



UNIUNEA EUROPEANĂ



GUVERNUL ROMÂNIEI



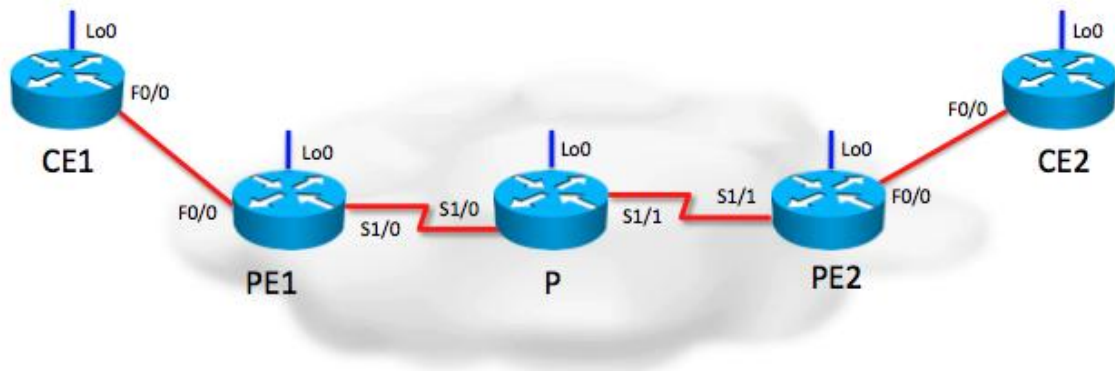
Instrumente Structurale
2007-2013



Platformă de e-learning și curriculă
e-content pentru învățământul superior tehnic

Securizarea Calculatoarelor și a Rețelelor

35. Implementarea MPLS L3 VPN



IP addressing table

Device	Interface	IP address	Subnet mask
CE1	Loopback0	199.0.0.1	255.255.255.255
	FastEthernet0/0	10.1.1.1	255.255.255.252
PE1	Loopback0	150.0.1.1	255.255.255.255
	FastEthernet0/0	10.1.1.2	255.255.255.252
	Serial1/0	192.168.1.1	255.255.255.252
P	Loopback0	150.0.1.2	255.255.255.255
	Serial1/0	192.168.1.2	255.255.255.252
	Serial1/1	192.168.1.5	255.255.255.252
PE2	Loopback0	150.0.1.3	255.255.255.255
	Serial1/1	192.168.1.6	255.255.255.252
	FastEthernet0/0	10.1.1.6	255.255.255.252

CE2	Loopback0	99.0.0.1	255.255.255.255
	FastEthernet0/0	10.1.1.5	255.255.255.252

Tasks

Open the `Labweek9-Topology.net` file.

1. [0.5p] Assign hostnames and IP addresses to all routers, according to the given topology.
2. [+1 = 1.5p] Activate OSPF in the provider's network. Run OSPF only on the interfaces between PE1, P and PE2 and on each provider router's loopback interface.
3. [+1 = 2.5p] Enable MPLS on the physical interfaces in the provider's network. Do not run MPLS on interfaces facing customer routers (CE1 and CE2)
4. [+2.5 = 5p] Create a VRF on both PE routers and bind them to the proper interfaces. Use the following parameters:
 - a. VRF name: ClientA
 - b. Route distinguisher: 1001:1
 - c. Route-targets for import and export: 64512:1
5. [+2.5 = 7.5p] Configure an MPBGP neighbor relationship between the PE routers. Establish neighbor relationships using the loopback addresses of PE1 and PE2.
 - a. AS number for BGP: 64512
6. [+2.5 = 10p] Enable RIPv2 between the CE routers and PE routers. Advertise both customer loopbacks in RIP and check each CE router for propagated routes.