Dedicated hosting service

From Wikipedia, the free encyclopedia

[Jump to navigation](https://en.wikipedia.org/wiki/Dedicated_hosting_service#mw-head)[Jump to search](https://en.wikipedia.org/wiki/Dedicated_hosting_service#searchInput)

*"Dedicated server" redirects here. For information about dedicated servers in multiplayer video gaming, see*[*Game server#Types*](https://en.wikipedia.org/wiki/Game_server#Types)*.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | hide**This article has multiple issues.** Please help [**improve it**](https://en.wikipedia.org/w/index.php?title=Dedicated_hosting_service&action=edit) or discuss these issues on the [**talk page**](https://en.wikipedia.org/wiki/Talk:Dedicated_hosting_service). *(*[*Learn how and when to remove these template messages*](https://en.wikipedia.org/wiki/Help:Maintenance_template_removal)*)*   |  | | --- | | Some of this article's [listed sources](https://en.wikipedia.org/wiki/Wikipedia:Citing_sources) **may not be**[**reliable**](https://en.wikipedia.org/wiki/Wikipedia:Reliable_sources). *(September 2013)* |  |  | | --- | | This article **needs additional citations for**[**verification**](https://en.wikipedia.org/wiki/Wikipedia:Verifiability). *(July 2012)* |  |  | | --- | | This article **possibly contains**[**original research**](https://en.wikipedia.org/wiki/Wikipedia:No_original_research). *(August 2011)* |  |  | | --- | | This article **needs additional citations for**[**verification**](https://en.wikipedia.org/wiki/Wikipedia:Verifiability). *(March 2018)* | |

|  |
| --- |
| Part of [a series](https://en.wikipedia.org/wiki/Category:Internet_hosting) on |
| [**Internet hosting service**](https://en.wikipedia.org/wiki/Internet_hosting_service) |
| **Full-featured hosting** |
| * [Virtual private server](https://en.wikipedia.org/wiki/Virtual_private_server) * Dedicated hosting * [Colocation centre](https://en.wikipedia.org/wiki/Colocation_centre) * [Cloud computing](https://en.wikipedia.org/wiki/Cloud_computing) * [Peer-to-peer](https://en.wikipedia.org/wiki/Peer-to-peer_web_hosting) |
| [**Web hosting**](https://en.wikipedia.org/wiki/Web_hosting_service) |
| * [Shared](https://en.wikipedia.org/wiki/Shared_web_hosting_service) * [Clustered](https://en.wikipedia.org/wiki/Clustered_web_hosting) * [Reseller](https://en.wikipedia.org/wiki/Reseller_web_hosting) |
| **Application-specific web hosting** |
| * [Blog](https://en.wikipedia.org/wiki/Blog_software) ([comments](https://en.wikipedia.org/wiki/Blog_comment_hosting_service)) * [Guild hosting service](https://en.wikipedia.org/wiki/Guild_hosting_service) * [Image](https://en.wikipedia.org/wiki/Image_hosting_service) * [Video](https://en.wikipedia.org/wiki/Online_video_platform) * [Wiki farms](https://en.wikipedia.org/wiki/Wiki_hosting_service) * [Application](https://en.wikipedia.org/wiki/Application_service_provider) * [Social network](https://en.wikipedia.org/wiki/Social_network_hosting_service) |
| **By content format** |
| * [File](https://en.wikipedia.org/wiki/File_hosting_service) * [Image](https://en.wikipedia.org/wiki/Image_hosting_service) * [Video](https://en.wikipedia.org/wiki/Online_video_platform) * [Music](https://en.wikipedia.org/wiki/Online_music_service) |
| **Other types** |
| * [Remote backup](https://en.wikipedia.org/wiki/Remote_backup_service) * [Game server](https://en.wikipedia.org/wiki/Game_server) * [Home server](https://en.wikipedia.org/wiki/Home_server) * [DNS](https://en.wikipedia.org/wiki/DNS_hosting_service) * [Email](https://en.wikipedia.org/wiki/Email_hosting_service) |
| * [v](https://en.wikipedia.org/wiki/Template:Internet_hosting) * [t](https://en.wikipedia.org/wiki/Template_talk:Internet_hosting) * [e](https://en.wikipedia.org/w/index.php?title=Template:Internet_hosting&action=edit) |

