Module 8: Server configurations Assignment

1 – Configure Local and remote resolver

[root@centos7 ~]#
[root@centos7 ~]# **nmtui**
[root@centos7 ~]#
[root@centos7 ~]# **systemctl restart network**
[root@centos7 ~]# **ping www.yahoo.com**
PING atsv2-fp.wg1.b.yahoo.com (46.228.47.114) 56(84) bytes of data.
64 bytes from www.yahoo.com (46.228.47.114): icmp_seq=1 ttl=54 time=62.0 ms
...
[root@centos7 ~]#
[root@centos7 ~]# **cat /etc/sysconfig/network-scripts/ifcfg-enp0s3**
TYPE=Ethernet
BOOTPROTO=none
DEFROUTE=yes
IPV4_FAILURE_FATAL=yes
IPV6INIT=no
IPV6_AUTOCONF=yes
IPV6_DEFROUTE=yes
IPV6_FAILURE_FATAL=no
IPV6_ADDR_GEN_MODE=stable-privacy
NAME=enp0s3
UUID=99fbbfe4-813a-4784-a2b2-b589a0b955cd
DEVICE=enp0s3
ONBOOT=yes
IPV6_PEERDNS=yes
IPV6_PEERROUTES=yes
IPADDR=192.168.1.22
PREFIX=24
GATEWAY=192.168.1.1
DNS1=192.168.1.1
[root@centos7 ~]#
[root@centos7 ~]# **ifconfig**
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.1.22 netmask 255.255.255.0 broadcast 192.168.1.255
    ether 08:00:27:77:24:5a txqueuelen 1000 (Ethernet)
    RX packets 19 bytes 1571 (1.5 KiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 164 bytes 16638 (16.2 KiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

...
[root@centos7 ~]#
[root@centos7 ~]# vi /etc/resolv.conf
[root@centos7 ~]# **cat /etc/resolv.conf**
Generated by NetworkManager
search server1.com
nameserver 192.168.1.1
[root@centos7 ~]#
[root@centos7 ~]# **cat /etc/hosts**
192.168.1.22 centos7.server1.com
127.0.0.1   localhost localhost.localdomain localhost4 localhost4.localdomain4
::1   localhost localhost.localdomain localhost6 localhost6.localdomain6
[root@centos7 ~]#
[root@centos7 ~]# **systemctl restart network**
[root@centos7 ~]#
[root@centos7 ~]# **hostname**
centos7.server1.com
[root@centos7 ~]#

2 – List the DNS packages and its configuration files

[root@centos7 ~]#
[root@centos7 ~]# **yum install unbound -y**
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
...
root@centos7 ~]#
[root@centos7 ~]# **ls -lh /etc/unbound/unbound.conf**
-rw-r--r--. 1 root root 22K May 21 09:03 /etc/unbound/unbound.conf
[root@centos7 ~]#
[root@centos7 ~]# **rpm -ql unbound**
/etc/sysconfig/unbound
/etc/unbound/conf.d
/etc/unbound/conf.d/example.com.conf
/etc/unbound/keys.d
/etc/unbound/keys.d/example.com.key
/etc/unbound/local.d
…

