

# KDT 클라우드보안 리눅스 팀 프로젝트

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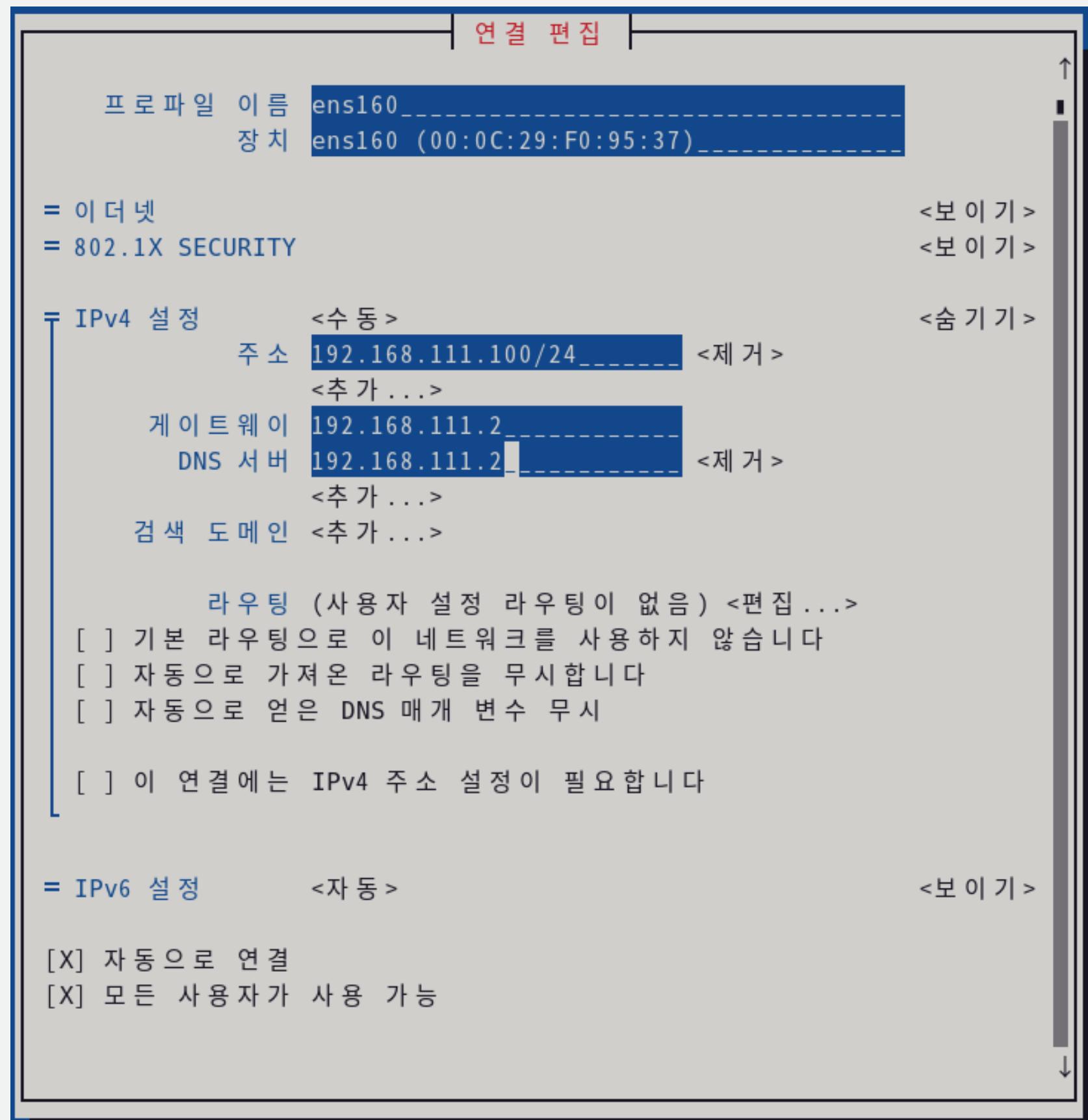
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# 설치

## 주소 설정

- 명령어 nmtui



# 사용자 및 그룹 등록

## 사용자 생성

조원이름 - 명령어 useradd

```
[root@teama ~]# useradd -md /home/kim kim  
[root@teama ~]# useradd -md /home/jin jin  
[root@teama ~]# useradd -md /home/hyun hyun  
[root@teama ~]# useradd -md /home/seol seol
```

축구팀 -명령어 useradd

```
[root@teama ~]# useradd -md /home/sonhm sonhm  
[root@teama ~]# useradd -md /home/leegi leegi  
[root@teama ~]# useradd -md /home/kimmj kimmj  
[root@teama ~]# useradd -md /home/hwanghc hwanghc
```

전체 계정 확인

- 명령어 tail /etc/passwd

```
[root@teama ~]# tail -8 /etc/passwd  
kim:x:1001:1001::/home/kim:/bin/bash  
jin:x:1002:1002::/home/jin:/bin/bash  
hyun:x:1003:1003::/home/hyun:/bin/bash  
seol:x:1004:1004::/home/seol:/bin/bash  
sonhm:x:1005:1005::/home/sonhm:/bin/bash  
leegi:x:1006:1006::/home/leegi:/bin/bash  
kimmj:x:1007:1007::/home/kimmj:/bin/bash  
hwanghc:x:1008:1008::/home/hwanghc:/bin/bash
```

# 사용자 및 그룹 등록

## 추가 그룹 생성 및 포함

eusoccer, krsoccer 그룹 생성 및 추가

- 명령어

groupadd (생성)

gpasswd -a 사용자명 그룹명 : 멤버 추가

```
[root@teama ~]# groupadd krsoccer
```

```
[root@teama ~]# groupadd eusoccer
```

```
[root@teama ~]# gpasswd -a kim krsoccer
사용자 kim을(를) krsoccer 그룹에 등록 중
[root@teama ~]# gpasswd -a hyun krsoccer
사용자 hyun을(를) krsoccer 그룹에 등록 중
[root@teama ~]# gpasswd -a jin krsoccer
사용자 jin을(를) krsoccer 그룹에 등록 중
[root@teama ~]# gpasswd -a seol krsoccer
사용자 seol을(를) krsoccer 그룹에 등록 중
[root@teama ~]#
[root@teama ~]# gpasswd -a sonhm eusoccer
사용자 sonhm을(를) eusoccer 그룹에 등록 중
[root@teama ~]# gpasswd -a kimmj eusoccer
사용자 kimmj을(를) eusoccer 그룹에 등록 중
[root@teama ~]# gpasswd -a leegi eusoccer
사용자 leegi을(를) eusoccer 그룹에 등록 중
[root@teama ~]# gpasswd -a hwanghc eusoccer
사용자 hwanghc을(를) eusoccer 그룹에 등록 중
[root@teama ~]#
[root@teama ~]# tail -2 /etc/group
krsoccer:x:1009:kim,hyun,jin,seol
eusoccer:x:1010:sonhm,kimmj,leegi,hwanghc
```

# 디스크 추가 후 LVM 구성

## 하드디스크 추가

20G, 30G, 50G

## 명령어 lsblk

```
[root@teamb ~]# lsblk
NAME   MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
sda      8:0    0   80G  0 disk
└─sda1   8:1    0    4G  0 part [SWAP]
└─sda2   8:2    0   76G  0 part /
sdb      8:16   0   20G  0 disk
sdc      8:32   0   30G  0 disk
sdd      8:48   0   50G  0 disk
sr0     11:0    1 10.2G  0 rom  /run/media/root/Rocky-9-4-x86_64-dvd
```

## 각각 PV 구성

## 명령어 fdisk

```
[root@teamb ~]# fdisk /dev/sdb

Welcome to fdisk (util-linux 2.37.4).
Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.

Device does not contain a recognized partition table.
Created a new DOS disklabel with disk identifier 0xf4d1a359.

Command (m for help): n
Partition type
  p   primary (0 primary, 0 extended, 4 free)
  e   extended (container for logical partitions)
Select (default p): p
Partition number (1-4, default 1):
First sector (2048-41943039, default 2048):
Last sector, +/-sectors or +/-size{K,M,G,T,P} (2048-41943039, default 41943039):

Created a new partition 1 of type 'Linux' and of size 20 GiB.
```

```
Command (m for help): t
Selected partition 1
Hex code or alias (type L to list all): 8e
Changed type of partition 'Linux' to 'Linux LVM'.
```

```
Command (m for help): p
Disk /dev/sdb: 20 GiB, 21474836480 bytes, 41943040 sectors
Disk model: VMware Virtual S
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
```

# 디스크 추가 후 LVM 구성

## 하드디스크 추가

각각 PV 구성

명령어 `lsblk` : 확인

```
[root@teamb ~]# lsblk
NAME   MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
sda      8:0    0   80G  0 disk
└─sda1   8:1    0     4G  0 part [SWAP]
└─sda2   8:2    0   76G  0 part /
sdb      8:16   0   20G  0 disk
└─sdb1   8:17   0   20G  0 part
sdc      8:32   0   30G  0 disk
└─sdc1   8:33   0   30G  0 part
sdd      8:48   0   50G  0 disk
└─sdd1   8:49   0   50G  0 part
sr0     11:0    1 10.2G 0 rom  /run/media/root/Rocky-9-4-x86_64-dvd
```