A **dedicated hosting service**, **dedicated server**, or **managed hosting service** is a type of [Internet hosting](https://en.wikipedia.org/wiki/Internet_hosting) in which the client leases an entire [server](https://en.wikipedia.org/wiki/Server_(computing)) not shared with anyone else. This is more flexible than [shared hosting](https://en.wikipedia.org/wiki/Shared_hosting), as organizations have full control over the server(s), including choice of [operating system](https://en.wikipedia.org/wiki/Operating_system), [hardware](https://en.wikipedia.org/wiki/Computer_hardware), etc.

There is also another level of dedicated or managed hosting commonly referred to as complex managed hosting. Complex Managed Hosting applies to both physical dedicated servers, [Hybrid server](https://en.wikipedia.org/wiki/Hybrid_server) and virtual servers, with many companies choosing a hybrid (combination of physical and virtual) hosting solution.

There are many similarities between standard and complex managed hosting but the key difference is the level of administrative and engineering support that the customer pays for – owing to both the increased size and complexity of the [infrastructure](https://en.wikipedia.org/wiki/IT_infrastructure) deployment. The provider steps in to take over most of the management, including security, memory, storage and IT support. The service is primarily proactive in nature.[[1]](https://en.wikipedia.org/wiki/Dedicated_hosting_service#cite_note-1) Server administration can usually be provided by the hosting company as an add-on service. In some cases a dedicated server can offer less overhead and a larger [return on investment](https://en.wikipedia.org/wiki/Return_on_investment). Dedicated servers are hosted in [data centers](https://en.wikipedia.org/wiki/Data_centre), often providing [redundant power](https://en.wikipedia.org/wiki/Emergency_power_system) sources and [HVAC](https://en.wikipedia.org/wiki/Heating,_Ventilating,_and_Air_Conditioning) systems. In contrast to colocation, the server hardware is owned by the provider and in some cases they will provide support for operating systems or applications.[[*citation needed*](https://en.wikipedia.org/wiki/Wikipedia:Citation_needed)]

Using a dedicated hosting service offers the benefits of high performance, security, email stability, and control. Due to the relatively high price of dedicated hosting, it is mostly used by websites that receive a large volume of traffic.[[*citation needed*](https://en.wikipedia.org/wiki/Wikipedia:Citation_needed)]



**Contents**

* [1Operating system support](https://en.wikipedia.org/wiki/Dedicated_hosting_service#Operating_system_support)
* [2Bandwidth and connectivity](https://en.wikipedia.org/wiki/Dedicated_hosting_service#Bandwidth_and_connectivity)
  + [2.195th percentile method](https://en.wikipedia.org/wiki/Dedicated_hosting_service#95th_percentile_method)
  + [2.2Unmetered method](https://en.wikipedia.org/wiki/Dedicated_hosting_service#Unmetered_method)
  + [2.3Total transfer method](https://en.wikipedia.org/wiki/Dedicated_hosting_service#Total_transfer_method)
  + [2.4Bandwidth pooling](https://en.wikipedia.org/wiki/Dedicated_hosting_service#Bandwidth_pooling)
* [3Management](https://en.wikipedia.org/wiki/Dedicated_hosting_service#Management)
* [4Security](https://en.wikipedia.org/wiki/Dedicated_hosting_service#Security)
* [5Software](https://en.wikipedia.org/wiki/Dedicated_hosting_service#Software)
* [6Limitations](https://en.wikipedia.org/wiki/Dedicated_hosting_service#Limitations)
* [7See also](https://en.wikipedia.org/wiki/Dedicated_hosting_service#See_also)
* [8References](https://en.wikipedia.org/wiki/Dedicated_hosting_service#References)

Operating system support[[edit](https://en.wikipedia.org/w/index.php?title=Dedicated_hosting_service&action=edit&section=1)]

