CSC5090 S1 2022 Tech Artifact 2 –
Create a domain user account on Windows Server OS

Weighting 20%   Due Date: 4 May 2022

Description

As a SA, you often need to add domain user accounts and computers in Active Directory. In this tech artifact, we will install the Domain Controller using the Windows Server Operating Systems. In particular, the Windows Server 2012 R2 is used as the Windows Server OS.

Objective

The objective of this tech artifact is to understand the Windows Server Operating Systems and to install some services to the Windows Server. It is in alignment with CLO 2 and 3.

Marks

This tech artifact will be marked out of 20. In total, there are five (5) tasks.

Required Software

The following feature and/or systems are needed to complete the tasks.

- The Hyper-V Manager (You may need to enable it on your Windows 10 Enterprise, Pro, or Education)
- Windows Operating System (Windows XP/7/8/10)
- Windows Server Operating System (Windows Server 2012, Windows Server 2012 R2, Windows Server 2016, etc.)

Preparatory Tasks

1. Go to Microsoft's website and download the evaluation copy of Windows Server 2012 R2. (ie. ISO image file).
2. Burn the download image to create a bootable CD/DVD or a bootable USB flash drive using the Rufus.
3. Create a new VM and install the Windows Server 2012 R2 from the created DVD or USB flash drive.

Task 1 (4 marks)

Topic: Install and Configure the Windows Server Operating Systems 2012 R2

The Windows Server 2012 R2 itself is often referred to as The Local Server.

- start up the PowerShell app from the Server Manager and type `ipconfig` on it to view the default settings of the Windows Server
- change its default settings of Network Connections (Internet Protocol Version 4) as follows:

  Use the following IP address:
  ```
  IP address: 10.0.0.21
  Subnet mask: 255.0.0.0
  Default Gateway: 10.0.0.1
  ```

  Use the following as DNS Server address
  ```
  Preferred DNS server: 127.0.0.1
  ```

- change name of the Local server into CSC-DC-01.

    1. Keep the Firewall on and update the timezone
    2. enable Remote management

Task 2 (5 marks)

Topic: Install Active Directory Domain Services (AD DS) on the Windows Server

As the domain controller (DC) is vital for the functioning of Active Directory, the configuration should be done carefully to avoid any errors.

- Log into your Active Directory Server with administrative credentials.
- Open Server Manager → Roles Summary → Add roles and features
- You may read through the pop-up text, then click ``next''
- Select the installation type. (i.e. Role-based feature-based installation)
- Select the destination server on which the role will be installed.
- Select the roles you want to install on this server. (ie. Active Directory Domain Services)
- The basic features required for the proper functioning of this role are selected by default. Click next to install them.

- Confirm the installation selections. It's recommended to select the ``restart the destination server automatically if required'' button. Select ``Install'' and once the installation is complete, close the windows.

Task 3 (5 marks)

Topic: Promote the server into a domain controller

After the installation of the AD DS role, the next step is to promote this server as a Domain Controller.

- Once the AD DS role is installed in this server, you will see a notification flag next to the Manage menu.
- Select ``Promote this server into a domain controller''.
- Select ``Add a new forest'' and enter the Root domain name. This domain name will also be the forest name.
- Select a forest functional level and a domain functional level of your choice. Ensure that the domain functional level is equal to or higher than the forest functional level.
- (Since this is the first DC, it automatically becomes the DNS server and also the Global Catalog).
- Since a DNS server is being configured as part of our efforts, you will be warned that a delegation for this DNS server cannot be created. This can be safely ignored.
- Enter a NetBIOS name for your domain. It is preferable to match the NetBIOS name with the root domain name.
- Select the folder where your database, log files, and SYSVOL will be stored. It is recommended to stick to the default settings.
- Review your options and click Next. A prerequisites check will be done by Active Directory.
- Once it is completed, Click Install.
- Your system will be rebooted automatically for the changes to take effect. Verify the health of the domain controller by running the command `dcdiag /v` from the command line.

Task 4 (6 marks)

Topic: Create A Domain User in AD and Verify the AD user account

- Click Active Directory User and Computer,
- Right Click on Users, then chose New User

- Then Enter the details of domain user 1- Mark, and save it
- Use the appropriate PowerShell cmdlet to create an account for domain user 2 – Tayler

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Documentation to submit

Like Tech Artifact 1, Documentation in the format of HOWTO will be submitted to the marker to be assessed. The Documentation should include

- a title -- **How to Set up a domain controller (DC) on the Windows Server**
- Meta-data - The Documentation's author's contact information and the revision data or history.
- Target audience -- Who will read this document (not the professor/teacher).
- The submission for this assignment consists of a report, with one section for each task.
- Each section is a list of instructions: Step by step, including the actual action/command and their output if there is.
    - If any pictures, images, and screen captures are inserted in the Documentation, each of them is accompanied by an explanation of what it is about.
    - The complete PowerShell cmdlet that creates a domain user account on your Domain Controller should be given.

The final submission is via the submission link for Assignment 2 on the CSC5090 StudyDesk.

End of Tech Artifact 2