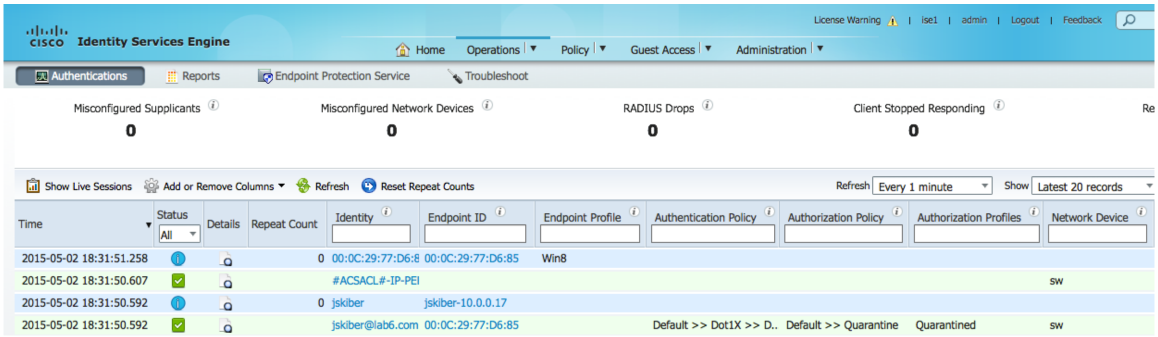
Host Report for 10.0.0.17

Concern Index	Target Index	Recon	C&C	Exploitation	DDoS Source	DDoS Target
0	0	0	0	0	0	0

Host IP
10.0.0.17

Status: Inactive
Hostname: --
Host Groups: Catch All
Location: RFC 1918
Last Seen: --
Policies: --
MAC Address: 00:0c:29:77:d6:85 *(VMware, Inc.)*

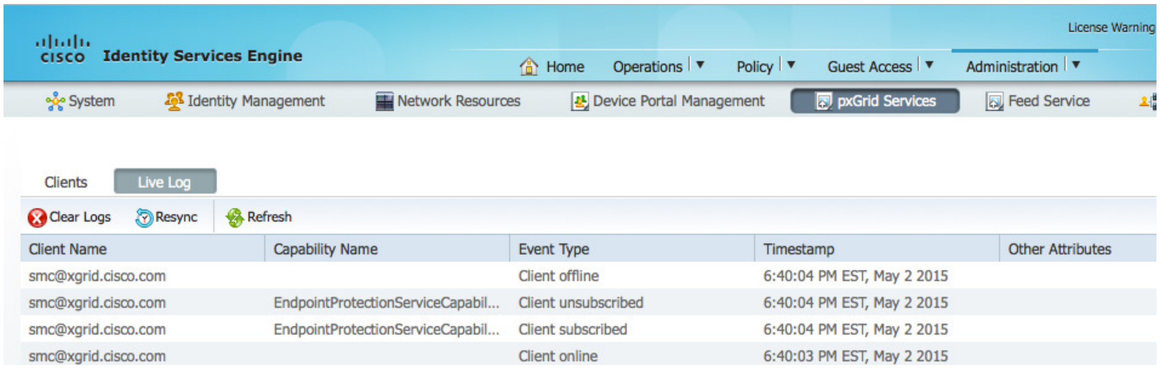
步骤 6. 您应该看到主机已成功隔离。



Misconfigured Supplicants	Misconfigured Network Devices	RADIUS Drops	Client Stopped Responding	Re
0	0	0	0	

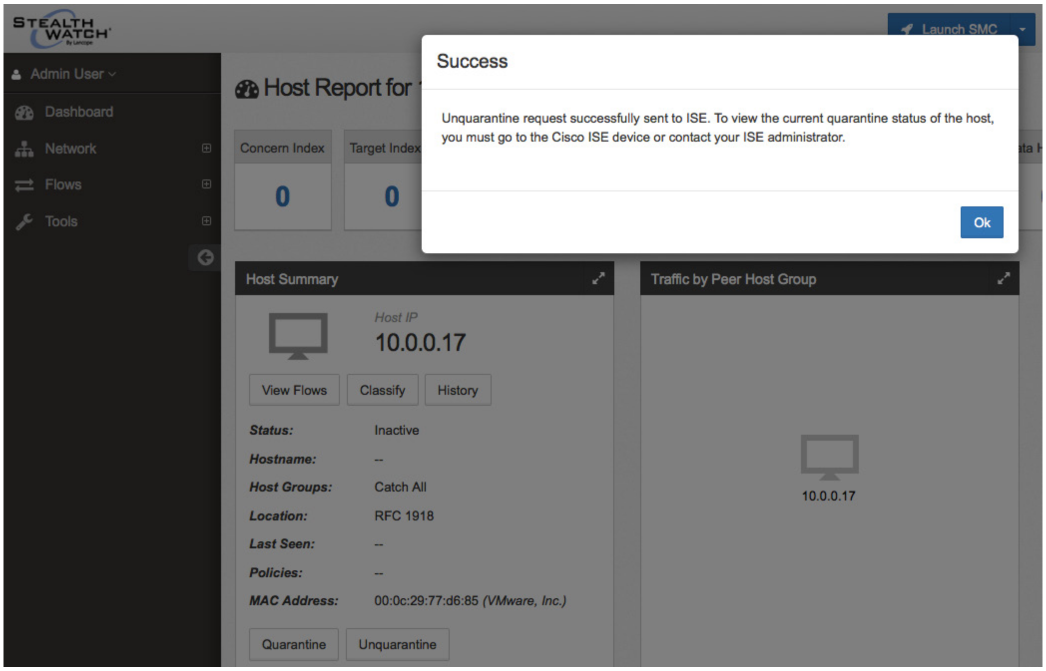
Time	Status	Details	Repeat Count	Identity	Endpoint ID	Endpoint Profile	Authentication Policy	Authorization Policy	Authorization Profiles	Network Device
2015-05-02 18:31:51.258	●		0	00:0C:29:77:D6:8	00:0C:29:77:D6:85	Win8				
2015-05-02 18:31:50.607	✓			#ACSACL#-IP-PEI						sw
2015-05-02 18:31:50.592	●		0	jskiber	jskiber-10.0.0.17					
2015-05-02 18:31:50.592	✓			jskiber@lab6.com	00:0C:29:77:D6:85		Default >> Dot1X >> D..	Default >> Quarantine	Quarantined	sw