명령어 `pvcreate`

```
[root@teamb ~]# pvcreate /dev/sdb1
Physical volume "/dev/sdb1" successfully created.
Creating devices file /etc/lvm/devices/system.devices
[root@teamb ~]# pvcreate /dev/sdc1
Physical volume "/dev/sdc1" successfully created.
[root@teamb ~]# pvcreate /dev/sdd1
Physical volume "/dev/sdd1" successfully created.
```

VG 구성 : DATA

명령어 `vgcreate`

```
[root@teamb ~]# vgcreate DATA /dev/sdb1 /dev/sdc1 /dev/sdd1
Volume group "DATA" successfully created
```

LV 구성 : VIDEO(40G), AUDIO(나머지)

명령어 `lvcreate`

```
[root@teamb ~]# lvcreate --extends 100%FREE --name AUDIO DATA
Logical volume "AUDIO" created.
```

# 디스크 추가 후 LVM 구성

## 하드디스크 추가

LV 구성 : VIDEO(40G), AUDIO(나머지)

명령어 lvscan, mkfs

```
[root@teamb ~]# ~]# lvscan
ACTIVE            '/dev/DATA/VIDEO' [40.00 GiB] inherit
ACTIVE            '/dev/DATA/AUDIO' [<59.99 GiB] inherit
```

```
[root@teamb ~]# mkfs.ext4 /dev/DATA/AUDIO
mke2fs 1.46.5 (30-Dec-2021)
Creating filesystem with 15725568 4k blocks and 3932160 inodes
Filesystem UUID: a093037b-a11f-428b-b839-9f41f760080a
Superblock backups stored on blocks:
      32768, 98304, 163840, 229376, 294912, 819200, 884736, 1605632, 2654208,
     4096000, 7962624, 11239424

Allocating group tables: done
Writing inode tables: done
Creating journal (65536 blocks): done
Writing superblocks and filesystem accounting information: done
```

# 디스크 추가 후 LVM 구성

## 하드디스크 추가

LV 구성 : VIDEO(40G), AUDIO(나머지)

### 1) 명령어 mount

```
[root@teamb ~]# mkdir /lvm1 /lvm2  
[root@teamb ~]#  
[root@teamb ~]# mount /dev/DATA/VIDEO /lvm1  
[root@teamb ~]# mount /dev/DATA/AUDIO /lvm2
```

### 2) 확인

```
[root@teamb ~]# cp /boot/vmlinuz-5* /lvm1/teamfile  
[root@teamb ~]# cp /boot/vmlinuz-5* /lvm2/teamfile  
[root@teamb ~]#  
[root@teamb ~]# df  


| Filesystem             | 1K-blocks | Used     | Available | Use% | Mounted on                           |
|------------------------|-----------|----------|-----------|------|--------------------------------------|
| devtmpfs               | 4096      | 0        | 4096      | 0%   | /dev                                 |
| tmpfs                  | 892604    | 0        | 892604    | 0%   | /dev/shm                             |
| tmpfs                  | 357044    | 7296     | 349748    | 3%   | /run                                 |
| /dev/sda2              | 79625216  | 6300096  | 73325120  | 8%   | /                                    |
| tmpfs                  | 178520    | 100      | 178420    | 1%   | /run/user/0                          |
| /dev/sr0               | 10660236  | 10660236 | 0         | 100% | /run/media/root/Rocky-9-4-x86_64-dvd |
| /dev/mapper/DATA-VIDEO | 40973536  | 13312    | 38846688  | 1%   | /lvm1                                |
| /dev/mapper/DATA-AUDIO | 61599532  | 13312    | 58424724  | 1%   | /lvm2                                |


```

### 3) /etc/fstab

```
#  
# /etc/fstab  
# Created by anaconda on Tue Oct 1 11:32:36 2024  
#  
# Accessible filesystems, by reference, are maintained under '/dev/disk/'.  
# See man pages fstab(5), findfs(8), mount(8) and/or blkid(8) for more info.  
#  
# After editing this file, run 'systemctl daemon-reload' to update systemd  
# units generated from this file.  
#  
UUID=2f725c3b-c859-4fc7-8cf8-aa81aa22b3e1 / xfs defaults 0 0  
UUID=2f84372b-d27d-4857-bcd6-3a8b50f6639d none swap defaults 0 0  
  
/dev/DATA/VIDEO /lvm1 ext4 defaults 0 0  
/dev/DATA/AUDIO /lvm2 ext4 defaults 0 0
```

# 디스크 추가 후 LVM 구성

## 하드디스크 추가

LV 구성 : VIDEO(40G), AUDIO(나머지)

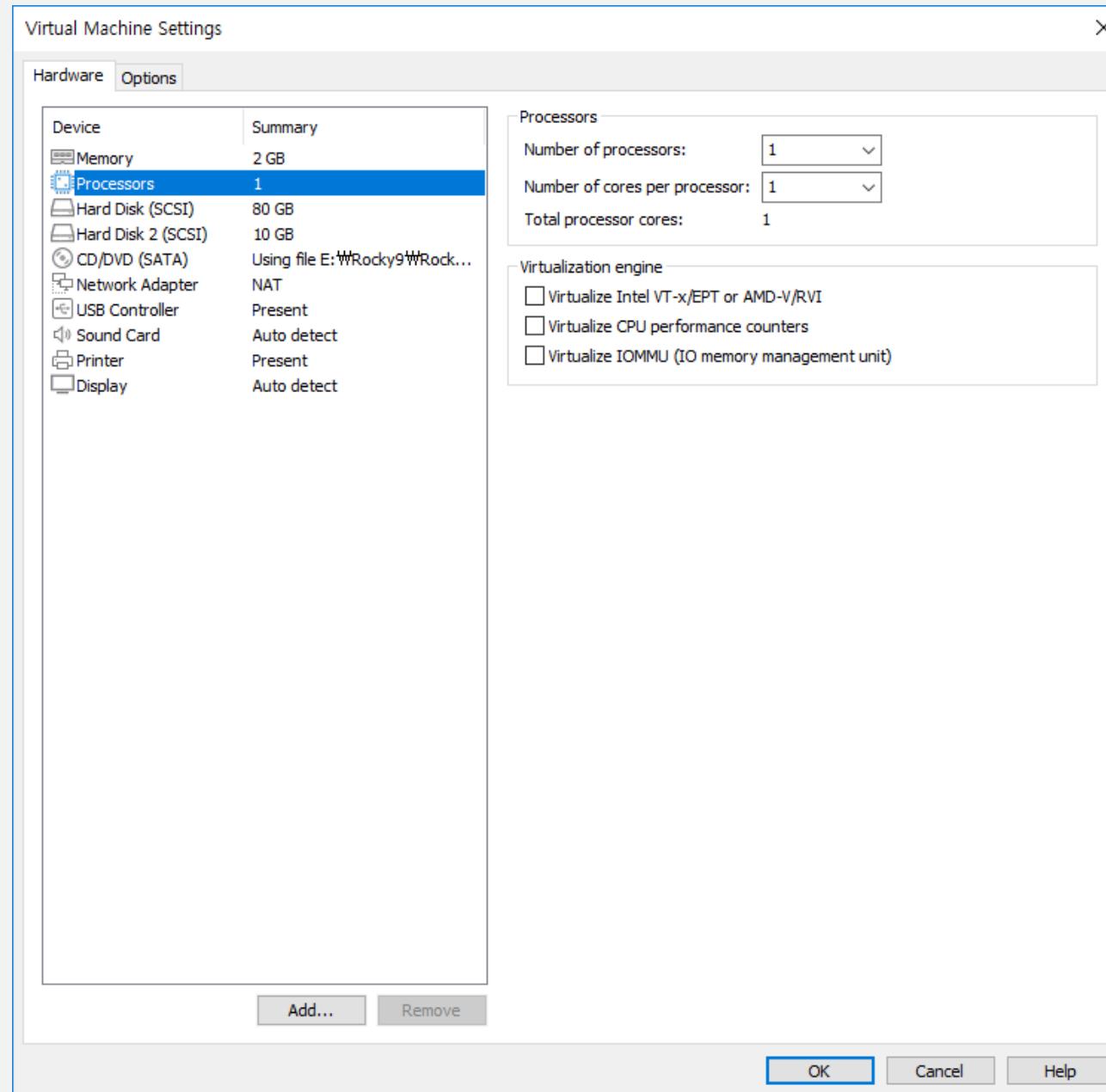
## 최종 확인

```
[root@teamb ~]# lsblk
NAME      MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
sda        8:0    0   80G  0 disk
└─sda1     8:1    0    4G  0 part [SWAP]
└─sda2     8:2    0   76G  0 part /
sdb        8:16   0   20G  0 disk
└─sdb1     8:17   0   20G  0 part
  └─DATA-AUDIO 253:1  0   60G  0 lvm  /lvm2
sdc        8:32   0   30G  0 disk
└─sdcl     8:33   0   30G  0 part
  └─DATA-AUDIO 253:1  0   60G  0 lvm  /lvm2
sdd        8:48   0   50G  0 disk
└─sdd1     8:49   0   50G  0 part
  ├─DATA-VIDEO 253:0  0   40G  0 lvm  /lvml
  └─DATA-AUDIO 253:1  0   60G  0 lvm  /lvm2
sr0       11:0   1 10.2G  0 rom   /run/media/root/Rocky-9-4-x86_64-dvd
```

