Install Samba4 on RHEL 8 for File Sharing on Windows

Aaron Kili | Last Updated: June 12, 2019 | RedHat, Samba | 4 Comments

Samba is an open source, fast, secure, stable and widely-used network file system that provides file sharing and print services for all clients using the **SMB/CIFS** protocol, such as Linux, all versions of DOS and Windows, OS/2, and so many other operating systems.

In our previous article, we have explained how to install Samba4 on CentOS/RHEL 7 for basic file sharing between **CentOS/RHEL** systems and **Windows** machines. Where we learned how to configure Samba for anonymous as well as secure file sharing between machines.

In this article, we will describe how to install and configure **Samba4** on **RHEL 8** for basic file sharing with Windows machines.

Install Samba4 in RHEL 8

1. To install the **Samba 4** along with its dependencies use the DNF package manager as shown.

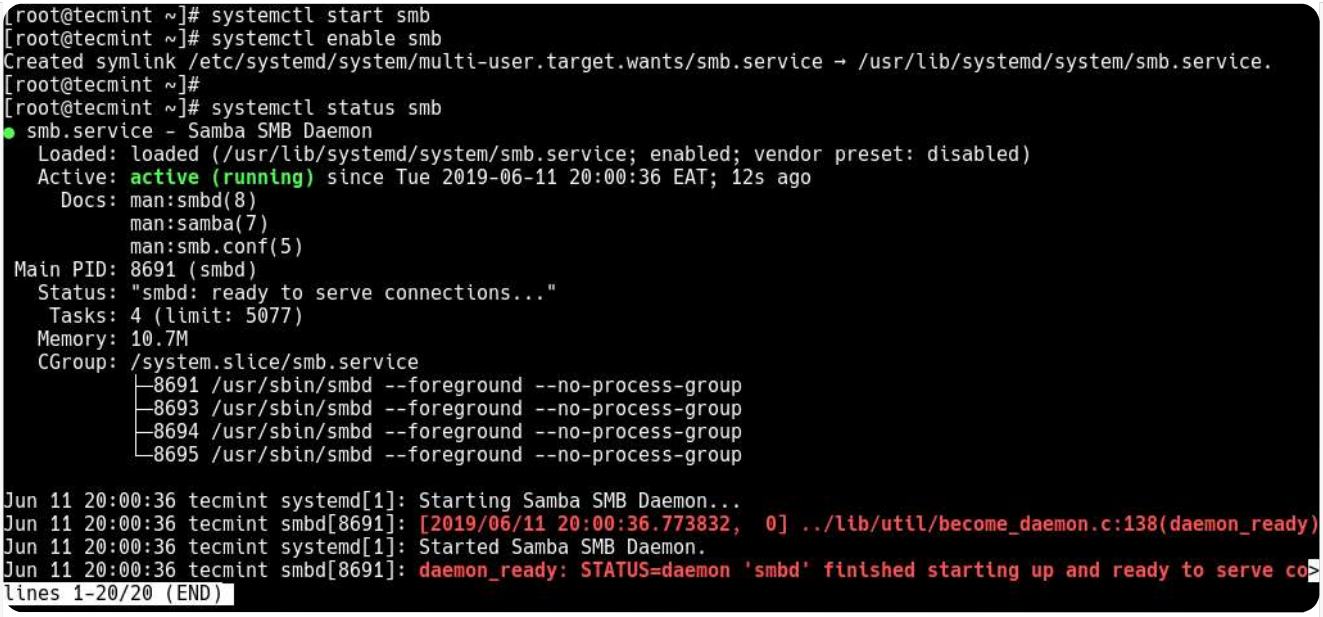
```
# dnf install samba samba-client samba-common
```

```
[root@tecmint ~]# dnf install samba samba-client
Updating Subscription Management repositories.
This system is registered to Red Hat Subscription Management, but is not receiving updates. You can use subscripti
on-manager to assign subscriptions.
Last metadata expiration check: 1 day, 7:16:57 ago on Mon 10 Jun 2019 12:25:08 PM EAT.
Dependencies resolved.
================================================================================================================
 Package                      Arch          Version                      Repository                  Size
================================================================================================================
Installing:
 samba                        x86_64        4.9.1-8.el8                  LocalRepo_BaseOS           708 k
 samba-client                 x86_64        4.9.1-8.el8                  LocalRepo_BaseOS           636 k
Installing dependencies:
 avahi-libs                   x86_64        0.7-19.el8                   LocalRepo_BaseOS            63 k
 cups-libs                    x86_64        1:2.2.6-25.el8               LocalRepo_BaseOS           432 k
 libsmbclient                 x86_64        4.9.1-8.el8                  LocalRepo_BaseOS           140 k
 libwbclient                  x86_64        4.9.1-8.el8                  LocalRepo_BaseOS           112 k
 perl-Carp                    noarch        1.42-396.el8                 LocalRepo_BaseOS            30 k
 perl-Errno                   x86_64        1.28-416.el8                 LocalRepo_BaseOS            76 k
 perl-Exporter                noarch        5.72-396.el8                 LocalRepo_BaseOS            34 k
 perl-File-Path               noarch        2.15-2.el8                   LocalRepo_BaseOS            38 k
 perl-IO                      x86_64        1.38-416.el8                 LocalRepo_BaseOS           141 k
 perl-PathTools               x86_64        3.74-1.el8                   LocalRepo_BaseOS            90 k
 perl-Scalar-List-Utils       x86_64        3:1.49-2.el8                 LocalRepo_BaseOS            68 k
 perl-Socket                  x86_64        4:2.027-2.el8                LocalRepo_BaseOS            59 k
 perl-Text-Tabs+Wrap          noarch        2013.0523-395.el8            LocalRepo_BaseOS            24 k
 perl-Unicode-Normalize       x86_64        1.25-396.el8                 LocalRepo_BaseOS            82 k
 perl-constant                noarch        1.33-396.el8                 LocalRepo_BaseOS            25 k
 perl-interpreter             x86_64        4:5.26.3-416.el8             LocalRepo_BaseOS           6.3 M
 perl-libs                    x86_64        4:5.26.3-416.el8             LocalRepo_BaseOS           1.6 M
 perl-macros                  x86_64        4:5.26.3-416.el8             LocalRepo_BaseOS            72 k
 perl-parent                  noarch        1:0.237-1.el8                LocalRepo_BaseOS            20 k
 perl-threads                 x86_64        1:2.21-2.el8                 LocalRepo_BaseOS            61 k
 perl-threads-shared          x86_64        1.58-2.el8                   LocalRepo_BaseOS            48 k
 samba-client-libs            x86_64        4.9.1-8.el8                  LocalRepo_BaseOS           5.0 M
 samba-common                 noarch        4.9.1-8.el8                  LocalRepo_BaseOS           207 k
 samba-common-libs            x86_64        4.9.1-8.el8                  LocalRepo_BaseOS           169 k
```

Install Samba on RHEL 8

2. Once the installation is complete, start the Sambe service, enable it to auto-start at system boot time and verify that service using the systemctl commands as follows.

```
# systemctl start smb
# systemctl enable smb
# systemctl status smb
```



Start and Enable Samba Service on RHEL 8

3. Next, if you have a firewalld configured, you need to add the Samba service in the firewall configuration to allow access to shared directories and files through system.

```
$ sudo firewall-cmd --permanent --add-service=samba
$ sudo firewall-cmd --reload
```

Configure Samba4 on RHEL 8

4. To configure Samba for file sharing, you need to create a backup copy of default samba configuration file which comes with pre-configuration settings and various configuration directives.

```
# cp /etc/samba/smb.conf /etc/samba/smb.conf.orig
```

Now, proceed further to configure samba for anonymous and secure file sharing services as explained below.

Setting Up Samba4 Anonymous File Sharing on RHEL 8

5. In this section, the first step is to create the shared directory which will store files on the server. Then define the appropriate permissions on the directory as shown.

```
# mkdir -p /srv/samba/anonymous
# chmod -R 0777 /srv/samba/anonymous
# chown -R nobody:nobody /srv/samba/anonymous
```

6. Next, using the **chcon utility**, change the SELinux security context for the created samba shared directory.


```
# chcon -t samba_share_t /srv/samba/anonymous
```

7. Now open the configuration file using your favorite text-based file editor to configure the anonymous unsecured file sharing on a shared directory.

```
# vim /etc/samba/smb.conf
```

