

# Progress Updates of University of Moratuwa

By CITeS, University of Moratuwa



# LINE-UP

## **UoM Divisions and Staff**

15 Permanent employers and 2 contract employers. With 4 main operational sub divisions

## **NoC Services**

Self hosted It services to education and administrative for Staff and Students.

## **Internet and Cloud Services**

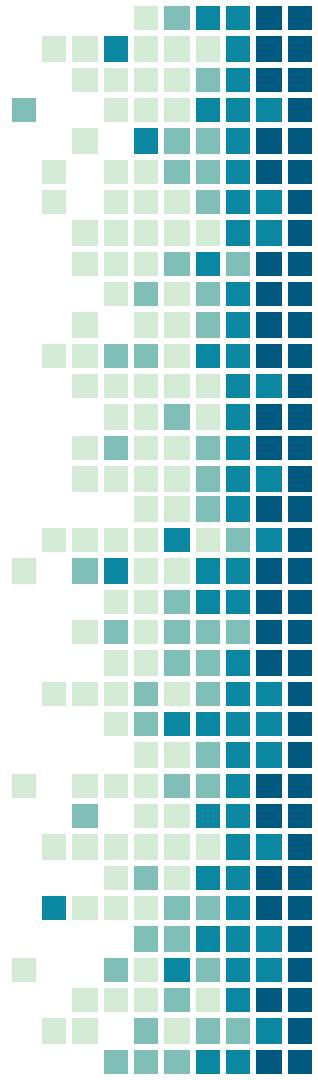
Interconnecting the departments and divisions.  
Providing cloud-based services

## **Network Monitoring**

Includes monitoring, management, and maintenance of an organization's IT infrastructure.

## **Challenges and opportunities**

Evolving threats and system complexity but offers opportunities for enhanced efficiency and cybersecurity innovation.



