Systems Programming
Lab #0

2022-03-07

sp-tas

Lab Information

- **TA**
  - 302동 319호 (공용연구실)
  - 황인휘/문채원/홍효림/전창민
  - Mail to: sp-ta@googlegroups.com

- **Lecture**
  - Tue, 18:30 – 20:20
  - Offline class

- **Questions**
  - **Class eTL → Q&A**
    - Questions on eTL Q&A board are more then welcome
    - Discussions between students are also encouraged
  - Check & Update your information(Email, phone num., etc.) of yourself in eTL exactly

Lab Session

- Tue 18:30 - 20:20
- 302동 105호 소프트웨어 실습실

- Description about the assignments
- Q&A about your assignments

- No PCs in SW Lab
  - Take your laptop.
- Your laptop → Do your assignments → Connect to lab server and test → Q&A

Assignment

- **5 programming assignments**
  - Will be announced in eTL
  - about 2-3 weeks per 1 assignment

- **Submission**
  - Source code: Evaluate by the lab server
  - Report: Description about your source code & execution results.

- **Delay policy**

	+1day	+2day	+3day	+4day	+5day
Max. Score	-20%	-40%	-60%	-80%	0

- **Code copy policy**
  - Provider/Copier: **Both will get 0.** (eTL check + manual check)

Evaluation

- 출석/태도: 15%
- 과제: 15%
- 중간고사: 15% + 15%
- 기말고사: 20%
- 실습: 20%

Announcements

- **Questions**
  - eTL Q&A Board (O)
  - sp-ta@googlegroups.com (O)
  - 공개글로 질문해주세요. 비밀글로 작성된 질문에 대해서는 답변을 달지 않습니다
  - **DO NOT SEND EMAIL TO TA'S PRIVATE MAIL!! Unless it's private matter ...**

- Assignments Delay policy (실습과 동일)

	+1day	+2day	+3day	+4day	+5day
Max. Score	-20%	-40%	-60%	-80%	0

  - eTL will be used for submissions.

Lab Environment

- **SSH Connect to:**
  - Sp?.snucse.org (sp01 ~ sp05)
  - Port: 22

- **We added individual accounts for students**
  - Announced in eTL
  - Username : stu?
  - Password : 학번 (-포함)

Connect to LAB Server (for Linux user)

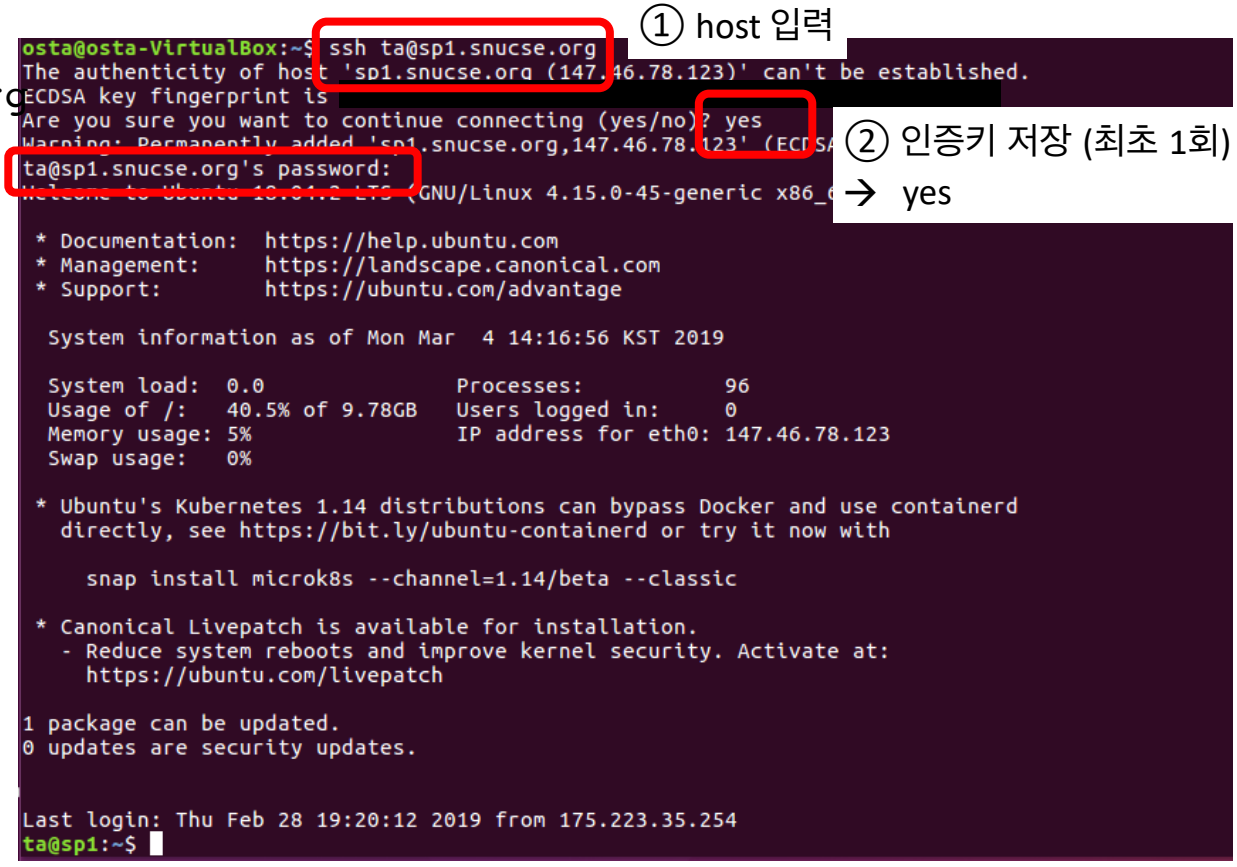
- Linux/MacOS User
  - type & execute command below:

```
# ssh username@domain
```

- (예제) 계정이 ta 인 경우,

```
# ssh ta@sp1.snucse.org
```

③ 계정 password 입력

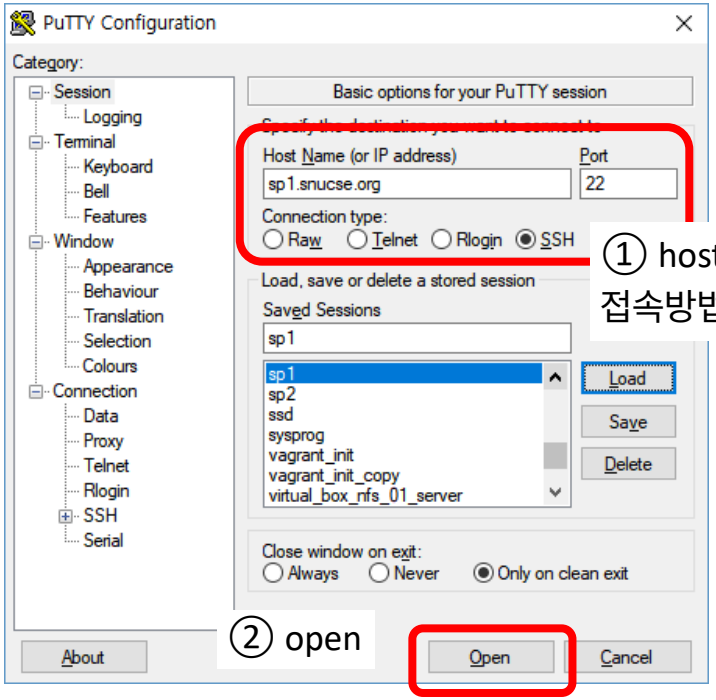


④ 접속 완료

Connect to LAB Server (for Windows user)

