HOSPITAL NETWORK DESIGN

A COURSE PROJECT REPORT

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BONAFIDE CERTIFICATE

Certified that this mini project report "**HOSPITAL NETWORK DESIGN**" is the bonafide work of **OM SINGH TONGAR ,EKTA KALRA,TUSHAR TANISHQ, SACHIN GUPTA, DEBMALYA SANTRA** who carried out the project work under my supervision.

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1. ABSTRACT

- This report describes the network design of Health care management or Hospital. In this network topology the nodes (i.e., computers, switches, routers or other devices) are connected to a local area network (LAN) and network via links (twisted pair copper wire cable or optical fiber cable). We have used Cisco Packet Tracer for designing the network topology It's a general design which can be implemented at any higher level to manage network system.

2.REQUIREMENTS

Requirement Analysis-

In Health care Network topology, we have desktop Computer, laptops, smart phone. There is a data flow between the devices within the system. We have divided our network into segments like for Hospital wards, clinical area etc. We have also used SSH for security. Our network requirements include network devices like routers, switches, server.

3.FEATURES AND SERVICES

- DHCP
- DNS
- Subnetting
- HTTPS
- SSH
- SMTP
- FTP
- WIFI

4.CONFIGURATION

The diagram is properly commented.We have divided the diagram into 6 segments as named above. Hospital Segments representing different departments of hospital. Following are the running configuration of routers and switches related to different segments of hospital respectively:

General Ward Switch	General Ward Router
Private WardSwitch	Private WardRouter
Clinical Area Switch	Clinical Area Router
IT Department Switch	IT Department Router
Entrance Switch	Entrance Router

5.IMPLEMENTATION

- Provide background information about the hospital network project
- Explain the need for the new hospital network and its potential benefits
- Describe the scope and objectives of the implementation plan

6.DEFINITIONS

DHCP : The Dynamic Host Configuration Protocol(DHCP) is a network management protocol used on UDP/IP networks whereby a DHCP server dynamically assignsan IP address and other network configuration parameters to each device on a network so they can communicate with other IP networks.

DNS : The Domain Name System is a hierarchical and decentralized naming system for computers, services, or other resources connected to the Internet or a privatenetwork.

SUBNETTING : A subnetwork or subnet is a logical subdivision of an IP network. The practice of dividing a network into two or more networksis called subnetting.

HTTPS : Hypertext Transfer ProtocolSecure is an extension of the HypertextTransfer Protocol. It is used for secure communication over a computernetwork and is widely used on the Internet. Hypertext Transfer Protocol Secure is an extension of the HypertextTransfer Protocol. It is used for secure communication over a computernetwork and is widely used on the Internet.

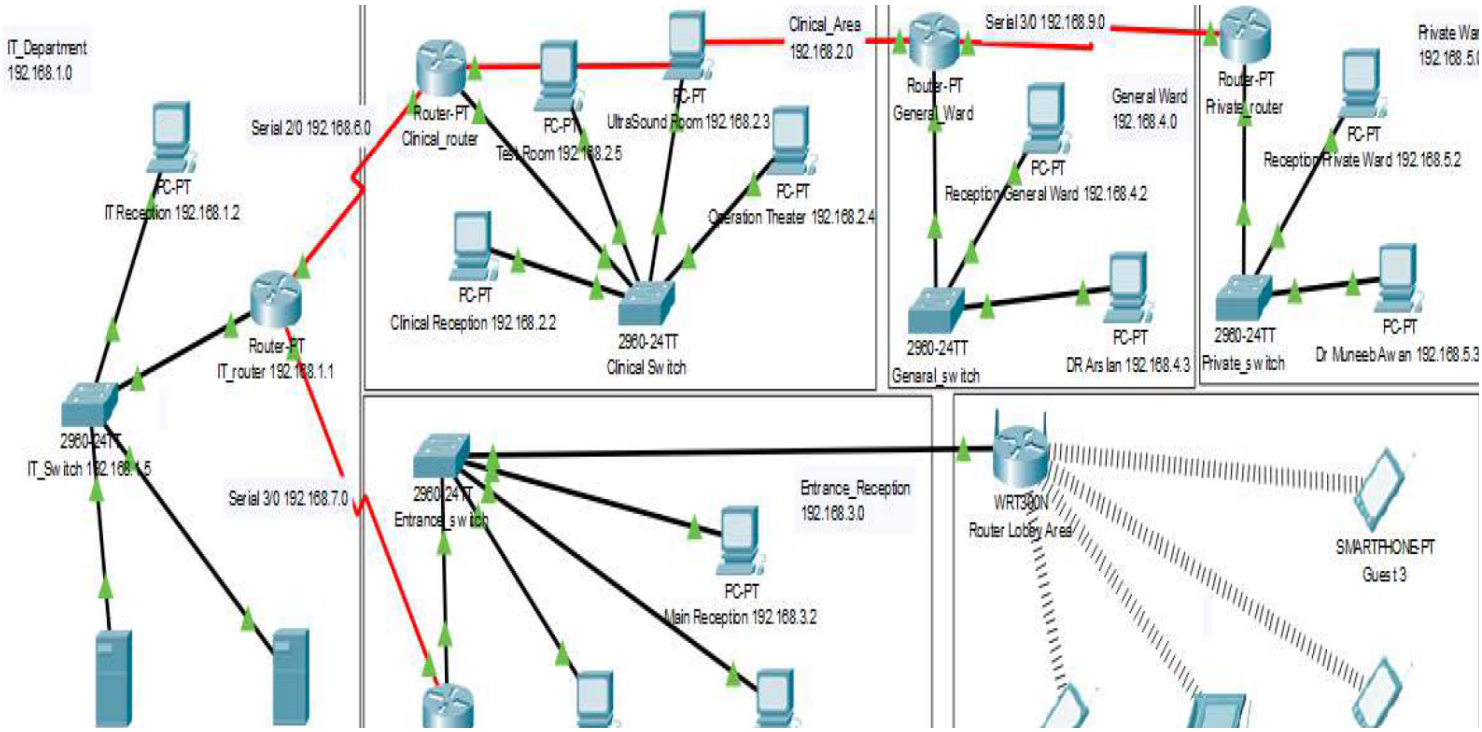
SSH : Secure Shell is a cryptographic network protocol for operating networkservices securely over an unsecured network.

SMTP : The Simple Mail Transfer Protocolis a communication protocol for electronic mail transmission.

FTP : The File TransferProtocol is a standard networkprotocol used for the transfer of computer files between a client and server on a computernetwork.

WI-FI : Wi-Fi is the name of a wireless networking technology that uses radio waves to providewireless high-speed Internet and network connections.

7. NETWORK DIAGRAM



8. CONCLUSION

This report describe show we have designed network topology of hospital (Health care Management System). With VLSM for Subnetting, segmented the diagram into 5 segments.This topology can also be implemented on higher level of hospitals.