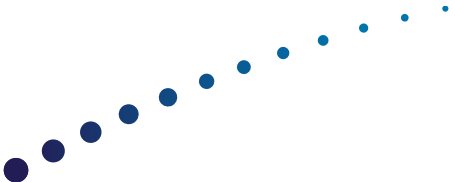
Deployment Guide

Self-Signed Certificates for NetScaler AGEE

For use with Citrix Receiver



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Introduction

Citrix Access Gateway™ is a secure application access solution that provides administrators granular application-level control while empowering users with remote access from anywhere. It gives IT administrators a single point to manage access control and limit actions within sessions based on both user identity and the endpoint device, providing better application security, data protection, and compliance management. Citrix Access Gateway is the first SSL VPN built to deliver both secure virtual desktops and applications.

Citrix Receiver makes going virtual as easy as turning on a TV. Users freely choose any device – it runs on smartphones, laptops, desktops and netbooks – turning any device into a powerful business tool to securely access corporate data anywhere. With Citrix your business will be more agile, competitive and profitable.

When deployed with Citrix Access Gateway, the Citrix Receiver uses Certificates to validate connections and secure data. It is therefore a requirement that a valid Certificate chain of trust be established between the Citrix Access Gateway and the Citrix Receiver.

Purchasing a Server Certificate from a valid third-party such as Verisign, and importing it into the Access Gateway is the best way to do this. However, for proof-of-concepts, you might want to create and use Self Signed Certificates. The Self Signed CA Certificates generated on the NetScaler will not work with the Citrix Receiver, so you must generate Self Signed Certificates using a Windows Server - for proof of concept deployments.

This guide will walk you through creating a Self Signed Certificate for use on the NetScaler AGEE as a Server Certificate, and also the importing of the Windows Certificate Authority Root Certificate.

Solution Requirements

- Self Signed Certificate Authority Root Certificate for use on NetScaler AGEE
- Self Signed Server Certificate for use on NetScaler AGEE

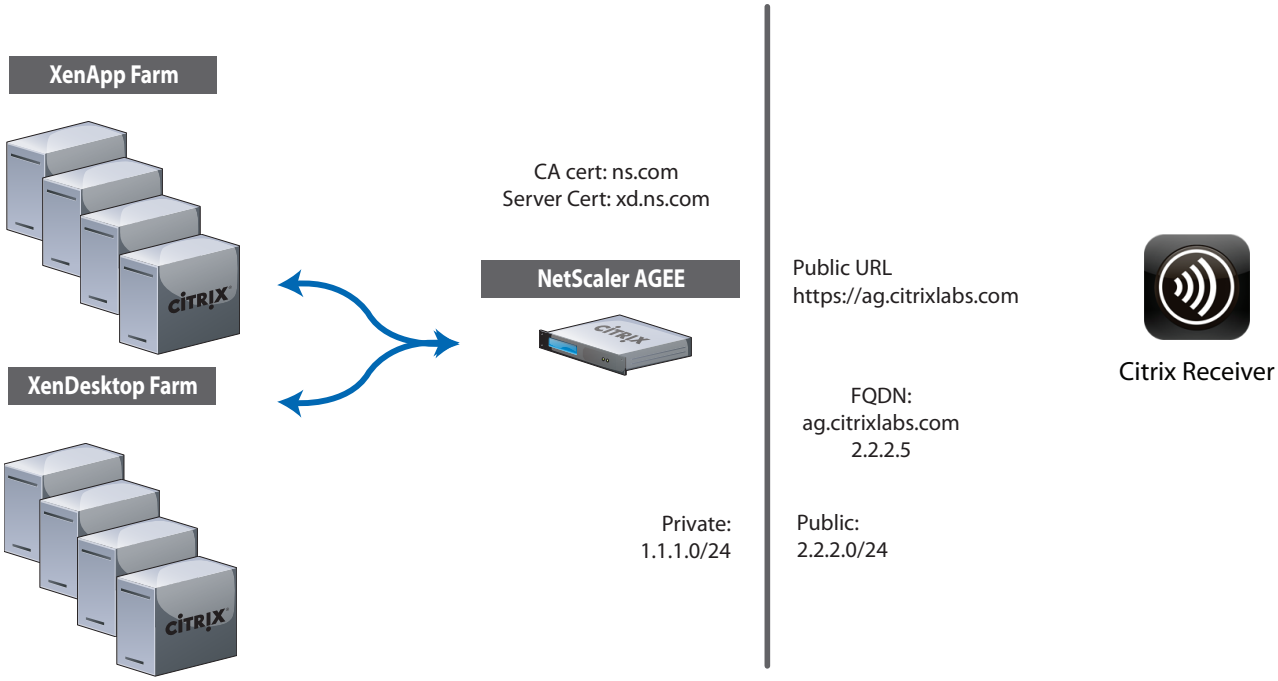
Prerequisites

- NetScaler AGEE v9.1+
- Windows Server - Certificate Authority
- Citrix Receiver

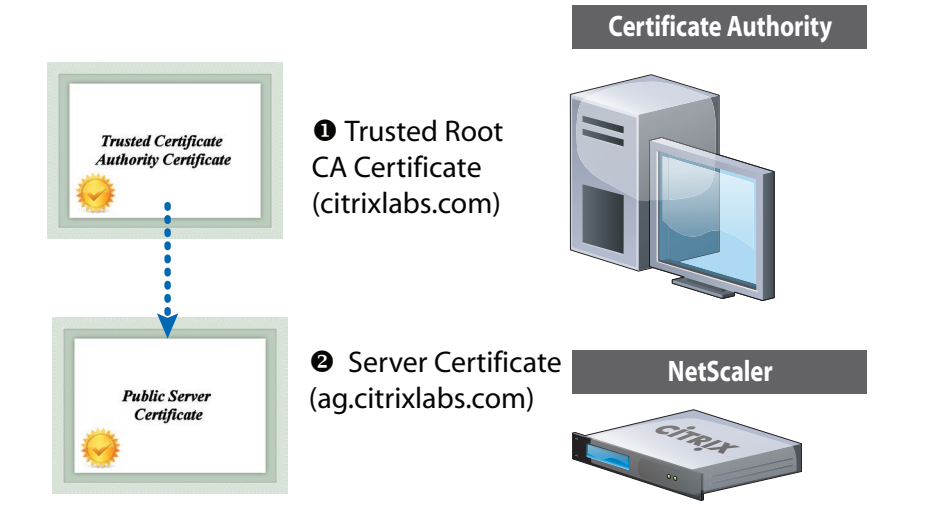
Network Diagram

The following is the Network that was used to develop this deployment guide.

Citrix
"Receiver / Access Gateway"
Logical Network Diagram



Citrix
"Receiver / Access Gateway"
Certificate Chain of Trust



Import:
❶ Trusted Root CA Certificate

Devices

NetScaler Cert Request

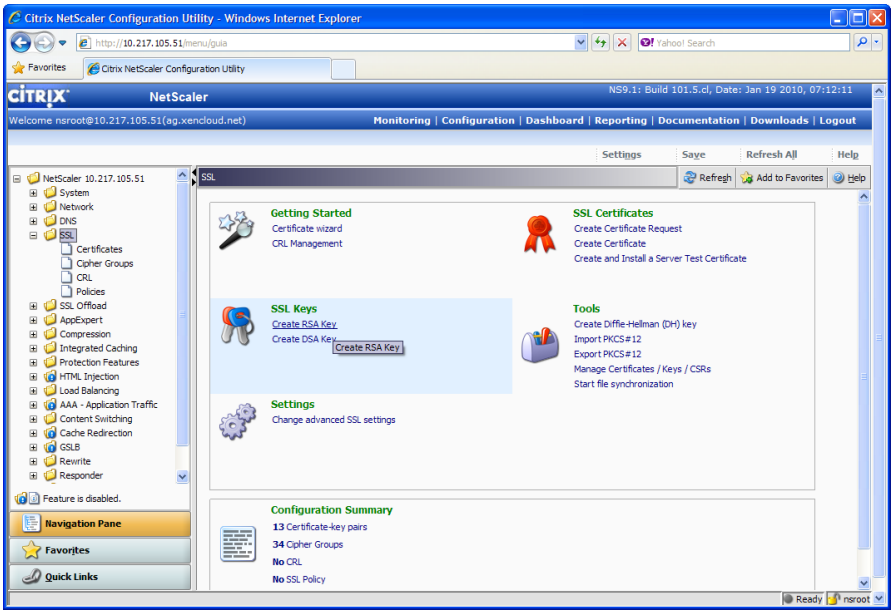
Create certificate request on NetScaler

Create a certificate request on the NetScaler, and we will submit it to the Windows Certificate Authority to issue a certificate.

Connect to NetScaler:

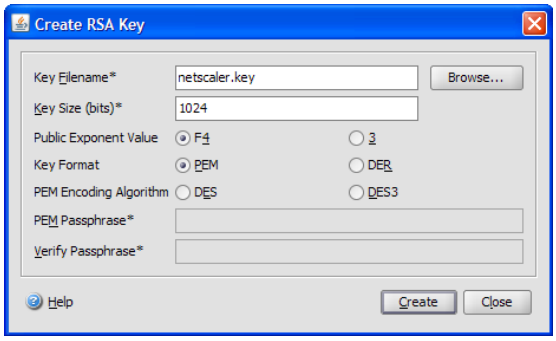
Navigate to SSL.

