



Readme for Windows 2000 Service Pack 4 (ReadMeSP.htm)

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This Readme file provides important information about Service Pack 4 (SP4) for Microsoft® Windows® 2000 Professional, Windows 2000 Server, Windows 2000 Advanced Server, Microsoft Small Business Server 2000, and Windows 2000 with Server Appliance Kit. Read this file before you install SP4. This file explains how to install SP4, describes the issues that SP4 addresses, and provides specific information that might apply to your setup.

Links to additional resources are also included in this file. To access the Web sites referenced in this file, you must be connected to the Internet.

1.0 Introduction

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SP4 is a collection of updates for Windows 2000. You can install SP4 either from the Service Pack 4 CD or from the [Microsoft Windows 2000 Service Pack 4 Web site](#).

SP4 contains updates for the following areas of Windows 2000 functionality:

- Security
- Operating system reliability
- Application compatibility
- Windows 2000 Setup

SP4 also includes:

- The updates contained in Service Pack 1, Service Pack 2, and Service Pack 3 for Windows 2000
- Microsoft Internet Explorer 5.01 Service Pack 4
- Microsoft Outlook® Express 5.5 with Service Pack 2

1.1 List of Fixes

To determine whether to install SP4, and for detailed information about fixes that SP4 includes, see article 327194, "List of Fixes in Windows 2000 Service Pack 4," in the [Microsoft Knowledge Base](#). This list of fixes is also available under **Learn More** on the [Microsoft Windows 2000 Service Pack 4 Web site](#).

1.2 Key Points to Remember About Service Pack 4

- You can install SP4 while Windows is running.
- If you install SP4 over Windows 2000 Service Pack 1 (SP1) or an earlier release of Windows 2000, your computer will automatically be upgraded to 128-bit encryption to

provide better online and local security and to bring your computer up to the current worldwide encryption standard. Beginning with Windows 2000 Service Pack 2 (SP2), 128-bit encryption is supported as the default, so if you previously installed SP2 or Windows 2000 Service Pack 3 (SP3), your computer has already been upgraded to this level of encryption. Furthermore, your computer retains 128-bit encryption even if you revert to Windows 2000 or SP1 unless you reformat your hard drive and complete a new installation of Windows 2000 or Windows 2000 with SP1.

- If you have already installed a previous service pack, install SP4 without removing the previous service pack.
- SP4 is a recommended update because it includes fixes that can improve how some programs run with Windows 2000.
- Before you install SP4, see [Before You Install Service Pack 4](#) later in this document.
- You cannot install SP4 on a computer that is running Microsoft Windows Millennium Edition.

1.3 Contents of the Service Pack 4 CD

SP4 is available from the SP4 CD, which includes:

- W2ksp4.exe. This executable file contains the SP4 installation files. Advanced users and administrators might want to extract the files to complete specific tasks before they install SP4. The *Microsoft Windows 2000 Service Pack 4 Installation and Deployment Guide* provides information on how to complete these tasks. You will find this guide in the \Support\Tools folder on the Service Pack 4 CD (see SPDeploy.htm).
- The *Microsoft Windows 2000 Hotfix Installation and Deployment Guide*. This guide provides instructions for installing hotfixes on multiple computers. You will find this guide in the \Support\Tools folder on the Service Pack 4 CD (see HFDeploy.htm).
- Additional tools for advanced users, support staff, and administrators. For more information, see the *Microsoft Windows 2000 Service Pack 4 Installation and Deployment Guide* in the \Support\Tools folder on the Service Pack 4 CD (see SPDeploy.htm).

1.4 Web Site Contents for Service Pack 4

The [Microsoft Windows 2000 Service Pack 4 Web site](#) includes all of the items listed in the preceding section, [Contents of the Service Pack 4 CD](#). This Web site also provides links from which you can install SP4.

- If you want to install SP4 on one computer, the **Express installation** is recommended.
- If you want to install SP4 on multiple computers, the **Network installation** is recommended.

Either installation results in an update or an upgrade to SP4.

For more information about each of these installation options, see [Installing Service Pack 4 from the Web Site](#) later in this document.

1.5 Support for USB 2.0 EHCI Host Controllers

SP4 includes drivers for computers that contain Universal Serial Bus 2.0 Enhanced Host Controller Interface (EHCI) Peripheral Component Interconnect (PCI) controllers. You can use Device Manager to determine whether your computer has one of these controllers installed. If such a controller is installed, you can use Device Manager to update the drivers for it.

Note

We recommend that you complete the following procedure even if you have updated your Universal Serial Bus (USB) driver from the Windows Update Web site, as described in article 319973, "Universal Serial Bus 2.0 Support in Windows 2000" on the [Microsoft Knowledge Base](#). The drivers that are provided with SP4 include additional enhancements.

