**Samba** is a [free software](https://en.wikipedia.org/wiki/Free_software) re-implementation of the [SMB](https://en.wikipedia.org/wiki/Server_Message_Block) [networking](https://en.wikipedia.org/wiki/Computer_networking) [protocol](https://en.wikipedia.org/wiki/Protocol_(computing)), and was originally developed by [Andrew Tridgell](https://en.wikipedia.org/wiki/Andrew_Tridgell). Samba provides [file](https://en.wikipedia.org/wiki/Computer_file) and [print](https://en.wikipedia.org/wiki/Input/output) [services](https://en.wikipedia.org/wiki/Windows_service) for various [Microsoft Windows](https://en.wikipedia.org/wiki/Microsoft_Windows) [clients](https://en.wikipedia.org/wiki/Client_(computing)) and can integrate with a Microsoft [Windows Server domain](https://en.wikipedia.org/wiki/Windows_Server_domain), either as a [Domain Controller](https://en.wikipedia.org/wiki/Domain_Controller) (DC) or as a domain member. As of version 4, it supports [Active Directory](https://en.wikipedia.org/wiki/Active_Directory) and Microsoft [Windows NT](https://en.wikipedia.org/wiki/Windows_NT) domains.

Samba runs on most [Unix](https://en.wikipedia.org/wiki/Unix), [OpenVMS](https://en.wikipedia.org/wiki/OpenVMS) and [Unix-like](https://en.wikipedia.org/wiki/Unix-like) systems, such as [Linux](https://en.wikipedia.org/wiki/Linux), [Solaris](https://en.wikipedia.org/wiki/Solaris_(operating_system)), [AIX](https://en.wikipedia.org/wiki/AIX) and the [BSD](https://en.wikipedia.org/wiki/Berkeley_Software_Distribution) variants, including Apple's [macOS Server](https://en.wikipedia.org/wiki/MacOS_Server), and [macOS](https://en.wikipedia.org/wiki/MacOS) client ([Mac OS X 10.2](https://en.wikipedia.org/wiki/Mac_OS_X_10.2) and greater). Samba is standard on nearly all distributions of Linux and is commonly included as a basic [system service](https://en.wikipedia.org/wiki/Services_menu) on other Unix-based operating systems as well. Samba is released under the terms of the [GNU General Public License](https://en.wikipedia.org/wiki/GNU_General_Public_License). The name [*Samba*](https://en.wikipedia.org/wiki/Samba) comes from SMB ([Server Message Block](https://en.wikipedia.org/wiki/Server_Message_Block)), the name of the standard protocol used by the Microsoft Windows network file system.



**Contents**

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Early history[[edit](https://en.wikipedia.org/w/index.php?title=Samba_(software)&action=edit&section=1)]

[Andrew Tridgell](https://en.wikipedia.org/wiki/Andrew_Tridgell) developed the first version of Samba Unix in December 1991 and January 1992, as a PhD student at the [Australian National University](https://en.wikipedia.org/wiki/Australian_National_University), using a [packet sniffer](https://en.wikipedia.org/wiki/Packet_sniffer) to do [network analysis](https://en.wikipedia.org/wiki/Category:Computer_network_analysis) of the protocol used by [DEC](https://en.wikipedia.org/wiki/Digital_Equipment_Corporation) [Pathworks](https://en.wikipedia.org/wiki/Pathworks) server software. At the time of the first releases, versions 0.1, 0.5 and 1.0, all from the first half of January 1992, it did not have a proper name, and Tridgell just called it "a Unix file server for Dos Pathworks". At the time of version 1.0, he realized that he "had in fact implemented the netbios protocol" and that "this software could be used with other PC clients".

With a focus on [interoperability](https://en.wikipedia.org/wiki/Interoperability) with Microsoft's [LAN Manager](https://en.wikipedia.org/wiki/LAN_Manager), Tridgell released "netbios for unix", observer, version 1.5 in December 1993. This release was the first to include client-software as well as a server. Also, at this time GPL2 was chosen as license.

