



PART 4

JDK 설치

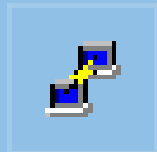
오라클 클라우드 우분투 설치

2021 게임소프트웨어과 3기 이주용



**설치 전 우분투 관리자계정 root계정을
활성화 해보도록 하겠습니다**

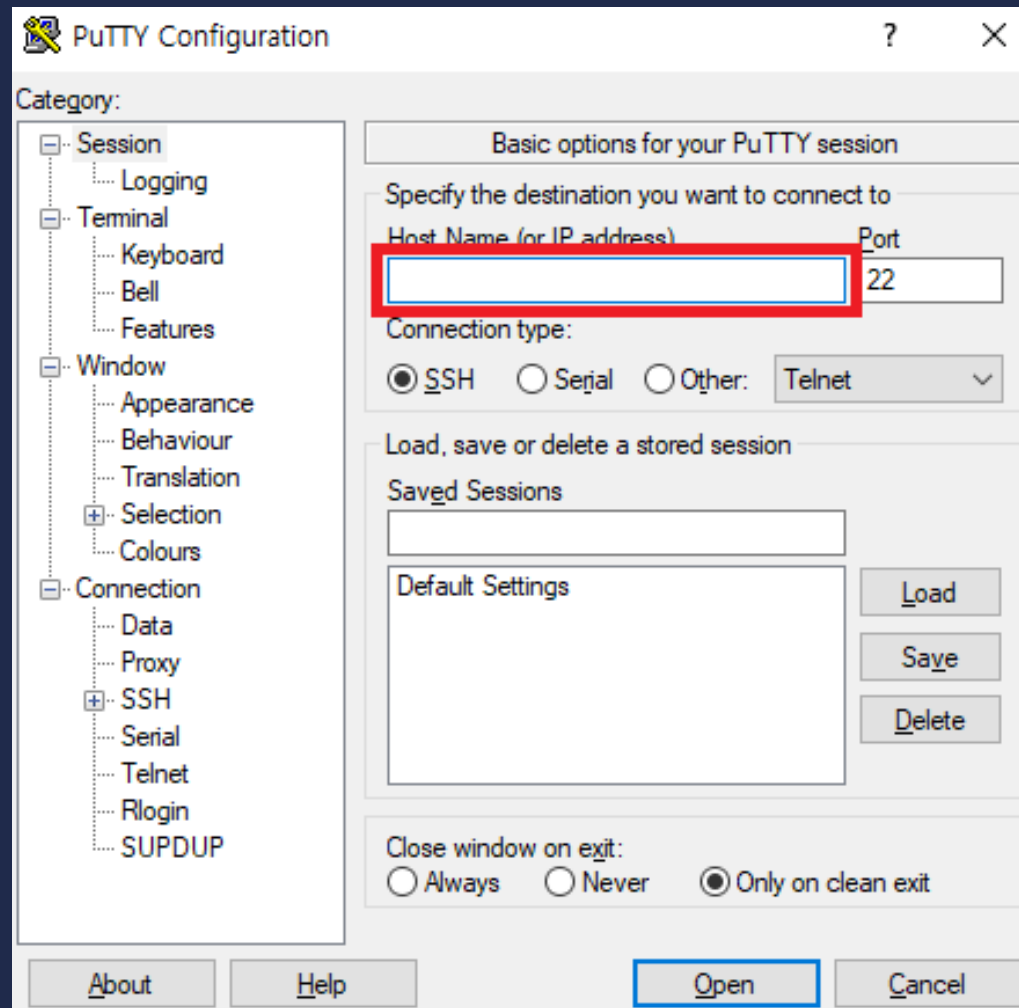
가장 정확



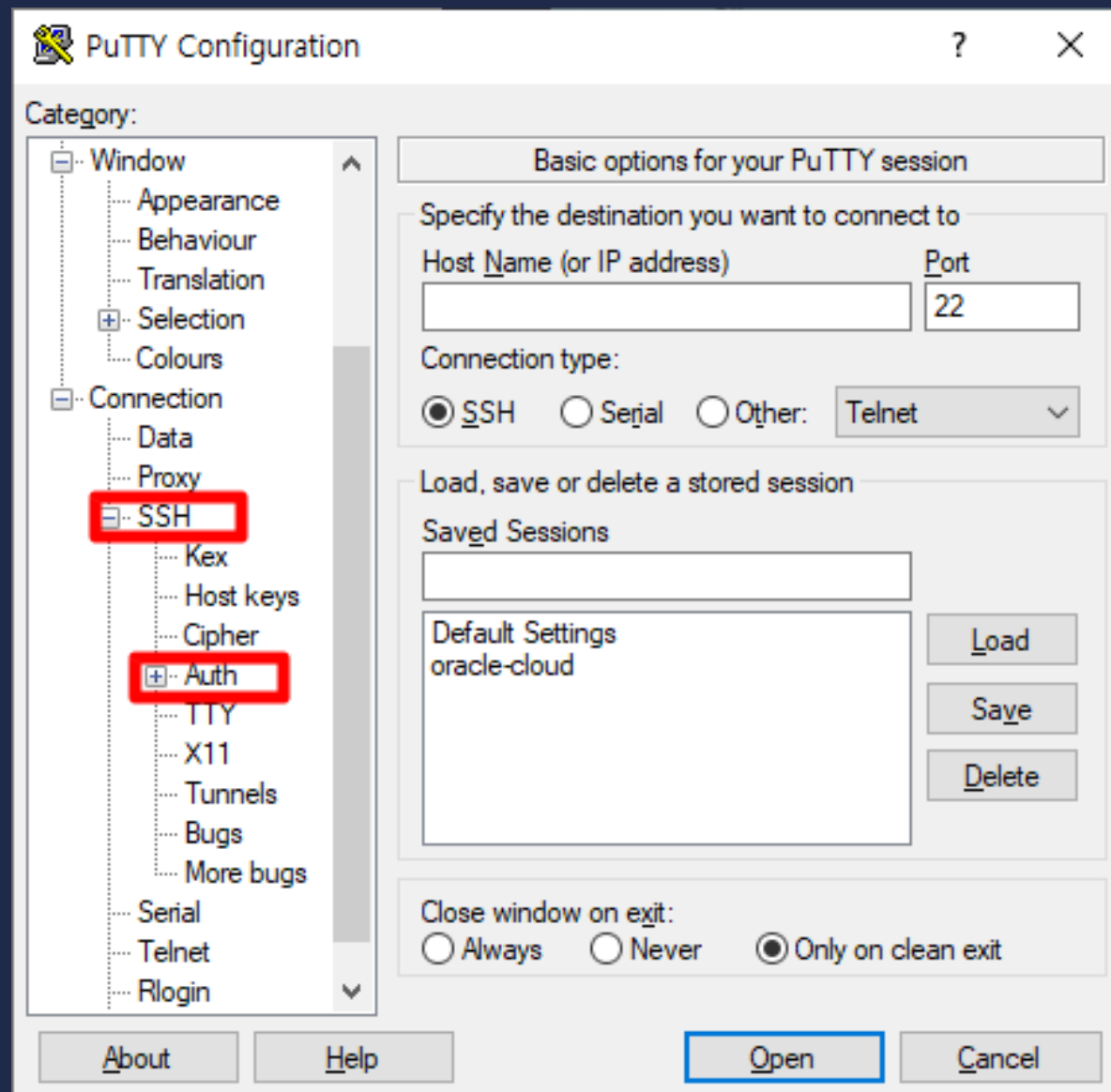
PuTTY

앱

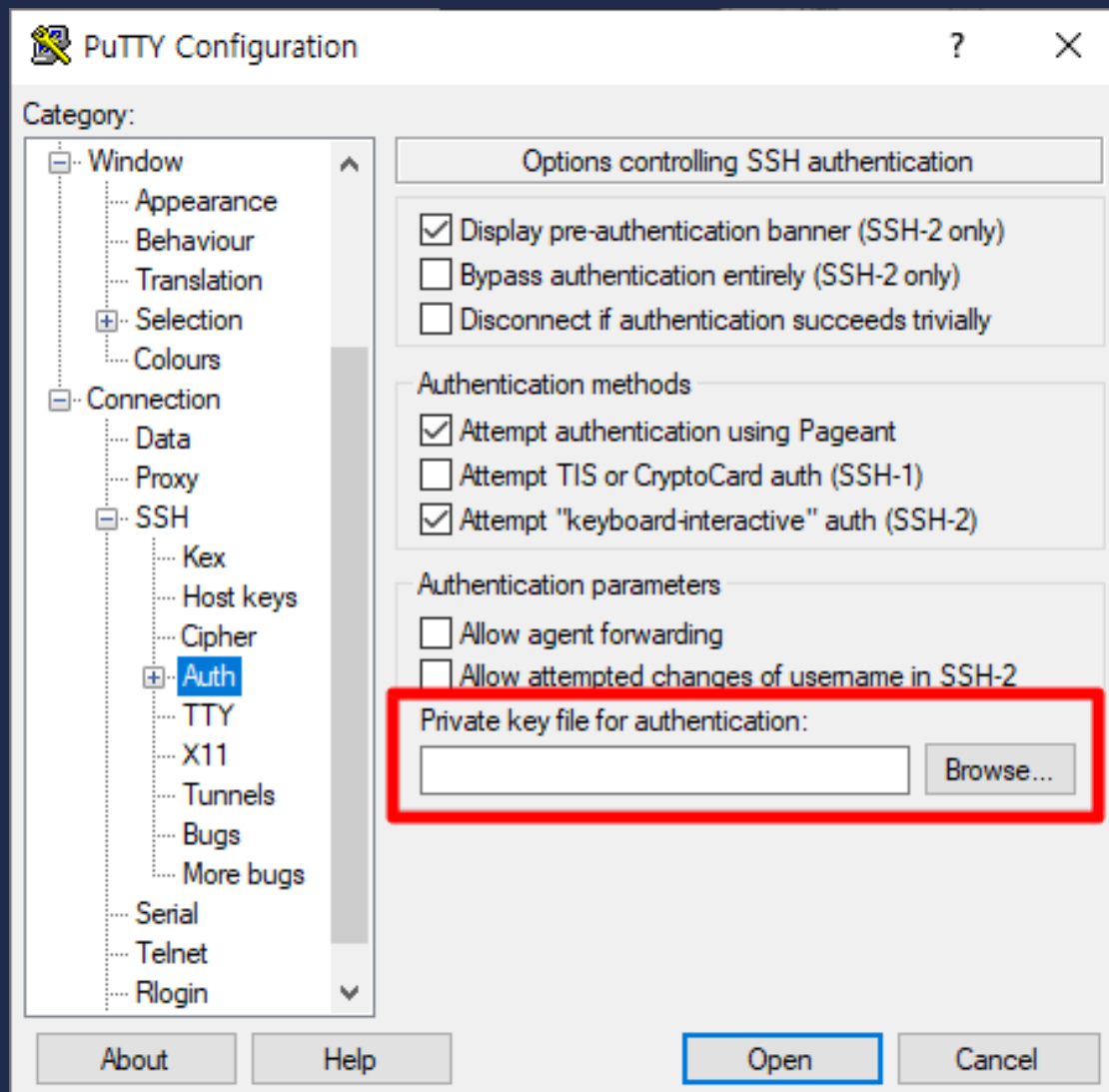
