

How to Install Samba4 on CentOS 7 for File Sharing on Windows

by Aaron Kili | Published: July 1, 2017 | July 1, 2017

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In our last article, we showed [how to install Samba4 on Ubuntu](#) for basic file sharing between Ubuntu systems and Windows machines. Where we looked at configuring anonymous (unsecure) as well as secure file sharing.

Here, we will describe how to install and configure Samba4 on CentOS 7(also works on RHEL 7) for basic file sharing between other Linux systems and Windows machines.

Important: Starting from version 4.0, Samba can run as an [Active Directory \(AD\) domain controller \(DC\)](#). We suggest you read through our special series on setting up [Samba4 Active Directory Domain Controller](#), which includes critical topics for Ubuntu, CentOS, and Windows.

Install Samba4 in CentOS 7

1. First install Samba4 and required packages from the default CentOS repositories using the [yum package manager tool](#) as shown.

```
# yum install samba samba-client samba-common
```

```
(root@tecmin ~)##
(root@tecmin ~)## yum install samba samba-client samba-common
Loaded plugins: fastestmirror, langpacks, product-id, search-disabled-repos,
               : subscription-manager, versionlock
This system is not registered with Subscription Management. You can use subscrip
tion-manager to register.
Loading mirror speeds from cached hostfile
 * base: mirror.nbrc.ac.in
 * epel: repo.ugm.ac.id
 * extras: mirror.nbrc.ac.in
 * rpmforge: kartolo.sby.datautama.net.id
 * updates: mirror.nbrc.ac.in
```

Install Samba4 on CentOS 7

2. After installing the samba packages, enable samba services to be allowed through system firewall with these commands.

```
# firewall-cmd --permanent --zone=public --add-service=samba
# firewall-cmd --reload
```

```
[root@tecmint ~]#  
[root@tecmint ~]# firewall-cmd --permanent --zone=public --add-service=samba  
success  
[root@tecmint ~]# firewall-cmd --reload  
success  
[root@tecmint ~]# _
```

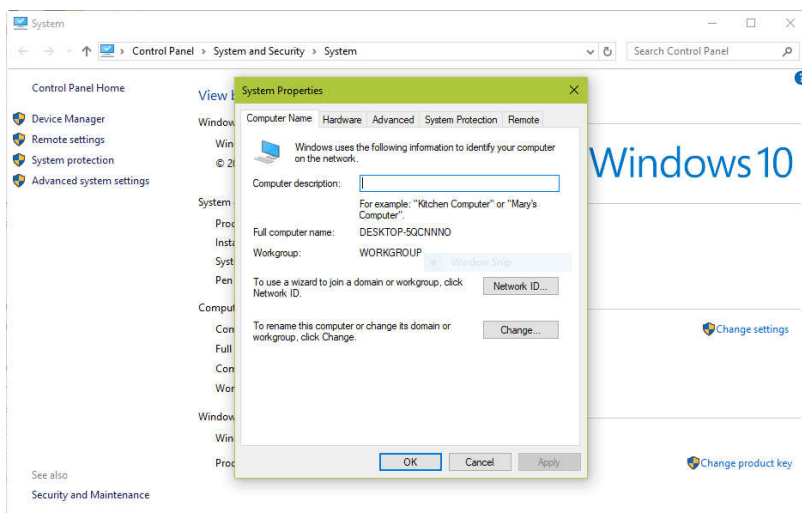
Open Samba on Firewalld

Check Windows Machine Workgroup Settings

3. Before you proceed to configure samba, make sure the Windows machine is in the same workgroup to be configured on the CentOS server.

There are two possible ways to view the Windows machine workgroup settings:

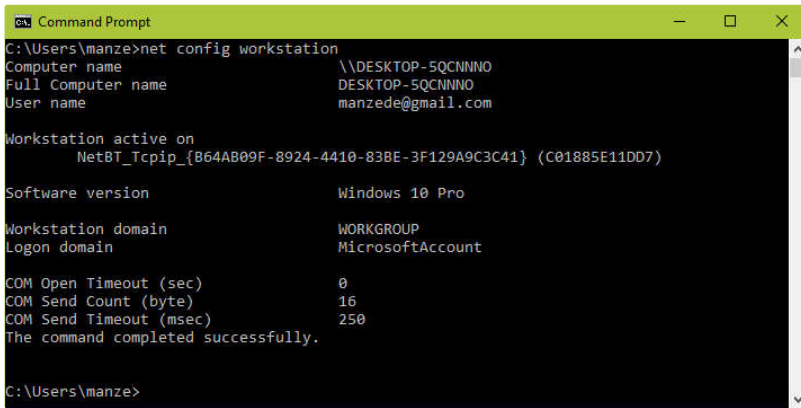
- Right clicking on “This PC” or “My Computer”
→ Properties → Advanced system settings → Computer Name.