3 – Start DNS service permanently

[root@centos7 ~]#
[root@centos7 ~]# **systemctl enable unbound.service**
Created symlink from /etc/systemd/system/multi-user.target.wants/unbound.service to
/usr/lib/systemd/system/unbound.service.

```
[root@centos7 ~]#
[root@centos7 ~]# systemctl start unbound.service
[root@centos7 ~]#
[root@centos7 ~]# unbound-control status
version: 1.4.20
verbosity: 1
threads: 2
modules: 2 [ validator iterator ]
uptime: 5 seconds
unbound (pid 4414) is running...
[root@centos7 ~]#

[root@centos7 ~]#
[root@centos7 ~]# systemctl status unbound.service
● unbound.service - Unbound recursive Domain Name Server
  Loaded: loaded (/usr/lib/systemd/system/unbound.service; enabled; vendor preset: disabled)
  Active: active (running) since Sun 2017-05-21 08:40:44 EDT; 7min ago
 Process: 4411 ExecStartPre=/usr/sbin/unbound-anchor -a /var/lib/unbound/root.key -c
/etc/unbound/icannbundle.pem (code=exited, status=0/SUCCESS)
 Process: 4409 ExecStartPre=/usr/sbin/unbound-checkconf (code=exited, status=0/SUCCESS)
 Main PID: 4414 (unbound)
  CGroup: /system.slice/unbound.service
        └─4414 /usr/sbin/unbound -d

May 21 08:40:44 centos7.server1.com systemd[1]: Starting Unbound recursive Domain Name Server...
May 21 08:40:44 centos7.server1.com unbound-checkconf[4409]: unbound-checkconf: no errors in
/etc/unbound/...onf
May 21 08:40:44 centos7.server1.com systemd[1]: Started Unbound recursive Domain Name Server.
May 21 08:40:44 centos7.server1.com unbound[4414]: [4414:0] notice: init module 0: validator
May 21 08:40:44 centos7.server1.com unbound[4414]: [4414:0] notice: init module 1: iterator
May 21 08:40:44 centos7.server1.com unbound[4414]: May 21 08:40:44 unbound[4414:0] warning:
increased lim...8290
May 21 08:40:44 centos7.server1.com unbound[4414]: [4414:0] info: start of service (unbound 1.4.20).
Hint: Some lines were ellipsized, use -l to show in full.
[root@centos7 ~]#

[root@centos7 ~]# vi /etc/unbound/unbound.conf
[root@centos7 ~]#
[root@centos7 ~]# unbound-checkconf
unbound-checkconf: no errors in /etc/unbound/unbound.conf
[root@centos7 ~]#
[root@centos7 ~]#
[root@centos7 ~]#
[root@centos7 ~]# systemctl restart unbound.service
[root@centos7 ~]#
[root@centos7 ~]# firewall-cmd --permanent --add-service=dns
success
```

[root@centos7 ~]#
[root@centos7 ~]# **firewall-cmd --reload**
success
[root@centos7 ~]#
[root@centos7 ~]#
[root@centos7 ~]# **systemctl status unbound.service**
● unbound.service - Unbound recursive Domain Name Server
　Loaded: loaded (/usr/lib/systemd/system/unbound.service; enabled; vendor preset: disabled)
　Active: active (running) since Sun 2017-05-21 09:05:27 EDT; 1min 24s ago
　Process: 4834 ExecStartPre=/usr/sbin/unbound-anchor -a /var/lib/unbound/root.key -c
/etc/unbound/icannbundle.pem (code=exited, status=0/SUCCESS)
　Process: 4833 ExecStartPre=/usr/sbin/unbound-checkconf (code=exited, status=0/SUCCESS)
　Main PID: 4839 (unbound)
　CGroup: /system.slice/unbound.service
　　　└─4839 /usr/sbin/unbound -d

May 21 09:05:27 centos7.server1.com systemd[1]: Starting Unbound recursive Domain Name Server...
May 21 09:05:27 centos7.server1.com unbound-checkconf[4833]: unbound-checkconf: no errors in
/etc/unbound/...onf
May 21 09:05:27 centos7.server1.com systemd[1]: Started Unbound recursive Domain Name Server.
May 21 09:05:27 centos7.server1.com unbound[4839]: May 21 09:05:27 unbound[4839:0] warning:
increased lim...8266
May 21 09:05:27 centos7.server1.com unbound[4839]: May 21 09:05:27 unbound[4839:0] error: Could
not open ...nied
May 21 09:05:27 centos7.server1.com unbound[4839]: May 21 09:05:27 unbound[4839:0] notice: init
module 0:...ator
May 21 09:05:27 centos7.server1.com unbound[4839]: May 21 09:05:27 unbound[4839:0] notice: init
module 1:...ator
May 21 09:05:27 centos7.server1.com unbound[4839]: May 21 09:05:27 unbound[4839:0] info: start
of service...20).
Hint: Some lines were ellipsized, use -l to show in full.
[root@centos7 ~]# unbound-control status
version: 1.4.20
verbosity: 1
threads: 2
modules: 2 [validator iterator]
uptime: 92 seconds
unbound (pid 4839) is running...
[root@centos7 ~]#
[root@centos7 ~]#
[root@centos7 ~]# **dig apache.org**

