A PROJECT WORK OF LAN CONNECTION OF COMPUTER CLASS

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Class: 24 Months IT
Subject: NETWORKING

1. IDENTIFY NEEDS AND REQUIREMENTS

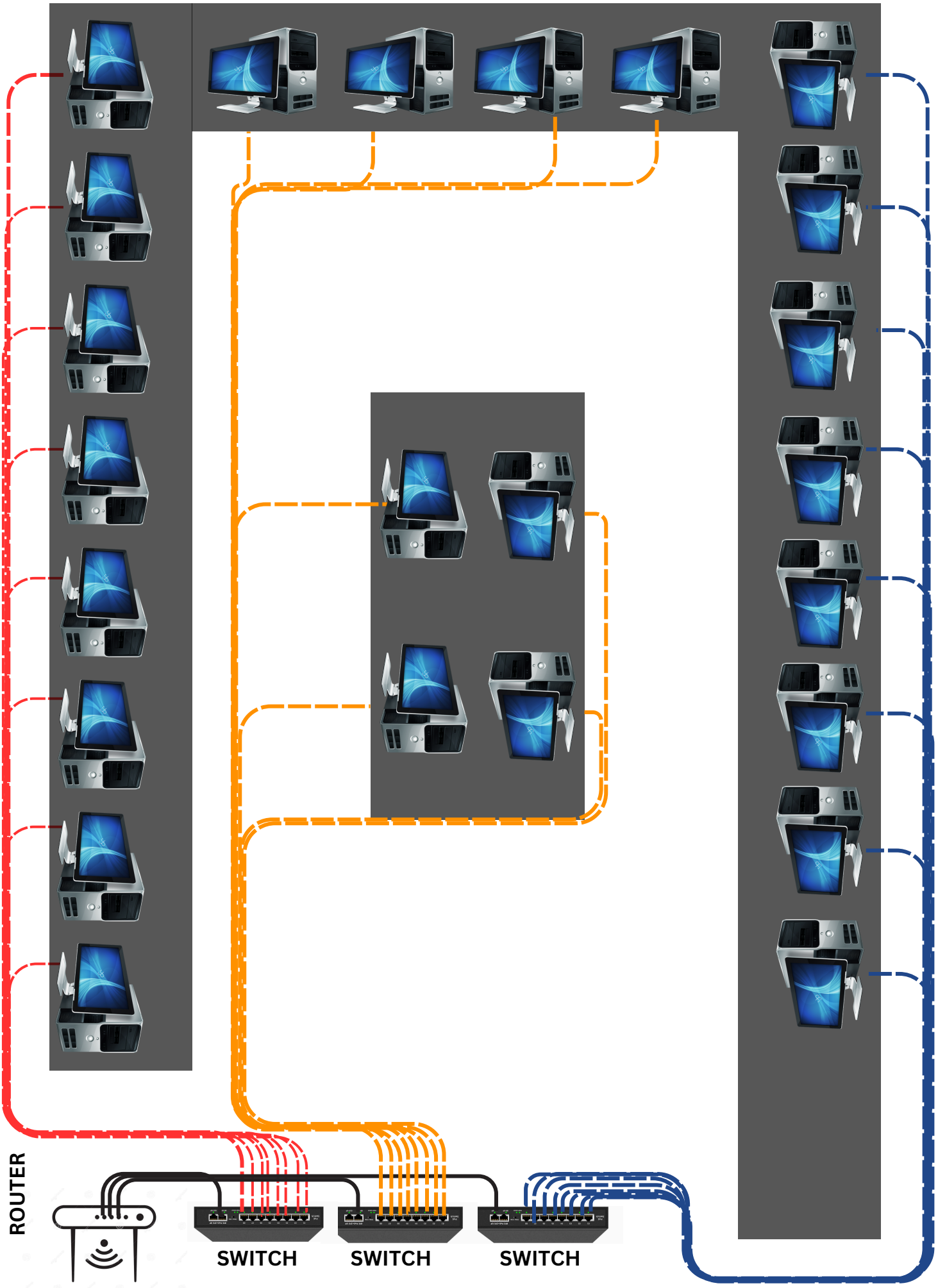
- 24 COMPUTERS
- ROUTER
- SWITCH 3 PICS (8 PORT)
- TWISTEDPAIR CABLE, 350M
- RJ45 CONNECTOR (54,EXTRA 5=61) PICS
- WIRE BEET
- MULTI-PLUG