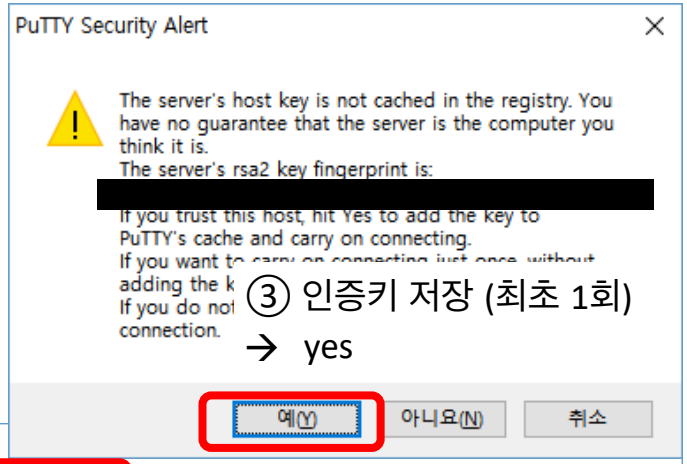
- Windows 사용자 → ssh 클라이언트 프로그램 사용
  - ssh 클라이언트: putty, xshell, secureCRT 등등
  - 구글/네이버 등에서 검색하여 원하는 프로그램 설치

- (예제) putty 를 사용하여 접속

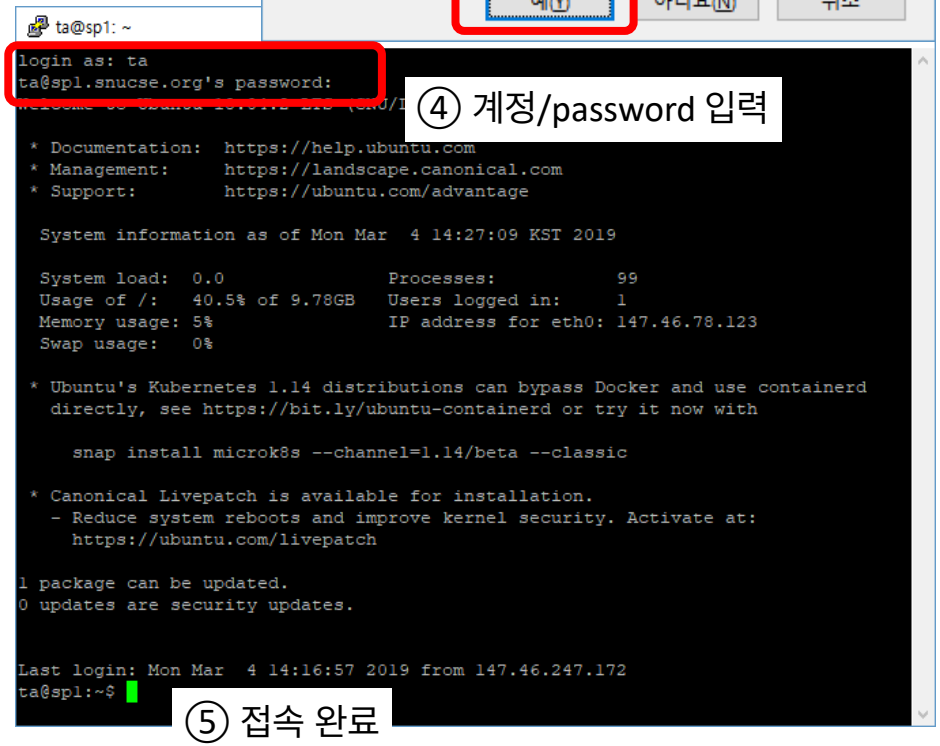


① host/port 입력
접속방법: SSH

② open



③ 인증키 저장 (최초 1회)
→ yes



④ 계정/password 입력

⑤ 접속 완료

Secure Copy (scp)

- Secure Copy : 서버 간 파일 전송

- Linux/MacOS 사용자
  - 터미널에서 다음과 같이 scp 명령어 입력

  ```
  # scp sourceFileName username@host:/some/remote/directory
  ```