步骤 7. 选择 Administration -> pxGrid Services -> Live Log。



Client Name	Capability Name	Event Type	Timestamp	Other Attributes
smc@xgrid.cisco.com		Client offline	6:40:04 PM EST, May 2 2015	
smc@xgrid.cisco.com	EndpointProtectionServiceCapabil...	Client unsubscribed	6:40:04 PM EST, May 2 2015	
smc@xgrid.cisco.com	EndpointProtectionServiceCapabil...	Client subscribed	6:40:04 PM EST, May 2 2015	
smc@xgrid.cisco.com		Client online	6:40:03 PM EST, May 2 2015	

步骤 8. 终端被视为非恶意终端后，即可对其取消隔离。



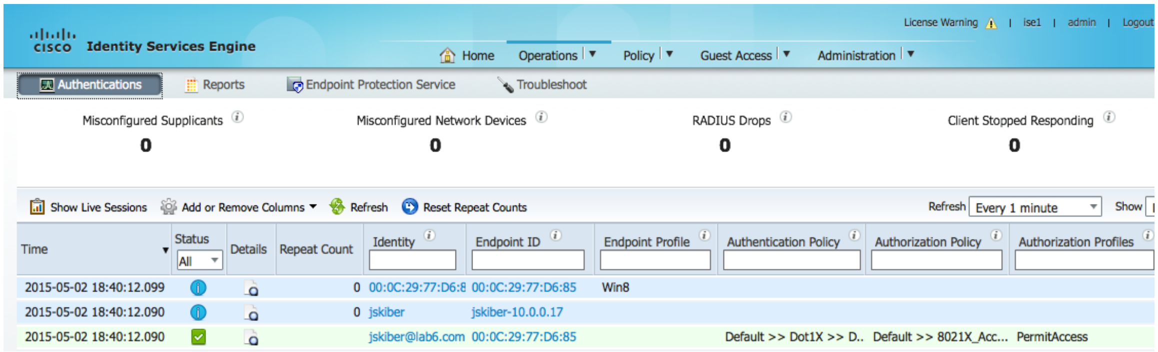
Success

Unquarantine request successfully sent to ISE. To view the current quarantine status of the host, you must go to the Cisco ISE device or contact your ISE administrator.

Host IP
10.0.0.17

Status: Inactive
Hostname: --
Host Groups: Catch All
Location: RFC 1918
Last Seen: --
Policies: --
MAC Address: 00:0c:29:77:d6:85 *(VMware, Inc.)*

步骤 9. Operations -> Authentications，您应该看到终端已处于取消隔离状态。



Misconfigured Supplicants	Misconfigured Network Devices	RADIUS Drops	Client Stopped Responding
0	0	0	0

Time	Status All	Details	Repeat Count	Identity	Endpoint ID	Endpoint Profile	Authentication Policy	Authorization Policy	Authorization Profiles
2015-05-02 18:40:12.099	ⓘ		0	00:0C:29:77:D6:8	00:0C:29:77:D6:85	Win8			
2015-05-02 18:40:12.090	ⓘ		0	jskiber	jskiber-10.0.0.17				
2015-05-02 18:40:12.090	✓			jskiber@lab6.com	00:0C:29:77:D6:85		Default >> Dot1X >> D..	Default >> 8021X_Acc...	PermitAccess

将自签名证书用于 SMC 和 ISE pxGrid 节点

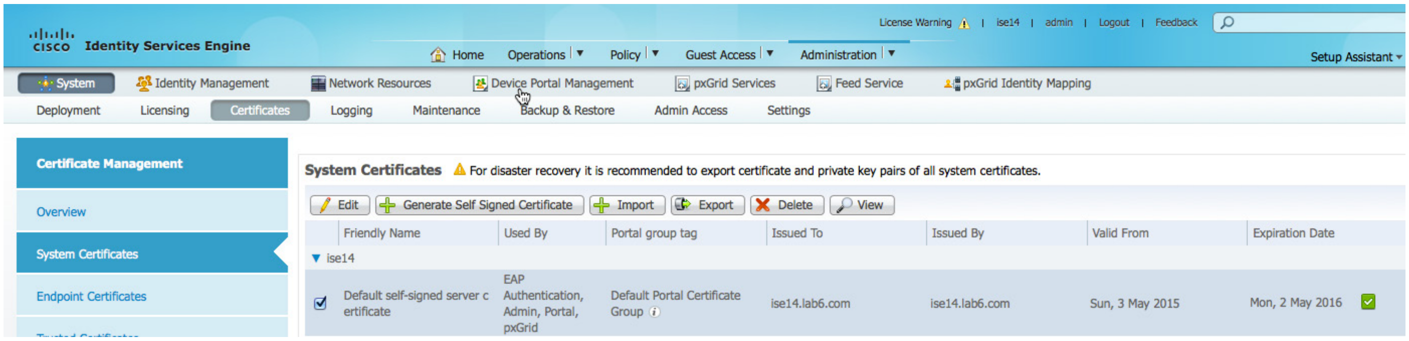
本节介绍如何对 Stealthwatch SMC 和 ISE pxGrid 节点使用自签名证书。自签名证书主要用于测试 PoC（概念验证）。ISE pxGrid 节点部署在独立环境中。请注意，在 ISE 生产部署中，pxGrid 将具有其自己的角色，或存在于其自己的节点上。

将 ISE 身份证书导入到受信任的系统证书库

ISE 身份证书需要受信任，公共证书需要导出到 ISE 受信任的系统证书库中。

注：在 ISE 1.4 中可能不必执行此步骤；ISE 身份证书可能已经受信任。

步骤 1. Administration -> System -> Certificates -> System Certificates -> 选择 ISE 身份证书并导出。