Midway through the 1.5-series, the name was changed to *smbserver*. However, Tridgell got a [trademark](https://en.wikipedia.org/wiki/Trademark) notice from the company "Syntax", who sold a product named *TotalNet Advanced Server* and owned the trademark for "SMBserver". The name "Samba" was derived by running the Unix command [grep](https://en.wikipedia.org/wiki/Grep) through the [system dictionary](https://en.wikipedia.org/wiki/Words_(Unix)) looking for words that contained the letters S, M, and B, in that order (i.e. grep -i '^s.\*m.\*b' /usr/share/dict/words).[[3]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-3)

Versions 1.6, 1.7, 1.8, and 1.9 followed relatively quickly, with the latter being released in January 1995. Tridgell considers the adoption of [CVS](https://en.wikipedia.org/wiki/Concurrent_Versions_System) in May 1996 to mark the birth of the Samba Team, though there had been contributions from other people, especially [Jeremy Allison](https://en.wikipedia.org/wiki/Jeremy_Allison), previously.[[4]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-4)

Version 2.0.0 was released in January 1999, and version 2.2.0 in April 2001.

Version history[[edit](https://en.wikipedia.org/w/index.php?title=Samba_(software)&action=edit&section=2)]

Version 3.0.0, released on 23 September 2003, was a major upgrade. Samba gained the ability to join Active Directory as a member, though not as a domain controller.[[5]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-5) Subsequent point-releases to 3.0 have added minor new features. Currently, the latest release in this series is 3.0.37, released 1 October 2009, and shipped on a voluntary basis.[[6]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-releaseplan_3.0-6) The 3.0.x series officially reached end-of-life on 5 August 2009.[[6]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-releaseplan_3.0-6)

Version 3.1 was used only for development.

With version 3.2, the project decided to move to time-based releases. New major releases, such as 3.3, 3.4, etc. will appear every six months. New features will only be added when a major release is done, point-releases will be only for bug fixes.[[7]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-7) Also, 3.2 marked a change of license from GPL2 to GPL3, with some parts released under LGPL3.[[8]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-8) The main technical change in version 3.2 was to autogenerate much of the [DCE/RPC](https://en.wikipedia.org/wiki/DCE/RPC)-code that used to be handcrafted. Version 3.2.0 was released on 1 July 2008.[[9]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-releaseplan_3.2-9) and its current release is 3.2.15 from 1 October 2009. The 3.2.x series officially reached end-of-life on 1 March 2010.[[9]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-releaseplan_3.2-9)

| **Date** | **Version** | **Description** |
| --- | --- | --- |
| September 23, 2003 | 3.0 | Active Directory support[[10]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-10) |
| July 1, 2008 | 3.2 | It will be updated on an as-needed basis for security issues only[[11]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-11) |
| January 27, 2009 | 3.3 |  |
| July 3, 2009 | 3.4 | This was the first release to include both Samba 3 and Samba 4 source code.[[12]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-12) |
| March 1, 2010 | 3.5 | This was the first release to include experimental support for [SMB2](https://en.wikipedia.org/wiki/Server_Message_Block#SMB_2.0).[[13]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-13) |
| August 9, 2011 | 3.6 | This is the first branch which includes full support for SMB2.[[14]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-14) |
| December 11, 2012 | 4.0 | It is a major rewrite that enables Samba to be an Active Directory domain controller, participating fully in a Windows Active Directory Domain. Its first technical preview (4.0.0TP1) was released in January 2006 after 3 years of development.[[15]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-15)[[16]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-16) |
| October 10, 2013 | 4.1 | support for [SMB3](https://en.wikipedia.org/wiki/Server_Message_Block#SMB_3.0) |
| March 4, 2015 | 4.2 | [Btrfs](https://en.wikipedia.org/wiki/Btrfs) based file compression, snapshots and [winbind](https://en.wikipedia.org/w/index.php?title=Winbind&action=edit&redlink=1) integration[[17]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-17) |
| September 8, 2015 | 4.3 | New Logging features, SMB 3.1.1 support[[18]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-18) |
| March 22, 2016 | 4.4 | Asynchronous flush requests[[19]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-19) |
| September 7, 2016 | 4.5 | NTLM v1 disabled by default, Virtual List View, Various performance improvements |
| March 7, 2017 | 4.6 | Multi-process [Netlogon](https://en.wikipedia.org/w/index.php?title=Netlogon&action=edit&redlink=1) support |
| September 21, 2017 | 4.7 | Samba AD with MIT [Kerberos](https://en.wikipedia.org/wiki/Kerberos_(protocol)) |
| March 13, 2018 | 4.8 | Apple [Time Machine](https://en.wikipedia.org/wiki/Time_Machine_(Apple_software)) Support. Setups using 'domain' or 'ads' security modes now require 'winbindd' to be running.[[20]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-20) |
| September 13, 2018 | 4.9 | Many changes : see [release notes](https://www.samba.org/samba/history/samba-4.9.0.html) |
| March 19, 2019 | 4.10 |  |
| September 17, 2019 | 4.11 | SMB1 is disabled by default. |
| March 3, 2020 | **4.12** |  |
| August 28, 2020 | 4.13 | Samba 4.13 raises this minimum version to Python 3.6 both to access new features and because this is the oldest version we test with in our CI infrastructure. |
| **Legend:**  Old version  Older version, still maintained  **Latest version**  Latest preview version  Future release | | |

