Final Project: IP Telephony Implementation

Start Assignment

- Due No Due Date
- Points 100
- Submitting a file upload

Develop a network system for any company with the following requirements:

Main Branch
Any Company Name/Business
3-storey building
8 different departments or offices
IP addressing will be your choice
with Website, intranet email system
protocol used: OSPF
number of router: 2
number of MLS: 2
number of switch: 7
number of computers: 5/office
Number of phones: 2/office

Branch 1
number of router: 1
number of switch: 2
number of office: 3
number of computer: 2/office
Number of phones: 1/office
1 floor building
ISP connection: PLDT

Branch 2
number of router: 1
number of switch: 2
number of office: 3
number of computer: 2/office
Number of phones: 1/office
1 floor building
ISP connection: GLOBE

ISP (PLDT)
number of routers: 2
number of computers: none
number of MultiUser setup: 2
protocol used: EIGRP

ISP (GLOBE)
number of routers: 2
number of computers: none
number of MultiUser setup: 2
protocol used: EIGRP

Configure an IP Telephony system that enables communication between departments. Your network design will depend upon the number of offices within each floor, each office should have a minimum of 2 IP phones, and 5 computers. The main branch has 2 routers; 1 router will be connected to the PLDT-ISP, and the other 1 will be connected to GLOBE-ISP (cloud with 2 routers);

LAN implementation should have the ff:

1. Redundancy
2. Available and Reliable Networks
3. Switching Concepts, VLANs, and InterVLAN Routing
4. Layer 2 Security

Requirement:

The documentation will be submitted first as your proposed network plan. NO PLAN, NO PROJECT!
Every implementation will be based on your planning.

1. Compilation/Research Format Paper - 10 - 11pts font size
Detailed explanation about the procedure of how the network was developed, similar to the explanation of the research framework.

Chapter 1 - Introduction

Chapter 2 - Related Literature

Chapter 3 - Technical Background

Chapter 4 - Methodology

Chapter 5 - Discussion and Implementation

Chapter 6 - Conclusion and Recommendation

Appendices

screenshots

codes

floorplans

or/and other information

References

All in APA standard (*American Psychological Association) format*

2. Short Size Bond Paper
3. Working Packet Tracer File with Demo
4. List of commands per device - 8 pts font size
5. Deadline of submission: The documentation Plan will be submitted first, as scheduled. Implementation 1st week of the FINALS.
6. Additional information will be given by the instructor, therefore keep a tab on your account always.

Final Project Rubric (2)

Criteria	Ratings					Pts
Redundancy; Reliable and Available Networks	**15 pts** Implemented the Redundancy, Reliable and Available Networks without errors	**13 pts** Implemented the Redundancy, Reliable and Available Networks with minimal errors	**11 pts** Implemented the Redundancy, Reliable and Available Networks with substantial amount oferrors	**9 pts** Implemented the Redundancy, Reliable and Available Networks but not working	**0 pts** Did not Implement the Redundancy, Reliable and Available Networks	15 pts
Physical Topology and Addressing	**20 pts** The physical topology was configured correct and applied addressing without errors	**18 pts** The physical topology was configured correctly but with some minor issues and applied addressing without errors	**12 pts** The physical topology and addresses were applied but contains errors	**8 pts** The physical topology and addresses were applied but contains substantial amount of errors	**0 pts** No physical topology created	20 pts
IP Telephony	**20 pts** All IP Phones were configured and working correctly	**16 pts** 60% of the IP Phones were configured and working correctly;	**12 pts** 50% of the IP Phones are working correctly	**5 pts** Below 50% of the IP Phones were configured and working	**0 pts** IP Phones were not working	20 pts
Protocol Implementation	**10 pts** All Protocols were configured and working correctly	**7 pts** 60% of the protocols were configured and working correctly;	**4 pts** 50% of the Protocols were configured and working correctly;	**0 pts** The Protocols are not working		10 pts
Verification	**10 pts** All End Devices are working and communicating; used multiuser set up.	**7 pts** All End Devices are working and communicating; but did not use multiuser set up.	**6 pts** 60% of the devices are correctly configured and communicates; All End Devices are working and communicating; used multiuser set up.	**4 pts** 60% of the devices are correctly configured and communicates; All End Devices are working and communicating; did not use multiuser set up.	**2 pts** Less than 60% of the devices were configured and communicates properly	10 pts
Server Sevices	**15 pts** All Server Services, FTP, SMTP, HTTP are working without errors	**12 pts** 80% of the Server Services, FTP, SMTP, HTTP are working without errors; the rest are not working	**9 pts** 50% of Server Services, FTP, SMTP, HTTP are working without errors; the rest are not working	**3 pts** Implemented but not working	**0 pts** No Implementation	15 pts

Criteria	Ratings						Pts
Layer 2 Security Implementation	**10 pts** The L2 security was implemented without errors	**8 pts** The L2 security was implemented with minimal errors	**6 pts** The L2 security was implemented with substantial amount of errors	**4 pts** The L2 security was implemented but not working	**2 pts** Implemented but not working	**0 pts** No Implementation	10 pts
							Total Points: 100