Server Configuration
Lab13
Installing Domain Controllers
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topology</td>
<td>3</td>
</tr>
<tr>
<td>1. Domain Controllers</td>
<td>4</td>
</tr>
<tr>
<td>1.1 Removing Clients from the Domain</td>
<td>4</td>
</tr>
<tr>
<td>1.2 Removing the Domain Controller Role</td>
<td>13</td>
</tr>
<tr>
<td>2. Building a domain</td>
<td>24</td>
</tr>
<tr>
<td>2.1 Installing Active Directory Domain Services</td>
<td>24</td>
</tr>
<tr>
<td>2.2 Upgrade to a Domain Controller</td>
<td>29</td>
</tr>
<tr>
<td>3. Server Core</td>
<td>37</td>
</tr>
<tr>
<td>3.1 Install Active Directory Domain Services on Server Core</td>
<td>37</td>
</tr>
<tr>
<td>4. Research (Optional)</td>
<td>42</td>
</tr>
<tr>
<td>References</td>
<td>42</td>
</tr>
</tbody>
</table>
Topology
1 Domain Controllers

Domain Controllers are the computers that control all the authentication and security policies on a network.

1.1 Removing Clients from the Domain

(Note: We first need to deconstruct the existing lab Domain.)

1. Open a console to the WIN7 machine, click “PC > Send CTRL+ALT+DEL”.

2. Type **P@ssw0rd1** as the administrator password and hit “Enter”.

![Console screenshot showing logon credentials being entered](image-url)
3. Left click the start button, and type **sysdm.cpl** in the search box. Click on the sysdm.cpl link that shows up under Programs.

4. On the System Properties window, click the “Change” button.
5. Select the radio button next to “Workgroup” and type the name WORKGROUP in the box below. Click “Ok”.

6. Click “Ok” after reading the instruction on leaving the domain.

7. Click “Ok”.
8. Click “Ok”.

![Computer Name/Domain Changes]

9. Click “Close”.

![System Properties]
10. Click “Restart Now”.

![Microsoft Windows restart prompt]

11. Open a console to the WIN8-1 machine, click anywhere on the screen to bring up the login prompt.

![Login prompt]

12. Type `P@ssw0rd1` as the administrator password and hit “Enter”.

![Password entry]

This work by Florida State College at Jacksonville is licensed under a Creative Commons Attribution-NonComercial-ShareAlike 4.0 International License.
13. On the Metro screen, begin typing `sysdm.cpl`. Select the `sysdm.cpl` search result.

14. On the System Properties window, click the “Change” button.
15. On the “Computer Name/Domain Changes” window, select the radio button next to Workgroup and type WORKGROUP in the box below. Click “Ok”.

16. Click “Ok”.

This work by Florida State College at Jacksonville is licensed under a Creative Commons Attribution-NonComercial-ShareAlike 4.0 International License.
17. Click “Ok”.

18. Click “Ok”.

![Computer Name/Domain Changes](image)

**Computer Name/Domain Changes**

Welcome to the WORKGROUP workgroup.

[OK button]

![Computer Name/Domain Changes](image)

**Computer Name/Domain Changes**

You must restart your computer to apply these changes

Before restarting, save any open files and close all programs.

[OK button]
19. Click “Close”.

20. Click “Restart Now”.

You must restart your computer to apply these changes

Before restarting, save any open files and close all programs.

[Windows restart dialog box]

This work by Florida State College at Jacksonville is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License.
1.2 Removing the Domain Controller Role

1. Open the Windows W2K12R2-ADDC server by clicking the icon in the topology. Click “PC > Send CTRL+ALT+DEL”.

2. Type `P@ssw0rd1` as the administrator password and hit “Enter”.

3. On the “Server Manager – Dashboard”, navigate to “Manage > Remove Roles and Features”.

This work by Florida State College at Jacksonville is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License.
4. On the “Before you Begin” page, click “Next”.

5. On the “Server Selection” page, click “Next”.

6. On the “Server Roles” page, uncheck “Active Directory Domain Services”.
7. Click “Remove Features”.

![Remove Roles and Features Wizard](image)

8. On the “Validation Results” window, click on “Demote this domain controller”.

![Validation Results](image)

(Note: This warning is stating that the Domain Controller must be demoted before Active Directory can be uninstalled.)
9. On the “Credentials” window, place a check by “Last domain controller in the domain” and click “Next”.