  - (예제) /home/sys/a.c 파일을 실습 머신 /home/sysprog/submit/lab0 디렉토리로 copy

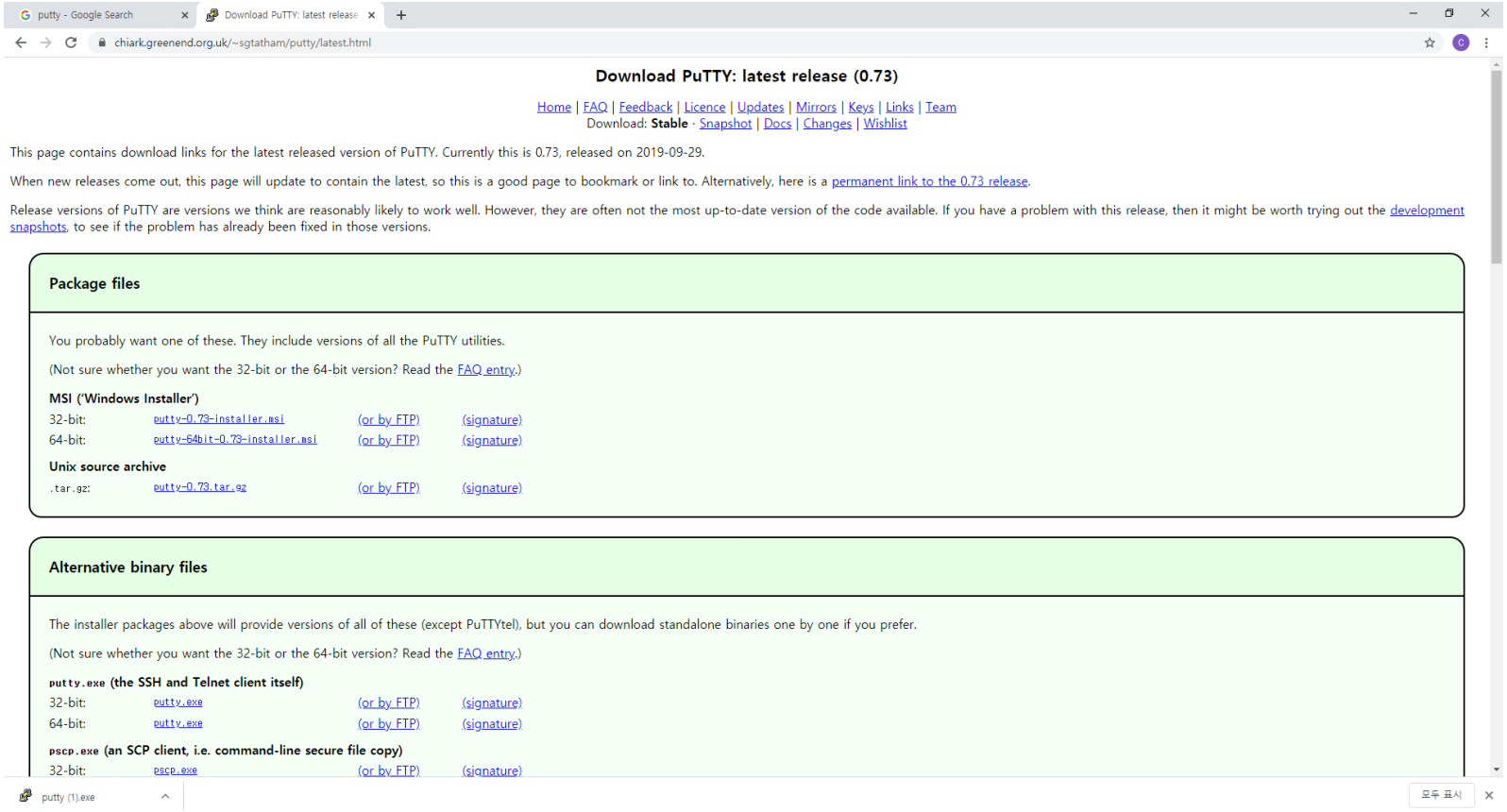
  ```
  # scp /home/sys/a.c ta@sp1.snucse.org:/home/sysprog/submit/lab0
  ```