PuTTY 실행



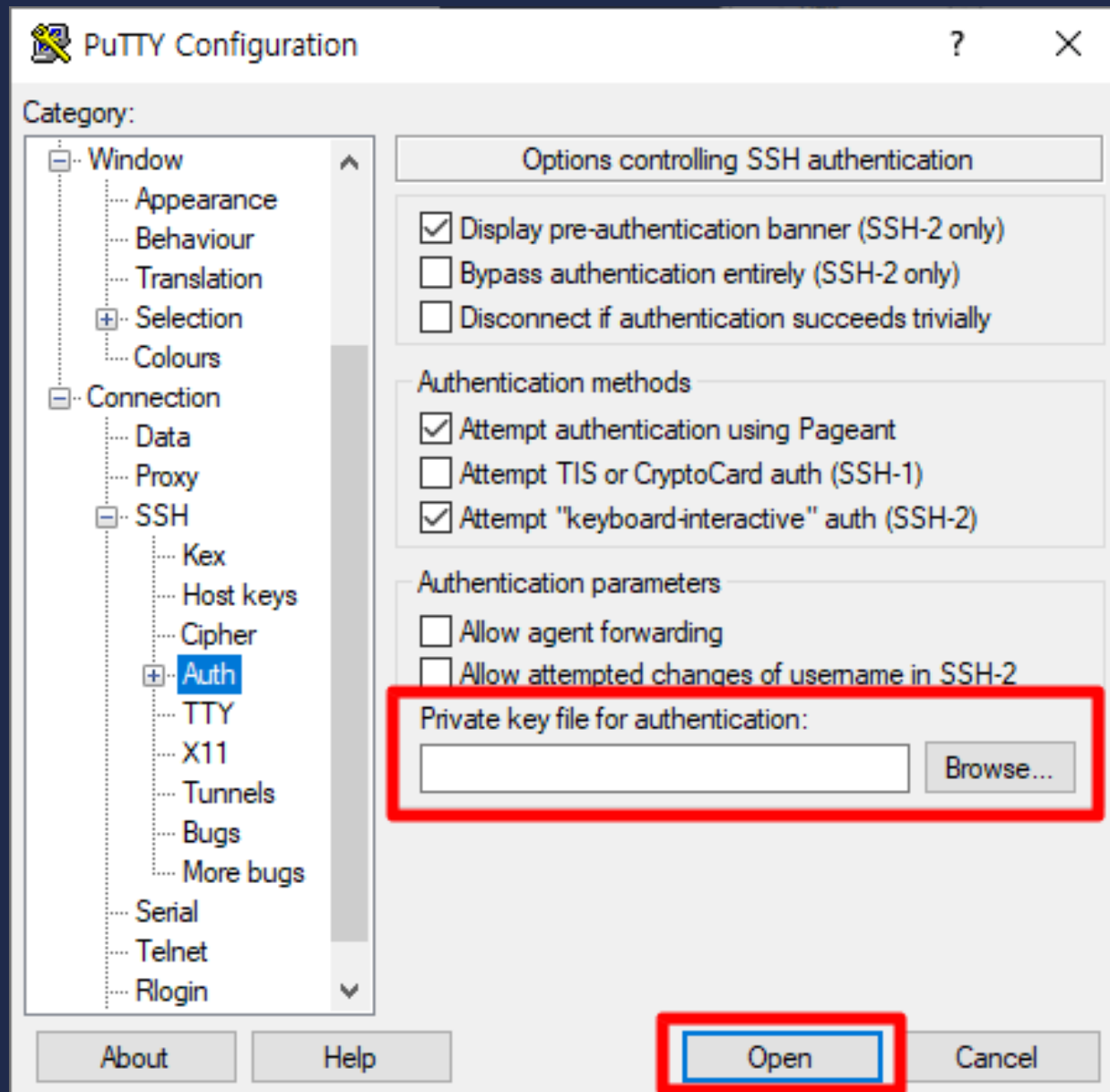
IP 적고



SSH - Auth



아까 개인키 저장한거 지정



IP입력 - 키 지정후 Open 눌러서 SSH 연결



login as: ubuntu

ubuntu 입력


```
login as: ubuntu
Authenticating with public key "rsa-key-20210914"
Welcome to Ubuntu 20.04.3 LTS (GNU/Linux 5.11.0-1016-oracle x86_64)

* Documentation:  https://help.ubuntu.com
* Management:    https://landscape.canonical.com
* Support:       https://ubuntu.com/advantage

System information as of Tue Sep 14 13:38:12 UTC 2021

System load:  0.0              Processes:            115
Usage of /:   3.6% of 44.97GB   Users logged in:     0
Memory usage: 20%              IPv4 address for ens3: 10.0.0.201
Swap usage:   0%

0 updates can be applied immediately.

Last login: Tue Sep 14 13:14:39 2021 from 175.114.13.21
ubuntu@inst:~$
```

