

Packet Tracer Scenario

An Enterprise called Company is responsible for organizing the World Skills London 2011 event. The company called ISP has been requested to host the events two websites (www.worldskills.org , www.london2011.org). The company also works with two Agencies (Agency 1 and Agency2) to manage the event. The following is the detailed network description of ISP, Company, Agency1 and Agency 2:

Instructions:

1. Most of the functionality of this Packet Tracer file been blocked. E.g creating or removing object, using CLI, etc...
2. Since CLI is blocked, you must use the PC terminal.
3. The Topology diagram is provided in the last page of this script.
4. Read the whole script before starting your work in Packet Tracer.
5. Make regular backup for your work on the USB stick (every 5 to 10 minutes) to avoid the software corruption. E.g:
 - a. File name: Country Name – V1.pka
 - b. File name: Country Name – V2.pka
 - c. File name: Country Name – V3.pka
 - d. Etc.....
6. The last good backup file will be marked.

Network description:

ISP:

- consist of two web servers:

Device	IP Address	Hosts
WEB1	80.80.80.80	www.worldskills.org
WEB2	70.70.70.70	www.london2011.org

Company:

- the company router connected to other different network routers as following:

Connected to	Network Address
ISP router	90.90.90.0/30
Agency 1 router	192.168.0.0/30
Agency 2 router	192.168.0.4/30

- Company Local Area Network Address = 172.18.0.0 and consist of three VLANs:

PC Name	VLAN #	Switch Port
DNS	10	Fa0/24
PC3	20	Fa0/10
PC4	22	Fa0/15

- Server (VLAN 10) = 10 hosts
- Publicity (VLAN 20) = 60 hosts
- Admin (VLAN 22) = 25 hosts
- Note: use the VLAN number as given in this script in for all configurations.

Agency 1:

- Consist of 2 Local Area Networks:
 - LAN1 = 172.16.0.0/24
 - LAN2= 172.16.1.0/24

Agency 2:

- consist of one Local Area Network = 172.17.0.0/24

Activity Tasks:

Task 1: Assigning and configuring IP address:

- ISP Router:
 - Configure the IP Address of ISP port connected to the Company router; use the first valid IP address of the range.
- Company Router:
 - Any port in company router (except for the one connected to ISP) must be assigned with the first valid IP Address of their ranges.
 - Company LAN:
 - Calculate the VLANs subnet range in descending order.
 - Use subnet 0 as first subnet range.
 - Gateways always get the first valid IP address.
 - DNS Server gets the second valid IP address of its range.
- Agency 1 and Agency 2 LANs:
 - Gateways always get first usable IP address of their network ranges.

Task 2: DHCP

- Configure the company router as DHCP server for :
 - Company VLANs, except for the server VLAN
 - Agency1 LANs.
 - Agency2 LAN.

Task2: WAN

- Configure the default route to ISP (don't use interface name) in Company router.
- OSPF:
 - Configure the OSPF routing protocol (with the process ID 100) between company, Agency1 and Agency2 routers.
 - The routers must be configured under area 0.
 - Company router must propagate the default route to other routers.
- WAN encapsulation:
 - The connection between the company router and the two agencies is secured by PPP CHAP using the password as cisco.

Task3: DNS Resolution:

- The DNS Server in Company network must resolve the two websites hosted by ISP.
- All hosts in the company network and agencies network must access the two website using the URL link given above.

Topology Diagram:

