0406期中考模擬實戰

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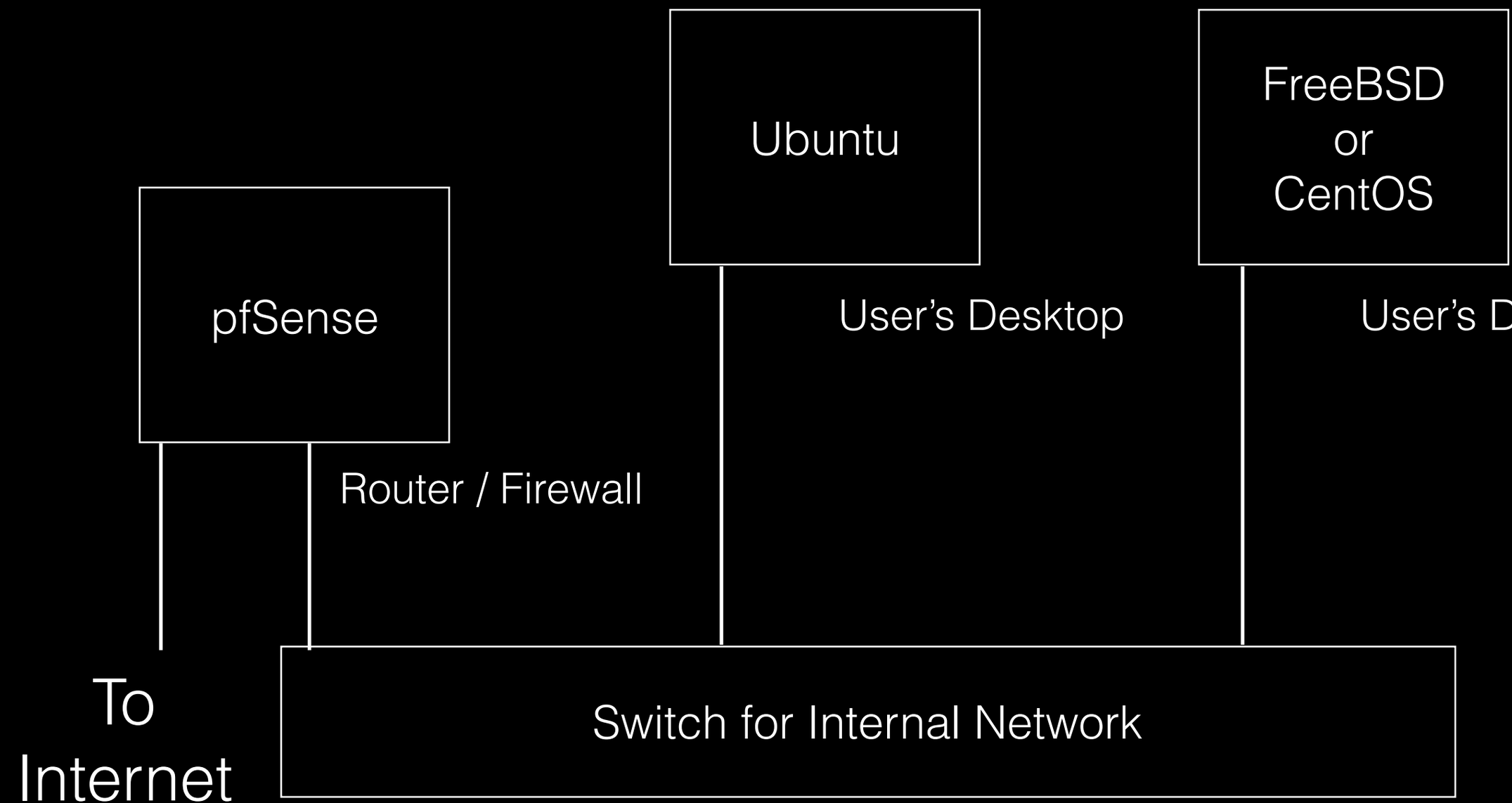
請大家照期中考分組
三人坐在一起
FTP: 192.168.204.59 nasa2016/nasa2016

實戰的目的

- 不用另外找時間練習
- 跟隊友培養默契
- 熟悉之前上課的內容
  (應該沒人下課還去抓投影片來複習?)
- 今年上機實作的機會偏少
- 評估自己面對期中考的考試方式的戰力(?)

Warning: if you want to download the installation image, please download 32-bit version as older machine in 204 cannot run 64-bit OS'es on its virtual box.



User's Requests

1. Install all 3 OS'es and can survive reboot

2. Ubuntu desktop's user data (/home) should be protected with data redundancy (please use software RAID or logical volume manager). You should be able to demonstrate this.

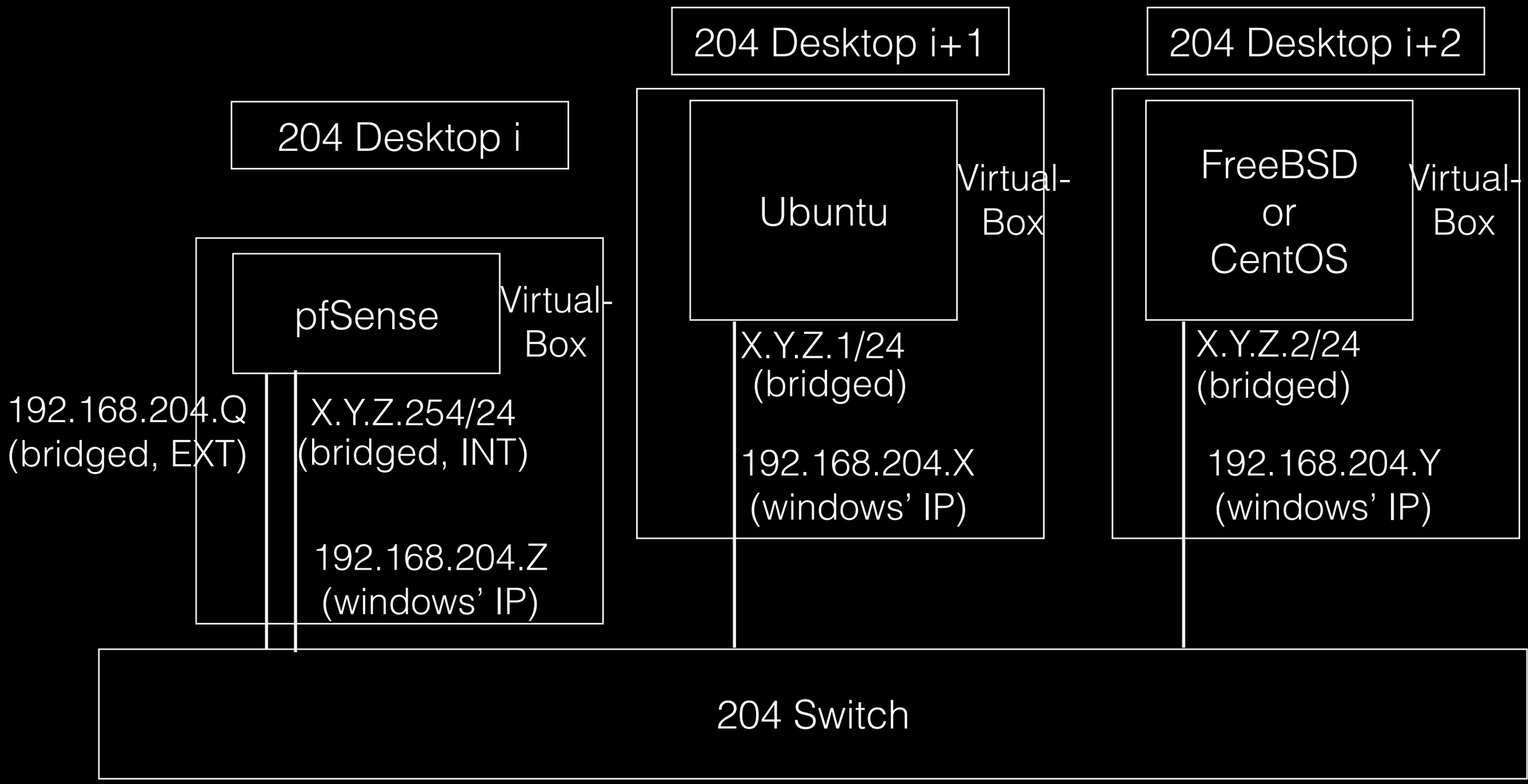
3. Create 3 user accounts (nasa1, nasa2, ta) on each of the two machines. Create a file that cannot be accessed (read) by nasa1, nasa2, but can be accessed (read) by ta.

User's Requests

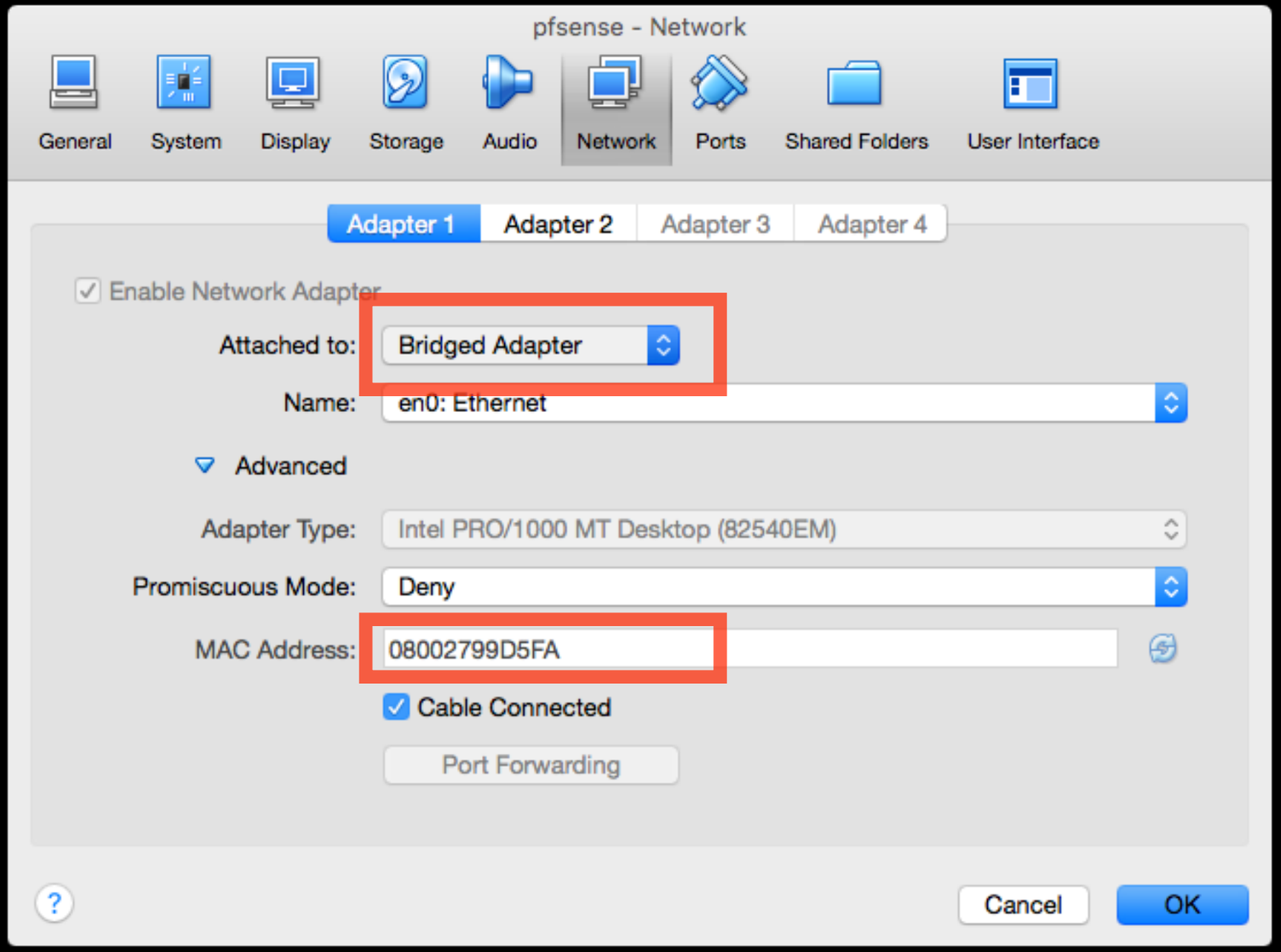
4. On either of the user desktops, using nasa1 user account, we can SSH to the other machine's nasa1 user account without specifying the password.

