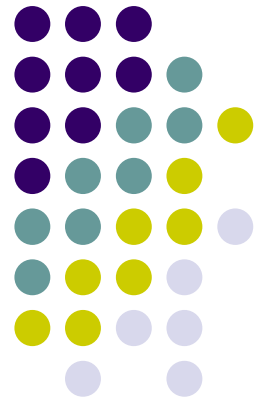# Dr. Pipat Sookavatana

IT for Business

- Communication and Information Exchange
  - Email
  - Web access
  - File and Printer Sharing
  - Information Access
  - Advertisement and Promotion
- Office Work
  - Document creation
  - Handout printing
- Management
 - Accounting
  - Online accessing
  - ERP
- Etc.

What will be covered today

- What compost of IT infrastructure
  - Network Infrastructure Device
  - Network Infrastructure (Wireless) Device
  - Server Device
  - Policy and Security Management
    - Internet Security Systems (ISS)' Managed Intrusion Detection and Prevention Service (IDS/IPS) Internet Security Systems (ISS)' Managed Intrusion Detection and Prevention Service (IDS/IPS)
    - Firewall
    - Antivirus
    - Mail Filter
    - Backup System
    - SSL-VPN — virtual private network
    - App-Firewall → ↑ 𝓌 IDS / IPS
    - WAN-Optimization
  - Other IP devices, VOIP Phone

They are commonly need one basic thing
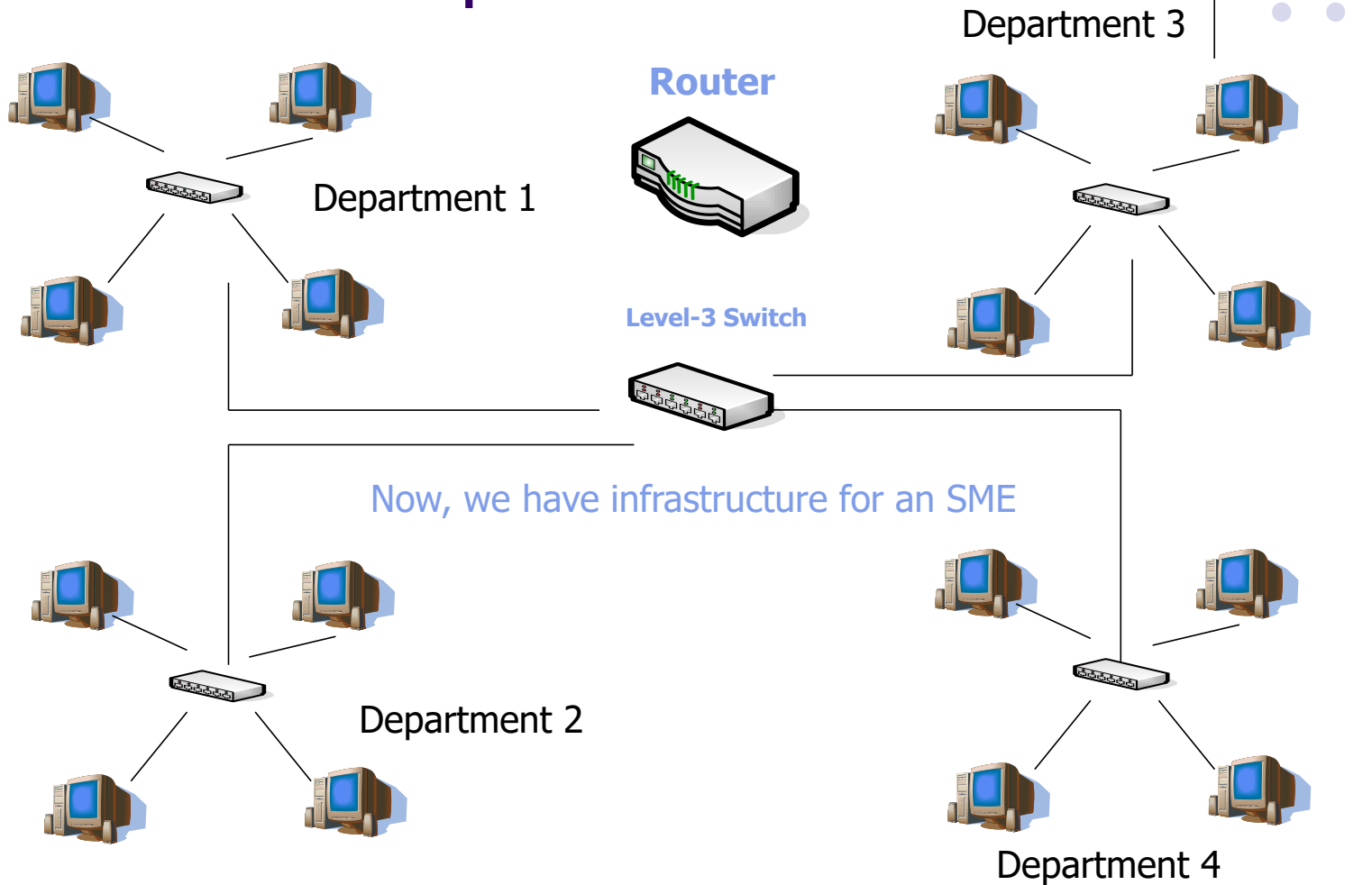## Network Infrastructure

