# Annual NOC Meeting 2016 - LEARN



SOUTH EASTERN UNIVERSITY OF SRI LANKA

BY:

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# SOUTH EASTERN UNIVERSITY OF SRI LANKA
# STAFF & STUDENTS DETAILS

| FACULTY | STUDENTS | STAFF(ACADEMIC) |
|---|---|---|
| Faculty of Engineering | 286 | 603 |
| Faculty of Management and Commerce | 1060 | |
| Faculty of Applied Sciences | 548 | |
| Faculty of Arts and Culture | 909 | |
| Faculty of Islamic Studies and Arabic Languages | 882 ------- Total: 3685 | |

# SOUTH EASTERN UNIVERSITY OF SRI LANKA NETWORK LOCATIONS

- OLUVIL.
  - Faculty of Engineering (FE).
  - Faculty of Management and Commerce(FMC).
  - Faculty of Arts and Culture (FAC).
  - Faculty of Islamic Studies and Arabic Languages(FIA).
  - Main Library.
  - Computer Unit.
  - Dept. of Mechanical Engineering .
  - Administrative Block.
  - Other Labs.

- SAMMANTHURAI.
  - Faculty of Applied Sciences.

# NETWORKING DEVICES

- More than 800 Network Computers.
- 66 Layer 2 Switches.
- 3 Layer 3 Switches.
- 14 Servers (Tower & Rack Mounted).
- 50 wireless access point
- Cisco Call Manager BE6000
  - This provides connectivity to the IP Phones. Currently IP Phones are installed at Eng faculty and the Library
- Cisco 2801V router
  - This is used to route calls from Cisco CallManager to the existing analog PABX. Connected through two extension lines
- 55 IP Phones (VoIP)
- CCTV

# INTERNET SERVICES

- Internet Service (for 4500 people)

  - We are using Squid Proxy Service for ethical internet usage on Linux Platform (CentOS )
    - 112 mbps internet bandwidth and 150 mbps local link bandwidth in oluvil
    - 60 mbps internet bandwidth and 80 mbps local link bandwidth in faculty of Applied Sciences in sammanthurai
  - WI-FI Internet services provided  in Library and  FE for Students and Staff.
  - Mobitel Wi-Fi Internet Solution provided  temporarily for      newly built FMC ,FIA and Administrative Building in FAS     which are not connected to NOC  so far.(20 mbps)

# NETWORK OPERATIONS

- InterVLAN Routing (25 Vlan Configured)
- Domain Controller & DNS
- DHCP
- VOIP
- Google Apps for Email .
- Proxy Server.
- Web Server (www.seu.ac.lk)
- Library Management Server (Koha)
- Learning Management  Server (Moodle).
- TFTP Server.
- Video Conferencing.
- Network Monitoring (NagiOS)
- CCTV System

# Updated since last NOC meeting(2014).

- Data and voice Networking done for New Library buildings and Faculty of Engineering .
- IP PBX implementation with IP Phones for above both areas .
- Email migrations for Google Apps.
- Internet Bandwidth Increased from 32 to 112 mbps in oluvil and 16 to 60 in sammanthurai .
- Learning Management Services (Moodle ) for all faculties.
- Library Management System (Koha)
- Digital Library (DSpace)
- Several Network Switches Added
- Network Monitoring (NagiOS)
- Wi-Fi internet solution provided for students