- Windows 사용자
  - WinSCP 등 SCP 클라이언트 사용하여 전송

- SCP 명령어 참고 사이트
  - http://www.hypexr.org/linux_scp_help.php

Connect to server - Windows

- 서버 접속과 scp 과정만 다름

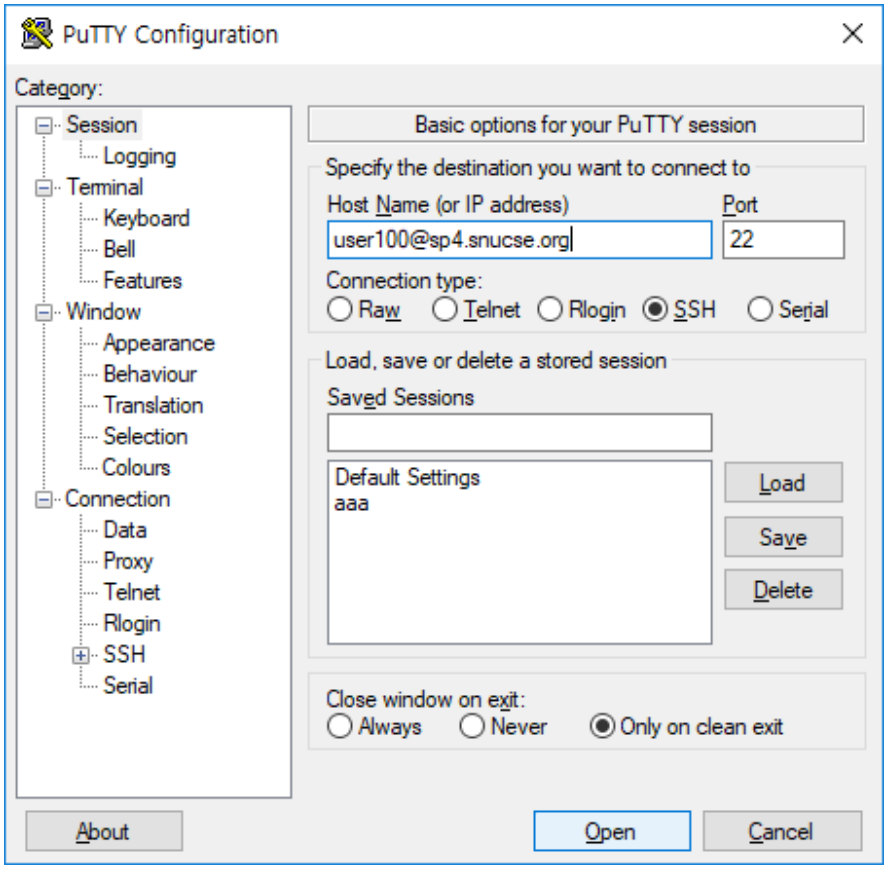


https://www.chiark.greenend.org.uk/~sgtatham/putty/latest.html

Alternative binary file – putty.exe

Connect to server - Windows

- 서버 접속과 scp 과정만 다름



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Connect to server - Windows

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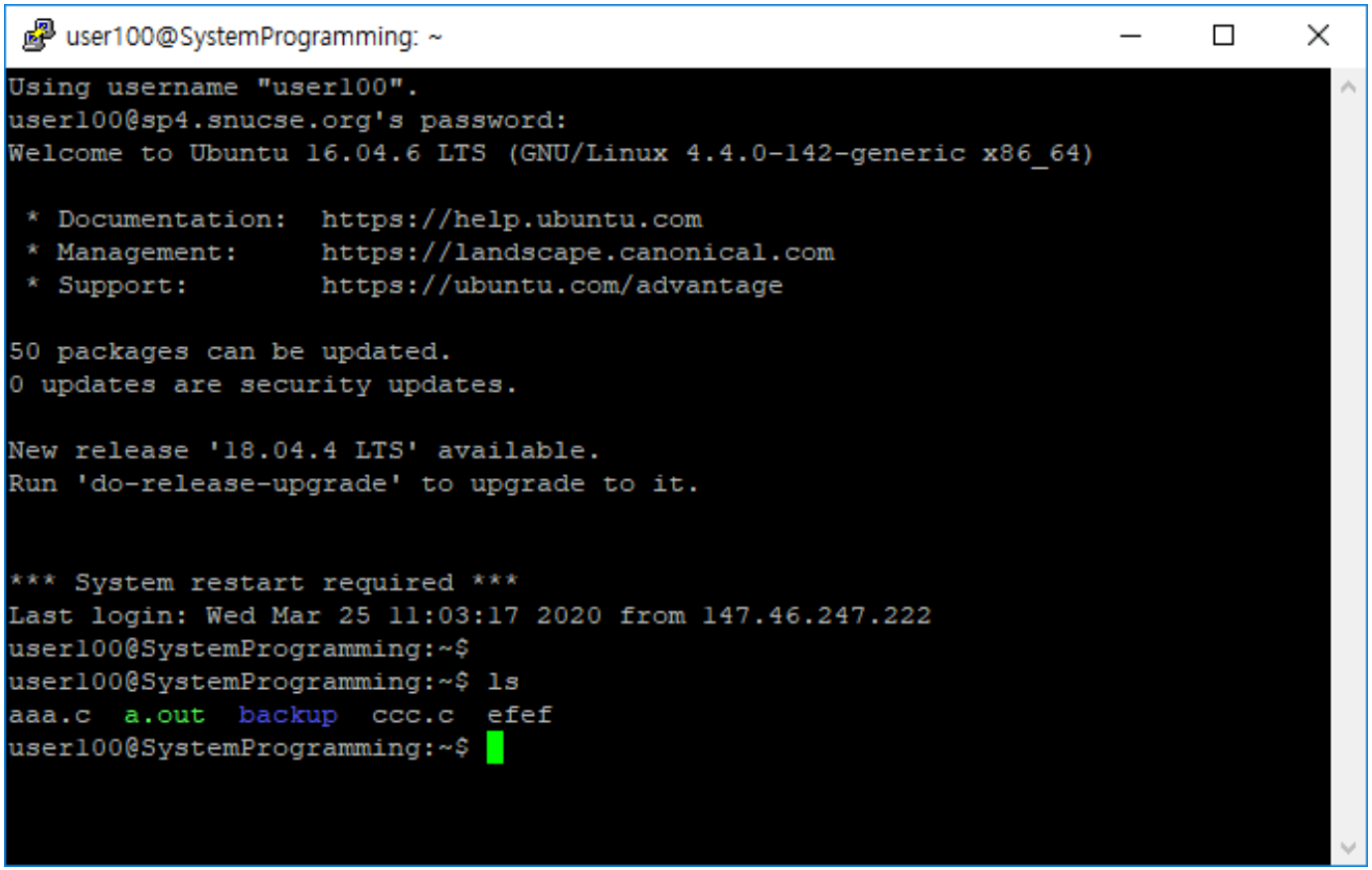
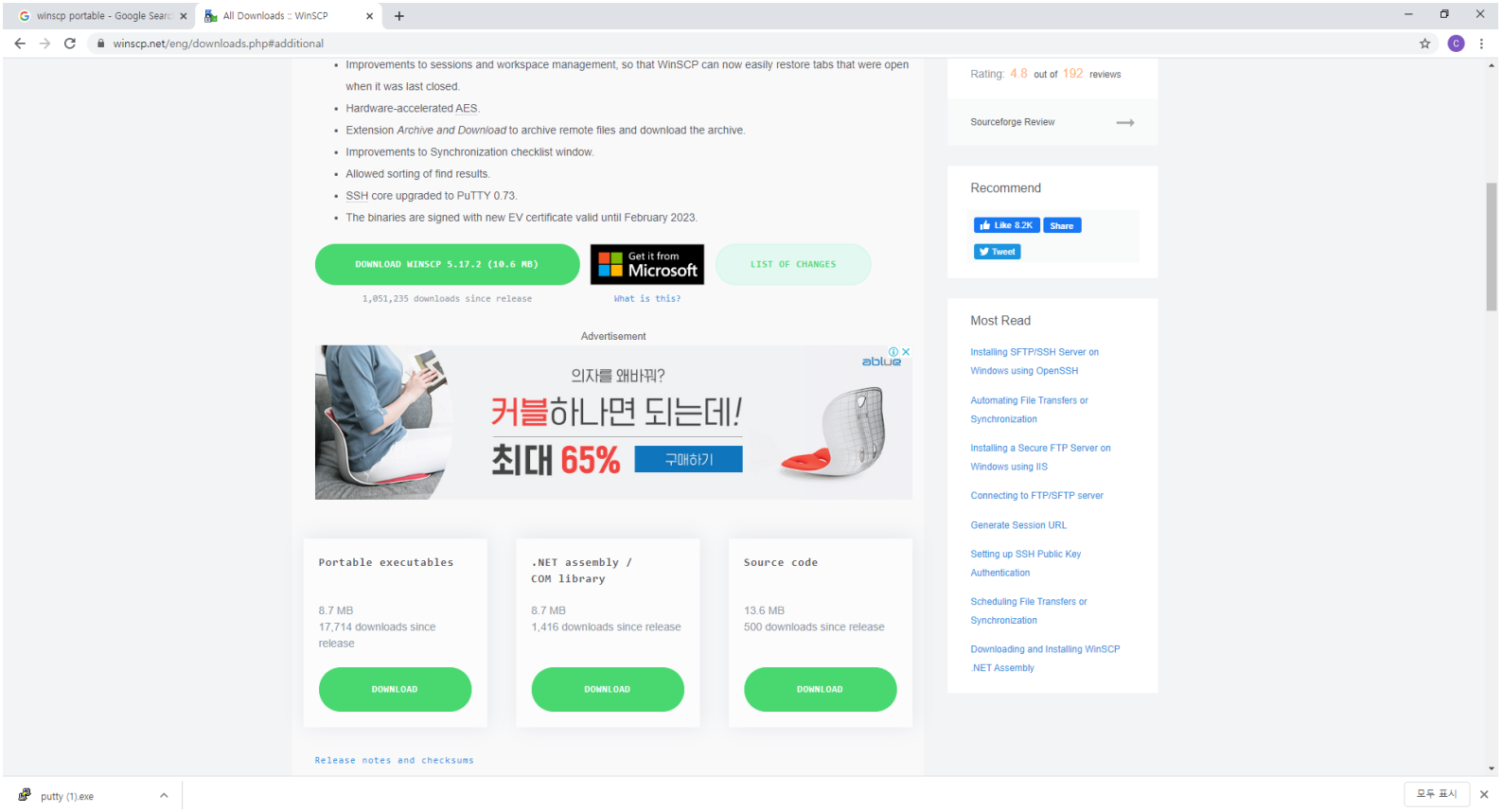


