



[TechNet Home](#) > [Products & Technologies](#) > [Desktop Operating Systems](#) > [Windows XP Professional](#) > [Deploy](#)

## How to Prepare Images for Disk Duplication with Sysprep

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Sysprep is a tool designed for corporate system administrators, OEMs, and others who need to deploy the Windows® XP operating system on multiple computers. After performing the initial setup steps on a single system, you can run Sysprep to prepare the sample computer for cloning.

To use Sysprep as part of the disk duplication process, the following requirements must be met:

- The master installation and the destination computers must have compatible hardware abstraction layers (HALs). For more information on HAL compatibility use the following knowledgebase article: [Q309283](#) HAL options after Windows XP or Windows Server 2003 Setup.
- The mass-storage controllers (IDE or SCSI) must be identical between the reference and destination computers.
- Plug and Play devices such as modems, sound cards, network cards, video cards, and so on, do not have to be the same. However, any device drivers not included in Drivers.cab should be included in the master installation before you run Sysprep. Alternatively, make sure the uninstalled drivers are available on the destination computer at first run, so Plug and Play can detect and install the drivers.
- Third-party software or disk-duplicating hardware devices are required. These products create binary images of a computer's hard disk, and they either duplicate the image to another hard disk or store the image in a file on a separate disk.
- The size of the destination computer's hard disk must be at least the same size as the hard disk of the master installation. If the destination computer has a larger hard disk, the difference is not included in the primary partition. However, you can use the ExtendOemPartition entry in the Sysprep.inf file to extend the primary partition if it was formatted to use the NTFS file system.

**Note** If the reference and destination computers have different BIOS versions, you should test the process first to ensure success. When using Sysprep for Disk Duplication, Sysprep modifies the local computer Security ID (SID) so that it is unique to each computer.

### How to prepare a master installation for cloning

1. Install Windows XP on a master computer. As a best practice, Microsoft recommends that Windows XP be installed from a distribution folder by using an answer file to help ensure consistency in configuring the master installation, so that iterative builds can be created and tested more readily. See Unattend.txt for information about automating Windows Setup using an answer file.
2. Log on to the computer as an administrator.

#### Related Links

- [How to Use Sysprep: An Introduction](#)
- [How to Use Sysprep for Auditing Installations](#)
- [How to Use Sysprep to Automate Mini-Setup](#)
- [How to Use Sysprep to Restore the Computer to an End-User-Ready State](#)
- [How to Use Sysprep in Factory Mode](#)

3. (Optional) Install and customize applications, such as Microsoft Office, Internet Explorer favorite items, and so on.
4. (Optional) Install any device drivers not included in Drivers.cab and not installed by the answer file.
5. (Optional) Run audit tests.
6. (Optional) If you want, create a Sysprep.inf file manually or with the aid of Setup Manager. This file is used to further customize each computer for the user and helps to set the amount of information for which the user will be prompted during Mini-Setup.
7. Run Sysprep.exe. Make sure that both the Sysprep.exe and Setupcl.exe files exist together in the %systemdrive%\Sysprep folder on the local hard disk. When used, the Sysprep.inf also needs to be in the same folder or on a floppy disk that is inserted when the Windows boot menu appears.

**Important** If Setupcl.exe is not in the same directory as Sysprep.exe, Sysprep will not work.

8. If the computer is ACPI-compliant, the computer will shut down by itself. If not, a dialog box appears stating that it is safe to shut down the computer.
9. Take out the system drive and follow the steps for duplicating the system on other computers. You must have special equipment or software for duplicating hard disks.

After a duplicated hard disk is inserted into a computer, when the user turns the computer on, the following occurs:

1. Plug and Play detection occurs – this takes approximately three minutes.
2. Mini-Setup prompts users to:
  - Accept the EULA.
  - Specify their name and organization.
  - Join a domain or a workgroup.
  - Specify regional options information.
  - Specify TAPI information.
  - Specify the networking protocols and services to install.
3. The local Sysprep folder containing Sysprep.exe and Sysprep.inf in %systemdrive% is deleted.
4. The computer restarts and a logon prompt displays.

**Note** If a Sysprep.inf file was used when running Sysprep.exe, only the dialog boxes omitted in the .inf file are presented to the user. If display settings are omitted, the default settings are used instead.

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