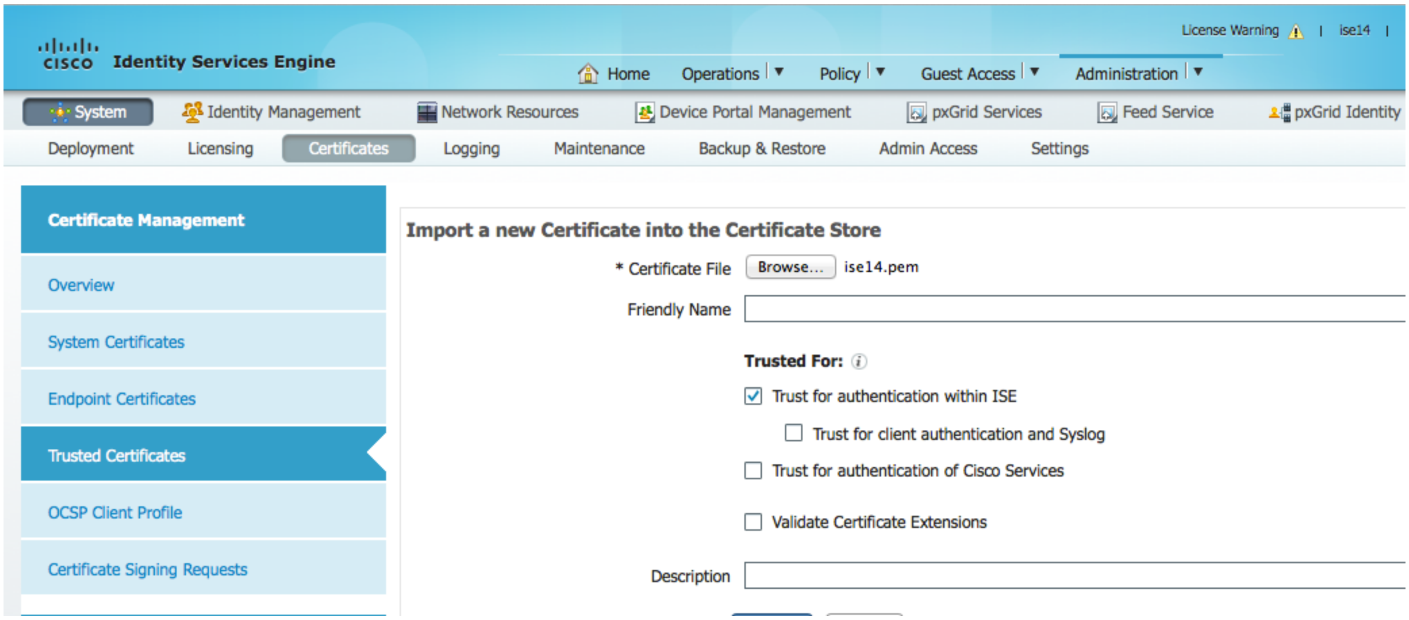


System Certificates ⚠ For disaster recovery it is recommended to export certificate and private key pairs of all system certificates.

	Friendly Name	Used By	Portal group tag	Issued To	Issued By	Valid From	Expiration Date	
▼	ise14							
☑	Default self-signed server certificate	EAP Authentication, Admin, Portal, pxGrid	Default Portal Certificate Group	ise14.lab6.com	ise14.lab6.com	Sun, 3 May 2015	Mon, 2 May 2016	✓

注：仅导出公共证书，您可以更改默认认证书名称。在这些示例中，证书名称更改为 ise14.pem

步骤 2. Administration -> System -> Certificates -> Trusted Certificates -> Import -> 证书文件 -> 启用 Trust for authentication within ISE -> Submit。



Import a new Certificate into the Certificate Store

* Certificate File [Browse...] ise14.pem

Friendly Name

Trusted For:

☑ Trust for authentication within ISE

☐ Trust for client authentication and Syslog

☐ Trust for authentication of Cisco Services

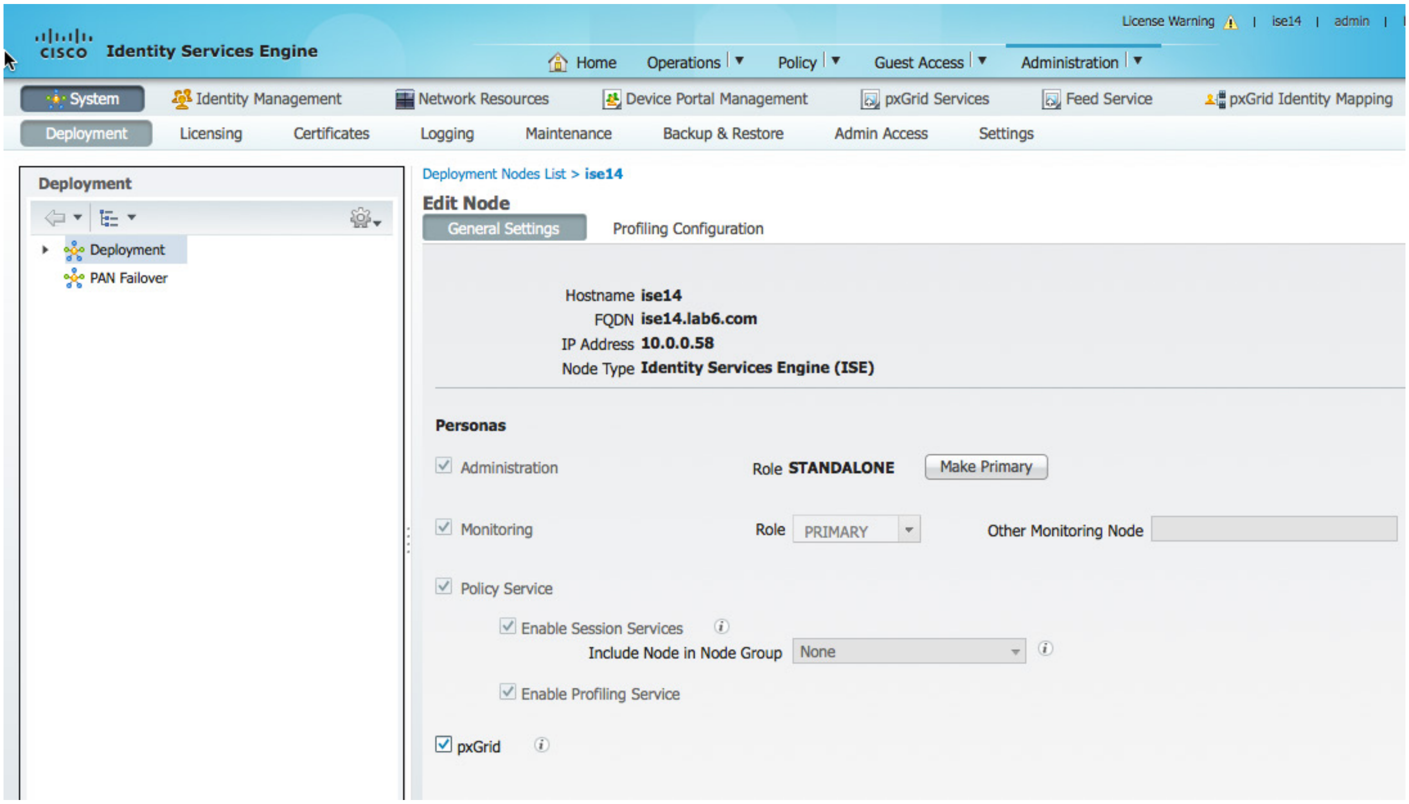
☐ Validate Certificate Extensions

Description

启用 pxGrid

启用 pxGrid 角色，在 ISE 中应会启动 pxGrid 服务。不必要再将自签名 ISE 身份证书复制到 ISE 中。

步骤 3. 在 Administration -> System -> Deployment -> Save 下启用 pxGrid。



Hostname **ise14**
FQDN **ise14.lab6.com**
IP Address **10.0.0.58**
Node Type **Identity Services Engine (ISE)**