# 디스크 쿼터 설정

## 하드디스크 10G 추가

### 1. 물리적 추가



### 추가된 디스크 확인

```
[root@teamc ~]# lsblk
NAME   MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
sda     8:0    0   80G  0 disk
└─sda1  8:1    0    4G  0 part [SWAP]
  └─sda2 8:2    0   76G  0 part /
sdb     8:16   0   10G  0 disk
sr0    11:0    1  10.2G 0 rom  /run/media/root/Rocky-9-4-x86_64-dvd
```

# 디스크 쿼터 설정

## 하드디스크 10G 추가

### 2. 파티션 추가 : fdisk

```
[root@teamc ~]# fdisk /dev/sdb

Welcome to fdisk (util-linux 2.37.4).
Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.

Device does not contain a recognized partition table.
Created a new DOS disklabel with disk identifier 0x2f465de0.

Command (m for help): n
Partition type
  p  primary (0 primary, 0 extended, 4 free)
  e  extended (container for logical partitions)
Select (default p): p
Partition number (1-4, default 1): 1
First sector (2048-20971519, default 2048):
Last sector, +/sectors or +/-size{K,M,G,T,P} (2048-20971519, default 20971519):

Created a new partition 1 of type 'Linux' and of size 10 GiB.

Command (m for help): p
Disk /dev/sdb: 10 GiB, 10737418240 bytes, 20971520 sectors
Disk model: VMware Virtual S
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0x2f465de0

Device      Boot Start     End   Sectors Size Id Type
/dev/sdb1        2048 20969472    10G 83 Linux

Command (m for help): w
The partition table has been altered.
Calling ioctl() to re-read partition table.
Syncing disks.
```

### 3. 파일 시스템 : mkfs.ext4

```
[root@teamc ~]# mkfs.ext4 /dev/sdb1
mke2fs 1.46.5 (30-Dec-2021)
Creating filesystem with 2621184 4k blocks and 655360 inodes
Filesystem UUID: ccbcce86-514d-4257-a307-ff3eed4af8cb
Superblock backups stored on blocks:
            32768, 98304, 163840, 229376, 294912, 819200, 884736, 1605632

Allocating group tables: done
Writing inode tables: done
Creating journal (16384 blocks): done
Writing superblocks and filesystem accounting information: done
```

### 4. 마운트 : mkdir /userhome mount /dev/sdb1 /userhome

```
[root@teamc ~]# mkdir /userhome
[root@teamc ~]# mount /dev/sdb1 /userhome
```

# 디스크 쿼터 설정

## 하드디스크 10G 추가

5. /etc/fstab 파일 수정

/dev/sdb1 /userhome ext4 defaults 0 0

```
#  
# /etc/fstab  
# Created by anaconda on Tue Oct 1 11:33:24 2024  
#  
# Accessible filesystems, by reference, are maintained under '/dev/disk/'.  
# See man pages fstab(5), findfs(8), mount(8) and/or blkid(8) for more info.  
#  
# After editing this file, run 'systemctl daemon-reload' to update systemd  
# units generated from this file.  
#  
UUID=41d2f5f4-9f01-4430-8a3c-485d5d07e543 /  
UUID=09fa8122-83f3-40e2-8ecf-797bf72a1994 none  
xfs defaults 0 0  
swap defaults 0 0  
  
/dev/sdb1 /userhome ext4 defaults 0 0
```

## 추가 사용자

aespa(soft 700M, hard 1G)  
IVE(soft 700M, hard 1G)  
NewJeans(soft 700M, hard 1G)

## 명령어 useradd

```
[root@teamc ~]# useradd -md /userhome/aespa aespa  
[root@teamc ~]# useradd -md /userhome/IVE IVE  
[root@teamc ~]# useradd -md /userhome/NewJeans NewJeans
```

# 디스크 쿼터 설정

## 추가 사용자

### 7. /etc/fstab 수정

```
#  
# /etc/fstab  
# Created by anaconda on Tue Oct 1 11:33:24 2024  
  
# Accessible filesystems, by reference, are maintained under '/dev/disk/'.  
# See man pages fstab(5), findfs(8), mount(8) and/or blkid(8) for more info.  
  
# After editing this file, run 'systemctl daemon-reload' to update systemd  
# units generated from this file.  
  
UUID=41d2f5f4-9f01-4430-8a3c-485d5d07e543 / xfs defaults 0 0  
UUID=09fa8122-83f3-40e2-8ecf-797bf72a1994 none swap defaults 0 0  
  
/dev/sdb1 /userhome ext4 defaults,usrjquota=aquota.user,jqfmt=vfsv0 0 0
```

### 8. 마운트

mount --options remount /userhome  
: 재부팅 효과

```
[root@teamc ~]# mount --options remount /userhome  
[root@teamc ~]#  
[root@teamc ~]# mount  
proc on /proc type proc (rw,nosuid,nodev,noexec,relatime)  
sysfs on /sys type sysfs (rw,nosuid,nodev,noexec,relatime,seclabel)  
devtmpfs on /dev type devtmpfs (rw,nosuid,seclabel,size=4096k,nr_inodes=2048,mode=0755,anon_size=64k)  
securityfs on /sys/kernel/security type securityfs (rw,nosuid,nodev,noexec,relatime)  
tmpfs on /dev/shm type tmpfs (rw,nosuid,nodev,seclabel,inode64)  
devpts on /dev/pts type devpts (rw,nosuid,noexec,relatime,seclabel,gid=5,mode=0620)  
tmpfs on /run type tmpfs (rw,nosuid,nodev,seclabel,size=357040k,nr_inodes=1024,mode=0755)  
cgroup2 on /sys/fs/cgroup type cgroup2 (rw,nosuid,nodev,noexec,relatime)
```

# 디스크 쿼터 설정

## 추가 사용자

### 쿼터 디비 생성

```
[root@teamc ~]# cd /userhome # 쿼터용 파일 시스템이 마운트된 디렉터리로 이동
[root@teamc userhome]# quotaoff -avug # 일단 쿼터를 종료(경고 메시지는 무시)
quotaoff: Your kernel probably supports ext4 quota feature but you are using external quota
/dev/sdb1 [/userhome]: user quotas turned off
[root@teamc userhome]# rm -rf aquota.* # 생성한 쿼터 관련 파일 삭제
[root@teamc userhome]# quotacheck -augmn # 파일 시스템의 쿼터 관련 사항을 다시 체크
[root@teamc userhome]# touch aquota.user aquota.group # 쿼터 관련 파일 생성
[root@teamc userhome]# chmod 600 aquota.* # 보안을 위해 소유자(root)외에는 접근 금지 설정
[root@teamc userhome]# quotacheck -augmn # 마지막 파일 시스템의 쿼터 관련 사항 체크
[root@teamc userhome]# quotaon -avug # 설정한 쿼터를 시작(경고 메시지는 무시)
quotaon: Your kernel probably supports ext4 quota feature but you are using external quota
/dev/sdb1 [/userhome]: user quotas turned on
[root@teamc userhome]# ls -l
합계 36
drwx----- 3 IVE      IVE      4096 10월   4 15:59 IVE
drwx----- 3 NewJeans NewJeans 4096 10월   4 15:59 NewJeans
drwx----- 3 aespa    aespa    4096 10월   4 15:59 aespa
-rw----- 1 root    root     0 10월   4 16:05 aquota.group
-rw----- 1 root    root    7168 10월   4 16:05 aquota.user
drwx----- 2 root    root    16384 10월   4 15:55 lost+found
```

### 공간 할당

#### edquota -u

```
[root@teamc userhome]# edquota -u aespa
[root@teamc userhome]# edquota -u IVE
[root@teamc userhome]# edquota -u NewJeans
```

Filesystem	blocks	soft		hard		inodes	soft	hard
		soft	hard	soft	hard			
/dev/sdb1	28	716800	1024000	7	0	0	0	0

# 디스크 쿼터 설정

## 추가 사용자

사용자별 현재 사용량

repquota

```
[root@teamc userhome]# repquota /userhome
*** Report for user quotas on device /dev/sdb1
Block grace time: 7days; Inode grace time: 7days
      Block limits          File limits
User        used    soft    hard grace   used    soft    hard grace
-----
root      --       20      0      0           3      0      0
aespa     --      28  716800 1024000       7      0      0
IVE       --      28  716800 1024000       7      0      0
NewJeans  --      28  716800 1024000       7      0      0
```

공간 할당 (aespa, IVE)

edquota

: 모든 사용자를 동일하게 설정할 경우 edquota 를 통해 다른 사용자 또한 동일하게 설정이 가능

```
[root@teamc userhome]# edquota -p aespa IVE
```

