

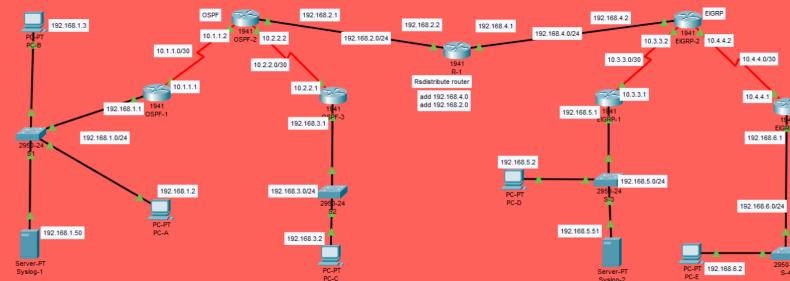
Intrusion Prevention System with Cisco Packet Tracer

Network Security Methods

- E-mail Security
- Anti Malware Software
- Firewall
- VPN - Virtual Private Network
- IPS - Intrusion Prevention System
- IDS - Intrusion Detection System

Routing Protocols

- RIP - Routing Information Protocol
- IGRP - Interior Gateway Routing Protocol
- EIGRP - Enhanced Interior Gateway Routing Protocol
- OSPF - Open Shortest Path First
- IS-IS - Intermediate System to Intermediate System
- BGP - Border Gateway Protocol



OSPF

Open Shortest Path First

Supports Area Routing

It sends link state updates rather than sending periodic updates.

It uses Dijkstra Algorithm.

Best used in the enterprise networks like WAN or educational campuses

OSPF Packets

1. Hello
2. Database Descriptor Packet
3. Link State Request Packet
4. Link State Update Packet
5. Link State Acknowledgement Packet

EIGRP

Enhanced Interior Gateway Routing Protocol.

Distance Vector Routing Protocol with the features link state and distance vector routing protocol.

Provides work efficiency with features of RTP(Reliable Transfer Protocol) and DUAL(Diffusing Update Algorithm).

Mostly used in large networks.

EIGRP Packets

1. Hello
2. Acknowledgement
3. Update
4. Query
5. Reply

REDISTRIBUTION

The use of routing protocols to advertise the routes that are learned by some other means such as another routing protocol, static routes or directly connected routes, is called redistribution. It is necessary when working on multiple protocol environment.

It is used when there is a case of company merger, multiple departments being managed by multiple network administrators or multi-vendor environments.

Characteristics of routing protocols affects the redistribution process.

If redistribution is not done properly, you might face some problems like below optimal routing, slow convergence or routing loops etc.

Redistribution of OSPF, EIGRP and iBGP are mostly used and recommended redistribution processes.

Can be performed for single static route as well.

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