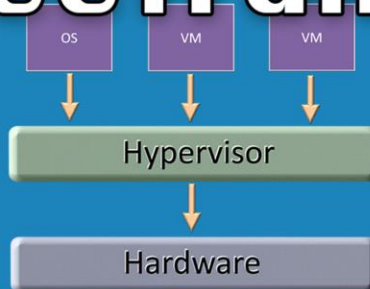


ITFreeTraining



Installing Hyper-V on Windows Server 2012 R2

For the free video please see
<http://itfreetraining.com/hyperv#/install>

This video will look at how to install Hyper-V on Windows Server 2012 R2. Hyper-V is a Microsoft virtualization technology. It is included as part of Windows Server 2012 and Windows 8 and above.

Demonstration

Demonstration installing Hyper-V on Windows Server 2012 R2

00:16 The install will be performed on a fresh install of Windows Server 2012 R2 Standard edition. The only configuration that has been performed is to configure an IP Address and add the server to the domain.

00:28 To add the role, open Server Manager from the quick launch bar and under the manage option select "Add Roles and Features" to start the wizard.

00:38 Press next to skip the welcome screen.

00:39 On the screen "select installation type" select the option "Role-based or feature-based installation" and press next. This option is selected since the install will be performed on the local server.

00:55 The next screen will ask for the destination server that the role will be installed on. In this case the default option will be used which is the local server and then the next button will be pressed.

01:08 On the role select screen, select the role "Hyper-V". The wizard may prompt for additional features to be installed, if this is the case press add features to add these features and then press next to move onto the next screen of the wizard.

01:25 When next is pressed on the role selection screen, some checks will be performed to ensure that the server can run Hyper-V. In this case an error will appear stating that virtualization has not been enabled in the BIOS. See below "Demonstration enabling virtualization in the BIOS" on how to fix this.

03:17 On the select features screen, no additional features are required so press next to move on to the next screen of the wizard.

03:25 At the welcome screen press next to move on. The welcome reminds the administrator that later on in the install a network adapter will need to be chosen to use with Hyper-V. This can be changed later on if required.

03:43 The create virtual switches screen will ask which virtual network that you want to use. In this case the New York virtual network was selected. You are free to change this later on if you need to.

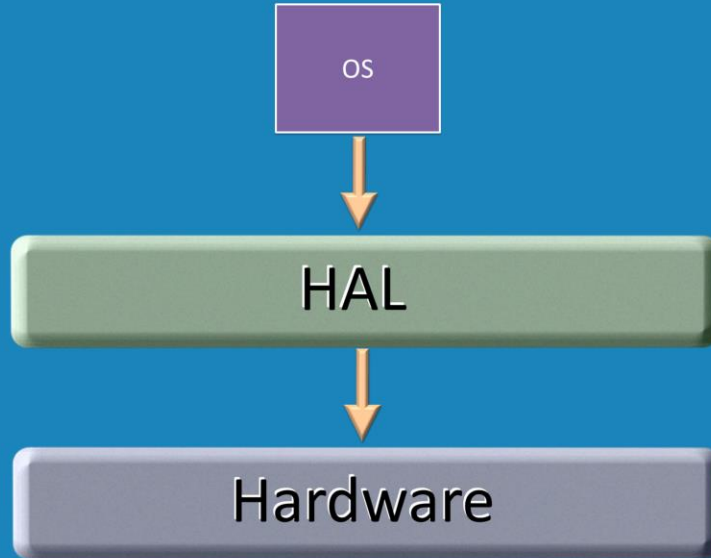
04:20 On the virtual migration screen you need to select if the Hyper-V server will accept live migrations from other machines. This setting can be switched on later if required. A live migration will essentially allow a virtual machine that is running on another Hyper-V server to be transferred to another Hyper-V server. This can be done without shutting down the virtual machine.

04:42 The next screen will ask where the configuration and virtual hard disk files for the virtual machines will be stored. In this case the default location will be used.

04:52 The next screen will allow the administrator to confirm the settings that will be used for the install. If you are happy with the settings, press install to install the role.