Security[[edit](https://en.wikipedia.org/w/index.php?title=Samba_(software)&action=edit&section=3)]

Some versions of Samba 3.6.3 and lower suffer serious security issues which can allow anonymous users to gain [root](https://en.wikipedia.org/wiki/Superuser) access to a system from an anonymous connection, through the exploitation of an error in Samba's [remote procedure call](https://en.wikipedia.org/wiki/Remote_procedure_call).[[21]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-21)

On 12 April 2016, Badlock,[[22]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-22) a crucial security bug in Windows and Samba, was disclosed. Badlock for Samba is referenced by [CVE](https://en.wikipedia.org/wiki/CVE_(identifier))-[2016-2118](https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2016-2118) (SAMR and LSA man in the middle attacks possible).[[23]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-23)

On 24 May 2017, it was announced that a remote code execution vulnerability had been found in Samba named *EternalRed* or *SambaCry*, affecting all versions since 3.5.0.[[24]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-samba-release-4.6.4-24) This vulnerability was assigned identifier [CVE](https://en.wikipedia.org/wiki/CVE_(identifier))-[2017-7494](https://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2017-7494).[[24]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-samba-release-4.6.4-24)[[25]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-25)

Features[[edit](https://en.wikipedia.org/w/index.php?title=Samba_(software)&action=edit&section=4)]

Samba allows file and print sharing between computers running Microsoft Windows and computers running Unix. It is an implementation of dozens of [services](https://en.wikipedia.org/wiki/Service_(systems_architecture)) and a dozen protocols, including:

* [NetBIOS](https://en.wikipedia.org/wiki/NetBIOS) over [TCP/IP](https://en.wikipedia.org/wiki/TCP/IP) ([NBT](https://en.wikipedia.org/wiki/NetBIOS_over_TCP/IP))
* [SMB](https://en.wikipedia.org/wiki/Server_Message_Block) (known as CIFS in some versions)
  + Samba supports POSIX extensions for CIFS/SMB. The initial extension was CIFS VFS (CAP\_UNIX) from 2004, which has been somewhat superseded by SMB3.[[26]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-26)
* [DCE/RPC](https://en.wikipedia.org/wiki/DCE/RPC) or more specifically, [MSRPC](https://en.wikipedia.org/wiki/Microsoft_RPC), the Network Neighborhood suite of protocols
* A [WINS](https://en.wikipedia.org/wiki/Windows_Internet_Name_Service) server also known as a NetBIOS Name Server (NBNS)
* The NT Domain suite of protocols which includes NT Domain Logons
* [Security Account Manager](https://en.wikipedia.org/wiki/Security_Account_Manager) (SAM) database
* [Local Security Authority](https://en.wikipedia.org/wiki/Local_Security_Authority_Subsystem_Service) (LSA) service
* NT-style printing service (SPOOLSS)
* [NTLM](https://en.wikipedia.org/wiki/NT_LAN_Manager)
* Active Directory Logon using modified versions of [Kerberos](https://en.wikipedia.org/wiki/Kerberos_(protocol)) and [LDAP](https://en.wikipedia.org/wiki/Lightweight_Directory_Access_Protocol)
* [DFS](https://en.wikipedia.org/wiki/Distributed_File_System_(Microsoft)) server