Personas

☑ Administration　Role **STANDALONE**

☑ Monitoring　Role PRIMARY　Other Monitoring Node

☑ Policy Service

☑ Enable Session Services

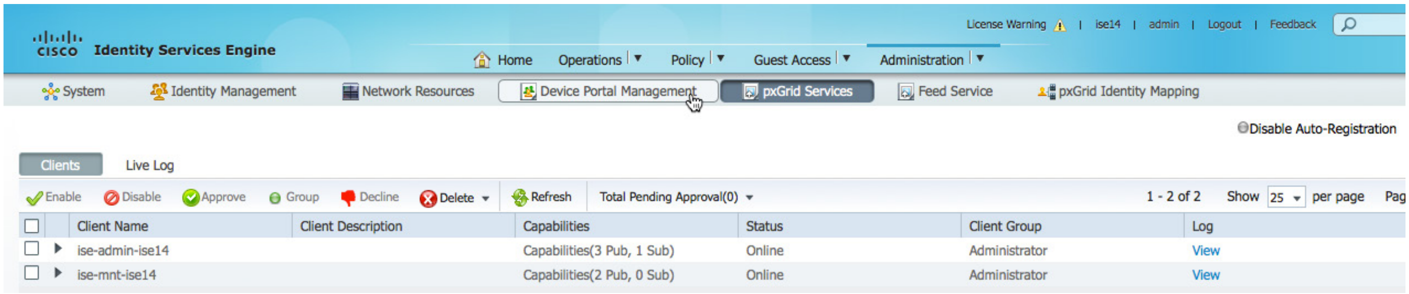
Include Node in Node Group None

☑ Enable Profiling Service

☑ pxGrid

步骤 4. 验证 pxGrid 服务是否已启用。Administration -> pxGrid Services。

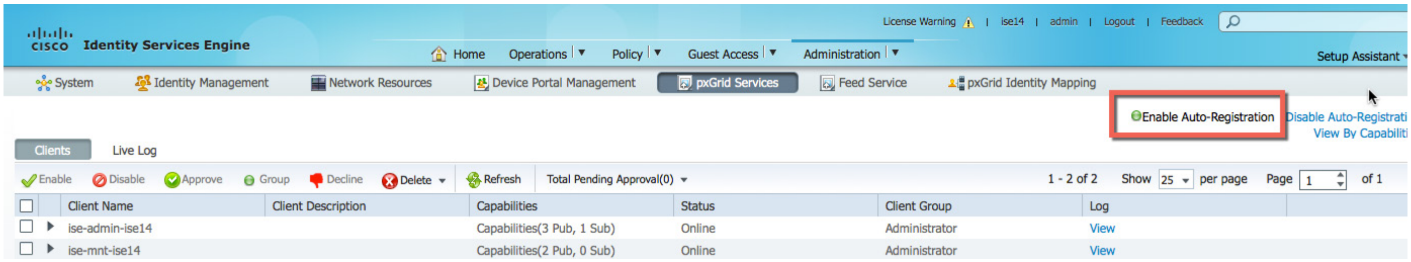
注：这可能需要一分钟时间，请验证 pxGrid 服务是否正在初始化，在 ISE pxGrid 节点上运行“application status ise”。如果服务仍然没有显示，请将 ISE 身份证书导出到 ISE 受信任的系统证书库中。



□	Client Name	Client Description	Capabilities	Status	Client Group	Log
□	ise-admin-ise14		Capabilities(3 Pub, 1 Sub)	Online	Administrator	View
□	ise-mnt-ise14		Capabilities(2 Pub, 0 Sub)	Online	Administrator	View

步骤 5. 启用“Auto Registration”

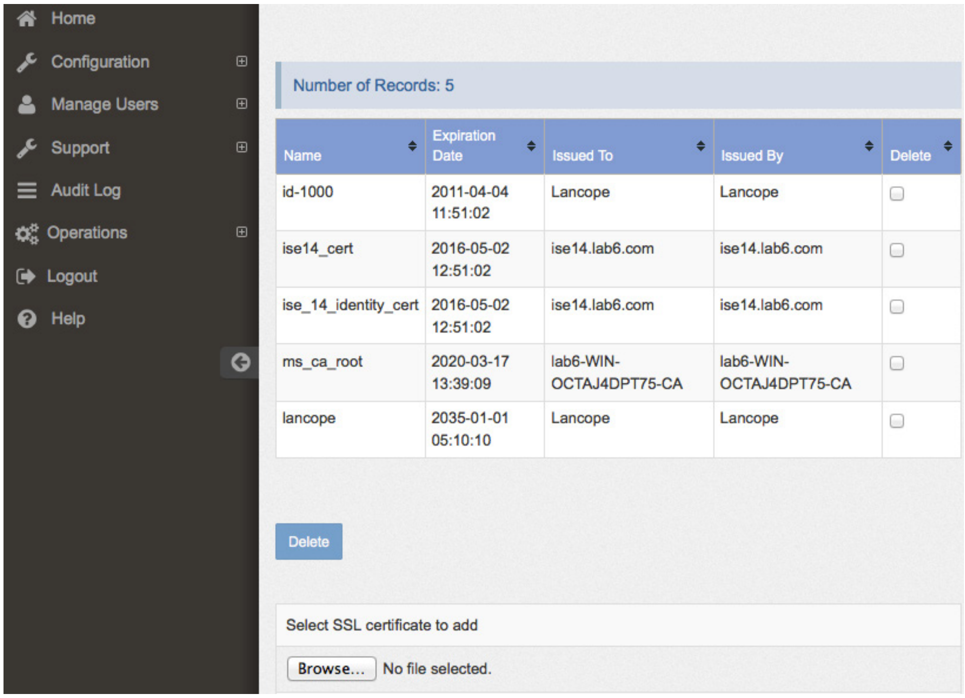
注：如果未启用“Auto Registration”，您将看到 pxGrid 客户端请求处于挂起状态。



