

CPT Student SharePoint 2010 Workstation Virtual Machine Setup Guide

Overview:

This document provides instructions on how to setup a virtual machine (VM) provided by Critical Path Training (CPT) for the purpose of a SharePoint course.

SharePoint 2010 has steep hardware & software requirements. The minimum hardware to run a CPT provided VM is listed below. Anything more results in a better experience for the user. Anything less can result in a poor experience for the students.

- Dual Core CPU 1.5Ghz
- Memory / RAM
 - 6GB RAM
- 75GB of free disk space
- Windows Server 2008 / Windows Server 2008 R2
- Windows Server Hyper-V Role enabled

Important Notes:

- Most CPT courses use the SharePoint 2010 “all-in-one” VM. This includes the developer and SharePoint Designer / no-code SharePoint solutions. This VM contains everything necessary to develop and consume SharePoint 2010. It is built using the **Critical Path Training SharePoint Server 2010 RTM Virtual Machine Setup Guide** available on the [Critical Path Training website](#) in the [Members](#) section.
- The VM is built using trial software. **They are only intended to be used by the instructor of a course and for students taking a public hands-on or private onsite course. CPT training VMs should not be distributed to a student as that is a violation of Microsoft licensing rules and regulations.**
- Contact CPT to obtain the links to download the correct trial VM(s) based on the class you are hosting / teaching. **Allow ample time to download the VM as both are around 10GB compressed** in spanned RAR files stored on Amazon’s S3 cloud storage service.

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Section 1: Download the Specified CPT VM(s)

Estimated time required to perform this section: varies depending on your connection, but at least 3 hours.

1. Download the CPT Hyper-V All-in-One VM. The links can be obtained from CPT.
 - a. Use the links provided by CPT to download the VM. This consist of a single *.EXE file and numerous *.RAR files.
 - b. Save all files in the same folder on the student workstation.
 - c. Double-click the *.EXE file. It may take a few sections, but a prompt will appear asking for the location to extract the *.VHD file. The file can go anywhere.
 - d. Once everything has been extracted, the *.EXE and *.RAR files can be deleted.

Note: If during the extraction process an error is reported about a corrupt file, cancel the process and try downloading the file again. Then try the extraction process. This can happen if you have a slow or unreliable Internet connection.

The files are stored on Amazon's highly reliable and fast S3 cloud storage solution. They have been validated many times so if you have issues downloading it must be with your Internet connection.

Section 2: Create a Hyper-V Internal Virtual Network

Estimated time required to perform this section: less than 5 minutes.

1. Use the Hyper-V Manager to create a new internal virtual network that will be used for the host workstation OS to talk to the virtual machine OS:
 - a. Launch the **Hyper-V Manager: Start » Administrative Tools » Hyper-V Manager**.
 - b. In the Actions pane on the right-hand side of the Hyper-V Manager select **Virtual Network Manager**.
 - c. Select an **Internal** network and click **Add**.
 - d. Set the name to **Hyper-V Internal** and set the connection type to **Internal Only**. Click **OK**.
2. Now change the IP of the new NIC that was added to the host machine:
 - a. Select **START » Control Panel** and click **View network connection status and tasks**.
 - b. In the **Network and Sharing Center** dialog, select **Change adapter settings** in the left-hand panel.
 - c. Look for a NIC entry that on the third line says **Hyper-V Internal**. Right click that entry and select **Properties**.
 - d. **Uncheck** the **Internet Protocol Version 6** option.
 - e. While leaving it **checked**, select the **Internet Protocol Version 4** option and click the **Properties** button.
 - f. Use the following to complete the dialog and click **OK**:
 - i. **IP Address:** 192.168.150.3
 - ii. **Subnet mask:** 255.255.255.0
 - iii. **Preferred DNS server:** 192.168.150.1
 - iv. Everything else: leave blank

Section 3: Creating the CPT All-In-One Hyper-V Virtual Machine

Estimated time required to perform this section: 15 minutes.

1. Use the **Hyper-V Manager** to create a new Virtual Machine to run the provided all-in-one virtual hard drive (VHD) file.
 - a. Launch the Hyper-V Manager: **Start » Administrative Tools » Hyper-V Manager**.
 - b. Start the **New Virtual Machine Wizard**.
 - c. When the wizard prompts you for the machine name, enter **WingtipServer**.
 - d. When the wizard prompts you to assign memory, use the following as a guideline:
 - i. If the workstation has 6GB of RAM, enter a **Memory** value of **4096MB** (4GB)
 - ii. If the workstation has 8GB of RAM, enter a **Memory** value of **6144MB** (6GB)
 - iii. If the workstation has 12GB+ of RAM, enter a **Memory** value of **8192MB** (8GB)
 - e. When the wizard prompts you for a network connection, select **Hyper-V INTERNAL**.
 - f. When the wizard prompts you to **Connect Virtual Hard Disk**, choose **Use an existing virtual hard drive** and browse to the *.VHD file created from extracting the VM from the provided links in a previous step.
 - g. When you complete the **New Virtual Machine Wizard**, click **Finish**.
2. Configure the number of virtual processors for the VM.
 - a. Within the **Hyper-V Manager**, right-click the VM that was previously created and select **Settings**.
 - b. Select the **Processor** section in the **Hardware** pane.
 - c. Set the **Number of Logical Processors** to **2** (two).
 - d. Click **OK** to save the changes.

