IT Essentials 5.0

5.2.2.3 Lab - Advanced Installation of Windows 7

Introduction

Print and complete this lab.

In this lab, you will install a Windows 7 operating system by using an answer file for automation. You will customize partition settings and create an Administrator account and User accounts.

Recommended Equipment

The following equipment is required for this exercise:

- A computer with a new installation of Windows 7
- Windows Automated Installation Kit (Windows AIK) installation media
- Windows 7 installation media
- A blank, formatted floppy disk or a USB flash drive

Step 1

Ask the instructor for the following required information for the answer file:

Regional and language settings _____

Windows 7 product key _____

Partition sizes: Primary _____ Logical 1 _____ Logical 2 _____

Administrator account: User name _____

Password _____

User account: User name _____

Password _____

Computer name _____

Registered organization _____

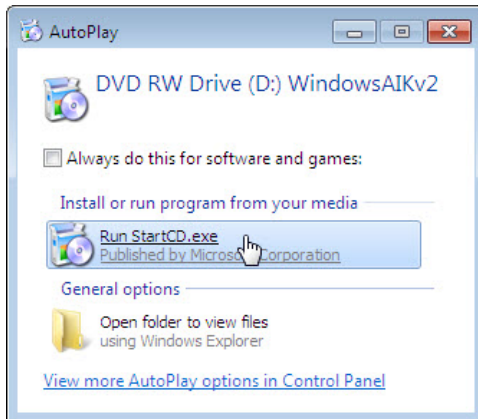Registered owner _____

Time zone _____

Step 2

Log on to the computer as Administrator.

Installation from a DVD-ROM: Insert the Windows Automated Installation Kit (AIK) DVD.

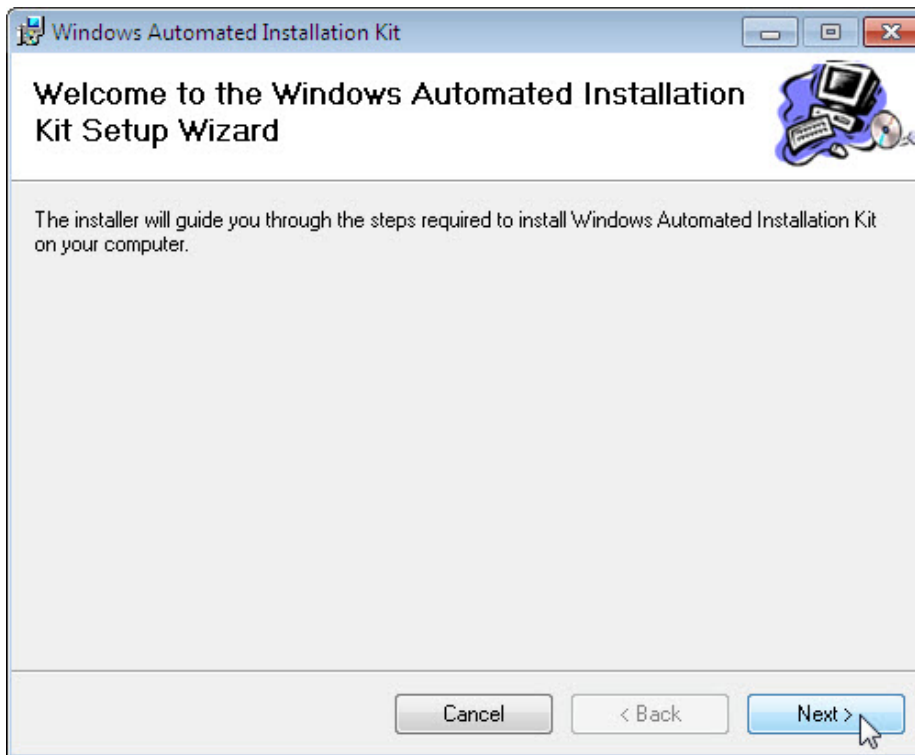When the "AutoPlay" window opens, click **Run StartCD.exe**.

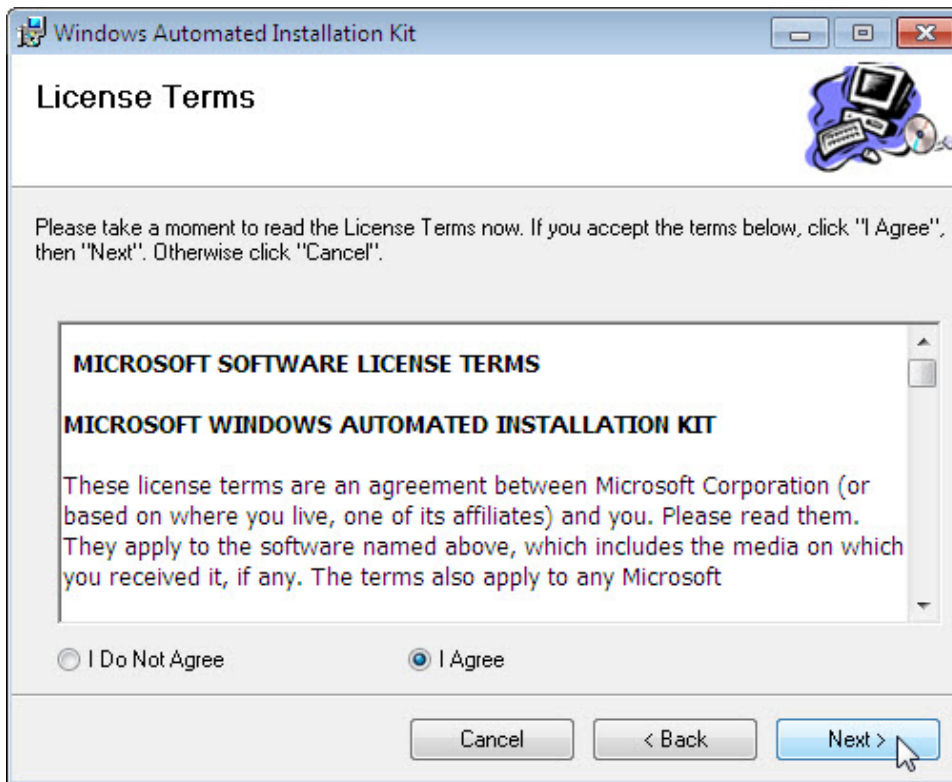Click **Yes** if prompted by User Account Control.

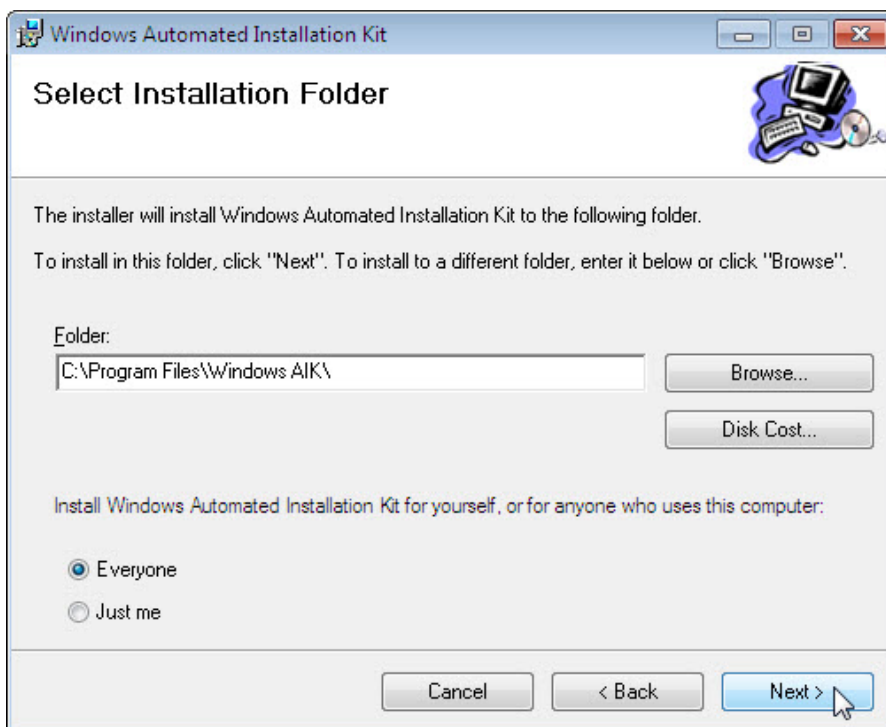The "Welcome to Windows Automated Installation Kit" window opens, click **Windows AIK Setup**.

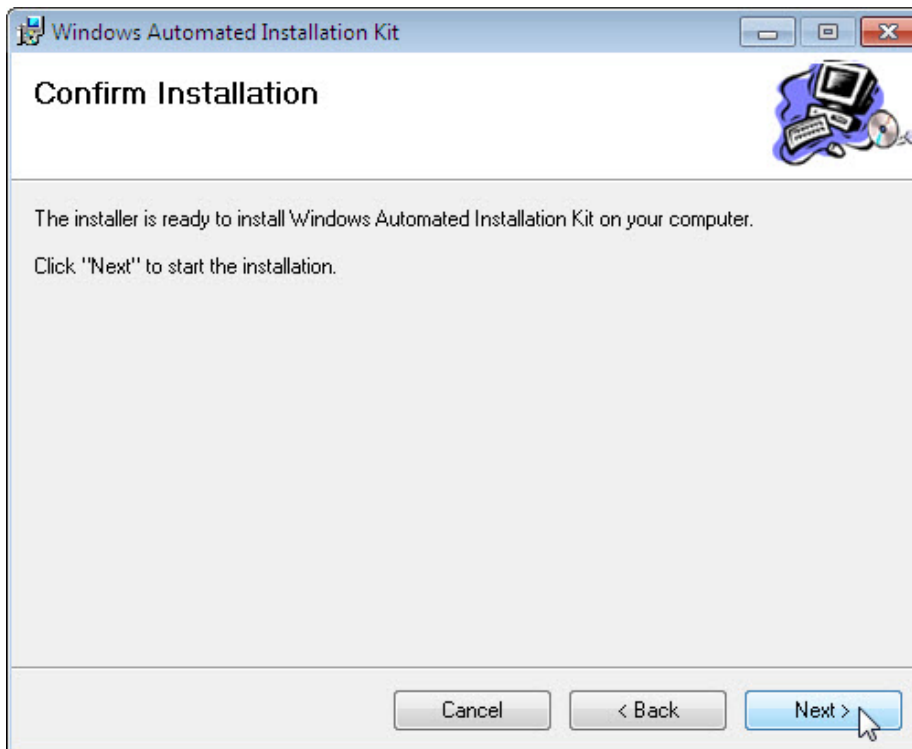When the "Setup Wizard" opens, click **Next**.

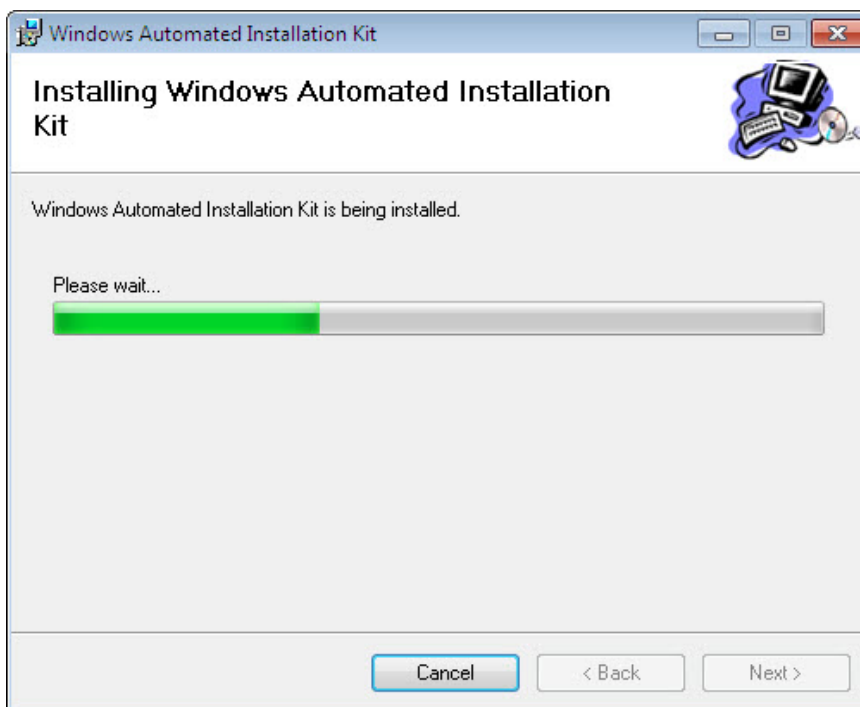Select **I Agree** to license terms and then click **Next**.