Modify the following global parameters and add a section for the **Anonymous** share. Note that you can set your own values where necessary (read **man smb.conf** for more information).

```
[global]
        workgroup = WORKGROUP
        netbios name = rhel
        security = user
...
[Anonymous]
```

```
comment = Anonymous File Server Share
path = /srv/samba/anonymous
browsable =yes
writable = yes
guest ok = yes
read only = no
force user = nobody
```

```
[global]
        workgroup = WORKGROUP
        netbios   = rhel
        security = user

        passdb backend = tdbsam

        printing = cups
        printcap name = cups
        load printers = yes
        cups options = raw

[homes]
        comment = Home Directories
        valid users = %S, %D%w%S
        browseable = No
        read only = No
        inherit acls = Yes

[printers]
        comment = All Printers
        path = /var/tmp
        printable = Yes
        create mask = 0600
        browseable = No

[print$]
        comment = Printer Drivers
        path = /var/lib/samba/drivers
        write list = @printadmin root
        force group = @printadmin
        create mask = 0664
        directory mask = 0775

[Anonymous]
        comment = Anonymous File Server Share
        path = /srv/samba/anonymous
        browsable =yes
        writable = yes
        guest ok = yes
        read only = no
        force user = nobody
-- INSERT --
```

Configure Anonymous Share on RHEL 8

Save the changes in the file and close.

8. Then run the following command to verify if the configuration is correct.

```
# testparm
```

Verify Samba Current Configuration Settings

```
Load smb config files from /etc/samba/smb.conf
rlimit_max: increasing rlimit_max (1024) to minimum Windows limit
Unknown parameter encountered: "netbios"
Ignoring unknown parameter "netbios"
Processing section "[homes]"
Processing section "[printers]"
Processing section "[print$]"
Processing section "[Anonymous]"
Loaded services file OK.
Server role: ROLE_STANDALONE

Press enter to see a dump of your service definitions


# Global parameters
[global]
	printcap name = cups
	security = USER
	idmap config * : backend = tdb
	cups options = raw
[homes]
	browseable = No
	comment = Home Directories
	inherit acls = Yes
	read only = No
	valid users = %S %D%w%S

[printers]
	browseable = No
	comment = All Printers
	create mask = 0600
	path = /var/tmp
	printable = Yes
```

```
[print$]
        comment = Printer Drivers
        create mask = 0664
        directory mask = 0775
        force group = @printadmin
        path = /var/lib/samba/drivers
        write list = @printadmin root


[Anonymous]
        comment = Anonymous File Server Share
        force user = nobody
        guest ok = Yes
        path = /srv/samba/anonymous
        read only = No
```

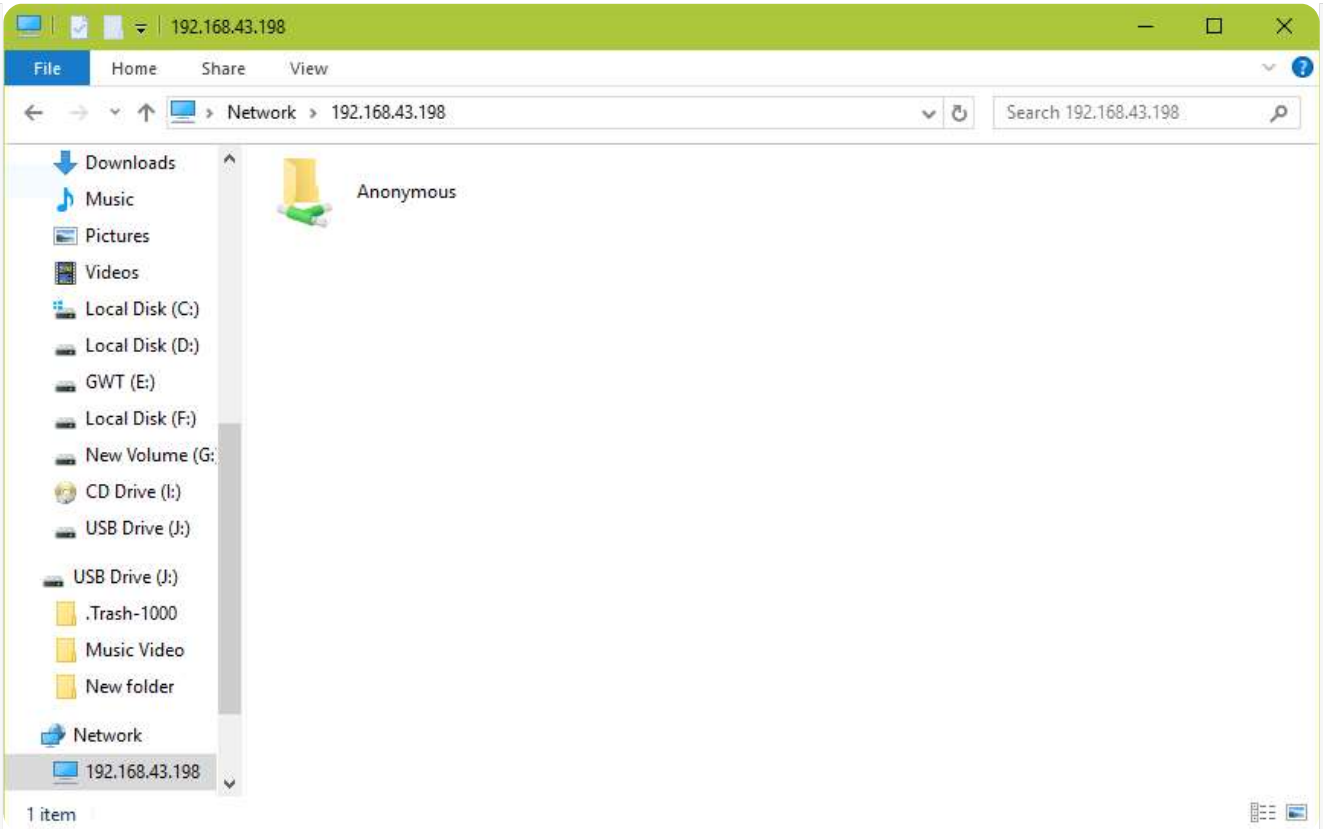
9. If the Samba configuration is **OK**, go ahead and restart the samba service for the recent changes to take effect.

```
# systemctl restart smb
```

