Release Notes Version 2012.12.3  
For the latest version of these instructions, the virtual machine, and other content, visit <http://aka.ms/VS11ALMVM>.  
**Microsoft® Visual Studio® 2012 Update 1 RTM Application Lifecycle Management Virtual Machine**

## General Release Notes

The Microsoft® Visual Studio® 2012 Update 1 RTM Application Lifecycle Management Virtual Machine is a single virtual machine image that contains fully installed and configured copies of the software listed below. This virtual machine requires Hyper-V, and can be used with Windows Server 2008 R2 SP1, Windows 8 (SLAT-capable processor required) or Windows Server 2012. The detailed instructions in this document assume that you are using Windows 8, although the instructions are similar for other operating systems.

The virtual machine contains the following pre-configured software:

1. Microsoft Windows Server 2008 R2 Standard Edition
2. Microsoft SQL Server 2008 R2
3. Microsoft Visual Studio Ultimate 2012 Update 1
4. Microsoft Visual Studio Team Foundation Server 2012 Update 1
5. Microsoft Visual Studio Team Foundation Server 2012 Update 1 Power Tools
6. Microsoft SharePoint Foundation 2010
7. Microsoft Project 2010
8. Microsoft Office Professional 2010 (Word, PowerPoint, Excel, Outlook)
9. Sample users and data required to support hands-on-lab scripts which accompany this download and exercise many of the new application lifecycle management capabilities introduced in Visual Studio 2012.
10. Sample data from the Visual Studio 2010 Application Lifecycle Management virtual machine has been ported forward to this virtual machine, along with upgrades to the corresponding hands-on-lab / demo scripts from that release.

## Activation

The virtual machine requires online activation if you wish to use it more than 10 days. For this to occur, your VM will need to be connected to a virtual network that has Internet access. We strongly recommend that you only connect this virtual machine to the Internet temporarily and promptly disable Internet access once activation is complete. Please refer to the section “*Configure this Virtual Machine with Hyper-V*” below for more information.

## Expiration

If you choose to activate your virtual machine, it will begin a 180-day trial of Windows Server 2008 R2 Standard Edition. After the 180 days is over you will need to stop using this virtual machine.

## Rollback

It is strongly recommended that you implement a rollback strategy for restoring this virtual machine to a previous point in time. This is helpful in case you make a mistake, or if you want to reset the state of the original sample data contained within this virtual machine. Hyper-V uses a concept called *snapshotting.* The hands-on-labs which were built for use with this virtual machine were tested for use with a “clean” state of the virtual machine; it is recommended that you restore to a clean snapshot before you start each hands-on-lab. See the section titled “Working with *Snapshots*” below for more information.

## Labs / Demo Scripts

A set of hands-on-lab documents, which also function as demo scripts, are available for download along with this virtual machine. The latest version of these documents can be downloaded from [here](http://aka.ms/VS11ALMVM). These hands-on-labs provide a guided experience for you to learn about the new application lifecycle management capabilities of Visual Studio 2012, as well as application lifecycle management features which were introduced in Visual Studio 2010.

## Recommend System Configuration

You will want to provide as much RAM as possible to this virtual machine. A minimum of 4GB is suggested. But you should not allocate all of your physical memory to a virtual machine or you can “starve” your host machine of the RAM it needs to complete other tasks. For example, if you have 12GB of physical memory on your computer then a good allocation for your virtual machine might be 8GB. This can be a process of trial and error.

By default, when you import this virtual machine it will be configured with 4GB of RAM and 1 virtual processor. If you have the necessary hardware you can increase this allocation after the import step by using the Hyper-V console and accessing the settings for this virtual machine.

If you have more than one hard drive, place the VHD file on a physical drive that is different from your system drive. Use the drive with the faster spindle rate if it is a mechanical drive or use an SSD drive. If you use an external hard drive, faster interfaces such as eSata or Firewire 800 will work better. Be careful with slower laptop drives and USB 1.1 interfaces.

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|  | Requirement for Hyper-V Host Machine |
| Operating System | Microsoft Windows® Server 2008 R2 with the Hyper-V role enabled Microsoft Windows® Server 2012 with the Hyper-V role enabled Microsoft Windows® 8 with Hyper-V enabled |
| Drive Formatting | NTFS |
| Processor | Intel VT or AMD-V capable *SLAT-capable CPU required if using Windows 8* |
| RAM | 6 GB of free physical RAM (8 GB or more recommended) 3 GB of RAM assigned to this virtual machine (4GB or more recommended) |
| Hard disk space required for install | 50 GB (more recommended if using snapshots) |

## How to Log In

Press Ctrl+Alt+End instead of Ctrl+Alt+Del. All accounts use the same password: **P2ssw0rd** (capital letter P, the number two, the letter s, the letter s, the letter w, the number zero, the letter r, and the letter d).

## Date and Time

This virtual machine has been hard-coded to boot up with a system date of May 16, 2012. This is required in order to support the accompanying hands-on-labs and demo scripts. Synchronization with the host operating system is disabled, as is synchronization with Internet time servers. If you reboot this virtual machine after you begin working with data in Team Foundation Server, it may have unintended consequences. Therefore it is recommended that you only reboot during the initial configuration steps as detailed below.