For the "Select Installation Folder" window, keep the default settings and click **Next**.

Click **Next** to confirm and start the installation.

A window opens displaying the file installation progress.

When the "Installation Complete" screen appears, click **Close**.
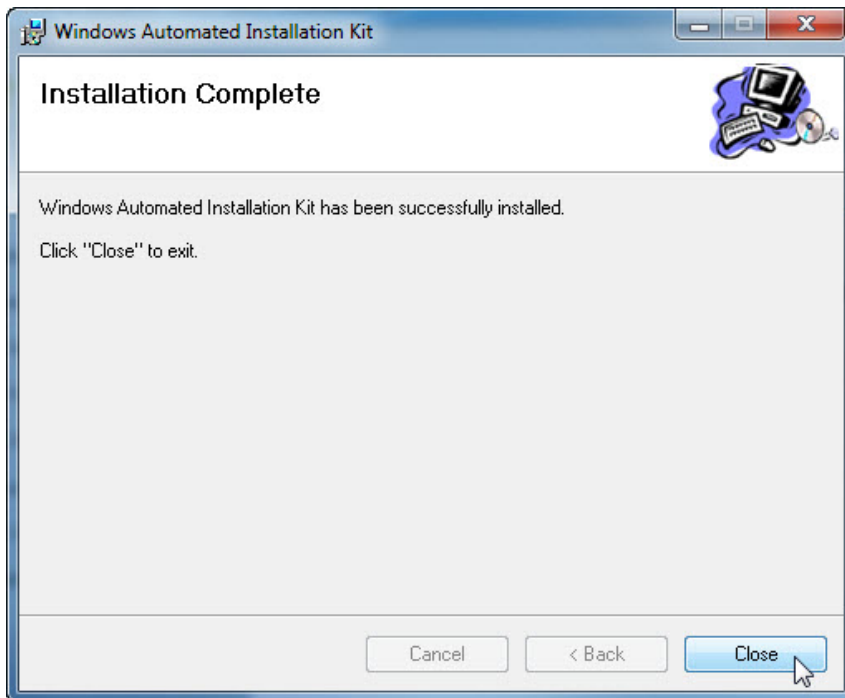
Click **Exit**.

Step 3

Create a folder called **Windows_7_Installation** at the root of C:.

Example: **C:\Windows_7_Installation**.

Insert the Windows 7 media in the appropriate drive.

Close the Windows 7 media Install Windows window if it opens.

Navigate to **D:\sources** and copy **install.wim** and **install_Windows 7 PROFESSIONAL.clg** from the Windows 7 installation media to **C:\Windows_7_Installation**.

Note: The install.wim file is 1.94GB and may take several minutes to copy.
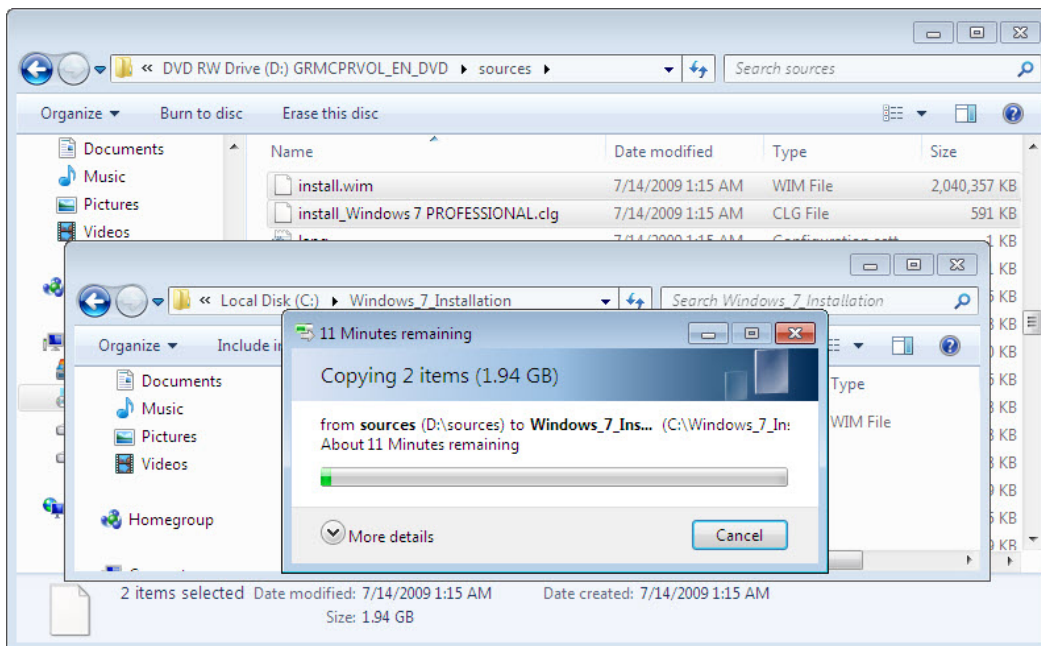
Step 4

Start > All Programs > Microsoft Windows AIK > Windows System Image Manager.
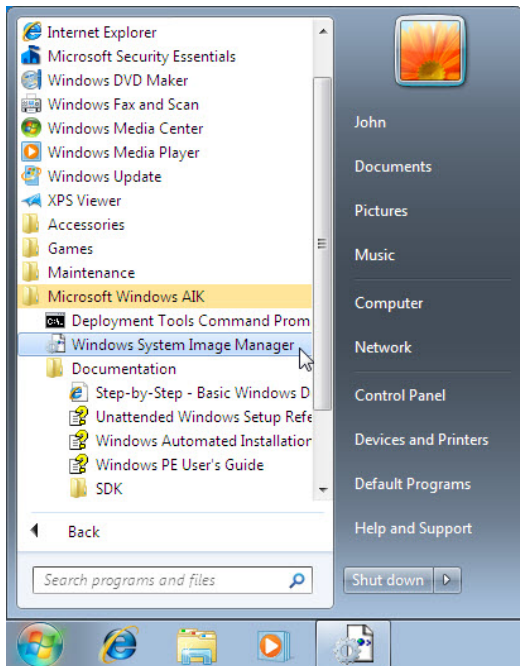
Step 5
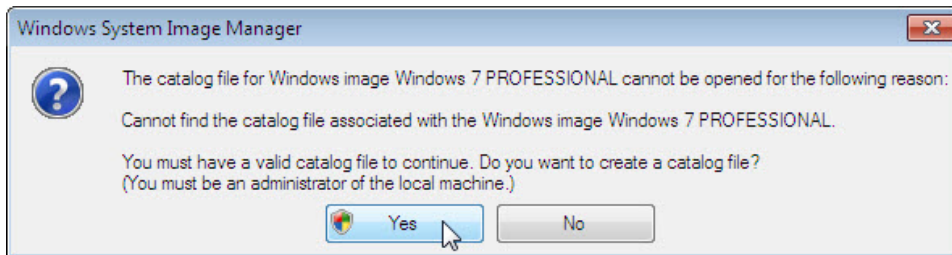
The "Windows System Image Manager" window opens.

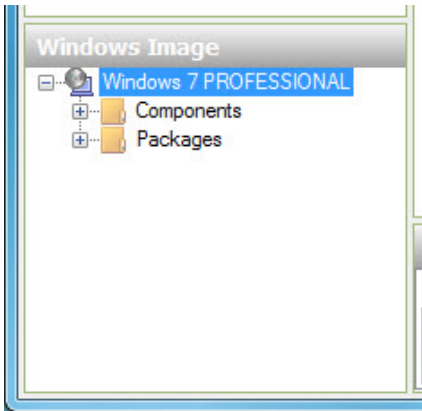Right-click **Select a Windows image or catalog file > Select Windows Image**.
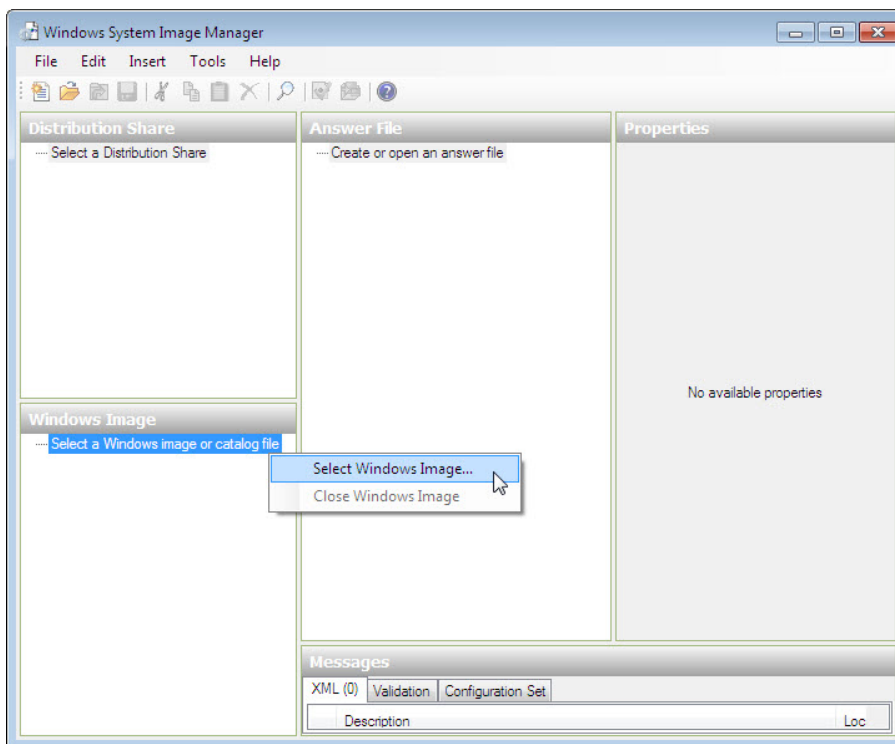
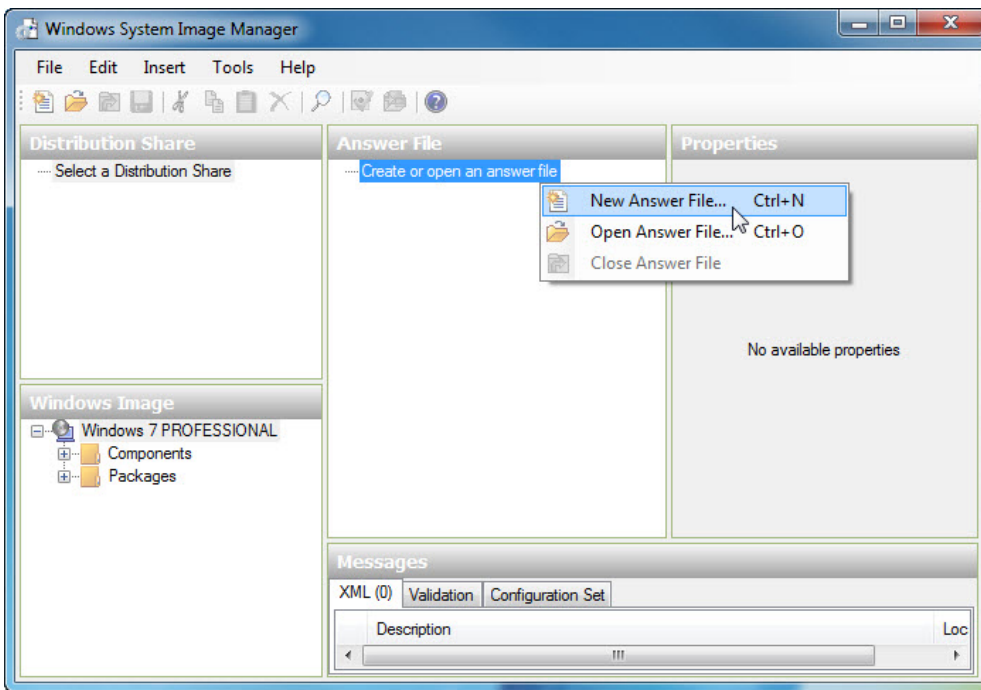Browse to **C:\Windows_7_Installation > install.wim > Open**.
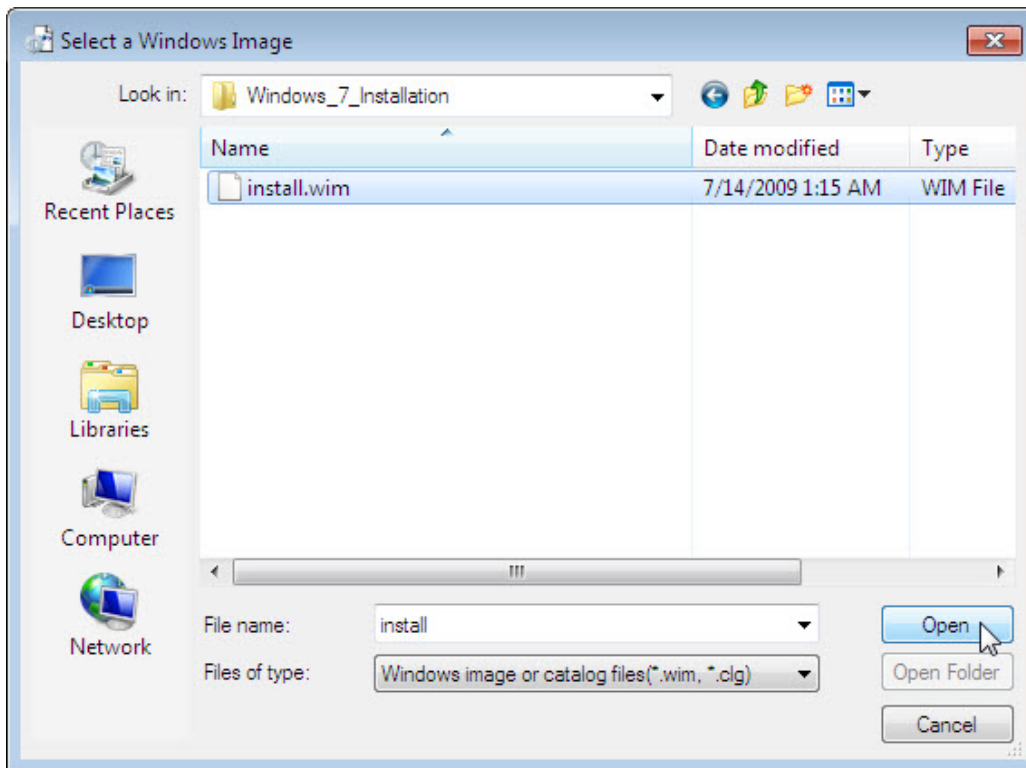
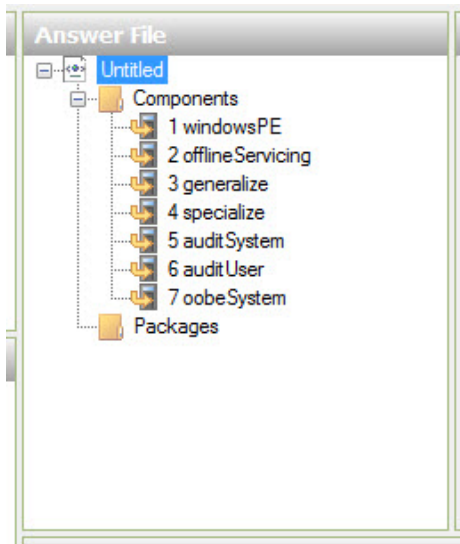Click **Yes**. Click **Yes** if prompted by User Account Control.

