# Overview

There are times when a domain controller will need to have the AD domain services role removed. This may be for a domain redesign, consolidation, or just to replace the server. In this lab, you will demote a domain controller as part of a domain restructuring.

# Objectives

* Be able to demote a domain controller.
* Be able to move AD objects within a domain.
* Be able to move AD objects to a new domain.
* Be able to add a domain controller to an existing domain.

# Prerequisites

* Lab – Implementing an AD Logical Design is complete
* Lab – Creating an Additional Domain Tree is complete

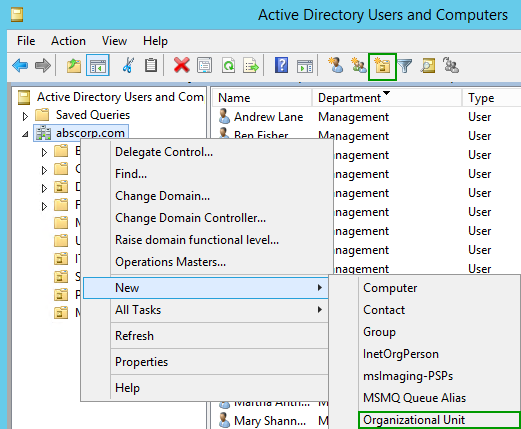
# Scenario

The original reason for creating the Research domain was due to the stricter password policies required. Since Windows Server 2008, it has been simple to create and implement password policies that apply to groups and not the entire domain.

To implement the domain restructure, you will be required to reorganize your OU structure in the **ABSCorp** domain so that it is based on a geographic location🡪department structure. You will then move the OUs and users in the **Abscorp** domain and the research domain to their new locations. You will then demote the research domain controller and add it as an additional domain controller in the **Abscorp** domain.

# Tasks

## Reorganizing the ABSCorp logical design

Your organization has decided to implement a Geographical🡪Department design for your OU structure. This requires that you have an OU for each location in your domain.

To create an OU for the Greenville location, perform the following:

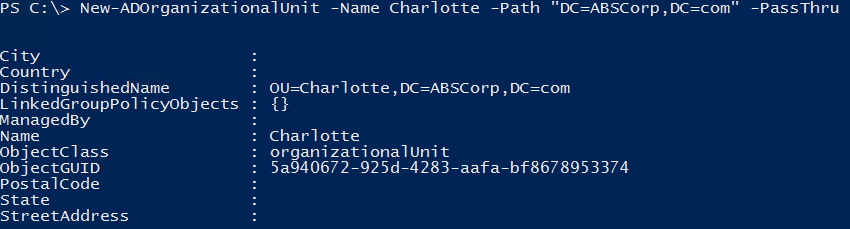
1. **Login** to the **CIS256-DC1** virtual machine
2. Open **AD Users and Computers**
3. Right-click the **abscorp.com** domain node and **select New🡪Organizational Unit** from the context menu.
4. In the **Name** text box of the **New Object – Organizational Unit** dialog box type **Greenville**

To create an OU for Charlotte, perform the following:

