Windows PowerShell   
Scripting and Toolmaking

Course 55039

CLASSROOM BUILD GUIDE



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# Overview of the Setup Process

This course uses three virtual machines:

* DC – This is a Windows Server 2012 Server Core virtual machine acting as domain controller for the COMPANY.PRI domain, and DNS server for the network.
* MEMBER – This is a Windows Server 2012 Server Core virtual machine that is a member of the COMPANY.PRI domain.
* CLIENT – This is a Windows 8 virtual machine where the student will perform the majority of their work. It belongs to the COMPANY.PRI domain. An ISO image containing course files will be attached to this virtual machine.

# Before You Begin

1. You will need to have the following ISO files on hand. Consider storing these in a folder names C:\ISO on the host machine. Once the installation is complete, these ISO files can be removed prior to imaging the computers. You will need valid product keys to activate the products.
   1. Windows Server 2012
   2. Windows 8 x64 (**32-bit is not supported**)
2. Create a folder named C:\Program Files\Microsoft Learning\55039. This is where the VMs will be stored.
3. Download the courseware files from the Internet.
   1. Open a browser and navigate to http://files.concentratedtech.com/55039.iso.
   2. Save the file to C:\Program Files\Microsoft Learning\55039 on the host machine.

# Setup DC

1. Configure Hyper-V with a Private Network and Internet Access in Virtual Network Manager.
   1. Launch Hyper-V.
   2. In the left panel select the server.
   3. In the Actions panel on the right select Virtual Network Manager.
   4. In the Virtual Networks section, select "New virtual network".
   5. On the right, select "Private" and click Add.
   6. Name the network “Private Network” and click Apply.
   7. Back in the Virtual Networks section, select "New virtual network".
   8. On the right, select "External" and click Add.
   9. Name the network “Internet Access” and click OK.
   10. Click “Yes” to acknowledge the warning.  (NOTE: If you are doing the installation remotely, this step may disconnect you from the  machine. Reconnect and proceed with the next step.)
   11. When the network is created, click OK.
2. Configure the Virtual Machine
   1. In Hyper-V Manager, select the Action menu to New > Virtual Machine.
   2. On the Before You Begin page, click Next.
   3. On the Specify Name and Location page, enter "DC".
      1. Select the "Store the virtual machine in a different location" and enter "C:\Program Files\Microsoft Learning\55039".
      2. Click Next.
   4. On the Assign Memory page, enter "1024" and click Next.
   5. On the Configure Networking page, select "Private Network" and click Next.
   6. On the Connect Virtual Hard Disk page, click Next.
   7. On the Installation Options page, select "Install an operating system from a boot CD/DVD-  ROM".
      1. Select the "Image file (.iso):" option and click Browse.
      2. Locate the Windows Server 2012 ISO image and click Open.
      3. Click Next.
      4. On the Completing the New Virtual Machine Wizard, click Finish.
3. Install Windows Server 2012 Server Core
   1. In Hyper-V Manager, right-click DC and select Connect.
   2. In the Action menu, select Start.
   3. On the Windows Setup dialog, click Next.
   4. Click "Install Now".
   5. Enter a valid Windows Server 2012 product key and click Next.
   6. If a page with "Select the operating system you want to install" appears, select the "Server Core" option and click Next.
   7. On the License terms page, select "I accept the license terms" and click Next.
   8. On the next page, select "Custom: Install Windows only (advanced)".
   9. On the "Where do you want to install Windows?" page, select “Drive 0 Unallocated Space” and  click Next.
   10. After several minutes and a reboot, the Settings page appears. Set the Administrator password  to "Pa$$w0rd ".
   11. Log into the server as Administrator.
4. Configure the Server
   1. Type **powershell** and press Enter.
   2. Type **update-help** and press Enter.
   3. Type **rename-computer –newname DC –restart** and press Enter.
   4. When the computer restarts, log on as Administrator by using password **Pa$$w0rd**
   5. Type **powershell** and press Enter.
   6. Type **add-windowsfeature ad-domain-services** and press Enter.
   7. Type **get-netadapter** and press Enter. Make a note of the number shown in the ifIndex column.
   8. Type **new-netipaddress –ipaddress 10.0.1.2 –interfaceindex 12 –prefixlength 24 –default 10.0.1.1** (replacing **12** with the number you noted in the previous step).
   9. Type **install-addsforest –domainname COMPANY.PRI –installdns** and press Enter.
   10. Type **Pa$$w0rd** and press Enter.
   11. Type **Pa$$w0rd** and press Enter.
   12. Type **Y** and press Enter.
   13. Several warnings will be displayed that can be safely ignored.
   14. When the computer restarts, log on as Administrator by using password **Pa$$w0rd**
   15. Type **powershell** and press Enter.
   16. In the Windows PowerShell window, type **Set-NetFirewallProfile -Name Domain,Public,Private -Enable False** and press Enter.
   17. When you have finished setting up the other 2 virtual machines, type **stop-computer** and press Enter. This will shut down the virtual machine, and you are finished setting it up.

