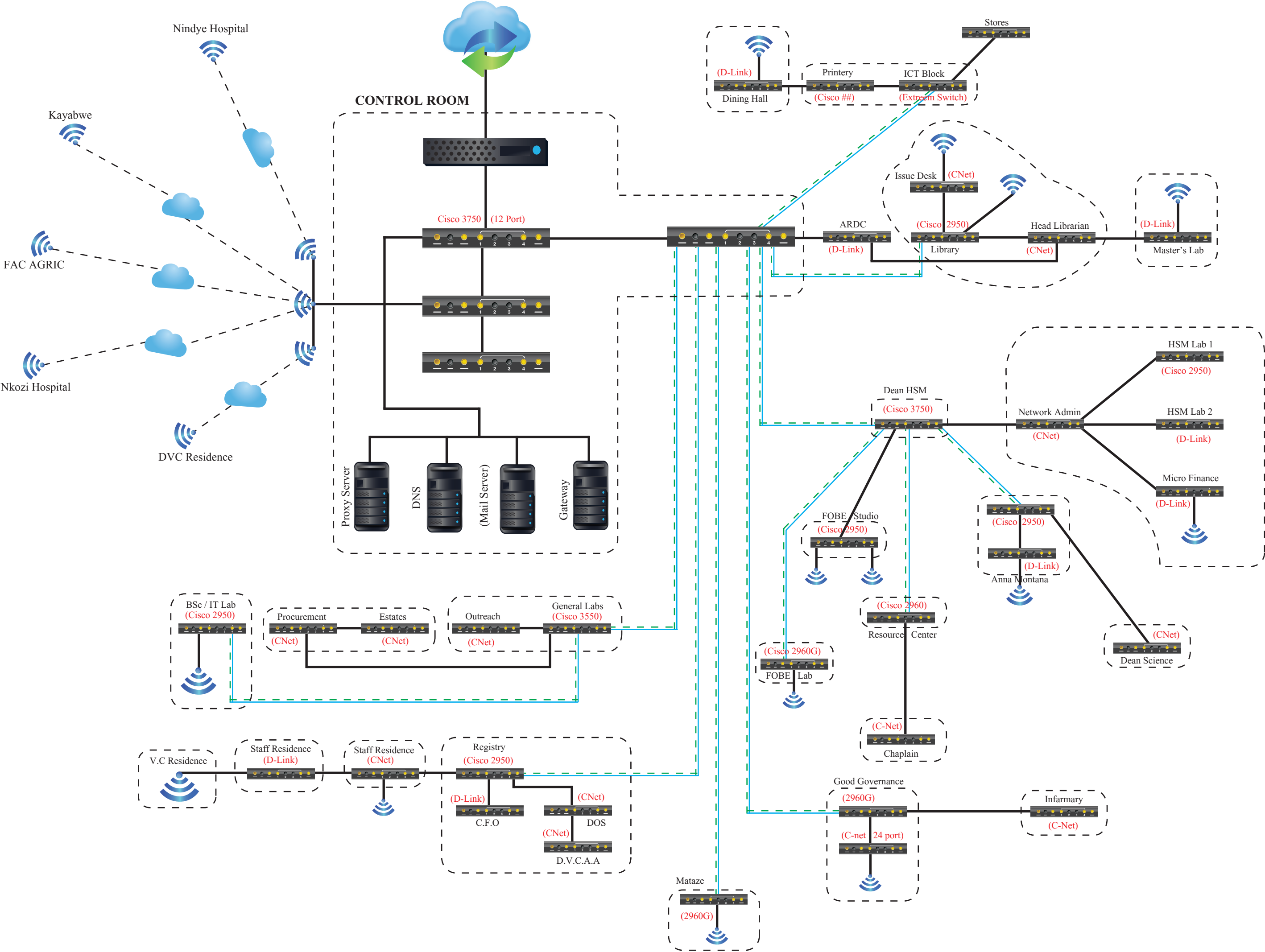


UGANDA MARTYRS UNIVERSITY - NETWORK STRUCTURE



	Gateway
	Switch
	Server
	Access Point
	Fiber Connection
	Cat 5 / Cat 6
	Wireless Connection / Cloud
	Within one building

SOURCE	DESTINATION	MEDIA	DISTANCE (Meters)
12 Port fiber switch 3750	A-Glab -Cisco 3550	Fiber Optic(SM)	30
A-Glab- Cisco 3550	BIT -Cisco 2950	Fiber Optic(SM)	120
12 Port fiber switch 3750	Onyango-Cisco 2950	Fiber Optic(MM)	40
Onyango -Cisco 2950	Staff Residence 1 -Cnet	CAT6	30
PRO-Cnet switch	Staff Residence 2 -DLink	CAT6	30
Staff Residence 1	VC Residence	CAT6	10
12 Port fiber switch 3750	Mataze-Cisco 2960G	Fiber Optic(MM)	40
12 Port fiber switch 3750	Good Gov Lab –Cisco 2960G	Fiber Optic(MM)	100
Good Gov Lab-Cisco 2950G	Good Gov Office 24E- Cnet	CAT6	10
12 Port fiber switch 3750	FHS-Cisco 2960G	Fiber Optic(MM)	300
FHS-Cisco 2960G	ANNA-Cisco 2950	Fiber Optic(MM)	50
FHS-Cisco 2960G	Resource Center	Fiber Optic(SM)	100
LIB –Cisco 2950	MA lab-Dlink	CAT6	20
LIB-Cisco 2950 (##)	ARDC-Dlink	CAT6	40
ARDC-Dlink	HED LIB	CAT5	30
Good Gov Lab-Cisco 2960G	Infirmary-Cnet	CAT6	40
ICT Block-Extreme Switch	Stores-Cnet	CAT6	30

KEY
SM=Single Mode Fiber Optic.
MM=Multimode Fiber Optic.
D-link and Cnet Switches are unmanaged switches linking separate buildings.

The future network should be catalyzed with Fiber optic connecting between buildings which are currently interconnected with CAT 6 Copper lines. This has resulted to switch port blowing due to lightening strikes.
Currently, the network is a flat network, characterized by the private Class C IP addressing scheme based on physical location, network devices and stakeholders.
From 172.16.2.xxto 172.16.22.xxx

Therefore the proposed network will be hierarchically addressed and segmented basing on the yard stick stated in the current network IP addressing scheme.

The university has one public IP 41.210.161.214

Locally, we use class C addresses, 172.16.0.0

IP Address Ranges

172.16.2.1 – 254 Library
172.16.3.1 – 254 Ms. Health Science Lab
172.16.4.1 – 254 BSc. IT Lab
172.16.5.1 – 254 FoBE Lab
172.16.6.1 – 254 Staff Laptops LAN
172.16.7.1 – 254 Cisco Lab
172.16.8.1 – 254 Postgraduate Lab
172.16.9.1 – 254 Gen Comp Lab
172.16.10.1 - 254 Visiting Lecturers and Other Visitors
172.16.13.1 – 254 Staff Laptops Wi-Fi
172.16.15.1 – 254 Resource Center
172.16.16.1 – 254 Thin Clients
172.16.17.1 – 254 Nuffic Resource Center
172.16.21.1 – 254 Printers & Photocopiers
172.16.22.1 – 254 Staff Office Desktops
172.16.50.1 – 254 Servers

172.16.11.1 – 254 Students
172.16.14.1 – 254 Students
172.16.18.1 – 254 Students
172.16.19.1 – 254 Students

Access Lists

cisco
hsmllab
postgrad
student
wireless
bscit
desktop
library
resource
thinclient
btlab
general
nuffic
staff
visitors