; <<>> DiG 9.9.4-RedHat-9.9.4-37.el7 <<>> apache.org
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 48890
;; flags: qr rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 4096
;; QUESTION SECTION:
;apache.org.　　　　　　　　IN　　A

;; *ANSWER SECTION:*
apache.org.　　　　1800　IN　　A　　88.198.26.2
apache.org.　　　　1800　IN　　A　　140.211.11.105

;; Query time: 55 msec
;; SERVER: 192.168.1.1#53(192.168.1.1)
;; WHEN: Sun May 21 10:55:28 EDT 2017
;; MSG SIZE rcvd: 71

[root@centos7 ~]#
[root@centos7 ~]#

4 – Verify DNS connectivity

Verify DNS connectivity from the DNS SERVER 1 Machine

[root@centos7 ~]#
[root@centos7 ~]# **dig apache.org @8.8.8.8**

; <<>> DiG 9.9.4-RedHat-9.9.4-37.el7 <<>> apache.org @8.8.8.8
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 63254
;; flags: qr rd ra; QUERY: 1, ANSWER: 2, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 512
;; QUESTION SECTION:
;apache.org.　　　　　　　　IN　　A

;; ANSWER SECTION:
apache.org.　　　　1261　IN　　A　　140.211.11.105
apache.org.　　　　1261　IN　　A　　88.198.26.2

;; Query time: 51 msec
;; SERVER: 8.8.8.8#53(8.8.8.8)
;; WHEN: Sun May 21 10:56:00 EDT 2017

;; MSG SIZE rcvd: 71

[root@centos7 ~]#
[root@centos7 ~]#

Verify DNS connectivity Remotely from the CLIENT SERVER 2 Machine

[root@client-example ~]#
[root@client-example ~]# **ifconfig eth0**
eth0   Link encap:Ethernet HWaddr 08:00:27:3C:6D:90
        inet addr:192.168.1.3 Bcast:192.168.1.255 Mask:255.255.255.0
        inet6 addr: fe80::a00:27ff:fe3c:6d90/64 Scope:Link
        UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
        RX packets:4772 errors:0 dropped:0 overruns:0 frame:0
        TX packets:3677 errors:0 dropped:0 overruns:0 carrier:0
        collisions:0 txqueuelen:1000
        RX bytes:534165 (521.6 KiB) TX bytes:223180 (217.9 KiB)

...
[root@client-example ~]#
[root@client-example ~]# **ping 192.168.1.22**
PING 192.168.1.22 (192.168.1.22) 56(84) bytes of data.
64 bytes from 192.168.1.22: icmp_seq=1 ttl=64 time=1.16 ms

[root@client-example ~]#
[root@client-example ~]# **dig lemonde.fr @192.168.1.22**

; <<>> DiG 9.8.2rc1-RedHat-9.8.2-0.17.rc1.el6_4.6 <<>> lemonde.fr @192.168.1.22
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 42064
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 0

;; QUESTION SECTION:
;lemonde.fr.   IN   A

;; ANSWER SECTION:
lemonde.fr.   2352   IN   A   93.184.220.20

;; Query time: 224 msec
;; SERVER: 192.168.1.22#53(192.168.1.22)
;; WHEN: Sat May 20 17:02:58 2017
;; MSG SIZE rcvd: 44

[root@client-example ~]#
[root@client-example ~]# **dig lemonde.fr**

; <<>> DiG 9.8.2rc1-RedHat-9.8.2-0.17.rc1.el6_4.6 <<>> lemonde.fr
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 48227
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 0

;; QUESTION SECTION:
;lemonde.fr.   IN   A

;; ANSWER SECTION:
lemonde.fr.   3600   IN   A   93.184.220.20

;; Query time: 54 msec
;; ***SERVER: 192.168.1.1#53(192.168.1.1)***
;; WHEN: Sat May 20 17:03:07 2017
;; MSG SIZE rcvd: 44

[root@client-example ~]# **vi /etc/resolv.conf**
[root@client-example ~]# **cat /etc/resolv.conf**
Generated by NetworkManager
domain NB
search NB
nameserver 192.168.1.22
[root@client-example ~]# **dig lemonde.fr**

