如何为vManage生成自签名Web证书

目录

简介

本文档介绍当现有证书在内部vManage上过期时如何生成和安装自签名Web证书。思科不为此类部署签署Web证书，客户必须通过自己的证书颁发机构(CA)或某些第三方CA进行签名。

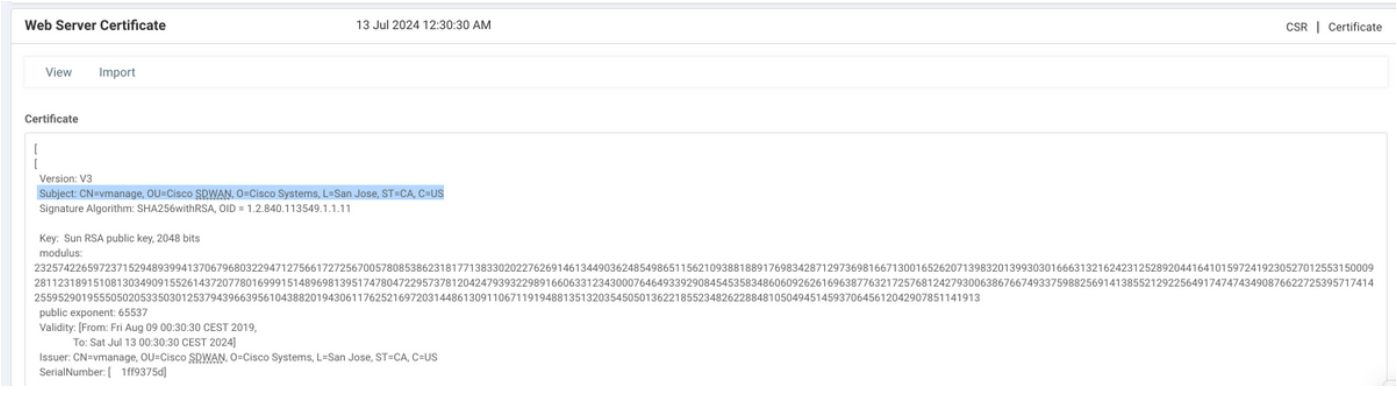
问题

vManage Web证书即将过期或已过期。对图形用户界面(GUI)的访问可能会丢失，或者您可以在GUI中看到有关证书过期的永久警报。

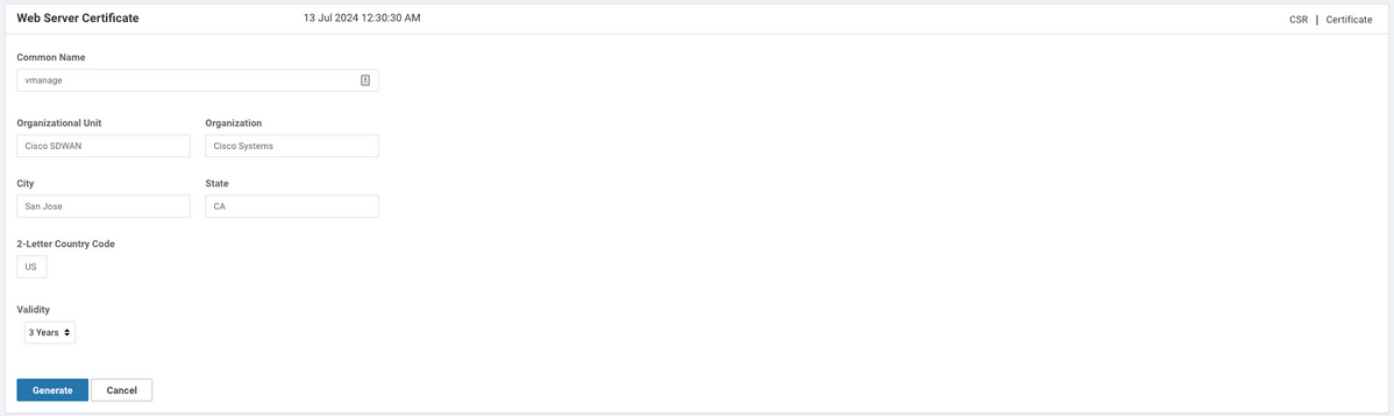
解决方案

如果您不关心自签名证书使用的安全方面，只想避免警报消息和由于证书过期而可能出现的vManage GUI访问问题，则可以将此解决方案与自签名Web证书一起在vManage上使用。