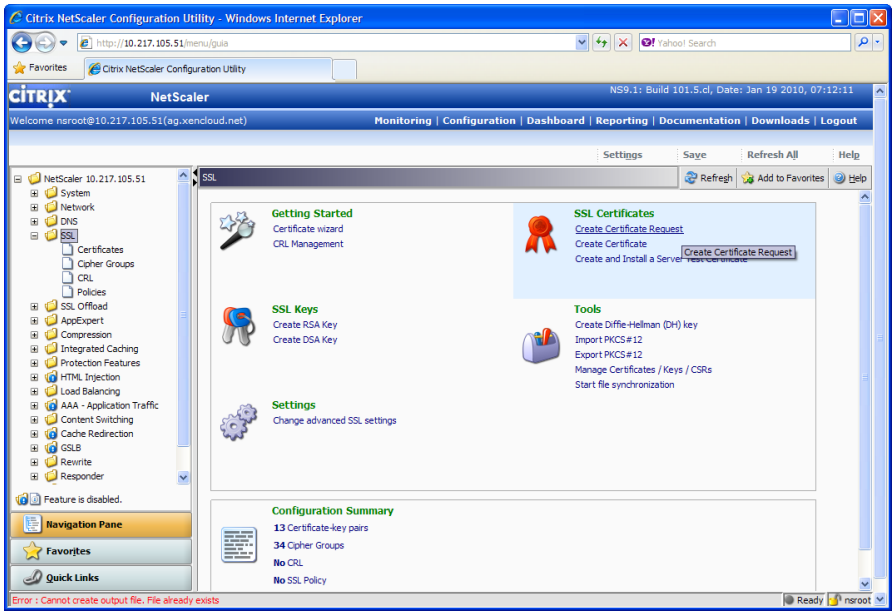
Select Create RSA Key.



Create Key:

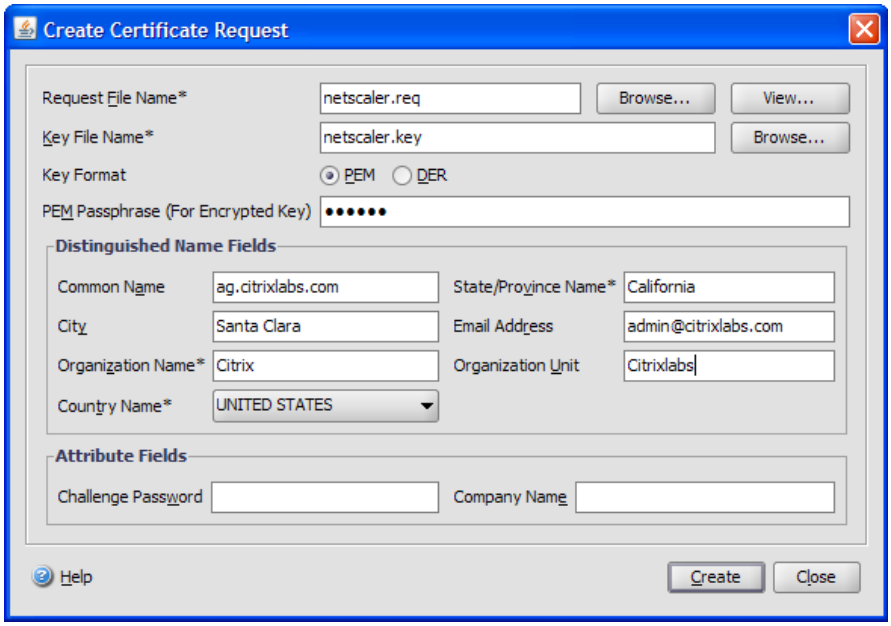
Create the key, by assigning a name, and key size.





Create Certificate Request:

Create the Certificate Request, using the key just created.



Create Certificate Request:

Name: <filename>.req

Key: <filename>.key

Passphrase: ******

CN: <FQDN of NetScaler SSL VIP>

City: city

Org: <Organization Name>

State: <Full State Name>

email: <admins email>

Org nit: <Org Unit>

Country: <country>

Note: The Common Name must match the Fully Qualified Domain Name that is used on the NetScaler SSL VIP.

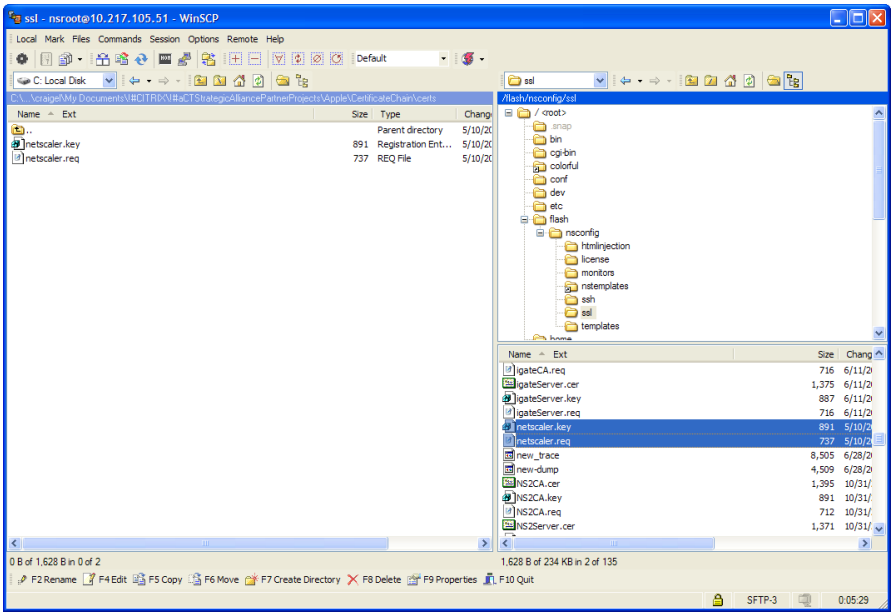
Certificate Authority

Copy certificate request to Certificate Authority

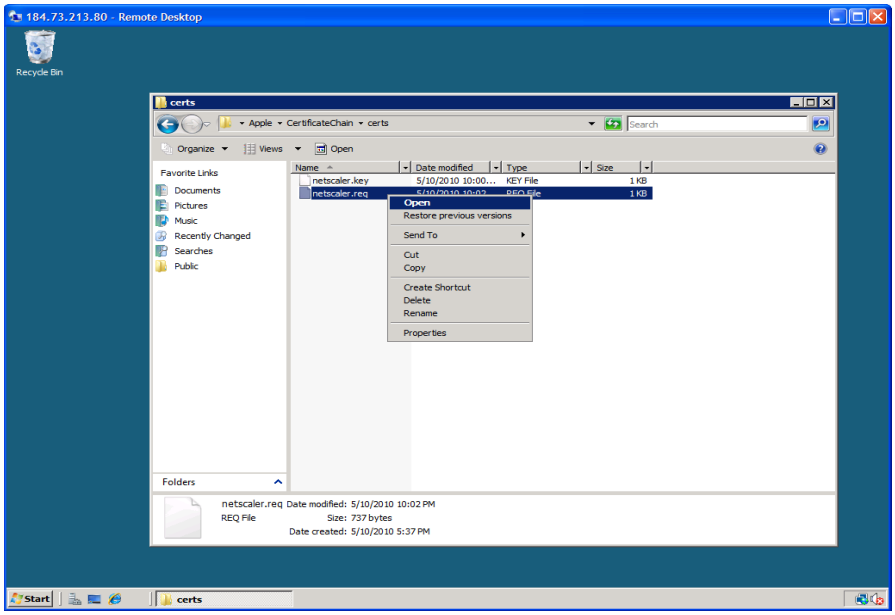
Copy Cert Request:

Using a program such as WinSCP or SSH, copy the certificate request and key files to the Windows Certificate Authority server.

Certificate files are stored in the /flash/nsconfig/ssl directory.

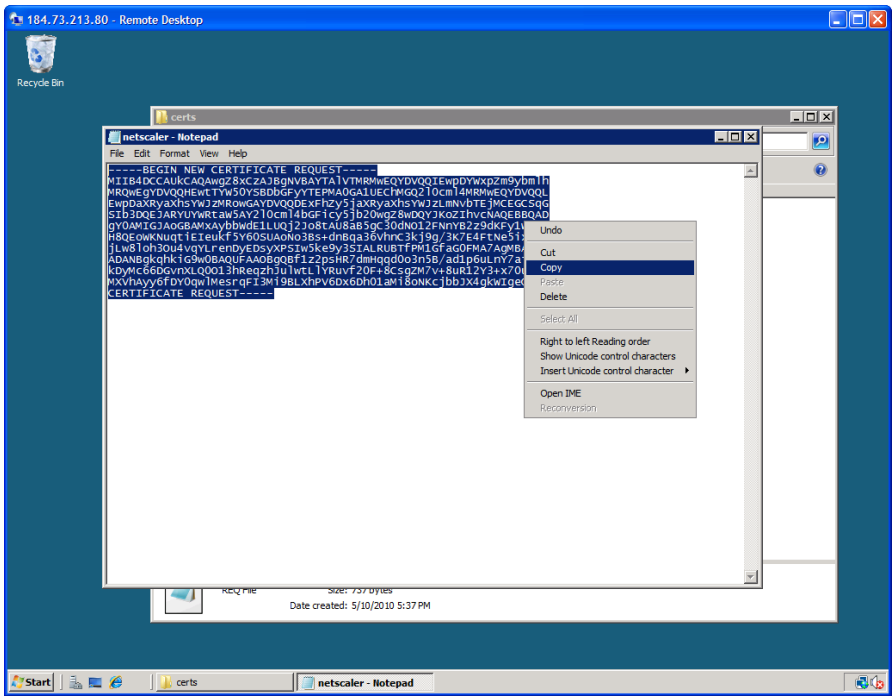


Create certificate on Windows Certificate Authority



Open the certificate request file:

Use a program such as Notepad to open the request file.