Check Windows WorkGroup

- Alternatively, open the cmd prompt and run the following command, then look for “workstation domain” in the output as shown below.

```
>net config workstation
```



```

C:\Users\manze>net config workstation
Computer name               \\DESKTOP-5QCNNNO
Full Computer name         DESKTOP-5QCNNNO
User name                   manzede@gmail.com

Workstation active on
    NetBT_Tcpip_{B64AB09F-8924-4410-83BE-3F129A9C3C41} (C01885E11DD7)

Software version            Windows 10 Pro

Workstation domain          WORKGROUP
Logon domain                MicrosoftAccount

COM Open Timeout (sec)      0
COM Send Count (byte)       16
COM Send Timeout (msec)     250
The command completed successfully.

C:\Users\manze>

```

Verify Windows WorkGroup

Configuring Samba4 on CentOS 7

4. The main samba configuration file is `/etc/samba/smb.conf`, the original file comes with pre-configuration settings which explain various configuration directives to guide you.

But, before configuring samba, I suggest you to take a backup of the default file like this.

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

Then, proceed to configure samba for anonymous and secure file sharingservices as explained below.

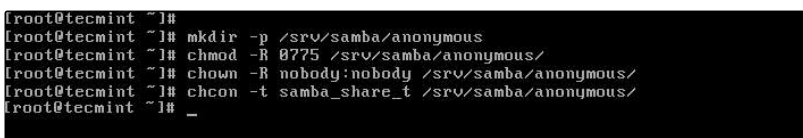
Samba4 Anonymous File Sharing

5. First create the shared directory where the files will be stored on the server and set the appropriate permissions on the directory.

```
# mkdir -p /srv/samba/anonymous
# chmod -R 0775 /srv/samba/anonymous
# chown -R nobody:nobody /srv/samba/anonymous
```

Also, you need to change the SELinux security context for the samba shared directory as follows.

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



```

[root@tecmint ~]#
[root@tecmint ~]# mkdir -p /srv/samba/anonymous
[root@tecmint ~]# chmod -R 0775 /srv/samba/anonymous/
[root@tecmint ~]# chown -R nobody:nobody /srv/samba/anonymous/
[root@tecmint ~]# chcon -t samba_share_t /srv/samba/anonymous/
[root@tecmint ~]# _

```

Create Samba Shared Directory

6. Next, open the samba configuration file for editing, where you can modify/add the sections below with the corresponding directives.

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

Samba Configuration Settings

```
[global]
    workgroup = WORKGROUP
    netbios name = centos
    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
```

7. Now verify current samba settings by running the command below.

```
# testparm
```

Verify Samba Current Configuration Settings

```
Load smb config files from /etc/samba/smb.conf
rlimit_max: increasing rlimit_max (1024) to minimum Windows value of 16384
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]
    netbios name = centos
    printcap name = cups
    security = USER
    idmap config * : backend = tdb
    cups options = raw

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

[printers]
```

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

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

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

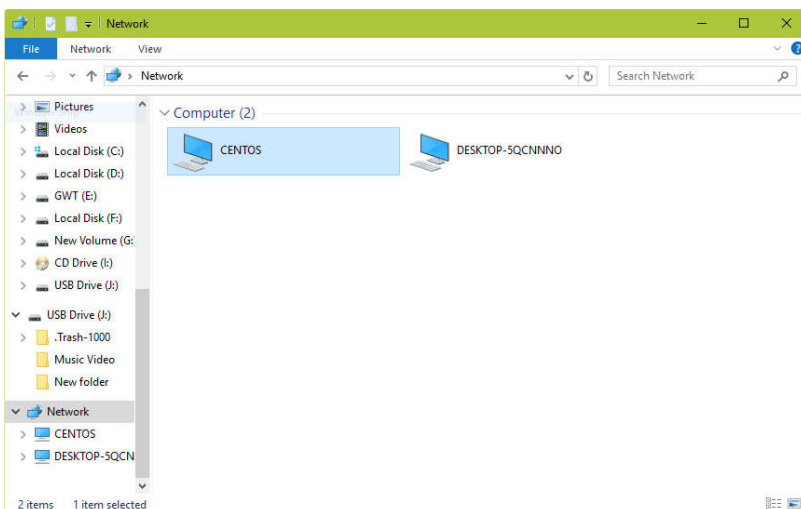
8. Finally, start and enable samba services to start automatically at next boot and also apply the above changes to take effect.

```
# systemctl enable smb.service
# systemctl enable nmb.service
# systemctl start smb.service
# systemctl start nmb.service
```