자동으로 로그인이 됩니다

```
ubuntu@inst:~$ sudo passwd root  
New password: 
```

sudo passwd root 입력 후
원하는 관리자 패스워드 입력

```
ubuntu@inst:~$ su
```

```
Password:
```

```
root@inst:/home/ubuntu#
```

su 입력 후 관리자 계정 암호 입력
계정이 root로 바졌는지 확인

```
root@inst:/home/ubuntu# nano /etc/ssh/sshd_config
```

nano /etc/ssh/sshd_config 입력

```
root@inst: /home/ubuntu
GNU nano 4.8 /etc/ssh/sshd_config
# $OpenBSD: sshd_config,v 1.103 2018/04/09 20:41:22 tj Exp $

# This is the sshd server system-wide configuration file.  See
# sshd_config(5) for more information.

# This sshd was compiled with PATH=/usr/bin:/bin:/usr/sbin:/sbin

# The strategy used for options in the default sshd_config shipped with
# OpenSSH is to specify options with their default value where
# possible, but leave them commented.  Uncommented options override the
# default value.

Include /etc/ssh/sshd_config.d/*.conf

#Port 22
#AddressFamily any
#ListenAddress 0.0.0.0
#ListenAddress ::

#HostKey /etc/ssh/ssh_host_rsa_key
Search: PermitRootLogin
^G Get Help      M-C Case Sens  M-B Backwards  ^P Older        ^T Go To Line
^C Cancel        M-R Regexp     ^R Replace      ^N Newer        M-J FullJstify
```

Ctrl + W -> PermitRootLogin 검색

```
root@inst: /home/ubuntu
GNU nano 4.8 /etc/ssh/sshd_config Modified
# Ciphers and keying
#RekeyLimit default none

# Logging
#SyslogFacility AUTH
#LogLevel INFO

# Authentication:

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

#PubkeyAuthentication yes

# Expect .ssh/authorized_keys2 to be disregarded by default in future.
#AuthorizedKeysFile .ssh/authorized_keys .ssh/authorized_keys2

^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos
^X Exit ^R Read File ^\ Replace ^U Paste Text ^T To Spell ^_ Go To Line
```

위와 같이 #지우고 yes로 편집

```
root@inst: /home/ubuntu
GNU nano 4.8 /etc/ssh/sshd_config
# $OpenBSD: sshd_config,v 1.103 2018/04/09 20:41:22 tj Exp $

# This is the sshd server system-wide configuration file.  See
# sshd_config(5) for more information.

# This sshd was compiled with PATH=/usr/bin:/bin:/usr/sbin:/sbin

# The strategy used for options in the default sshd_config shipped with
# OpenSSH is to specify options with their default value where
# possible, but leave them commented.  Uncommented options override the
# default value.

Include /etc/ssh/sshd_config.d/*.conf

#Port 22
#AddressFamily any
#ListenAddress 0.0.0.0
#ListenAddress ::

#HostKey /etc/ssh/ssh_host_rsa key
Search: PasswordAuthentication
^G Get Help      M-C Case Sens  M-B Backwards  ^P Older        ^T Go To Line
^C Cancel        M-R Regexp     ^R Replace      ^N Newer        M-J FullJstify
```

다시 PasswordAuthentication 검색

```
root@inst: /home/ubuntu
GNU nano 4.8 /etc/ssh/sshd_config Modified
# For this to work you will also need host keys in /etc/ssh/ssh_known_hosts
#HostbasedAuthentication no
# Change to yes if you don't trust ~/.ssh/known_hosts for
# HostbasedAuthentication
#IgnoreUserKnownHosts no
# Don't read the user's ~/.rhosts and ~/.shosts files
#IgnoreRhosts yes

# To disable tunneled clear text passwords, change to no here!
PasswordAuthentication yes
#PermitEmptyPasswords no

# Change to yes to enable challenge-response passwords (beware issues with
# some PAM modules and threads)
ChallengeResponseAuthentication no

# Kerberos options
#KerberosAuthentication no
#KerberosOrLocalPasswd yes

^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos
^X Exit ^R Read File ^\ Replace ^U Paste Text ^T To Spell ^_ Go To Line
```