Basic Network Infrastructure

Switch/HUB
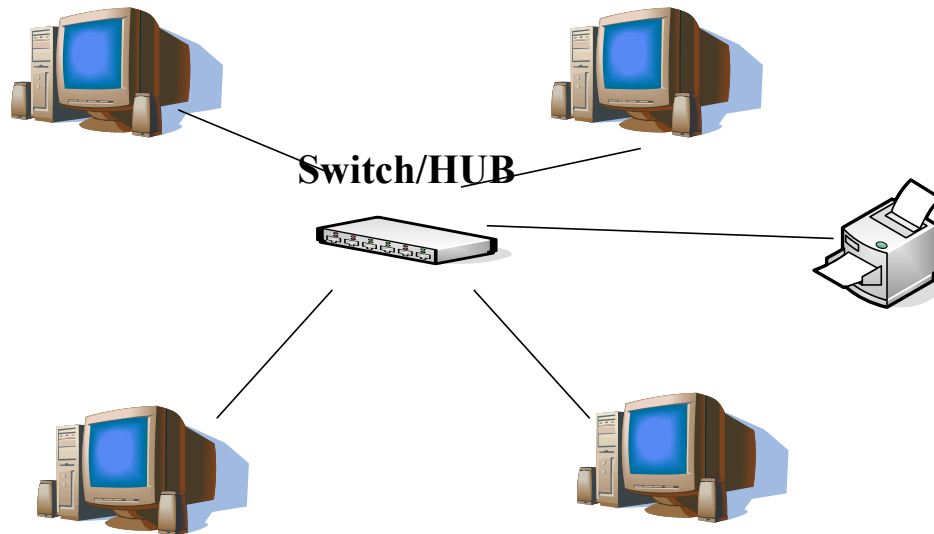
Now, we have a very basic network connection which files and printer can be shared