□		Client Name	Client Description	Capabilities	Status	Client Group	Log
□	▶	ise-admin-ise14		Capabilities(3 Pub, 1 Sub)	Online	Administrator	View
□	▶	ise-mnt-ise14		Capabilities(2 Pub, 0 Sub)	Online	Administrator	View

将 ISE 身份证书导出到 SMC 中

步骤 1. 将 ISE 身份证书导入到 SMC 证书颁发机构库中。
Admin User -> Administer Appliance -> Configuration -> Certificate Authority -> 浏览并上传先前步骤中的 ISE 身份证书 -> Add。



Number of Records: 5

Name	Expiration Date	Issued To	Issued By	Delete
id-1000	2011-04-04 11:51:02	Lancope	Lancope	□
ise14_cert	2016-05-02 12:51:02	ise14.lab6.com	ise14.lab6.com	□
ise_14_identity_cert	2016-05-02 12:51:02	ise14.lab6.com	ise14.lab6.com	□
ms_ca_root	2020-03-17 13:39:09	lab6-WIN-OCTAJ4DPT75-CA	lab6-WIN-OCTAJ4DPT75-CA	□
lancope	2035-01-01 05:10:10	Lancope	Lancope	□

Select SSL certificate to add

No file selected.

为 SMC 创建自签名证书

此处我们为 SMC（pxGrid 客户端）创建自签名证书。您需要在 SMC 上获取根访问权限。

注：这些步骤记录在 SMC -> Help-Self-Signed Certificates 上

步骤 1. 为 SMC 生成私钥，系统还将提示您输入要在后续步骤中使用的口令。

```
openssl genrsa -des3 -out smc1.key 2048
```

您将看到以下内容：

```
smc:~# openssl genrsa -des3 -out smc1.key 2048
Generating RSA private key, 2048 bit long modulus
............................................................................................
........................................+++
.+++
e is 65537 (0x10001)
Enter pass phrase for smc1.key:
Verifying - Enter pass phrase for smc1.key:
smc:~#
```

步骤 2. 生成自签名证书请求 (CSR) 。

```
openssl req -new -key smc1.key -out smc1.csr
```

```
Note: All the field are required except for the challenge password [] and company name []
```

您将看到以下内容：

```
smc:~# openssl req -new -key smc1.key -out smc1.csr
Enter pass phrase for smc1.key:
You are about to be asked to enter information that will be incorporated
into your certificate request.
What you are about to enter is what is called a Distinguished Name or a DN.
There are quite a few fields but you can leave some blank
For some fields there will be a default value,
If you enter '.', the field will be left blank.
-----
Country Name (2 letter code) [AU]:US
State or Province Name (full name) [Some-State]:Maryland
Locality Name (eg, city) []:Germantown
Organization Name (eg, company) [Internet Widgits Pty Ltd]:Lancope
Organizational Unit Name (eg, section) []:Engineering
Common Name (e.g. server FQDN or YOUR name) []:smc.lab6.com
Email Address []:jdoe@lancope.com

Please enter the following 'extra' attributes
to be sent with your certificate request
A challenge password []:
An optional company name []:
smc:~#
```

步骤 3. 生成自签名证书。

```
openssl x509 -req -days 365 -in smc1.csr -signkey smc1.key -out smc1.crt
```

您将看到以下内容：

```
smc:~# openssl x509 -req -days 365 -in smc1.csr -signkey smc1.key -out smc1.crt
Signature ok
subject=/C=US/ST=Maryland/L=Germantown/O=Lancope/OU=Engineering/CN=smc.lab6.com/emailAddress=jdoe@lancope.com
Getting Private key
Enter pass phrase for smc1.key:
smc:~#
```

步骤 4. 解密先前键入的密码。

```
cp smc1.key smc1.key.org
openssl rsa -in smc1.key.org -out smc1.key
```

您将看到以下内容：

```
smc:~# cp smc1.key smc1.key.org
smc:~# openssl rsa -in smc1.key.org -out smc1.key
Enter pass phrase for smc1.key.org:
writing RSA key
smc:~#
```

步骤 5. 您应在 /root/smc 目录中具有以下内容。

```
smc:~# ls
smc1.crt smc1.csr smc1.key smc1.key.org
smc:~#
```

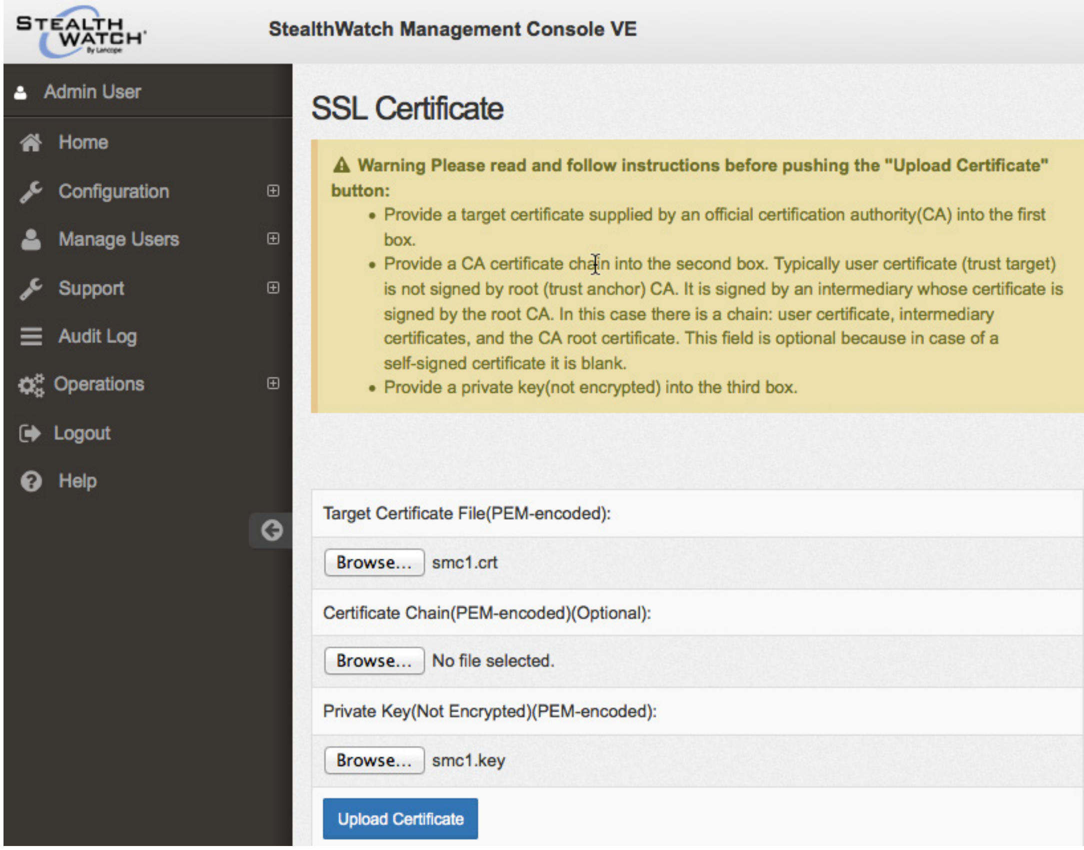
将以 Admin User 身份将 smc1.cert 和 smc1.key 上传到 SSL 证书下的 SMC 中。

