

# Homework 02

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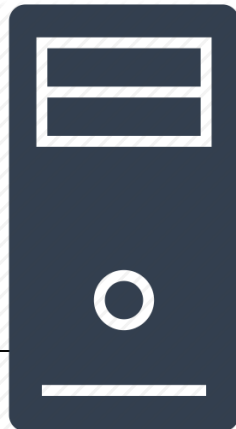
DNS

hwlin1414

# Architecture

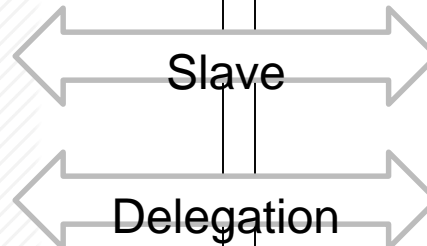
## ❑ Student A:

- Master zone:
  - [exampleA.com](#)
- Delegation (from B):
  - [sub.exampleB.net](#)
- Slave zone:
  - [sub.exampleA.com](#)



## ❑ Student B:

- Master zone:
  - [exampleB.net](#)
- Delegation (from A):
  - [sub.exampleA.com](#)
- Slave zone:
  - [sub.exampleB.net](#)



# Requirement

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## ❑ Setup a DNS server with BIND

- Serve your own domain A ([exampleA.com](#))
- Serve domain delegated from your teammate B's (sub.[exampleB.net](#))
- Serve your teammate B's domain delegated from you as a slave
  - (sub.[exampleA.com](#))
- Be able to query from internet (e.g. workstations ∙ 140.113.235.1)

## ❑ Delegation (20%)

- Delegate a sub-domain to your teammate B
  - sub.{your domain} to your teammate B
    - E.g. sub.exampleA.com

# Requirement (Cont.)

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## ❑ Common (in all view) (10%)

- Add demo.sub.{teammate's domain} CNAME of ws.sub.{teammate's domain}
- Add sub.{teammate's domain} SSHFP record of your server's ssh key fingerprint

## ❑ View (sub.{teammate's domain}) (20%)

- Create ws.sub.{teammate's domain} A record
- For queries from bsd1-bsd4.cs.nctu.edu.tw
  - answer 140.113.235.131
- For queries from linux1-linux4.cs.nctu.edu.tw
  - answer 140.113.235.151
- Otherwise, answer not found

# Requirement (Cont.)

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## ❑ Logging (10%)

- Record all records to `/var/log/named.log`
- Do log rotate
- You might be asked to explain the meaning of each log entry

## ❑ Security (15%)

- Only allow AXFR request on “otherwise” view from
  - your teammate’s IP
  - `bsd1.cs.nctu.edu.tw`
  - `linux1.cs.nctu.edu.tw`
- No recursion allowed.