A catalog file is generated in the "Windows Image" area.

Right-click **Create or open an answer file > New Answer File**.

A new answer file is created in the "Answer File" area.

To name the file select the root node **Untitled**.

Click **File > Save Answer File >** name the file **autounattend**. Make sure the **Windows_7_Installation** folder is selected and then click **Save**.

Note: It is important to name the file **autounattend**, as Windows 7 will only search for that file name when performing an unattended installation.
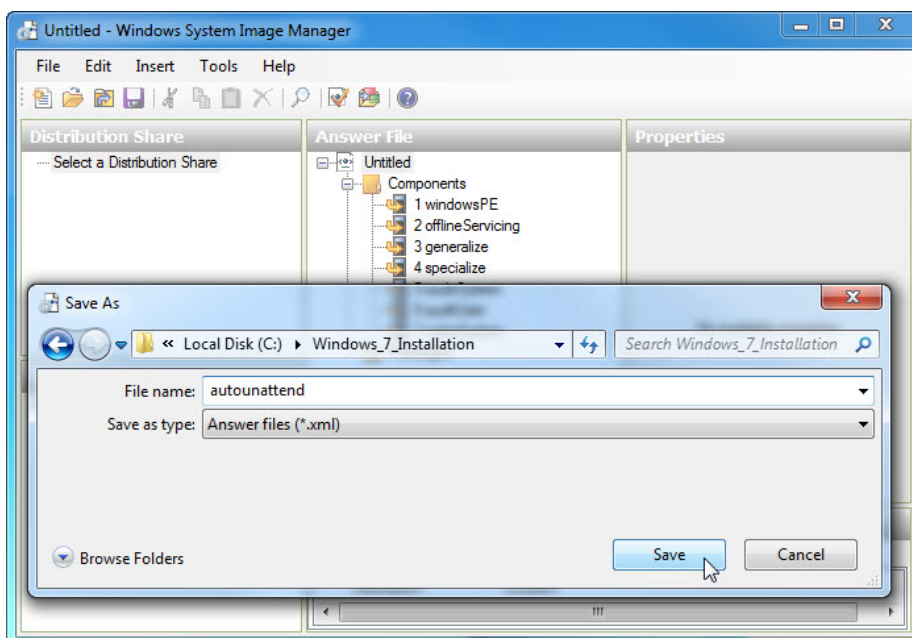

Step 6

In the "Windows Image" area, expand **Components**.
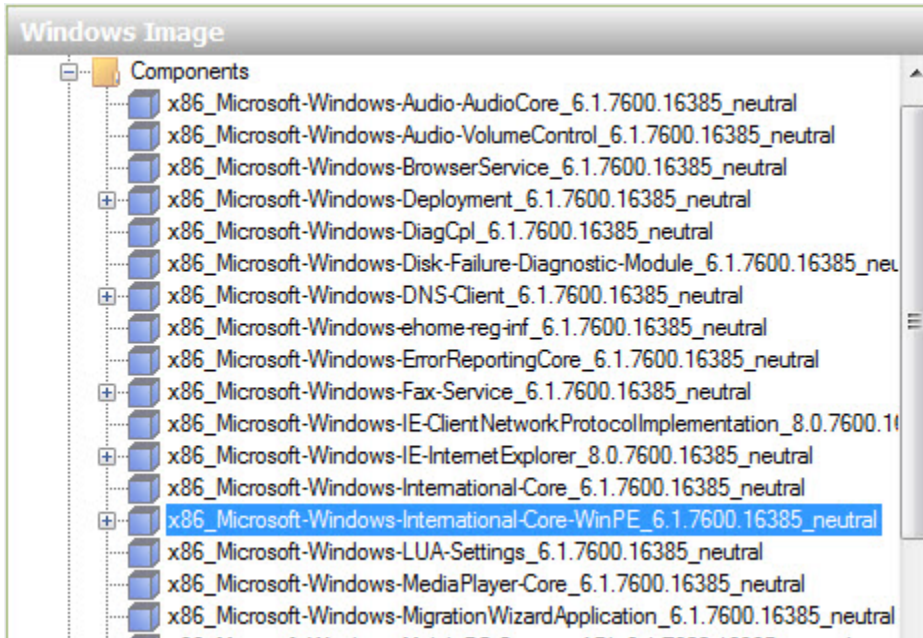
Note: The name of the components will have a prefix and suffix attached, for example: **x86_Microsoft-Windows-International-Core-WinPE_6.1.7600.16385_neutral**. The prefix is **x86** and the suffix is **6.1.7600.16385_neutral**. For simplicity, the prefix and suffix will be left out in the lab instructions.

Right-click **Microsoft-Windows-International-Core-WinPE > Add Settings to Pass 1 windowsPE**.
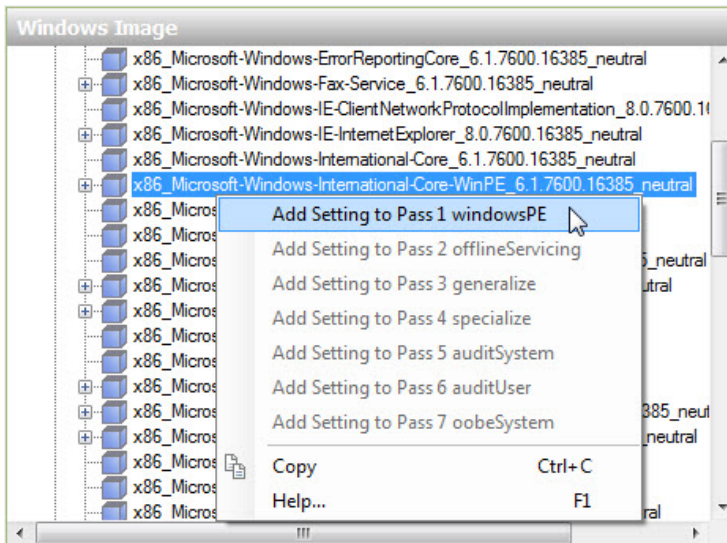
Notice that **Microsoft-Windows-International-Core-WinPE** has been added to the "Answer File" and "Properties" areas.
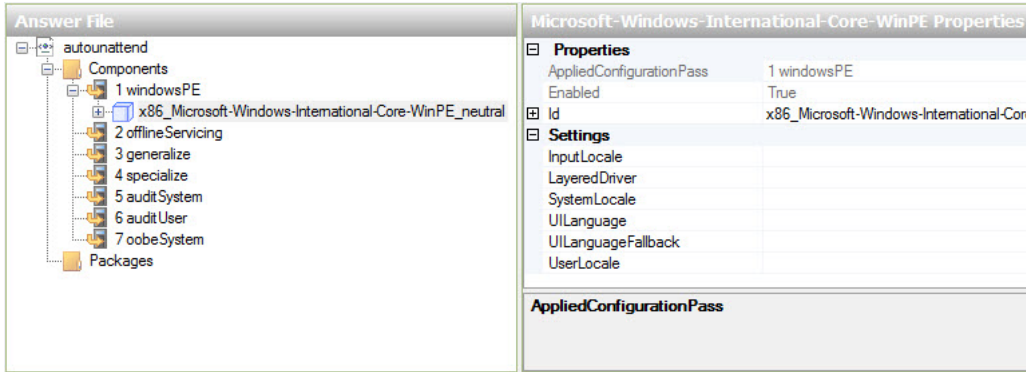
Select **Microsoft-Windows-International-Core-WinPE** in the **Answer File** area. In the **Microsoft-Windows-International-Core-WinPE Properties** area, type the language settings, provided by your instructor, in the following locations: InputLocale, SystemLocale, UILanguage, UILanguageFallback, and UserLocale. For example: **en-us**.
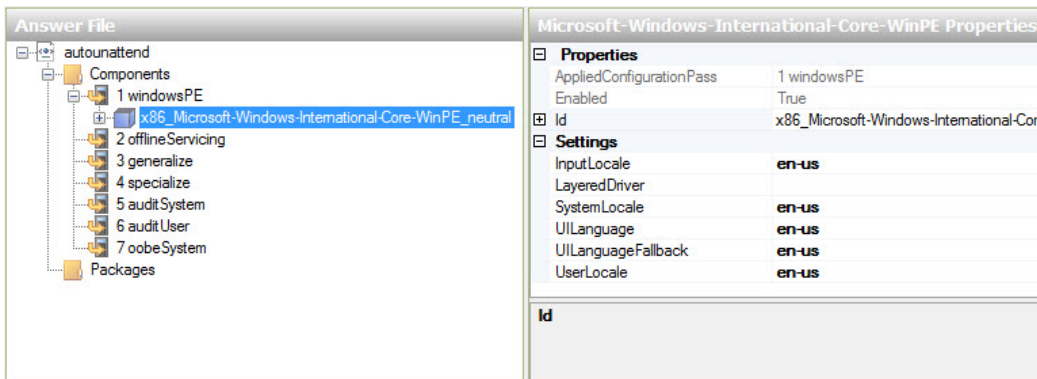
Note: Place the curser next to a setting in the "Properties" area and press the **F1** key to view the Windows Help file for the setting. Supported regional and language settings are also located here: http://msdn.microsoft.com/en-ca/library/ms533052(VS.85).aspx

In the "Answer File" area, expand **Microsoft-Windows-International-Core-WinPE >** select **SetupUILanguage**. In the "SetupUILanguage Properties" area, type the language settings provided by your instructor in the UILanguage location. For example: **en-us**.