步骤 6. 使用 SCP 在本地复制 smc1.crt 和 smc1.key 文件，如果在复制到本地 PC 时收到表明拒绝连接的消息，请参阅附录中的“在 MAC 上启用 SSH”以供参考。

将自签名证书上传到 SMC

此处我们将自签名证书的公共证书和私钥对上传到 SMC。

步骤 1. Admin User -> Configuration -> SSL Certificates 并上传 smc1.crt 和 smc1.key -> Upload Certificate。



SSL Certificate

⚠ Warning Please read and follow instructions before pushing the "Upload Certificate" button:

- Provide a target certificate supplied by an official certification authority(CA) into the first box.
- Provide a CA certificate chain into the second box. Typically user certificate (trust target) is not signed by root (trust anchor) CA. It is signed by an intermediary whose certificate is signed by the root CA. In this case there is a chain: user certificate, intermediary certificates, and the CA root certificate. This field is optional because in case of a self-signed certificate it is blank.
- Provide a private key(not encrypted) into the third box.

Target Certificate File(PEM-encoded): smc1.crt

Certificate Chain(PEM-encoded)(Optional): No file selected.

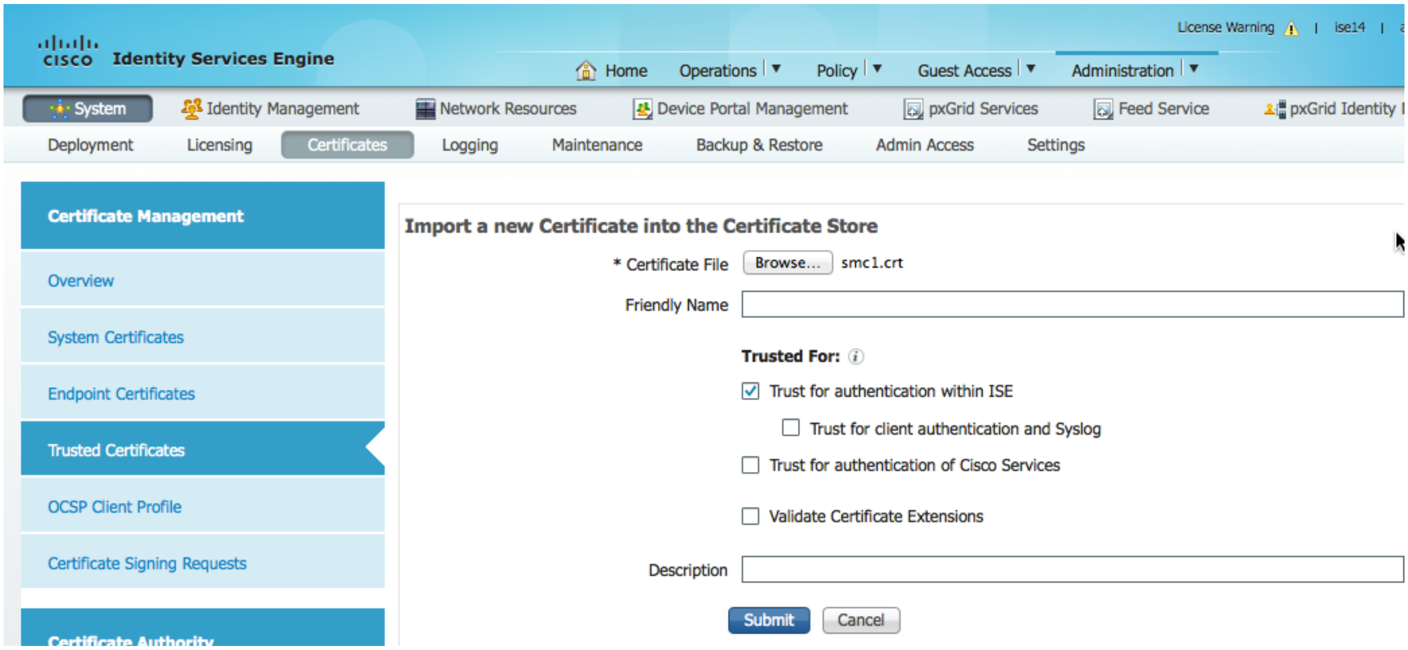
Private Key(Not Encrypted)(PEM-encoded): smc1.key

步骤 2. 您应该看到证书已成功上传，并需要重新启动。

将 SMC 自签名证书上传到 ISE 受信任的系统证书库

此处我们将 SMC 自签名证书上传到 ISE 受信任的系统证书库。

步骤 1. Administration -> System -> Certificates -> Trusted Certificates -> Import the SMC self-signed certificate。启用“trust for authentication within ISE”并点击 Submit。



Identity Services Engine
License Warning | ise14
Home | Operations | Policy | Guest Access | Administration
System | Identity Management | Network Resources | Device Portal Management | pxGrid Services | Feed Service | pxGrid Identity
Deployment | Licensing | Certificates | Logging | Maintenance | Backup & Restore | Admin Access | Settings
Certificate Management
Overview
System Certificates
Endpoint Certificates
Trusted Certificates
OCSP Client Profile
Certificate Signing Requests
Certificate Authority
Browse...
Submit
Cancel