# 서버 구성

## SSH Server

### 1. 설치

설치확인 : rpm -qa

```
[root@teama ~]# rpm -qa openssh-server  
openssh-server-8.7p1-38.el9.x86_64
```

if. 설치가 안되 있을 때

dnf -y install openssh-server

### 2. 환경설정 (생략)

### 3. 서비스 시작

systemctl status 서비스명

```
[root@teama ~]# systemctl status sshd  
● sshd.service - OpenSSH server daemon  
  Loaded: loaded (/usr/lib/systemd/system/sshd.service; enabled; preset: enabled)  
  Active: active (running) since Wed 2024-10-02 21:05:59 KST; 4 days ago  
    Docs: man:sshd(8)  
          man:sshd_config(5)  
   Main PID: 840 (sshd)  
     Tasks: 1 (limit: 10777)  
    Memory: 1.6M  
      CPU: 15ms  
    CGroup: /system.slice/sshd.service  
           └─840 "sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups"
```

```
10월 02 21:05:59 teama systemd[1]: Starting OpenSSH server daemon...  
10월 02 21:05:59 teama sshd[840]: Server listening on 0.0.0.0 port 22.  
10월 02 21:05:59 teama sshd[840]: Server listening on :: port 22.  
10월 02 21:05:59 teama systemd[1]: Started OpenSSH server daemon.
```

if. 시작 및 disable 상태일 때  
systemctl restart sshd  
systemctl enable sshd

# 서버 구성

## SSH Server

### 4. 방화벽

firewall-cmd --add-service=서비스명 : 서비스추가  
firewall-cmd --reload : 서비스목록 업데이트  
firewall-cmd --list-service : 확인

```
[root@teama ~]# firewall-cmd --permanent --add-service=ssh
Warning: ALREADY_ENABLED: ssh
success
[root@teama ~]# firewall-cmd --reload
success
[root@teama ~]# firewall-cmd --list-service
cockpit dhcpcv6-client ssh
```

### 5. SELinux (생략)

### 6. 접속 확인

#### ping 확인

```
[root@teama ~]# ping 192.168.111.150
PING 192.168.111.150 (192.168.111.150) 56(84) bytes of data.
64 bytes from 192.168.111.150: icmp_seq=1 ttl=64 time=0.329 ms
64 bytes from 192.168.111.150: icmp_seq=2 ttl=64 time=0.522 ms
64 bytes from 192.168.111.150: icmp_seq=3 ttl=64 time=0.503 ms
```

#### 접속

```
[root@teama ~]# ssh teama@192.168.111.100
teama@192.168.111.100's password:
Last login: Tue Oct  1 20:59:49 2024
[teama@teama ~]$ ifconfig ens160
ens160: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
          inet 192.168.111.100  netmask 255.255.255.0  broadcast 192.168.111.255
          inet6 fe80::20c:29ff:fe0:9537  prefixlen 64  scopeid 0x20<link>
          ether 00:0c:29:f0:95:37  txqueuelen 1000  (Ethernet)
          RX packets 444911  bytes 658288309 (627.7 MiB)
          RX errors 0  dropped 0  overruns 0  frame 0
          TX packets 180967  bytes 9834611 (9.3 MiB)
          TX errors 0  dropped 0  overruns 0  carrier 0  collisions 0
```

# 서버 구성

## XRDP Server

### 1. 설치

dnf -y install

```
[root@teama ~]# dnf -y install epel-release
```

```
[root@teama ~]# dnf -y install xrdp
```

### 2. 환경설정 (생략)

### 3. 서비스 시작

systemctl status 서비스명

```
[root@teama ~]# systemctl start xrdp
[root@teama ~]# systemctl status xrdp
● xrdp.service - xrdp daemon
   Loaded: loaded (/usr/lib/systemd/system/xrdp.service; disabled; preset: disabled)
   Active: active (running) since Mon 2024-10-07 20:30:57 KST; 5s ago
     Docs: man:xrdp(8)
           man:xrdp.ini(5)
   Main PID: 35084 (xrdp)
      Tasks: 1 (limit: 10777)
    Memory: 1.6M
      CPU: 12ms
     CGroup: /system.slice/xrdp.service
             └─35084 /usr/sbin/xrdp --nodaemon
```

```
10월 07 20:30:57 teama systemd[1]: Starting xrdp daemon...
10월 07 20:30:57 teama systemd[1]: Started xrdp daemon.
10월 07 20:30:57 teama xrdp[35084]: [INFO ] starting xrdp with pid 35084
10월 07 20:30:57 teama xrdp[35084]: [INFO ] address [0.0.0.0] port [3389] mode 1
10월 07 20:30:57 teama xrdp[35084]: [INFO ] listening to port 3389 on 0.0.0.0
10월 07 20:30:57 teama xrdp[35084]: [INFO ] xrdp_listen_pp done
```

# 서버 구성

## XRDP Server

### 4. 방화벽

firewall-cmd --add-service=서비스명 : 서비스추가

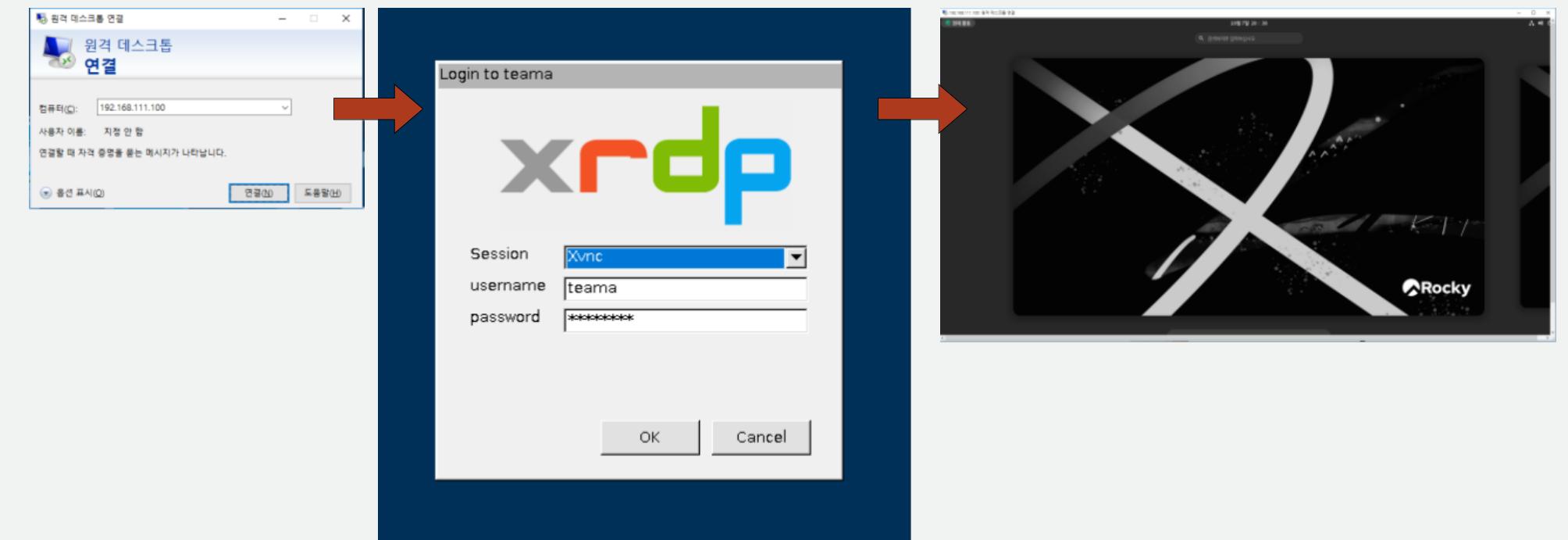
firewall-cmd --reload : 서비스목록 업데이트

firewall-cmd --list-service : 확인

```
[root@teama ~]# firewall-cmd --permanent --add-port=3389/tcp
success
[root@teama ~]# firewall-cmd --reload
success
[root@teama ~]# firewall-cmd --list-port
3389/tcp
```

### 5. SELinux (생략)

### 6. 접속 확인



# 서버 구성

## DNS Server

### 1. 설치

```
dnf -y install
```

```
[root@teama ~]# dnf -y install bind bind-chroot
```

### 2. 환경설정

```
vi /etc/named.conf
```

```
[root@teama ~]# vi /etc/named.conf
```

11행 수정 {127.0.0.1} -> {any;}

12행 수정 {::1;} -> {none;}

```
11      listen-on port 53 { 127.0.0.1; };           11
12      listen-on-v6 port 53 { ::1; };             12
```

```
listen-on port 53 { any; };
listen-on-v6 port 53 { none; };
```

# 서버 구성

## DNS Server

### 2. 환경설정

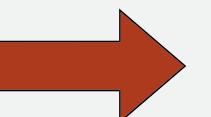
vi /etc/named.conf

```
[root@teama ~]# vi /etc/named.conf
```

19행 수정 {localhost;} -> {any;}

33행 수정 yes -> no

19	allow-query { localhost; };
33	dnssec-validation yes;



19	allow-query { any; };
33	dnssec-validation no;

# 서버 구성

## DNS Server

### 3. 서비스 시작

systemctl restart  
systemctl enable

```
[root@teama ~]# systemctl restart named
[root@teama ~]# systemctl enable named
Created symlink /etc/systemd/system/multi-user.target.wants/named.service
→ /usr/lib/systemd/system/named.service.
```

### systemctl status

```
[root@teama ~]# systemctl status named
● named.service - Berkeley Internet Name Domain (DNS)
  Loaded: loaded (/usr/lib/systemd/system/named.service; enabled; preset: disabled)
  Active: active (running) since Tue 2024-10-08 20:21:10 KST; 1min 33s ago
    Main PID: 37098 (named)
       Tasks: 6 (limit: 10777)
      Memory: 17.5M
        CPU: 59ms
       CGroup: /system.slice/named.service
               └─37098 /usr/sbin/named -u named -c /etc/named.conf
```

