**Assignment 1: Windows Installation and Installation Types.**

Install Windows 10 Professional into a VMWare virtual machine, stored on your external hard disk drive. Install various software. Create a snapshot, install log and “Gold” copy. Research other installation methods.

**Required Resources**

* Access to VMWare Workstation on College workstation
* Windows 10 Consumer Edition 1809.iso from either of the following locations:

S:\IN Faculty\_Student\Pete Hinton\ISOs\Windows 10 1809  
N:\Faculty\_Student\Pete Hinton\ISOs\Windows 10 1809

* Your external hard disk drive
* Course Resources – Speccy, Notepad++, Naming Convention, Change Management Log, Lines to add to VMX

**Additional Information**

Professional Documentation - All documentation must be done in a *professional style*. It must include:

* Title page
* Updateable Table of Contents
* Document introduction
* Section introductions
* Document summary
* ALL sources and graphics used MUST be properly cited (APA) or credited.

\*\* All scripts must be converted to text before embedding them in your documentation. \*\*

*NB: Citations – Remember that citations MUST be provided for any code, script, test or image copied from another source or used as a resource. Not attributing appropriately (Plagiarism) or using illegal or unlicensed copies (copy write breach) are serious academic offenses. If you have any doubt as to when or how to cite, consult with your instructor and the resources provided by the college.*

<http://www.nscc.ca/docs/about-nscc/policies-procedures/policy-studentcodeofconduct.pdf>

**Evaluation:**

This assignment is worth a total of **55 Marks** as per the Rubric on Brightspace (marks will be deducted for deviating from Requirements). You may be asked to demonstrate some of your assignment to show your comprehension of the material.

**Marking and Assignment Notes:**

* **In Class** **marking** **(Task 1 & 2)** MUST be completed on the due date assigned during the scheduled class.
* **Documentation (Task 3)** must be submitted to Brightspace by 5pm on the due date assigned in Brightspace
* **Automatic mark of 0 - Assignment not submitted or work not original.**
* **Rubric** can be found on Brightspace at the bottom right of the assignment page under ‘Assessment’ or via Assessments 🡪 Rubrics

**Task 1 (In-Class Marking):** Create a new virtual machine following these specifications.

**Specifications for Virtual Machine**

* Do a Typical configuration.
* Select “I will install the operating system later” option.
* Select Windows 10 x64 for your Guest Operating
* Follow your **Naming Convention** for Virtual Machines.
* Set your location to your portable drive.
* Maximum Disk Size should be 60G (split)
* Customize your hardware to meet these specifications.
  + Maximum of 4096 MB of RAM
  + Number of processors: 1
  + Number of cores per processors: 1
* Modify your new Virtual Machine to add these specifications:
  + CD/DVD “Use ISO image file: Select your **Windows 10 Consumer Edition 1809** ISO from portable drive.
  + Add additional: 5g Disk
  + Add additional: 10g Disk
* Modify the Description to list (you will need to read ahead for some of the information required):
  + Operating System:
  + Creation Date:
  + Hostname:
  + Default User Name:
  + Default User Password:

**Task 2 (In-Class Marking):** Create a new **Windows 10 Professional** Workstation following these specifications.

**Specifications (Windows 10 custom “attended” installation)**

* Specify English (United States) for all language options
* Specify “Windows 10 Pro” as the version to install
* If prompted for an activation key, skip for now as we will activate it later
* Do a Custom installation (Advanced)
* Select your Drive 0 for your installation
* Specify Canada as your region
* Keep your Keyboard set to US
* SKIP your second keyboard layout (if required)
* Set up for an organization
* **\*\* Select Domain join instead of signing into a Microsoft account**.
* Create an account for this PC
  + Follow the **Naming Convention** to create your User name (Default User) based on your name
  + Set the password for your default user to “**student**”
  + Configure answers to security questions
* Do **NOT** make Cortana your personal Assistant.
* Select **NO** for all remaining optional features (select **Basic** for diagnostic info)
* Do NOT update your new workstation at this time. There will be some updates that will happen automatically in the background. They can be viewed in your Task Manager.
* Follow the **Naming Convention** to rename your workstation computer name (**Hostname**).
* Modify your Workgroup name to “OSYS”
* Adjust Date and Time to the set the Time zone (if required).
* Activate Windows 10 if required (registration is not necessary)
  + Open the command prompt as an administrator
  + Type/paste in the following to activate Windows (can be done off college network):  
    slmgr.vbs -ipk W269N-WFGWX-YVC9B-4J6C9-T83GX
  + Type/paste in the following to point to the KMS server (can be done off college network):  
    slmgr.vbs -skms 10.13.1.39
  + Type/paste in the following to force the activation request (can ONLY be done on college network):  
    slmgr.vbs -ato
* Do a typical install of VMWare Tools (if required)
* Modify your File Explorer View on both the VM and the host machine.  
  File Explorer – View - Options – Folder Options – View - Advanced Settings to:
  + “Show hidden files, folders or drives”
  + Uncheck “Hide extensions for known file types”
* Install Speccy from S: or N: drive \Pete Hinton or download from <https://www.ccleaner.com/speccy/download/standard>
* Install Notepad++ from S: or N: drive \Pete Hinton or download from <https://notepad-plus-plus.org/download/>
* Install Recommended and Critical Updates but be aware that updating at NSCC will take a significant amount of time.
* In services, turn **Windows Update service Startup Type from “Manual” to “Disabled”** after ALL updates have completed.
* Run Speccy to generate a summary of the final system configuration. Save a snapshot to your desktop, add ‘assignment-1’ to the snapshot name.
* Add lines to the end of your VMX (See Course Resources). For example, e:\NSCC\VMWare\OSYS1200\_VM01\OSYS1200\_VM01.vmx file, edit using either notepad or notepad++.
* Take a VM Snapshot called “Assignment\_1” of your Client in the OFF state.
* **Create a “Gold” copy of your Virtual Machine on your portable drive. (You will need to research what a Gold Copy is and why it is so critical)**
* Complete an Install Log for your new Windows 10 Workstation. In Brightspace under “Content”🡪 “Course Resources” there is a Microsoft Access Database called “ChangeManagementLog” that you can use. Install Log and Change Management Log are just different names for the same thing.

**Task 3 (submit on Brightspace):** Research and understand install methods.

There are several different types of installations available with Windows 10. You have completed an attended clean install. You will now create a professional style (requirements on Page 1) document and complete the following questions and case study.

1. Which utility is used to create answer files for unattended installations?
2. Which utility is used to prepare computers for imaging by removing specific information, such as the computer name and computer SID?
3. Which utility can be used update drivers in an existing Windows 10 image?
4. Which configuration pass is performed by Sysprep?
5. What are the steps required to create an autounattended.xml file?
6. Case Study.
   * Company Inc.’s Technology Division builds over 100 computers per week for customers. The computers use a wide range of hardware depending on whether they are built for gaming, home use, or office use. Create a plan for Company Inc. to start using imaging, including sysprep and audit mode, to install Windows 10 on their new computers.