Import a new Certificate into the Certificate Store

* Certificate File: smc1.crt

Friendly Name:

Trusted For:

☑ Trust for authentication within ISE

☐ Trust for client authentication and Syslog

☐ Trust for authentication of Cisco Services

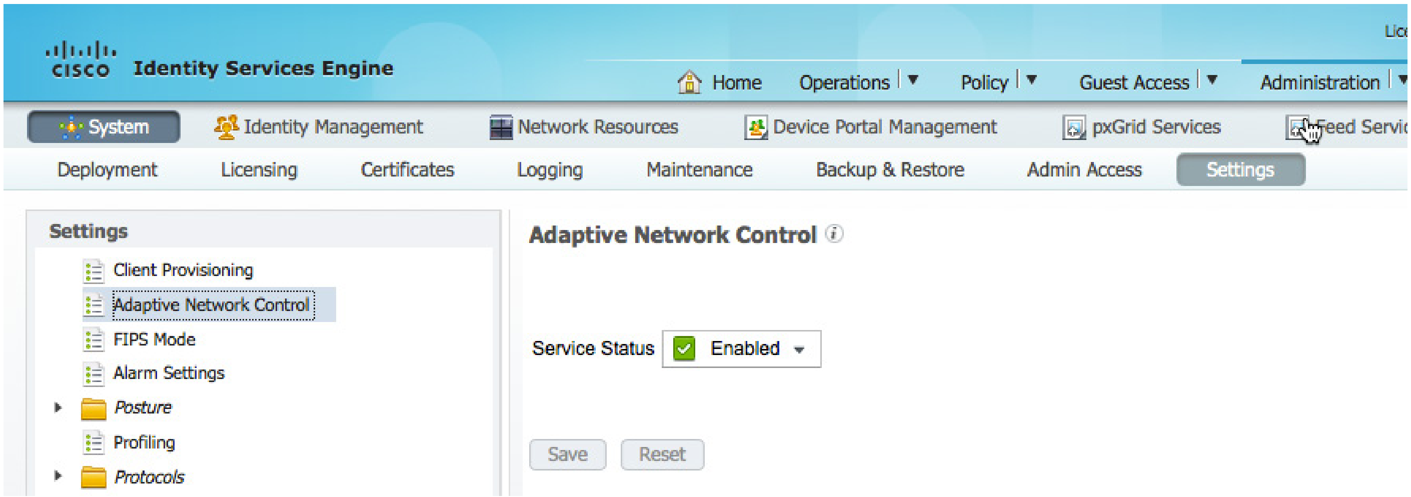
☐ Validate Certificate Extensions

Description:

启用自适应网络控制 (ANC)

本节讨论在 ISE 1.4 上启用自适应网络控制 (ANC) 和配置授权策略。ANC 以前在 ISE 1.3 中称为终端保护服务 (EPS)。

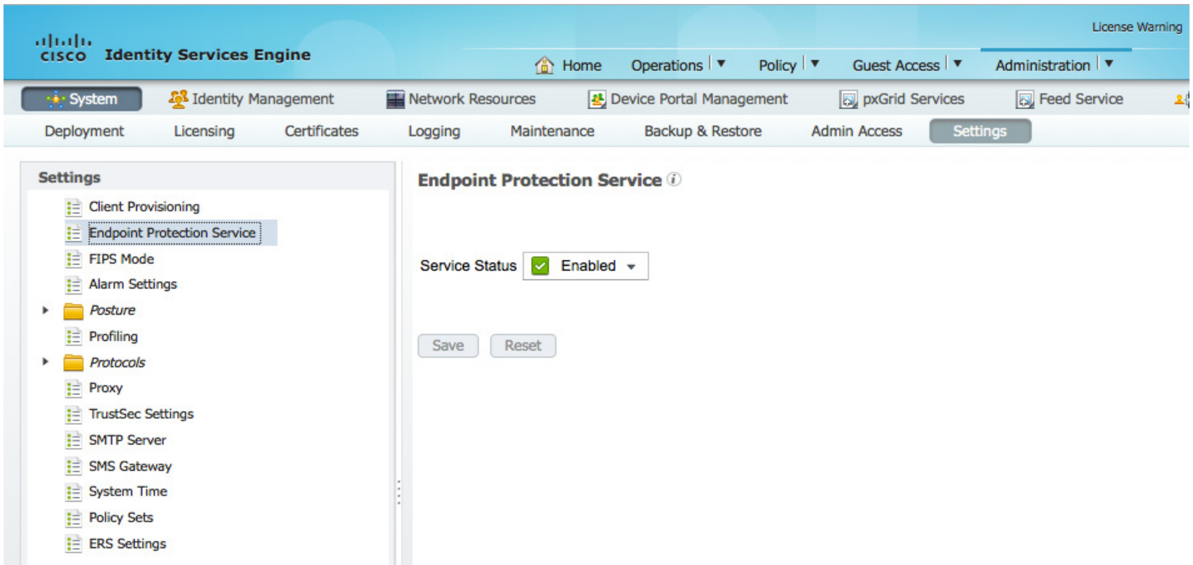
步骤 1. 要在 ISE 1.4 中启用 ANC，请点击 Administration -> System -> Settings -> Adaptive Network Control -> Enable->Save。



