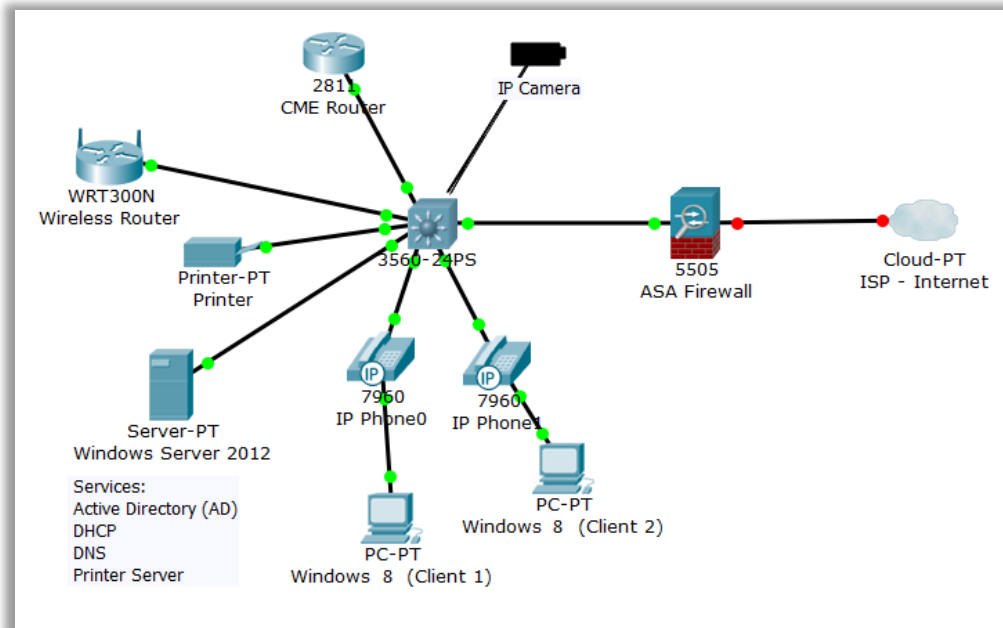


Introduction

The objective of this course is to help students understand and configure components used in setting up a network for a small business/home office (SOHO). Our ultimate goal would be to build and configure a topology as per follows:



As per the topology, the following components will be discussed during the course:

- 1) Window Server 2012 and Windows 8 Clients.
- 2) Cisco Multilayer Switch and Router
- 3) Cisco Firewall
- 4) Cisco IP Phone and Camera
- 5) Wireless Access Point

Course Outline:

(Hours 1 - 8)

Install and Configure Windows 2012 Server and Window 8 Client

- Install Windows 2012 Server from CD
- Promote member server to Active Directory
- Created an Organization Group such as Sales , Engineering , Human Resource
- Create an user Account inside Active Directory and assign different roles
- Create a Junior Admin account and Delegate the task to different Organization Unit
- Configure Corporate Group Policy for users (such as remove Run command) and apply to Domain and Organization OU
- Share the folders and assign different Permission to each users base on their roles
- Cover the Basic IP address and Subnet Mask

- Setup the Print Server on Windows 2012 Server

Install Windows 8 Client

- Install Windows 8 Operating system on the clients PC.
- Make the Windows 8 Clients to Join The Domain Model
- Login into Local PC and Login into Domain
- Test the connection to Server and permission of user who logged on
- Check and make sure the Policy is applied to the users
- Make sure the clients can print to Print Server
- Test group policy with windows 8 clients

(Hours 9 -16)

Configure and Create the VLAN at the Switch

- Explain the Basic concept of Switch
- Show the difference between Multi-Layer Switch and regular Switch
- Show the basic commands in Switch
- Configure different VLAN ; Such as Sales , HR VLAN
- Connect the Client PC to Particular VLAN and Make Sure they communicate with each other
- Show the concept of Man in Middle attack with Port Security and test it with student Laptop
- Setup the Syslog server ; and configure it so the error created via Port Security will be send to syslog server
- Show the concept of default route
- Configure Routed Port and make the Switch act as a Multi-layer Switch
- Troubleshoot the connectivity problem using the concept of OSI Layer model

(Hours 17 - 24)

Setup the Firewall and Camera

- Cover the Main concept of Firewall
- Show the concept of the INSIDE , OUTSIDE and DMZ
- Configure the Firewall with basic IP address INSIDE and OUTSIDE
- Configure The Firewall with CLI
- Configure The Firewall with Dynamic NAT and Static NAT
- Configure a camera inside the DMZ and make sure outside World be able to connect to camera located inside the DMZ for remote monitoring
- Check and test the camera connectivity from inside the LAN

(Hours 25 - 32)

Setup the Wireless and Cisco IP Phone

- Configure the IP Phone and make sure they communicate with each other
- Setup the phone to register with the Call Manager Express
- Test Connectivity of phones
- Login into Wireless Access Point
- Create A DHCP server with IP address to be given to Wireless Clients
- Secure the Access Point
- Make sure all the clients can access the internet.

(Hours 33 - 40)

Hands on Project

- Bring together all the components covered during the course and build out the topology in hardware. Test the different components for correct operation. Trouble shoot “real world” challenge problems introduced into the topology.