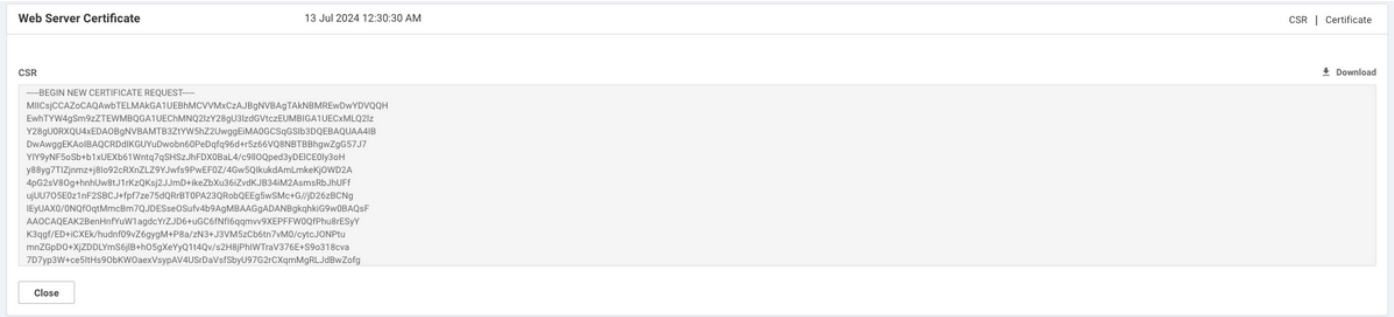
1.在vManage GUI中，导航至**Administration > Settings > Web Server Certificate > Certificate**，然后将此信息保存到有关证书主题的某个位置，例如，**Subject:CN=vmanage， OU=Cisco SDWAN， O=Cisco Systems， L=San Jose， ST=CA， C=US**。



2.在vManage GUI中，导航至 **Administration > Settings > Web Server Certificate > CSR**，然后选择**Generate**以生成新的证书签名请求(CSR)。 确保输入您在上一步中捕获的“主题”的值。



