Certificate Services

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Certificate Services – VirtualBox Server

**22.1 - Installing AD CS Through Server Manager**

Adding the AD CS roles and features

Graphical user interface, text, application

Description automatically generated

Role-based since I am downloading it on this machine alone.

A screenshot of a computer

Description automatically generated

Verifying the roles and features will be added to this machine.

Graphical user interface, text, application, email

Description automatically generated

Adding AD CS.

Graphical user interface, text, application

Description automatically generated

I chose two of these services because they seemed useful for later steps (22.2)

Graphical user interface, application

Description automatically generated

Installation progress:

Graphical user interface, text, application, email

Description automatically generated

Installation complete!

**22.2 - Configuring AD CS Through Server Manager**

Now to configure AD CS through the configuration wizard. Here are the role services I chose to configure:

Graphical user interface, text, application

Description automatically generated

I chose Enterprise CA since I operate online

A screenshot of a computer

Description automatically generated

Since I am the main domain controller, I chose Root CA

A screenshot of a computer

Description automatically generated with medium confidence

Settings for private key creation:

Text

Description automatically generated

Graphical user interface, text, application

Description automatically generated

Keeping the default CA name.

Graphical user interface, text, application, email

Description automatically generated

Keeping default validity period.

Graphical user interface, text, application

Description automatically generated

Database locations:

Graphical user interface, text, application

Description automatically generated

Configuration screen:

Graphical user interface, text, application, email

Description automatically generated

Configuration complete!

Graphical user interface, text, application, chat or text message

Description automatically generated

**22.3 – Configuring an Auto-Enrollment Group Policy for a Domain**

I clicked Start – Administrative Tools – Group Policy Management and was met with this screen:

Graphical user interface, text, application

Description automatically generated

I then right-clicked Default Domain Policy and clicked Edit. This is the screen:

Graphical user interface, text, application

Description automatically generated

Next, I clicked Public Key Policy and double-clicked Certificate Services Client – Auto-Enrollment. This setting will auto-enroll and renew my certificate services, so I do not have to do it myself.

Graphical user interface, text, application, Word

Description automatically generated

Here are the Certificate Service Client settings:

(Default: no boxes checked)

Graphical user interface, text, application, email

Description automatically generated

**22.4 – Creating a Certificate Template**

First, I opened Certificate Authority to access my certificates.

Graphical user interface, text

Description automatically generated

Then, I the CA name, Strelizia, right-clicked Certificate Templates, and clicked Manage.

Graphical user interface, application, Word

Description automatically generated

Here are all of the Certificate Templates.

Graphical user interface

Description automatically generated

I am going to duplicate a Computer template.

Graphical user interface, application

Description automatically generated

Here are the settings for the duplicate, I changed the default (Server 2003) to Server 2008:

Graphical user interface, text, application, email

Description automatically generated

I also gave the duplicate a name, clicked Apply, and closed the windows.

Graphical user interface, text, application, email

Description automatically generated

**22.5 – Publishing a Certificate Template**

I opened the Certification Authority tool for this exercise, then clicked Certificate Templates.

Graphical user interface, text, application

Description automatically generated

Next, I clicked Certificate Template to Issue since I will be publishing a template.

Graphical user interface, text, application

Description automatically generated

I published my Copy of Computer Test template.

Graphical user interface, text

Description automatically generated

There it is, published!

Graphical user interface, text

Description automatically generated

**22.6 – Revoking a Certificate**

There aren’t any certificates to revoke.

Graphical user interface, text, application, email

Description automatically generated

**22.7 – Configuring CA Policy Auditing**

Part 1: Enable Object Access/Success Auditing in the CA machine’s local security policy

I ran mmc.exe

Graphical user interface, application

Description automatically generated

I was met with this screen:

Graphical user interface, text, application, email

Description automatically generated

Next, I added a snap-in.

Graphical user interface, text, application

Description automatically generated

Graphical user interface

Description automatically generated with medium confidence

Graphical user interface, text, application

Description automatically generated

Then, I enabled Success Auditing for Object Access.

Here is the file path:

A picture containing text

Description automatically generated

And the policy screen:

Graphical user interface, application

Description automatically generated

The computer is now auditing success attempts for object access.

Graphical user interface, text, application, email

Description automatically generated

Part 2: Enable auditing on the CA

I opened Certification Authorities and right clicked my CA name.

Graphical user interface, application

Description automatically generated

Then, I navigated to the Auditing tab and checked two boxes to audit.

Graphical user interface, text, application

Description automatically generated

Finally, I clicked Apply and closed all open boxes.

**Extras:**

I checked the state of my server’s firewall and scanned it.

Graphical user interface, text, application

Description automatically generated

Everything looks good there. Now for the scan.

Graphical user interface, text, application, email

Description automatically generated

Awesome! Now to check for updates since I leave the server off for long periods of time.

Text

Description automatically generated

Updates are installed and server is off.

References

JasonGerend, Dknappettmsft, Khdownie, Eross-msft, John-par, Jamesmci, Sudeepku, & Yishengjin1413. (2021, July 29). *Configure the server certificate template*. Developer tools, technical documentation and coding examples | Microsoft Docs. <https://docs.microsoft.com/en-us/windows-server/networking/core-network-guide/cncg/server-certs/configure-the-server-certificate-template>

Panek, W. (2018). *MCSA Windows Server 2016 complete study guide: Exam 70-740, exam 70-741, exam 70-742, and exam 70-743*. John Wiley & Sons.