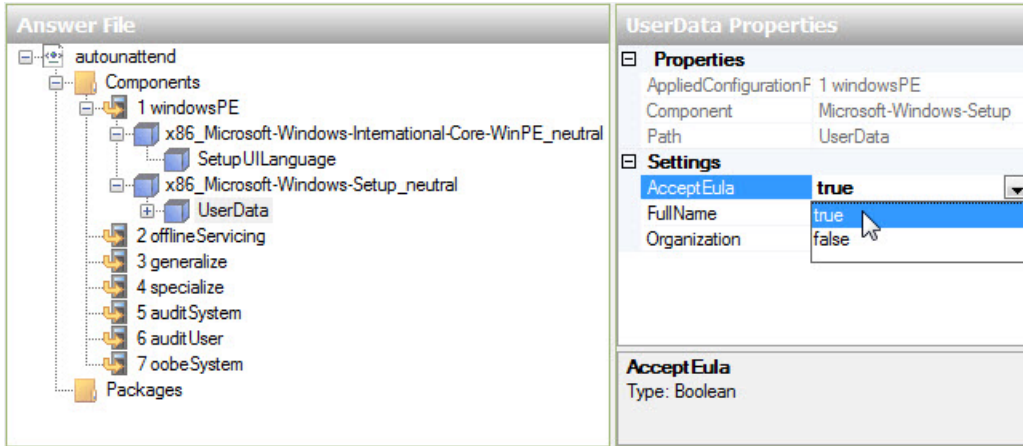Confirm **OnError** is selected for **WillShowUI**.
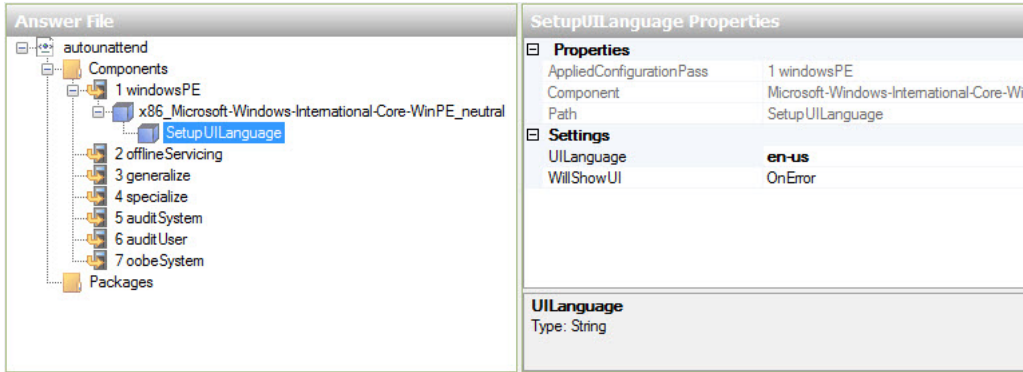
Step 7

In the "Windows Image" area, locate and expand the component **Microsoft-Windows-Setup >** right-click **UserData > Add Setting to Pass 1 windowsPE**.
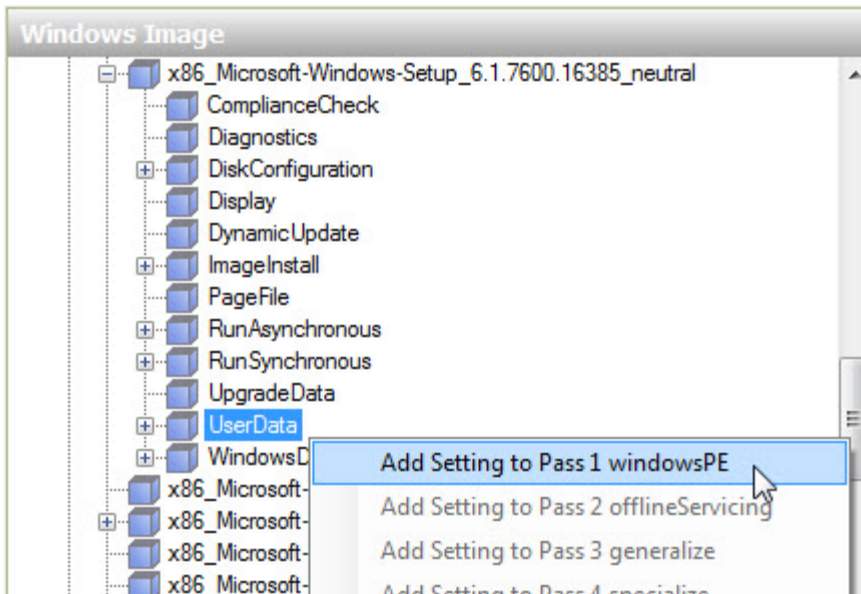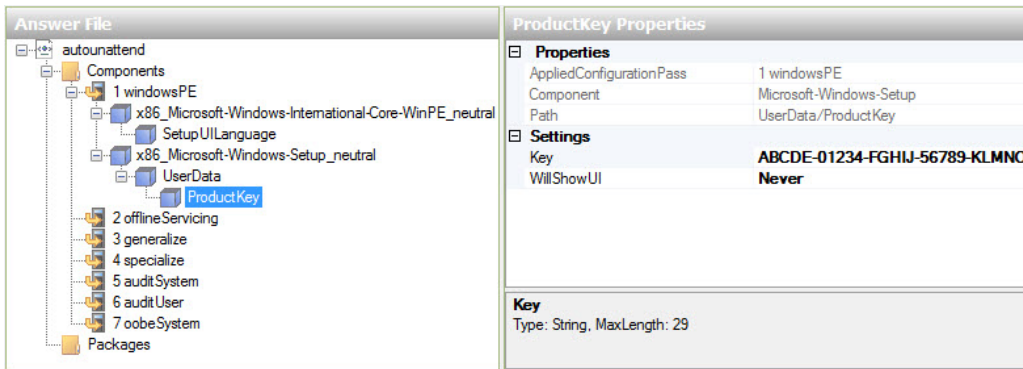

Select **UserData** in the "Answer File" area. In the "UserData Properties" area, click in the box to the right of **AcceptEula** and select **true**.

In the "Answer File" area, expand **UserData > ProductKey**. In the "ProductKey Properties" area, click in the box to the right of **Key** and enter the Windows 7 product key provided by the instructor.

Click in the box to the right of the **WillShowUI** and select **Never**.
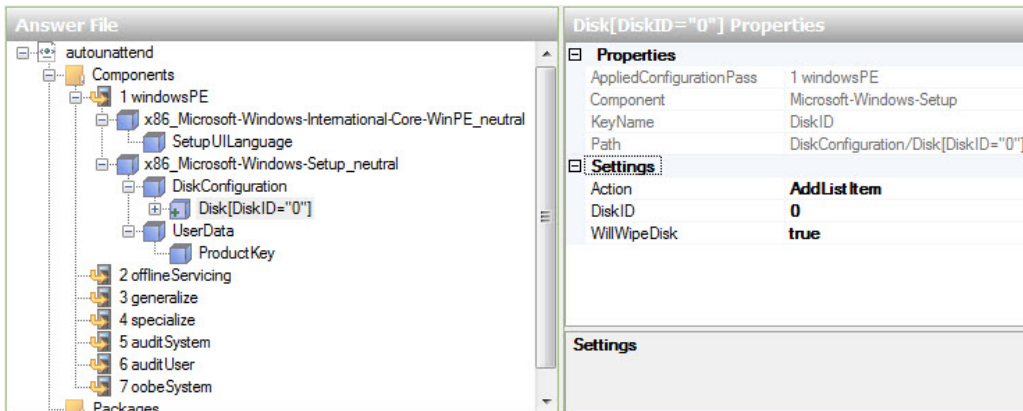

Step 8

In the "Windows Image" area, locate and expand component **Microsoft-Windows-Setup\DiskConfiguration >** right-click **Disk > Add Setting to Pass 1 windowsPE**.
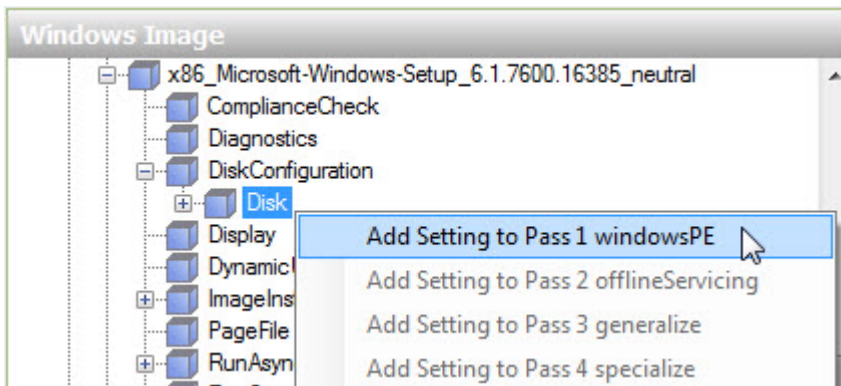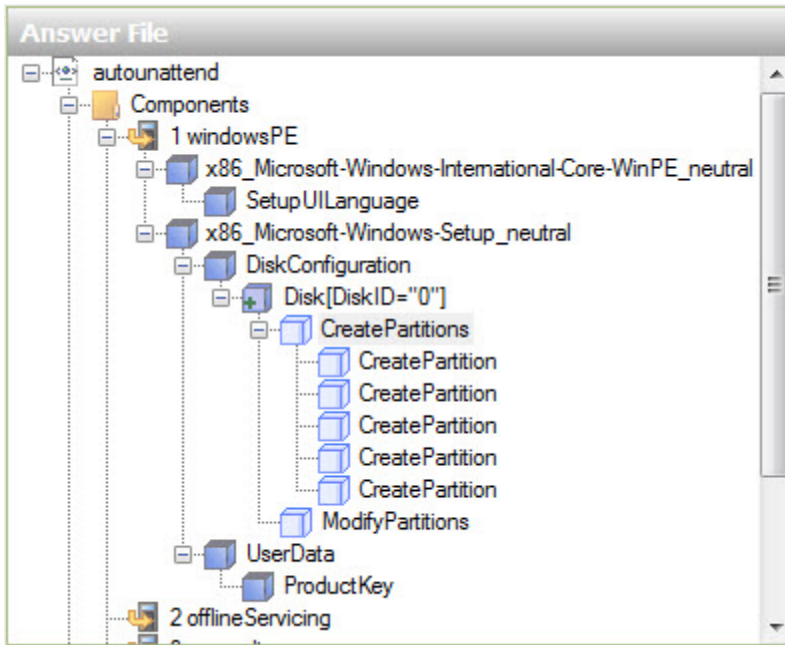
Select **Disk** in the "Answer File" area. In the "Disk Properties" area, click in the box to the right of **DiskID** and type the number **0**. Set **WillWipeDisk** to **true**.
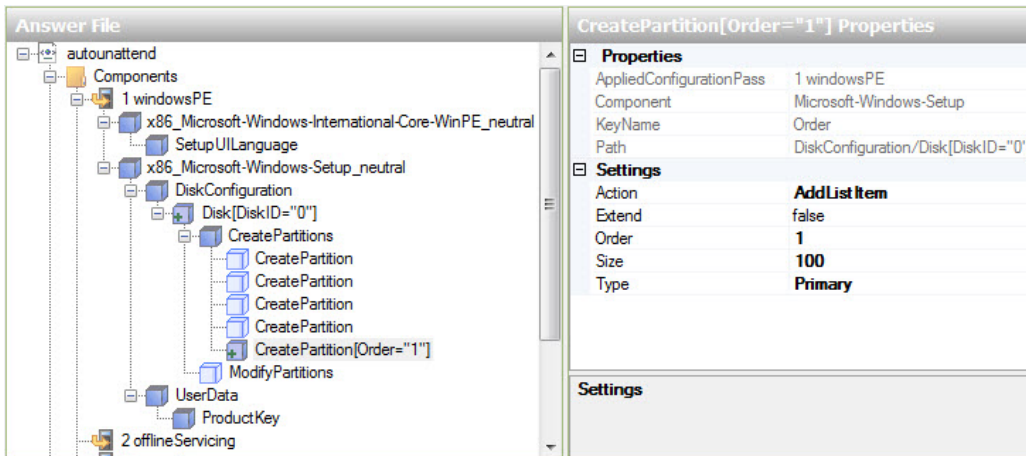

