

IP Addressing Table

Department/Network	Subnet	Device	IP Address	Notes
HR	192.168.10.0/24	PC0, PC1, PC3	192.168.10.2	Hosts
IT	192.168.20.0/24	PC2, PC4	192.168.20.2	Hosts
SALE	192.168.30.0/24	PC5, PC6	192.168.30.2	Hosts
ADMIN	192.168.5.16/29	ADMIN PC	192.168.5.18	Admin User
WEB Server	192.168.5.0/29	Web Server	192.168.5.3	Only accessible from some networks
NTP/TACACS Server	192.168.5.8/29	NTP & TACACS Server	192.168.5.9	Centralized Auth/Time Server
FINANCE	192.168.40.0/27	PC7, PC9	192.168.40.2	Hosts
R&D	192.168.40.32/27	PC11, PC12	192.168.40.34	Hosts
F&B	192.168.40.64/27	PC8, PC10	192.168.40.66	Hosts
Router Interfaces	192.168.1.0/30	G0/0–G0/2	192.168.1.1–1.2	Point-to-Point Links
Router Loopback /Mgmt	192.168.1.4/30	G0/0–G0/1	192.168.1.5–1.6	Router Mgmt

Configurations Done

OSPFv2 Enabled on Routers

- Secure OSPFv2 configuration using *ip ospf authentication message-digest*.
- Interfaces authenticated with MD5.
- Network-wide reachability tested using **PING** from HR PC to all others.

Secure NTP Server Configured

- NTP server at 192.168.5.9 configured.
- Devices synchronized with centralized time.

Secure Remote Management

- Configured TACACS+ server
- All network devices (routers & switches) use TACACS+ for remote login.

Port Security

- **Switch 2 and 3:**
 - Port security with 2 dynamically learned MACs per port.
 - Violation action: **restrict**.
- **Switch 1:**
 - Statically assigned MAC addresses for Admin PC and Servers.
 - Violation action: **shutdown**.

Website Access Control

- Only HR, IT, FINANCE, and R&D allowed to access the Web Server at 192.168.5.3.
- Configured with ACLs on router interfaces to enforce policy.