### 4. 방화벽

firewall-cmd --permanent --add-service=서비스명  
firewall-cmd --reload  
firewall-cmd --list-service

```
[root@teama ~]# firewall-cmd --permanent --add-service=dns
success
[root@teama ~]# firewall-cmd --reload
success
[root@teama ~]# firewall-cmd --list-service
cockpit dhcpcv6-client dns ssh
```

### 5. SELinux (생략)

# 서버 구성

## DNS Server

### 6. 접속 확인

dig / nslookup

```
[root@teama ~]# nslookup
> server 192.168.111.100
Default server: 192.168.111.100
Address: 192.168.111.100#53
> www.nate.com
Server:      192.168.111.100
Address:     192.168.111.100#53

Non-authoritative answer:
Name:   www.nate.com
Address: 120.50.131.112
```

```
[root@teama ~]# dig @192.168.111.100

; <>> DiG 9.16.23-RH <>> @192.168.111.100
; (1 server found)
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 54438
;; flags: qr rd ra; QUERY: 1, ANSWER: 13, AUTHORITY: 0, ADDITIONAL: 27
;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
; COOKIE: 950e11e356f529ae01000000670516a82ab7ca39836265b8 (good)
;; QUESTION SECTION:
;.

;; ANSWER SECTION:
.          518142  IN  NS  a.root-servers.net.
.          518142  IN  NS  f.root-servers.net.
.          518142  IN  NS  i.root-servers.net.
.          518142  IN  NS  c.root-servers.net.
.          518142  IN  NS  m.root-servers.net.
.          518142  IN  NS  h.root-servers.net.
.          518142  IN  NS  j.root-servers.net.
.          518142  IN  NS  l.root-servers.net.
.          518142  IN  NS  d.root-servers.net.
.          518142  IN  NS  k.root-servers.net.
.          518142  IN  NS  e.root-servers.net.
.          518142  IN  NS  b.root-servers.net.
.          518142  IN  NS  g.root-servers.net.
```

# 서버 구성

## DNS Server

### 6. 접속 확인

#### dig / nslookup 작동 확인

```
[root@teama ~]# nslookup  
> server 192.168.111.100  
Default server: 192.168.111.100  
Address: 192.168.111.100  
> www.nate.co[redacted]  
Default server: 192.168.111.100  
Address: 192.168.111.100  
Server: 192.168.111.100  
Address: 192.168.111.100  
Default server: 192.168.111.100  
Address: 192.168.111.100#53  
Server: 192.168.111.100  
Address: 192.168.111.100  
Non-authoritative answer:  
Name: www.nate.com  
Address: 120.50.131.112
```

```
[root@teama ~]# dig @192.168.111.100  
; <>> DiG 9.16.23-RH <>> @192.168.111.100  
; (1 server found)  
;; global options: +cmd  
;; Got answer:  
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 54438  
;; flags: qr rd ra; QUERY: 1, ANSWER: 13, AUTHORITY: 0, ADDITIONAL: 27  
;; OPT PSEUDOSECTION:  
; EDNS: version: 0, flags:; udp: 1232  
; COOKIE: 950e11e356f529ae01000000670516a82ab7ca39836265b8 (good)  
;; QUESTION SECTION:  
;.  
;.  
;.  
;; ANSWER SECTION:  
. 518142 IN NS a.root-servers.net.  
. 518142 IN NS f.root-servers.net.  
. 518142 IN NS i.root-servers.net.  
. 518142 IN NS c.root-servers.net.  
. 518142 IN NS m.root-servers.net.  
. 518142 IN NS h.root-servers.net.  
. 518142 IN NS j.root-servers.net.  
. 518142 IN NS l.root-servers.net.  
. 518142 IN NS d.root-servers.net.  
. 518142 IN NS k.root-servers.net.  
. 518142 IN NS e.root-servers.net.  
. 518142 IN NS b.root-servers.net.  
. 518142 IN NS g.root-servers.net.
```

# 서버 구성

## DNS Server

### 6. 접속 확인

네임서버 고정 사용 지정 : vi /etc/resolv.conf  
192.168.111.2 -> 192.168.111.100

```
# Generated by NetworkManager
nameserver 192.168.111.100
```

### httpd 설치, 가동

```
[root@teama ~]# dnf -y install httpd
[root@teama ~]# systemctl start httpd
```

### httpd 서비스 시작 확인

```
[root@teama ~]# systemctl start httpd
```

### httpd 방화벽

```
[root@teama ~]# firewall-cmd --reload
success
[root@teama ~]# firewall-cmd --list-service
cockpit dhcpcv6-client dns http https ssh
```

### ftp 설치, 가동

```
[root@teama ~]# dnf -y install vsftpd
```

### ftp 방화벽

```
[root@teama ~]# firewall-cmd --permanent --add-service=ftp
success
```

cd /var/ftp

vi welcome.msg -> welcome.msg 파일 생성됨  
아래 내용을 작성

```
Welcome ! This is Linux. FTP Server
~
```

vi /etc/vsftpd/vsftpd.conf 맨 위에 아래 글 추가

```
banner_file=/var/ftp/welcome.msg
# Example config file /etc/vsftpd/vsftpd.conf
#
# The default compiled in settings are fairly paranoid. This sample file
```

vi /var/www/html/index.html -> 기본으로 뜨는 페이지

```
root@teama:~ — /usr/bin/vim /var/www/html/index.html
<h1> Team STEAM Web Sever.</h1>
```

# 서버 구성

## DNS Server

### 6. 접속 확인

vi /etc/named.conf 하단에 내용 추가

```
        file "named.ca";
};

include "/etc/named.rfc1912.zones";
include "/etc/named.root.key";

zone "team-steam.com" IN {
    type master;
    file "team-steam.com.db";
    allow-update { none; };
};
```

# 마스터 네임 서버는 master  
# options의 directory에 생성될 "도메인 이름"의 상세 설정 파일  
# 2차 네임 서버의 주소. 생략하면 none으로 처리

# 서버 구성

## DNS Server

### 6. 접속 확인

#### 정방향 영역 파일(포워드 존 파일) 생성

```
[root@teama ~]# cd /var/named/  
[root@teama named]#  
[root@teama named]# touch team-steam.com.db  
[root@teama named]#  
[root@teama named]# ls  
chroot  data  dynamic  named.ca  named.empty  named.localhost  named.loopback  slaves  team-steam.com.db
```

포워드존(team-steam.com.db)에 내용 입력

```
1 $TTL 3H  
2 @      SOA   @    root.  ( 2 1D 1H 1W 1H )  
3          IN    NS   @  
4          IN    A     192.168.111.100  
5  
6 www    IN    A     192.168.111.100  
7 ftp    IN    A     192.168.111.200
```

ftp, web CNAME 설정

```
$TTL 3H  
@      SOA   @    root.  ( 2 1D 1H 1W 1H )  
IN    NS   @  
IN    A     192.168.111.100  
  
team  IN    A     192.168.111.100  
www   IN    CNAME team  
teamb  IN    A     192.168.111.150  
ftp   IN    CNAME teamb
```

# 서버 구성

## DNS Server

### 6. 접속 확인

#### named-checkzone : 포워드존 문법 확인

```
[root@teama named]# named-checkzone team-steam.com team-steam.com.db
zone team-steam.com/IN: loaded serial 2
OK
```

#### system restart/status : 서비스 재시작 및 확인

```
[root@teama named]# systemctl restart named
[root@teama named]#
[root@teama named]# systemctl status named
● named.service - Berkeley Internet Name Domain (DNS)
  Loaded: loaded (/usr/lib/systemd/system/named.service; enabled; preset: disabled)
  Active: active (running) since Thu 2024-10-10 20:33:04 KST; 6s ago
    Process: 2943 ExecStartPre=/bin/bash -c if [ ! "$DISABLE_ZONE_CHECKING" == "yes" ]; then /usr/sbin/n
    Process: 2945 ExecStart=/usr/sbin/named -u named -c ${NAMEDCONF} ${OPTIONS} (code=exited, status=0/SUC
   Main PID: 2946 (named)
     Tasks: 5 (limit: 10777)
    Memory: 16.2M
       CPU: 51ms
      CGroup: /system.slice/named.service
              └─2946 /usr/sbin/named -u named -c /etc/named.conf
```

# 서버 구성

## DNS Server

### 6. 접속 확인

#### firewall-cmd : 방화벽 설정

```
[root@teama named]# firewall-cmd --permanent --add-service=dns  
Warning: ALREADY_ENABLED: dns  
success  
[root@teama named]# firewall-cmd --reload  
fsuccess  
[root@teama named]# firewall-cmd --list-service  
cockpit dhcpcv6-client dns ftp http https ssh  
[root@teama named]#
```