yes 로 변경


```
root@inst: /home/ubuntu
GNU nano 4.8 /etc/ssh/sshd_config Modified
# For this to work you will also need host keys in /etc/ssh/ssh_known_hosts
#HostbasedAuthentication no
# Change to yes if you don't trust ~/.ssh/known_hosts for
# HostbasedAuthentication
#IgnoreUserKnownHosts no
# Don't read the user's ~/.rhosts and ~/.shosts files
#IgnoreRhosts yes

# To disable tunneled clear text passwords, change to no here!
PasswordAuthentication yes
#PermitEmptyPasswords no

# Change to yes to enable challenge-response passwords (beware issues with
# some PAM modules and threads)
ChallengeResponseAuthentication no

# Kerberos options
#KerberosAuthentication no
#KerberosOrLocalPasswd yes
Save modified buffer?
Y Yes
N No ^C Cancel
```

```
root@inst: /home/ubuntu
GNU nano 4.8 /etc/ssh/sshd_config Modified
# For this to work you will also need host keys in /etc/ssh/ssh_known_hosts
#HostbasedAuthentication no
# Change to yes if you don't trust ~/.ssh/known_hosts for
# HostbasedAuthentication
#IgnoreUserKnownHosts no
# Don't read the user's ~/.rhosts and ~/.shosts files
#IgnoreRhosts yes

# To disable tunneled clear text passwords, change to no here!
PasswordAuthentication yes
#PermitEmptyPasswords no

# Change to yes to enable challenge-response passwords (beware issues with
# some PAM modules and threads)
ChallengeResponseAuthentication no

# Kerberos options
#KerberosAuthentication no
#KerberosOrLocalPasswd yes
File Name to Write: /etc/ssh/sshd_config
^G Get Help M-D DOS Format M-A Append M-B Backup File
^C Cancel M-M Mac Format M-P Prepend ^T To Files
```

Ctrl + X 누르고
y 누른후 그 다음 엔터누르고 나간다

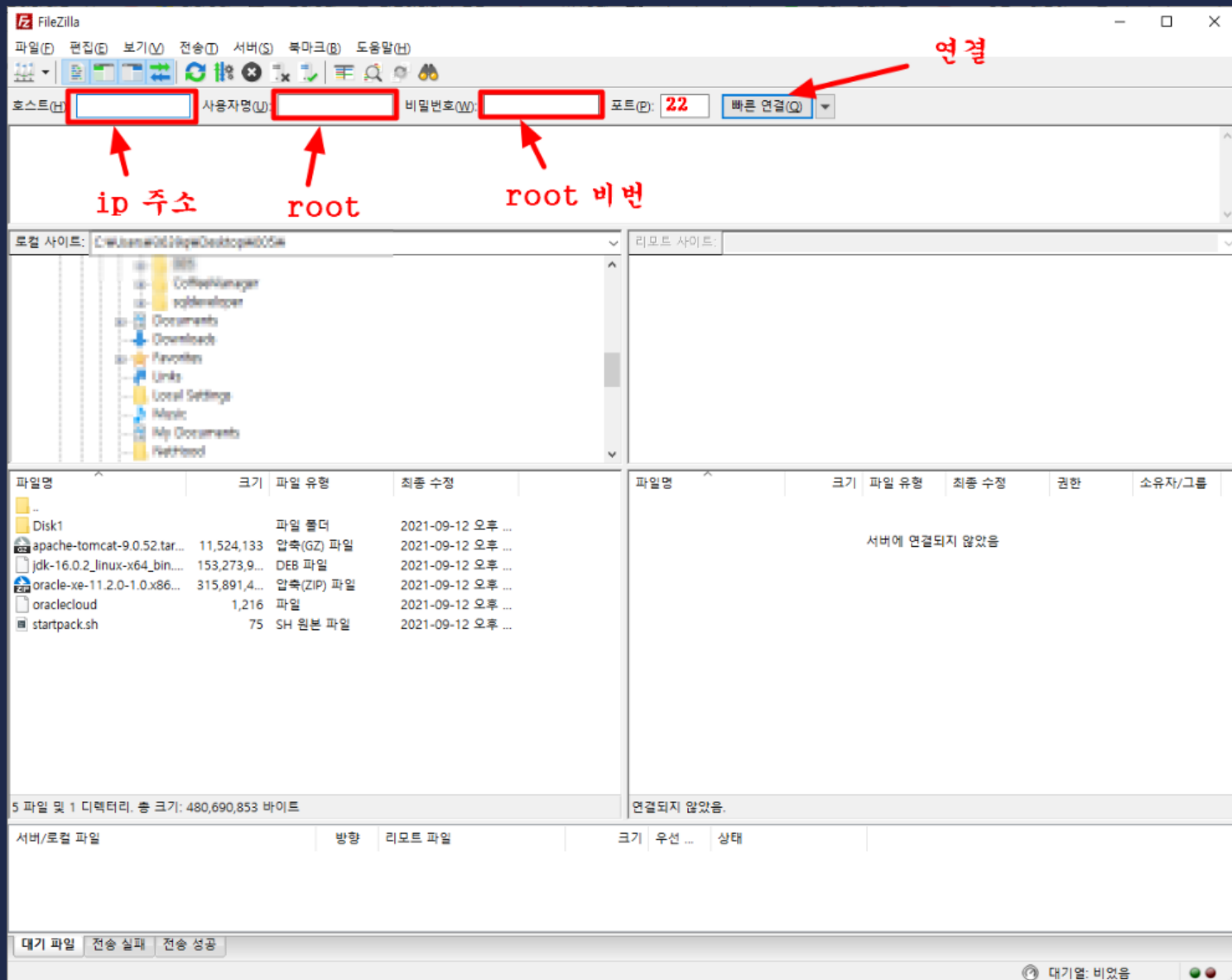
```
root@inst:~# service sshd restart
```