# Setup MEMBER

1. Configure the Virtual Machine
   1. In Hyper-V Manager, select the Action menu to New > Virtual Machine.
   2. On the Before You Begin page, click Next.
   3. On the Specify Name and Location page, enter "MEMBER".
      1. Select the "Store the virtual machine in a different location" and enter "C:\Program Files\Microsoft Learning\55039".
      2. Click Next.
   4. On the Assign Memory page, enter "1024" and click Next.
   5. On the Configure Networking page, select "Private Network" and click Next.
   6. On the Connect Virtual Hard Disk page, click Next.
   7. On the Installation Options page, select "Install an operating system from a boot CD/DVD-  ROM".
      1. Select the "Image file (.iso):" option and click Browse.
      2. Locate the Windows Server 2012 ISO image and click Open.
      3. Click Next.
      4. On the Completing the New Virtual Machine Wizard, click Finish.
2. Install Windows Server 2012 Server Core
   1. In Hyper-V Manager, right-click MEMBER and select Connect.
   2. In the Action menu, select Start.
   3. On the Windows Setup dialog, click Next.
   4. Click "Install Now".
   5. Enter a valid Windows Server 2012 product key and click Next.
   6. If a page with "Select the operating system you want to install" appears, select the "Server Core" option and click Next.
   7. On the License terms page, select "I accept the license terms" and click Next.
   8. On the next page, select "Custom: Install Windows only (advanced)".
   9. On the "Where do you want to install Windows?" page, select “Drive 0 Unallocated Space” and  click Next.
   10. After several minutes and a reboot, the Settings page appears. Set the Administrator password  to "Pa$$w0rd ".
   11. Log into the server as Administrator.
3. Configure the Server
   1. Type **powershell** and press Enter.
   2. Type **update-help** and press Enter.
   3. Type **rename-computer –newname MEMBER –restart** and press Enter.
   4. When the computer restarts, log on as Administrator by using password **Pa$$w0rd**
   5. Type **powershell** and press Enter.
   6. Type **get-netadapter** and press Enter. Make a note of the number shown in the ifIndex column for the Ethernet adapter.
   7. Type **new-netipaddress –ipaddress 10.0.1.3 –interfaceindex 12 –prefixlength 24 –default 10.0.1.1** (replacing **12** with the number you noted in the previous step).
   8. Type **set-dnsclientserveraddress –interfaceindex 12 –serveraddress 10.0.1.2** (replacing **12** with the number you noted in step 28)
   9. Type **add-computer –domainname COMPANY.PRI** and press Enter.
   10. In the dialog box, enter the following and press Enter:
       1. User name: **COMPANY\Administrator**
       2. Password: **Pa$$w0rd**
   11. Type **restart-computer** and press Enter.
   12. When the computer restarts, log on as Administrator by using password **Pa$$w0rd**
   13. Type **powershell** and press Enter.
   14. In the Windows PowerShell window, type **Set-NetFirewallProfile -Name Domain,Public,Private -Enable False** and press Enter.
   15. Type **stop-computer** and press Enter. This will shut down the virtual machine, and you are finished setting it up.

