

1) Configure SSH server.

Server:

```
[centos@centos7 ~]$ su
Password:
[root@centos7 centos]# yum install openssh-server
Loaded plugins: fastestmirror, langpacks
Existing lock /var/run/yum.pid: another copy is running as pid 3194.
Another app is currently holding the yum lock; waiting for it to exit...
  The other application is: PackageKit
    Memory :  59 M RSS (403 MB VSZ)
    Started: Wed Apr 23 04:45:02 2025 - 00:15 ago
    State   : Sleeping, pid: 3194
Another app is currently holding the yum lock; waiting for it to exit...
  The other application is: PackageKit
    Memory :  59 M RSS (403 MB VSZ)
    Started: Wed Apr 23 04:45:02 2025 - 00:17 ago
    State   : Sleeping, pid: 3194
Loading mirror speeds from cached hostfile
 * base: mirrors.piconets.webwerks.in
 * extras: mirrors.piconets.webwerks.in
 * updates: mirrors.piconets.webwerks.in
Resolving Dependencies
--> Running transaction check
---> Package openssh-server.x86_64 0:7.4p1-22.el7_9 will be installed
--> Finished Dependency Resolution
```

Installed:
openssh-server.x86_64 0:7.4p1-22.el7_9

Complete!

```
[root@centos7 centos]# systemctl status sshd
● sshd.service - OpenSSH server daemon
   Loaded: loaded (/usr/lib/systemd/system/sshd.service; enabled; vendor preset:
   enabled)
   Active: inactive (dead)
     Docs: man:sshd(8)
           man:sshd_config(5)
[root@centos7 centos]# systemctl enable sshd
[root@centos7 centos]# systemctl start sshd
[root@centos7 centos]# systemctl status sshd
● sshd.service - OpenSSH server daemon
   Loaded: loaded (/usr/lib/systemd/system/sshd.service; enabled; vendor preset:
   enabled)
   Active: active (running) since Wed 2025-04-23 04:46:26 EDT; 2s ago
     Docs: man:sshd(8)
           man:sshd_config(5)
  Main PID: 3335 (sshd)
    Tasks: 1
   CGroup: /system.slice/sshd.service
           └─3335 /usr/sbin/sshd -D
```

```
[root@centos7 centos]# ifconfig
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.29.241 netmask 255.255.255.0 broadcast 192.168.29.255
    inet6 fe80::6eee:c462:7fe9:558a prefixlen 64 scopeid 0x20<link>
    inet6 2405:201:f:d042:b5ec:103a:cd60:f93a prefixlen 64 scopeid 0x0<glo
bal>
    ether 08:00:27:d6:58:75 txqueuelen 1000 (Ethernet)
    RX packets 669 bytes 525993 (513.6 KiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 268 bytes 26290 (25.6 KiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

```
[root@centos7 centos]# systemctl stop firewalld
```

Client:

```
[root@centos7 centos]# ssh centos@192.168.29.241
The authenticity of host '192.168.29.241 (192.168.29.241)' can't be established.
ECDSA key fingerprint is SHA256:KqsNgEz/uRBG8R3Cvc+9T3VugCBho8P8rTPJ/92kPd4.
ECDSA key fingerprint is MD5:72:10:02:dc:9b:69:0a:f2:95:a3:c0:29:3b:6e:14:de.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '192.168.29.241' (ECDSA) to the list of known hosts.
centos@192.168.29.241's password:
Last login: Wed Apr 23 04:44:31 2025
+-----+
                        LINUXVMIMAGES.COM
Last login: Wed Apr 23 04:44:31 2025
+-----+
                        LINUXVMIMAGES.COM
+-----+
                        User Name: centos
                        Password: centos (sudo su -)
[centos@centos7 ~]$ █
```

2) Establish SSH communication on port 41101.

Server:

```

[centos@centos7 ~]$ su
Password:
[root@centos7 centos]# yum install openssh-server
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
 * base: mirrors.piconets.webwerks.in
 * extras: mirrors.piconets.webwerks.in
 * updates: mirrors.piconets.webwerks.in
Resolving Dependencies
--> Running transaction check
---> Package openssh-server.x86_64 0:7.4p1-22.el7_9 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

=====
Package                        Arch      Version              Repository            Size
=====
Installing:
openssh-server                x86_64    7.4p1-22.el7_9       updates                459 k
=====

Transaction Summary
=====
Install 1 Package
=====

Complete!
[root@centos7 centos]# systemctl status sshd
● sshd.service - OpenSSH server daemon
   Loaded: loaded (/usr/lib/systemd/system/sshd.service; enabled; vendor preset:
   enabled)
   Active: inactive (dead)
     Docs: man:sshd(8)
           man:sshd_config(5)

[root@centos7 centos]# systemctl enable sshd
[root@centos7 centos]# systemctl start sshd
[root@centos7 centos]# systemctl status sshd
● sshd.service - OpenSSH server daemon
   Loaded: loaded (/usr/lib/systemd/system/sshd.service; enabled; vendor preset:
   enabled)
   Active: active (running) since Wed 2025-04-23 05:07:24 EDT; 1s ago
     Docs: man:sshd(8)
           man:sshd_config(5)
 Main PID: 4392 (sshd)
   Tasks: 1
   CGroup: /system.slice/sshd.service
           └─4392 /usr/sbin/sshd -D

```