But this can be use only with in one small department, 2-10 computers
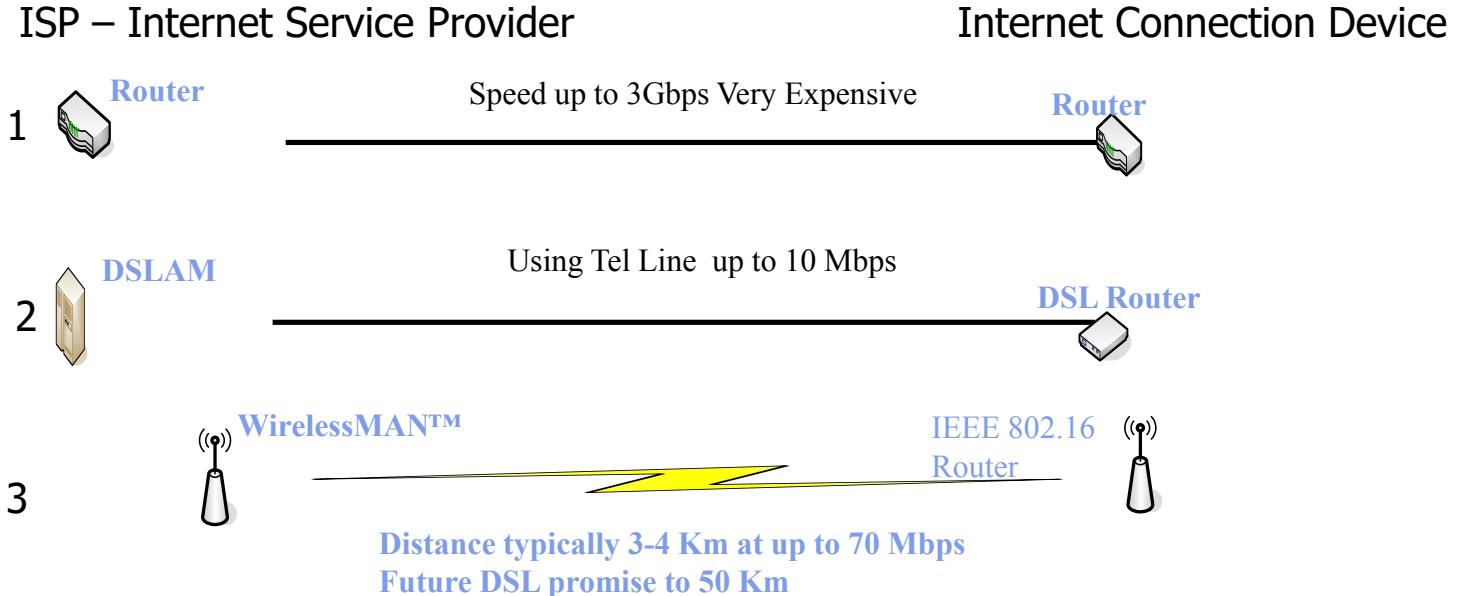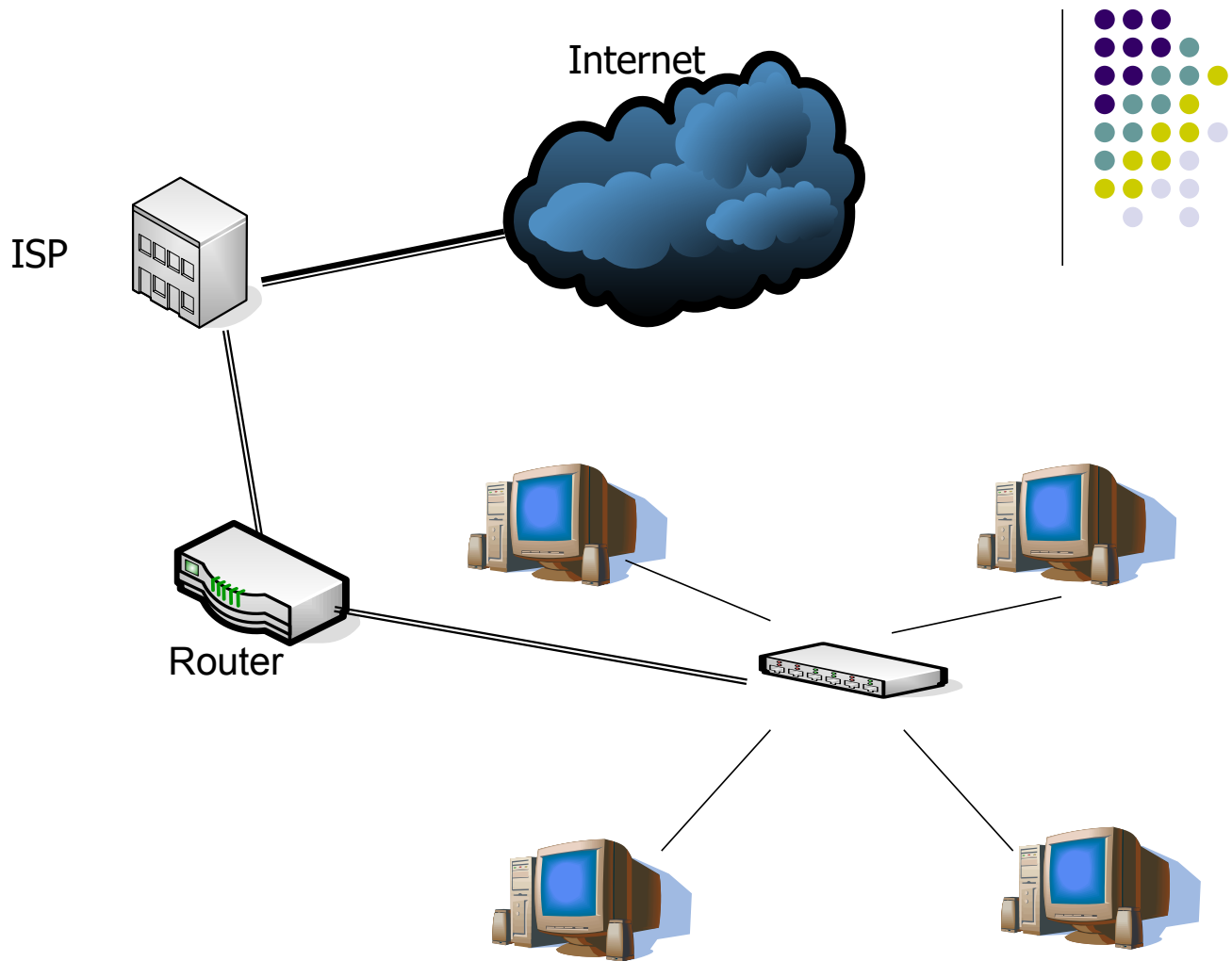
More than one department