In the "Answer File" area, expand **Disk[DiskID="0"] >** right-click **CreatePartitions > Insert New CreatePartition**.
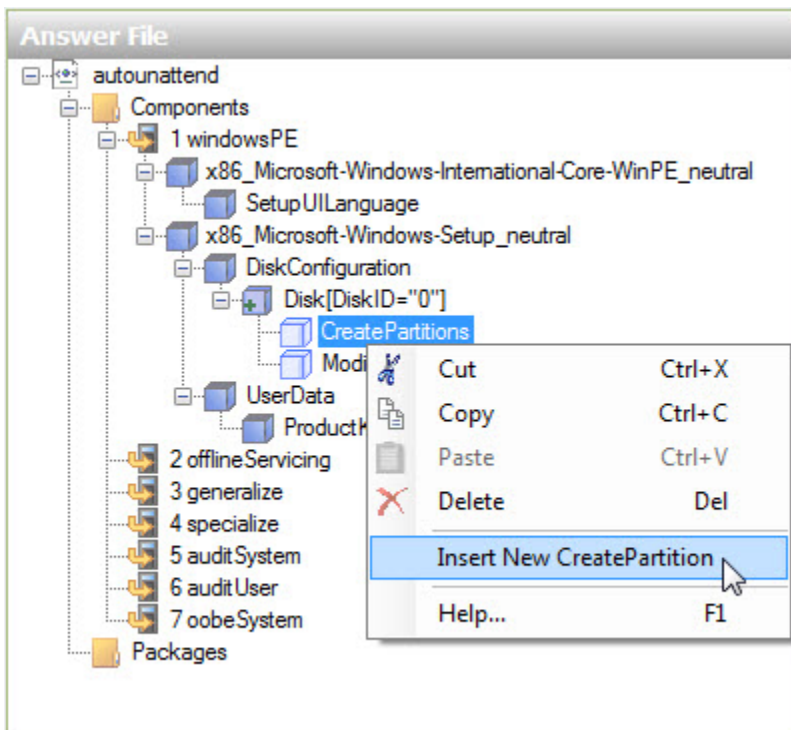
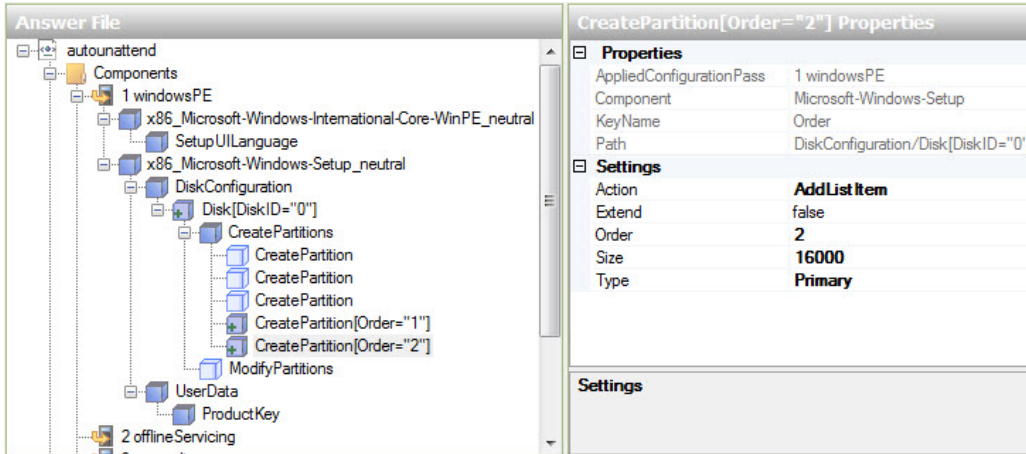Add four more **CreatePartition** objects, for a total of five objects.

Select the top **CreatePartition** in the "Answer File" area. In the "CreatePartition Properties" area, set the following values: Extend = **false**, Order = **1**, Size = **100**, and Type = **Primary**.
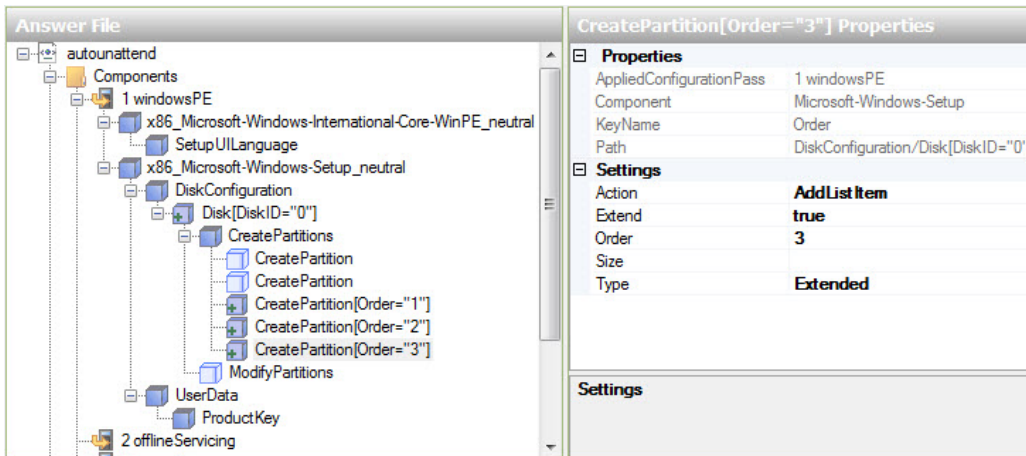

Notice that the newly configured partition moves to the bottom of the five **CreatePartition** objects.
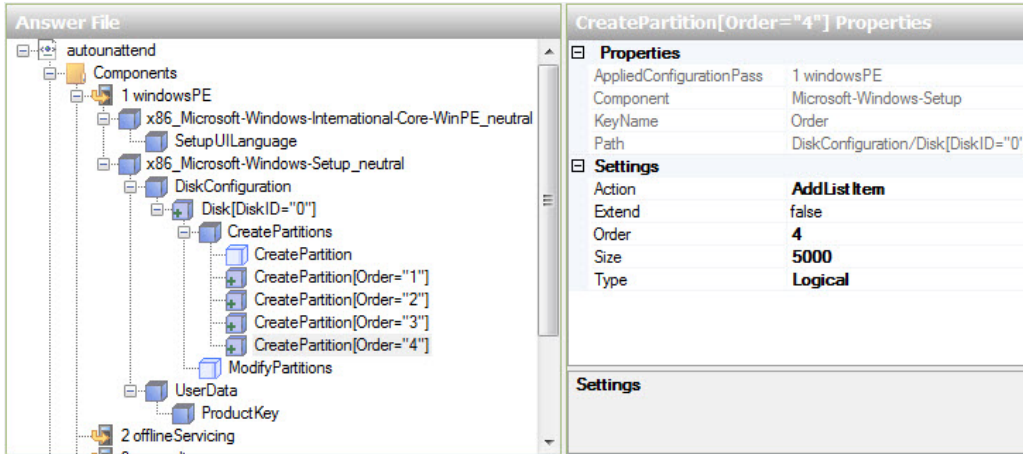
Select the top **CreatePartition** in the "Answer File" area. In the "CreatePartition Properties" area, set the following values: Extend = **false**, Order = **2**, and Type = **Primary**. For Size, use the primary partition size provided by the instructor. For example: Size = **16000**.
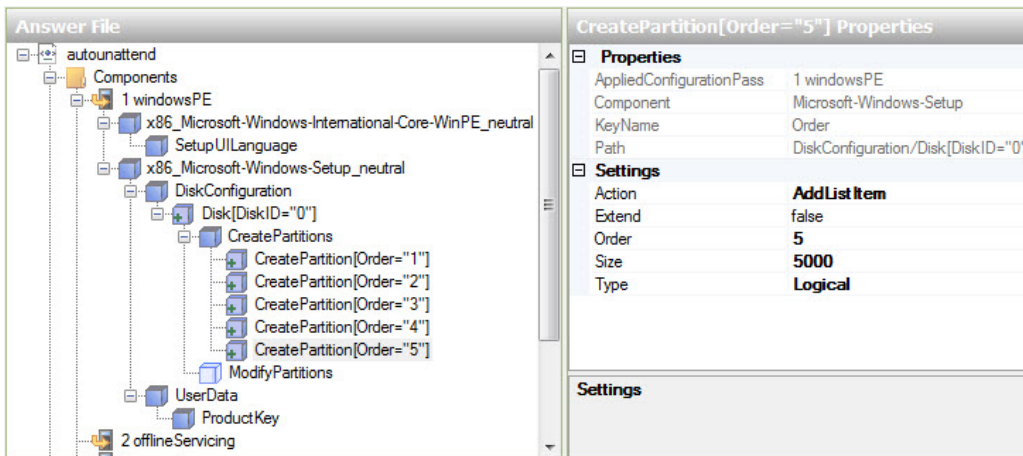

Select the top **CreatePartition** in the "Answer File" area. In the "CreatePartition Properties" area, set the following values: Extend = **True**, Order = **3**, and Type = **Extended**.
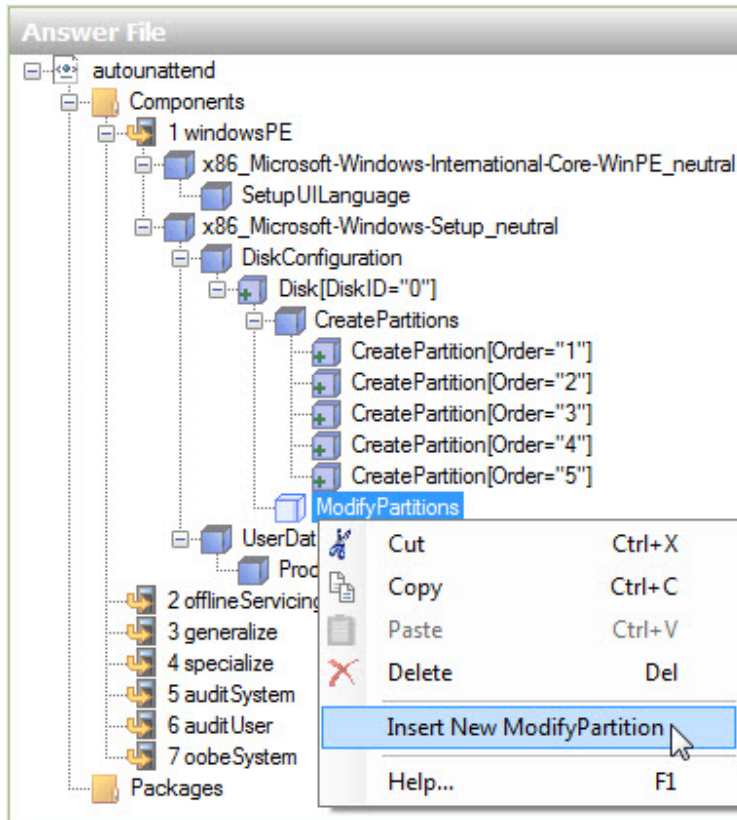

Select the top **CreatePartition** in the "Answer File" area. In the "CreatePartition Properties" area, set the following values: Extend = **false**, Order = **4**, and Type = **Logical**. For Size, use the logical 1 partition size provided by the instructor. For example: Size = **5000**.

