Milestone 4 - VCenter AD Integration, PowerCLI and Linked Clones

> 💡In this milestone we are going to begin using an Active Directory login to vcenter. We will also install powershell and powercli on xubuntu-wan and hand extract the base VMs from dc1, xubuntu and vyos

Resources

Watch the following videos in order. Make sure you are documenting as you go, there is no really effective way to retroactively create a record of your work. You may create multiple proof videos as you go or you can just wait until the end and record them in one fell swoop.

- Milestone 4.1 Active Directory LDAPs SSO Provider
  - Supplementary video because the first was truncated
  - General Steps:
    - Set up AD Certificate Authority via **Powershell**
      - Requires DC1 reboot
      - Research this command and it's parameters and include a description breakdown in your techjournal
        ```
        Install-AdcsCertificationAuthority -Credential (Get-Credential)
          -CAType EnterpriseRootCa -CryptoProviderName "RSA#Microsoft Software Key Storage Provi
          -KeyLength 2048 -HashAlgorithmName SHA512
          -ValidityPeriod Years -ValidityPeriodUnits 5
          -CACommonName "filch-local-CA"
        ```
      -
    - Make sure you have "-adm" account in AD
    - Create "accounts" OU structure
    - Create vcenterldap service account
    - Create vcenter-admin AD group (add your -adm useer)
    - Join vcenter to Domain
      - Reboot vcenter appliance (this is not just power on/off VM!)
    - Copy AD cert to xubuntu-wan
      - May require DC1 reboot
    - Add new SSO Provider on vcenter (Active Directory over LDAP)
      - Need the proper "DNs" for users and groups OU's in AD
      - Add your vcenter-admin account to SSO Users and Groups - Administrators in vcenter
- Milestone 4.2 Powershell, PowerCLI and Our First Clone
  - Follow Xubuntu dependencies for Powercli and Ansible on xubuntu-wan
    - https://greenmountaincyber.com/docs/topics/vmware/powercli/xubuntu-dependencies

- - - Powercli to clone DC1 to make a server2019 base VM
      - https://greenmountaincyber.com/docs/topics/vmware/powercli/extracting-snapshots
    - **Repeat steps used for DC1 to make vyos and xubuntu base vms**
  - Milestone 4.3 Ubuntu Server Base VM and Linked Clone
    - Create an Ubuntu 22.04.1 VM based on instructions at: https://greenmountaincyber.com/docs/topics/vmware/base-vms/ubuntu-server
    - Use powercli to make an Ubuntu linked clone
  - Milestone Overview and Proof

Deliverables (1 point)

A professional video demonstration that shows the following deliverables. Make sure to include voice.

Technical Deliverables

From 4.1

- ```
  Deliverable 1.  Show the Active Directory based SSO login
  banner in the upper right corner of vcenter
  ```

From 4.2

- ```
  Deliverable 2.  Show the extracted base VMs from vyos, dc1 and
  xubuntu.  Show the code you used to perform that extraction
  with a sample run.
  ```

4.3

- ```
  Show the awx linked clone.  It should pick up a DHCP ip address
  on 480-WAN
  ```

Milestone Proof

Refer to the following video.

Technical Documentation (1 point)

- Include in your video a walkthrough of all the documentation created in support of this milestone to include a walkthrough of your chronological reflections.