# NETWORK TOPOLOGY- Oluvil

# Continue...



FACULTY OF APPLIED SCIENCES- SAMMANTHURAI
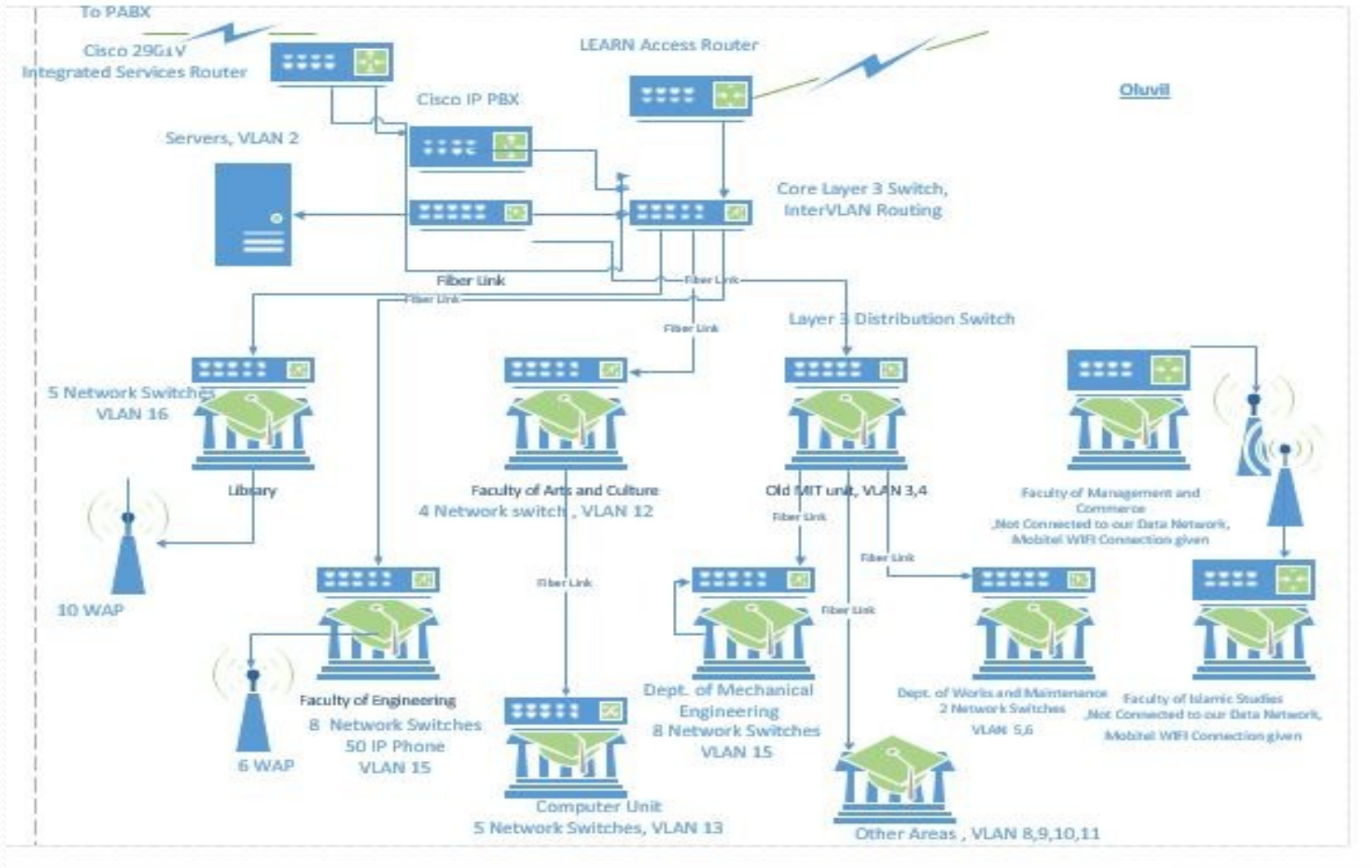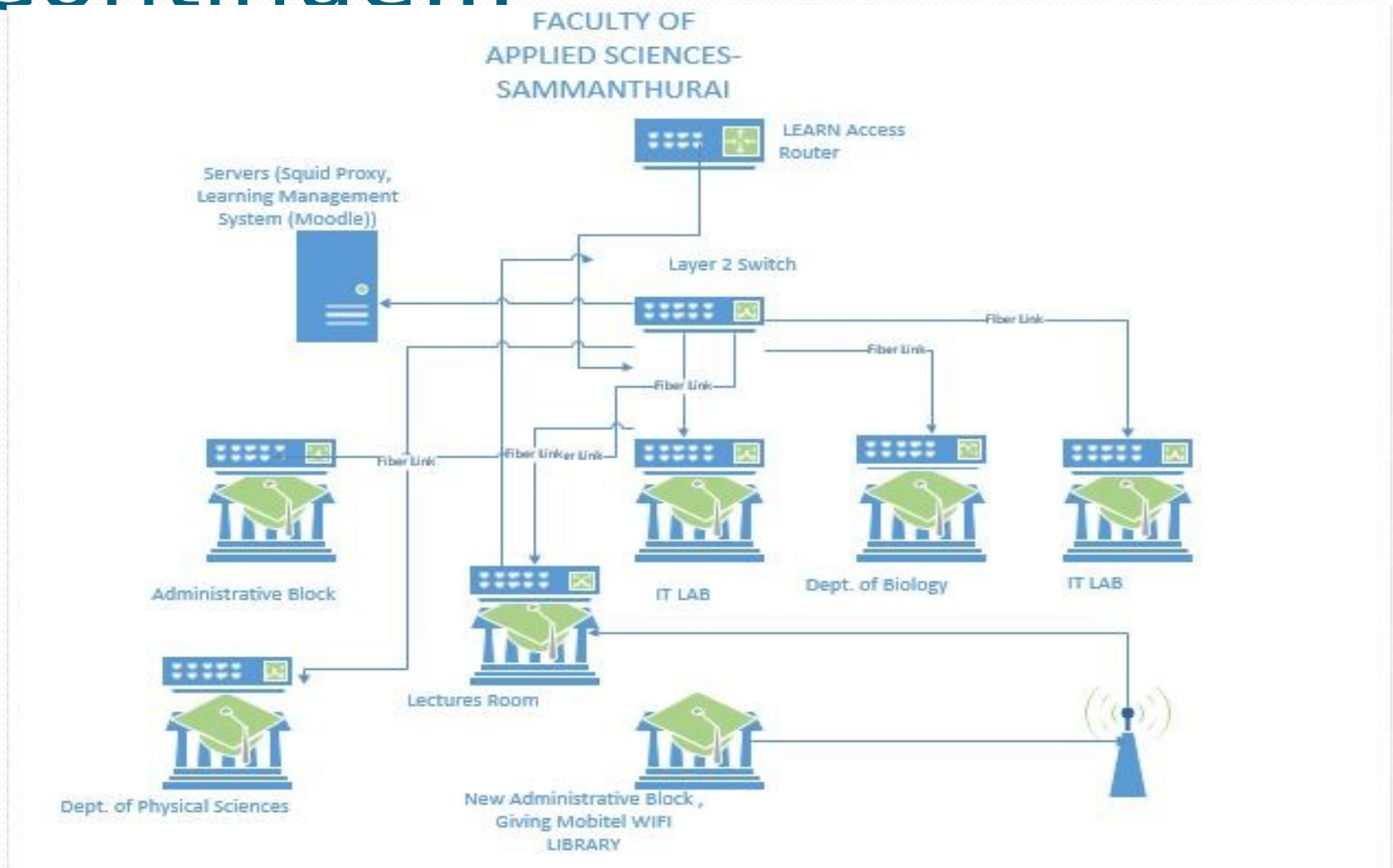
# FUTURE DEVELOPMENT PLAN

- ➤ IPV6
  - ➤ seusl - 2401.dd00:68::/48

- ➤ Cable Networking for FMC, Administrative block in sammanthurai and FIA.

- ➤ Wi-Fi Coverage for all area of the university .
- ➤ Wireless Controller

- ➤ Security Appliance(Hardware Appliance ). We facing some issues in squid proxy .

- ➤ VPN services .

# Continue..

➢ Developing ICT Center

➢ IP-PBX for all faculties and Integrate with old  PABX system  .

➢ New Servers Implementation (such as File server)
➢ Roaming User account for Students.

➢ Hosting Web Server Locally.

➢ Adding Distribution Switch to All faculties and buildings (Rearranging Network Topology)

# NETWORK SECURITY

- SSH Access  to Servers and Network Devices.

- Preventing Malicious Program into the Server or Network by blocking all unnecessary ports .

- Backup and Recovery.

# SUCCESSFUL STORIES AND EXPERIENCES

- Increasing Internet performance in squid proxy server by Increasing File Descriptor.
- NOC increased the bandwidth.
- Squid Proxy does not allow other ports . Any Ideas???

# QUESTIONS