Availability, price and employee familiarity often determines which operating systems are offered on dedicated servers. Variations of [Linux](https://en.wikipedia.org/wiki/Linux) and [Unix](https://en.wikipedia.org/wiki/Unix) ([open source](https://en.wikipedia.org/wiki/Open-source_software) [operating systems](https://en.wikipedia.org/wiki/Operating_systems)) are often included at no charge to the customer. Commercial operating systems include Microsoft Windows Server, provided through a special program called Microsoft SPLA. [Red Hat Enterprise](https://en.wikipedia.org/wiki/Red_Hat_Enterprise_Linux) is a commercial version of Linux offered to hosting providers on a monthly fee basis. The monthly fee provides OS updates through the [Red Hat Network](https://en.wikipedia.org/wiki/Red_Hat_Network) using an application called [Yum](https://en.wikipedia.org/wiki/Yum_(software)). Other operating systems are available from the open source community at no charge. These include [CentOS](https://en.wikipedia.org/wiki/CentOS), [Fedora Core](https://en.wikipedia.org/wiki/Fedora_(operating_system)), [Debian](https://en.wikipedia.org/wiki/Debian), and many other Linux distributions or BSD systems [FreeBSD](https://en.wikipedia.org/wiki/FreeBSD), [NetBSD](https://en.wikipedia.org/wiki/NetBSD), [OpenBSD](https://en.wikipedia.org/wiki/OpenBSD).

Support for any of these operating systems typically depends on the level of management offered with a particular dedicated server plan. Operating system support may include updates to the core system in order to acquire the latest security fixes, patches, and system-wide vulnerability resolutions. Updates to core operating systems include kernel upgrades, service packs, application updates, and security patches that keep the server secure and safe. Operating system updates and support relieves the burden of server management from the dedicated server owner.

Bandwidth and connectivity[[edit](https://en.wikipedia.org/w/index.php?title=Dedicated_hosting_service&action=edit&section=2)]

[Bandwidth](https://en.wikipedia.org/wiki/Bandwidth_(computing)) refers to the [data transfer rate](https://en.wikipedia.org/wiki/Bit_rate) or the amount of data that can be carried from one point to another in a given time period (usually a second) and is often represented in bits (of data) per second (bit/s).

**95th percentile method**[[edit](https://en.wikipedia.org/w/index.php?title=Dedicated_hosting_service&action=edit&section=3)]

Line speed, billed on the 95th percentile, refers to the speed in which data flows from the server or device, measured every 5 minutes for the month, and dropping the top 5% of measurements that are highest, and basing the usage for the month on the next-highest measurement. This is similar to a median measurement, which can be thought of as a 50th percentile measurement (with 50% of measurements above, and 50% of measurements below), whereas this sets the cutoff at 95th percentile, with 5% of measurements above the value, and 95% of measurements below the value. This is also known as [Burstable billing](https://en.wikipedia.org/wiki/Burstable_billing). Line speed is measured in bits per second (or kilobits per second, megabits per second or gigabits per second).

**Unmetered method**[[edit](https://en.wikipedia.org/w/index.php?title=Dedicated_hosting_service&action=edit&section=4)]

The second [bandwidth](https://en.wikipedia.org/wiki/Bandwidth_(computing)) measurement is unmetered service where providers cap or control the “top line” speed for a server. Top line speed in unmetered bandwidth is the total Mbit/s allocated to the server and configured on the switch level. Unmetered bandwidth services usually incur an additional charge.

**Total transfer method**[[edit](https://en.wikipedia.org/w/index.php?title=Dedicated_hosting_service&action=edit&section=5)]

Some providers will calculate the Total Transfer, which is the measurement of actual data leaving and arriving, measured in bytes. Although it is typically the sum of all traffic into and out of the server, some providers measure only outbound traffic (traffic from the server to the internet).

