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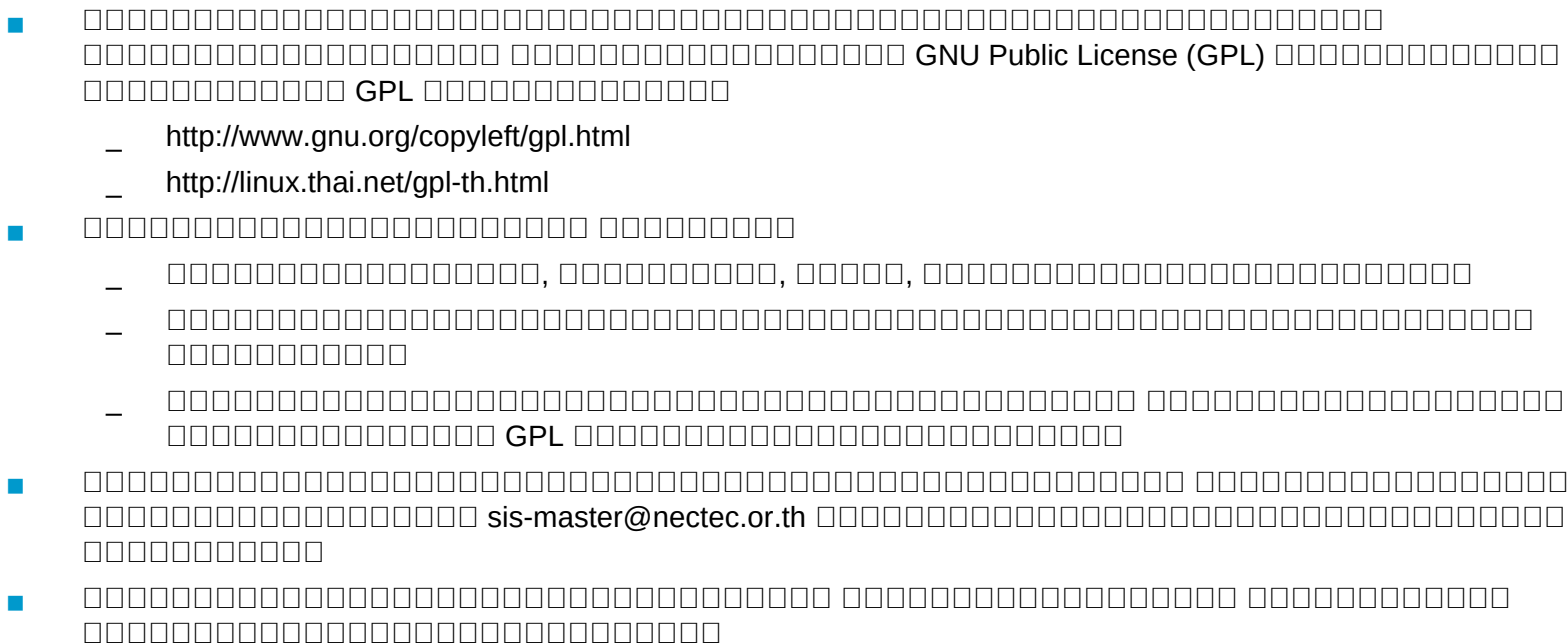
SIS

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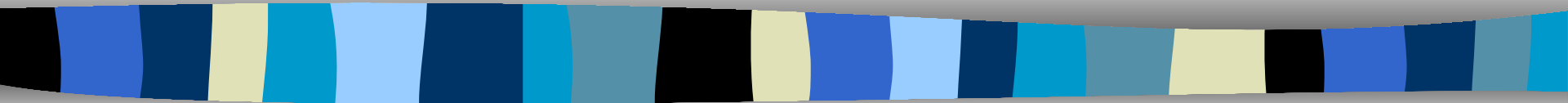
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<http://www.school.net.th/linux-sis/training/>



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□ □ □ Internet Server (□ □ □)



WWW Server (Apache)

- Apache Web Server □□□□□□□□□□ Web Server
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□□□
- □□□□□□□□□□□□□□□□ port 80
- Apache □□□□□□□□□□□□□□□□□□□□□□□□ Module
□□□□ PHP module (□□□□□□ Microsoft ASP),
Perl Module, SSL Module
- □□□□□□□□□□□□□□□□□□□□□□□□□□ SSL (Port 443)