#### 웹 브라우저 접속 확인 (index.html파일에 적힌 내용)



# 서버 구성

## DNS Server

6. 접속 확인

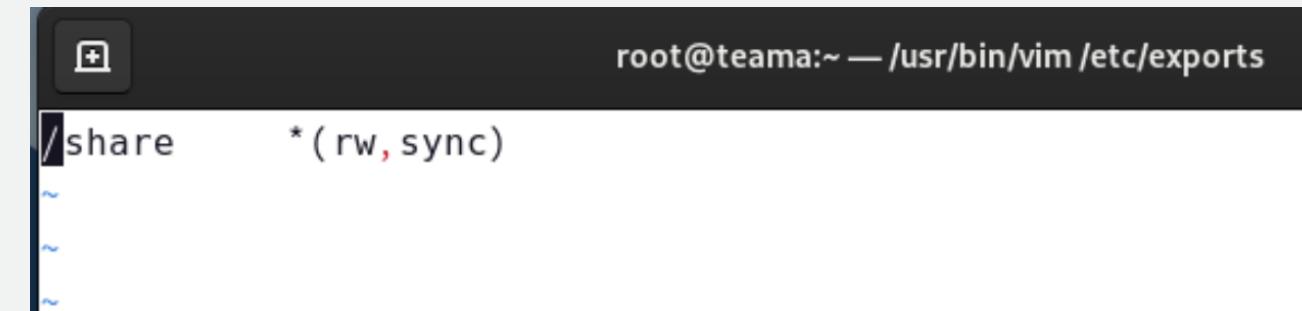
ftp ftp.team-steam.com

```
[root@teamb ~]# ftp 192.168.111.100
Connected to 192.168.111.100 (192.168.111.100).
220-Welcome~! TEAM STEAM FTP SERVER!
220
Name (192.168.111.100:root): teama
331 Please specify the password.
Password:
230 Login successful.
Remote system type is UNIX.
Using binary mode to transfer files.
```

## NFS Server

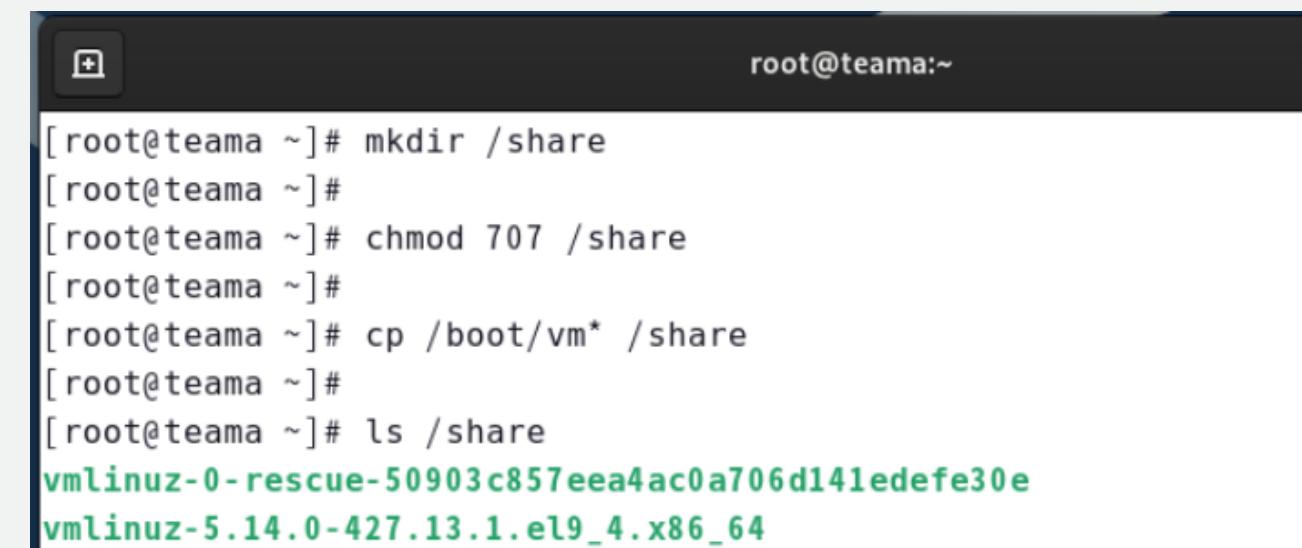
### 환경설정

vi /etc/exports : 공유할 디렉터리 추가  
/share [서버에 접근할 컴퓨터의 IP주소](rw, sync)



```
root@teamam:~ — /usr/bin/vim /etc/exports
/share * (rw, sync)
```

share 디렉터리 생성 및 접근권한 설정(707, rwx---rwx)



```
root@teamam:~ —
[root@teamam ~]# mkdir /share
[root@teamam ~]#
[root@teamam ~]# chmod 707 /share
[root@teamam ~]#
[root@teamam ~]# cp /boot/vmlinuz* /share
[root@teamam ~]#
[root@teamam ~]# ls /share
vmlinuz-0-rescue-50903c857eea4ac0a706d141edefe30e
vmlinuz-5.14.0-427.13.1.el9_4.x86_64
```

# 서버 구성

## NFS Server

접속 확인

NFS 서버의 /share 디렉터리에 마운트할 디렉터리를 만든 후 마운트

```
[root@teamb ~]# showmount -e 192.168.111.100
Export list for 192.168.111.100:
/share *
```

확인

```
[root@teamb ~]# ls -l myShare/
합계 26576
-rwxr-xr-x. 1 root root 13605704 10월 11 11:23 vmlinuz-0-rescue-50903c857eea4ac0a706d141edefe30e
-rwxr-xr-x. 1 root root 13605704 10월 11 11:23 vmlinuz-5.14.0-427.13.1.el9_4.x86_64
```

## Samba Server

설치

dnf -y install

```
[root@teama ~]# dnf -y install samba
```

## Samba 서버를 이용해 디렉터리 공유

```
[root@teama ~]# mkdir /share      # Samba로 공유할 디렉터리
[root@teama ~]# groupadd sambaGroup  # Windows에서 접속을 허용할 그룹 생성
[root@teama ~]# chgrp sambaGroup /share  # 디렉터리의 소유 그룹 변경
[root@teama ~]# chmod 770 /share      # 디렉터리 허가권 변경
[root@teama ~]# usermod -G sambaGroup teama  # teama 사용자를 sambaGroup에 추가
[root@teama ~]# smbpasswd -a teama    # teama 사용자의 삼바 전용 비밀번호 지정
```

## 환경 설정 및 서비스 시작

### 1) samba 그룹 및 사용자 지정

```
10 [global]
11         workgroup = WORKGROUP
12         unix charset = UTF-8
13         map to quest = Bad User
```

### 3) testparm 오류 확인

```
[root@teama ~]# testparm
Load smb config files from /etc/samba/smb.conf
Unknown parameter encountered: "map to quest"
Ignoring unknown parameter "map to quest"
Loaded services file OK.

Weak crypto is allowed by GnuTLS (e.g. NTLM as a compatibility fallback)
```

# 서버 구성

## Samba Server

환경 설정 및 서비스 시작

2) vi /etc/samba/smb.conf

```

44 [Share]
45   path = /share
46   writable = yes
47   guest ok = no
48   create mode = 0777
49   directory mode = 0777
50   valid users = @sambaGroup

```

4) 서비스 시작 (systemctl)

```

[root@teama ~]# systemctl restart smb nmb
[root@teama ~]# systemctl enable smb nmb
Created symlink /etc/systemd/system/multi-user.target.wants/smb.service

```

```

[root@teama ~]# systemctl start firewalld
[root@teama ~]# firewall-cmd --permanent --add-service=samba
success
[root@teama ~]# firewall-cmd --reload
success
[root@teama ~]# firewall-cmd --list-service
cockpit dhcpcv6-client dns ftp http https samba ssh
[root@teama ~]# firewall-cmd --permanent --add-service=samba-client
success

```

네트워크 설정

2) 네트워크 드라이브 연결

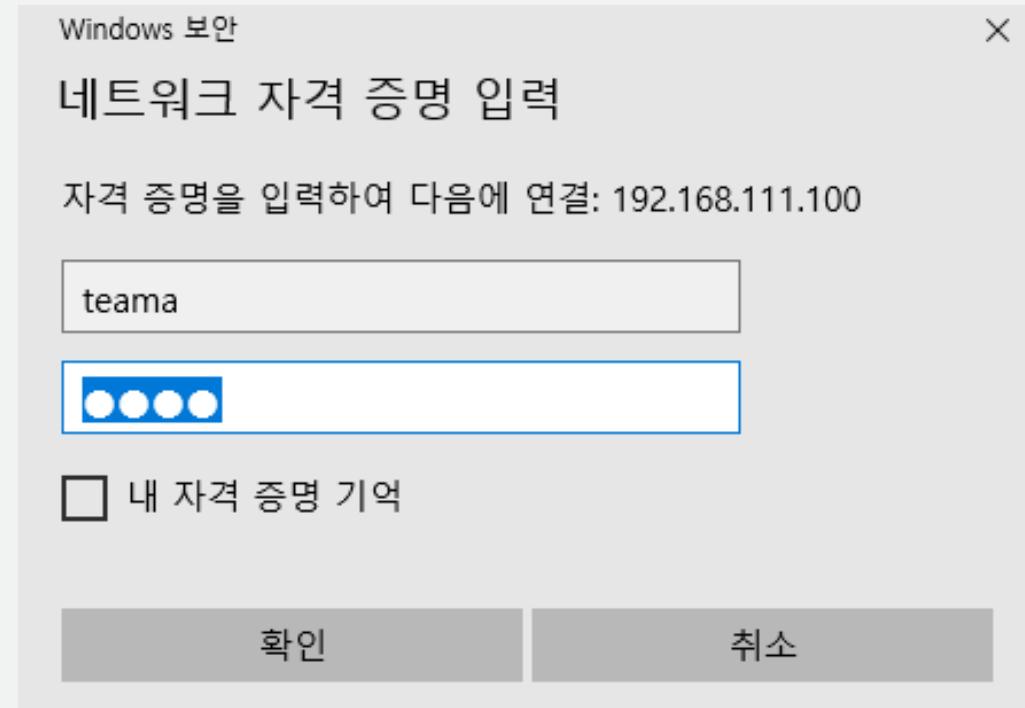


# 서버 구성

## Samba Server

### 네트워크 설정

3)