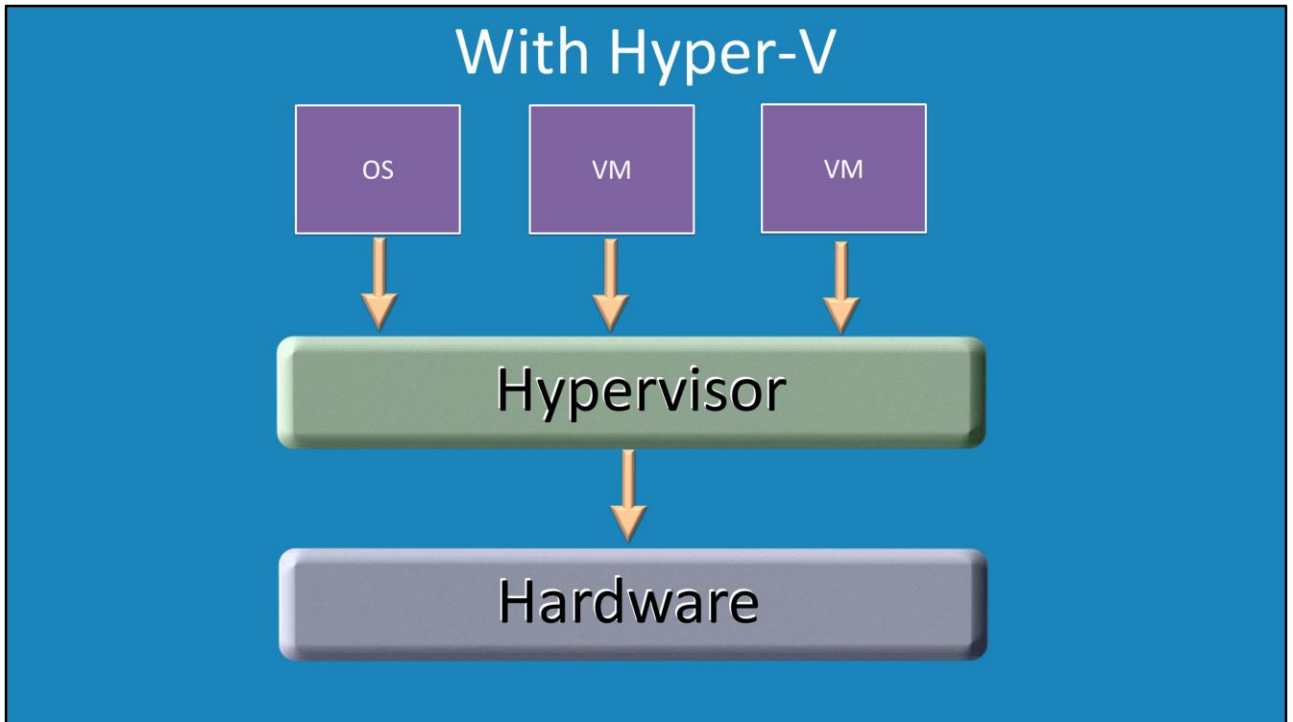
05:10 Once the install is complete, the wizard will ask for the server to be restarted. To do this, right click the start menu and select "Restart" under the menu "Shut down or sign out". The server will perform two restarts before reaching the login screen.

Without Hyper-V



Without Hyper-V

05:28 Without Hyper-V installed, the operating system communicates with the HAL (Hardware Abstraction Layer). This provides the basic functions for the operating system. The operating system does not communicate directly with the hardware and requires the HAL to perform this. The standard HAL that Windows uses does not support virtualization and must be replaced in order for the operating system to run Hyper-V and thus support virtualization.



Hyper-V

05:40 When Hyper-V is installed the HAL is replaced with a Hypervisor. The hypervisor is essentially a HAL with additional functions added to support virtualization.

05:55 The operating system is a partition and is treated like a virtual machine. So each virtual machine that is created is placed in its own partition alongside the operating system. Since the operating system is treated like a virtual machine, resources will be allocated to it and the virtual machines evenly and fairly.

Demonstration enabling virtualization in the BIOS

01:40 To configure the BIOS, restart or start the computer. During the initial boot up a particular key will need to be pressed to access the BIOS, in this case to access the BIOS the delete key needs to be pressed. Other common keys are escape and F6.

When the computer boots the computer should tell you which key to press. Otherwise refer to the documentation for that computer or motherboard to find out which key needs to be pressed.

02:08 Different BIOS will have the setting in different places and the setting name may be different. In this case the menu option "Advanced BIOS Features" needs to be selected and then the option "Virtualization" changed to enabled.

02:37 Exit the bios saving the changes. In this case F10 needs to be pressed to save the changes. Make sure you press Y if prompted to save the changed otherwise the change will not be saved. Different BIOS may have different options to exit the BIOS.

See <http://YouTube.com/ITFreeTraining> or <http://itfreetraining.com> for our always free training videos. This is only one video from the many free courses available on YouTube.

References

“Install Hyper-V and Configure a Virtual Machine” <http://technet.microsoft.com/en-us/library/hh846766.aspx>