10. On the “Warnings” page, click “Proceed with removal” and click “Next”.

11. On the “Removal Options”, place a check by “Remove this DNS zone” and “Remove application partitions”. Click “Next”.

This work by Florida State College at Jacksonville is licensed under a Creative Commons Attribution-NonComercial-ShareAlike 4.0 International License.
12. On the “New Administrator Password” window, type **Password1** for the password and confirm password. Click “Next”.

14. Once the W2k12R2-ADDC machine reboots, click “PC > Send CTRL+ALT+DEL” and enter the password **Password1**.

![Password Entry]

15. On the “Server Manager – Dashboard”, navigate to “Manage > Remove Roles and Features”.

![Remove Roles and Features]

16. On the “Before you Begin” page, click “Next”.

![Before you Begin]

This work by Florida State College at Jacksonville is licensed under a Creative Commons Attribution-NonComercial-ShareAlike 4.0 International License.
17. On the “Server Selection” page, click “Next”.

18. On the “Server Roles” page, uncheck “Active Directory”.

This work by Florida State College at Jacksonville is licensed under a Creative Commons Attribution-NonComercial-ShareAlike 4.0 International License.
19. Click “Remove Features”.

20. On the “Server Roles” page, uncheck “DNS Server”.

This work by Florida State College at Jacksonville is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License.
21. Click “Remove Features”.

22. On the “Server Roles” page, click “Next”.

![Remove Roles and Features Wizard]

![Remove server roles]

This work by Florida State College at Jacksonville is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License.
23. On the “Features” page, click “Next”.

24. On the “Confirmation” page, click “Remove”.

This work by Florida State College at Jacksonville is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License.
25. On the “Results” page, after the removal is complete, click “Close”.

![Removal progress](image)

26. Right click the start button, select “Shut down or sign out > Restart”.

![Shut down or sign out](image)

27. Click the drop down, select “Other (Planned)” and click “Continue”.

![Select reason](image)
2 Building a Domain

Proper planning before building a domain is key to saving time and money.

2.1 Installing Active Directory Domain Services

1. Open the Windows W2K12R2-ADDC server by clicking the icon in the topology. Click “PC > Send CTRL+ALT+DEL”.

2. Type Password1 as the administrator password and hit “Enter”.

3. On the “Server Manager – Dashboard”, navigate to “Manage > Add Roles and Features”.

This work by Florida State College at Jacksonville is licensed under a Creative Commons Attribution-NonComercial-ShareAlike 4.0 International License.
4. On the “Before you Begin” page, click “Next”.

5. On the “Installation Type” page, click “Next”.

6. On the “Server Selection” page, click “Next”.
7. On the “Server Roles” page, place a check by “Active Directory Domain Services”.

![Screenshot of selecting Server Roles](image1.png)

8. A “Roles and Features” window will pop up. Click “Add Features” to add the features.

![Screenshot of Add Roles and Features Wizard](image2.png)
9. On the “Server Roles” page, click “Next”.

10. On the “Features” page, click “Next”.
11. On the “AD DS” page, read the information about Active Directory Domain Services and click “Next”.

12. On the “Confirmation” page, click “Install”.

---

This work by Florida State College at Jacksonville is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-nc-sa/4.0/).
13. On the “Results” page, click “Close”.

2.2 Upgrading to a Domain Controller

1. On the “Server Manager – Dashboard”, click the warning triangle in the navigation bar and select “Promote this server to a domain controller”.

![Promote this server to a domain controller](image)
2. On the “Deployment Configuration” page, select the radio button next to “Add a new forest” and type **mydomain.local** as the root domain name. Click “Next”.

![Deployment Configuration](image)

3. On the “Domain Controller Options” page, type the **P@ssw0rd1** as the password and confirm password then click “Next”.

![Domain Controller Options](image)
4. On the “DNS Options” page, click “Next”.