To update drivers for USB 2.0

1. After you install SP4, open Device Manager. To do so, click **Start**, point to **Settings**, click **Control Panel**, double-click **System**, click the **Hardware** tab, and then click **Device Manager**.
2. Click **Universal Serial Bus controllers**.
3. If **Enhanced Host Controller** appears under **Universal Serial Bus controllers**, you have USB 2.0 drivers installed. If **Enhanced Host Controller** does not appear under **Universal Serial Bus Controllers**, but **Universal Serial Bus Controller** appears under **Other devices** (with a yellow question mark), you do not have USB 2.0 drivers installed.
4. Right-click **Enhanced Host Controller** (or **Universal Serial Bus Controller** under **Other devices**), and then click **Update Driver**. Follow the instructions that appear in the Hardware Update Wizard.

After you have updated the drivers, "Hi-Speed" devices that are connected to the Enhanced Host Controller will work at high speed (up to 480 Mbps).

1.6 Support for Wireless Protocol 802.1x

SP4 supports the IEEE 802.1x authentication protocol. For information about using this protocol with Windows 2000, see article 313664, "Using 802.1x Authentication on Computers Running Windows 2000" in the [Microsoft Knowledge Base](#). This article was written for other Windows 2000 releases, but it also applies to SP4.

1.7 Updates Included in Previous Windows 2000 Service Packs

The following information applies to previous service packs for Windows 2000. If you update to SP4 from versions of Windows 2000 earlier than SP3, this information applies to your installation. For more information, see **Learn More** on the [Windows 2000 Service Pack 3 Web site](#).

- **Automatic Updates**

Beginning with SP3, you can automatically receive critical Windows 2000 fixes over the Internet as soon as they become available.

- **128-Bit Encryption**

Beginning with SP2, 128-bit encryption is supported as the default standard.

- **Updates for Internet Explorer 5.01**

Beginning with SP3, Internet Explorer 5.01 is updated only when you install a Windows 2000 service pack.

- **Application Compatibility Modes**

Compatibility modes are automatically installed onto computers that are running Windows 2000 Professional. As a result, you can run applications that were designed to run

on Microsoft Windows 95, Windows 98, or Windows NT 4.0 with Service Pack 5.

- **Microsoft Windows Installer**

Installing SP3 or SP4 automatically updates Windows Installer from version 1.1 to version 2.0, which you can also download from the Download Center on the [Microsoft Web site](#). After you install Windows Installer version 2.0, you cannot revert to version 1.1, even if you remove SP3 or SP4.

2.0 Before You Install Service Pack 4

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Read these installation instructions carefully before you install SP4. Installation methods might have changed since the release of previous service packs.

Before you install SP4, see article 813432, "Release Notes for Windows 2000 Service Pack 4," in the [Microsoft Knowledge Base](#). This article is also available under **Learn More** on the [Windows 2000 Service Pack 4 Web site](#). Read these notes carefully before you install the service pack.

Note

If you want to install SP4 on multiple computers, see the Microsoft Windows 2000 Service Pack 4 Installation and Deployment Guide in the \Support\Tools folder on the Service Pack 4 CD (see SPDeploy.htm). This guide provides detailed instructions for installing SP4 as either a standalone, in which just the service pack is installed, or as an integrated installation, in which the service pack is installed along with Windows 2000.

To maximize recovery of the computer if the installation fails, use the following procedure to update your emergency repair disk before you begin the installation.

To update your emergency repair disk

1. Click **Start**, point to **Programs**, point to **Accessories**, point to **System Tools**, and then click **Backup**.
2. On the **Welcome** tab, click **Emergency Repair Disk**.
3. Click **Also backup the registry to the repair directory**, and then click **OK**.

2.1 Operating Systems That Support Service Pack 4

You can install SP4 only on versions of Windows that are supported for the service pack. Before you install SP4, see the table in this section to determine whether your version of Windows is supported for an update to SP4.

Note

System administrators and advanced users: This information applies only to standalone installations of SP4. You can integrate SP4 with Windows 2000 installation files and make more upgrade options available. These options are explained in the *Microsoft Windows 2000 Service Pack 4 Installation and Deployment Guide* in the \Support\Tools folder on the Service Pack 4 CD (SPDeploy.htm).

Windows operating system	Supported for installations of SP 4
Microsoft Windows 95	No
Windows 98	No
Windows 98 Second Edition	No
Windows NT 3.51	No
Windows NT 4.0	No
Windows Millennium Edition	No
Windows 2000 Professional	Yes
Windows 2000 Server	Yes
Windows 2000 Advanced Server	Yes
Windows 2000 Datacenter Server	Yes — update to SP4 only in conjunction with your OEM
Windows 2000 with Server Appliance Kit	Yes
Microsoft Small Business Server 2000	Yes

2.2 Space Requirements for Service Pack 4

For information about the space requirements for installing SP4, see article 813432, "Release Notes for Windows 2000 Service Pack 4," on the [Microsoft Knowledge Base](#). This article is also available under **Learn More** on the [Windows 2000 Service Pack 4 Web site](#). Read these notes carefully before you install the service pack.

