Tivoli Provisioning Manager for OS Deployment V7.1.1

Clone images

In this module, you will learn about creating clone profiles for Windows® and Linux® operating system installations.

Creating a clone system profile

For the unattended setup, you create the clone profile from the OS Deployment > System Profiles WEBUI page. Click the **New Profile** button and select one of the two clone options that are available in the Profile Wizard. You can create two types of clone profiles. One profile is cloning from a reference image file, and the other profile is cloning from a reference machine.

Clone profile from a reference image file

- Only Microsoft® Windows Imaging (WIM) files, Solaris Flash Archive (.flar) files, or Rembo Toolkit header files are supported
  - From **OS deployment > System profiles**, click the **New profile** button
  - In the Profile Wizard, select **Cloning from a reference image file**

Profile Wizard

This wizard guides you through the process of creating a new system profile. A system profile contains the partition layout and files necessary for deployment.

A machine can be automatically installed either by running a full setup procedure, or by cloning a reference machine, by cloning an installation file such as a WIM image. Choose the type of system profile that you want to create:

- ○ Unattended setup (scripted install)
- ⦿ Cloning from a reference image file
- ○ Cloning from a reference machine

Note: The Web interface extension must be installed and running on your local computer for you to create an image file clone.
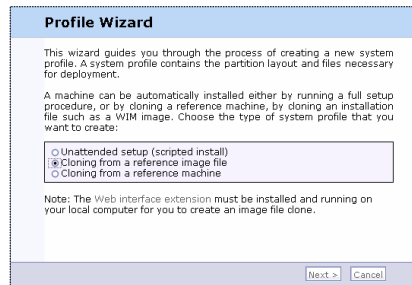
[Next >] [Cancel]

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If you select the option, Clone profile from a reference image file, you can create the clone profile from several types of files. You can create the profile from a Windows Imaging file, a Solaris Flash Archive (.flar) file, or a Rembo Toolkit header file. The image file must be available on a computer that is running the Web Interface Extension. For a Solaris Flash Archive, you must set up a Solaris installation server with an NFS share.
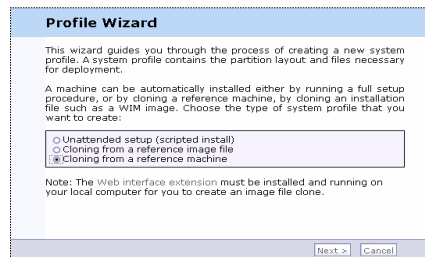
Clone profile from a reference image file

- For Solaris Flash Archive, perform the following steps:
  – Set up a Solaris installation server with a configured network share for Solaris Flash Archives
  – Download and start the Web Interface Extension on the Solaris installation server
  – Create the profile through the Tivoli® Provisioning Server for OS Deployment WEBUI