; <<>> DiG 9.8.2rc1-RedHat-9.8.2-0.17.rc1.el6_4.6 <<>> lemonde.fr
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 37555
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 0

;; QUESTION SECTION:
;lemonde.fr.   IN   A

;; ANSWER SECTION:
lemonde.fr.   2280   IN   A   93.184.220.20

;; Query time: 0 msec
;; SERVER: 192.168.1.22#53(192.168.1.22)
;; WHEN: Sat May 20 17:04:05 2017
;; MSG SIZE rcvd: 44

[root@client-example ~]#

5 – Configure dhcp ip in your system

Configure DHCP Sever ip in your system (Server1 Machine)

[root@centos7 ~]#
[root@centos7 ~]# **yum install dhcp -y**
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
 * base: mirror.dataone.nl
 * extras: mirror.colocenter.nl
 * updates: mirrors.supportex.net
Resolving Dependencies
--> Running transaction check
---> Package dhcp.x86_64 12:4.2.5-47.el7.centos will be installed
--> Finished Dependency Resolution

Dependencies Resolved

```
================================================================================
 Package          Arch           Version                 Repository       Size
================================================================================
Installing:
 dhcp             x86_64         12:4.2.5-47.el7.centos          base         511 k

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

Total download size: 511 k
Installed size: 1.4 M
Downloading packages:
dhcp-4.2.5-47.el7.centos.x86_64.rpm | 511 kB 00:00:01
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Installing : 12:dhcp-4.2.5-47.el7.centos.x86_64   1/1
  Verifying : 12:dhcp-4.2.5-47.el7.centos.x86_64   1/1

Installed:
  dhcp.x86_64 12:4.2.5-47.el7.centos

Complete!

[root@centos7 ~]#

[root@centos7 ~]# **systemctl status dhcp**

Unit dhcp.service could not be found.

[root@centos7 ~]#

[root@centos7 ~]# **systemctl enable dhcp**

Failed to execute operation: Access denied

[root@centos7 ~]# systemctl status dhcpd

● dhcpd.service - DHCPv4 Server Daemon

  Loaded: loaded (/usr/lib/systemd/system/dhcpd.service; disabled; vendor preset: disabled)

  Active: inactive (dead)

   Docs: man:dhcpd(8)

      man:dhcpd.conf(5)

[root@centos7 ~]# systemctl enable dhcpd

Created symlink from /etc/systemd/system/multi-user.target.wants/dhcpd.service to /usr/lib/systemd/system/dhcpd.service.

[root@centos7 ~]# systemctl start dhcpd

Job for dhcpd.service failed because the control process exited with error code. See "systemctl status dhcpd.service" and "journalctl -xe" for details.

[root@centos7 ~]# systemctl status dhcpd

● dhcpd.service - DHCPv4 Server Daemon

  Loaded: loaded (/usr/lib/systemd/system/dhcpd.service; enabled; vendor preset: disabled)

  Active: failed (Result: exit-code) since Sun 2017-05-21 11:49:55 EDT; 1min 14s ago

   Docs: man:dhcpd(8)

      man:dhcpd.conf(5)

 Process: 14527 ExecStart=/usr/sbin/dhcpd -f -cf /etc/dhcp/dhcpd.conf -user dhcpd -group dhcpd --no-pid (code=exited, status=1/FAILURE)

 Main PID: 14527 (code=exited, status=1/FAILURE)

May 21 11:49:55 centos7.server1.com dhcpd[14527]: Internet Systems Consortium DHCP Server 4.2.5

May 21 11:49:55 centos7.server1.com dhcpd[14527]: Copyright 2004-2013 Internet Systems Consortium.

May 21 11:49:55 centos7.server1.com dhcpd[14527]: All rights reserved.

May 21 11:49:55 centos7.server1.com dhcpd[14527]: For info, please visit https://www.isc.org/software/dhcp/

May 21 11:49:55 centos7.server1.com dhcpd[14527]: Not searching LDAP since ldap-server, ldap-port and lda...file

May 21 11:49:55 centos7.server1.com dhcpd[14527]: Wrote 0 leases to leases file.

May 21 11:49:55 centos7.server1.com systemd[1]: dhcpd.service: main process exited, code=exited, status=1...LURE

May 21 11:49:55 centos7.server1.com systemd[1]: Failed to start DHCPv4 Server Daemon.

May 21 11:49:55 centos7.server1.com systemd[1]: Unit dhcpd.service entered failed state.

May 21 11:49:55 centos7.server1.com systemd[1]: dhcpd.service failed.

Hint: Some lines were ellipsized, use -l to show in full.

[root@centos7 ~]#

[root@centos7 ~]# **cat /etc/dhcp/dhcpd.conf**

#

