

# PXE

PXE

Preboot execution environment ,

OS 가

PXE

Virtualbox , Host-only Adapter .

Virtualbox - File - Host Network Manager

IPv4 Address: 10.0.0.254/24

DHCP Server: None

CentOS 07 VM PXE:

NIC 2EA ( / )

CentOS 07 VM Client:

NIC 1EA ( )

PXE

```
# Public
```

```
cat << EOF | sudo tee /etc/sysconfig/network-scripts/ifcfg-  
enp0s3
```

```
TYPE=Ethernet
```

```
BOOTPROTO=dhcp
```

```
DEFROUTE=yes
```

```
NAME=enp0s3
```

```
DEVICE=enp0s3
```

```
ONBOOT=yes
```

```
EOF
```

```
# Private
```

```
cat << EOF | sudo tee /etc/sysconfig/network-scripts/ifcfg-  
enp0s8
```

```
TYPE=Ethernet
```

```
BOOTPROTO=none
```

```
DEFROUTE=no
NAME=enp0s8
DEVICE=enp0s8
ONBOOT=yes
```

```
IPADDR=10.0.0.11
PREFIX=24
EOF
```

```
sudo systemctl restart network
sudo systemctl status network
```

```
PXE      DHCP
```

```
sudo yum install -y dhcp
```

```
sudo mkdir /etc/dhcp/dhcpd.d/
```

```
cat << EOF | sudo tee /etc/dhcp/dhcpd.conf
option domain-name-servers      10.0.0.11;
## 10.0.0.11 -> PXE              IP
```

```
default-lease-time 600;
max-lease-time 7200;
```

```
authoritative;
## DHCPNAK send enable
```

```
filename          "pxelinux.0";
next-server        10.0.0.11;
## tftp           IP
```

```
subnet 10.0.0.0 netmask 255.255.255.0 {
    range dynamic-bootp 10.0.0.200 10.0.0.253;
    option broadcast-address 10.0.0.255;

    # option routers 10.0.0.11;
    ## Client 가           Gateway IP
    ##
}
```

EOF

```
sudo systemctl enable --now dhcpd
sudo systemctl status dhcpd
```

PXE        TFTP

tftp

```
sudo yum install -y syslinux tftp tftp-server
sudo cp /usr/share/syslinux/pxelinux.0 /var/lib/tftpboot/
```

```
sudo systemctl enable --now tftp
sudo systemctl status tftp
```

```
tftp
(to) 10.0.0.11
tftp> verbose
tftp> trace
tftp> get pxelinux.0
```

PXE        ISO

```
wget
http://mirror.navercorp.com/centos/7/isos/x86_64/CentOS-7-x86_
64-Minimal-2009.iso
```

```
sudo mkdir /var/lib/tftpboot/centos7
```

```
sudo mount CentOS-7-x86_64-Minimal-2009.iso /mnt
## sudo mount -t iso9660 -o loop CentOS-7-x86_64-
Minimal-2009.iso /mnt
```

```
sudo cp /mnt/images/pxeboot/vmlinuz /var/lib/tftpboot/centos7/
sudo cp /mnt/images/pxeboot/initrd.img
/var/lib/tftpboot/centos7/
sudo cp /usr/share/syslinux/menu.c32 /var/lib/tftpboot/
```

```
sudo mkdir /var/lib/tftpboot/pxelinux.cfg/
```

```
cat << EOF | sudo tee /var/lib/tftpboot/pxelinux.cfg/default
```

```

timeout 100
default menu.c32

menu title ##### PXE Boot Menu #####
label 1
  menu label ^1) Install CentOS 7
  kernel centos7/vmlinuz
  append          initrd=centos7/initrd.img
method=http://10.0.0.11/iso devfs=nomount

label 2
  menu label ^2) Boot from local drive
  localboot
EOF

```

```
sudo yum install -y httpd
```

```

cat << EOF | sudo tee /etc/httpd/conf.d/pxeboot.conf
Alias /iso /mnt
<Directory /mnt>
  Require ip 127.0.0.1 10.0.0.0/24
</Directory>
EOF

```

```

sudo systemctl enable --now httpd
sudo systemctl disable --now firewalld

```

```
PXE      ISO
```

```
Virtualbox - VM - Settings
```

```

      NIC      dhcpd      NIC      .
(      NIC      .)

```

```
VM Start -      F12 - Boot Manager - 1) LAN (      L      )
```

```
CentOS      .
```

```
PXE
```

```

PXE      PC      CentOS      가
      .      initrd(=      )      CentOS

```

(kickstart) 가 nfs 가 PXE  
가 .

---

# CentOS 7 Windows RDP

## CentOS 7 Windows RDP

```
# OS
CentOS 7.9 x86_64 minimal
--> XRDP GUI --> GUI Windows
RDP
```

### Linux GUI

```
# GUI GroupInstall
root@localhost ~]# yum groups list | grep -i desktop
Cinnamon Desktop
MATE Desktop
GNOME Desktop
General Purpose Desktop
LXQt Desktop
# GNOME "Server with GUI"
root@localhost ~]# yum groupinstall "GNOME Desktop"

# GUI init
[root@localhost ~]# systemctl get-default
multi-user.target
[root@localhost ~]# systemctl set-default graphical.target
[root@localhost ~]# systemctl get-default
graphical.target
```

```
# Reboot GUI
[root@localhost ~]# reboot
```

## Linux

```
# XRDP Install.
[root@localhost ~]# yum install epel-release
[root@localhost ~]# yum install xrdp
[root@localhost ~]# systemctl enable xrdp && systemctl start xrdp
```

```
# selinux disable iptables -F or tcp/3389 가
```

## rdesktop

```
# openssl-devel
yum -y install gcc openssl-devel
wget
https://github.com/rdesktop/rdesktop/releases/download/v1.8.6/
rdesktop-1.8.6.tar.gz
tar xvzf rdesktop-1.8.6.tar.gz
cd rdesktop-1.8.6/
./configure --disable-credssp --disable-smartcard
make
make install
```

## Check

```
# RDP , rdesktop -u [User] [ip]
root@localhost ~]# rdesktop -u administrator 10.10.10.5
Autoselected keyboard map en-us
Connection established using SSL.
WARNING: Remote desktop does not support colour depth 24;
falling back to 16
```