Department 3

Router

Department 1

Level-3 Switch

Now, we have infrastructure for an SME

Department 2

Department 4

What Next

Yes, the Internet connection

What provide the Internet connection

ISP – Internet Service Provider   Internet Connection Device

1 **Router**   Speed up to 3Gbps Very Expensive   **Router**

2 **DSLAM**   Using Tel Line up to 10 Mbps   **DSL Router**

3 **WirelessMAN™**   IEEE 802.16
                                                        Router

Distance typically 3-4 Km at up to 70 Mbps
Future DSL promise to 50 Km

Internet

ISP

Router

Now, we have the Internet connection to the firm
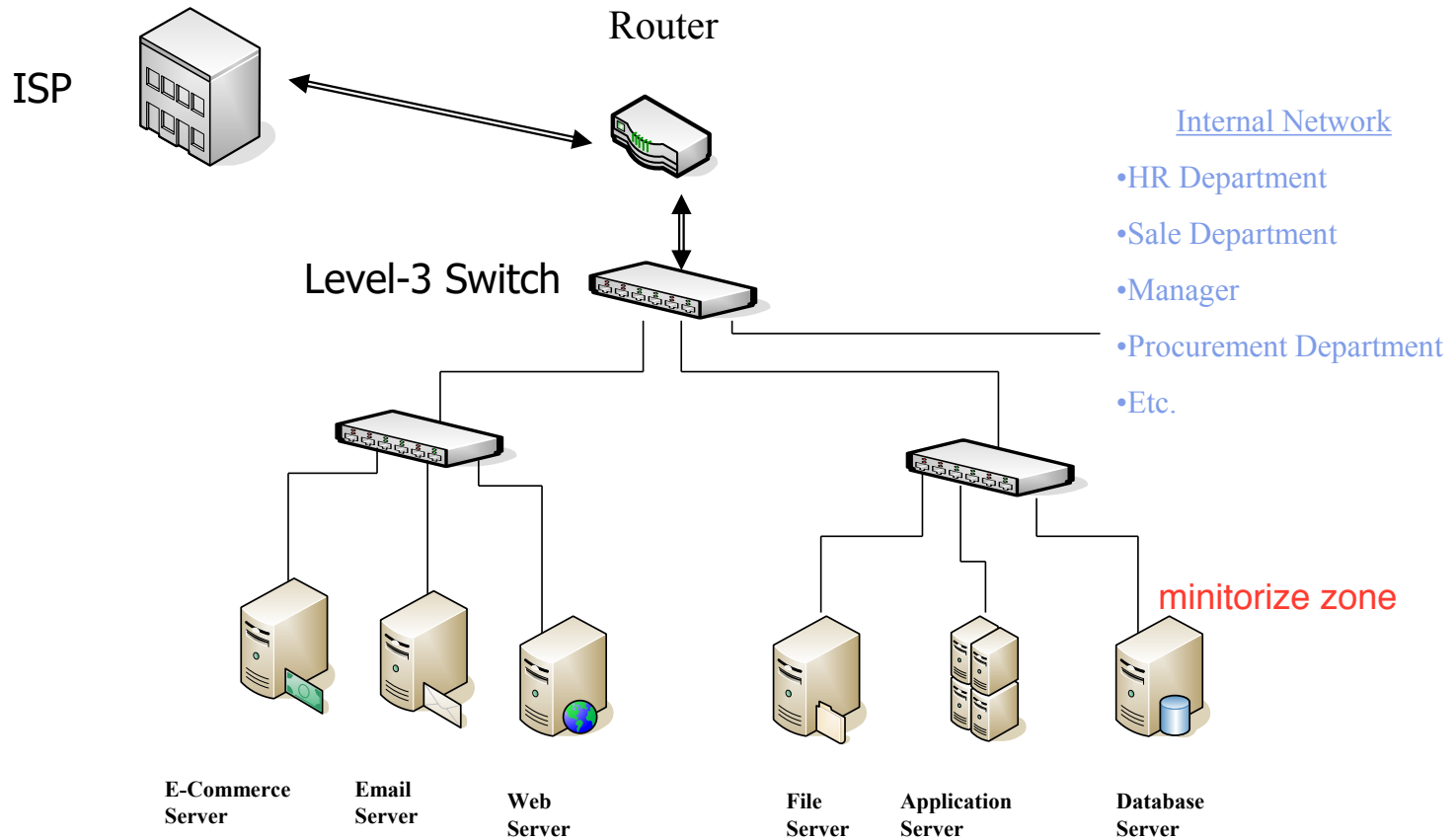
What else do we need

- Various server
- Two type of server
1. Intranet Server
    - File Server
    - Database Server
    - Application Server
    - ERP Server
2. Internet Server
    - Mail Server
    - Web Server
    - Online Business Server
    - VPN Server

Implement servers

ISP

Router

Level-3 Switch

Internal Network
- HR Department
- Sale Department
- Manager
- Procurement Department
- Etc.

minitorize zone

E-Commerce Server

Email Server

Web Server

File Server

Application Server

Database Server

So what next

- Business information is very important
- It need to be protected
  - Virus (Check virus every week)
  - Spyware (Check spyware every week)
  - Hacker

Every even on my notebook, I typical get 3-4 Spyware weekly
How about on your PC…. Have u every check it ?

Security and Policy

- Firewall
- Antivirus/Malware
- IDS/IPS
- Good policy and employee training

ISP Router IDS/IPS

Firewall

Good Policy and Employee training
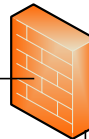
Antivirus