Configuration File

- /usr/local/etc/httpd/conf/httpd.conf
 - Server Type, Port
 - ScriptAlias
 - Addhandler
 - Directory
 - Accessfile
 - Virtualhost
- /usr/local/etc/httpd/conf/mime.types

WWW Server □□ Linux-SIS

■ /usr/local/etc/httpd

- bin/httpd.org
- bin/httpd.php
□□□□□□□□□□□□□□ PHP
- htdocs/
□□□□□□□□□□□□ HTML
- cgi-bin/
□□□□□□□□□□ CGI script

httpd □□□□□□□□

httpd □□□□□□□□

■ /usr/local/etc/httpsd

□□□□□□□□□□□□□□ SSL

Web Server

■ /usr/local/etc/webadmintool

Web Admin Tool

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□□□□□□□□□□ CGI

- □□□□□ /usr/local/etc/httpd/
 - cd cgi-bin
 - cp examples/date .
- □□□□□□□□□□□□□□□□ Web Site
<http://linux.intranet/cgi-bin/date>
- □□□□□□□□□□□□□□□□ <http://linux.intranet/>
□□□□□□□□□□ script □□□□□□□□□□□□□□□□
Addressbook

PHP3

- `□□□□□□ CGI □□□□□□□□□□□□□□□□□□□□□□□□□□□□`
`□□□□□□□ PHP3 □□□□□□□□□□□□□□□□□□□□□□□□□□□□`
Script `□□□□□□□□□□` html `□□□□□□□`
- `□□□□□□□□□□ script PHP □□□□ □□□□□□`
`□□□□□□□□□□□□□ .php3`
- `□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□`
htdocs/php_examples/
- `□□□□□□□□□□□□□□□□ PHP □□`
`http://linux.intranet/news`



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[illegible]

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Proxy/Cache Server

- Proxy/Cache □□□□□□□□
- □□□□□□□□□□□□□□□□ Parent/Sibling
- Hit/Miss
- □□□□□□□□ Bandwidth □□□□□□□□ 30-40
% □□□□□□□□□□ Cache Level □□□ 1 □□□
20-25% □□□□□□□□□□ Level □□□ 2

Squid

- Free/Open Source Cache Proxy Server
- <http://squid.nl.anr.net/>
- ☐☐☐☐☐☐☐☐☐☐☐☐
- ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐ 2
- ☐☐ Linux ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Transparent Proxy ☐☐☐ (☐☐☐☐☐☐☐☐
☐☐☐☐☐☐☐☐☐☐ set ☐☐☐☐☐☐)

Squid Configuration

- Add user `sudo useradd -s /sbin/nologin squid`
- `mkdir -p /usr/local/etc/squid/cache` `mkdir -p /usr/local/etc/squid/logs`
file `chown squid:squid /usr/local/etc/squid` `Linux-SIS`
_ `/usr/local/etc/squid/cache` `ln -s /data/cache/`
_ `/usr/local/etc/squid/logs` `ln -s /var/adm/squid_logs/`
- `touch /usr/local/etc/squid/cache` `touch /usr/local/etc/squid/logs`
`log file`
- `mkdir -p /usr/local/etc/squid/cache` `Initialize Cache Space`
`(squid -z)`
- `Linux-SIS` `sudo systemctl restart squid`
`sudo systemctl status squid`

Squid Configuration File

- `cache_dir /usr/local/etc/squid/etc/squid.conf`
- `parent sibling`
 - `cache_peer hostname type http_port icp_port options`
- `Access Control List`
 - `acl computer_room src 203.150.154.0-203.150.154.255/255.255.255.0`
 - `http_access allow computer_room`
 - `icp_access allow computer_room`

[illegible]

- `acl local-servers dstdomain schoolname.ac.th`
- `never_direct deny local-servers`
- `never_direct allow all`



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- `httpd_accel_uses_host_header` on

□□□□□□□□□□□□□□ Squid

- □□□□□□□□ /usr/local/etc/squid/bin/squid &
□□□□□□□□□□ /etc/rc.d/rc.squid

- □□□□□□□□□□□□□□□□□□□□□□
□□□□□□

– /var/adm/squid_logs/cache.log

- □□□□□□□□□□□□□□□□□□□□□□□□
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– /var/adm/squid_logs/access.log

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□□□□□□□ Web Site □□□□□□□

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- □□□□□□□□□□ Redirector
□□□□□□□□□□ 1.1 □□□□□□□ Ian Lee
- □□□□□□□□ Linux-SIS 3.1 □□□□□□□□□□
URL □□□□□□□□□□□□□□ block □□□□□
/usr/local/etc/squid/etc/acl-url.conf
- Restart Squid