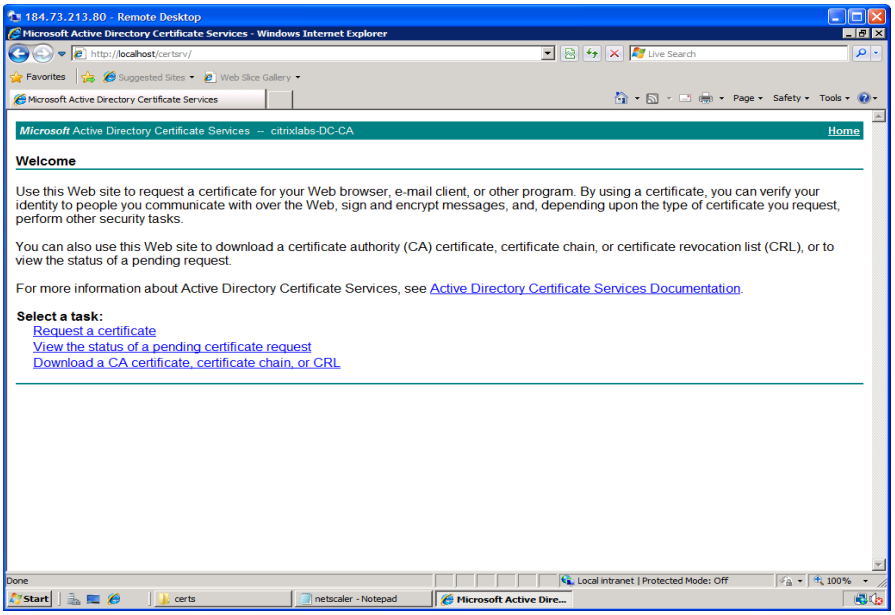
Copy to Clipboard:

Copy the contents of the certificate request to the clipboard.

Request Certificate:

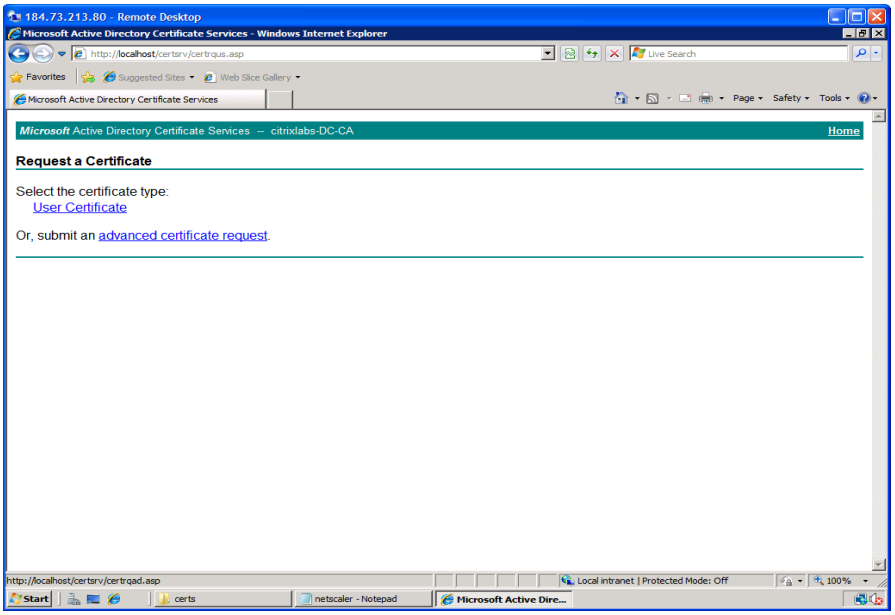
Launch a browser and navigate to the http://<domain>/CertSrv page to bring up the Certificate Server.

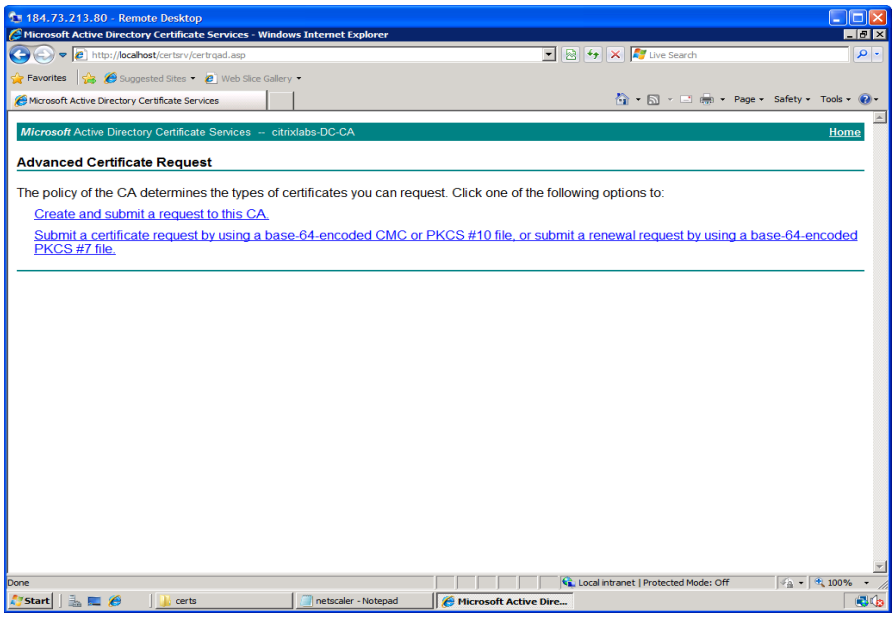
Select Request a Certificate.



Request Certificate:

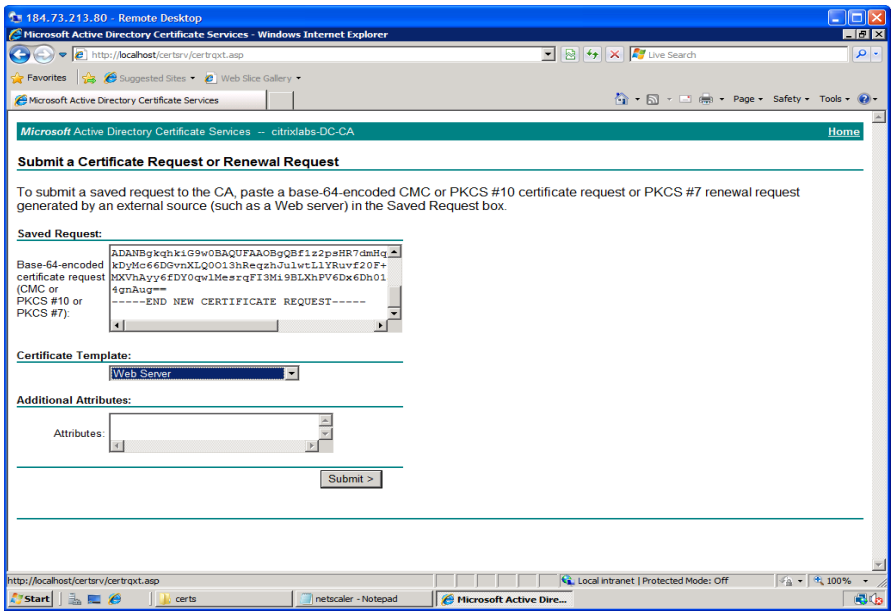
Submit an advanced certificate request.





Certificate Request:

Submit a certificate request by selecting “Submit a certificate request by using a base-64-encoded CMC or PKCS #10 file, or submit a renewal request by using a base-64-encoded PKCS #7 file.”



Certificate Request:

Paste the certificate request into the input form.

Select “Web Server” for Certificate Template.

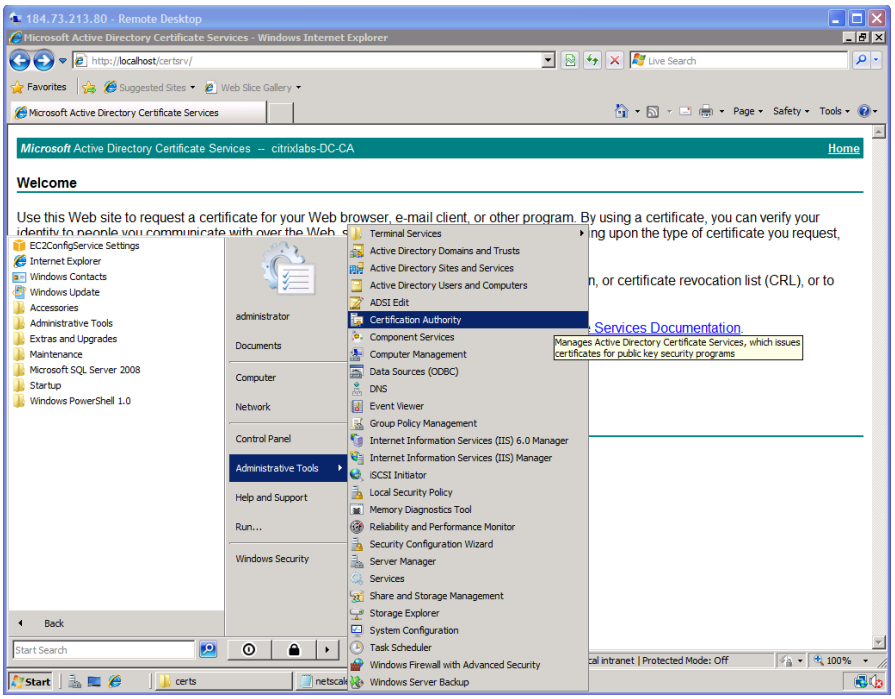
Submit.

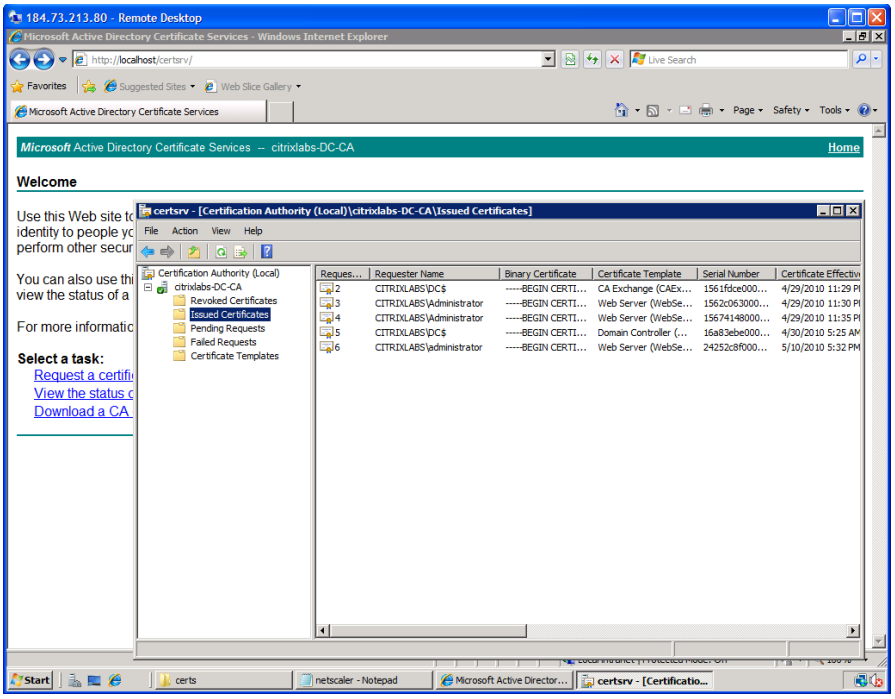
Issue Certificate:

If the Certificate Authority has enabled “auto enrollment”, the Server Certificate has already been issued.

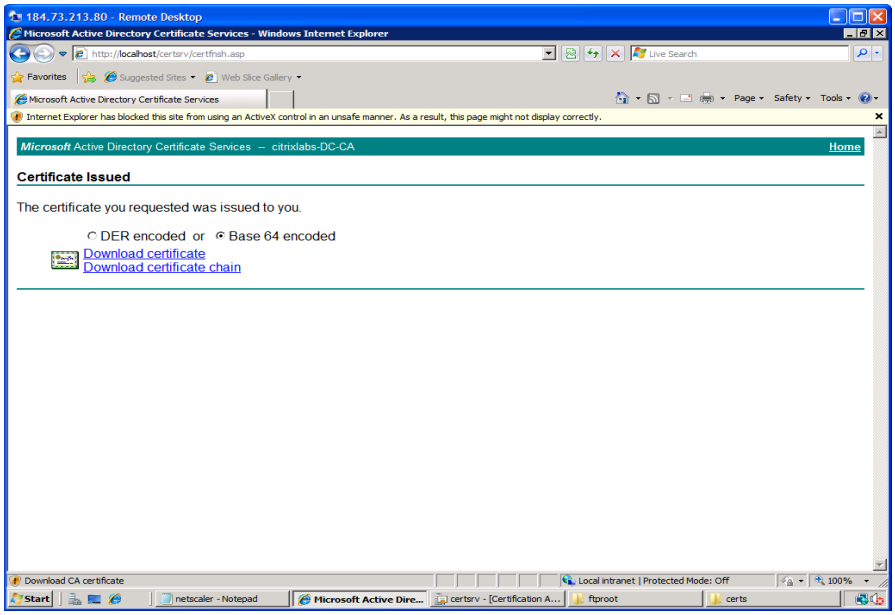
If not, you will need to launch the Certificate Authority snap-in and issue the Certificate.

Start -> Programs -> Administrative Tools -> Certificate Authority.





Download Server Certificate

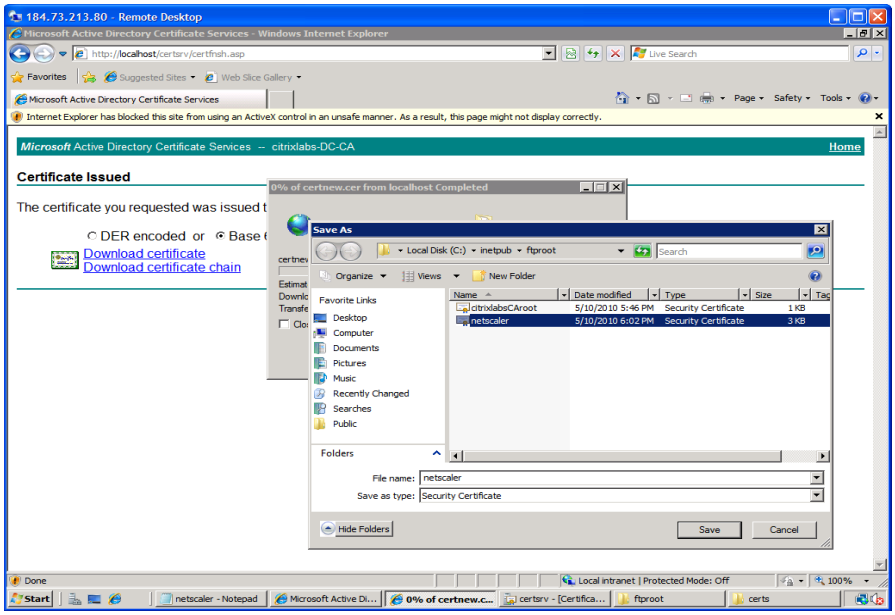


Server Certificate:

In the web browser, navigate back to http://<domain>/CertSrv

Select Download Certificate.

Select Base 64 encoded.



Server Certificate:

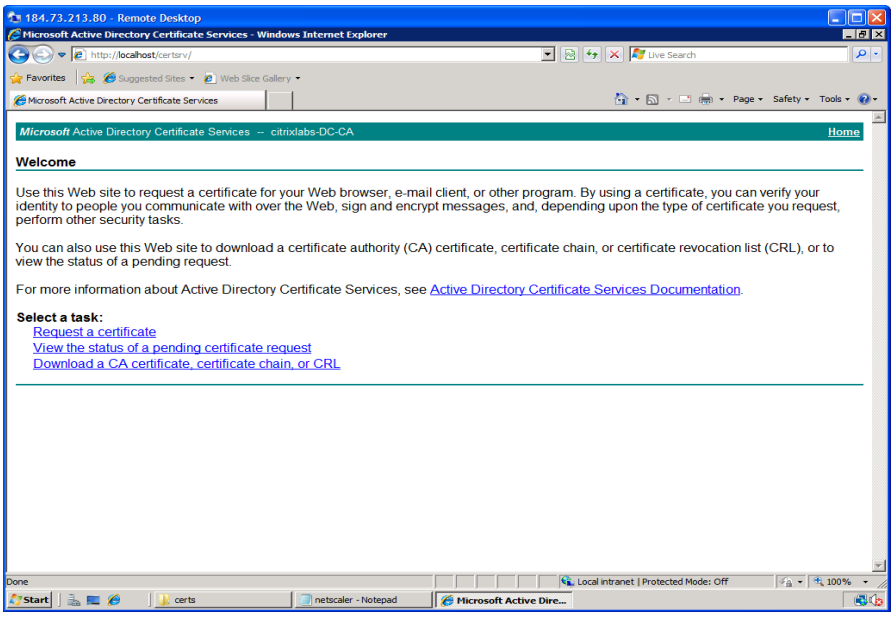
Save the file with a .cer file extension.

