Brick and Mortar Enterprises

Nalini Elkins: Inside Products, Inc.

Mike Ackermann: Blue Cross Blue Shield of Michigan

Snehal Patel: Gap, Inc.

What are Brick and Mortar enterprises?

- By and large, quite geographically dispersed

- Use Internet for Business: But Internet is NOT the Business

- Have multiple types of networks

- Have been computerized for 40 – 50 years

- Large IT staff

- Time to market / ROI / business

What kind of networks

- Campus LAN

- Private WAN

- Extranet (Business partner connections: private)
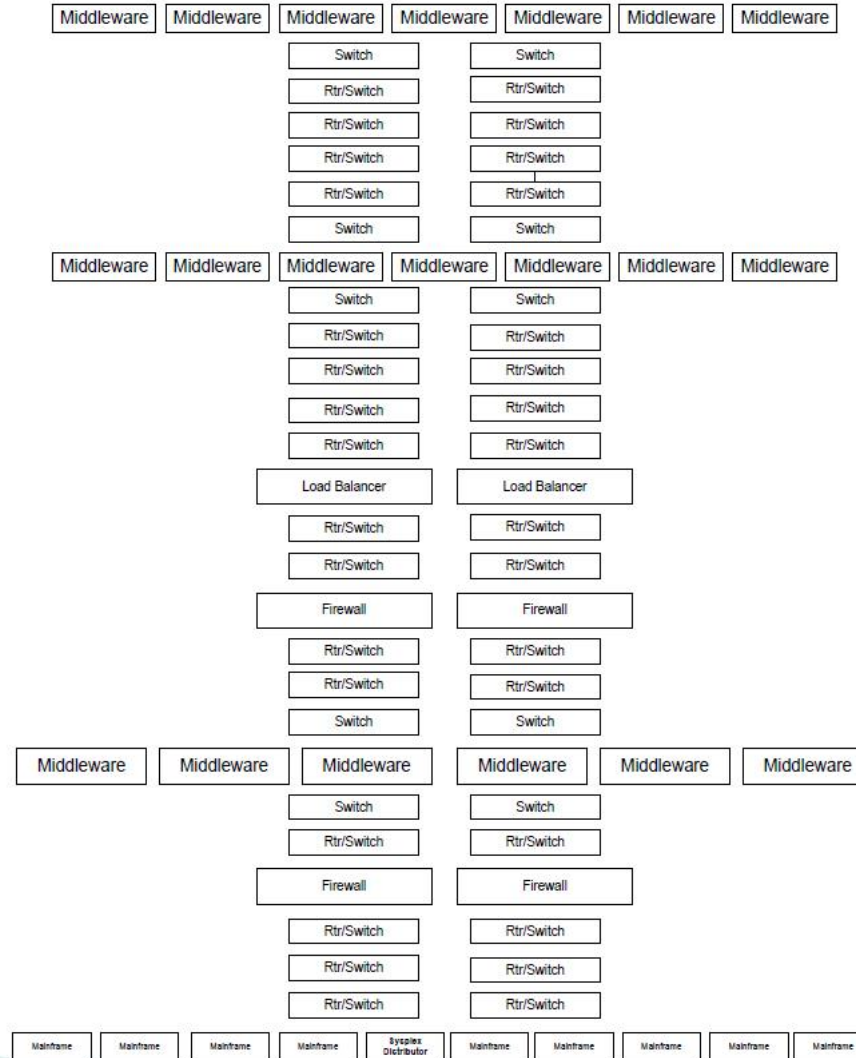
- Internet facing apps