Select the top **CreatePartition** in the "Answer File" area. In the "CreatePartition Properties" area, set the following values: Extend = **false**, Order = **5**, and Type = **Logical**. For Size, use the logical 2 partition size provided by the instructor. For example: Size = **5000**.
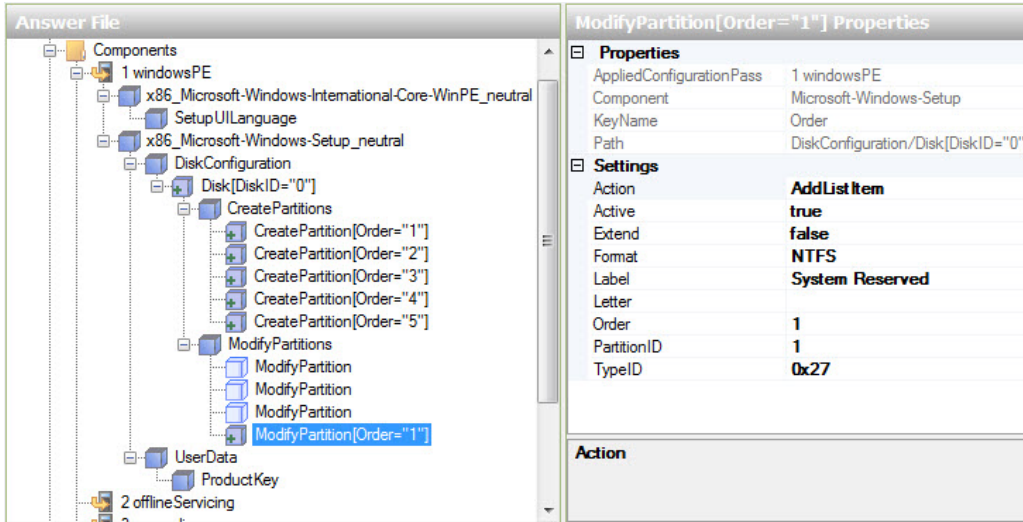
In the "Answer File" area, right-click **ModifyPartitions > Insert New ModifyPartition**.
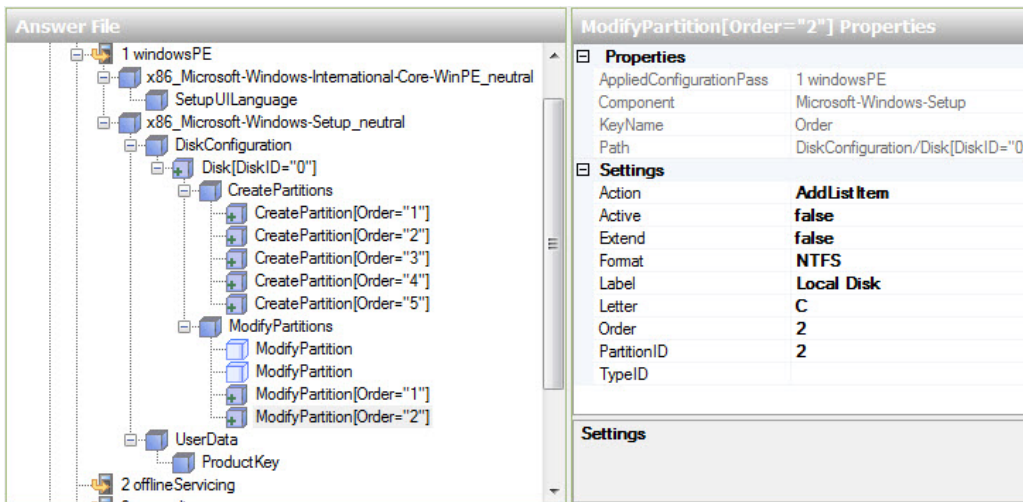

Add three more **ModifyPartition** objects, for a total of four objects.

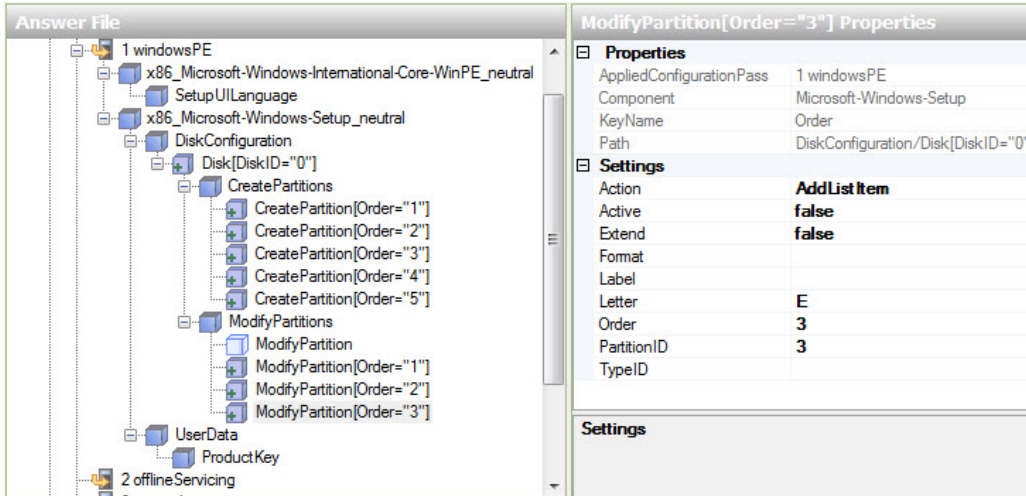Select the top **ModifyPartition** in the "Answer File" area. In the "ModifyPartition Properties" area, set the following values: Action = **AddListItem**, Active = **true**, Extend = **false**, Format = **NTFS**, Label = **System Reserved**, Letter = leave this blank, Order = **1**, PartitionID = **1**, and TypeID = **0x27**.

Select the top **ModifyPartition** in the "Answer File" area. In the "ModifyPartition Properties" area, set the following values: Action = **AddListItem**, Active = **false**, Extend = **false**, Format = **NTFS**, Label = **Local Disk**, Letter = **C**, Order = **2**, and PartitionID = **2**.


Select the top **ModifyPartition** in the "Answer File" area. In the "ModifyPartition Properties" area, set the following values: Action = **AddListItem**, Active = **false**, Extend = **false**, Letter = **E**, Order = **3**, and PartitionID = **3**.

Select the top **ModifyPartition** in the "Answer File" area. In the "ModifyPartition Properties" area set the following values: Action = **AddListItem**, Active = **false**, Extend = **false**, Letter = **F**, Order = **4**, and PartitionID = **4**.
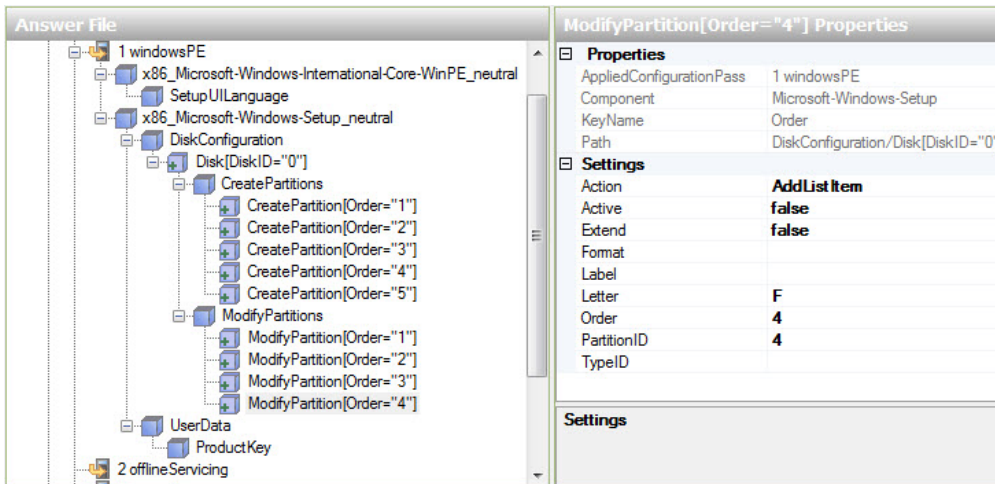
In the "Windows Image" area, locate and expand component **Microsoft-Windows-Setup\DiskConfiguration\ImageInstall\OSImage\InstallTo >** right-click **InstallTo > Add Setting to Pass 1 windowsPE**.
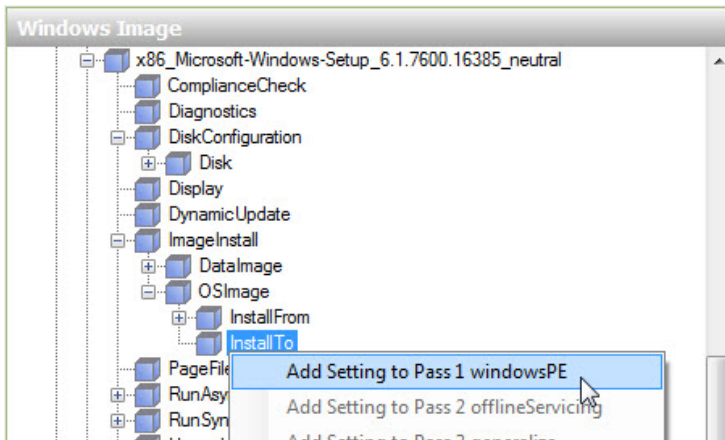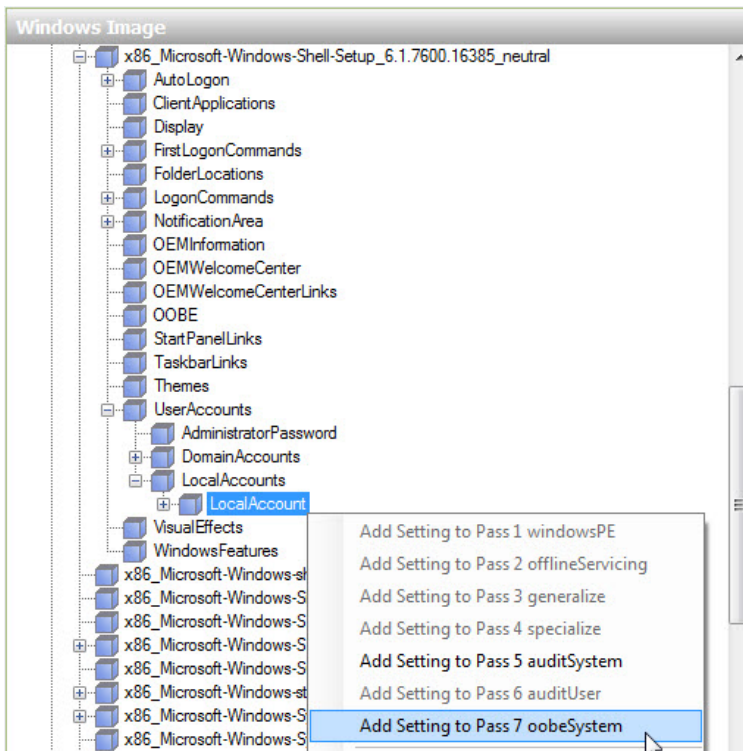
Select **InstallTo** in the "Answer File" area. In the "InstallTo Properties" area, set the following values: DiskID = **0** and PartitionID = **2**.
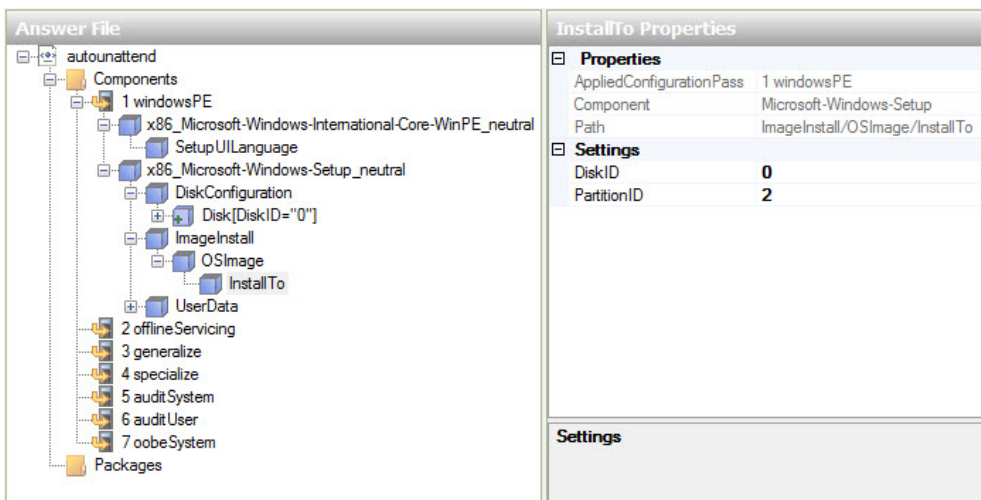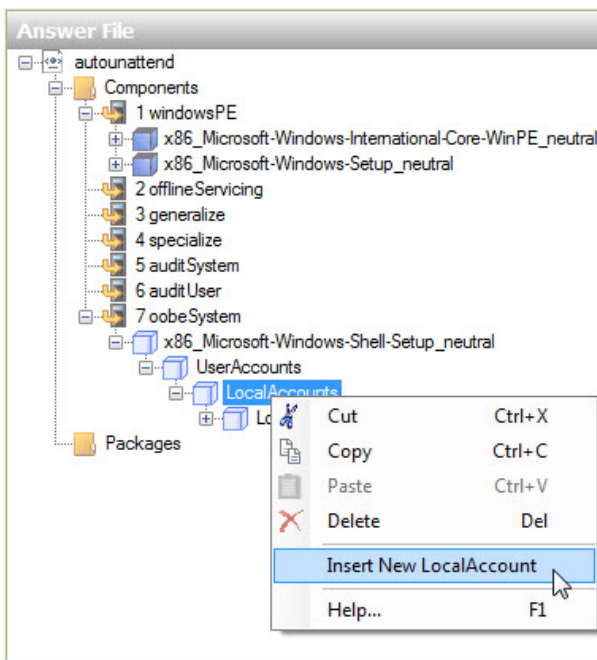

