

Setup Active Directory

Active Directory is essential to most enterprise networks. It provides a solution to the management and security of each individual user's identity, what they have access to, and what role they may have within an organization. In addition, it can be used to ensure that devices connecting to our network are approved ones, so that outside/untrusted devices are treated differently.

For this lab, we'll use Active Directory to:

- Have a single point of usernames/passwords to sign in from
- Leverage centralized DNS to access our systems
- Manage our machines on the network

ToDo

You should have a Windows machine you've created that's named DC01. From that machine, complete the following tasks:

- Ensure that the machine's hostname is 'DC01'
- Assign a static IP of 10.1.1.50 (or if you've chosen to use your own subnet, set an appropriate static IP)
- Install the necessary roles/features for the machine to operate as a domain controller
- Promote the machine to a domain controller; name your domain "<YourUsername>.lan"
- Once your domain controller is operational, add a reverse DNS record for your subnet
- Create DNS records for both of your ESXi servers (esx01 and esx02)
- Rename and join your ESX Admin machine to your domain

Once the configuration is completed on each server, a router virtual machine is required to serve as a gateway between our LAN and the WAN. To accomplish this, you need to provision a pfSense virtual machine on *one* of your two ESXi servers. It's up to you to pick which one

- Create a new VM with two network interfaces and appropriate settings for pfSense
- Install the pfSense operating system using the ISO from the ISO datastore
- Once installed, configure pfSense by ensuring the proper interfaces are associated with WAN and LAN by comparing the MAC addresses in pfSense to what is assigned to the virtual machine
- Once interfaces are assigned, swap the default LAN subnet to what we're using, 10.1.1.0/24
- Log into the web interface of pfSense and modify the DHCP settings to use 172.16.3.100 and 172.16.3.101 as the DNS servers

Submissions

- **Submit one screenshot proving that your ESX_Admin machine is connected to your Active Directory domain**
- **Submit one (or two, depending on how your format things) screenshot(s) showing that you can resolve your ESXi server's via their DNS names**