Enterprise Operational Support Environment
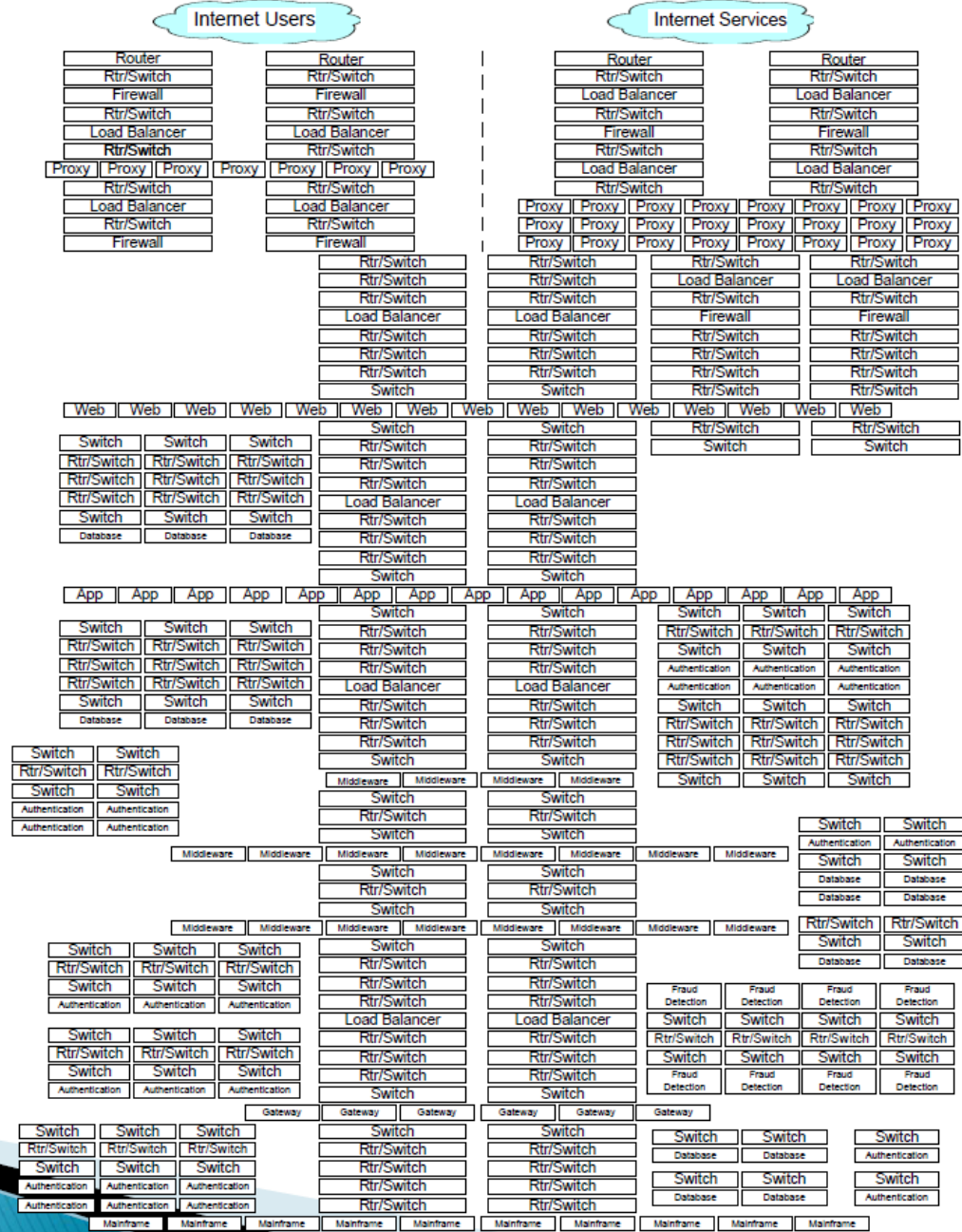
One Internet
Facing
Application

2000 Total
Applications

Middleware Troubleshooting Example

Data Center Routing protocols used

- OSPF

- EIGRP

- Some BGP

- RIP (not all that much)

- Static routes (actually maybe a fair amount)

Route Summarization

- Strategies to minimize LSAs with OSPF

- Use BGP internally to summarize

- Other routing protocols also summarize.

- This is our job to do!

Many "middle boxes"

- Layers of:
  - Load balancers
  - NATs
  - Firewalls
  - App servers
  - Web servers
  - Proxies

- Mainframe is back-end (quite often)
- Big databases

Applications

- From the stone age to the space age

- Thousands of applications

- Hard to convert

- Relational data bases used

Future

- SDN

- Containers / orchestration

- Hybrid cloud