service sshd restart 로 서비스 재시작

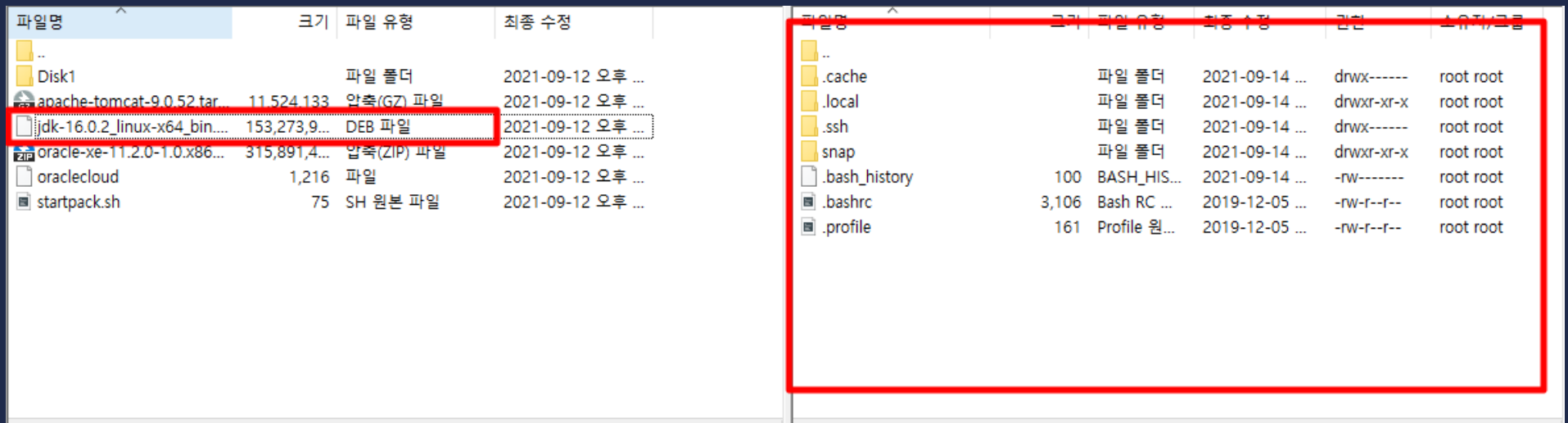
```
root@inst: ~  
login as: root  
root@152.70.233.241's password:  
Welcome to Ubuntu 20.04.3 LTS (GNU/Linux 5.11.0-1016-oracle x86_64)  
  
* Documentation:  https://help.ubuntu.com  
* Management:    https://landscape.canonical.com  
* Support:       https://ubuntu.com/advantage  
  
System information as of Tue Sep 14 13:52:46 UTC 2021  
  
System load:  0.22          Processes:            120  
Usage of /:   3.6% of 44.97GB Users logged in:       1  
Memory usage: 21%          IPv4 address for ens3: 10.0.0.201  
Swap usage:   0%  
  
0 updates can be applied immediately.  
  
Last login: Tue Sep 14 13:52:12 2021 from 175.114.13.21  
root@inst:~#
```