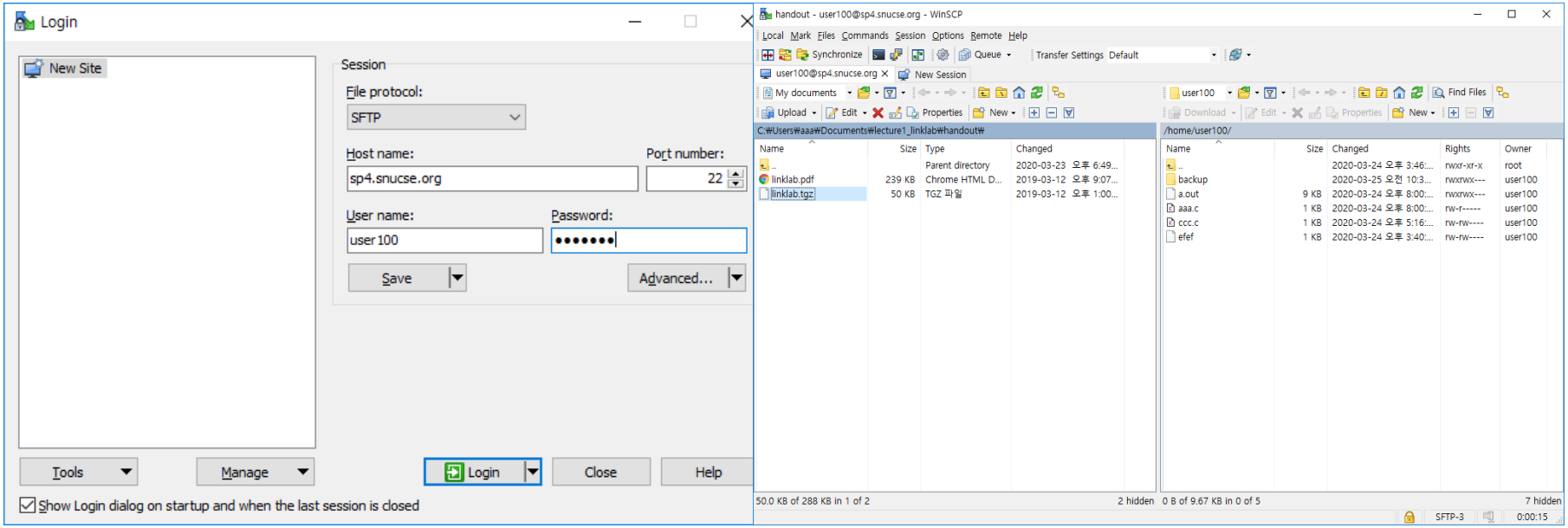
https://www.chiark.greenend.org.uk/~sgtatham/putty/latest.html
Alternative binary file – putty.exe

Windows – SCP



- https://winscp.net/eng/downloads.php#additional
- Portable executables – Decompression

Windows – scp



- Choose file protocol to SFTP
- Enter host name, user name, password.
- You can use other SFTP Clients. (FileZilla, etc)

Windows – scp

- 서버 접속과 scp 과정만 다름

https://winscp.net/eng/downloads.php#additional

Portable executables – Decompression

Let's try

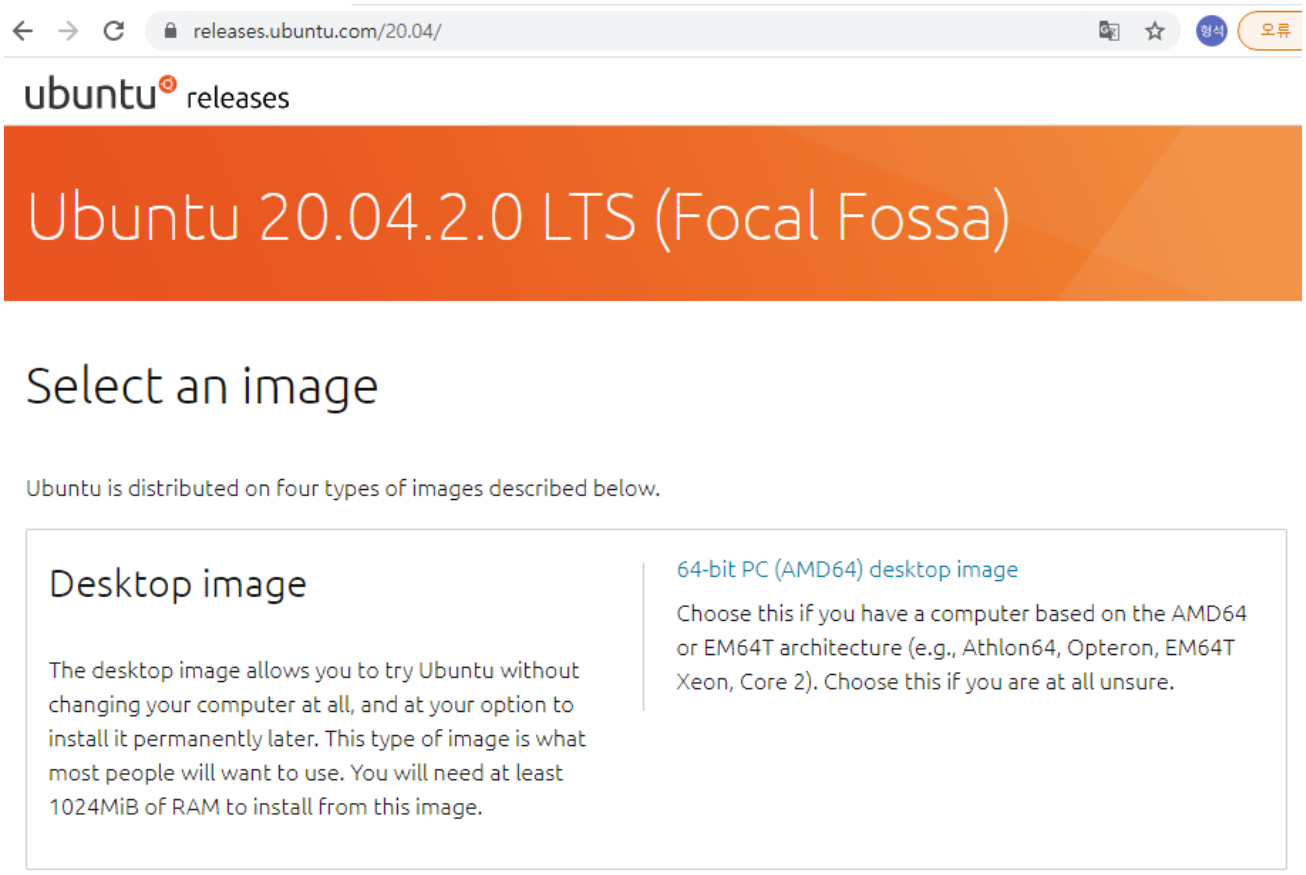
- 1. 개인 컴퓨터에서 서버에 접속
  - # ssh user?@sp?.snucse.org
- 2. 자기 계정 password 변경 (필수)
  - # passwd
- 3. etl에서 개인 컴퓨터로 과제 파일(linklab.tgz) 다운받기
- 4. scp로 과제 파일을 서버로 옮기기
  - # scp linklab.tgz user?@sp?.snucse.org:/home/user?/
- 5. 서버에서 압축 풀기
  - # tar xvf linklab.tgz
- 6. 과제 수행