```
# If you want to change the port on a SELinux system, you have to tell
# SELinux about this change.
# semanage port -a -t ssh_port_t -p tcp #PORTNUMBER
#
Port 41101
#AddressFamily any
#ListenAddress 0.0.0.0
#ListenAddress ::
```

```
#LoginGraceTime 2m
PermitRootLogin yes
#StrictModes yes
#MaxAuthTries 6
#MaxSessions 10
```

Client:

```
[root@centos7 centos]# ssh centos@192.168.29.241 -p 41101
centos@192.168.29.241's password:
Last login: Wed Apr 23 04:50:06 2025 from centos7.linuxvmimages.local
+---+
LINUXVMIMAGES.COM
+---+
User Name: centos
Password: centos (sudo su -)
[centos@centos7 ~]$ exit
```

3) Configure Telnet server-client.

Server

```
[root@centos7 centos]# yum install telnet-server telnet
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
 * base: mirrors.piconets.webwerks.in
 * extras: mirrors.piconets.webwerks.in
 * updates: mirrors.piconets.webwerks.in
Resolving Dependencies
--> Running transaction check
---> Package telnet.x86_64 1:0.17-66.el7 will be installed
---> Package telnet-server.x86_64 1:0.17-66.el7 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

=====
Package                        Arch      Version              Repository            Size
=====
Installing:
telnet                        x86_64    1:0.17-66.el7        updates               64 k
telnet-server                 x86_64    1:0.17-66.el7        updates               41 k
=====

Transaction Summary
=====
Install 2 Packages

Complete!
[root@centos7 centos]# systemctl status telnet.socket
● telnet.socket - Telnet Server Activation Socket
   Loaded: loaded (/usr/lib/systemd/system/telnet.socket; disabled; vendor prese
t: disabled)
   Active: inactive (dead)
     Docs: man:telnetd(8)
    Listen: [::]:23 (Stream)
   Accepted: 0; Connected: 0

Apr 23 04:37:26 centos7.linuxvmimages.local systemd[1]: Listening on Telnet S...
Apr 23 05:31:20 centos7.linuxvmimages.local systemd[1]: Closed Telnet Server ...
Hint: Some lines were ellipsized, use -l to show in full.
[root@centos7 centos]# systemctl start telnet.socket
[root@centos7 centos]# systemctl enable telnet.socket
Created symlink from /etc/systemd/system/sockets.target.wants/telnet.socket to /
usr/lib/systemd/system/telnet.socket.
[root@centos7 centos]# systemctl status telnet.socket
● telnet.socket - Telnet Server Activation Socket
   Loaded: loaded (/usr/lib/systemd/system/telnet.socket; enabled; vendor preset
: disabled)
   Active: active (listening) since Wed 2025-04-23 05:33:16 EDT; 15s ago
     Docs: man:telnetd(8)
    Listen: [::]:23 (Stream)
```

```
Apr 23 05:33:16 centos7.linuxvmimages.local systemd[1]: Listening on Telnet S...
Hint: Some lines were ellipsized, use -l to show in full.
[root@centos7 centos]# systemctl stop firewalld
```

Client:

```
Password:
[root@centos7 centos]# yum install telnet
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
 * base: mirrors.piconets.webwerks.in
 * extras: mirrors.piconets.webwerks.in
 * updates: mirrors.piconets.webwerks.in
Package 1:telnet-0.17-66.el7.x86_64 already installed and latest version
Nothing to do
[root@centos7 centos]# telnet 192.168.29.241
Trying 192.168.29.241...
Connected to 192.168.29.241.
Escape character is '^'.

Kernel 3.10.0-1160.6.1.el7.x86_64 on an x86_64
centos7 login: centos
Password:
Last login: Wed Apr 23 05:25:19 from centos7.linuxvmimages.local
+-----+
                        LINUXVMIMAGES.COM
+-----+
                        User Name: centos
                        Password: centos (sudo su -)
```

4) Establish Telnet communication on port 43897.

Server

```
Apr 23 06:27:44 centos7.linuxvmimages.local systemd[1]: Listening on Telnet S...
Apr 23 06:27:59 centos7.linuxvmimages.local systemd[1]: Closed Telnet Server ...
Hint: Some lines were ellipsized, use -l to show in full.
[root@centos7 centos]# systemctl enable telnet.socket
[root@centos7 centos]# systemctl start telnet.socket
[root@centos7 centos]# systemctl stop firewalld
[root@centos7 centos]# cd Downloads
[root@centos7 Downloads]# ls
rudra
[root@centos7 Downloads]# exir
bash: exir: command not found...
[root@centos7 Downloads]# cd ..
[root@centos7 centos]# cp /usr/lib/systemd/system/telnet.socket /usr/lib/systemd
/sy
[root@centos7 centos]# nano /usr/lib/systemd/system/telnet.socket
```

[Unit]

Description=Telnet Server Activation Socket

Documentation=man:telnetd(8)

[Socket]

ListenStream=45000

Accept=true

[Install]

WantedBy=sockets.target