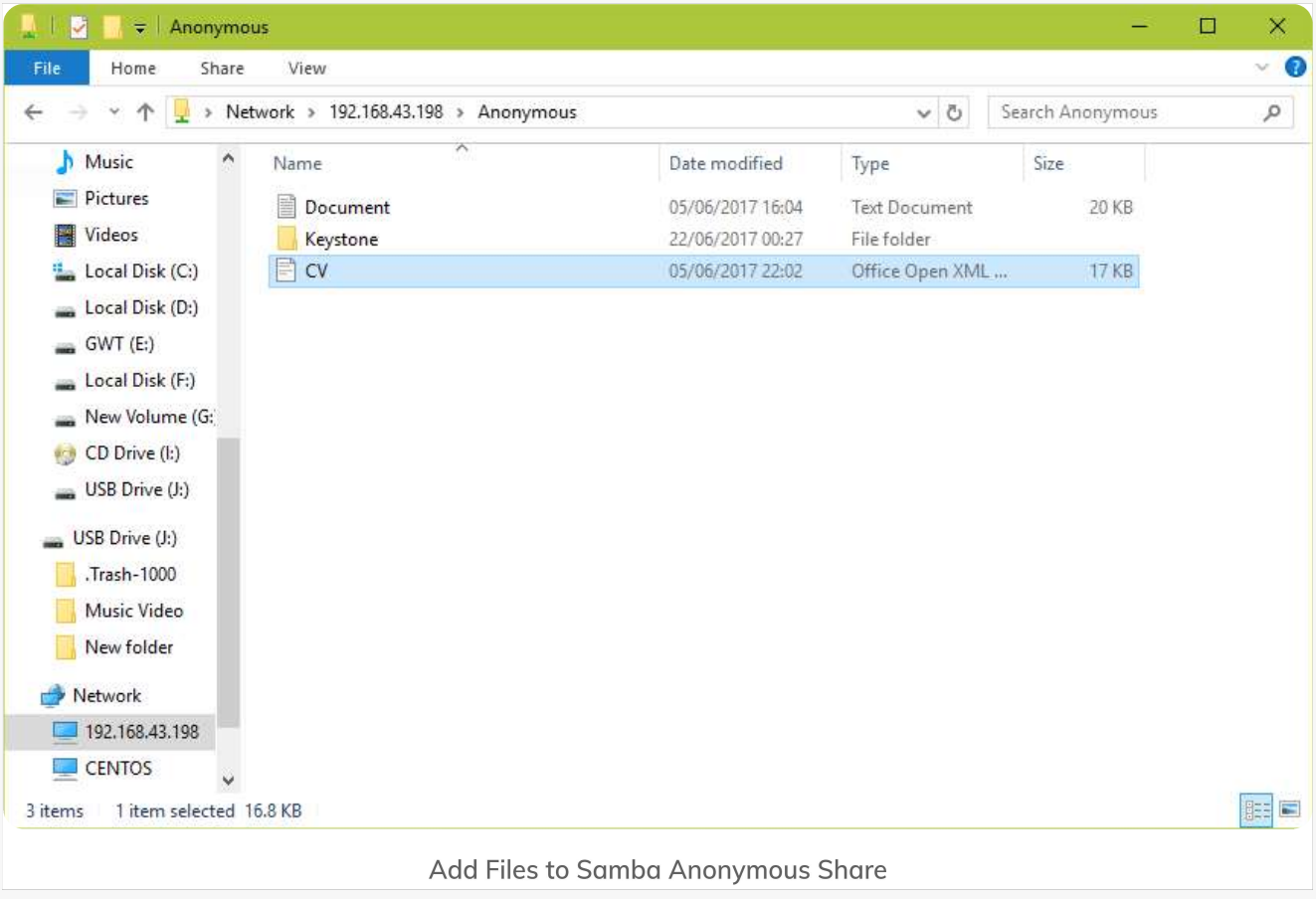
10. Finally, test if the Anonymous share is working fine, log into your Windows machine, open the **Windows Explorer**, click on **Network**, then click on the **RHEL** host, or use the server IP address to access it (running ip add command on the server can help you to view the IP address).

```
e.g. 2.168.43.198
```