CA Certificate:

Using the web browser, navigate to http://<domain>/CertSrv

Select Download a CA certificate, certificate chain or CRL

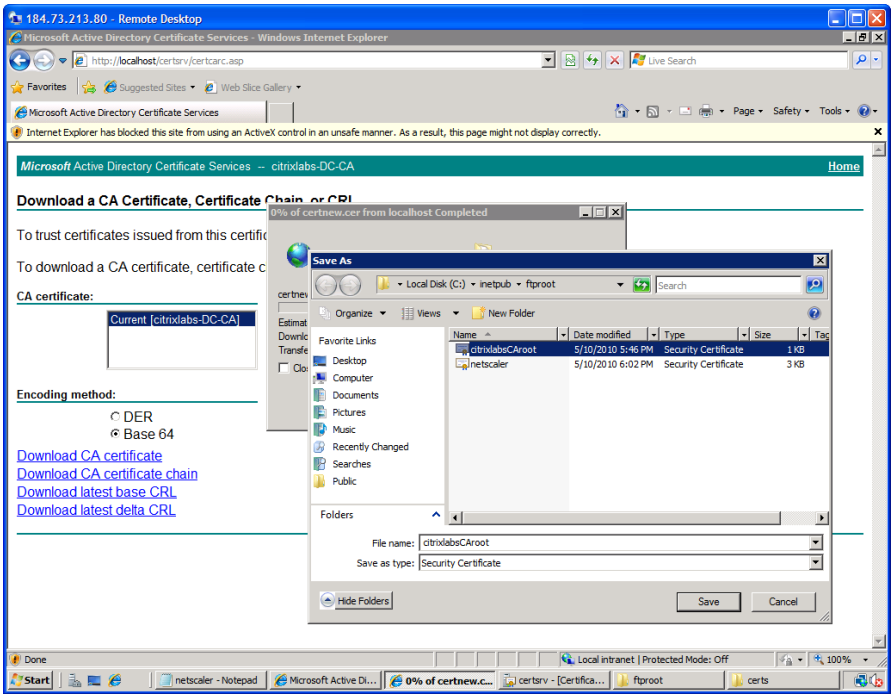
Download CA Certificate



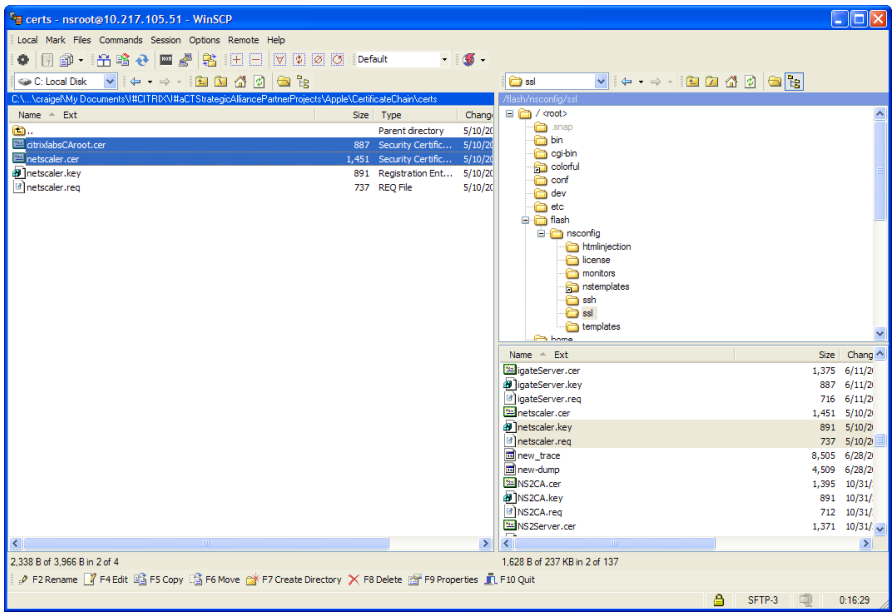
CA Certificate:

Select Base 64

Select Download CA certificate and save to a file with .cer file extension.



Copy Server Certificate and CA Certificate to NetScaler



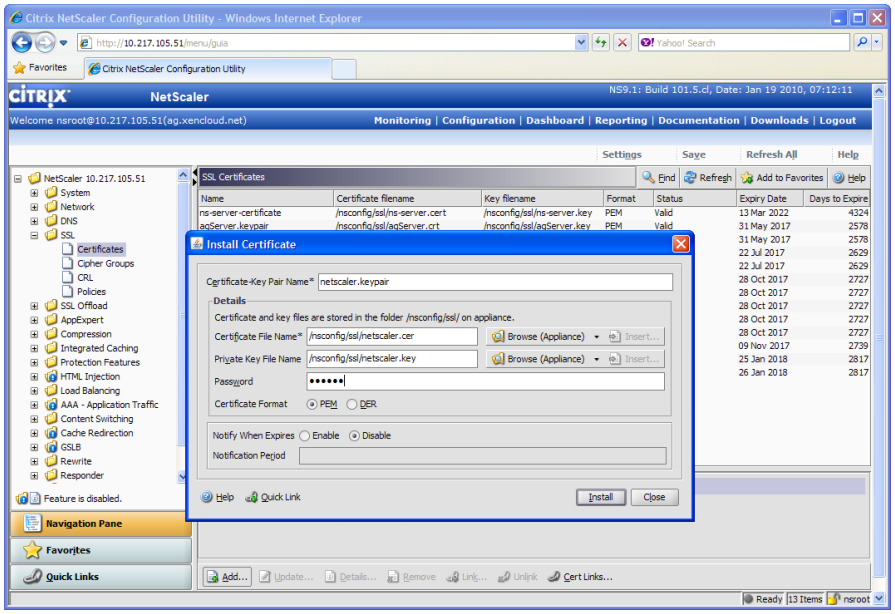
Copy Cert Request:

Using a program such as WinSCP or SSH, copy the Server certificate and the CA certificate to the NetScaler.

Certificate files should be stored in the /flash/nsconfig/ssl directory.

NetScaler Certificates

Add Server Certificate to NetScaler



Server Certificate:

Connect to the NetScaler.

Navigate to NetScaler -> SSL -> Certificates.

Select Add.

Key Pair Name: <server cert. keypair>

Certificate: <server cert.cer>

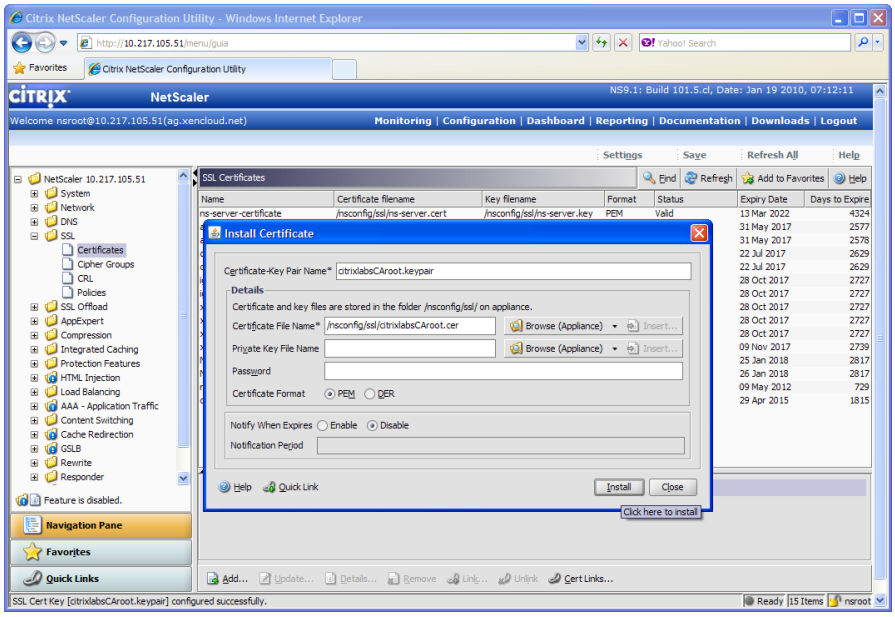
Key: <server cert.key>

Pass: ******

Note: Certificate files should be stored in the /flash/nsconfig/ssl directory.

Install.

Add CA Certificate to NetScaler



CA Certificate

Select Add, to add the CA Certificate.

Key Pair Name: <CA Cert. keypair>

Certificate: <CA Cert.cer>

Install.

Link CA and Server Certificates

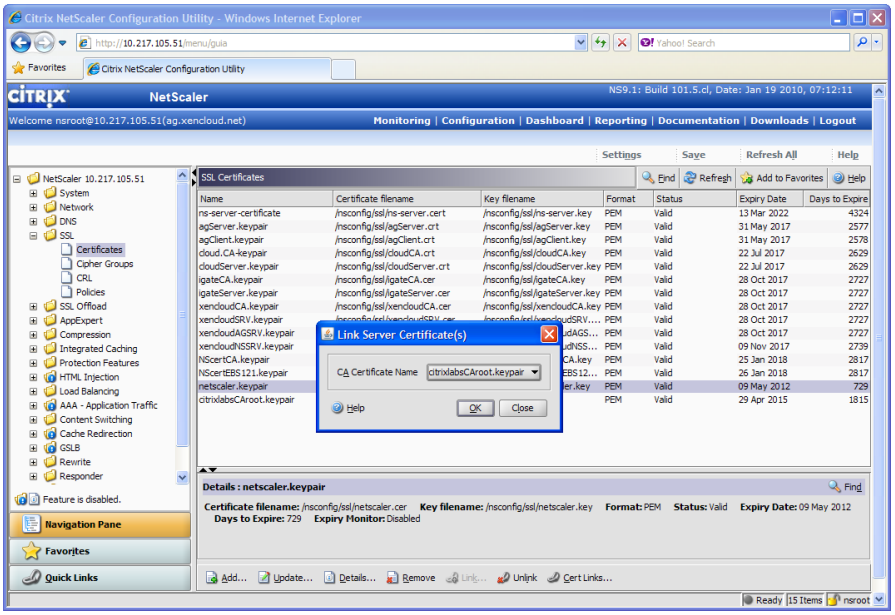
Link Certificates:

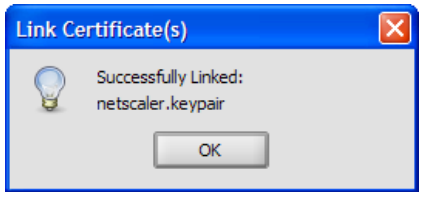
Select the newly installed Server Certificate.