### 확인 공유 확인



### /share 디렉터리 확인

```
[root@teama ~]# ls -l /share/
합계 12532
-rwxrw-rw-. 1 teama teama 12826192 10월  7 18:45 FileZilla_3.67.1_win64_sponsored2-setup.exe
drwxrwxrwx. 2 teama teama      102 10월 11 12:20 프로젝트
```

### SELinux

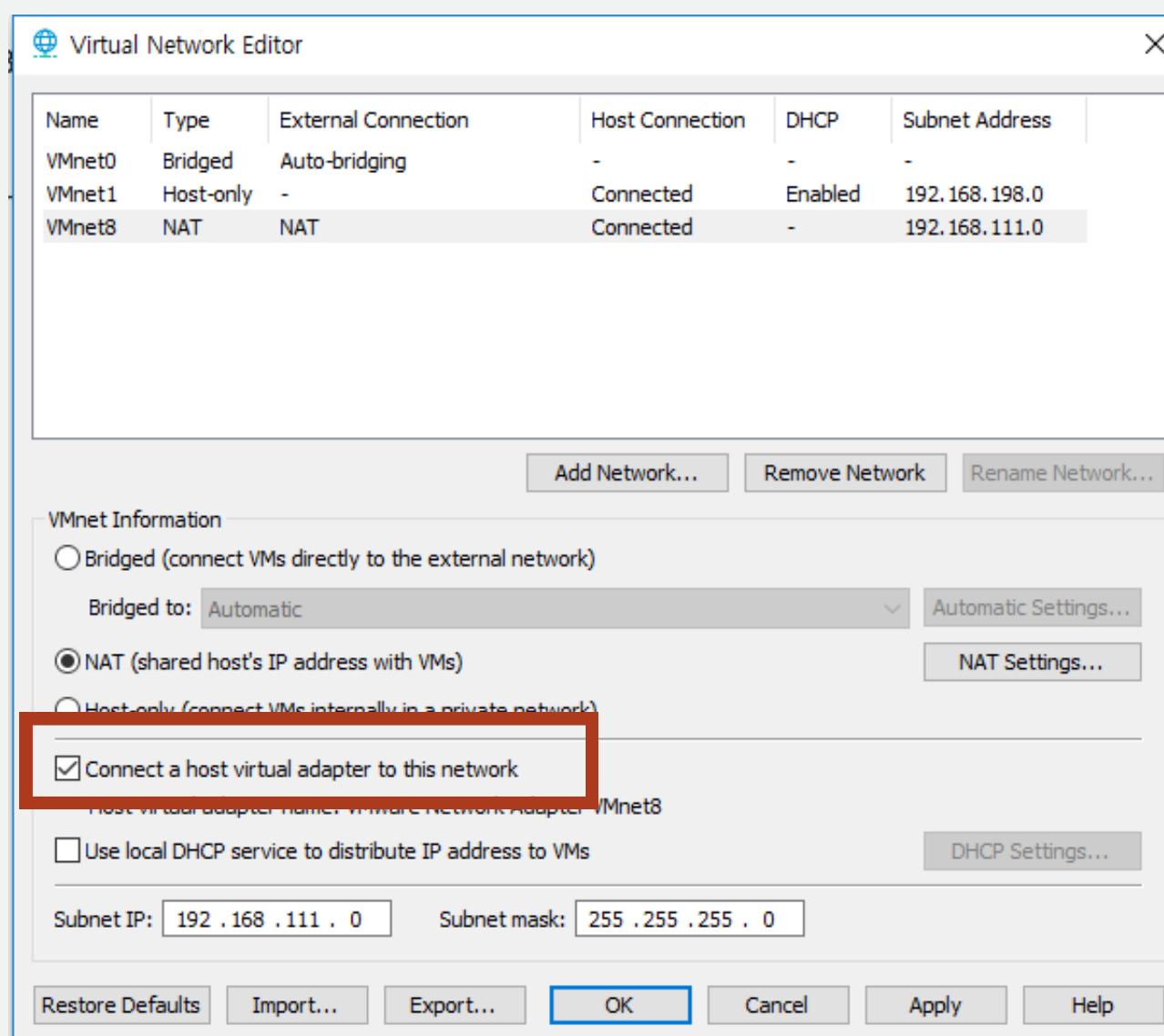
```
[root@teama ~]# getenforce
Enforcing
[root@teama ~]# setsebool -P samba_enable_home_dirs on
[root@teama ~]# chcon -R -t samba_share_t /share
```

# 서버 구성

## DHCP Server

### DHCP 서비스 중단

Use local DHCP service to distribute IP address to VMs 끄기



### 환경 설정

#### /etc/dhcp/dhcp.conf 환경설정

```
ddns-update-style interim;
subnet 192.168.111.0 netmask 255.255.255.0 {
    option routers 192.168.111.2 ;
    option subnet-mask 255.255.255.0 ;
    range dynamic-bootp 192.168.111.55 192.168.111.99 ;
    option domain-name-servers 8.8.8.8 ;
    default-lease-time 10000 ;
    max-lease-time 50000 ;
}
```

### 서비스시작

```
[root@teama ~]# systemctl restart dhcpd
[root@teama ~]#
[root@teama ~]# systemctl enable dhcpd
Created symlink /etc/systemd/system/multi-user.target.wants/dhcpd.service → /usr/lib/systemd/system/dhcpd.service.
[root@teama ~]#
[root@teama ~]# systemctl status dhcpd
● dhcpd.service - DHCPv4 Server Daemon
   Loaded: loaded (/usr/lib/systemd/system/dhcpd.service; enabled; preset: disabled)
   Active: active (running) since Mon 2024-10-14 20:19:10 KST; 20s ago
     Docs: man:dhcpd(8)
           man:dhcpd.conf(5)
     Main PID: 3803 (dhcpd)
       Status: "Dispatching packets..."
          Tasks: 1 (limit: 10777)
         Memory: 9.4M
            CPU: 11ms
```

# 서버 구성

## DHCP Server

설정

IP 정보 할당

```
root@teamb:~# su -c 'systemctl restart NetworkManager'
[root@teamb ~]#
[root@teamb ~]# ifconfig ens160
ens160: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
        inet 192.168.111.55 netmask 255.255.255.0 broadcast 192.168.111.255
          inet6 fe80::20c:29ff:feb9:a0fe prefixlen 64 scopeid 0x20<link>
            ether 00:0c:29:b9:a0:fe txqueuelen 1000 (Ethernet)
              RX packets 33 bytes 4135 (4.0 KiB)
              RX errors 0 dropped 0 overruns 0 frame 0
              TX packets 62 bytes 6177 (6.0 KiB)
              TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

확인

/var/lib/dhcp/dhcp.leases

```
root@teamb:~ — /usr/bin/vim /var/lib/dhcp/dhcpd.leases
# This lease file was written by isc-dhcp-4.4.2bl
# authoring-byte-order entry is generated, DO NOT DELETE
authoring-byte-order little-endian;

server-duid "\000\001\000\001.\237\272\250\000\014)\360\2257";

lease 192.168.111.55 {
    starts 4 2024/10/14 20:37:45;
    ends 4 2024/10/14 20:40:26;
    cltt 4 2024/10/14 20:37:45;
    binding state active;
    next binding state free;
    rewind binding state free;
    hardware ethernet 00:0c:29:b9:a0:fe;
    uid "\001\000\014)\372\031\331";
    client-hostname "teamb";
}
```

# 서버 구성

## Mail Server

team

1) /etc/hostname 호스트 이름 설정

```
root@teama:~ — /usr/bin/vim /etc/hostname  
mail.team-steam.com
```

2) /etc/hostname 해당 내용 입력

```
root@teama:~ — /usr/bin/vim /etc/hosts  
127.0.0.1 localhost localhost.localdomain localhost4 localhost4.localdomain4  
::1 localhost localhost.localdomain localhost6 localhost6.localdomain6  
192.168.111.100 mail.team-steam.com
```

3) /etc/mail/local-host-names 해당 내용 입

```
root@teama:~ — /usr/bin/vim /etc/mail/local-host-names  
# local-host-names - include all aliases for your machine here.  
#  
mail.team-steam.com
```

4) /etc/sysconfig/network 해당 내용 입력  
위 내용 모두 입력 후 재부팅

```
root@teama:~ — /usr/bin/vim /etc/sysconfig/network  
# Created by anaconda  
#  
HOSTNAME=mail.team-steam.com
```

4) 호스트네임 변경 확인

```
root@mail:~  
[root@mail ~]# hostname  
mail.team-steam.com
```

# 서버 구성

## Mail Server

team

### 1) vi /etc/named.conf

```
60 zone "team-steam.com" IN {  
61     type master;  
62     file "team-steam.com.db";  
63     allow-update { none; };  
64 };
```

### 2) team-steam.com.db 설정