When you do your assignment…

- 1. 개인 컴퓨터에서 과제 진행 후 서버에서 테스트
  - 환경이 달라 문제 발생 가능
  - 채점은 실습 서버 환경에서 진행됨
  - 코딩은 각자 머신에서, 최종 테스트만 서버에서 진행

- **2. 실습 서버를 사용하지 않을 사람도 passwd 변경 필수**

OS / Linux Kernel



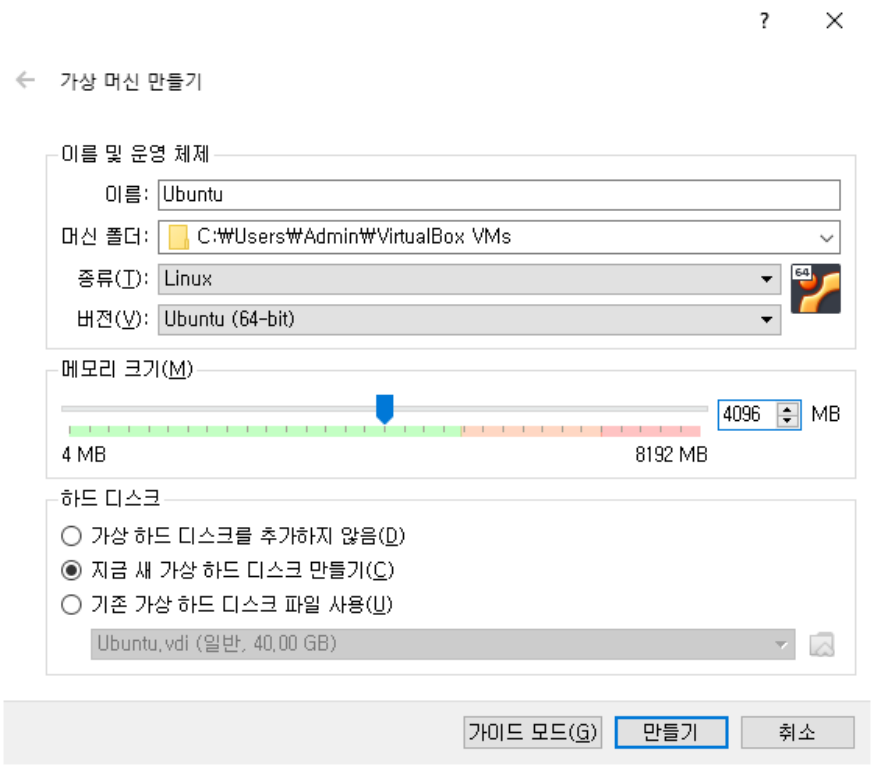
- **Linux Kernel v5.15.65**
  - **We don't accept questions regarding to other kernel version**
  - **Must use this kernel version**

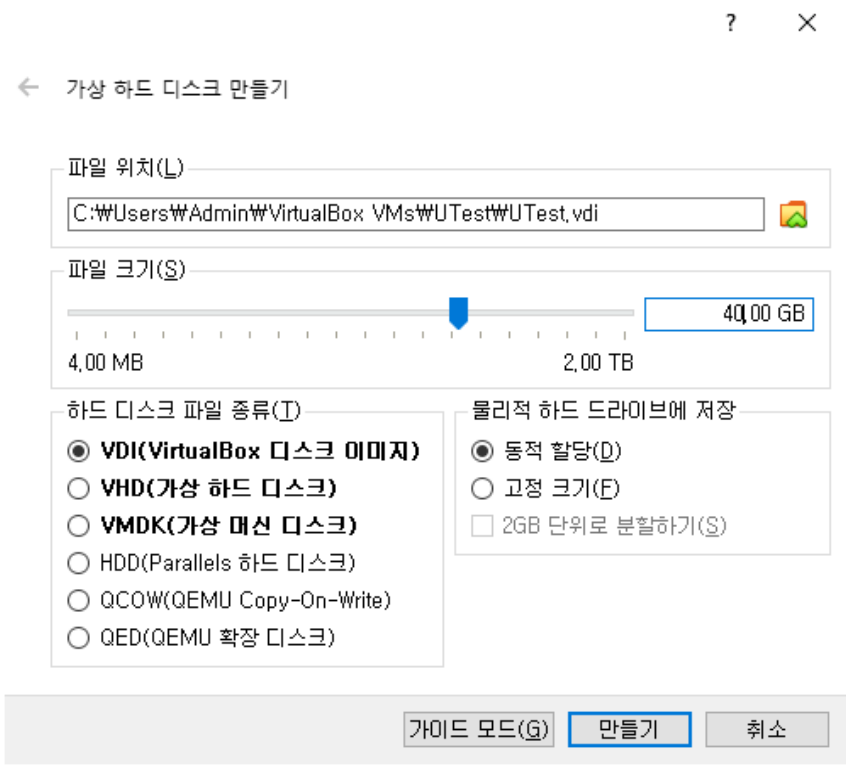
VirtualBox 6.1

- https://www.virtualbox.org/wiki/Downloads
- Choose & install appropriate package for your laptop.

