

Use the Virtual Machine Manager to quickly deploy Hyper-V

The tips in this article will show you how to quickly deploy virtual machines using the System Center Virtual Machine Manager (SCVMM) management program of Hyper-V.

Network Administration - One of the benefits of virtualization is a copy-and-paste of a virtual machine copy (VM). If you need a new virtual machine, theoretically you just need to copy its file to another location. However, this simple process often lacks some other important steps that administrators need to take.

The tips in this article will show you how to quickly deploy virtual machines using the System Center Virtual Machine Manager (SCVMM) management program of Hyper-V and the steps needed to customize a pre-existing VM to Create a sample VM.

Quickly deploy virtual machines in Hyper-V with SCVMM

When it comes to creating a copy for a virtual machine, copy and paste action is only half of what you need to do. When you make a copy, you will have a copy of the source VM, but you still need to do some extra work to customize the virtual machine for your environment. Hyper-V and its SCVMM management technology are equipped with a function that automates the remaining half of this procedure. Although it is easy to get complicated at first, the end result will be the ability to quickly deploy new virtual machines through a few clicks. Here is a step-by-step introduction to how to use the Virtual Machine Manager to create and deploy virtual machines.

Step 1: Create a source virtual machine



Start, you need a source virtual machine. This virtual machine should be configured as you would with all other virtual machines, in all aspects such as applications, configurations, updates or other utilities you need. Similar to the Ghost application, the source virtual machine is an image used to create other virtual machines.

This is the 'backward' part of the VM deployment process: The protocol that Virtual Machine Manager uses to create a template from a source virtual machine will invalidate the virtual machine during execution. Therefore, before you start, you need to create a copy of this VM into your library and use the disabled original as the source VM. This is because SCVMM's use of Sysprep tool (a utility used in Windows operating system deployment) requires powering off during execution. SCVMM also does not support creating templates from Hyper-V virtual machines that have multiple checkpoints, so you need to delete checkpoints in virtual machines that you plan to use as a sample source.

Step 2: Create hardware profile and guest operating system

To create a sample VM, Virtual Machine Manager requires three things: the source machine, the hardware profile, and the guest operating profile. The hardware profile will outline the virtual machine hardware configured for what will become the deployed VM. The guest operating system profile will identify the operating system specific information. Finally, a source has to be created.

The first step in building a sample VM is to create a hardware profile. In the Library view, click the **New Hardware Profile link** and name the profile. Next, click the **Hardware Settings** tab. You will then be taken to the hardware profile view just like the views you see when creating new virtual machines from scratch. The difference with the hardware profile here is, you can set the profile for each VM you will create with this template.

When your virtualized hardware is identified through its profile, you need to create a guest operating profile. In the Library view, click the **New Guest OS Profile link** and name the profile. Under the **Guest OS** tab, you will see several options related to the operating system, as well as some components that will be applied to the virtual machine when deployed. Components such as hostname, local administrator password, product key for Windows, time zone, installed operating system, and connected domain need to be imported into the profile.

As you can see, most of the Sysprep configuration has been completed in the guest operating profile. If you're familiar with the Sysprep tool's answer file, you can add a file to the script location. You can also set the GUIRunOnce key, which launches a command line executable file, or script, the first time a user logs in to the virtual machine, providing deeper customization. With virtual machine deployment, the combination of these components within the guest OS profile is the point where SCVMM plays an important role.

Step 3: Create and deploy VM templates

When all three components are complete, you are now ready to create the first virtual machine. In the **Library** view, click **New Template** to start the process. The first screen of the wizard will ask you to specify the Virtual Hard Disk source (VHD) for this model. This source may be a virtual machine that has been turned off as discussed above or another template or VHD stored in the library. It should be noted that using an existing virtual machine to complete this process will destroy the virtual machine.

The remaining steps in the configuration process are to assign the hardware profile and guest OS profile, then select the **Library Server** and the path to save the template. Setting up the hardware and guest OS profile in the respective screens, or the template will have the default settings, these are settings that will force you to start a process again. The wizard will start creating the first template by running Sysprep on the machine. If the process is done properly, it will take a certain amount of time to complete.

Once the template has been created, the source VM will not exist and a new template will be added to the Library. Deploying the template with its related profiles is done by right-clicking on the template and selecting the **New Virtual Machine option** . Now your new VM will be deployed in a new way.

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