Deploy and Configure Infrastructure VM

# Overview

This exercise consists of deploying and performing post deployment configuration on a Windows Server 2019 VM. This VM will be used as a management workstation to complete labs throughout the course, as well as provide network services required by the lab virtual infrastructure.

Note that this VM needs to be used as the management workstation for labs to be completed correctly since the workstation will be used for the following services:

* Active Directory
  + User Authentication
  + DNS – Domain Name Service
* Management Tools
  + PuTTy – SSH client (MS – Teams download)
  + WinSCP – SFTP client to transfer data to and from virtual environment (MS Teams download)
  + CPU Utilization Script *cpubusy.pl* (MS – Teams download)

# Preparation

Log into the program vSphere virtual infrastructure <https://wtcsit3avc-vcsa03.conestogac.on.ca> using your Conestoga credentials to access the site.

# Deploy a Template to a VM Running Server 2019

In this task, you will create a VM in vSphere by deploying a pre-configured template. This work will be completed from your laptop.

1. In vSphere, right-click your folder, and select **New Virtual Machine...**
2. On the select a creation type page, select **Deploy from template** and click **Next**.
3. Select Data Center, navigate through Template\_VMs folder and Select Widows Server 2019 GUI Template.
4. Use the following to name your virtual machine <conestoga\_ID>-INFRA as your VM name and click **Next**. Example: my user ID is agignac, as such, my VM would be agignac-INFRA.
5. Select your compute resource and click **Next**.
6. Select storage and click **Next**.
7. Select all three given clone options and click **Next**.
8. Select Customize Windows Deployment standard option and click **Next**.
9. Set Network Adapter Settings, Enter <your Subnet address>.100 (based on the excel spreadsheet guide) as the IP address, 255.255.255.0 as the subnet mask, and your Subnet default gateway as prompted for the IP configuration information and click **Next**.
10. Customize hardware, select network adapter. Browse and select your configured network adapter ending with \_01 and click **Next**.
11. Wait for 2 to 3 minutes for the VM to deploy and the customization to take effect. This would be a good time to take a quick break.

# Complete Post Deployment Configuration Tasks

In this task, you will configure networking and download and install required applications. Remember that you must wait until the VM reboots after first boot so that the customization has been applied.

1. Connect to your VM via Remote Desktop. Use Remote Desktop! I DO NOT want to see you using the vSphere console! In the real world, we NEVER use virtual infrastructure consoles to use VMs. They are only there for troubleshooting and initial configuration if necessary.
2. Rename the Ethernet0 network adapter to Production.
3. Download and install the Firefox browser. If you are in love with Chrome you may use it but in my experience, Firefox is better for working with vSphere.
4. Download the Putty application and move it to your desktop.
5. Download and install the WinSCP application.
6. Copy the cpubusy.pl file to your Windows VM desktop. There are a number of ways to do this. You could log into eConestoga from your Windows VM and download it from the course shell. You could download it to your device and copy and paste it to the desktop. You could configure your RDP session to map to your local disk and copy it that way. Your choice.