VB Configuration

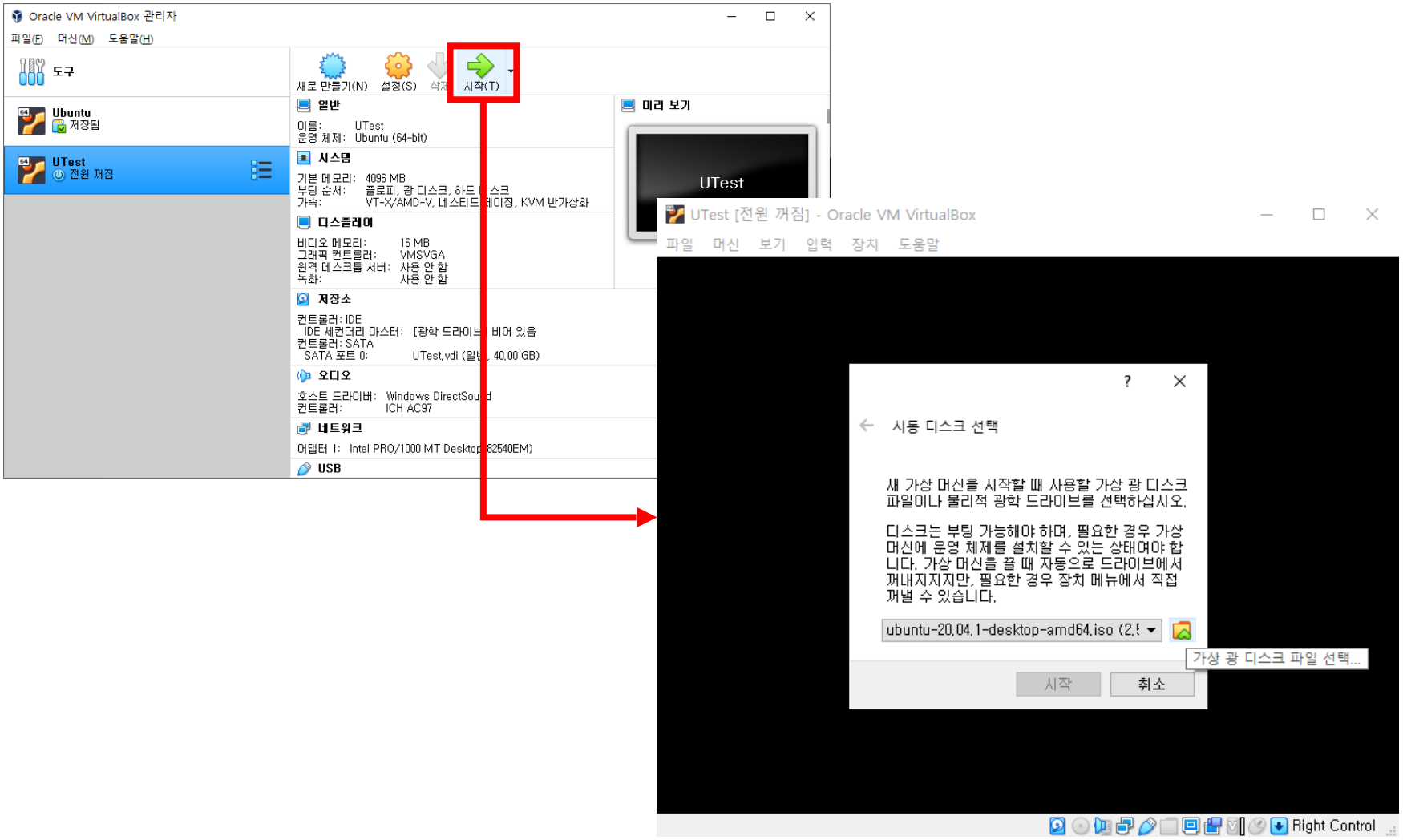
VB Configuration



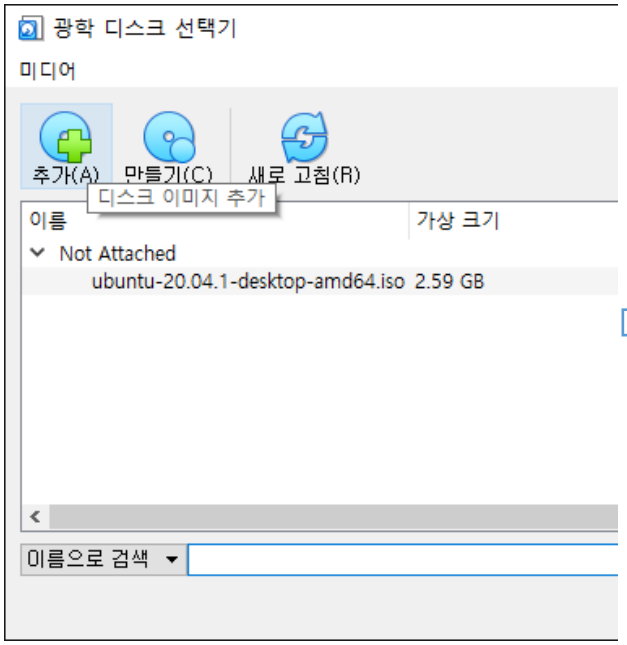


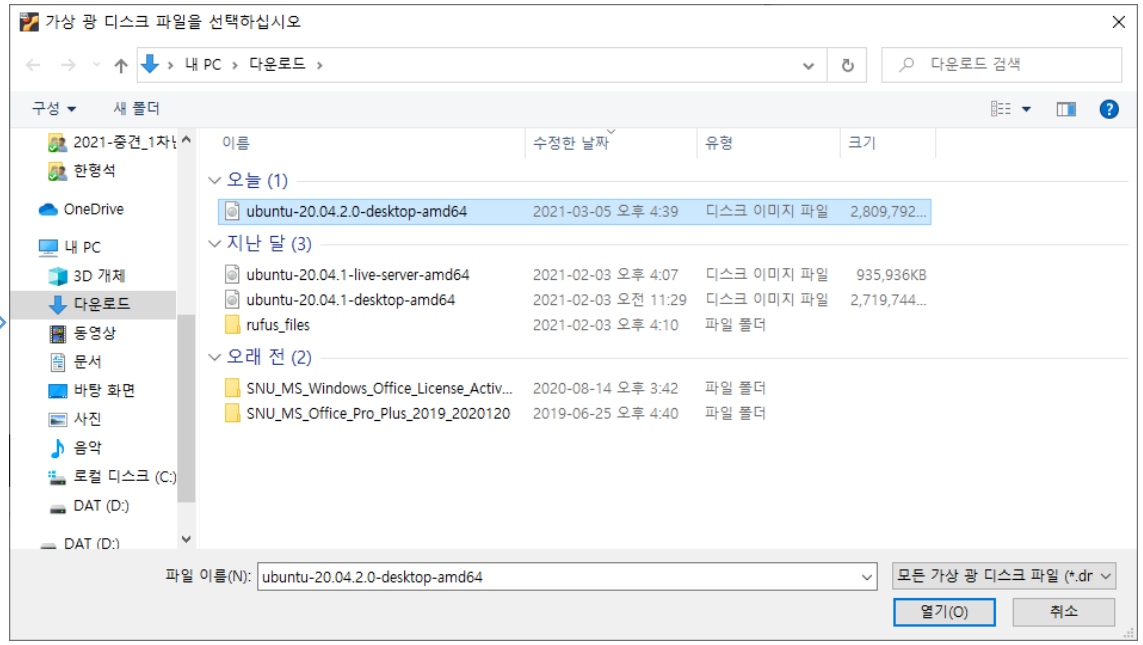
- Modify memory & file size appropriately.
- (RECOMMANDED) Storage: 40-50 GB

