

Preserving OEM Activation in Windows Vista (Updated)

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Applies to:

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| • | Windows Vista® Starter |
| • | Windows Vista Home Basic |
| • | Windows Vista Home Premium |
| • | Windows Vista Business |
| • | Windows Vista Ultimate |

Summary: An updated version of the description of how to add or remove software from an existing OEM-preinstalled Windows Vista image while preserving the pre-activation state applied in the OEM factory.

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# Introduction

A common scenario for businesses buying OEM systems with Windows Vista® pre-installed is that the business has Line of Business (LOB) applications, device drivers, and other software that they wish to add before they deploy these systems into their IT environment. This paper explains how to add or remove software from an existing OEM-preinstalled Windows Vista image while preserving the pre-activation state that was applied in the OEM factory.

Businesses can preserve the pre-activated status of Windows Vista when they use one of the following approved methods to modify an OEM-preinstalled Windows Vista image:

* In an online environment, use audit mode.
* In an offline environment, use Package Manager.

Microsoft recommends that customers take advantage of the work done by their OEM and add to the factory image or subtract from it, to create the desired image, by using the audit mode process. This will ensure that OEM Activation remains intact. The following alternatives to OEM Activation are available as well:

* **Clean Installations**. OEM Activation will not be preserved and activation will be required manually on a per-machine basis.
* **Volume License Installations**. OEM Activation is bypassed and activation is provided by Key Management Services (KMS) or Microsoft Activation Keys (MAK). For more information about KMS or MAK, see the following Web page: <http://www.microsoft.com/licensing/default.mspx>.

**Note**   Original equipment manufacturers (OEMs) frequently pre-activate Windows Vista software that is installed on computers that they manufacture.

## Customizing Windows in Audit Mode

Audit mode enables OEMs and corporations to customize a Windows installation before shipping the computer to an end user. In audit mode, you can install applications, add device drivers, run scripts, and test the validity of a Windows installation. Audit mode is a networked-enabled environment that does not require settings in Windows Welcome to be applied.

You can use audit mode to add additional customizations to a reference image; this reduces the number of different images you need to manage. For example, you can create a single reference image that contains the basic customizations you want to apply to all Windows images. You can then boot the reference image to audit mode and make additional changes that are specific to the computer. These changes can be customer-requested applications or specific device drivers.

**Limitations of Using Audit Mode**

If you use **sysprep** **/audit** to boot to audit mode, the computer will be removed from a domain. You must rejoin the computer to a domain in audit mode.

### Updating by Using Audit Mode

Use the following steps to update an image by using audit mode.

1. Create an answer file that will instruct the Windows Vista OEM image to boot into audit mode.

**Note**   Make sure to omit the ProductKey entries from Unattend.xml to avoid overwriting the product key already present in the OEM image. Inserting a blank entry may also result in an error.

For more information about creating answer files, see the following topics in the Windows Automated Installation Kit (Windows AIK) or in the Windows OEM Preinstallation Kit (Windows OPK) documentation: “**Create an Answer File**,” “**Work with Answer Files in Windows SIM,**” and **“Open a Windows Image or Catalog File**.”

1. Boot Windows Vista into audit mode.

For more information about audit mode, see the following topics in the Windows AIK or the Windows OPK documentation: “**Customize Windows in Audit Mode**,” and “**How Configuration Passes Work**.”

1. Install software, drivers, or LOB applications.
2. Run **sysprep /generalize**.

For more information about Sysprep, see the following topics in the Windows AIK or the Windows OPK documentation: “**What is Sysprep**?” and “**How Sysprep Works**.”

**Note**   Users may see an error if Sysprep is run too many times. More information and a solution to this are located at http://support.microsoft.com/kb/929828.

All of the topics that were referenced in the previous steps can be found by downloading the Windows AIK. To download the Windows AIK, go to the following page on the Download Center, and then follow the instructions to download.

<http://www.microsoft.com/downloads/details.aspx?FamilyId=94BB6E34-D890-4932-81A5-5B50C657DE08&displaylang=en>

### Applying Customizations by Using Package Manager

Package Manager is a new tool that is installed as a Windows Vista operating system component. It is also distributed in the Windows OPK and is installed by default in the \Tools\Servicing folder.

Package Manager can be used to install or remove packages, such as security updates, language packs or service packs. Since Windows Vista is a completely componentized operating system, Package Manager can also be used to enable or disable Windows features on an offline Windows image. Drivers are also treated as components, so you can also add or remove a driver on an offline Windows image using Package Manager.

This tool is called by Windows Setup during a normal installation. It runs transparently during a Windows installation or update. It can also be initiated from the command-line prompt to install packages on an offline computer using an unattended installation answer file. For unattended installation of service packs or other updates, it must be run manually at a command prompt.

### Updating by Using Package Manager

The following steps provide an outline of the procedure that updates an image by using audit mode.

1. Prepare the Windows Vista OEM pre-installed image to be modified with Package Manager.

For information about how to use Package Manager, see the following topics in the Windows AIK or the Windows OPK documentation: “**Package Manager Command-Line Options**,” and “**Package Manager Technical Reference**.”

1. Install software, drivers, or LOB applications.
2. Duplicate and deploy the image.

For information about how to use Package Manager, see the following topic in the Windows AIK or the Windows OPK documentation: “**Windows Vista Deployment Step by Step Guide**.”

Web addresses can change, so you might be unable to connect to the Web site or sites mentioned in this paper.