All these services and protocols are frequently incorrectly referred to as just NetBIOS or SMB. The NBT (NetBIOS over TCP/IP) and WINS protocols, and their underlying SMB version 1 protocol, are deprecated on Windows. Since [Windows Vista](https://en.wikipedia.org/wiki/Windows_Vista) the [WS-Discovery](https://en.wikipedia.org/wiki/WS-Discovery) protocol has been included along with SMB2 and its successors, which supersede these. (WS-Discovery is implemented on [Unix-like](https://en.wikipedia.org/wiki/Unix-like) platforms by third party [daemons](https://en.wikipedia.org/wiki/Daemon_(computing)) which allow Samba shares to be discovered when the deprecated protocols are disabled).

Samba sets up [network shares](https://en.wikipedia.org/wiki/Network_share) for chosen Unix [directories](https://en.wikipedia.org/wiki/Directory_(file_systems)) (including all contained subdirectories). These appear to Microsoft Windows users as normal Windows folders accessible via the network. Unix users can either [mount](https://en.wikipedia.org/wiki/Mount_(computing)) the shares directly as part of their file structure using the mount.cifs command or, alternatively, can use a utility, smbclient (libsmb) installed with Samba to read the shares with a similar interface to a standard command line [FTP](https://en.wikipedia.org/wiki/File_Transfer_Protocol) program. Each directory can have different access privileges overlaid on top of the normal Unix file protections. For example: home directories would have read/write access for all known users, allowing each to access their own files. However they would still not have access to the files of others unless that permission would normally exist. Note that the netlogon share, typically distributed as a read only share from /etc/samba/netlogon, is the logon directory for user logon scripts.

Samba services are implemented as two [daemons](https://en.wikipedia.org/wiki/Daemon_(computing)):

* smbd, which provides the file and printer sharing services, and
* nmbd, which provides the NetBIOS-to-IP-address name service. NetBIOS over TCP/IP requires some method for mapping NetBIOS computer names to the IP addresses of a TCP/IP network.

Samba configuration is achieved by editing a single file (typically installed as /etc/smb.conf or /etc/samba/smb.conf). Samba can also provide [user logon scripts](https://en.wikipedia.org/wiki/User_logon_scripts) and group policy implementation through poledit.

Samba is included in most Linux distributions and is started during the boot process. On Red Hat, for instance, the /etc/rc.d/init.d/smb script runs at boot time, and starts both daemons. Samba is not included in Solaris 8, but a Solaris 8-compatible version is available from the Samba website. The [OS/2](https://en.wikipedia.org/wiki/OS/2)-based [ArcaOS](https://en.wikipedia.org/wiki/ArcaOS) includes Samba to replace the old [IBM LAN Server](https://en.wikipedia.org/wiki/IBM_LAN_Server) software.[[27]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-27)

Samba includes a web administration tool called *Samba Web Administration Tool* (SWAT).[[28]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-28)[[29]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-29) SWAT was removed starting with version 4.1.[[30]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-30)

Samba TNG[[edit](https://en.wikipedia.org/w/index.php?title=Samba_(software)&action=edit&section=5)]

|  |  |
| --- | --- |
|  | This section needs to be **updated**. Please update this article to reflect recent events or newly available information. *(January 2016)* |

Samba TNG (The Next Generation) was [forked](https://en.wikipedia.org/wiki/Fork_(software_development)) in late 1999, after disagreements between the Samba Team leaders and Luke Leighton about the directions of the Samba project. They failed to come to an agreement on a development transition path which allowed the research version of Samba he was developing (known at the time as Samba-NTDOM) to slowly be integrated into Samba.[[31]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-31) Development has been minimal, due to a lack of developers. The Samba TNG team frequently directed potential users towards Samba because of its better support and development.[[32]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-32)

A key goal of the Samba TNG project was to rewrite all of the NT Domains services as [FreeDCE](https://en.wikipedia.org/wiki/FreeDCE) projects.[[33]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-33) This was made difficult as the services were developed manually through network reverse-engineering, with limited or no reference to DCE/RPC documentation.[[*citation needed*](https://en.wikipedia.org/wiki/Wikipedia:Citation_needed)]