3.0 Installing Service Pack 4

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You can install SP4 from the Service Pack 4 CD, from a network drive, or from the [Microsoft Windows 2000 Service Pack 4 Web site](#).

During the installation, backup files are created by default so that you can remove SP4 later if you want to do so. If you do not want to create backup files, you can click **Do Not Archive Files** in the Setup Wizard. This option is not recommended, however. If you do not have enough hard disk space to store backup files on your computer, you can move them to a shared network folder and delete them from your computer. For more information about this option, see article 290402, "HOW TO: Remove the Service Pack Restore Files and Folders in Windows," in the [Microsoft Knowledge Base](#). Although this article was written for SP3, it applies to SP4 as well.

Important

If you choose not to create backup files, you will be unable to remove SP4.

To install SP4, you must be logged on to your computer as a member of the Administrators group.

3.1 Installing Service Pack 4 from the CD

The following procedure explains how to install SP4 from the Service Pack 4 CD. To install SP4 from the Web site instead, see the next section, [3.2 Installing Service Pack 4 from the Web Site](#).

To install Service Pack 4 from the CD

1. Before you begin the installation, stop any real-time virus checkers that you have running. This is important because if real-time virus checkers are running, they can cause problems with the installation.
2. Insert the Service Pack 4 CD into your CD-ROM drive. Wait a few moments for a Web page to appear.
3. If a Web page automatically appears when you insert the CD, click the link under **Install Service Pack 4**.
If a Web page does *not* automatically appear, perform the following procedure:
 - a. Click **Start**, click **Run** and then type the following:
Drive:/w2ksp4.exe
(*Drive* represents the drive letter associated with your CD-ROM drive)
 - b. Press ENTER.
4. If Setup prompts you to run W2ksp4.exe or to save it to disk, click **Run this program from its current location**, and then click **OK**.
5. Follow the instructions that appear in the Windows 2000 Service Pack 4 Setup Wizard.
6. If you do not want to create backup files, select the **Do Not Archive Files** option when the Setup Wizard displays it.

Important

If you select **Do Not Archive Files**, you will not be able to remove SP4 later. We recommend that you create backup files.

7. Restart your computer, and then restart the virus checkers.

3.2 Installing Service Pack 4 from the Web Site

You have two installation options for installing SP4 from the Web:

• The Express installation

If you choose to install the service pack from the Web site, the Express installation is recommended for users with one computer to upgrade. Due to the time it takes to download the files for the Network installation, the Express installation can be significantly faster. The Express installation detects the service pack files that are already installed on your computer. It then installs only those files that need to be updated.

For more information about these installation types, see [Microsoft Windows 2000 Service Pack 4 Web site](#).

• The Network installation

When you use the Network installation option, you can download an executable file (W2ksp4.exe) that contains all of the SP4 files. This is a useful option if you want to set up a shared network folder for deploying SP4 across a network. For more information about

installing SP4 on multiple computers, see the *Microsoft Windows 2000 Service Pack 4 Installation and Deployment Guide* in the \Support\Tools folder on the Service Pack 4 CD (see SPDeploy.htm).

For more information about these options, and for the download links, see the [Microsoft Windows 2000 Service Pack 4 Web site](#).

Important

Windows 2000 includes Internet Explorer 5.01. If you use a browser other than Internet Explorer 5.01 or later, your connection settings might prevent you from being able to use the Express installation option to install SP4. As an alternative, you can complete the Network installation, which is explained in [To download the installation files](#) in the next section.

To run the Express installation

1. Before you begin the installation, stop any real-time virus checkers that you have running. This is important because if real-time virus checkers are running, they can cause problems with the installation.
2. Go to the [Microsoft Windows 2000 Service Pack 4 Web site](#).
3. Click **Get SP4 Now**, and then click **Download Windows 2000 SP4**.
4. Choose a language from the drop-down list and click **Go**.
5. Important information appears about the two installations that are available. Before you proceed, review this information to ensure the appropriateness of this installation.
6. Click **SP4 Express Installation**.
7. The **File Download** dialog box appears.
8. To download files and install SP4 now, click **Open**, and then click **OK**.
9. If a security warning appears asking whether you want to install "Web Package," click **Yes** to continue downloading SP4.
10. Follow the instructions in the Windows 2000 Service Pack 4 Setup Wizard. If you do not want to create backup files, select the **Do Not Archive Files** option when the Setup Wizard displays it.

