



Summer2020

Report on the Mini Project,

Designing a Full-fledged Network

For an Organization (APEX UNIVERSITY)

Course Title: Computer Networks

Course Code: CSE405

Section: 01

Submitted by,

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Submitted to,

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Acknowledgement:

All Praises and Credit Goes to the Almighty for his blessing to complete this project and the report of the project on “Building a Network for a University”. The project is one of the requirement for fulfillment of the course CSE405 which is titled as “Computer Networking”.

Enormous thanks to my honorable course instructor Dr. Anisur Rahman, Assistant Professor, East West University, for giving us this opportunity to learn something very practical by doing the project individually. I would like to show my gratitude for his valuable instructions, proper guidelines and fruitful advices related to the project.

Statement of the Project:

INTERNATIONAL Apollo University, is an enterprise like East West University, owns a large number of computers, with a complex network infrastructure. Apart from wired internet access to all the classrooms, labs, employee PCs, library and other administrative and academic wings, the university also provides wireless internet access for everyone. On top of that the university runs a number of complex networked systems to support several of its business process like admissions, advising, results, eTender, library management, accounts and so on.

This complex network infrastructure is subnetted and switching/routing mechanisms are in practice.

Software:

- Cisco Packet Tracer. □ Microsoft Office □ Notepad.
- Web browser

Recommended Operating System:

Winows 7/8/8.1/10.

Keywords:

- DNS Server
- Router
- Switch
- Straight through Cable
- Serial Connector
- Access Point Device
- Wireless Router

Topology:

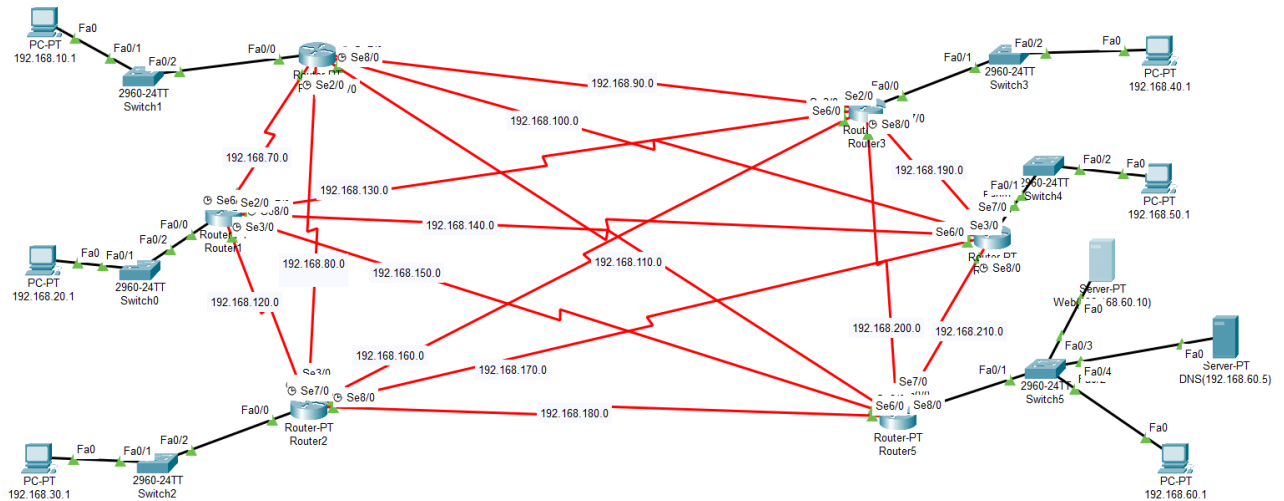


Figure-1: Network Topology using Cisco Packet Tracer

Verifications:

I have tried to ping from one PC to other PC to see if the internetwork connectivity is working properly. It has been successful every time. In the following picture, the pinging are shown.

