Lab 7 - Using PowerShell for bulk user creation

Lab Objective

You will write a PowerShell script that reads user details from a **CSV file** and automatically creates users, assigns them to the correct Organizational Unit (OU), and adds them to a department-based security group in **Active Directory (AD)**.

This lab will help students practice **Active Directory automation, scripting, and PowerShell fundamentals**.

Lab Requirements

- Servers: **DC1XX (Windows Server 2022, DC for vlabsXX.com).**

- A **CSV** file containing user details **(FIRST NAME;LAST NAME;DEPARTEMENT).**

Tasks

1- Use the CSV File

- Copy the **users.csv** file in the **C:\ drive.**

- Read the **users.csv** file and ensure that:

    o The **first line** contains exactly the headers **FIRST NAME, LAST NAME, and DEPARTEMENT**, in that order, separated by **semicolons (;).**

    o Each subsequent line represents a user, with fields also separated by **semicolons (;).**

2- Use the PowerShell Script addusers.ps1 to automate user creation

- Open **Windows PowerShell ISE.**

- Copy the contents of **addusers.ps1** into the editor.

- **Important:** You must modify the script to reflect your actual domain name.

- Save the file with the new name **addusers.ps1** in the **C:\ drive.**

- Ensure the script reads the correct file: **users.csv**

- Read the script and **understand its logic**, and ensure it will perform these tasks:

  o Reads each line from **users.csv** using the **Import-Csv** cmdlet with **;** as a delimiter.

  o Extracts the values for **FIRST NAME, LAST NAME, and DEPARTEMENT** from each line.

  o Constructs the username by combining the first letter of the first name with the full last name, all in lowercase **(e.g., Alice Martin → amartin).**

  o Creates a **new Organizational Unit (OU)** for each department if it doesn't already exist, using **New-ADOrganizationalUnit.**

  o Creates an Active Directory user account with:

    ▪ The generated username.

    ▪ The GivenName, Surname, and Department attributes set from the CSV.

    ▪ A default password and the -Enabled flag set to true.

  o Places each user in the appropriate OU, named after their department.

  o Verifies the existence of the OU for each department in Active Directory or creates it if missing.

  o Verifies that the user account has been created in the corresponding OU.

  o Create a security group for each department (if not already present) and add the user to the corresponding department group.

  o Expected result for each user:

    ▪ The account is created in Active Directory.

    ▪ Located under the correct Organizational Unit (OU).

    ▪ The attributes GivenName, Surname, and Department are properly assigned.

    ▪ The user is a member of the correct departmental group.

    ▪ The username follows the convention: first initial + last name (e.g., jdoe).

- Once you are done with the verification you can **run the script** and confirm **there are no errors in the output**. If errors appear, correct the file formatting in users.csv.

3- Validate OU, User and Group Creation

Verify the following using GUI or PowerShell:

- Check that each department mentioned in the CSV has a corresponding OU in AD. Example: If the department is IT, there should be an OU named IT.

- Confirm that each user from users.csv has been created in AD.

- Verify that the username format is correct: first letter of the first name + full last name (e.g., Alice Martin → amartin).

- Check that the account is in the correct OU (based on the department).

- Confirm that the user accounts are enabled.

- Confirm that a security group should exist for each department (e.g., IT, HR, etc.).

- Group names should match the department names.

- Each user should be a member of the corresponding departmental group.

- Verify that each user account resides in the expected OU path.

Lab Submission:

- A **screenshot of Active Directory** (using **Active Directory Users and Computers**) displaying:

    - The **created Organizational Units (OUs)**.

    - The **users** added to the appropriate OUs.

    - The **security groups** associated with each department.

- A **brief lab report** summarizing your validation process in **Step 3**, including:

    - Confirmation of correct user creation.

    - Verification of attributes (GivenName, Surname, Department).

    - Verification of OU structure and group membership.