Step 9

In the "Windows Image" area, locate and expand component **Microsoft-Windows-Shell-Setup\UserAccounts\LocalAccounts >** right-click **LocalAccount > Add Setting to Pass 7 oobeSystem**.

In the "Answer File" area, right-click **LocalAccounts >** select **Insert New LocalAccounts**.
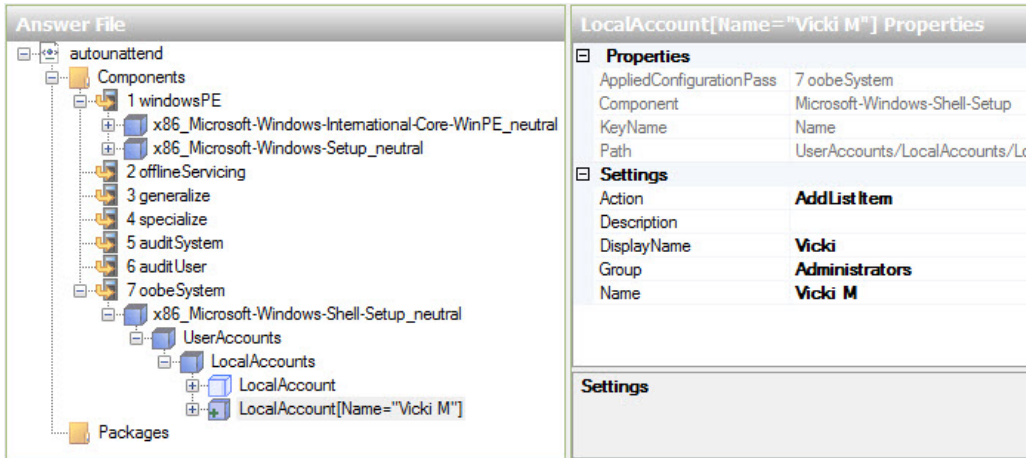

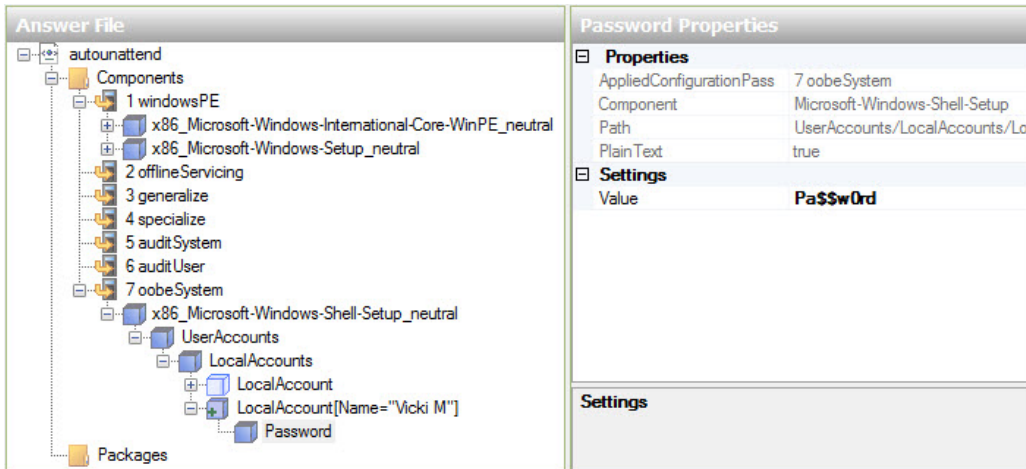You should now have two **LocalAccounts** objects.

Setup an Administrators account.

Select the top **LocalAccount** in the "Answer File" area. In the "LocalAccount Properties" area, type the **DisplayName** and the **Name** provided by your instructor. Example: **Vicki** and **Vicki M**.

Type **Administrators** as the name of the Group.

Expand **LocalAccount[Name="Vicki M"] > Password**. In the "Password Properties" area, type the **password** provided by your instructor in the Value setting. Example: **Pa$$w0rd**.

Set up a User account.

Select the top **LocalAccount** in the "Answer File" area. In the "LocalAccount Properties" area, type the **DisplayName** and the **Name** provided by your instructor. Example: **John** and **John M**.

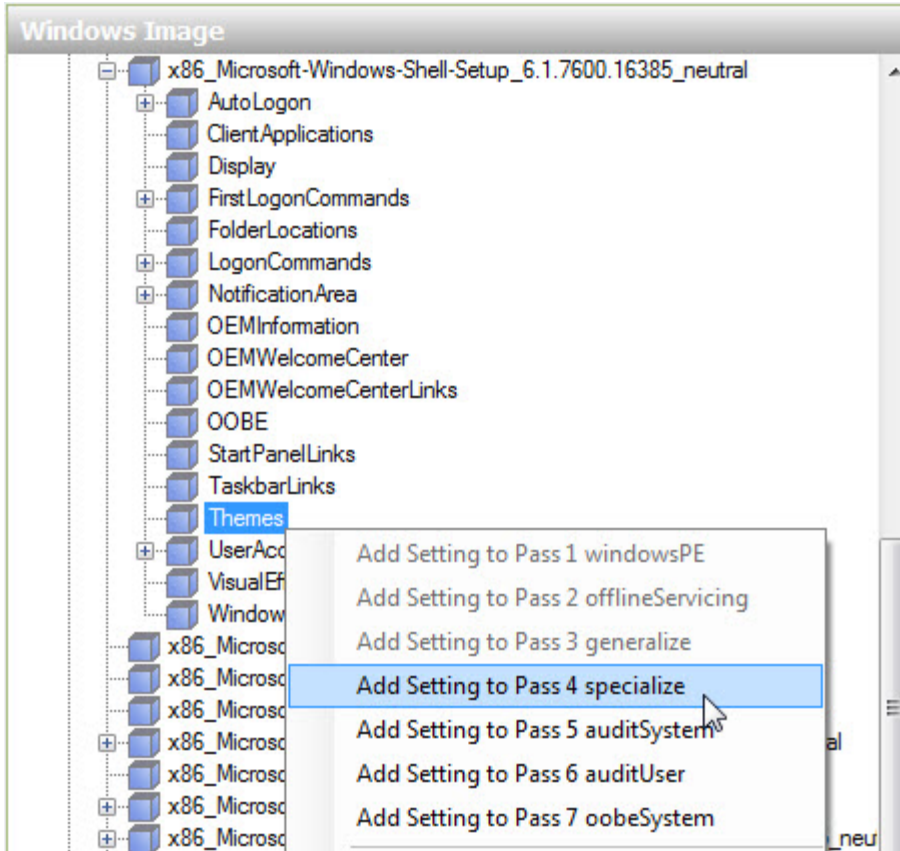Type **Users** as the name of the Group.

Expand **LocalAccount[Name="John M"] > Password**. In the "Password Properties" area, type the **password** provided by your instructor in the Value setting. Example: **Pa$$w0rd**.
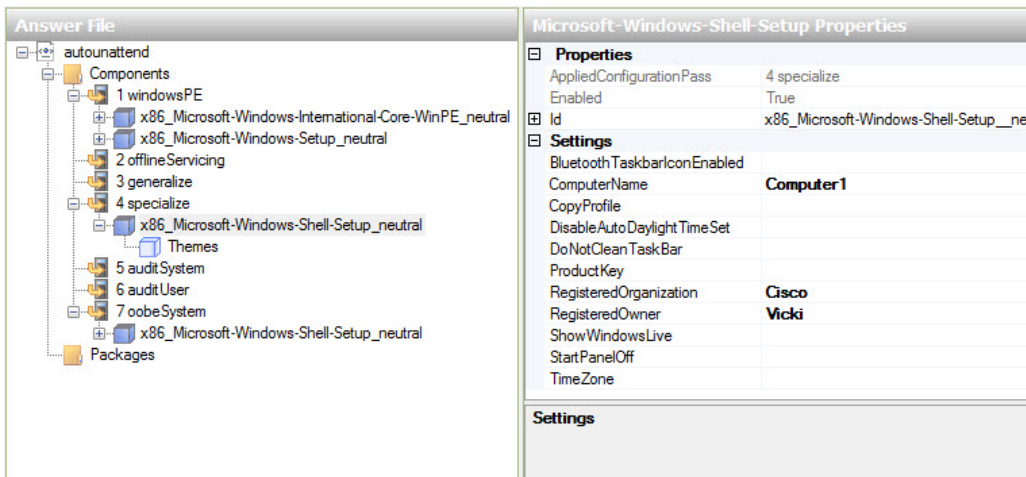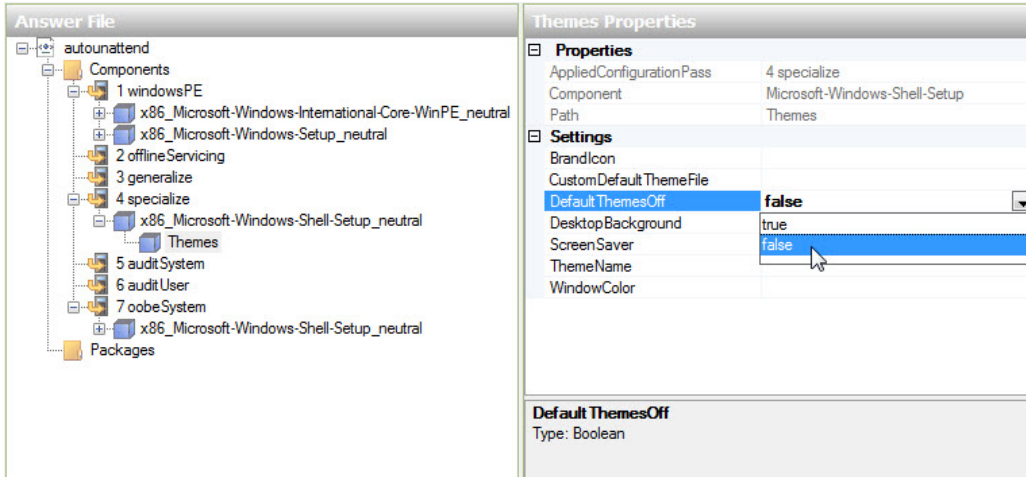

Step 10

In the "Windows Image" area, locate **Microsoft-Windows-Shell-Setup >** and right-click **Themes > Add Setting to Pass 4 specialize**.