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You must perform additional steps to create a clone profile from a Solaris Flash Archive file. On this slide is a list of these steps, including the installation of the Web Interface Extension. 1. Configure a Solaris installation server with an NFS share specifically for Solaris Flash Archives and copy the .flar file into that location. 2. Download and install the Web Interface Extension on the Solaris machine. 3. From the product WEBUI, create a new Solaris clone profile from a reference image file by passing the IP address of the configured Solaris machine.
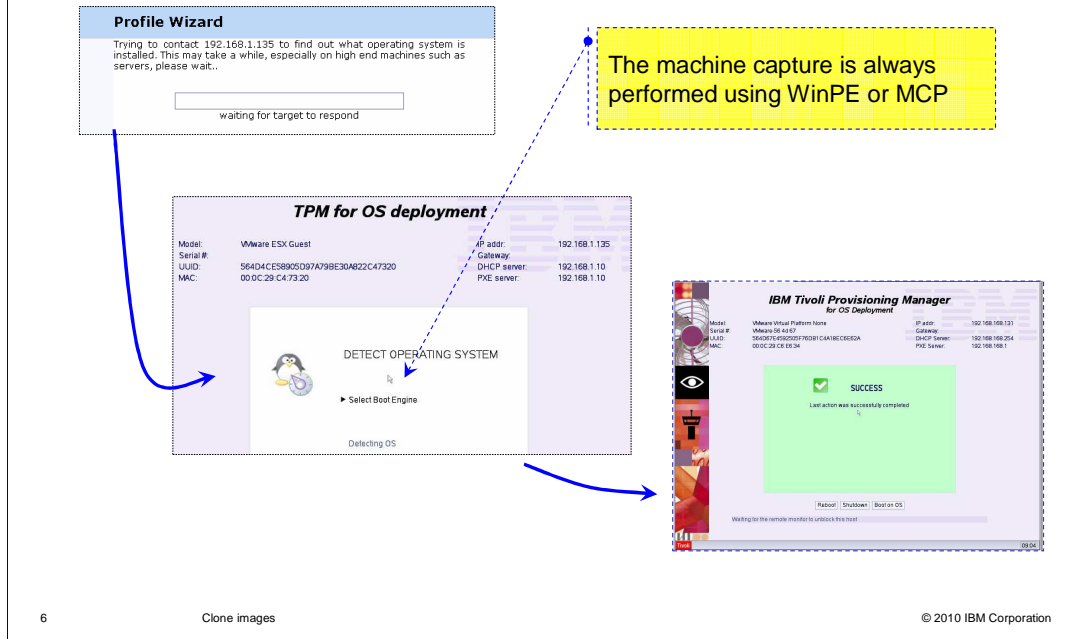
Clone profile from a reference machine (1 of 2)

- Only Windows and Linux on Intel® are supported
- Prepare the machine before starting the clone operation from the WEBUI. On **Windows**, run **sysprep**.
- From **OS deployment > System profiles**, click the New profile button
- In the Profile Wizard, select **cloning from a reference machine**

Profile Wizard

This wizard guides you through the process of creating a new system profile. A system profile contains the partition layout and files necessary for deployment.

A machine can be automatically installed either by running a full setup procedure, or by cloning a reference machine, by cloning an installation file such as a WIM image. Choose the type of system profile that you want to create:

- ○ Unattended setup (scripted install)
- ○ Cloning from a reference image file
- ◉ Cloning from a reference machine

Note: The Web interface extension must be installed and running on your local computer for you to create an image file clone.

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You select the clone profile option from a reference machine when you have an installed system (Windows or Linux on Intel) and you want to take its clone image. Before starting the profile creation from the product WEBUI, you prepare the installed machine. For Windows, you run the sysprep tool with specific options, depending on the version of Windows. The steps needed to clone a Windows or Linux machine are: 1. Prepare the installed machine; 2. PXE boot the machine; 3. Start the clone profile creation from the product WEBUI. Select the **Cloning from a reference machine** option. Pass the reference machine IP address to the Profile Wizard.

Clone profile from a reference machine (2 of 2)

You start the "clone from a reference machine" profile creation. Then, you pass to the profile wizard the IP address of the prepared reference machine that was PXE-booted. Tivoli Provisioning Manager for OS Deployment detects the installed operating system through a task that is executed on the reference machine. Tivoli Provisioning Manager for OS Deployment displays the detected operating system in the profile wizard. The image capture uses WinPE for Windows and MCP for Linux. After the Profile Wizard displays the detected operating system type, you can continue the profile creation.

Cloning a Windows machine

1. Copy the Sysprep executable files into a folder named C:\sysprep

2. Close all your applications

3. Click **Start → Run** and run the sysprep with the correct options for the specific Windows platform

4. PXE boot the machine

5. Start the capture from the WEBUI and provide the machine IP address

Profile Wizard

This wizard guides you through the process of creating a new system profile. A system profile contains the partition layout and files necessary for deployment.

A machine can be automatically installed either by running a full setup procedure, or by cloning a reference machine, by cloning an installation file such as a WIM image. Choose the type of system profile that you want to create:

○ Unattended setup (scripted install)
○ Cloning from a reference image file
◉ Cloning from a reference machine

Note: The Web interface extension must be installed and running on your local computer for you to create an image file clone.