Select “Link” at the bottom of the GUI.

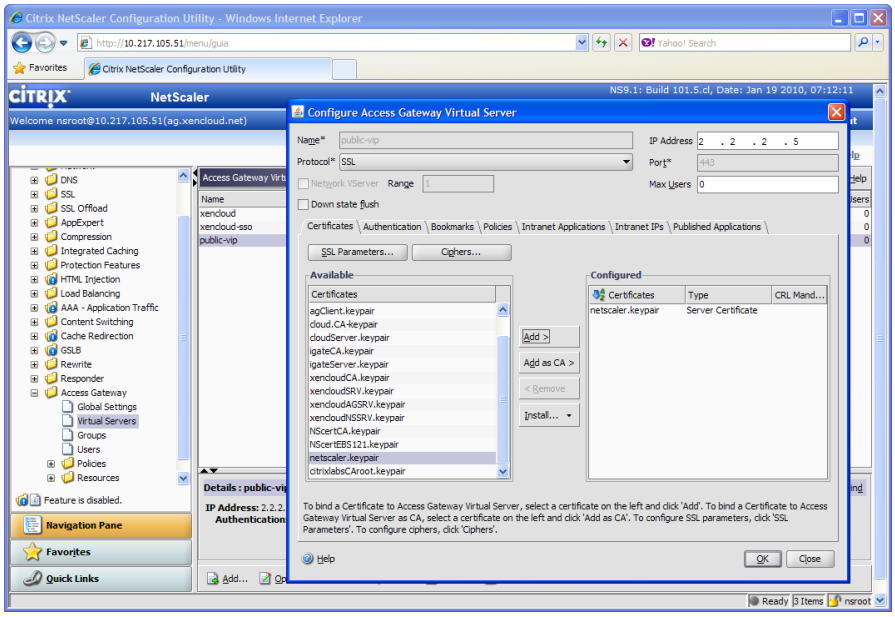
In the CA Certificate Name dropdown, select the <CA Cert. keypair> filename.

Wait for a successful link dialog box.





Bind Certificates to SSL VIP



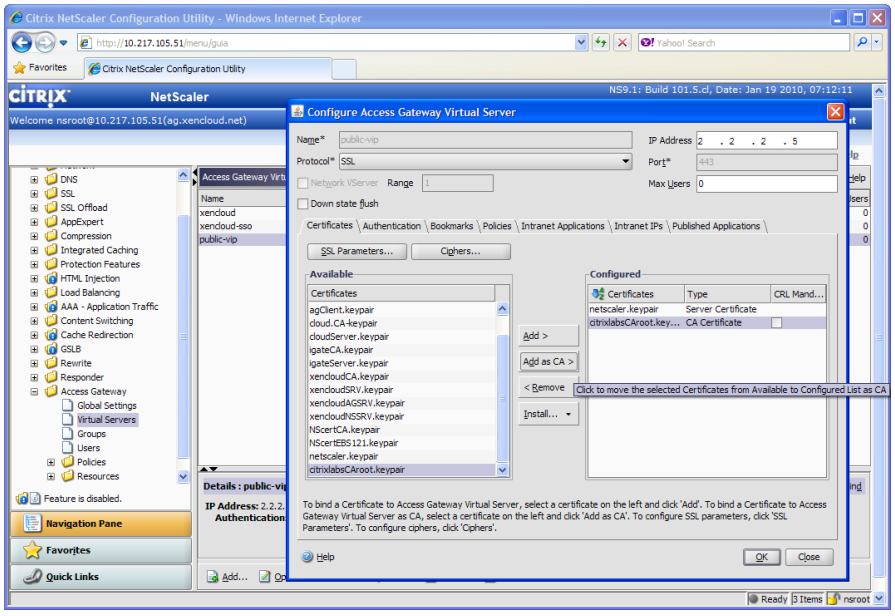
Bind Server Certificate:

In the NetScaler configuration GUI, navigate to NetScaler -> Access Gateway -> Virtual Servers.

Open the VIP.

Select the Certificates tab.

Select the Server Certificate -> Add.



Bind CA Certificate:

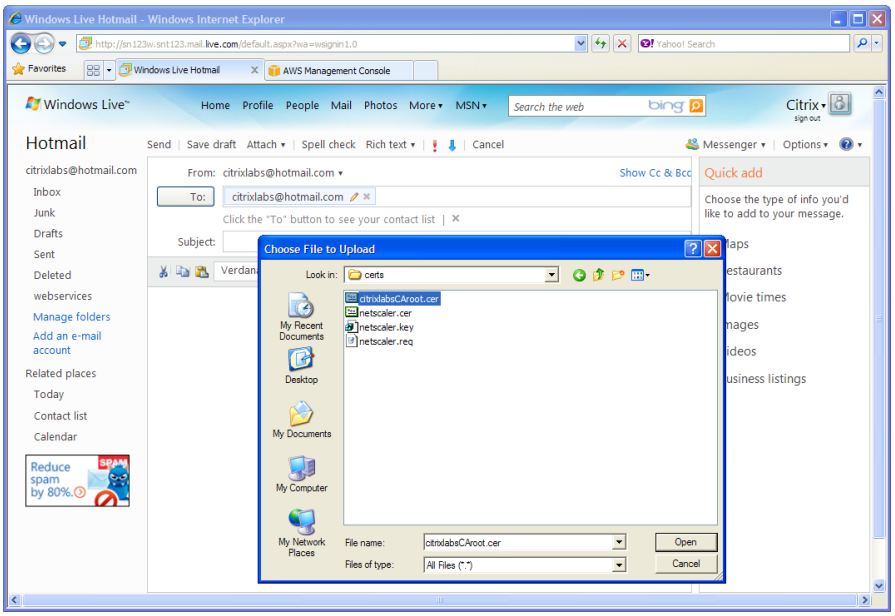
Select the CA Certificate -> Add as CA.

Mobile Devices

Import Root CA Certificate onto mobile device.

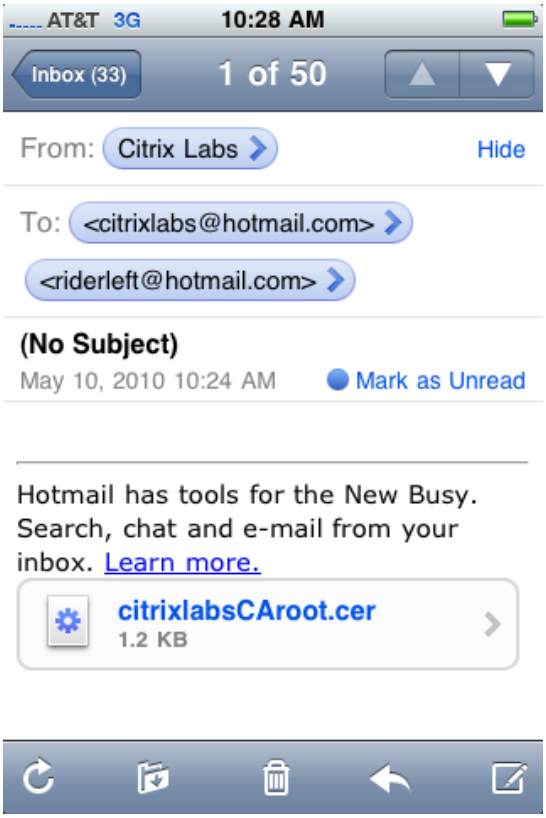
Copy CA Certificate:

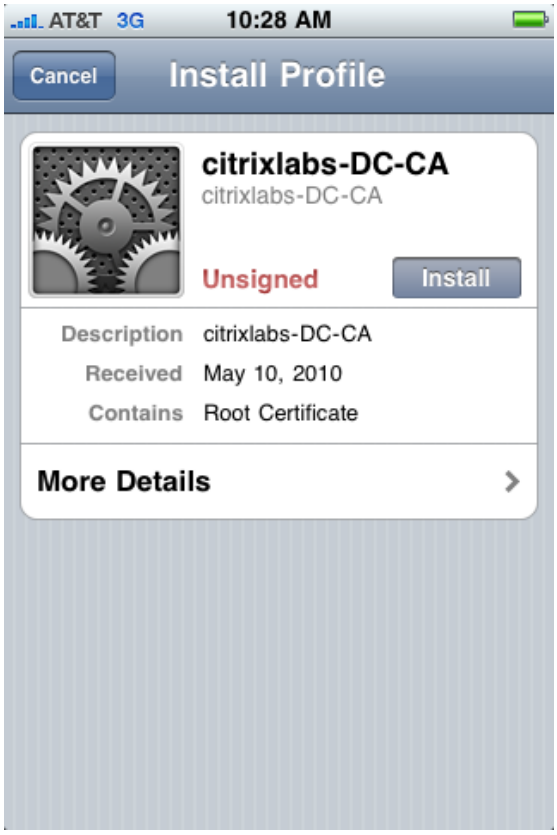
The easiest way to install the CA Root Certificate onto the mobile device is to eMail it as an attachment, then open it on the mobile device.