# HELLO!



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Management Assistant

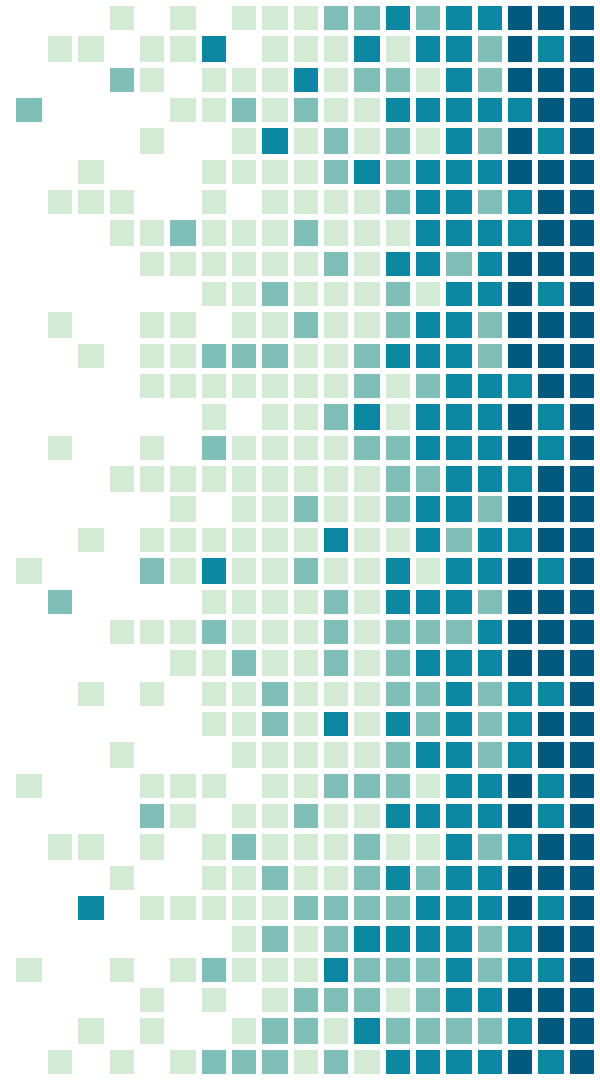


**Saman Kumara**

Lab Attendant



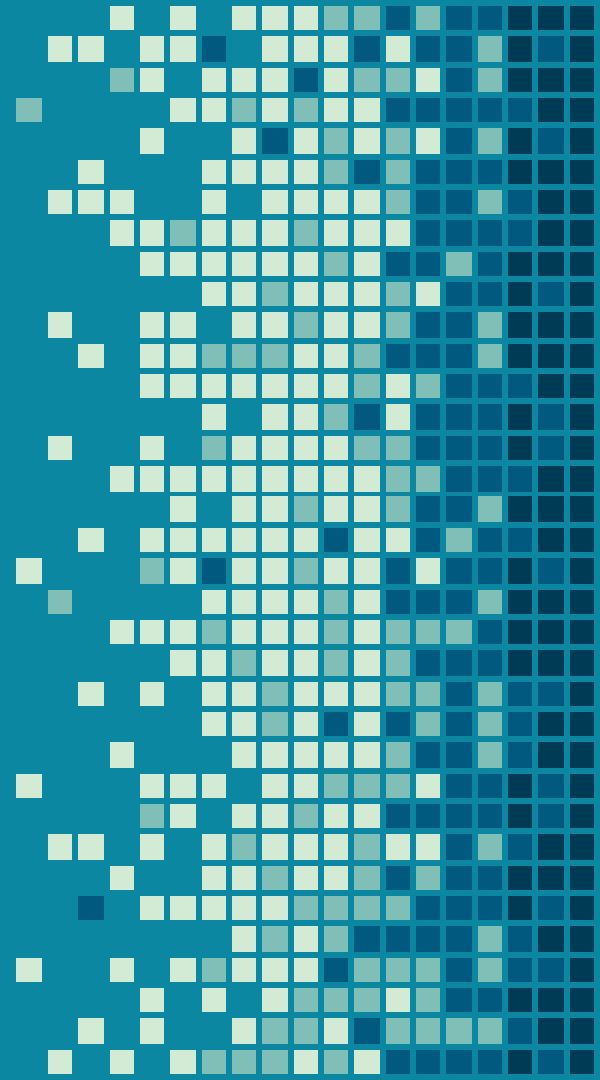
NoC  
SERVICES



*Email.*

“ *Email.*

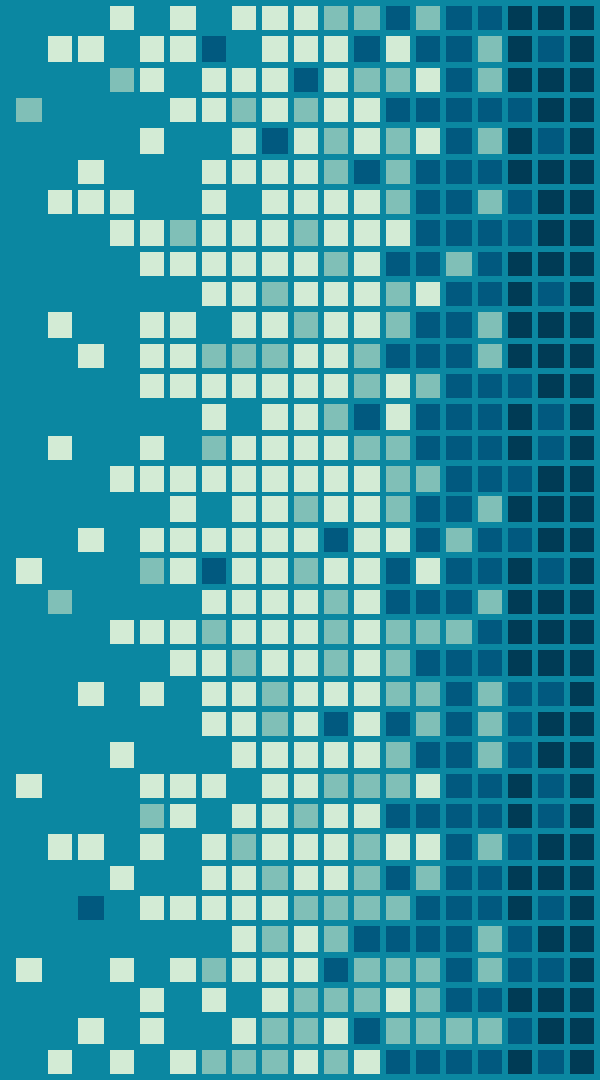
Both server and client services  
hosted on prem with active spam  
filtering.



“ *DNS.*

On prem DNS Services with DNS Sec. Used as a recursive DNS and have hosted multiple zones.