```
# DHCP Server Configuration file.
#   see /usr/share/doc/dhcp*/dhcpd.conf.example
#   see dhcpd.conf(5) man page
#
[root@centos7 ~]# cp /usr/share/doc/dhcp-4.2.5/dhcpd.conf.example /etc/dhcp/dhcpd.conf
cp: overwrite '/etc/dhcp/dhcpd.conf'? y
[root@centos7 ~]#
[root@centos7 ~]# vi /etc/dhcp/dhcpd.conf
[root@centos7 ~]#
[root@centos7 ~]# dhcpd -t
Internet Systems Consortium DHCP Server 4.2.5
Copyright 2004-2013 Internet Systems Consortium.
All rights reserved.
For info, please visit https://www.isc.org/software/dhcp/
Not searching LDAP since ldap-server, ldap-port and ldap-base-dn were not specified in the config file
[root@centos7 ~]#
[root@centos7 ~]# systemctl restart dhcpd
[root@centos7 ~]# systemctl status dhcpd
● dhcpd.service - DHCPv4 Server Daemon
   Loaded: loaded (/usr/lib/systemd/system/dhcpd.service; enabled; vendor preset: disabled)
   Active: active (running) since Sun 2017-05-21 13:06:13 EDT; 18s ago
     Docs: man:dhcpd(8)
           man:dhcpd.conf(5)
 Main PID: 15560 (dhcpd)
   Status: "Dispatching packets..."
   CGroup: /system.slice/dhcpd.service
           └─15560 /usr/sbin/dhcpd -f -cf /etc/dhcp/dhcpd.conf -user dhcpd -group dhcpd --no-pid

...

[root@centos7 ~]#
[root@centos7 ~]# firewall-cmd --permanent --add-service=dhcp
success
[root@centos7 ~]#
[root@centos7 ~]#
[root@centos7 ~]# firewall-cmd --reload
success
[root@centos7 ~]#
[root@centos7 ~]#
[root@centos7 ~]# firewall-cmd --list-all
public (active)
  target: default
  icmp-block-inversion: no
  interfaces: enp0s3
  sources:
  services: dhcp dhcpv6-client dns ssh
  ports:
```

```
  protocols:
  masquerade: no
  forward-ports:
  sourceports:
  icmp-blocks:
  rich rules:

[root@centos7 ~]#
[root@centos7 ~]# grep -A 2 "subnet 192.168.1.0" /etc/dhcp/dhcpd.conf
subnet 192.168.1.0 netmask 255.255.255.0 {
  range 192.168.1.151 192.168.1.160;
  option broadcast-address 192.168.1.255;
[root@centos7 ~]#
[root@centos7 ~]# sed -n '80,83p' /etc/dhcp/dhcpd.conf
#host centos6 {
#  hardware ethernet 08:00:27:3C:6D:90;
#  fixed-address 192.168.1.170;
#}
[root@centos7 ~]#
[root@centos7 ~]#
```

DHCP Server - Dynamic IP in the range (192.168.1.151 <---> 192.168.1.160) address:

```
[root@localhost ~]# dhclient -r
[root@localhost ~]#
[root@localhost ~]# dhclient
[root@localhost ~]# ifconfig
eth0     Link encap:Ethernet  HWaddr 08:00:27:3C:6D:90
         inet addr:192.168.1.152  Bcast:192.168.1.255  Mask:255.255.255.0
         inet6 addr: fe80::a00:27ff:fe3c:6d90/64 Scope:Link
         UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
         RX packets:260 errors:0 dropped:0 overruns:0 frame:0
         TX packets:108 errors:0 dropped:0 overruns:0 carrier:0
         collisions:0 txqueuelen:1000
         RX bytes:45473 (44.4 KiB)  TX bytes:11946 (11.6 KiB)

lo       Link encap:Local Loopback
         inet addr:127.0.0.1  Mask:255.0.0.0
         inet6 addr: ::1/128 Scope:Host
         UP LOOPBACK RUNNING  MTU:16436  Metric:1
         RX packets:20 errors:0 dropped:0 overruns:0 frame:0
         TX packets:20 errors:0 dropped:0 overruns:0 carrier:0
         collisions:0 txqueuelen:0
         RX bytes:1320 (1.2 KiB)  TX bytes:1320 (1.2 KiB)