DNS Server: bind

- DNS Server ☐☐☐☐ Server ☐☐☐☐☐☐☐☐☐☐☐
☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
☐☐☐☐☐☐☐☐☐ ?
- ☐☐☐☐☐☐☐☐ bind ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
DNS Server ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
- ☐☐ Linux-SIS ☐☐☐☐☐☐☐☐☐☐☐☐☐☐ bind
(process ☐☐☐☐ named) ☐☐☐☐☐☐☐☐☐☐
☐☐☐☐ ☐☐☐☐☐☐☐☐☐☐☐☐ DNS Cache Server

Configuration File

- □□□□□□□□ /etc/named.conf
- □□□□□□□□□□□□□□□□ /var/named/

DNS Cache Server

- □□ /etc/named.conf

```
zone "." in {  
    type hint;  
    file "root.cache";  
};
```

- □□□□□□□□□ root.cache

```
– dig @rs.internic.net . ns >  
/var/named/root.cache
```

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Secondary DNS Server

■ □□ /etc/named.conf

```
zone "thai.net" in {
    type slave;
    file "slave/thai.net";
    masters { 202.44.202.2; };
};
```

 ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
`/var/named/slave` ☐☐☐☐

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SCHOOL NET THAILAND @1509

ASTORIA

Primary DNS Server - Forward

- □□ /etc/named.conf
 - zone “schoolname.ac.th.” in {
 - type master;
 - file “master/schoolname.ac.th”
 - };
- □□□□□□□□□□ /var/named/master/schoolname.ac.th
□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□
IP Address □□□□□□□□□□□□□□□□□□□□□□□□□□
188-189

Primary DNS Server - Reverse

- `vim /etc/named.conf`
`zone "1.168.192.in-addr.arpa" in {`
`type master;`
`file "master/192.168.1";`
`};`
- `vim /var/named/master/192.168.1`
`189-190`



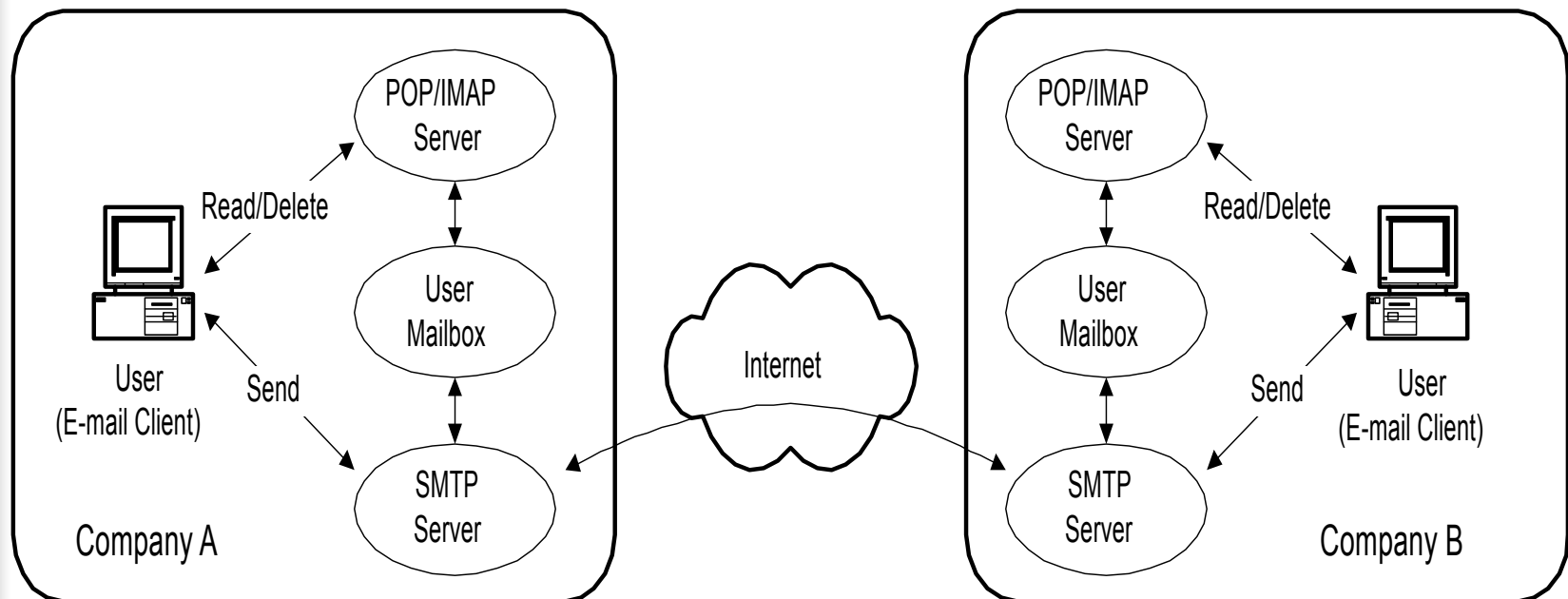
- ```

■ □□□□□ Configuration default □□□□□
□□□ Linux-SIS 3.1 □□□□□□□□□□□
host □□□ nslookup □□□□□□□□□□
□□□□□□□□□□ □□□□□□□□□□□□□□□□
□□□□ host news.intranet □□□□□ IP
192.168.1.9 □□□□□□ (□□□□ Reverse
□□□ Forward)