Testing Anonymous Samba File Sharing

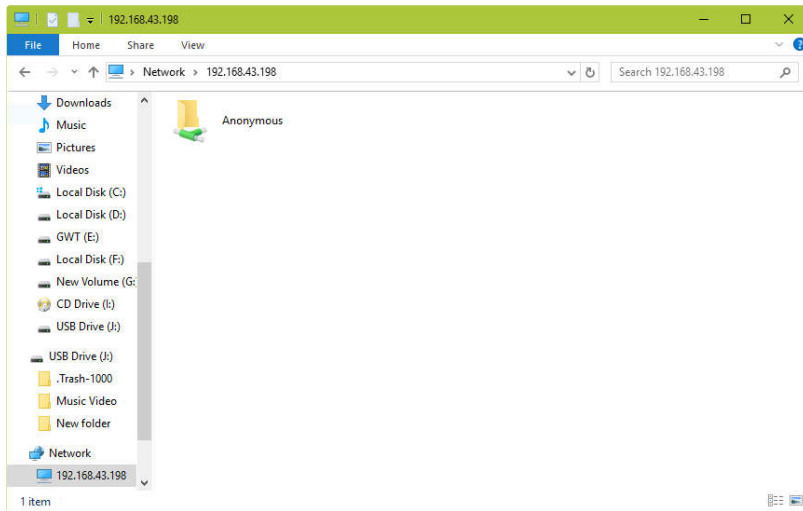
9. Now on the Windows machine, open “Network” from a Windows Explorer window, then click on the CentOS host, or else try to access the server using its IP address (use [ifconfig command](#) to get IP address).

e.g. \\192.168.43.168.

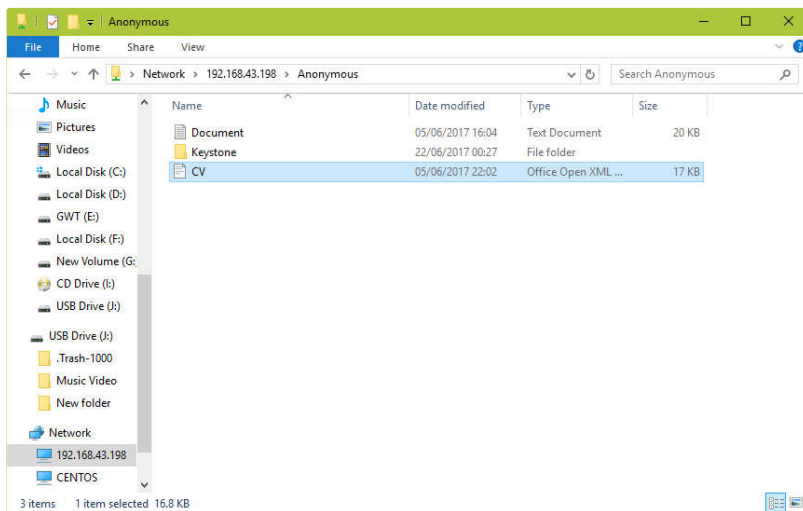


Shared Network Hosts

10. 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

Setup Samba4 Secure File Sharing

11. First start by creating a samba system group, then add users to the group and set a password for each user like so.

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

12. Then create a secure directory where the shared files will be kept and set the appropriate permissions on the directory with SELinux security context for the samba.

```
# 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
```

13. Next open the configuration file for editing and modify/add the section below with the corresponding directives.

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

Samba Secure Configuration Settings

```
[Secure]
    comment = Secure File Server Share
    path = /srv/samba/secure
    valid users = @smbgrp
    guest ok = no
    writable = yes
    browsable = yes
```

14. Again, verify the samba configuration settings by running the following command.

```
$ testparm
```

Verify Secure Configuration Settings

```
Load smb config files from /etc/samba/smb.conf
rlimit_max: increasing rlimit_max (1024) to minimum Windows value of 16384
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]
    netbios name = centos
    printcap name = cups
    security = USER
    idmap config * : backend = tdb
    cups options = raw

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

[printers]
```