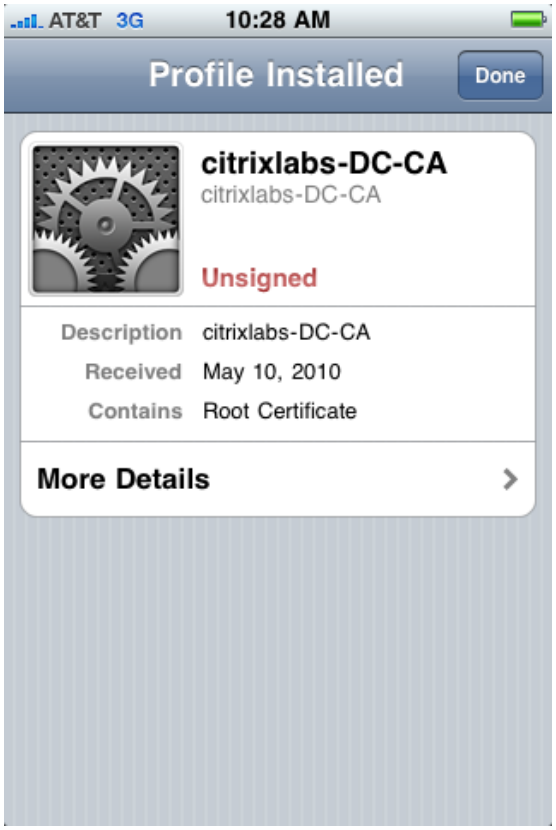


Install CA Certificate:

Open the attachment in the eMail client on the mobile device.







Install CA Certificate:

Install it.

Workstations/Laptops

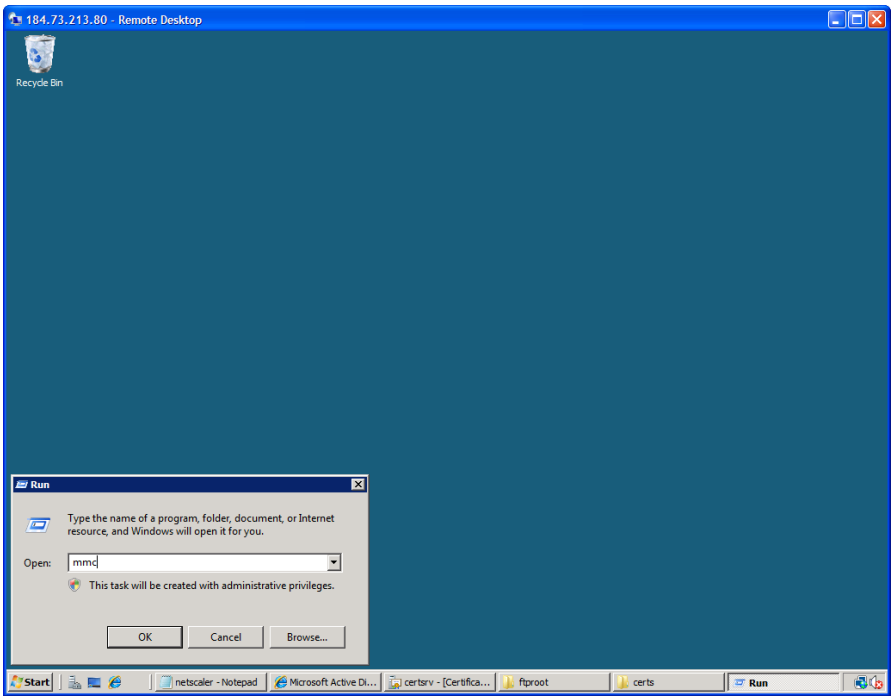
Import the Root CA Certificate onto client device.

MMC:

You can import the certificate into the browser, or use the MMC.

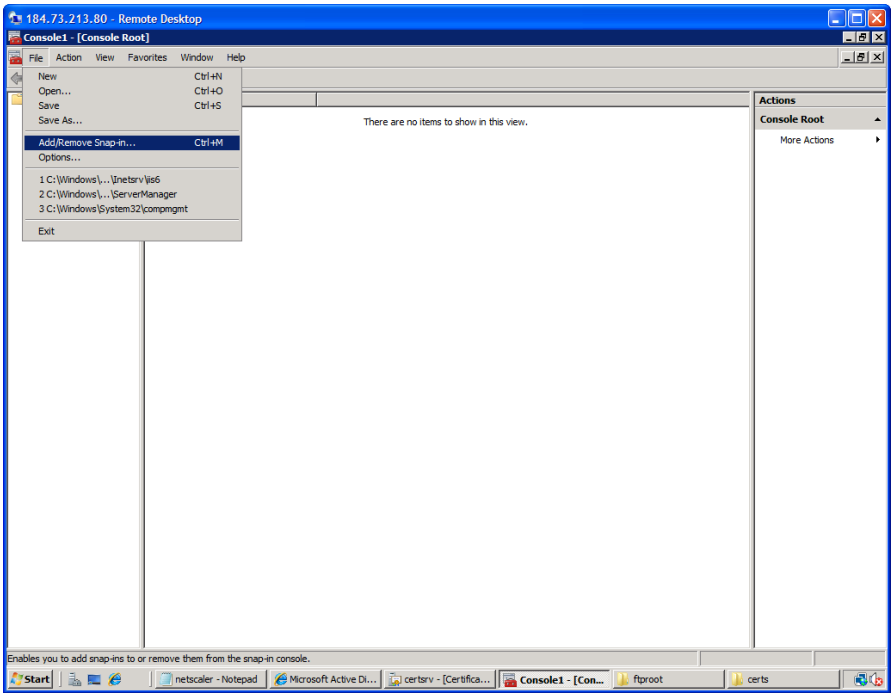
Start by copying the CA Root Certificate to the clients machine.

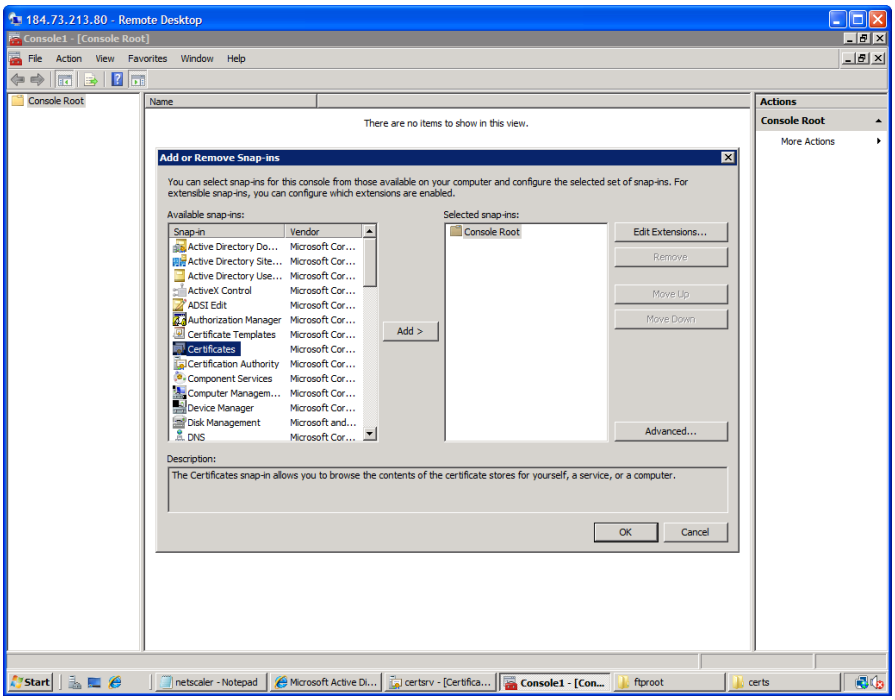
On the Windows client, Start -> Run -> MMC.