Level-3 Switch

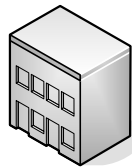E-Commerce Server   Email Server   Web Server   File Server   Application Server   Database Server
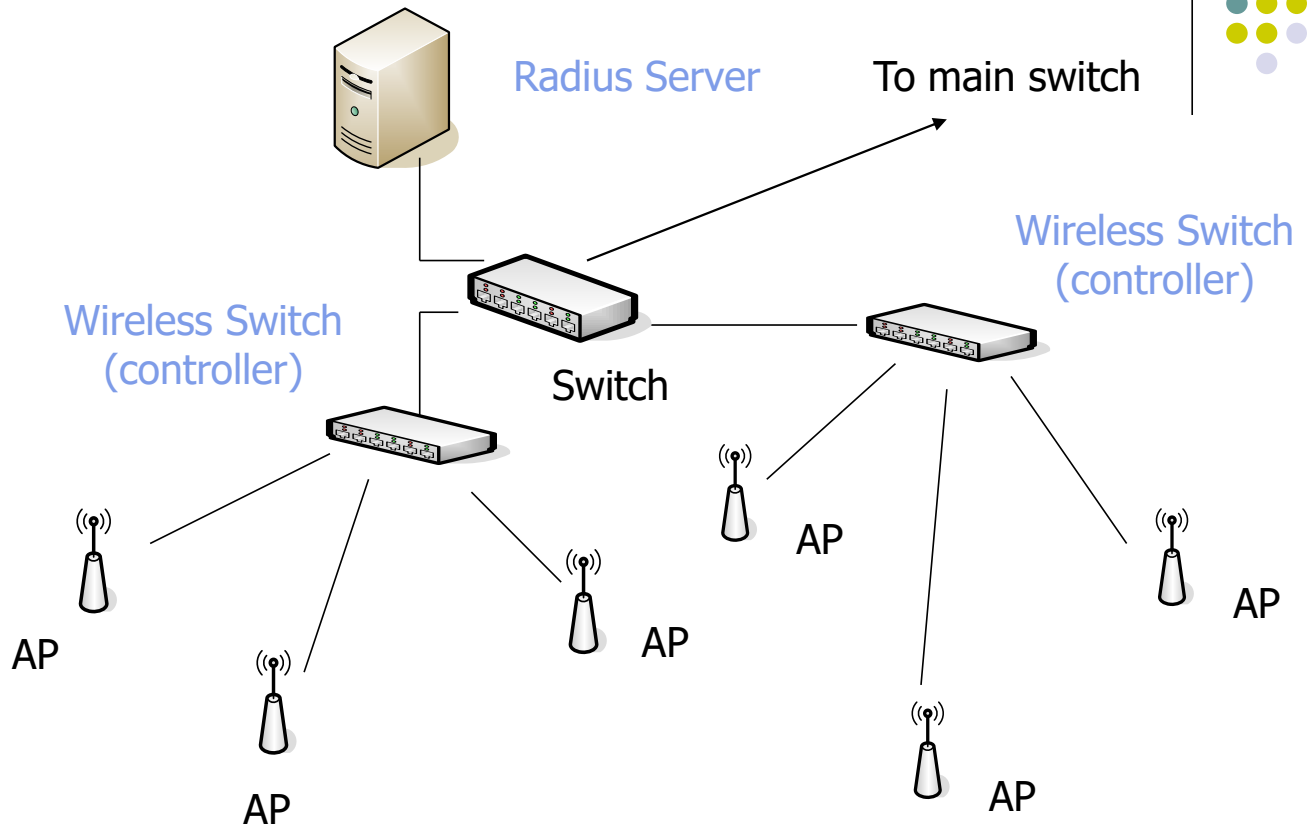
Our network is getting on the way

What else

- Wireless Network implementation
  - Wireless Network Set
  - Security in wireless network is very weak
 - Do not just buy cheap AP and plug in
  - Back Door for virus , hacker…

Secure Wireless LAN

Radius Server

To main switch

Wireless Switch
(controller)

Wireless Switch
(controller)

Switch

AP

AP

AP

AP

AP

AP

AP

AP

Other devices

- Backup solution
- Multiple offices connection
- VOIP Phone
- VPN Server (SSL-VPN)
- WAN Optimization
- Application Optimization, Firewall