```
[root@centos7 centos]# systemctl daemon-reload
[root@centos7 centos]# systemctl restart telnet.socket
[root@centos7 centos]# systemctl enable telnet.socket
[root@centos7 centos]# systemctl status telnet.socket
● telnet.socket - Telnet Server Activation Socket
   Loaded: loaded (/usr/lib/systemd/system/telnet.socket; enabled; vendor prese
: disabled)
   Active: active (listening) since Wed 2025-04-23 06:33:18 EDT; 10s ago
     Docs: man:telnetd(8)
    Listen: [::]:45000 (Stream)
 Accepted: 1; Connected: 0
```

Client

```
[centos@centos7 ~]$ cd downloads
-bash: cd: downloads: No such file or directory
[centos@centos7 ~]$ cd Downloads
[centos@centos7 Downloads]$ mkdir rudra
[centos@centos7 Downloads]$ exit
logout
Connection closed by foreign host.
[root@centos7 centos]#
[root@centos7 centos]# telnet 192.168.29.241 port 45000
Usage: telnet [-4] [-6] [-8] [-E] [-L] [-S tos] [-a] [-c] [-d] [-e char] [-l use
r]
        [-n tracefile] [-b hostalias ] [-r]
        [host-name [port]]
[root@centos7 centos]#
```


5) Configure Apache web server.

```
[centos@centos7 ~]$ su
Password:
[root@centos7 centos]# yum install httpd
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
 * base: mirrors.piconets.webwerks.in
 * extras: mirrors.piconets.webwerks.in
 * updates: mirrors.piconets.webwerks.in
Resolving Dependencies
--> Running transaction check
---> Package httpd.x86_64 0:2.4.6-97.el7.centos.2 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

=====
Package           Arch             Version                               Repository      Size
=====
Installing:
httpd             x86_64           2.4.6-97.el7.centos.2               updates         2.7 M
Transaction Summary
=====
Install 1 Package
```



```

Complete!
[root@centos7 centos]# systemctl status httpd
● httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; disabled; vendor prese
t: disabled)
   Active: inactive (dead)
     Docs: man:httpd(8)
          man:apachectl(8)
[root@centos7 centos]# systemctl start httpd
[root@centos7 centos]# systemctl enable httpd
Unknown operation 'enable'.
[root@centos7 centos]# systemctl enable httpd
Created symlink from /etc/systemd/system/multi-user.target.wants/httpd.service to /usr/lib/systemd/system/httpd.service.
[root@centos7 centos]# systemctl status httpd
● httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; enabled; vendor preset
: disabled)
   Active: active (running) since Wed 2025-04-23 06:06:54 EDT; 18s ago
     Docs: man:httpd(8)
          man:apachectl(8)
  Main PID: 7009 (httpd)
    Status: "Total requests: 0; Current requests/sec: 0; Current traffic:  0 B/s
          man:apachectl(8)"
  Main PID: 7009 (httpd)
    Status: "Total requests: 0; Current requests/sec: 0; Current traffic:  0 B/s
ec"
    CGroup: /system.slice/httpd.service
            └─7009 /usr/sbin/httpd -DFOREGROUND
              └─7014 /usr/sbin/httpd -DFOREGROUND
                └─7015 /usr/sbin/httpd -DFOREGROUND
                  └─7016 /usr/sbin/httpd -DFOREGROUND
                    └─7017 /usr/sbin/httpd -DFOREGROUND
                      └─7018 /usr/sbin/httpd -DFOREGROUND

Apr 23 06:06:53 centos7.linuxvmimages.local systemd[1]: Starting The Apache H...
Apr 23 06:06:54 centos7.linuxvmimages.local systemd[1]: Started The Apache HT...
Hint: Some lines were ellipsized, use -l to show in full.
[root@centos7 centos]# systemctl stop firewalld
[root@centos7 centos]# ifconfig
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 192.168.29.241  netmask 255.255.255.0  broadcast 192.168.29.255
        inet6 fe80::6eee:c462:7fe9:558a  prefixlen 64  scopeid 0x20<link>
        inet6 2405:201:f:d042:b5ec:103a:cd60:f93a  prefixlen 64  scopeid 0x0<glo

```

```
[root@centos7 centos]# nano index.html
[root@centos7 centos]# nano /etc/httpd/conf/httpd.conf
[root@centos7 centos]# nano /etc/httpd/conf/httpd.conf
[root@centos7 centos]# systemctl restart httpd
sy[root@centos7 centos]# systemctl enable httpd
[root@centos7 centos]# nano /var/www/html/index.html
[root@centos7 centos]# nano /var/www/html/index.html
[root@centos7 centos]# nano /var/www/html/index.html
[root@centos7 centos]# systemctl restart httpd
[root@centos7 centos]# systemctl enable httpd
[root@centos7 centos]# nano /etc/httpd/conf/httpd.conf
[root@centos7 centos]#
```



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