# Setup CLIENT

1. Configure the virtual machine
   1. In Hyper-V Manager, choose the Action menu to New > Virtual Machine.
   2. On the Before You Begin page, click Next.
   3. On the Specify Name and Location page, enter "CLIENT".
      1. Select the "Store the virtual machine in a different location" and enter "C:\Program Files\Microsoft Learning\55039".
      2. Click Next.
   4. On the Assign Memory page, enter "2048" and click Next.
   5. On the Configure Networking page, select "Private Network" and click Next.
   6. On the Connect Virtual Hard Disk page, click Next.
   7. On the Installation Options page, select "Install an operating system from a boot CD/DVD-  ROM".
      1. Select the "Image file (.iso):" option and click Browse.
      2. Locate the Windows 8 ISO image and click Open.
      3. Click Next.
   8. On the Completing the New Virtual Machine Wizard, click Finish.
   9. In Hyper-V Manager, right-click CLIENT and select Settings.
   10. In the Hardware section, click “IDE Controller 0”.
   11. On the right, select “DVD Drive” and click “Add”.
   12. On the left, ensure that “DVD Drive” is selected.
   13. Select “Image file:” and click “Browse”.
   14. In the Open dialog box, navigate to C:\Program Files\Microsoft Learning\55039\ and double-click 55039.iso.
   15. Click “OK”.
   16. In Hyper-V Manager, right-click CLIENT and select Connect.
   17. In the Action menu, select Start.
2. Install Windows 8
   1. On the Windows Setup dialog, click Next.
   2. Click "Install Now".
   3. On the License terms page, select "I accept the license terms" and click Next.
   4. On the next page, choose "Custom: Install Windows only (advanced)".
   5. On the "Where do you want to install Windows?" page, click Next.
   6. After several minutes and a reboot, the Personalize page appears. In the PC name box, enter  "CLIENT " and click Next.
   7. On the Settings page, click Customize.
   8. Click "Yes, turn on sharing and connect to devices."
   9. On the "Help protect and update your PC" settings page choose the following:
      1. Windows Update: Don't set up Windows Update (not recommended)
      2. Change the remaining switches to "Off"
      3. Click Next.
   10. On the "Send Microsoft info to help make Windows and apps better" settings page, click Next.
   11. On the "Check online for solutions to problems" settings page, flip all four switches to "Off"  and click Next.
   12. On the "Sign in to your PC" page, click "Sign in without a Microsoft account" in the lower left  corner.
   13. On the next page, click "Local account".
   14. Fill out the form using the following:
       1. User Name: Student
       2. Password: Pa$$w0rd
       3. Reenter password: Pa$$w0rd
       4. Password hint: Same as the others
   15. Click “Finish.”
3. Configure Windows 8
   1. On the Start screen, type **power** and right-click the Windows PowerShell icon. Click “Run as Administrator.”
   2. Click Yes.
   3. Type **mkdir c:\help** and press Enter.
   4. Type **copy d:\help.zip c:\help** and press Enter.
   5. Type **explorer c:\help** and press Enter.
   6. Right-click **help.zip** and select **Extract all…**
      1. For the path, enter **C:\help**
      2. Uncheck **Show extracted files when complete**
      3. Click **Extract**
      4. Close the Explorer window
   7. Type **update-help –force –source c:\help\help\** and press Enter. Allow the command several minutes to complete.
      1. Note: If the CLIENT virtual machine DVD-ROM drive is not D:, then substitute the correct drive letter for D: in the Update-Help command.
   8. Type **get-netadapter** and press Enter. Make a note of the number shown in the ifIndex column for the Ethernet adapter.
   9. Type **new-netipaddress –ipaddress 10.0.1.4 –interfaceindex 12 –prefixlength 24 –default 10.0.1.1** (replacing **12** with the number you noted in the previous step).
   10. Type **set-dnsclientserveraddress –interfaceindex 12 –serveraddress 10.0.1.2** (replacing **12** with the number you noted above).
   11. Type **add-computer –domainname COMPANY.PRI** and press Enter.
   12. In the dialog box, enter the following and press Enter:
       1. User name: **COMPANY\Administrator**
       2. Password: **Pa$$w0rd**
   13. Type **restart-computer** and press Enter
   14. Click the screen.
   15. Click the left-arrow icon and click “Other user”
   16. Type the following and press Enter:
       1. User name: **COMPANY\Administrator**
       2. Password: **Pa$$w0rd**
   17. Press Windows+I
   18. Click Power, and click Shut Down.
   19. You are finished setting up this virtual machine.

# Final Steps

After all VMs are built and shut down, take snapshots prior to imaging the host machine. Rename each snapshot, “Starting Image”.