3.将新生成的CSR复制到复制粘贴缓冲区，如图所示。



4.然后输入vshell，并**借助**echo命令将带有CSR的缓冲区内容粘贴到vManage上的文**件中**。

```
vmanage#
vmanage# vshell
vmanage:~$ mkdir web
vmanage:~$ cd web
vmanage:~/web$ echo "-----BEGIN NEW CERTIFICATE REQUEST-----
> MIICsjCCAZoCAQAwbTELMAkGA1UEBhMCVVMxCzAJBgNVBAgTAkNBMREwDwYDVQQH
> EwhTYW4gSm9zZTEWMBQGA1UEChMNQ2lzY28gU3lzdGVtczEUMBIGA1UECxMLQ2lz
> Y28gU0RXQU4xEDAOBgNVBAMTB3ZtYW5hZ2UwggEiMA0GCSqGSIb3DQEBAQUAA4IB
> DwAwggEKAoIBAQCRDdIKGUYuDwobn60PeDqfq96d+r5z66VQ8NBTBBhgwZgG57J7
> YIY9yNF5oSb+b1xUEXb61Wntq7qSHSzJhFDX0BaL4/c9llOQped3yDElCE0ly3oH
> y88yg7TIZjnmz+j8Io92cRXnZLZ9YJwfs9PwEF0Z/4Gw5QIkukdAmLmkeKjOWD2A
> 4pG2sV8Og+hnhUw8tJ1rKzQKsj2JJmD+ikeZbXu36iZvdKJB34iM2AsmsRbJhUFf
> ujUU7O5E0z1nF2SBCJ+fpf7ze75dQRrBT0PA23QRobQEEg5wSMc+G//jD26zBCNg
> IEyUAX0/0NQfOqtMmcBm7QJDESseOSufv4b9AgMBAAGgADANBgkqhkiG9w0BAQsF
> AAOCAQEAK2BenHnfYuW1agdcYrZJD6+uGC6fNfI6qqmvv9XEPFFW0QfPhu8rESyY
> K3qgf/ED+iCXEk/hudnf09vZ6gygM+P8a/zN3+J3VM5zCb6tn7vM0/cytcJONPtu
> mnZGpDO+XjZDDLYmS6jlB+hO5gXeYyQ1t4Qv/s2H8jPhIWTraV376E+S9o318cva
> 7D7yp3W+ce5ItHs9ObKWOaexVsypAV4USrDaVsfSbyU97G2rCXqmMgRLJdBwZofg
> 04qsgrC8qG28aue1Q88XPa/HQtp0WB/Pxg7oe91s59Je/ETsMkR3vt7aglemyXAJ
> nal67+T/QWgLSJB2pQuPHo51MbA55w==
> -----END NEW CERTIFICATE REQUEST-----" > web_cert.csr
```

5.确保在cat命令的帮助下正确保 **存CSR**。

```
vmanage:~/web$ cat web_cert.csr
-----BEGIN NEW CERTIFICATE REQUEST-----
MIICsjCCAZoCAQAwbTELMAkGA1UEBhMCVVMxCzAJBgNVBAgTAkNBMREwDwYDVQQH
EwhTYW4gSm9zZTEWMBQGA1UEChMNQ2lzY28gU3lzdGVtczEUMBIGA1UECxMLQ2lz
Y28gU0RXQU4xEDAOBgNVBAMTB3ZtYW5hZ2UwggEiMA0GCSqGSIb3DQEBAQUAA4IB
DwAwggEKAoIBAQCRDdIKGUYuDwobn60PeDqfq96d+r5z66VQ8NBTBBhgwZgG57J7
YIY9yNF5oSb+b1xUEXb61Wntq7qSHSzJhFDX0BaL4/c9llOQped3yDElCE0ly3oH
y88yg7TIZjnmz+j8Io92cRXnZLZ9YJwfs9PwEF0Z/4Gw5QIkukdAmLmkeKjOWD2A
4pG2sV8Og+hnhUw8tJ1rKzQKsj2JJmD+ikeZbXu36iZvdKJB34iM2AsmsRbJhUFf
```

```
ujUU7O5E0z1nF2SBCJ+fpf7ze75dQRrBT0PA23QRobQEEg5wSMc+G//jD26zBCNg
IEyUAX0/0NQfOqtMmcBm7QJDESseOSufv4b9AgMBAAGgADANBgkqhkiG9w0BAQsF
AAOCAQEAK2BenHnfYuW1agdcYrZJD6+uGC6fNfI6qqmvv9XEPFFW0QfPhu8rESyY
K3qgf/ED+iCXEk/hudnf09vZ6gygM+P8a/zN3+J3VM5zCb6tn7vM0/cytcJONPtu
mnZGpDO+XjZDDLYmS6jlB+hO5gXeYyQ1t4Qv/s2H8jPhIWTraV376E+S9o318cva
7D7yp3W+ce5ItHs9ObKWOaexVsypAV4USrDaVsfSbyU97G2rCXqmMgRLJdBwZofg
04qsgrC8qG28aue1Q88XPa/HQtp0WB/Pxg7oe91s59Je/ETsMkR3vt7aglemyXAJ
nal67+T/QWgLSJB2pQuPHo51MbA55w==
-----END NEW CERTIFICATE REQUEST-----

vmanage:~/web$
```