1. Open a PowerShell session with administrative rights and type the following:

New-ADOrganizationalUnit -Name Charlotte -Path "DC=ABSCorp,DC=com" -PassThru

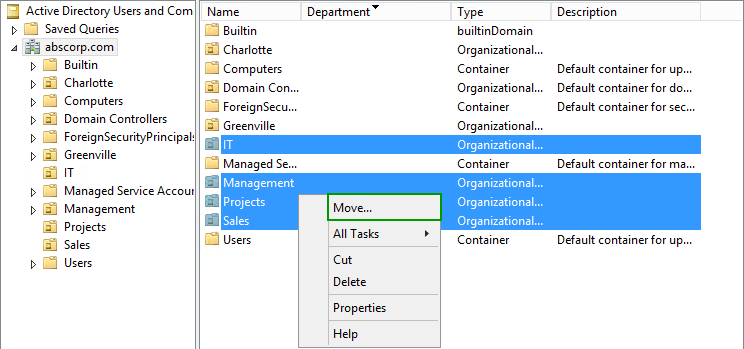
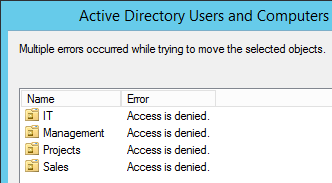
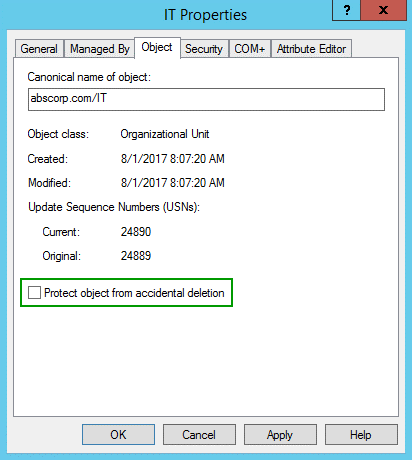
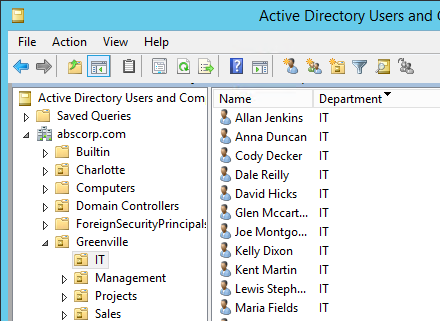
The **-PassThru** option will send output to the screen that is normally suppressed. This gives you feedback about what the command did. The output of the command is shown below.



## Moving AD Objects

Now that the Greenville and Charlotte OUs are created, we need to move the department OUs for each location into their respective OUs.

To move the Greenville department OUs into the Greenville OU, perform the following:

1. Open **AD Users and Computers**
2. Select the **domain** node. This will allow you to see all the OUs in the details pane.
3. Select the **IT**, **Management**, **Projects**, and **Sales** OUs by holding down the **CTRL** key and **clicking** on each.
4. With all the OUs selected, right-click and **select** **Move**… from the context menu. In the **Move** dialog box, select the **Greenville OU** and click the **OK** button. You will get an error that says Access is denied as shown in the figure.
   1. This is because to move the OUs you must copy them to the new location and delete them from their existing location. By default, OUs are protected from accidental deletion.
5. To configure the OUs to allow you to move or delete them, perform the following:
   1. Select the **Advanced Features** from the **View** **menu**. This will show portions of Active Directory that are normally hidden.
   2. Right-click the **IT** OU and select **Properties.**
   3. Select the **Object** tab and uncheck the **Protect object from accidental deletion** option as shown in the figure.
   4. Repeat the steps above for the **Management**, **Projects**, and **Sales** OUs.
6. Move the **IT**, **Management**, **Projects**, and **Sales** OUs to the **Greenville** OU using the previous procedure. It should work this time.
7. Verify that the **users** are still in their respective OUs.

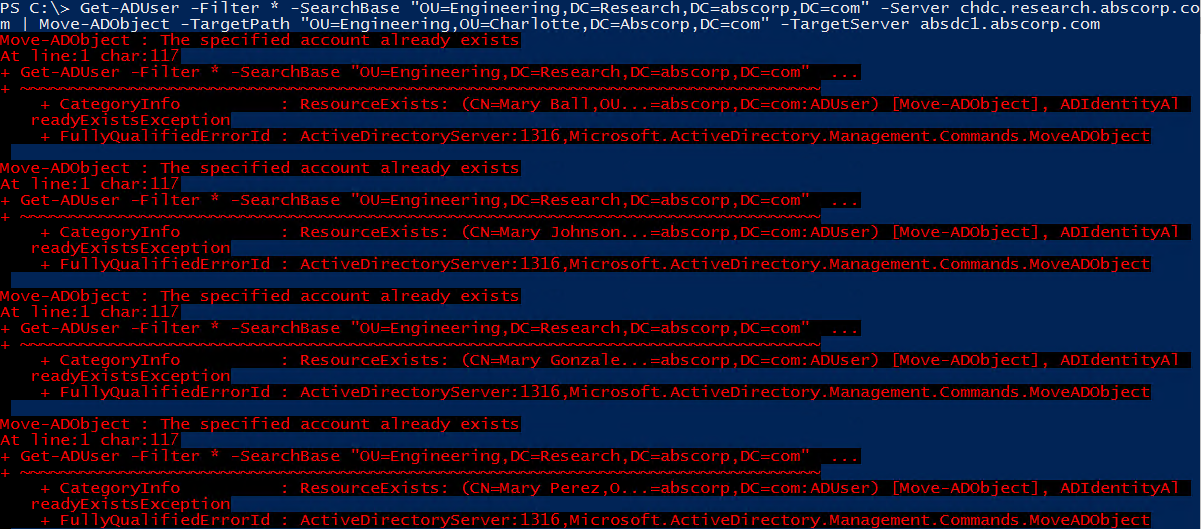
Move the OUs from the **Research** domain to the Charlotte OU perform the following:

1. Loginto the **CIS256-DC1** virtual machine using the **abscorp\administrator** account.
2. Open a **PowerShell** session with **administrative** rights.
3. Type the following command to create the OUs in **ABSCorp**.

“Engineering”,”IT”,”Management” | Foreach-Object {New-ADOrganizationalUnit -Name $\_ -Path “OU=Charlotte,DC=ABSCorp,DC=com”}

1. Type the following command to move the users from the **Engineering** OU in the **Research** domain to the **Engineering** OU in the **ABSCorp** domain.

Get-ADUser -Filter \* -SearchBase "OU=Engineering,DC=Research,DC=abscorp,DC=com" -Server chdc.research.abscorp.com | Move-ADObject -TargetPath "OU=Engineering,OU=Charlotte,DC=Abscorp,DC=com" -TargetServer absdc1.abscorp.com

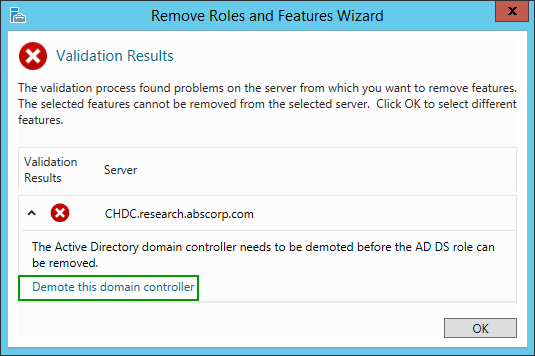
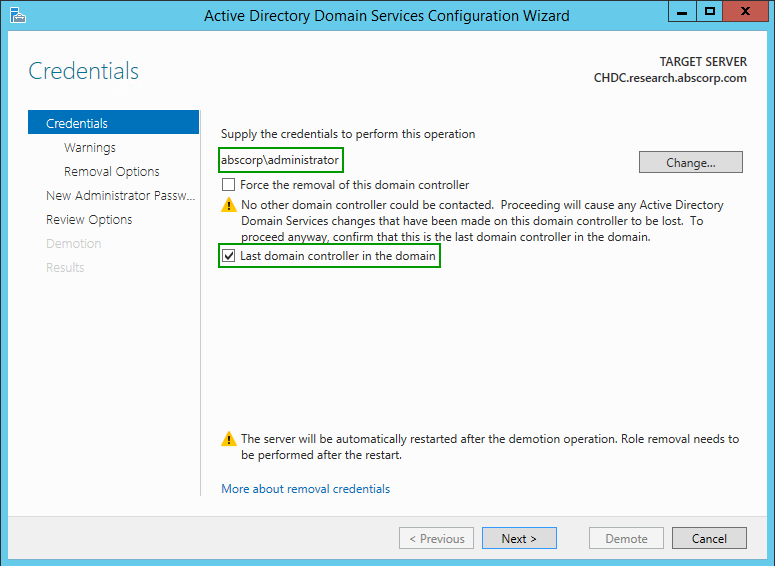
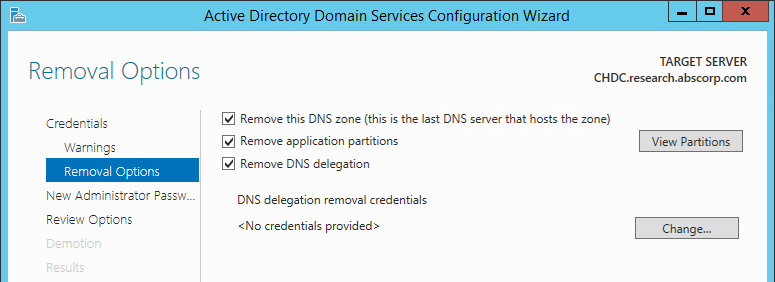
1. Your output should look like the screen below. Note: some objects will not move because of naming conflicts. Normally we would fix these but for the purpose of the lab we will just ignore the errors.
2. Modify the **command** above to move the users from the **IT** and **Management** OUs in the **Research** domain to their OUs in the **ABSCorp** domain.
3. Open **AD Users and Computers** and verify that the users were moved.