*Email.  
DNS.*



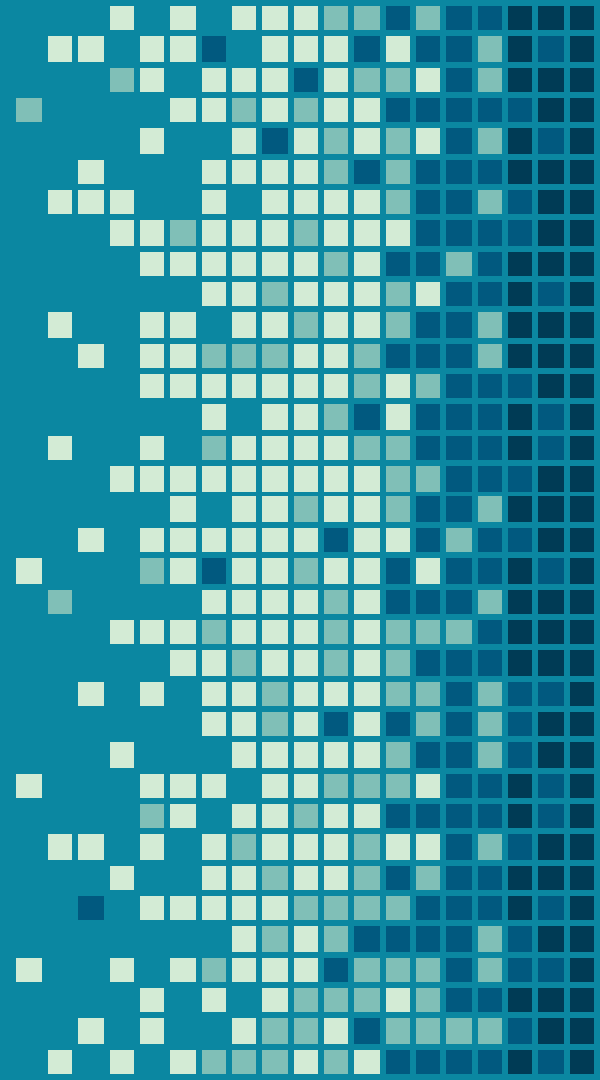
“ *Moodle based LMS.*

Single LMS for all faculties with high availability. Provide multiple interactive learning contents.

Secure Exams support

Paid and Custom Plugins

*Email.  
DNS.  
LMS.*



““ *Students and Staff  
Management System.*

Inhouse developed system which  
connected All administrative and  
academic services.

*Email.  
DNS.  
LMS.  
Students & Staff MS.*



## ““ *Library Management Systems.*

Inhouse hosted library management system including a digital repository system, and a portfolio management system.

*Email.  
DNS.  
LMS.  
Students & Staff MS.  
Library MS.*

## ““ *Single sign-on.*

LDAP based user authentication and Active Directory based device authentication.

*Email.*

*DNS.*

*LMS.*

*Students & Staff MS.*

*Library MS.*

*LDAP/AD.*

## ““ *File Sharing.*

Inhouse Web based Document Management system.

*Email.*

*DNS.*

*LMS.*

*Students & Staff MS.*

*Library MS.*

*LDAP/AD.*

*File Sharing.*

## “ VPN.

VPN services provide secure, encrypted connections over the internet, enabling users to access University networks and protect their online privacy.

*Email.*

*DNS.*

*LMS.*

*Students & Staff MS.*

*Library MS.*

*LDAP/AD.*

*File Sharing.*

*VPN.*

“ *Eduroam and Edugain.*

Provide Identity services via LEARN federation.

*Email.*

*DNS.*

*LMS.*

*Students & Staff MS.*

*Library MS.*

*LDAP/AD.*

*File Sharing.*

*VPN.*

*Eduroam and Edugain.*

## “ VOIP.

Hardware and software-based telephony system.

*Email.*

*DNS.*

*LMS.*

*Students & Staff MS.*

*Library MS.*

*LDAP/AD.*

*File Sharing.*

*VPN.*

*Eduroam and Edugain.*

*VOIP.*

## “ *Web hosting services.*

Providing hosting services to the main website as well as academics portfolios.