```

# SMTP Server Sendmail

- SMTP Server □□□□□□□□□□□□□□□□□□  
□□□□□□□ E-mail (□□□□□□□□□□□□□□  
□□□□□) □□□□□□□□□□□□□□□□□□  
□□□□□□□□□□□□□□□□□□□□□□
- □□□□□□ E-mail Client □□□□□□□□  
□□□□□ Outgoing E-mail Server



# MX DNS Record

- DNS MX Record ใช้อธิบายการส่ง E-mail ไปยัง SMTP Server ของโดเมนนั้นๆ  
เช่น ott@school.net.th SMTP Server ของ school.net.th (user.school.net.th) user.school.net.th
- user.school.net.th SMTP Server
- DNS MX Record: host -t mx school.net.th
- MX Record check  
error

SMTP Server □□□□□□□□  
□□□□□□□□□□ E-mail

- □□□ E-mail □□□□□□□□□□□□□□□□□□□□
  - E-mail Address □□□□□□□□□□□□□□
  - □□□□□□□□□□□□□□□ SMTP Server  
□□□□□□□□
- □□□□□□□□□□
    - □□□□□□□□□□ IP Range □□□ Client □□□□□  
□□□□□□□□□□□□□□□□□□□ SMTP Server □□  
□□□□□□
    - /etc/mail/relays-domains

☐ ☐ ☐ E-mail

- 





# Configuration □□□□□□□□□□

## ■ /etc/aliases

- □□□□□ alias □□□□□□□□ mailing list □□□□□□□□
- □□□□□□□□□□□□□□□□
  - postmaster: root
  - user1: user1@school.net.th
  - user2: \user2, user2@cnn.com
  - list1: :include:/etc/mail/list1
- □□□□□□□□□□□□□□□□ newaliases

# /etc/access

- □□□□□□□□□□□□□□□□, □□□□□ □□□□□□□□□□  
□□□□□□□□□□□□□□□□□□□□□□□□ (□□□□ □□□□□□□□□□  
Spam E-mail □□)
- □□□□□□□□□□□□□□□□□□□□
  - /etc/mail/access
    - spammer@aol.com REJECT
    - cyberspammer.com REJECT
    - 206.117.147 REJECT
- □□□□□□□□□□□□□□□□□□□□□□□□□□□□ □□□ restart sendmail
  - cd /etc/mail ; makemap hash access < access

# /etc/mail/domaintable

- `makemap hash domaintable < domain SMTP Server domain`
- `Forward domain`
  - `domain1.co.th` `domain2.co.th`
- `makemap hash domaintable < domain`
  - `cd mail ; makemap hash domaintable < domaintable`
  - `restart sendmail`