5. All user desktops should be able to normally browse web sites on the Internet going through the pfSense router.

6. Firewall can block all users when attempting to connect to www.nasa.gov website.



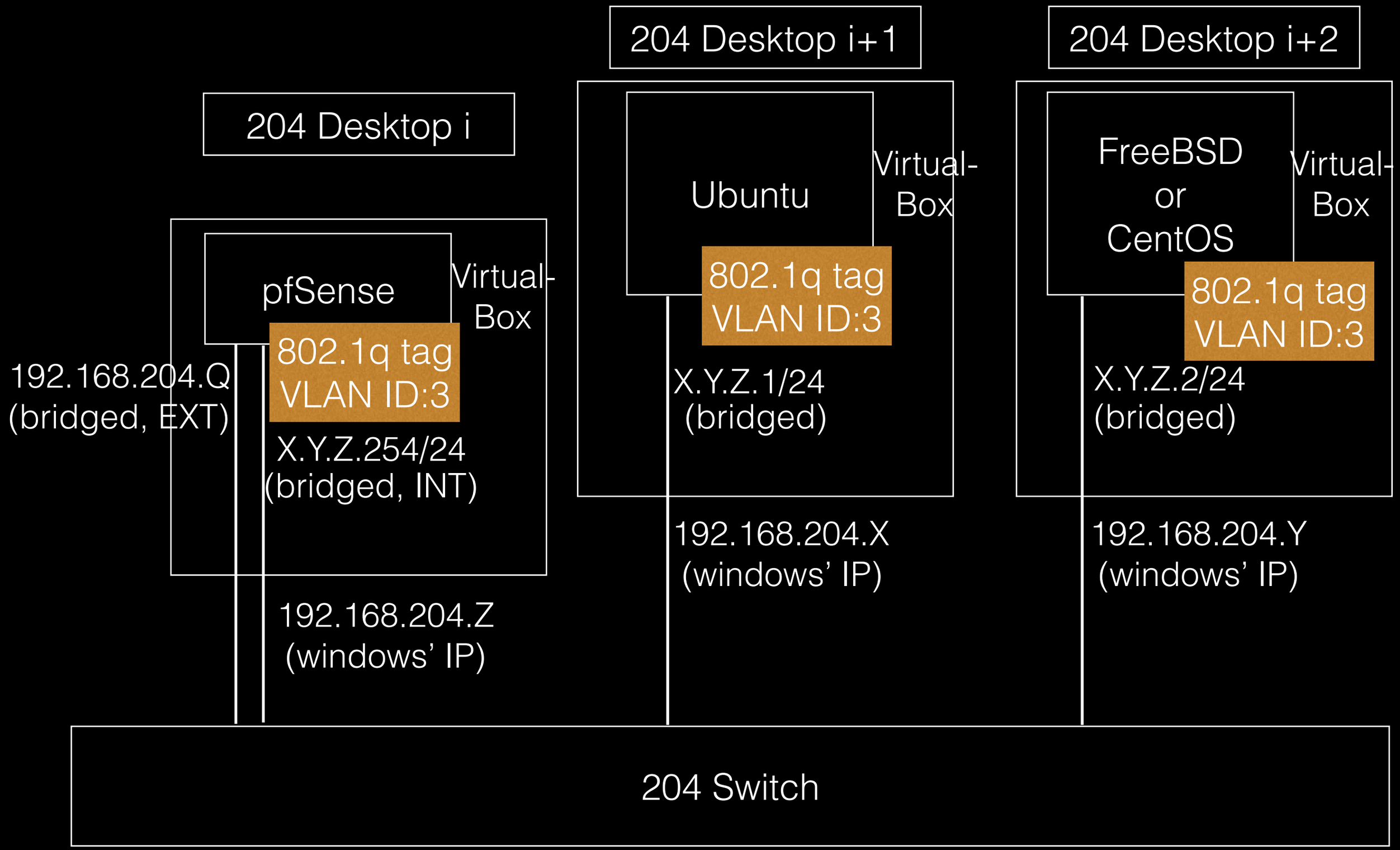
Do not enable DHCP server on your pfsense!!!



Please set “Attached to”
to NAT or not attached
before you disable the DHCP server
on pfSense!

Requirements for Network IP Selection

- pfSense should use external IP obtained from the department's DHCP server (192.168.204.X) as well as gateway, DNS provided by that server.
- Each team should select their own subnet IP (network address + netmask). The IP should be in private IP range, and should be able to incorporate exactly **64** host addresses (including network address and broadcast address)
- Write down your IP / netmask on the whiteboard after your team decided, so that there is no conflict with other teams' choices
- (Bonus) Use VLAN tag on all internal network interfaces so that the traffic from your team are not mixed with other teams' (e.g., https://wiki.ubuntu.com/vlan)


204 Desktop i
pfSense
Virtual-
Box
802.1q tag
VLAN ID:3
192.168.204.Q
(bridged, EXT)
X.Y.Z.254/24
(bridged, INT)
192.168.204.Z
(windows' IP)
204 Desktop i+1
Ubuntu
Virtual-
Box
802.1q tag
VLAN ID:3
X.Y.Z.1/24
(bridged)
192.168.204.X
(windows' IP)
204 Desktop i+2
FreeBSD
or
CentOS
Virtual-
Box
802.1q tag
VLAN ID:3
X.Y.Z.2/24
(bridged)
192.168.204.Y
(windows' IP)
204 Switch

If you accomplish 4 out of 6+1 requests, you will get today's 1 point for participation. :)