6.在openssl的帮助下， **为名**为rootca.key的根证书生 **成密钥**。

```
vmanage:~/web$ openssl genrsa -out rootca.key 2048
Generating RSA private key, 2048 bit long modulus
..
..........
e is 65537 (0x10001)
vmanage:~/web$ ls
rootca.key  web_cert.csr
vmanage:~/web$
```

7.生成名为rootca.pem的根CA证**书，并**使用上一步中**生成的rootca.key**对其进行签名。

```
vmanage:~/web$ openssl req -x509 -new -nodes -key rootca.key -sha256 -days 4000 -out rootca.pem
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]:CA
Locality Name (eg, city) []:San Jose
Organization Name (eg, company) [Internet Widgits Pty Ltd]:Cisco Systems
Organizational Unit Name (eg, section) []:Cisco SDWAN
Common Name (e.g. server FQDN or YOUR name) []:vmanage
Email Address []:
vmanage:~/web$ ls
rootca.key  rootca.pemweb_cert.csr
vmanage:~/web$
```

8.使用根CA证书和密钥对CSR签名。

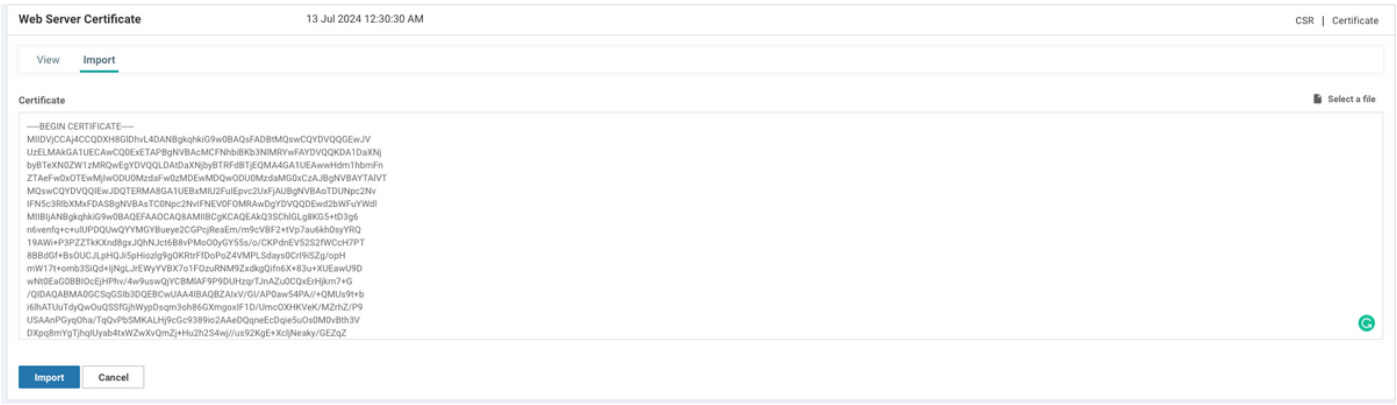
```
vmanage:~/web$ openssl x509 -req -in web_cert.csr -CA rootca.pem -CAkey rootca.key -
CAcreateserial -out web_cert.crt -days 4000 -sha256
Signature ok
subject=/C=US/ST=CA/L=San Jose/O=Cisco Systems/OU=Cisco SDWAN/CN=vmanage
Getting CA Private Key
vmanage:~/web$ ls
rootca.key  rootca.pemrootca.srl  web_cert.crt  web_cert.csr
vmanage:~/web$
```