[root@localhost ~]#
```

DHCP Server - Fixed Static IP based on MAC address:

```
[root@localhost ~]#
[root@localhost ~]# dhclient
[root@localhost ~]# ifconfig
eth0      Link encap:Ethernet  HWaddr 08:00:27:3C:6D:90
          inet addr:192.168.1.170  Bcast:192.168.1.255  Mask:255.255.255.0
          inet6 addr: fe80::a00:27ff:fe3c:6d90/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:153 errors:0 dropped:0 overruns:0 frame:0
          TX packets:67 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:32618 (31.8 KiB)  TX bytes:6776 (6.6 KiB)

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:16436  Metric:1
          RX packets:20 errors:0 dropped:0 overruns:0 frame:0
          TX packets:20 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
          RX bytes:1320 (1.2 KiB)  TX bytes:1320 (1.2 KiB)

[root@localhost ~]#
```

6 – Configure syslog service

```
[root@centos7 ~]# rpm -qa | grep rsyslog
rsyslog-7.4.7-16.el7.x86_64
[root@centos7 ~]#
[root@centos7 ~]# systemctl enable rsyslog.service
[root@centos7 ~]# systemctl start rsyslog.service
[root@centos7 ~]# systemctl status rsyslog.service
● rsyslog.service - System Logging Service
   Loaded: loaded (/usr/lib/systemd/system/rsyslog.service; enabled; vendor preset: enabled)
   Active: active (running) since Sun 2017-05-21 17:59:52 EDT; 1min 12s ago
 Main PID: 1088 (rsyslogd)
   CGroup: /system.slice/rsyslog.service
           └─1088 /usr/sbin/rsyslogd -n

May 21 17:59:51 centos7.server1.com systemd[1]: Starting System Logging Service...
May 21 17:59:52 centos7.server1.com systemd[1]: Started System Logging Service.
[root@centos7 ~]# vi /etc/rsyslog.conf
```

```
[root@centos7 ~]# sed -n '14,20p' /etc/rsyslog.conf
# Provides UDP syslog reception
#$ModLoad imudp
#$UDPServerRun 514

# Provides TCP syslog reception
#$ModLoad imtcp
#$InputTCPServerRun 514
[root@centos7 ~]#
[root@centos7 ~]#
[root@centos7 ~]# firewall-cmd --permanent --zone=public --add-port=514/tcp
success
[root@centos7 ~]# firewall-cmd --permanent --zone=public --add-port=514/udp
success
[root@centos7 ~]# firewall-cmd --reload
success
[root@centos7 ~]# firewall-cmd --list-all
public (active)
  target: default
  icmp-block-inversion: no
  interfaces: enp0s3
  sources:
  services: dhcp dhcpv6-client dns ssh
  ports: 514/tcp 514/udp
  protocols:
  masquerade: no
  forward-ports:
  sourceports:
  icmp-blocks:
  rich rules:

[root@centos7 ~]#
[root@centos7 ~]#
[root@centos7 ~]# journalctl -n 5
-- Logs begin at Sun 2017-05-21 08:36:03 EDT, end at Sun 2017-05-21 17:01:01 EDT. --
May 21 17:01:01 centos7.server1.com CROND[19535]: (root) CMD (run-parts /etc/cron.hourly)
May 21 17:01:01 centos7.server1.com run-parts(/etc/cron.hourly)[19539]: starting 0anacron
May 21 17:01:01 centos7.server1.com run-parts(/etc/cron.hourly)[19550]: finished 0anacron
May 21 17:01:01 centos7.server1.com systemd[1]: Removed slice user-0.slice.
May 21 17:01:01 centos7.server1.com systemd[1]: Stopping user-0.slice.
[root@centos7 ~]#
```