A key difference from Samba was in the implementation of the NT Domains suite of protocols and [MSRPC](https://en.wikipedia.org/wiki/MSRPC) services. Samba makes all the NT Domains services available from a single place, whereas Samba TNG separated each service into its own program.[[*citation needed*](https://en.wikipedia.org/wiki/Wikipedia:Citation_needed)]

[ReactOS](https://en.wikipedia.org/wiki/ReactOS) started using Samba TNG services for its SMB implementation. The developers of both projects were interested in seeing the Samba TNG design used to help get ReactOS talking to Windows networks. They worked together to adapt the network code and build system. The multi-layered and modular approach made it easy to port each service to ReactOS.[[34]](https://en.wikipedia.org/wiki/Samba_(software)#cite_note-34)

See also[[edit](https://en.wikipedia.org/w/index.php?title=Samba_(software)&action=edit&section=6)]

* ******[***Free and open-source software portal***](https://en.wikipedia.org/wiki/Portal:Free_and_open-source_software)
* [LM hash](https://en.wikipedia.org/wiki/LM_hash)
* [SSLBridge](https://en.wikipedia.org/wiki/SSLBridge)

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

* 1. [**^**](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-1) [*"Samba Latest News"*](https://www.samba.org/samba/latest_news.html)*. Retrieved 28 November 2017.*
  2. [**^**](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-samba4-13_2-0) [*"Samba 4.13.0 Available for Download"*](https://www.samba.org/samba/history/samba-4.13.0.html)*. Retrieved 3 July 2020.*
  3. [**^**](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-3) [*"A bit of history and a bit of fun"*](http://www.rxn.com/services/faq/smb/samba.history.txt)*. 27 June 1997. Retrieved 28 May 2009.*
  4. [**^**](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-4) [*"10 years of Samba!"*](https://samba.org/samba/docs/10years.html)*. Retrieved 21 September 2015.*
  5. [**^**](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-5) [*"The first stable release of Samba 3.0 is available"*](https://lists.samba.org/archive/samba-announce/2003/000021.html)*. Retrieved 21 September 2015.*
  6. ^ [Jump up to:***a***](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-releaseplan_3.0_6-0) [***b***](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-releaseplan_3.0_6-1) [*"Release Planning for Samba 3.0"*](https://wiki.samba.org/index.php/Release_Planning_for_Samba_3.0)*. Retrieved 21 September2015.*
  7. [**^**](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-7) [*"Monday, April 28 - Samba Mashup Report"*](https://lists.samba.org/archive/samba-announce/2008/000136.html)*. Retrieved 21 September 2015.*
  8. [**^**](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-8) [*"Samba Adopts GPLv3 for Future Releases"*](https://lists.samba.org/archive/samba-announce/2007/000122.html)*. Retrieved 21 September 2015.*
  9. ^ [Jump up to:***a***](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-releaseplan_3.2_9-0) [***b***](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-releaseplan_3.2_9-1) [*"Release Planning for Samba 3.2"*](https://wiki.samba.org/index.php/Release_Planning_for_Samba_3.2)*. Retrieved 21 September2015.*
  10. [**^**](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-10) [*"Samba Team announces the first official release of Samba 3.0"*](https://www.samba.org/samba/history/samba-3.0.0.html)*. Retrieved 24 September 2003.*
  11. [**^**](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-11) [*"[ANNOUNCE] Samba 3.2.0 Available for Download"*](https://lists.samba.org/archive/samba-announce/2008/000145.html)*. Retrieved 21 September 2015.*
  12. [**^**](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-12) [*"Samba - Release Notes Archive"*](https://www.samba.org/samba/history/samba-3.4.0.html)*. Retrieved 21 September2015.*
  13. [**^**](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-13) [*"Samba - Release Notes Archive"*](https://www.samba.org/samba/history/samba-3.5.0.html)*. Retrieved 21 September2015.*
  14. [**^**](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-14) [*"Samba - Release Notes Archive"*](https://samba.org/samba/history/samba-3.6.0.html)*. Retrieved 21 September2015.*
  15. [**^**](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-15) [*"Samba - opening windows to a wider world"*](https://www.samba.org/samba/news/releases/4.0.0.html)*. Retrieved 21 September 2015.*