Select **Microsoft-Windows-Shell-Setup** in the "Answer File" area below **component 4 specialize**. In the "Microsoft-Windows-Shell-Setup Properties" area, type the ComputerName, RegisteredOrganization, and RegisteredOwner provided by your instructor. Example: **Computer1**, **Cisco**, and **Vicki**.
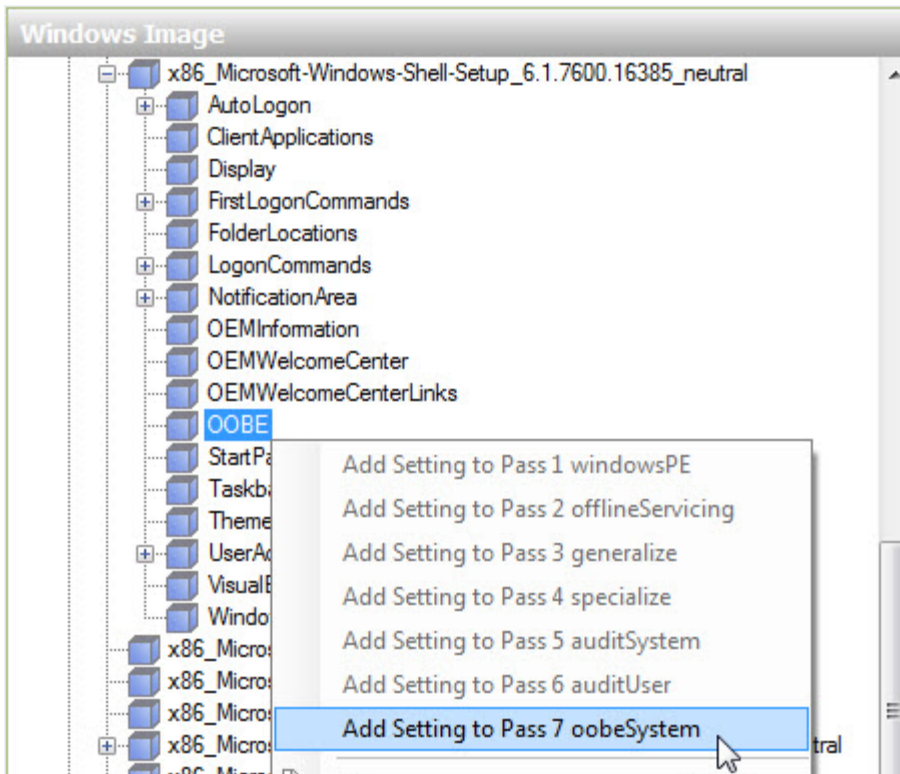

Expand **Microsoft-Windows-Shell-Setup** in **component 4 specialize** of the "Answer File" area. Locate and select **Themes**. In the "Themes Properties" area, set the following value: DefaultThemesOff = **false**.

Step 11

In the "Windows Image" area, locate and expand component **Microsoft-Windows-Shell-Setup >** right-click **OOBE > Add Setting to Pass 7 oobeSystem**.

Select **Microsoft-Windows-Shell-Setup** in the "Answer File" area below **component 7 oobe System**. In the "Microsoft-Windows-Shell-Setup Properties" area, type the time zone in the **TimeZone** setting, provided by your instructor. Example: TimeZone = **Pacific Standard Time**.
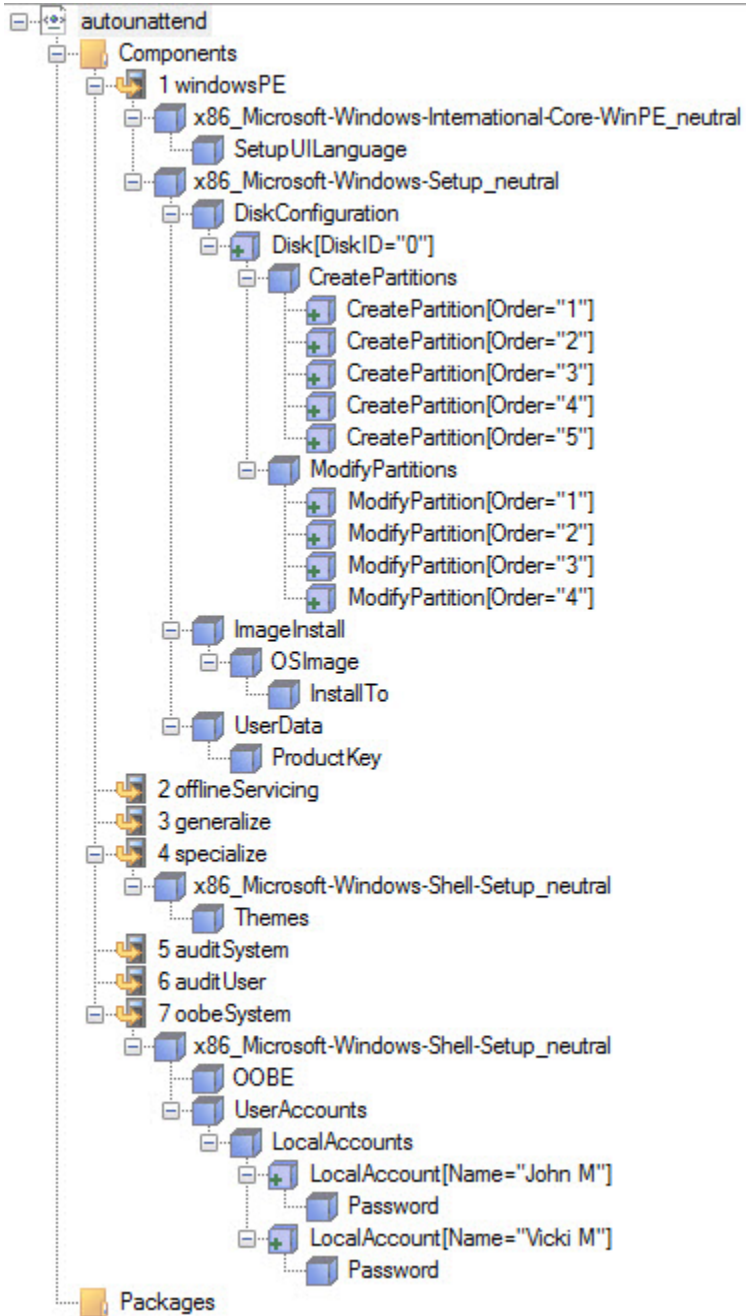
Select **OOBE** in the "Answer File" area. In the "OOBE Properties" area, set the following value: NetworkLocation = **Work** and ProtectYourPC = **3**. This will disable automatically installed updates.

Note: Normally you would set ProtectYourPC to 1, automatically install updates. But to reduce the installation time for this lab we will set the value to 3.

Step 12

Before validating the answer file, expand all components in the **autounattend** file to make sure everything is properly added.

```
autounattend
    Components
        1 windowsPE
            x86_Microsoft-Windows-International-Core-WinPE_neutral
                SetupUILanguage
            x86_Microsoft-Windows-Setup_neutral
                DiskConfiguration
                    Disk[DiskID="0"]
                        CreatePartitions
                            CreatePartition[Order="1"]
                            CreatePartition[Order="2"]
                            CreatePartition[Order="3"]
                            CreatePartition[Order="4"]
                            CreatePartition[Order="5"]
                        ModifyPartitions
                            ModifyPartition[Order="1"]
                            ModifyPartition[Order="2"]
                            ModifyPartition[Order="3"]
                            ModifyPartition[Order="4"]
                ImageInstall
                    OSImage
                        InstallTo
                UserData
                    ProductKey
        2 offlineServicing
        3 generalize
        4 specialize
            x86_Microsoft-Windows-Shell-Setup_neutral
                Themes
        5 auditSystem
        6 auditUser
        7 oobeSystem
            x86_Microsoft-Windows-Shell-Setup_neutral
                OOBE
                UserAccounts
                    LocalAccounts
                        LocalAccount[Name="John M"]
                            Password
                        LocalAccount[Name="Vicki M"]
                            Password
    Packages
```

If anything is missing, go back over the lab and add the missing components or settings.

Click **Tools > Validate Answer File**.
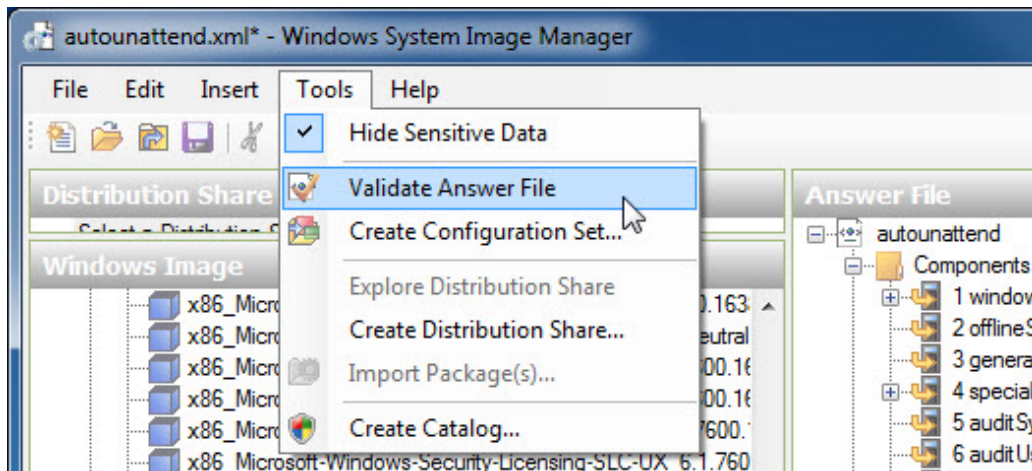
Select the **Validation** tab in the "Messages" area.

If you see any error or warning messages, ask your instructor for assistance in correcting them before proceeding with the lab.

If there are no error or warning messages click **File > Save Answer File**.
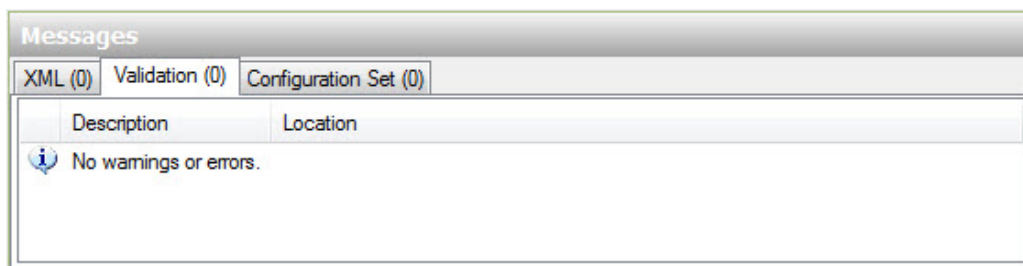
Step 13

Copy the **autounattend.xml** file from **C:\Windows_7_Installation** to the root of the floppy disk or USB flash drive.

Insert the floppy disk in the floppy drive or connect the USB flash drive to a USB port.

Insert the Windows 7 media in the appropriate drive.

Restart the computer.

Step 14

When the **Press Any Key to Boot from CD or DVD** message appears, press any key on the keyboard.

The installation of Windows 7 will proceed in a completely unattended fashion, and finally you will be presented with the logon screen.

Note: The system will flash on and off several times, restart several times, and other times only a black or blue screen will appear with nothing else shown during the installation.

Logon to the computer using the administrator name and password used in the **autounattend** file.

What was the name of the file used to automate the installation located on the floppy disk or USB flash drive?

How do you think automating the installation will help the IT Department if they have to repeat the procedure on 100 computers?