9.将新的签名证书复制到复制粘贴缓冲区。您可以使用**cat** 查看已签名的证书。

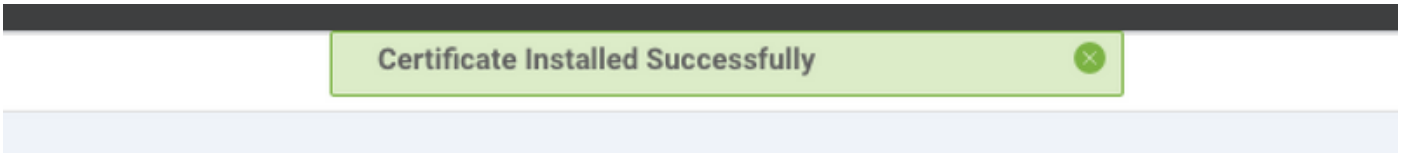
```
vmanage:~/web$ cat web_cert.crt
-----BEGIN CERTIFICATE-----
MIIDVjCCAj4CCQDXH8GlDhvL4DANBgkqhkiG9w0BAQsFADBtMQswCQYDVQQGEwJV
UzELMAkGA1UECAwCQ0ExETAPBgNVBAcMCFNhbiBKb3NlMRYwFAYDVQQKDA1DaXNj
byBTeXN0ZW1zMRQwEgYDVQQLDAtDaXNjbyBTRFdBTjEQMA4GA1UEAwwHdm1hbmFn
ZTAeFw0xOTEwMjIwODU0MzdaFw0zMDEwMDQwODU0MzdaMG0xCzAJBgNVBAYTAlVT
MQswCQYDVQQIEwJDQTERMA8GA1UEBxMIU2FuIEpvc2UxFjAUBgNVBAoTDUNpc2Nv
```

```
IFN5c3RlbXMxFDASBgNVBAsTC0Npc2NvIFNEV0FOMRAwDgYDVQQDEwd2bWFuYWdl
MIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAkQ3SChlGLg8KG5+tD3g6
n6venfq+c+ulUPDQUwQYYMGYBueye2CGPcjReaEm/m9cVBF2+tVp7au6kh0syYRQ
19AWi+P3PZZTkKXnd8gxJQhNJct6B8vPMoO0yGY55s/o/CKPdnEV52S2fWCcH7PT
8BBdGf+BsOUCJLpHQJi5pHiozlg9gOKRtrFfDoPoZ4VMPLSdays0CrI9iSZg/opH
mW17t+omb3SiQd+IjNgLJrEWyYVBX7o1FOzuRNM9ZxdkgQifn6X+83u+XUEawU9D
wNt0EaG0BBIOcEjHPhv/4w9uswQjYCBMlAF9P9DUHzqrTJnAZu0CQxErHjkrn7+G
/QIDAQABMA0GCSqGSIb3DQEBCwUAA4IBAQBZAIxV/GI/AP0aw54PA//+QMUs9t+b
i6lhATUuTdyQwOuQSSfGjhWypDsqm3oh86GXmgoxIF1D/UmcOXHKVeK/MZrhZ/P9
USAAnPGyqOha/TqQvPbSMKALHj9cGc9389io2AAeDQqneEcDqie5uOs0M0vBth3V
DXpq8mYgTjhqIUyab4txWZwXvQmZj+Hu2h2S4wj//us92KgE+XcljNeaky/GEZqZ
jWNoWDgWeJdsm8hx2QteHHbDTahuArVJf1p45eLIcJR1k0lRL8TTroWaST1bZCJz
20aYK4S0K0nTkpscuVIrXHkwNN6Ka4q9/rVxnLzAflJ4E9DXojpD3qNH
-----END CERTIFICATE-----
```

10.将证书导入vManage。为此，请导航至**Administration > Settings > Web Server Certificate > Import**，然后粘贴复制粘贴缓冲区的内容，如图所示。



11.如果您做得一切正确，vManage将显示“**Certificate Installed Successfully**”，如图所示。



12.最后，检查结果，确保证书有效日期成功更新，如图所示。

相关信息

- 生成Web服务器证书
- OpenSSL人
- **技术支持和文档 - Cisco Systems**