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Profile Wizard

Enter the IP address of the target machine that you want to clone and make sure the target machine is ready to start up into Tivoli Provisioning Manager for Images server.
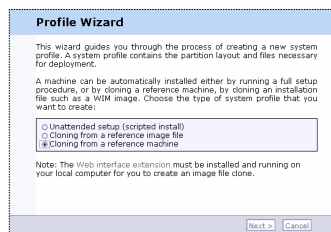
IP address: 10.1.2.48

Hint: To start up the target machine into Tivoli Provisioning Manager for Images server, you need to initiate a network start up (press F12 upon starting up).

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On this slide, is the step-by-step procedure to clone a Windows reference machine. First, you obtain the correct sysprep.exe package for your specific Windows version. Typically, this package is located on the related Windows image CD/DVD. Then, you copy the Sysprep executable files on the reference machine into a folder named **C:\sysprep**. Close all your applications. Click **Start** > **Run** and run the sysprep with the correct options for the specific Windows model. Refer to the Tivoli Provisioning Manager for OS Deployment Guide. For example, for Windows XP, you run: C:\sysprep\sysprep.exe –mini –forceshutdown –reseal. Alternatively, you can start Sysprep in a graphical user interface. Your system shuts down automatically after a few seconds. PXE boot the machine. Start the capture from the WEBUI and provide the machine IP address to the wizard.

Cloning a Linux machine

1. Prepare the installed Linux machine and PXE boot it

2. Start the clone profile creation from the WEBUI by providing the Linux machine IP address

Profile Wizard

Enter the IP address of the target machine that you want to clone and make sure the target machine is ready to start up into Tivoli Provisioning Manager for Images server.

IP address: 10.1.2.48

Hint: To start up the target machine into Tivoli Provisioning Manager for Images server, you need to initiate a network start up (press F12 upon starting up).

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Before capturing a Linux machine, you have to prepare it. More precisely, you have to remove all the files and folders that you do not want to be cloned. You also check to see whether Linux Grand Unified Bootloader (GRUB) is installed on the bootsector of the Linux /boot partition or in the root partition. To start your system correctly with GRUB, ensure that you have a standard MBR on the disk, with the boot partition flagged as bootable. The Xen virtualization package part of RHEL5 is not supported and must be removed from the reference computer before the clone operation is started. Tivoli Provisioning Server for OS Deployment automatically installs and runs its own system preparation tool named LinPrep during the clone operation. After you prepare the machine, you PXE boot it and finally start the clone profile creation from the WEBUI, passing the machine IP address to the wizard.

Windows snapshot capture

- A snapshot capture is a Windows clone without running sysprep

- The snapshot capture is supported only for Windows

- Snapshot capture is not a backup solution. It is a quick snapshot of a Windows computer, but it is not reliable if the reference computer has a lot of data.
  - From **OS deployment > System profiles**, click the **New profile** button
  - In the Profile Wizard, select **Cloning from a reference machine**

Profile Wizard

This wizard guides you through the process of creating a new system profile. A system profile contains the partition layout and files necessary for deployment.

A machine can be automatically installed either by running a full setup procedure, or by cloning a reference machine, by cloning an installation file such as a WIM image. Choose the type of system profile that you want to create:

○ Unattended setup (scripted install)
○ Cloning from a reference image file
◉ Cloning from a reference machine

Note: The Web interface extension must be installed and running on your local computer for you to create an image file clone.

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In addition to the clone operation, you can also perform a "clone without sysprep" for Windows. In other words, you take an operating system snapshot image. A quick snapshot of the Windows system can be restored later on the same machine. This feature cannot be used as a backup solution because it is not reliable for systems that host large amounts of data and have complex applications. The procedure to take such an image is similar to the Windows cloning profile, but you do not run sysprep. Instead, you directly PXE boot the machine and start the profile creation from the product WEBUI.

Summary

In this module you learned how to:

- Create clone profiles from a reference image file
- Create clone profiles from a reference machine
- Create snapshot image profiles

In this module you learned how to: create clone profiles from a reference image file; create clone profiles from a reference machine; and create snapshot image profiles.

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