  16. [**^**](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-16) [*"Samba 4.0.0TP1 Available for Download"*](https://web.archive.org/web/20060722050801/http:/news.samba.org/releases/4.0.0tp1/)*. Archived from*[*the original*](https://news.samba.org/releases/4.0.0tp1/)*on 22 July 2006. Retrieved 11 January 2014.*
  17. [**^**](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-17) [*"Samba - Release Notes Archive"*](https://www.samba.org/samba/history/samba-4.2.0.html)*. Retrieved 21 September2015.*
  18. [**^**](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-18) [*"Samba - Release Notes Archive"*](https://www.samba.org/samba/history/samba-4.3.0.html)*. Retrieved 8 September2015.*
  19. [**^**](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-19) [*"Samba - Release Notes Archive"*](https://www.samba.org/samba/history/samba-4.4.0.html)*. Retrieved 22 March 2016.*
  20. [**^**](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-20) [*"Release Notes for Samba 4.8.0"*](https://www.samba.org/samba/history/samba-4.8.0.html)*. 13 March 2018. Retrieved 19 March 2019.*
  21. [**^**](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-21) [CVE-2012-1182](https://www.samba.org/samba/security/CVE-2012-1182) - A security announcement regarding a major issue with Samba 3.6.3 and lower.
  22. [**^**](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-22) [*"Badlock"*](http://badlock.org/)*. Retrieved 12 April 2016.*
  23. [**^**](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-23) [*"Microsoft, Samba Patch "Badlock" Vulnerability"*](http://www.listythings.com/microsoft-samba-patch-badlock-vulnerability/)*. Retrieved 13 April 2016.*
  24. ^ [Jump up to:***a***](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-samba-release-4.6.4_24-0) [***b***](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-samba-release-4.6.4_24-1) [*"Samba 4.6.4 - Release Notes"*](https://www.samba.org/samba/history/samba-4.6.4.html)*. 24 May 2017. Retrieved 24 May 2017.*
  25. [**^**](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-25) [*"SambaCry is coming"*](https://securelist.com/sambacry-is-coming/78674/)*. Securelist - Kaspersky Lab’s cyberthreat research and reports. Retrieved 19 March 2018.*
  26. [**^**](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-26) [*"UNIX Extensions"*](https://wiki.samba.org/index.php/UNIX_Extensions)*. SambaWiki.*
  27. [**^**](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-27) [*"ArcaMapper"*](https://www.arcanoae.com/wiki/arcamapper/)*. arcanoae.com. Retrieved 11 September 2020.*
  28. [**^**](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-28) [*"Chapter 37. SWAT: The Samba Web Administration Tool"*](https://us3.samba.org/samba/docs/man/Samba-HOWTO-Collection/SWAT.html)*. Retrieved 21 September 2015.*
  29. [**^**](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-29) [*"Linux.com"*](http://www.linux.com/feature/125452)*. Retrieved 21 September 2015.*
  30. [**^**](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-30) [*"Samba 4.1 Features added/changed"*](https://wiki.samba.org/index.php/Samba_4.1_Features_added/changed)*. Retrieved 21 September2015.*
  31. [**^**](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-31) [*"Project FAQ - What is the relationship between Samba and Samba TNG?"*](https://wiki.samba-tng.org/doku.php/pages/faq#what_is_the_relationship_between_samba_and_samba-tng)*. Retrieved 19 February 2008.*
  32. [**^**](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-32) [*"Project FAQ - Which should I use - Samba or Samba TNG?"*](https://wiki.samba-tng.org/doku.php/pages/faq#which_should_i_use_-_samba_or_samba-tng)*. Retrieved 19 February 2008.*
  33. [**^**](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-33) [*"Project FAQ - What's all this about FreeDCE?"*](https://wiki.samba-tng.org/doku.php/pages/faq#what_s_all_this_about_freedce)*. Retrieved 19 February 2008.*
  34. [**^**](https://en.wikipedia.org/wiki/Samba_(software)#cite_ref-34) *Vincent, Brian.*[*"Interview with Steven Edwards"*](http://www.winehq.org/?interview=14)*. Wine HQ. Retrieved 19 February 2008.*

External links[[edit](https://en.wikipedia.org/w/index.php?title=Samba_(software)&action=edit&section=8)]

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|  | Wikibooks has a book on the topic of: [***Samba***](https://en.wikibooks.org/wiki/Samba) |

* [Official website](https://www.samba.org/)