**E-mail**

– ott@domain1.co.th      pattara@domain2.co.th

- `cd /etc/mail ; makemap hash virtusertable < virtusertable`
- restart sendmail

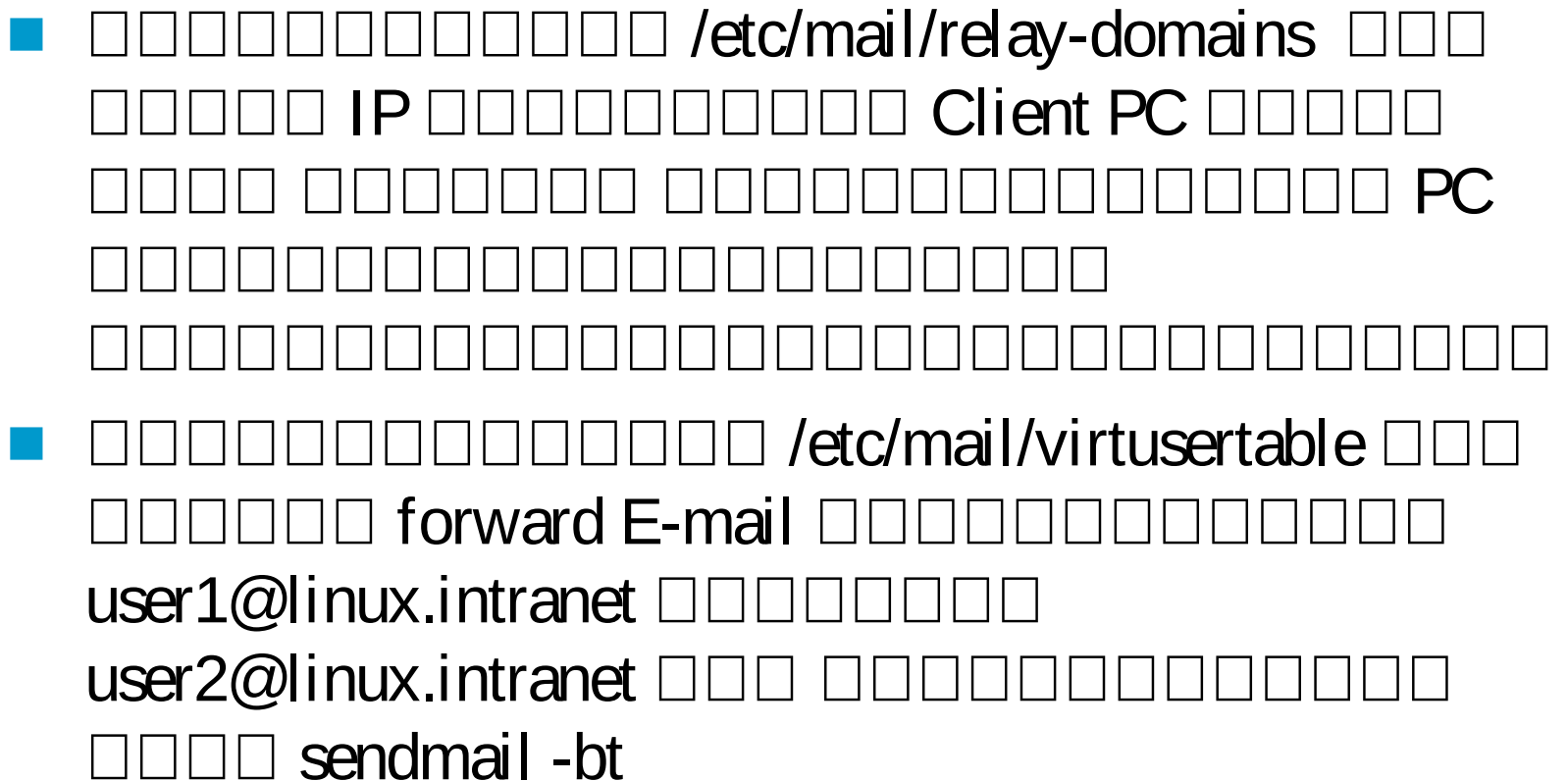
# □□□□□□□□□□□□□□ Sendmail

## ■ Telnet □□□□ port 25

– □□□□□□□□□□□□□□□□□□□□  
□□□□□□□□□□□□□□ 203-204

## ■ □□□□□□□□□□ sendmail -bt

– □□□□□□□□□□□□□□□□□□□□  
□□□□□□□□□□□□□□ 204-205



# POP/IMAP Server

- ใช้อินเทอร์เน็ตเพื่อรับและส่งอีเมล  
ผ่าน POP/IMAP Server
- POP ใช้อินเทอร์เน็ตเพื่อรับอีเมล  
จาก POP Server mail ใช้อินเทอร์เน็ต  
Server ใช้อินเทอร์เน็ตเพื่อรับอีเมล
- IMAP ใช้อินเทอร์เน็ตเพื่อรับอีเมล  
จาก IMAP Server header ใช้อินเทอร์เน็ต  
E-mail ใช้อินเทอร์เน็ตเพื่อรับอีเมล  
Server ใช้อินเทอร์เน็ต