5. The “Additional Options” page will auto-fill the NetBIOS name. Click “Next”.

6. On the “Paths” page, leave the defaults and click “Next”.
7. On the “Review Options” page, click “Next”.

8. Once the prerequisites have passed, click “Install”.

10. On the W2K12R2-ADDC machine, click “PC > Send CTRL+ALT+DEL”.

11. Click the arrow to the left to change users.
12. Select “Other User”.

13. To log in type **mydomain\administrator** as the user name and **Password1** as the password and hit “Enter”.

15. On the “DNS Manager” window, expand W2k12r2-ADDC, expand Forward Lookup Zones and expand mydomain.local. The DNS Server Role was installed at the same time as the Domain Controller upgrade. Close the “DNS Manager” window.


![Active Directory Users and Computers](image)
17. On the “Active Directory Users and Computers” window, expand mydomain.local, and click on the “Users” folder.

18. Right click on Administrator and select “Reset Password”.

19. Type P@ssw0rd1 for the new password and confirm password and click “Ok”.
20. Click “Ok”.

3 Server Core

Server Core will have the same capabilities as a Domain Controller with a GUI, but without the processing needed to support the GUI.

3.1 Install Active Directory Domain Services on Server Core

1. Open the Windows W2K12R2-CORE server by clicking the icon in the topology. Click “PC > Send CTRL+ALT+DEL”.

2. Type **Password1** as the administrator password and hit “Enter”.

---

This work by Florida State College at Jacksonville is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License.
3. On the command prompt, type `powershell.exe` and hit “Enter”.

```
C:\Users\Administrator>powershell.exe
Windows PowerShell
Copyright (C) 2013 Microsoft Corporation. All rights reserved.
```

4. Join W2K12R2-CORE to the domain you created by typing `add-computer -domainname mydomain.local` and hit “Enter”.

```
PS C:\Users\Administrator> add-computer -domainname mydomain.local
```

5. On the security prompt, enter the Domain Administrator credentials. Type `administrator` for the user name and `P@ssw0rd1` as the password. Click “OK”.

```
Windows PowerShell credential request [x]

Enter your credentials.

User name: administrator
Password: ********

OK Cancel
```

6. After the warning prompt, type `restart-computer` and hit “Enter”.

```
WARNING: The changes will take effect after you restart the computer
W2K12R2-CORE
PS C:\Users\Administrator> restart-computer
```
7. On the W2K12-CORE machine, click “PC > Send CTRL+ALT+DEL”.

8. Click the arrow to the left to change users.

9. Click on “Other User”.
10. Log in using the domain administrator credentials. Type `mydomain\administrator` as the user name and `P@ssw0rd1` as the password.

11. On the command prompt, type `powershell.exe` and hit “Enter”.

```
C:\Users\administrator.MYDOMAIN>powershell.exe
Windows PowerShell
Copyright (C) 2013 Microsoft Corporation. All rights reserved.
PS C:\Users\administrator.MYDOMAIN> _
```

12. Type the following powershell command to install Active Directory Domain Services.

```
Install-WindowsFeature AD-Domain-Services -IncludeManagementTools
```

13. Type the following powershell command to promote the server to a Domain Controller.

```
Install-ADDSDomainController -DomainName mydomain.local
```

14. When prompted, type the password “P@ssw0rd1” and confirm with “P@ssw0rd1”.

```
PS C:\Users\administrator.MYDOMAIN> Install-ADDSDomainController -DomainName mydomain.local
SafeModeAdministratorPassword: **********
Confirm SafeModeAdministratorPassword: **********
```
15. Type “Y” to confirm the server to be configured as a domain controller. Hit “Enter”.


18. On the “Active Directory Users and Computers” window, expand “mydomain.local” and click on the “Domain Controllers” folder.

19. Both servers are now listed as Domain Controllers.
Take any screenshots and notes required by your instructor and click “I’M DONE” at the top of the topology page. You may complete this lab as many times as you wish by making a new reservation.

4  Research (Optional)

1. Install From Media (IFM)
2. IaaS on Azure
3. DNS SRV record registration issues

References

1. Active Directory Domain Services Overview
2. AD DS Deployment Cmdlets in Windows PowerShell
3. Build and Deploy the Second Domain Controller