150+ VPS for Staff and Students  
Projects

*Email.  
DNS.  
LMS.  
Students & Staff MS.  
Library MS.  
LDAP/AD.  
File Sharing.  
VPN.  
Eduroam and Edugain.  
VOIP.  
Web hosting services.*

## ““ *Software Licensing.*

Microsoft, ArcGIS, Autodesk,  
MATLAB, etc.

Antivirus Solution.

*Email.*

*DNS.*

*LMS.*

*Students & Staff MS.*

*Library MS.*

*LDAP/AD.*

*File Sharing.*

*VPN.*

*Eduroam and Edugain.*

*VOIP.*

*Web hosting services.*

*Software Licensing.*



## ““ *Help Desk.*

Centralized support service resolving user issues, providing technical assistance, and ensuring smooth operation of IT and non-IT services.

*Email.*

*DNS.*

*LMS.*

*Students & Staff MS.*

*Library MS.*

*LDAP/AD.*

*File Sharing.*

*VPN.*

*Eduroam and Edugain.*

*VOIP.*

*Web hosting services.*

*Software Licensing.*

*Help Desk.*



## *Wi-Fi.*

University wide enterprise grade wireless service.

200+ APs.

85% covered including Hostels

*Email.*

*DNS.*

*LMS.*

*Students & Staff MS.*

*Library MS.*

*LDAP/AD.*

*File Sharing.*

*VPN.*

*Eduroam and Edugain.*

*VOIP.*

*Web hosting services.*

*Software Licensing.*

*Help Desk.*

*Wi-Fi.*

## “ Video Conferencing.

Zoom

Teams

BigBlueButton.

Email.

DNS.

LMS.

Students & Staff MS.

Library MS.

LDAP/AD.

File Sharing.

VPN.

Eduroam and Edugain.

VOIP.

Web hosting services.

Software Licensing.

Help Desk.

Wi-Fi.

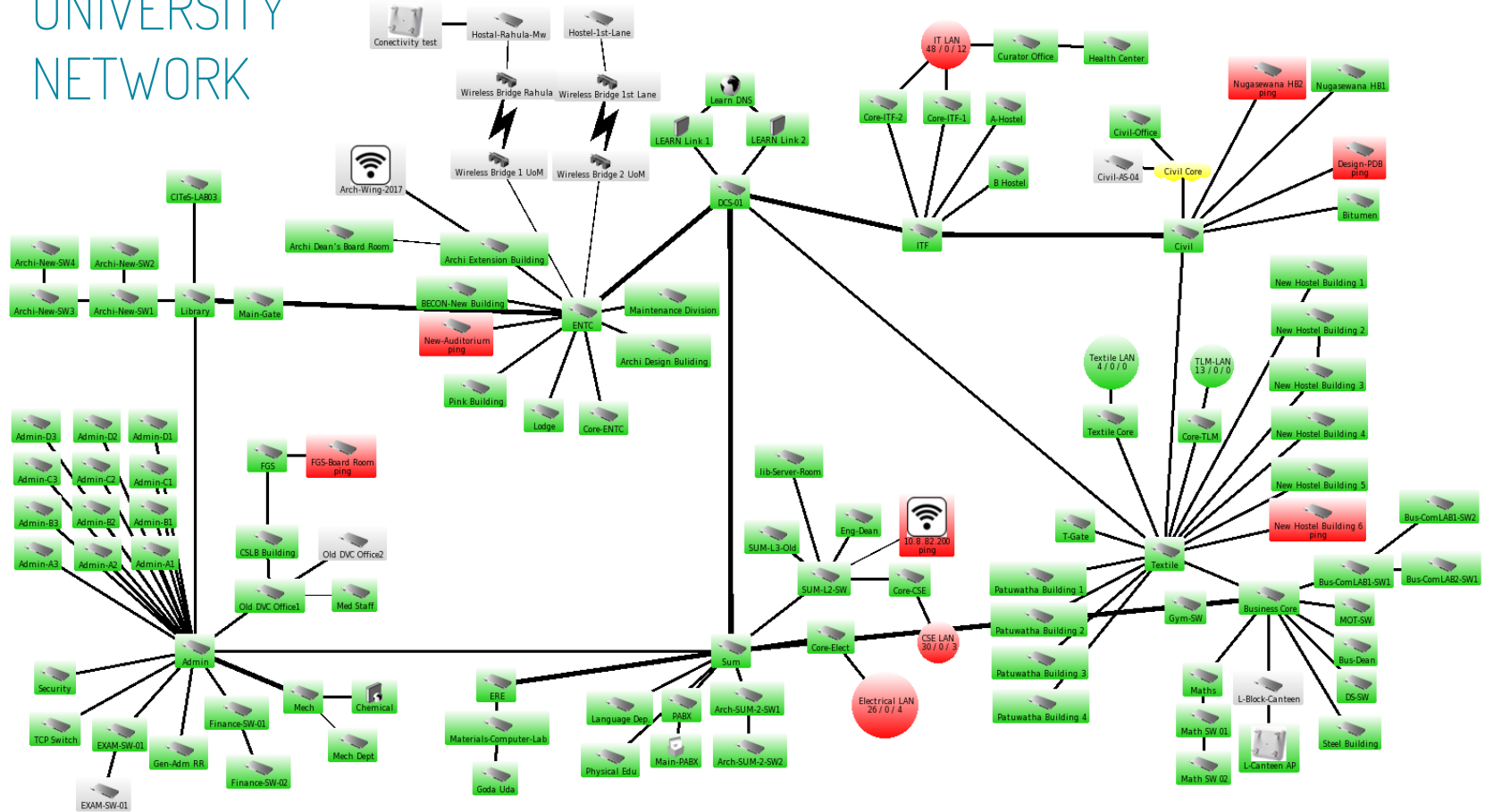
Video Conferencing.