**Bandwidth pooling**[[edit](https://en.wikipedia.org/w/index.php?title=Dedicated_hosting_service&action=edit&section=6)]

One of the reasons for choosing to outsource dedicated servers is the availability of high powered networks from multiple providers. As dedicated server providers utilize massive amounts of bandwidth, they are able to secure lower volume based pricing to include a multi-provider blend of bandwidth. To achieve the same type of network without a multi-provider blend of bandwidth, a large investment in core routers, long term contracts, and expensive monthly bills would need to be in place. The expenses needed to develop a network without a multi-provider blend of bandwidth does not make sense economically for hosting providers.

Many dedicated server providers include a [service level agreement](https://en.wikipedia.org/wiki/Service_level_agreement) based on [network](https://en.wikipedia.org/wiki/Computer_network) up-time. Some dedicated server hosting providers offer a 100% up-time guarantee on their network. By securing multiple vendors for connectivity and using redundant hardware, providers are able to guarantee higher up-times; usually between 99-100% up-time if they are a higher quality provider. One aspect of higher quality providers is they are most likely to be [multi-homed](https://en.wikipedia.org/wiki/Multihoming) across multiple quality up-link providers, which in turn, provides significant redundancy in the event one goes down in addition to potentially improved routes to destinations.

Bandwidth consumption over the last several years has shifted from a per megabit usage model to a per gigabyte usage model. Bandwidth was traditionally measured in line speed access that included the ability to purchase needed megabits at a given monthly cost. As the shared hosting model developed, the trend towards gigabyte or total bytes transferred, replaced the megabit line speed model so dedicated server providers started offering per gigabyte.

Management[[edit](https://en.wikipedia.org/w/index.php?title=Dedicated_hosting_service&action=edit&section=7)]

Dedicated hosting services primarily differ from managed hosting services in that managed hosting services usually offer more support and other services. As such, managed hosting is targeted towards clients with less technical knowledge, whereas dedicated hosting services, or unmanaged hosting services, are suitable for web development and system administrator professionals.

To date, no industry standards have been set to clearly define the management role of dedicated server providers. What this means is that each provider will use industry standard terms, but each provider will define them differently. For some dedicated server providers, fully managed is defined as having a web based control panel while other providers define it as having dedicated system engineers readily available to handle all server and network related functions of the dedicated server provider.

Server management can include some or all of the following:

* [Operating system](https://en.wikipedia.org/wiki/Operating_system) updates
* Application updates
* [Server monitoring](https://en.wikipedia.org/wiki/Internet_Server_Monitoring)
* [SNMP](https://en.wikipedia.org/wiki/Simple_Network_Management_Protocol) hardware monitoring
* Application monitoring
* Application management
* Technical support
* [Firewall](https://en.wikipedia.org/wiki/Firewall_(computing)) services
* [Anti-spam software](https://en.wikipedia.org/wiki/Anti-spam_techniques)
* [Antivirus](https://en.wikipedia.org/wiki/Antivirus_software) updates
* [Security audits](https://en.wikipedia.org/wiki/Information_technology_security_audit)
* [DDoS](https://en.wikipedia.org/wiki/Denial-of-service_attack) protection and mitigation
* [Intrusion detection](https://en.wikipedia.org/wiki/Intrusion_detection)
* [Backups](https://en.wikipedia.org/wiki/Backup) and restoration
* [Disaster recovery](https://en.wikipedia.org/wiki/Disaster_recovery)
* [DNS hosting service](https://en.wikipedia.org/wiki/DNS_hosting_service)
* [Load balancing](https://en.wikipedia.org/wiki/Load_balancing_(computing))
* Database administration
* Performance tuning
* [Out-of-band Management](https://en.wikipedia.org/wiki/Out-of-band_Management)
* Software installation and configuration
* User management
* Programming consultation

Dedicated hosting server providers define their level of management based on the services they provide. In comparison, fully managed could equal self managed from provider to provider.

Administrative maintenance of the operating system, often including upgrades, [security patches](https://en.wikipedia.org/wiki/Patch_(computing)), and sometimes even [daemon](https://en.wikipedia.org/wiki/Daemon_(computer_software)) updates are included. Differing levels of management may include adding users, domains, daemon configuration, or even custom programming.