## Configure this Virtual Machine with Hyper-V

This section lists the tasks that you must perform using a server with the Hyper-V role enabled.

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| 1. Import and configure the Virtual Machine   Due to the activation and expiration models in Windows Server, it’s highly recommended that you do one of the following:   * Retain a copy of the unaltered VM * Create and retain a snapshot from before first run of the VMs | 1. Under **Actions**, click **Import Virtual Machine**… 2. Use the **Browse** button to select the folder where the virtual machine package was extracted. Keep default settings. Note: You need to browse to the **“Visual Studio 2012 ALM RTM”** folder - *not* one of its subfolders. Click **Select Folder** when you have browsed to this path.      1. Click **Next** through each remaining page of the import wizard, then **Finish**, and wait for the import operation to complete. 2. The new virtual machine will show up in your Virtual Machines list. 3. Optionally, you can right-click this virtual machine to configure various **Settings.**  For example you may wish to increase the number of virtual processors (depending on your hardware) or adjust the amount of RAM allocated to this virtual machine. Read the “Recommended System Configuration” section above for tips about RAM allocation. 4. **Start** the virtual image. 5. Once the machine starts, log in as Administrator (press CTRL + ALT +END) to login. Password is P2ssw0rd. 6. After you login it may take a few minutes to finish the configuration install new drivers. Once done, you may be prompted to reboot. 7. After reboot the machine is ready to use. |
| 1. (Optional) Activate the operating system   This step is optional and is only required if you need to use this virtual machine for more than 10 days from the time you first boot it up. If you do not need to use this virtual machine for more than 10 days you should skip this step. | 1. Open the Hyper-V Manager on the host. 2. Select the VM in the Virtual Machines pane. 3. Click Settings in the Actions pane. 4. Configure the network adapter to use an external network adapter. *(For information on how to configure an external network adapter with Hyper-V please consult the Hyper-V documentation)* 5. Your settings should resemble the following screenshot (the actual name of your external network may vary) 6. Click OK to close the settings dialog. 7. **Start** the virtual machine if it isn’t already running. 8. Once the machine starts, log in as Administrator (press CTRL + ALT +END) to login. Password is P2ssw0rd. 9. Once booted, the virtual machine will automatically set its internal clock to May 16, 2012. This is by design in order to support the accompanying hands-on-labs. However, in order to activate Windows, you will need to temporarily set the date to today’s actual date. Click on the Date/Time section of the task bar and select **Change date and time settings…** Click **Change date and time** and select today’s date. The time does not need to be changed. Click OK twice. 10. From the Start menu, open the **Control Panel**. 11. Double-click on the **System** control panel applet. 12. Click on **Activate Windows Now** at the bottom of the System applet. 13. Click on **Activate Windows online now**. If you have successfully enabled Internet access for your virtual machine then this step should just take a few moments. 14. Your virtual machine will now remain active for up to 180 days from the day you first launched it. You can confirm this by looking at the bottom of the System control panel applet. 15. **Important:** Reboot your virtual machine. This will automatically set your machine’s date back to May 16, 2012. 16. Proceed to step 3 below to configure your virtual machine for use with an **internal** network adapter. Step 3 is very important since there is no active virus protection software on this virtual machine, and it may not contain the latest security patches, so you shouldn’t leave this virtual machine in an Internet-facing state. |
| 3. Configure an internal network adapter | 1. Open the **Hyper-V Manager** on the host. 2. Select the VM in the Virtual Machines pane. 3. Click **Settings** in the Actions pane. 4. Configure the network adapter to use an internal network adapter. *(For information on how to configure an external network adapter with Hyper-V please consult the Hyper-V documentation)* 5. Your settings should resemble the following screenshot (the actual name of your internal network may vary) 6. Click OK to **close** the settings dialog. 7. It is highly recommended that you now take a snapshot of the virtual machine so that you can return to this state later if you need to. See “*Working with Snapshots*” below for more information. |

## Working with Snapshots

Hyper-V introduces the concept of “snapshots” which can be used to revert a virtual machine to a previous configuration state. The hands-on-labs which were built for use with this virtual machine were tested for use with a “clean” state of the virtual machine; it is recommended that you restore to a clean snapshot before you start each hands-on-lab. As delivered, this virtual machine does not include any snapshots.

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| Tasks | Detailed steps |
| 1. Create a Snapshot   Note that having many snapshots can adversely affect performance. You can delete snapshots you no longer need and Hyper-V will merge these when the VM is not running. | 1. Prepare the VM(s) in the state you wish to capture. 2. Open or return to the Hyper-V Manager 3. Select the VM and click Snapshot under Actions. 4. Wait for the snapshot captures to complete. 5. (optional) Right-click a snapshot to rename it. |
| 1. Apply a Snapshot | 1. Open or return to the Hyper-V Manager 2. Select the VM, right-click on the snapshot you wish to use, and choose Apply. You will be prompted to save the current state as a snapshot. Doing so will retain your current state, skipping will discard it. |

## Feedback

If you have comments or general feedback, please e-mail [vskitfdbk@microsoft.com](mailto:vskitfdbk@microsoft.com).