Important

If you select **Do Not Archive Files**, you will not be able to remove SP4 later. We recommend that you create backup files.

11. The Express installation detects the files that need to be updated and installs them.

Important

During the download, make sure that you are downloading files from a Microsoft Web site.

12. The Setup Wizard displays installation progress and tells you when the installation is complete.
13. When the installation is complete, restart your computer, and then restart the virus checkers.

To run the Network installation

If you plan to perform a Network installation of SP4, you should read the following procedure

carefully and completely before you extract and install SP4.

The files that are downloaded for SP4 include all files that have been updated for this service pack, not just the files required for the current computer. Because of the substantial amount of time it takes to download the installation files for SP4, you might want to save W2ksp4.exe on your computer. Doing so prevents you from having to repeat this lengthy download process if you must restart the installation or reinstall SP4. Because of the size of the download, if your computer has more than one hard disk, it is best to save W2ksp4.exe to a disk other than your system disk.

To download the installation files

1. Go to the [Microsoft Windows 2000 Service Pack 4 Web site](#).
2. Click **Get SP4 Now**, and then click **Download Windows 2000 SP4**.
3. Choose a language from the drop-down list, and then click **Go**.
4. Important information appears about the two installations that are available. Before you proceed, review this information to ensure the appropriateness of this installation.
5. To install SP4, click **SP4 Network Installation**.
6. The **File Download** dialog box appears. We recommend that you select the option **Save this program to disk**. This minimizes the time required to download files. You can choose a location to save the file.

The files that are downloaded for SP4 include all files that have been updated for this service pack, not just the files required for the current computer.

During the download, the compressed executable file W2ksp4.exe is saved on your hard disk.

Important

During the download, make sure that you are downloading files from a Microsoft Web site.

To install Service Pack 4

1. Before you begin the installation, stop any real-time virus checkers that you have running. This is important because if real-time virus checkers are running, they can cause problems with the installation.
2. Click **Start**, and then click **Run**.
3. Do one of the following:
 - In the **Open** box, browse to the location to which you saved the executable file, type **w2ksp4.exe**, and then press ENTER.
 - Or, locate W2ksp4.exe, and then double-click it.
4. Follow the instructions in the Windows 2000 Service Pack 4 Setup Wizard.

For more information, see the preceding sections of this document.

To extract the files without starting the installation (advanced users)

You can use the **/X** command-line option to extract the files without installing them. For details about this, see the *Microsoft Windows 2000 Service Pack 4 Installation and Deployment Guide* in the \Support\Tools folder on the Service Pack 4 CD (see SPDeploy.htm).

4.0 Removing Service Pack 4

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If you chose to create backup files when you installed SP4, you can remove SP4 at any time and restore your computer to its previous state. See [3.1 Installing Service Pack 4](#) for information about the backup option.

To remove Service Pack 4 by using Add/Remove Programs

1. Click **Start**, point to **Settings**, and then click **Control Panel**.
2. Double-click **Add/Remove Programs**, click **Windows 2000 Service Pack 4**, and then click **Change/Remove**.
3. Follow the instructions that appear.
4. When you have completed this process, click **OK** to restart the computer.

Important

If you choose to remove SP4, a dialog box displays a list of the applications that you have installed since you updated Windows 2000 to SP4. If you continue to remove SP4, these applications might not work correctly.

Multiple descriptions for some applications might appear instead of a single generic description. You should ignore these additional descriptions.

5.0 Release Notes and Known Issues

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For release notes and information about known issues, see article 813432, "Release Notes for Windows 2000 Service Pack 4," in the [Microsoft Knowledge Base](#). This article is also available under **Learn More** on the [Windows 2000 Service Pack 4 Web site](#). Read these notes carefully before you install the service pack.

6.0 Additional Windows 2000 Resources

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For additional information about Windows 2000 and SP4, see the following resources:

- The "Check Hardware and Software Compatibility" page for Windows 2000 on the [Microsoft Web site](#), which provides the most up-to-date information about hardware and software that Windows 2000 supports.
- The [Microsoft Knowledge Base](#), which provides updated information about Windows 2000 and other Microsoft products.

- The *Microsoft Windows 2000 Service Pack 4 Installation and Deployment Guide*, which provides information for advanced users and administrators on how to extract the service pack files to complete specific tasks before SP4 is installed. You will find this guide in the \Support\Tools folder on the Service Pack 4 CD (see SPDeploy.htm) and on the [Microsoft Windows 2000 Service Pack 4 Web site](#).
- The *Microsoft Windows 2000 Hotfix Installation and Deployment Guide*, which provides instructions for installing hotfixes on multiple computers. You will find this guide in the \Support\Tools folder on the Service Pack 4 CD (see HFDeploy.htm) and on the [Microsoft Windows 2000 Service Pack 4 Web site](#).

7.0 Copyright

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