MMC:

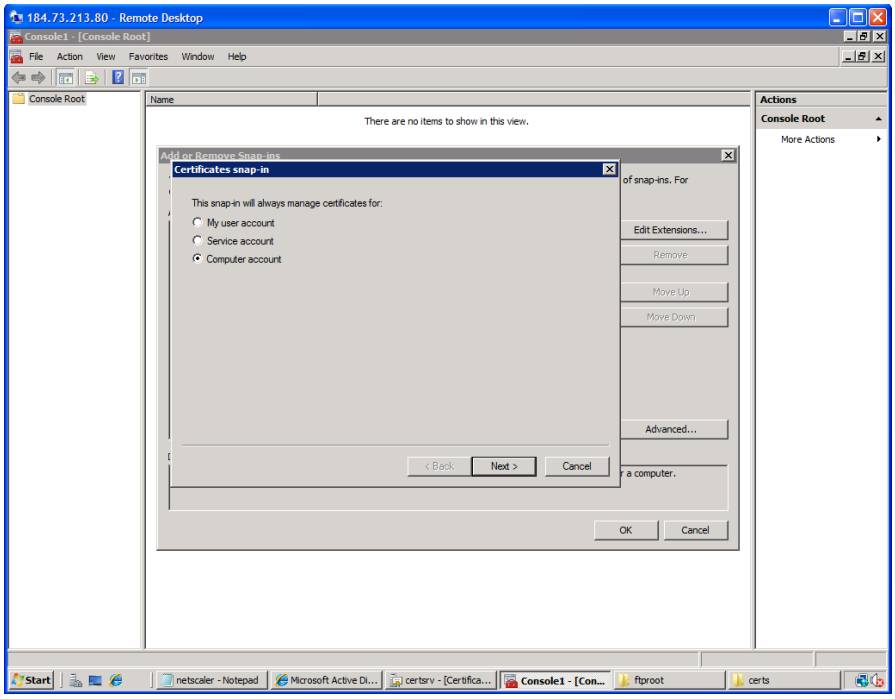
Select File -> Add/Remove Snap-In.





MMC:

Select Certificates -> Add.

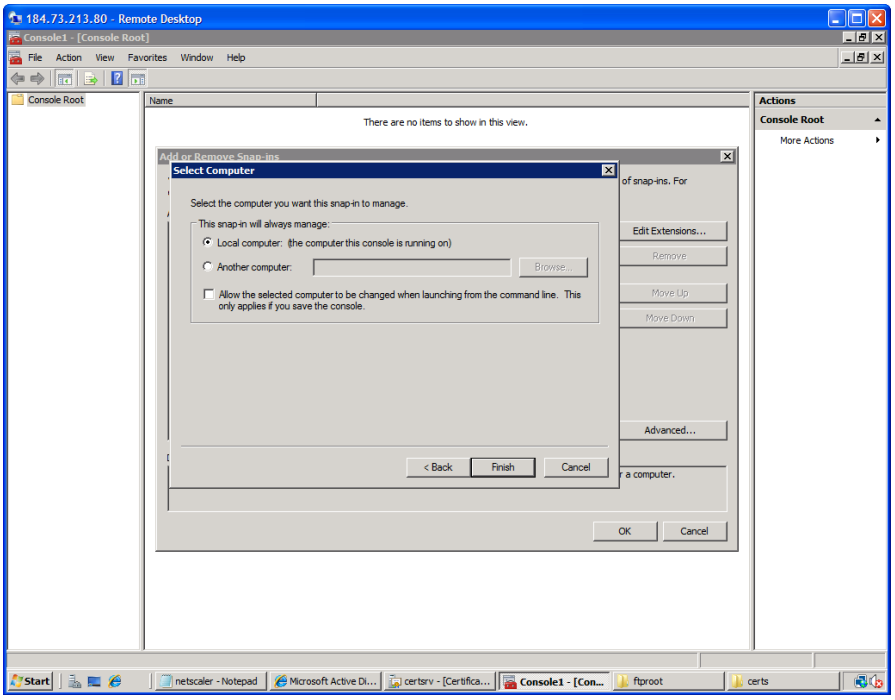


MMC:

Select Computer Account.

MMC:

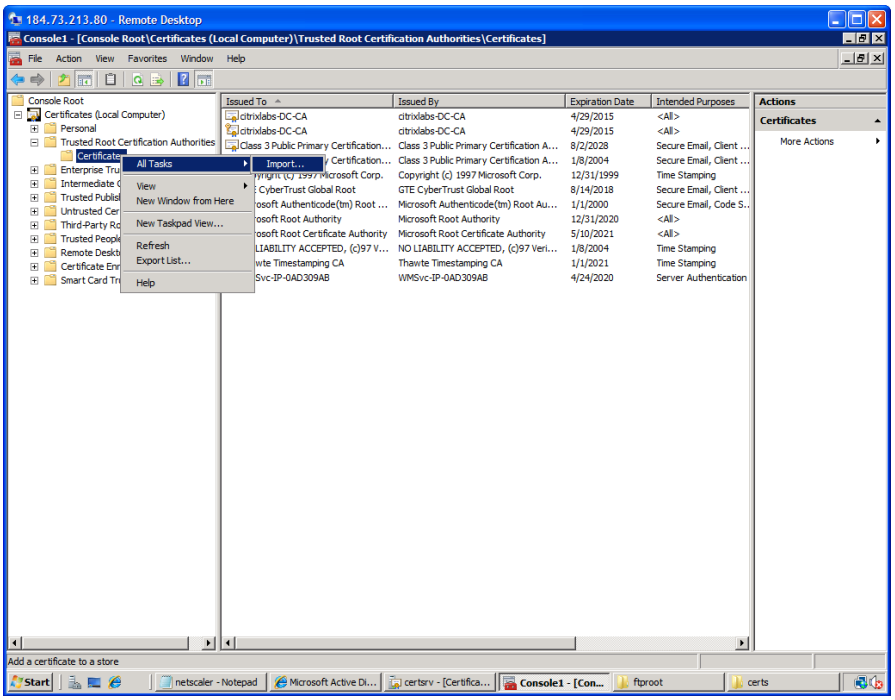
Local Computer.

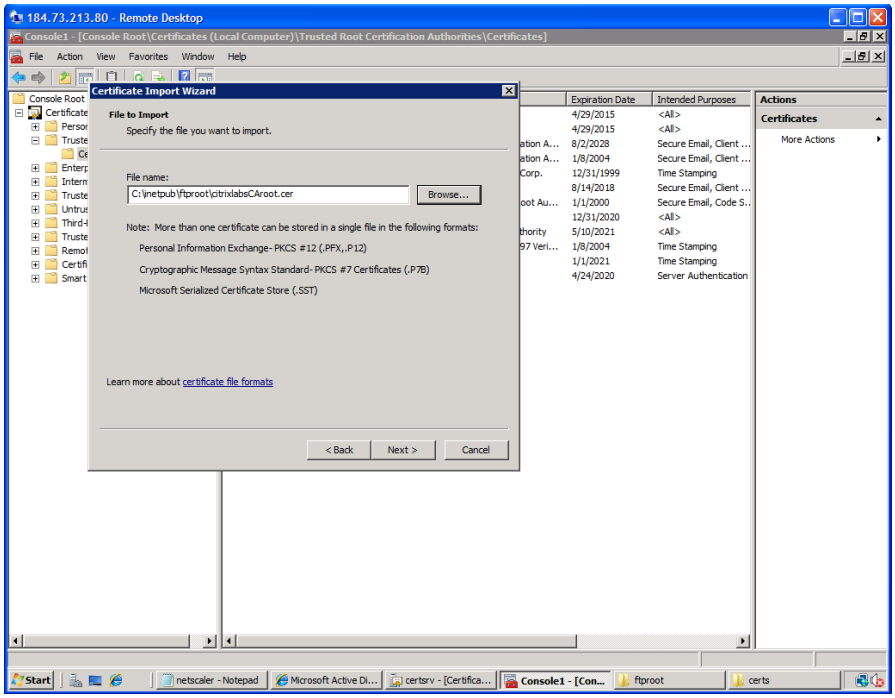


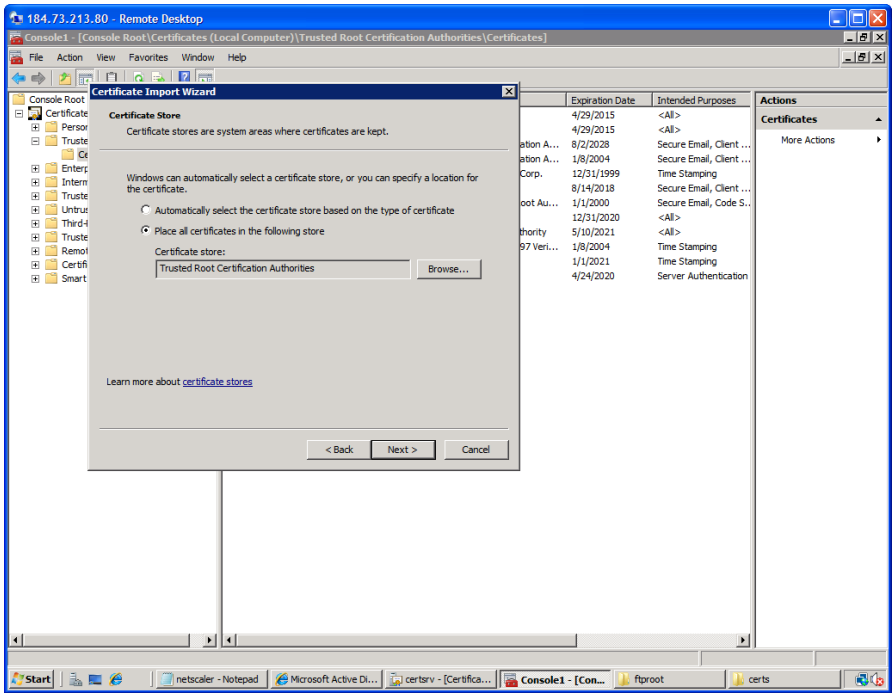
MMC:

Navigate to Trusted Root Certificate Authorities.

Right-Click -> All Tasks -> Import.







MMC:

Browse for the CA Root Certificate.

Import.

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