2.ANALYZE CURRENT INFRASTRUCTURE

- 24 COMPUTER
- ROUTER
- SWITCH

3.Network diagram

> TWISTED PAIR CABLE



4.Choose Hardware & software

HARDWARE RECOMMENDATIONS:

COMPUTERS:
MODEL: DELL OPTIPLEX 3080 (DESKTOP)
SPECIFICATIONS:
INTEL CORE I5 PROCESSOR
8GB RAM
256GB SSD
WINDOWS 10 PRO

SWITCH:

MODEL: CISCO SG350-8 MANAGED SWITCH
SPECIFICATIONS:
8*3 PORTS (24 ETHERNET)

ROUTER:

- **MODEL: UBIQUITI EDGEROUTER 4**
- **SPECIFICATIONS:**
  - **ADVANCED ROUTING FEATURES**
  - **GIGABIT ETHERNET**

ETHERNET CABLES:

- **50M**

SOFTWARE RECOMMENDATIONS:

- **WINDOWS 10 PRO:**
- **ANTIVIRUS/ANTIMALWARE:**
- **FIREWALL**
- **VPN**

5.Assigning IP Addresses:

Device	IP Address
PC1	192.168.1.1
PC2	192.168.1.2
PC3	192.168.1.3
PC4	192.168.1.4
PC5	192.168.1.5
PC6	192.168.1.6
PC7	192.168.1.7
PC8	192.168.1.8
PC9	192.168.1.9
PC10	192.168.1.10
PC11	192.168.1.11
PC12	192.168.1.12
PC13	192.168.1.13
PC14	192.168.1.14
PC15	192.168.1.15
PC16	192.168.1.16
PC17	192.168.1.17
PC18	192.168.1.18
PC19	192.168.1.19
PC20	192.168.1.20
PC21	192.168.1.21
PC22	192.168.1.22
PC23	192.168.1.23
PC24	192.168.1.24

6.Create a Network Security plan

1. ***Conduct a Risk Assessment***
2. ***Develop Security Policies***
3. ***Choose Security Tool***
4. ***Deploy Security Measures***
5. ***monitor and update***

7.Plan for Network Support & Maintenance

- ***Troubleshooting network issues***
- ***Installing or upgrading network equipment and software***
- ***Regularly monitoring the network for irregularities***
- ***Optimizing network performance***
- ***Regularly backing up data in the network***

8.Document the Network

• GEOGRAPHY
IDENTIFY NETWORK SITES
• SITE CONNECTIVITY
TYPES OF LINKS
SPEED
. REDUNDANT LINKS
INTERNET
• DEDICATED LEASE LINE (BY PASSES THE INTERNET)
• NETWORK DEVICES
SERVERS
. ROUTERS
. SWITCH
. VPN APPLIANCE
FIREWALL APPLIANCE
• CONFIGURATION
• CHANGE LOG
PLACEMENT ON NETWORK
• NETWORK PROTOCOLS
. IPV4
IPV6
. ROUTING PROTOCOLS
. NETWORKING ADDRESSING
SPECIFIC USE OF NETWORK ADDRESS RANGES
AUTHENTICATION REQUIREMENTS
SINGLE VS. MULTIFACTOR
WHERE CERTAIN TYPES OF AUTHENTICATION ARE USED
• NAMING CONVENTIONS
SERVERS
. USERS
GROUPS
GROUP MEMBERSHIPS/ROLE-BASED ACCESS CONTROLD

9. TEST AND IMPLEMENT

1. Assess the project needs. Be the first to add your personal experience.
2. Design the logical network.
3. Design the physical network.
4. Implement the network.
5. Monitor and maintain the network.
6. Evaluate and improve the network.
7. Here's what else to consider.

10.Budget :

1.Computers:

24×25000=600000 INR

2.RJ45 Connectors:

54×3+5=162+5=167 INR

Switches: (8 port)

3×4000=12000 INR

Wire beet:

50×100=5000 INR

Multi Plug:

1×1500=1500 INR

cable:

50×36=1800 INr

Now, add all these costs together:600000+167+12000+5000 +1500+1800=620467 INR