이제 root계정으로 로그인 하여 작업합니다

JDK 설치를 시작합니다



Filezilla



제공한 JDK 설치파일을 오른쪽으로 드래그앤 드롭

```
root@inst:~# dpkg -i jdk-16.0.2_linux-x64_bin.deb
```

dpkg -i jdk-16.0.2_linux-x64_bin.deb

성공하면 아래처럼 나온다

```
root@inst:~# dpkg -i jdk-16.0.2_linux-x64_bin.deb
Selecting previously unselected package jdk-16.0.2.
(Reading database ... 70159 files and directories currently installed.)
Preparing to unpack jdk-16.0.2_linux-x64_bin.deb ...
Unpacking jdk-16.0.2 (16.0.2-1) ...

Setting up jdk-16.0.2 (16.0.2-1) ...
root@inst:~#
```

```
root@inst:~# update-alternatives --install /usr/bin/java java /usr/lib/jvm/jdk-16.0.2/bin/java 1
```

**update-alternatives --install /usr/bin/java java
ava /usr/lib/jvm/jdk-16.0.2/bin/java 1**

성공하면 아래처럼 나온다

```
update-alternatives: using /usr/lib/jvm/jdk-16.0.2/bin/java to provide /usr/bin/java (java) in auto mode
```



```
root@inst:~# update-alternatives --install /usr/bin/javac javac /usr/lib/jvm/jdk-16.0.2/bin/javac 1
```

**update-alternatives --install /usr/bin/javac
javac /usr/lib/jvm/jdk-16.0.2/bin/javac 1**

성공하면 아래처럼 나온다

```
update-alternatives: using /usr/lib/jvm/jdk-16.0.2/bin/javac to provide /usr/bin/javac (javac) in auto mode
```

java -version javac -version

```
root@inst:~# java -version
java version "16.0.2" 2021-07-20
Java(TM) SE Runtime Environment (build 16.0.2+7-67)
Java HotSpot(TM) 64-Bit Server VM (build 16.0.2+7-67, mixed mode, sharing)
root@inst:~# javac -version
javac 16.0.2
```

이제 환경변수를 설정하겠습니다

```
root@oracledb:~# vim ~/.bashrc
```

vim ~/.bashrc

```
if [ -f ~/.bash_aliases ]; then
    . ~/.bash_aliases
fi

# enable programmable completion features (you don't need to enable
# this, if it's already enabled in /etc/bash.bashrc and /etc/profile
# sources /etc/bash.bashrc).
#if [ -f /etc/bash_completion ] && ! shopt -oq posix; then
#    . /etc/bash_completion
#fi
export JAVA_HOME=/usr/lib/jvm/jdk-16.0.2
export PATH="$PATH:$JAVA_HOME/bin"
-- INSERT --
```

a 눌러서 INSERT 모드로 바꾸고 맨 밑줄에 2줄 입력

```
export JAVA_HOME=/usr/lib/jvm/jdk-16.0.2
export PATH="$PATH:$JAVA_HOME/bin"
```

나올때는 ESC누르고 :wq 입력하고 나오기

```
root@oracledb:~# reboot -f
```

reboot -f
재부팅

```
root@oracledb:~# echo $JAVA_HOME  
/usr/lib/jvm/jdk-16.0.2  
root@oracledb:~#
```

echo \$JAVA_HOME 입력해서
/usr/lib/jvm/jdk-16.0.2
이렇게 나오면 성공