Administrasi Jaringan (Network Administration)

Ferry Astika Saputra
Isbat Udzin Nadhori
Iwan Syarif
M. Udin Harun al Rasyid

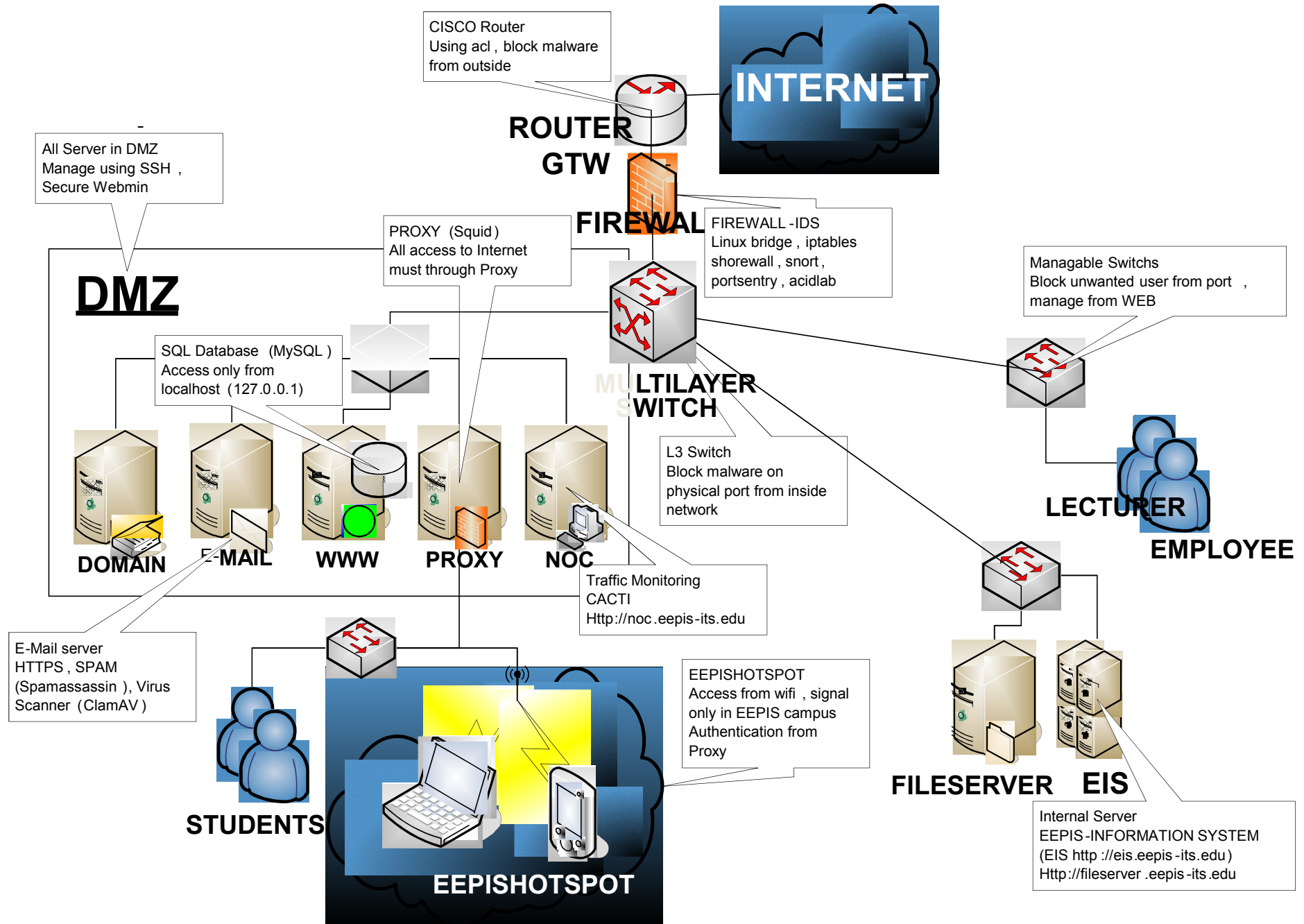# Introduction

- Networks are no longer a luxury, but a requirement to keep the organization running.

