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Windows Vista
Microsoft

[Microsoft Explains Why Vista \(SP1\) Is Such a Disk Space Hog](#)

Windows 7 will be optimized in this aspect

As soon as the system requirements for Windows Vista were made available, the operating system was cataloged as a resource hog. Beyond being CPU- and RAM-hungry, Vista also managed to grab an unprecedented part of the hard drive, requiring for the high-end versions a 40GB HDD, with at least 15 GB of available space just to install. Furthermore, even a clean install of Windows Vista takes full advantage of all those free 15 GB of disk space. The actual Vista code is, however, just a very small portion of the total installation footprint of the operating system.

"As we all know, adding new functionality consumes additional disk space--in Windows or any software. In reality, 'code' takes up a relatively small percentage of the overall Windows footprint. The actual code required for a Windows Vista Ultimate install is just over 2GB, with the rest of the footprint going to 'data' broadly defined," revealed [Michael Beck](#), a program manager in the core OS deployment feature team.

In fact, the vast majority of the disk space is consumed by features that have been added in the evolution from Windows XP to Windows Vista. Beck indicated that features such as system recovery, performance, data protection, and troubleshooting were largely responsible for Vista's insatiable hunger for free disk space.

"Some of these include system restore, hibernation, page file, registry back up, and logging. Each of these represent 'backup state' that is available to the system to recover from any number of situations, some planned and others not," Beck stated.

[Microsoft indicated that Windows 7](#) would introduce tweaked features, as the operating system would be optimized to occupy a much lower footprint than Vista. This is valid for system restore (which constantly takes snapshots of the system allowing), hibernation (designed to save all the content in RAM to the hard drive in a file named Hiberfil.sys), and additional backup features, but also for additional items and components across the [operating system](#).

"Because we know that different customers will want to make different tradeoffs of disk space relative to recovery (especially on small footprint devices), with Windows 7 we want to make sure you have more control than you currently do to decide ahead of time how much disk space to use for these mechanisms, and we will also tune our defaults to be more sensitive to overall consumption due to the changing nature of storage," Beck stated.

Microsoft provided the image included on the left with the space consumed by various Windows Vista Service Pack 1 components at a full installation of the Ultimate/Premium editions. All the numbers on the right represent MB. In this regard, the Desktop code takes 160 MB, the Boot Critical PnP Drivers 84 MB, the Games 100 MB, the System Registry 150 MB etc. Thus, the largest consumers of disk space are, by far, in the Fixed Size Data section, in addition to system restore and rollback features and the Hiberfil.sys file, which can take well in excess of 1 GB of space each.

"Approximately 1GB driver support," Beck stated. "Windows Vista works with thousands and thousands of different devices. The ability to plug in almost any device, even your old

printer, and have it get recognized and installed automatically is something customers have come to expect from Windows. We receive lots of feedback wanting to remove some or all of these, and each release we carefully scrub the 'in-box' device support relative to what we see from telemetry in terms of used devices. The ability to install a printer or USB device while offline is a key value, especially with laptops representing over half of all PCs being sold. In the future we can possibly assume 'always go to Windows Update' but we're not there yet in most places in the world."