# Requirement (Cont.)

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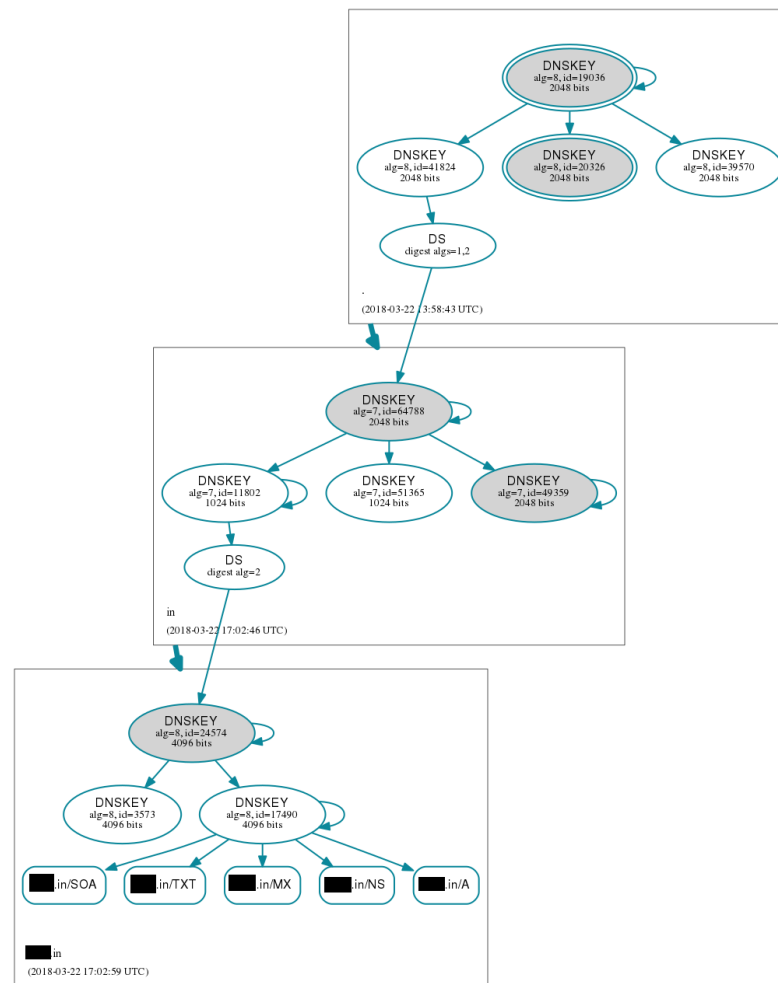
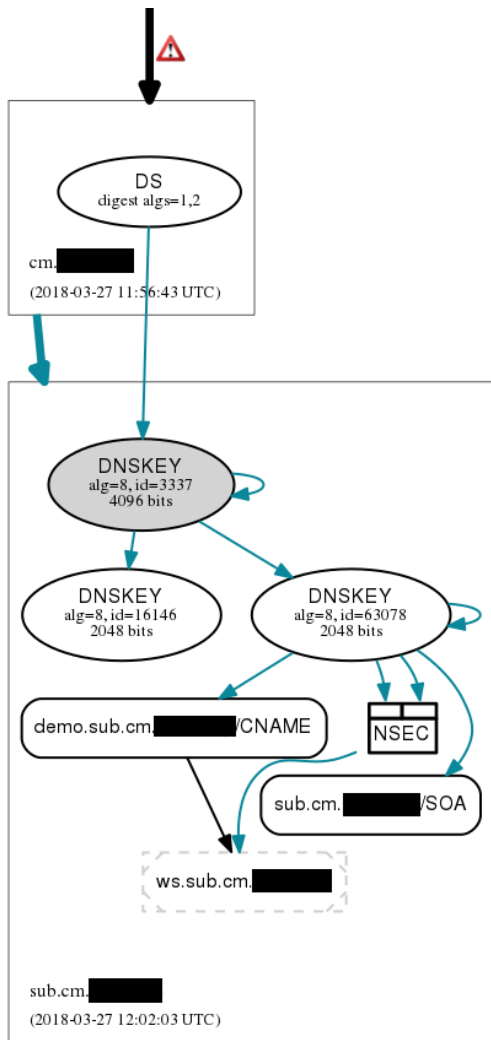
## ❑ DNSSEC (15%)

- Enable on sub.{teammate's domain}
- check the domain on <http://dnsviz.net>
- Think about view and DNSSEC.

## ❑ Remember to setup slave zone of sub.{your domain} (10%)

- (Managed by your teammate)
- Updates should be **synchronized**
  - `bsd1.cs.nctu.edu.tw / linux1.cs.nctu.edu.tw` no need to inform.
- You might be asked to add/update a record to proof synchronization

# Tools: Dnsviz.net



# Hand-in

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## ❑ Demo

- 04/25 (Wed.) 16:00~18:00 19:00~21:00

## ❑ Help

- domain apply
  - nctucs.net <http://www.nctucs.net/> (using CS account)
- Email ta@nasa.cs.nctu.edu.tw
- Goto CSCC to ask professional 3F at office hour!
  - There will be no help on 04/25 (Wed.) office hour (demo).