Note: Setting this to any other value will likely cause the VM to demand to be reactivated within three days of starting up the first time, interrupting the course. See the [FAQ section](#) for more information on how to resolve this.

3. Configure the internal virtual network for Remote Desktop (RDP) Connections.
 - a. Start the VM by right-clicking it and selecting **Start**.
 - b. Connect to the VM by right-clicking it and selecting **Connect**.
 - c. Once the VM boots up, login. To send a CTRL+ALT+DELETE to the guest VM, use the menu in the **Virtual Machine Connection** window: **ACTION » CTRL+ALT+DEL**.
 - d. Select **START » Control Panel** and click **View network connection status and tasks**.
 - e. In the **Network and Sharing Center** dialog, select **Change adapter settings** in the left-hand panel.

Note: There should only be one NIC listed. If not, you may need to try this configuration on each of them until the test at the end of this step works. If you need to try multiple NICs, ensure you go back and undo what you did before moving onto the next NIC.

- f. Select the NIC, right-click that entry and select **Properties**.
- g. **Uncheck** the **Internet Protocol Version 6** option.
- h. While leaving it **checked**, select the **Internet Protocol Version 4** option and click the **Properties** button.
- i. Use the following to complete the dialog and click **OK**:
 - i. **IP Address:** 192.168.150.1
 - ii. **Subnet mask:** 255.255.255.0
 - iii. **Preferred DNS server:** 192.168.150.1

- iv. Everything else: leave blank
 - j. Close the open dialogs. Now you can test the RDP connection
4. Go back to the host machine and open an RDP connection:
- a. Select **START » All Programs » Accessories » Remote Desktop Connection**.
 - b. Click the **Options** button.
 - c. On the **Display** tab, set the **Display Configuration** to **Full Screen** (or whatever windowed mode you prefer).
 - d. On the **Local Resources** tab, click the **More** button at the bottom. Ensure the **local C:\ drive** is **checked** and click **OK**. *This will setup a mapped drive from the guest VM to the C:\ of the host machine making it easier to copy files into the VM.*
 - e. On the **General** tab enter **192.168.150.1** in the **Computer** name and click **Connect**. It should prompt you to login. If so, login as the **administrator**.

Note: If it doesn't connect to the VM, you need to go back into the VM and make the IP changes to a different NIC as there were likely two NICs. Make sure you undo what you did to the first NIC.

5. Create a Hyper-V snapshot so the student can go back to the VM's initial configuration in case there are any problems during class.
- a. If the VM is still running login and shut it down.
 - b. Within the **Hyper-V Manager**, right-click the VM that was previously created and select **Snapshot**.
 - c. After a few minutes the snapshot will be created.
 - d. Right-click the snapshot in the **Snapshots** pane, select **Rename** and give it a name of **Initial Student Configuration**.

Section 4: Frequently Asked Questions

- **What is the login account & password on the VM?**
 - Unless prompted specifically by a hands-on lab, students should login as the **administrator**.
 - All passwords on CPT VM's are set to **Password1**.
- **Do the student VM's require Internet connectivity?**
 - No, none of the CPT SharePoint 2010 courses require access to the Internet.
 - However, if the configuration of a VM is not followed exactly with the steps above
- **Why are students VM(s) prompting to be activated?**
 - This happens when Windows determines there has been a significant hardware change since it was last activated. Usually this is because during the configuration the number of virtual cores configured differs from the number that was used when the VM was built (2).
- **What should be done if the student VM(s) start prompting to be activated?**
 - There are two options:
 1. Configure the host & VM's to have internet access and activate the VM. Because it is trial software this has no impact on CPT, the instructor, training facility, the course or Microsoft.
 2. Rearm the activation window with an administrator command prompt. This action can only be performed one time on a VM. It tells Windows to reset the activation deadline to be 10 days from the current date:
 - Click **START** and in the **Search** box type **CMD**.
 - When **CMD.EXE** appears in the list of found applications, right-click it and select **Run as administrator**.
 - In the command prompt type **SLMGR /REARM**.
 - After a few seconds or minutes, a message box will appear saying the VM has been rearmed.
- **Can students copy the VM to take with them? / Can instructors provide a copy of the VM to students?**
 - No. This is prohibited by Microsoft's licensing rules and regulations. CPT is not permitted to redistribute Microsoft software, including trial software.
 - If students ask, instruct them to use one of the setup guides freely available on the CPT website and mentioned at the beginning of this guide.