## Move the Schema Master role

The CHDC server holds the schema master role for the forest. Before demoting the domain controller, you should **move** the **Schema Master** **role** back **to** **ABSDC1** using the guidance from the previous labs.

## Removing Active Directory

You are now ready to remove research domain from the **CIS256**-**DC2** server. To do this perform the following:

1. Login to the **CIS256**-**DC2** virtual machine as the **abscorp\administrator.**
2. **Important:** Use the PowerShell command **Get-AdForest** to verify that CHDC does not contain any forest-wide operations master role.
3. **Open Server Manager** and **start** the **Remove Roles and Features** wizard **from** the **Manage** menu.
4. **Attempt** to **remove** the **AD Domain Services role**
5. You will be prompted that you must Demote this domain controller and are provided a link as shown in the figure to launch the **Active Directory Domain Services Configuration** wizard. **Click** the **Demote this domain controller** link.
6. On the **Credentials** page, verify that **abscorp\administrator** is shown and select **Last domain controller in the domain** option as shown below and then click the **Next** button.
7. On the **Warnings** page, select the **Proceed** **with removal** option and then click the **Next** button.
8. On the **Removal Options** page, select all the options as shown in the figure below and then **click** the **Next** button.
9. On the **New Administrator Password** page, type **Password1** twice and then click the **Demote** button.
10. On the **Review Options** page, review the selections and then click the **Demote** button.
11. When the wizard is complete, your system will reboot.

## Adding an additional domain controller to a domain

It is recommended that you have at least two domain controllers in every domain for reliability. Your organization has decided to add the **CHDC** as an additional domain controller in the **Abscorp** domain.

To add the CHDC machine as an additional domain controller in the **Abscorp** domain, perform the following:

1. Login to the **CIS256-DC2** virtual machine as the local **administrator**.
2. Verify that you have network connectivity to **absdc1.abscorp.com.**
3. Join **CHDC** to the **abscorp**.**com** domain.
4. After the server restarts, login to the server using the **ABSadmin** account.
5. In **Server Manager**, click the link in the **Notifications** for the **Post-deployment Configuration for AD Domain Services** and select the **Promote this server to a domain controller** link.
6. Perform an Active Directory installation with the following settings:
   1. Deployment operation: **Add a domain controller to an existing domain.**
   2. Domain: **abscorp**.**com**
   3. DSRM password: **Password1**
   4. All other settings are left at their defaults.
7. After the system reboots**,** login to **CHDC (CIS256-DC2)** as the **absadmin** and transfer the **Infrastructure Master** role to **CHDC.**
8. Use the **Get-AdDomain** cmdlet to verify that the Infrastructure Master was moved to CHDC.