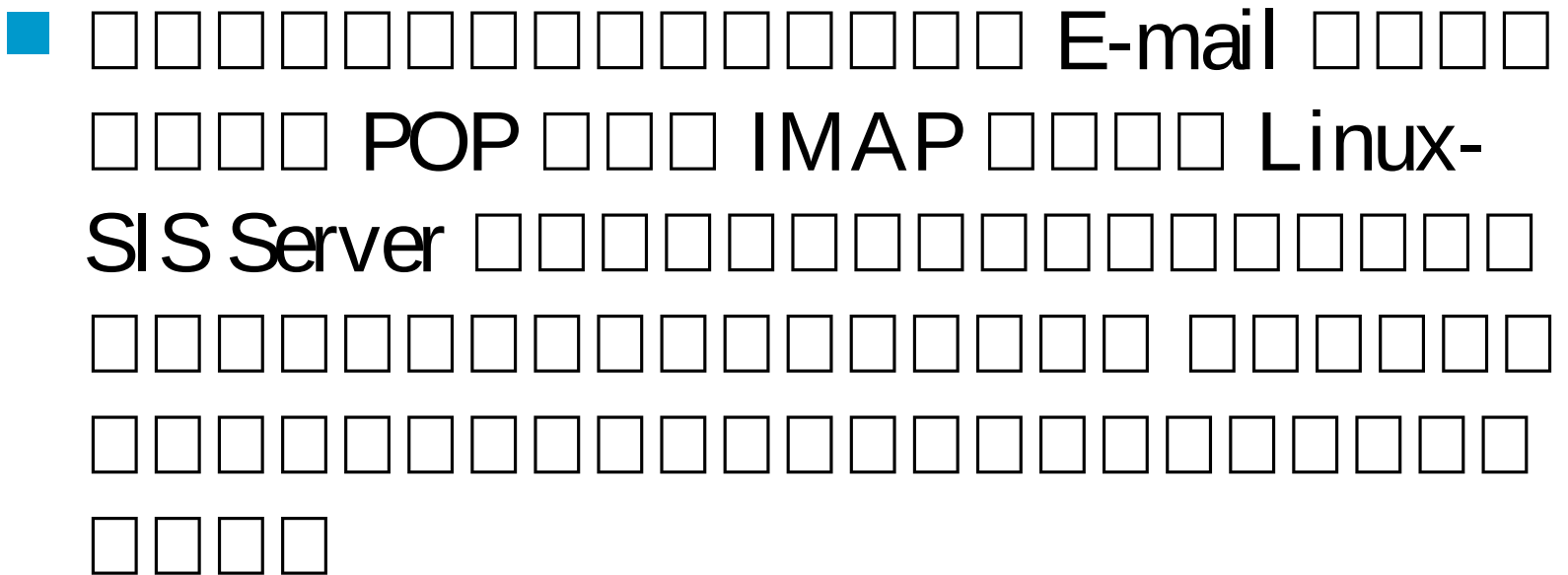
© 2542



# การตั้งค่า

- ตรวจสอบ Linux Version และ POP/IMAP Server  
การตั้งค่า POP/IMAP Server
- แก้ไข /etc/inetd.conf  
pop imap comment
- ตั้งค่า telnet port 110 (pop), 143 (imap)
  - 207-208





# Radius Server

- RADIUS = Remote Authentication Dial In User Service
- Add User Add Terminal Server (Add)
  - Slirp (Add)
- RADIUS
  - RADIUS Server Add
  - Terminal Server Add RADIUS Client

# Radius Client

- □□□□□□□□ Terminal Server, Access Server □□□□□□□□□□ □□  
□□□□□□□□□□ RADIUS Protocol □□□
- □□□□□□□□□□□□ □□□□□□□□□□□□□□□□  
□□□ RADIUS Server

# RADIUS Server

- Livingston Radius  
Livingston (Lucent)
- 
- Server -> Authentication Server, Accounting Server
- - 
  - User
  - RADIUS Proxy

# Free Radius Software

- <http://www.livingston.com/tech/docs/radius/>
- <http://www.freeradius.org/>
- <http://www.miquels.cistron.nl/radius/>
- <ftp://ftp.cheapnet.net/pub/icradius/>
- <http://www.xtradius.com/>

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# Common Configuration Files

- Radius DB: /etc/raddb , /usr/local/etc/raddb
  - clients  Radius Client
  - dictionary  Code
  - users



```
– radpwtest -l <client IP> -d “/etc/raddb” -s <radius-
server-ip> -w “password” username
```