# INTERNET AND CLOUD SERVICES

- Two links from LEARN
  - 1.4 Gbps – Main link
  - 300 Mbps – Backup link
- Interconnecting Five faculties, Administrative divisions and Centers up to 40 Gbps Backbone.
- Microsoft and Google.



# UNIVERSITY NETWORK





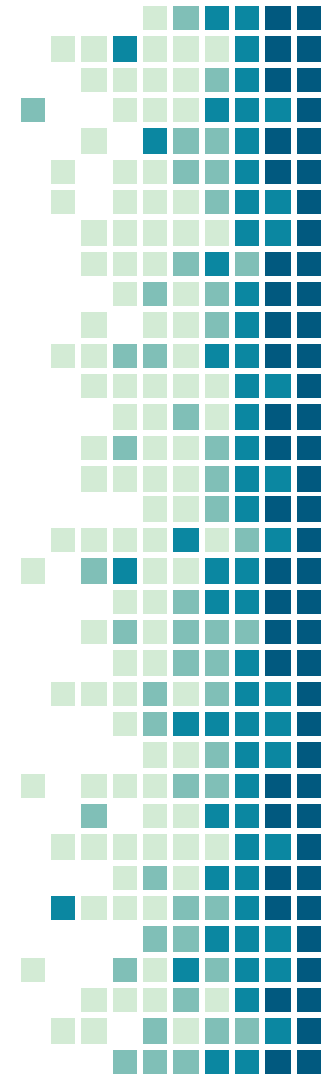
# NETWORK MONITORING

Monitoring, Management, and Maintenance of an organization's IT infrastructure.

# MONITORING



Performance Monitoring  
Fault Monitoring  
Security Monitoring  
Configuration Management  
Resource Utilization  
Traffic Analysis  
Alerting and Notification  
User Activity Monitoring



# MANAGEMENT

Patch Management

Backup Systems

Documentation Update





# MAINTENANCE

- Hardware Maintenance
- Power Management  
Three power sources  
Solar, Generator and  
National Grid.
- Security Updates
- User Training



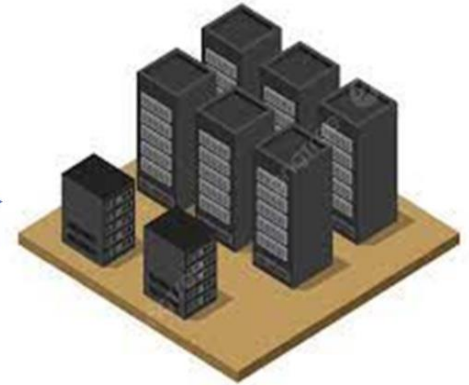
450 kW  
810 kW



350 kW  
400 kWh



80 kW





“ Challenges and  
Opportunities.

Budget allocation

Recruitment restrictions

Spam and phishing

Device failure

Industry support for R&D

Training & awareness programmes

# THANKS!

Team – CITEs

University of Moratuwa