11. Next, open the **Anonymous** directory and try to add files in there to share with other users.



Samba Anonymous Share



Add Files to Samba Anonymous Share

Setting Up Samba4 Secure File Sharing on RHEL 8

12. In order to create a securely shared directory, you need to create a Samba system group. All users of the secured share will be added to this group. You can use the **groupadd command** to create the group as follows.

```
# groupadd smbgrp
```

Then use usermod command to add all users, for example, **tecmint** to the group and set a password for each user as shown.

```
# usermod tecmint -aG smbgrp
# smbpasswd -a tecmint
```

13. Next, create the secure directory which will securely store shared files, then set the appropriate permissions on the directory. Also, change the SELinux security context for the directory as follows.

```
# mkdir -p /srv/samba/secure
# chmod -R 0770 /srv/samba/secure
# chown -R root:smbgrp /srv/samba/secure
# chcon -t samba_share_t /srv/samba/secure
```

14. Next, open the configuration file for editing.

```
# vim /etc/samba/smb.conf
```

And add the following section at the end of the file.

```
[Secure]
        comment = Secure File Server Share
        path =  /srv/samba/secure
```

```
        valid users = @smbgrp
        guest ok = no
        writable = yes
        browsable = yes
```

Save the changes and close the file.

15. Next, verify the samba configuration again, by running the **testparm command**.

```
# testparm
```

16. Restart Samba services to apply the changes.

```
# systemctl restart smb.service
# systemctl restart nmb.service
```

Testing Secure Samba File Sharing

17. Lastly, test if the Secure share is working fine. From your Windows machine, open the **Windows Explorer**, click on **Network**, then click on the **RHEL** host, or else try to access the server using its IP address as explained before.

```
e.g. 2.168.43.198
```

You'll be asked to enter your username and password to login the RHEL 8 server.

Samba Secure Login

18. Once you log in, you will get a list of all samba shared directories. Now you can securely share some files with other permitted users on the network by adding files in Secure directory.

Samba Secure Share

That's all! In this article, we have shown how to install and configure **Samba 4** in **RHEL 8** for anonymous and secure file sharing with Windows machines. Do you have any questions or comments concerning this guide, use the feedback form below to reach us.

RHEL 8

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4 thoughts on “Install Samba4 on RHEL 8 for File Sharing on Windows”

Bennett A Swenning

April 25, 2021 at 10:26 pm

I am not getting access to the **RHEL 8.2** share from **Windows 10**. I am receiving an error that says: “You do not have permission to access \\10.103.1.10. Contact your network administrator to request access.”

I’m lost at this point.

Reply

Random WOI

November 19, 2020 at 11:21 am

Hi there! Great tutorial!

Btw, I Just want to point out details that you may have overlooked.

This will not survive a reboot.

```
# chcon -t samba_share_t /srv/samba/secure
```

Perhaps, this is what you want.

```
# semage fcontext -a -t  samba_share_t '/srv/samba/secure(/.*)?'
# restorecon -Rv /srv/samba/secure
```

Reply

Towhid Ahammed

September 15, 2020 at 4:04 pm

I used your instruction to setup samba 4 on Redhat Linux 8.2. Create multiple users and folders for sharing. but I can only map a single folder with a single user name and password. if I want to map two folders in a windows pc I cant. there some multiple user errors is shown. Only the first user and password are workable. please tell me what to do.

Reply

Ivan

December 10, 2019 at 6:01 pm

I used your instruction to create a public folder, but when I try to access a shared folder from Windows 10, or Android, a username and password are ever requested...

Reply

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