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	192.1...	Router0	ICMP		0.000	N	0	(edit)	(delete)
	Successful	192.1...	Router4	ICMP		0.000	N	1	(edit)	(delete)
	Successful	192.1...	Router5	ICMP		0.000	N	2	(edit)	(delete)

Figure 2: Pinging

I have also requested for the university's web page writing the URL of the website using one of the PC's web browser. I have received the output as shown:

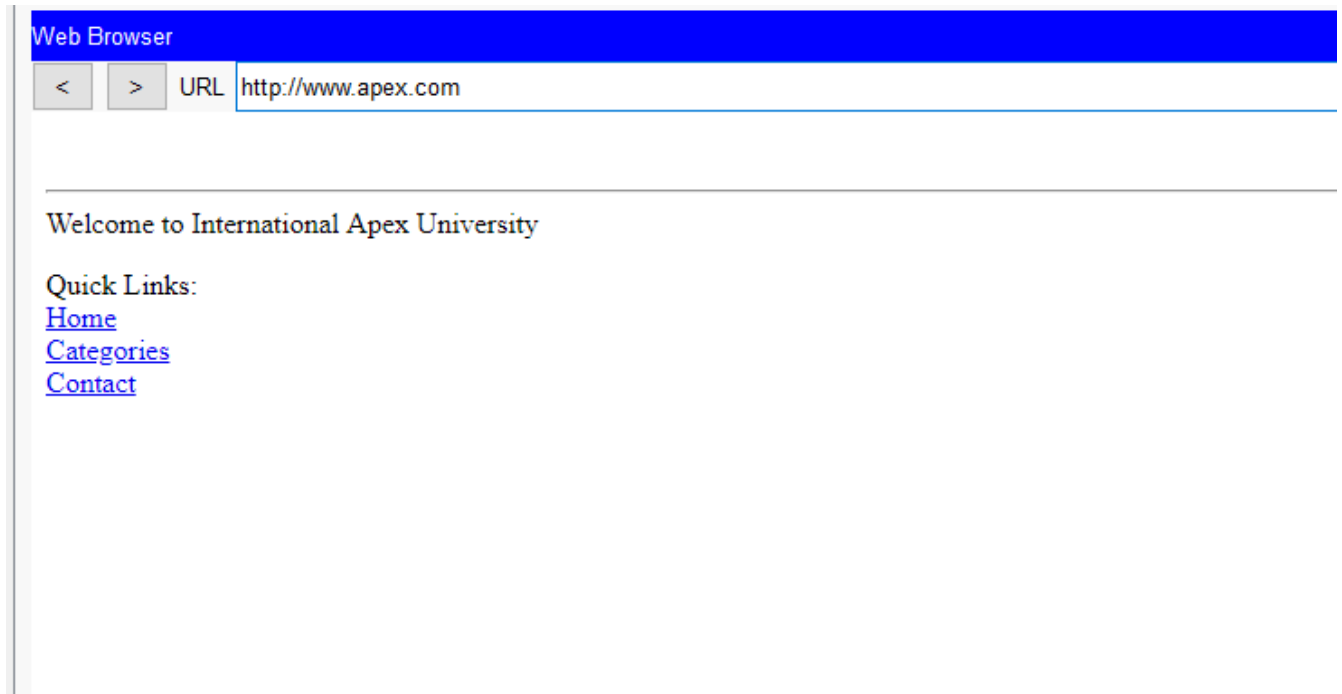


Figure 2: URL requests

I have also added another page for online advising in the DNS server. In the above picture the Advising link is visible. If we click on it, it will take us to the advising portal, which is still under construction.

Limitations:

For greater expansions of the subnets, there is not much scope. To create the scope, there must be several more routers connected through serial ports.

Conclusion:

Throughout the whole project, I have learnt how to design a complex network model using a Web Server and DNS server. The network model could be made more complex for greater expansion. However, this project is nothing, but a little step towards many large projects to come in my future.