Dedicated server hosting providers may provide the following types of server managed support:

* Fully managed – Includes monitoring, software updates, reboots, security patches and operating system upgrades. Customers are completely hands-off.
* Managed – Includes medium level of management, monitoring, updates, and a limited amount of support. Customers may perform specific tasks.
* Self-managed – Includes regular monitoring and some maintenance. Customers provide most operations and tasks on dedicated server.
* Unmanaged – Little to no involvement from [service provider](https://en.wikipedia.org/wiki/Service_provider). Customers provide all maintenance, upgrades, patches, and security.

Security[[edit](https://en.wikipedia.org/w/index.php?title=Dedicated_hosting_service&action=edit&section=8)]

Dedicated hosting server providers utilize extreme security measures to ensure the safety of data stored on their network of servers. Providers will often deploy various software programs for scanning systems and networks for obtrusive invaders, spammers, hackers, and other harmful problems such as [Trojans](https://en.wikipedia.org/wiki/Trojan_horse_(computing)), worms, and crashers (Sending multiple connections). [Linux](https://en.wikipedia.org/wiki/Linux) and [Windows](https://en.wikipedia.org/wiki/Microsoft_Windows) use different software for security protection.

Software[[edit](https://en.wikipedia.org/w/index.php?title=Dedicated_hosting_service&action=edit&section=9)]

Providers often bill for dedicated servers on a fixed monthly price to include specific software packages. Over the years, software vendors realized the significant market opportunity to bundle their software with dedicated servers. They have since started introducing pricing models that allow dedicated hosting providers the ability to purchase and resell software based on reduced monthly fees.

Microsoft offers software licenses through a program called the Service Provider License Agreement. The SPLA model provides use of Microsoft products through a monthly user or processor based fee. SPLA software includes the Windows Operating System, Microsoft SQL Server, Microsoft Exchange Server, Microsoft SharePoint and shoutcast hosting, and many other server based products.

Other software applications available are specialized web hosting specific programs called control panels. Control panel software is an all-inclusive set of software applications, server applications, and automation tools that can be installed on a dedicated server. Control panels include integration into web servers, database applications, programming languages, application deployment, server administration tasks, and include the ability to automate tasks via a web based front end.

Limitations[[edit](https://en.wikipedia.org/w/index.php?title=Dedicated_hosting_service&action=edit&section=10)]

Many providers do not allow [IRC](https://en.wikipedia.org/wiki/Internet_Relay_Chat) (bots, clients or daemons). This is due to rogue IRC users triggering [DDoS](https://en.wikipedia.org/wiki/DDoS) attacks against the provider, which may overwhelm their networks, lowering service quality for all customers.

* [Adult content](https://en.wikipedia.org/wiki/Pornography) is disallowed by many providers as it may either be of questionable legality or consume large amounts of bandwidth.
* [Copyright violations](https://en.wikipedia.org/wiki/Copyright_violation) – Hosting copyrighted material of which an individual does not own the copyright to is against the [terms of service](https://en.wikipedia.org/wiki/Terms_of_service) of most hosting companies.

See also[[edit](https://en.wikipedia.org/w/index.php?title=Dedicated_hosting_service&action=edit&section=11)]

* [Data center](https://en.wikipedia.org/wiki/Data_center)
* [Hosting environment](https://en.wikipedia.org/wiki/Hosting_environment)
* [Virtual private server](https://en.wikipedia.org/wiki/Virtual_private_server)
* [Cloud computing](https://en.wikipedia.org/wiki/Cloud_computing)
* [Reseller web hosting](https://en.wikipedia.org/wiki/Reseller_web_hosting)

References[[edit](https://en.wikipedia.org/w/index.php?title=Dedicated_hosting_service&action=edit&section=12)]

* 1. [**^**](https://en.wikipedia.org/wiki/Dedicated_hosting_service#cite_ref-1) “Internet Infrastructure Technology” Structure Research, Sept 5, 2012