```
[root@mail named]# touch team-steam.com.db  
[root@mail named]#  
[root@mail named]# ls  
chroot  dynamic  named.empty      named.loopback  team-steam.com.db  
data    named.ca   named.localhost  slaves
```

### 3) vi /var/named/team-steam.com.db 내용 입력

```
root@mail:/var/named — /usr/bin/vim /var/named/team-steam.com.db  
$TTL 3H  
@ SOA @ root. ( 2 1D 1H 1W 1H )  
IN NS @  
IN A 192.168.111.100  
IN MX 10 mail.team-steam.com.  
  
mail IN A 192.168.111.100
```

### 4) named-checkconf 파일 이상 확인

```
[root@mail named]# named-checkconf  
[root@mail named]#  
[root@mail named]# named-checkzone team-steam.com team-steam.com.db  
zone team-steam.com/IN: loaded serial 2  
OK
```

### 5) 서비스 시작

```
● named.service - Berkeley Internet Name Domain (DNS)  
  Loaded: loaded (/usr/lib/systemd/system/named.service; enabled; preset: disabled)  
  Active: active (running) since Mon 2024-10-14 21:12:56 KST; 11s ago  
    Main PID: 2876 (named)  
       Tasks: 5 (limit: 10777)  
     Memory: 21.7M  
        CPU: 129ms  
      CGroup: /system.slice/named.service  
              └─2876 /usr/sbin/named -u named -c /etc/named.conf
```

# 서버 구성

## Mail Server

teamA

### 1) 방화벽 멈춤

```
[root@mail named]# systemctl stop firewalld
[root@mail named]#
[root@mail named]# systemctl disable firewalld
Removed "/etc/systemd/system/multi-user.target.wants/firewalld.service".
Removed "/etc/systemd/system/dbus-org.fedoraproject.FirewallD1.service".
```

### 2) nslookup : 네임서버 설정 확인

```
[root@mail named]# nslookup
>
> server 192.168.111.100
Default server: 192.168.111.100
Address: 192.168.111.100#53
>
> mail.team-steam.com
Server:      192.168.111.100
Address:     192.168.111.100#53

Name:   mail.team-steam.com
Address: 192.168.111.100
```

### 3) /etc/NetworkManager/system-connections/ens160.nmcnnection dns 주소 수정

```
[root@mail:/var/named — /usr/bin/vim /etc/NetworkManager/system-connections/ens160.nmconnection
[connection]
id=ens160
uuid=e8e32a99-7b2c-3b18-b653-dc78e4c309dc
type=ethernet
autoconnect-priority=-999
interface-name=ens160
timestamp=1728563421

[ethernet]

[ipv4]
address1=192.168.111.100/24,192.168.111.2
dns=192.168.111.100;
method=manual

[ipv6]
addr-gen-mode=eui64
method=auto

[proxy]
```

### 4) /etc/resolv.conf nameserver ip 주소 수정

```
[root@mail:/var/named — /usr/bin/vim /etc/resolv.conf
# Generated by NetworkManager
search team-steam.com
nameserver 192.168.111.100
```

# 서버 구성

## Mail Server

teamb

### 1) nameserver ip 주소 변경

```
열기(O) ▾ ❶ *resolv.conf  
/etc  
1 # Generated by NetworkManager  
2 nameserver 192.168.111.100
```

### 2) teamb에서 mail.team-steam.com 입력, ip 주소 확인

```
❷ root@teamb:~ — nslookup  
[root@teamb ~]# nslookup  
>  
> mail.team-steam.com  
Server:      192.168.111.100  
Address:     192.168.111.100#53  
  
❸ Name:   mail.team-steam.com  
Address: 192.168.111.100
```

3) /etc/mail/sendmail.cf  
85행 Cwteam-steam.com 수정  
268행 Addr=127.0.0.1 삭제

```
❹ root@mail:/var/named — /usr/bin/vim /etc/mail/sendmail.cf  
72  
73 # default LDAP map specification  
74 # need to set this now before any LDAP maps are defined  
75 #0 LDAPDefaultSpec=-h localhost  
76  
77 #####  
78 # local info #  
79 #####  
80  
81 # my LDAP cluster  
82 # need to set this before any LDAP lookups are done (including classes)  
83 #D{sendmailMTACluster}$_m  
84  
85 Cwteam-steam.com  
86 # file containing names of hosts for which we receive email  
87 Fw/etc/mail/local-host-names  
88  
89 # my official domain name  
  
265  
266 # SMTP daemon options  
267  
268 # DaemonPortOptions=Port=smtp, Name=MTA  
269  
270 # ClientPortOptions=Family=inet, Address=0.0.0.0  
271 #0 ClientPortOptions=Family=inet, Address=0.0.0.0  
272
```

# 서버 구성

## Mail Server

teamb

### 1) etc/mail/access 파일 하단

: 외부 네트워크 또는 호스트가 메일을 보낼 수 있도록 허가

```
root@mail:/var/named — /usr/bin/vim /etc/mail/access

# Check the /usr/share/doc/sendmail/README.cf file for a description
# of the format of this file. (search for access_db in that file)
# The /usr/share/doc/sendmail/README.cf is part of the sendmail-doc
# package.
#
# If you want to use AuthInfo with "M:PLAIN LOGIN", make sure to have the
# cyrus-sasl-plain package installed.
#
# By default we allow relaying from localhost...
Connect:localhost.localdomain      RELAY
Connect:localhost                  RELAY
Connect:127.0.0.1                  RELAY

team-steam.com                    RELAY
192.168.111                      RELAY
```

### 2) makemap : 설정 내용 적용

```
[root@mail named]# _makemap hash /etc/mail/access < /etc/mail/access
```

### 3) vi etc/dovecot/dovecot.conf 24, 30, 33 행 주석 제거

```
root@mail:/var/named — /usr/bin/vim /etc/dovecot/dovecot.conf

11
12 # Most (but not all) settings can be overridden by different protocols and/or
13 # source/destination IPs by placing the settings inside sections, for example:
14 # protocol imap { }, local 127.0.0.1 { }, remote 10.0.0.0/8 { }
15
16 # Default values are shown for each setting, it's not required to uncomment
17 # those. These are exceptions to this though: No sections (e.g. namespace {})
18 # or plugin settings are added by default, they're listed only as examples.
19 # Paths are also just examples with the real defaults being based on configure
20 # options. The paths listed here are for configure --prefix=/usr
21 # --sysconfdir=/etc --localstatedir=/var
22
23 # Protocols we want to be serving
24 protocols = imap pop3 lmtp submission
25
26 # A comma separated list of IPs or hosts where to listen in for connections.
27 # "*" listens in all IPv4 interfaces, "::" listens in all IPv6 interfaces.
28 # If you want to specify non-default ports or anything more complex,
29 # edit conf.d/master.conf.
30 listen = *, ::

31
32 # Dovecot's base directory for temporary files and other data.

33 base_dir = /var/run/dovecot/
34
35 # Name of this instance. In multi-instance setup dovecadm and other commands
```

# 서버 구성

## Mail Server

- 1) useradd steam으로 team-steam.com 메일 사용자 steam 생성
- 2) steam 사용자의 메일 계정은 steam@team-steam.com이 된다
- 3) sendmail과 dovecot 시작하고 상시 가동

```
[root@mail ~]# useradd steam
[root@mail ~]# passwd steam
steam 사용자의 비밀 번호 변경 중
새 암호:
새 암호 재입력:
passwd: 모든 인증 토큰이 성공적으로 업데이트 되었습니다.
[root@mail ~]#
[root@mail ~]# systemctl restart sendmail
[root@mail ~]# systemctl enable sendmail
Created symlink /etc/systemd/system/multi-user.target.wants/sendmail.service → /usr/lib/systemd/system/sendmail.service.
Created symlink /etc/systemd/system/multi-user.target.wants/sm-client.service → /usr/lib/systemd/system/sm-client.service.
[root@mail ~]#
[root@mail ~]# systemctl restart dovecot
[root@mail ~]# systemctl enable dovecot
Created symlink /etc/systemd/system/multi-user.target.wants/dovecot.service → /usr/lib/systemd/system/dovecot.service.
[root@mail ~]#
```

# 서버 구성

## Mail Server

### 메일 서버 작동 테스트

1)

신상 정보

환영합니다  
백업에서 복구  
**신상 정보**  
전체 이름(E): steam  
전자메일 주소(A): steam@team-steam.com  
추가 정보  
답장 주소(P):  
조직(G):

2)

메일 받기

환영합니다  
백업에서 복구  
신상 정보  
**메일 받기**  
서버 종류(T): POP  
설명: POP 서버에 연결해서 메일을 받음.  
메일(S): mail.team-steam.com  
포트(P): 995  
사용자이름(N): steam  
보안  
암호화 방식(M): TLS, 특정 포트 사용  
인증  
지원하는 방식 확인  
암호

3)

메일 보내기

환영합니다  
백업에서 복구  
신상 정보  
메일 받기  
**메일 보내기**  
서버 종류(T): SMTP  
설명: SMTP를 사용해서 원격 메일허브로 연결해 메일을 보냅니다.  
서버(S): mail.team-steam.com  
포트(P): 25  
계정 요약  
완료  
보안  
암호화 방식(M): 암호화 없음  
인증  
종류(Y): 지원하는 방식 확인  
사용자이름(N): root

4) 메일 전송 확인