## Submission Requirements

1. **Download** the **grading** **script** from the assignment page to the **C:\Scripts** folder.
2. Check your lab by running the following command:

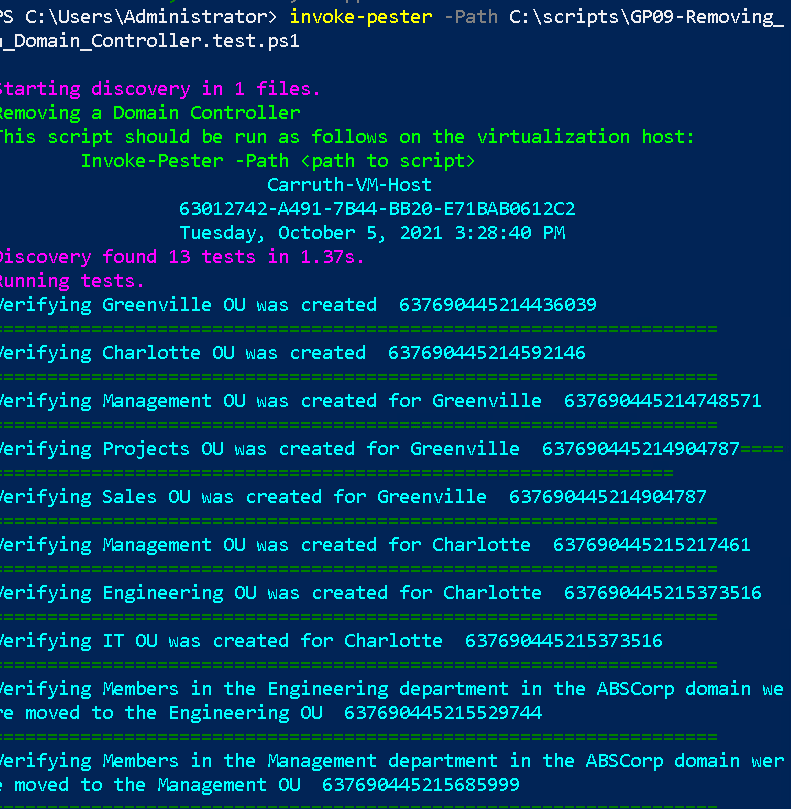
Invoke-Pester -Path C:\Scripts\GP09-Removing\_a\_Domain\_ Controller.test.ps1

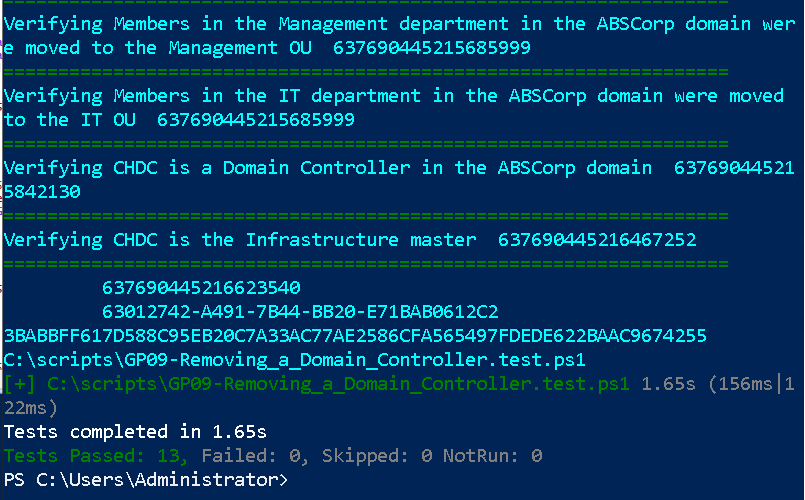
**Note**: You will see a security warning when running the script. Enter **R** to run the script.

If you want to see more detail, add **-Output Detailed** to the command. This may assist you with troubleshooting

Invoke-Pester -Path C:\Scripts\GP09-Removing\_a\_Domain\_ Controller.test.ps1 -Output Detailed

1. You should not see any red in the output. Red in the PowerShell way of telling you that an error condition exists. Most of the time, the output will tell you what is wrong. If it is not obvious, contact your teacher and ask for assistance. You will be learning PowerShell during this term. **Correct** any **errors** you may have and run the script until all the output has no red. You should see the output like the images below.





1. Capture a snippet that shows the PowerShell Command and all its output. If you must use more than one snippet to capture the output, you must have at least **one line of overlap** in the snippets. The text in the snippets **must be legible** when pasted into the Word document. Paste the snippet(s) into a **new** **Word** **document.**
2. **Upload** the **document** in the submission area for the assignment.