ISP

Router

IDS/IPS

Firewall

WAN-ACC

SSL-VPN

Level-3 Switch

Antivirus

App Acc, Firewall

E-Commerce
Server

Email
Server

Web
Server

File
Server

Database
Server

Application
Server
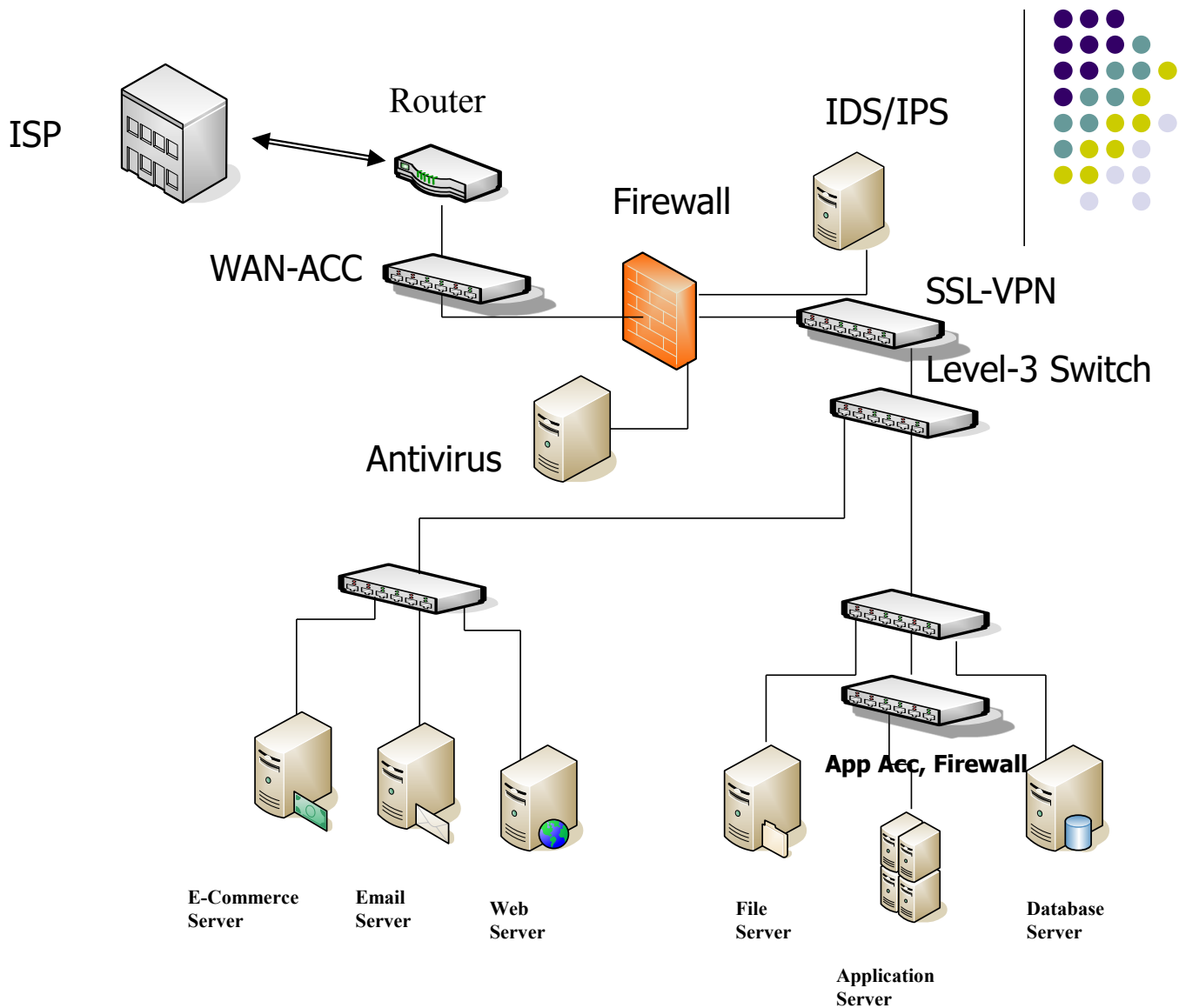
Our network is getting on the way

Questions