Adaptive Network Control

Service Status: ☑ Enabled

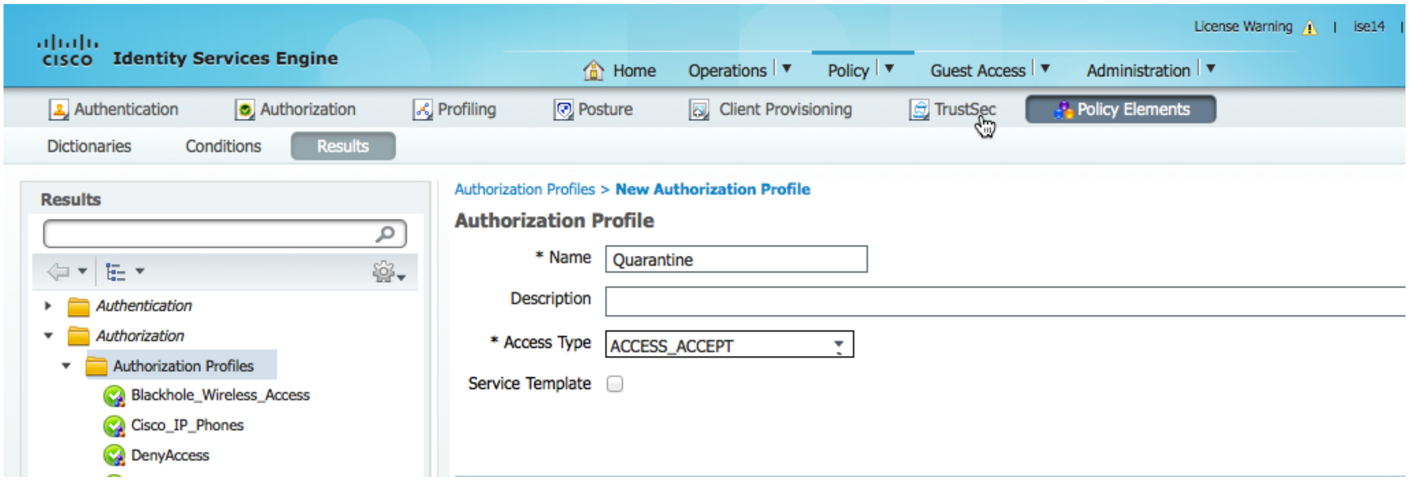
步骤 2. 要在 ISE 1.3 中启用 EPS，请点击 Administration -> System -> Settings -> 启用 Service Status，然后点击 Save。



Endpoint Protection Service

Service Status: ☑ Enabled

步骤 3. Policy -> Police Elements -> Results -> Authorization -> Authorization Profiles -> Add -> Quarantine，为 Name 输入 **Quarantine** -> Submit。

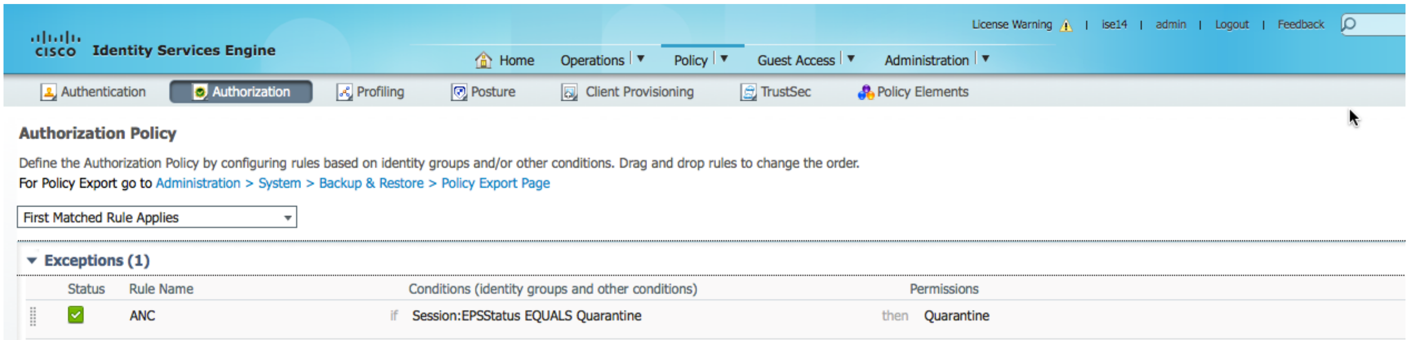


Authorization Profiles > New Authorization Profile

Authorization Profile

* Name	Quarantine
Description	
* Access Type	ACCESS_ACCEPT
Service Template	☐

步骤 4. Policy -> Authorization -> Exceptions 并添加以下内容：



Authorization Policy

Define the Authorization Policy by configuring rules based on identity groups and/or other conditions. Drag and drop rules to change the order.
For Policy Export go to Administration > System > Backup & Restore > Policy Export Page

First Matched Rule Applies

Exceptions (1)

Status	Rule Name		Conditions (identity groups and other conditions)		Permissions
✓	ANC	if	Session:EPSStatus EQUALS Quarantine	then	Quarantine

步骤 5. Rule Name: ANC。

步骤 6. New Condition Rule 添加新属性值：Session:EPStatus:Equals:Quarantine。

步骤 7. Permissions:Profiles:Standard:Quarantine。

步骤 8. Click -> Done -> Save。

参考资料

其他 pxGrid 文档位于：http://www.cisco.com/c/en/us/support/security/identity-services-engine/products-implementation-design-guides-list.html

- 使用 pxGrid 部署证书：使用自签名 pxGrid 客户端和自签名 ISE pxGrid 节点证书
- 使用 pxGrid 部署证书：证书颁发机构 (CA) 签名的 pxGrid 客户端和自签名 ISE pxGrid 节点证书
- 使用 pxGrid 部署证书：证书颁发机构 (CA) 签名的 pxGrid 客户端和 CA 签名的 ISE pxGrid 节点证书
- 配置并测试与 Cisco pxGrid 的集成

附录

在 MAC 上启用 SSH

步骤 1. 在 MAC 上启用 SSH。

```
Johns-Macbook-Pro:Utilities jeppich$ sudo launchctl load -w /System/Library/LaunchDaemons/ssh.plist
Johns-Macbook-Pro:Utilities jeppich$
```

步骤 2. 将文件从 SMC 复制到本地 PC。

```
Dddd smc:~# scp smc1.crt jeppich@10.0.0.5:/Applications/ise14_certs/
Password:
smc1.crt                                       100% 1330     1.3KB/s   00:00
smc:~# ls
jeppich@10.0.0.5  smc1.crt  smc1.csr  smc1.key  smc1.key.org
smc:~# scp smc1.key jeppich@10.0.0.5:/Applications/ise14_certs/
Password:
smc1.key                                       100% 1675     1.6KB/s   00:00
smc:~#
```

故障排除

SMC ANC 缓解错误消息：隔离请求未能发送到 ISE

在 Administration -> pxGrid services 下，将 SMC 驻注册客户端分配到 ESP 组中。

在 ISE pxGrid 节点中没有与 pxGrid 的连接

对于证书颁发机构 (CA) 签名证书，请确保您在 ISE 受信任的系统证书库中具有根 CA 证书，并在 ISE 系统证书库中具有 ISE pxGrid 节点证书。pxGrid 客户端证书必须同时具有客户端身份验证和服务器身份验证的 EKU。

对于 ISE 自签名证书，必须将自签名身份证书从系统证书库导出并导入到 ISE 受信任的系统证书库中。

有关详细信息，请参阅“在 ISE 分布式环境中配置 pxGrid”