Network Services

CISCO Router
Using acl , block malware
from outside

INTERNET

**ROUTER
GTW**

All Server in DMZ
Manage using SSH ,
Secure Webmin

FIREWALL

PROXY (Squid)
All access to Internet
must through Proxy

FIREWALL -IDS
Linux bridge , iptables
shorewall , snort ,
portsentry , acidlab

Managable Switchs
Block unwanted user from port ,
manage from WEB

DMZ

SQL Database (MySQL)
Access only from
localhost (127 .0.0.1)

**MULTILAYER
SWITCH**

L3 Switch
Block malware on
physical port from inside
network

DOMAIN **E-MAIL** **WWW** **PROXY** **NOC**

LECTURER

EMPLOYEE

Traffic Monitoring
CACTI
Http://noc.eepis-its.edu

E-Mail server
HTTPS , SPAM
(Spamassassin), Virus
Scanner (ClamAV)

EEPISHOTSPOT
Access from wifi , signal
only in EEPIS campus
Authentication from
Proxy

FILESERVER **EIS**

STUDENTS

EEPISHOTSPOT

Internal Server
EEPIS -INFORMATION SYSTEM
(EIS http ://eis.eepis -its.edu)
Http://fileserver .eepis -its.edu

Who are Responsible

- Computer Technician
  - Responsible for setting up and maintaining the users' computers.
  - Putting the computers together.
  - Adding new hardware: RAM, CD-ROM drive, Monitor, etc.
  - Installing software
  - Setting up accounts, email, and access to servers
  - Troubleshooting
- Network Technician
  - Connecting the computers to the network.
  - Setting up any wireless network access.
  - Configure the routers and switches.
    - Basic configurations
    - Security
    - Traffic flow
- System Administrator
  - Maintaining the "file servers", the computers that store the software and data used by everyone.
  - Setting up usernames and passwords for controlling access to the network.
  - Setting up and maintaining the servers that control Email.
  - Keep the computers secure from viruses and hackers.

Sys Admin Handle

User

- How many users are there?

- The level of the user's expertise.

- What are the users trying to do?

- Are they responsible or irresponsible?

- Who do the users know?

Hardware Software

- How many, how big and how complex?
- Is there a network?
- Are the computers heterogenous or homogenous?

Sys Admin Handle

What System Administrator Do ?

- ensuring that the computing system runs correctly and as efficiently as possible, and

- ensuring that all users can and do use the computing system to carry out their required work in the easiest and most efficient manner

Conflict

- Management will wish to restrict the amount of money spent on computer systems.
- The users on the other hand will always want more disk space and faster CPUs.
- The System Administrator must attempt to balance these two conflicting aims

Network Administrator Activity

- Fault Management
- device management
- Configuration Management
- performance management
- history management
- Accounting
- security
- Management Scope
- Maintenance and upgrade
- Remote access

What Systems Administrators need to know

- programming,
  Systems Administrators have to be able to program. They might have to write scripts that automate regular tasks to help users perform certain tasks.

- hardware maintenance and installation,
  This may range from installing new hardware to cleaning old hardware so that it continues to work.

- documentation and testing,

- Human Computer Interface,

- networks and computer communication,

- user education,

- diplomacy,

- legal issues and contracts,

- detective work,

- management and policy setting, and

- public relations.

Materi Administrasi Jaringan

1. Tugas dan Tanggung Jawab Sistem Administrator
2. Telnet dan SSH Server, Konsep dan Penerapan
3. Samba-FTP Server, Konsep dan Penerapan
4. DNS Server , Konsep dan Penerapan
5. Webserver, Konsep dan Penerapan
6. Mail Server, Konsep dan Penerapan
7. IMAP Server, Konsep dan Penerapan
8. Log Analysis, Konsep dan Penerapan
9. DHCP Server, Konsep dan Penerapan
10. Mailing List, Konsep dan Penerapan
11. Proxy Server, Konsep dan Penerapan
12. Traffic Shapping (Quality of Service), Konsep dan Penerapan
13. Network Monitoring, Konsep dan Penerapan
14. Dynamic DNS, Konsep dan Penerapan
15. Webmin, Konsep dan Penerapan
16. Virtualization , Konsep dan Penerapan