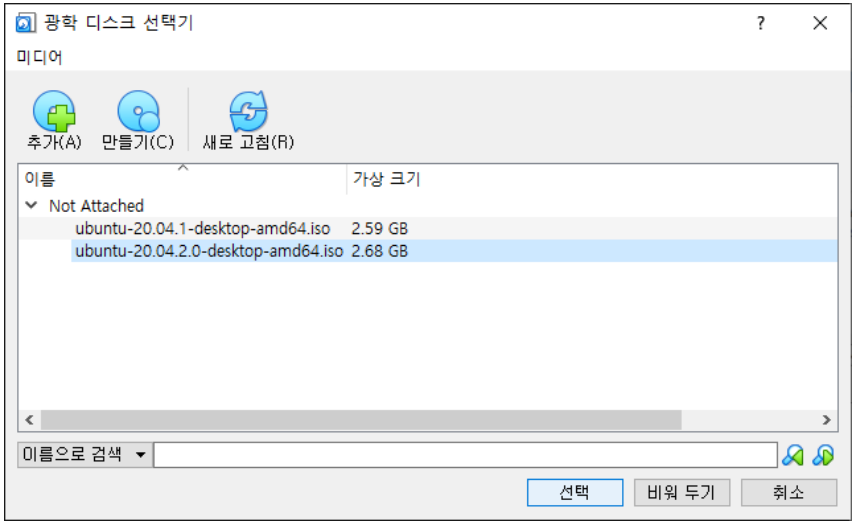
VB Configuration



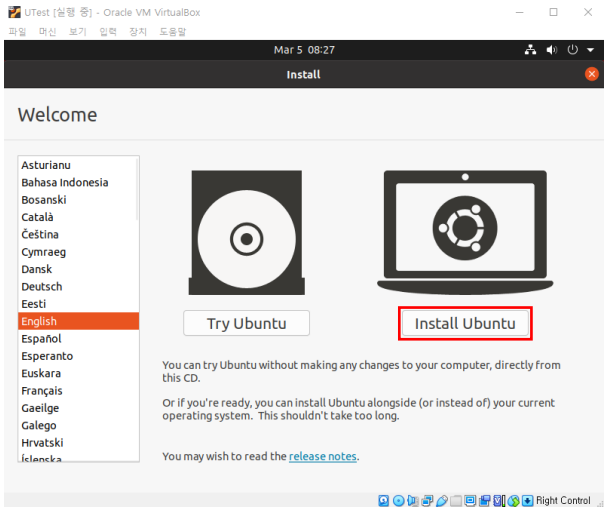
VB Configuration

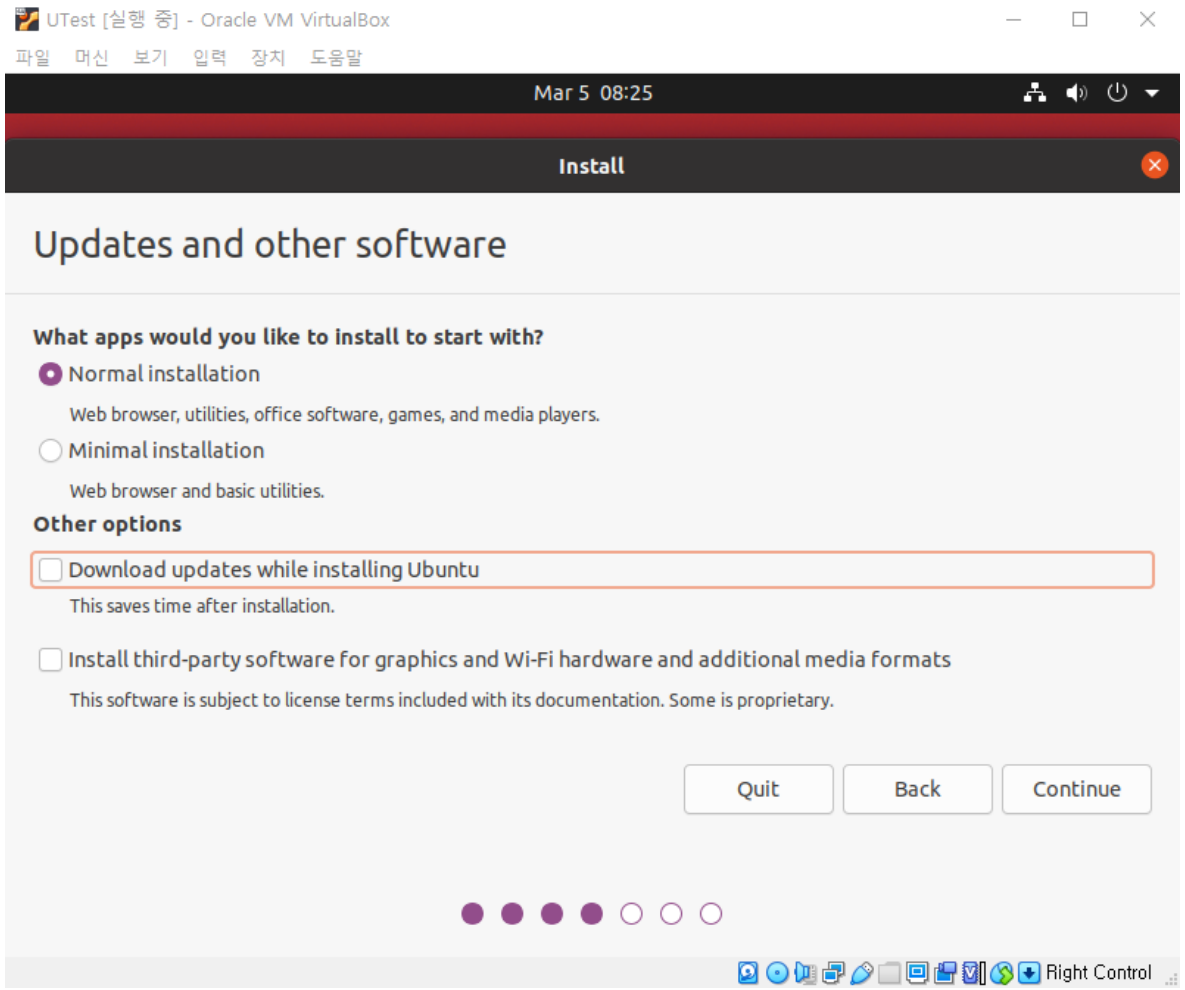






VB Configuration





Next class

- Assignment #1

- If you have any questions?
  - Questions on eTL Q&A board

대면 실습 일정

- 3/7 : ot
- 3/14 : linker lab
- 3/28 : shell lab
- 4/18 : malloc lab
- 5/2 : kernel lab
- 5/23 : proxy lab

- 대면 실습일에는 과제에 대한 설명과 질의응답을 진행할 예정입니다
- 해당 날짜 이외에는 실습 진행하지 않습니다. 질문은 etl로 받도록 하겠습니다
- 출석체크는 하지 않습니다