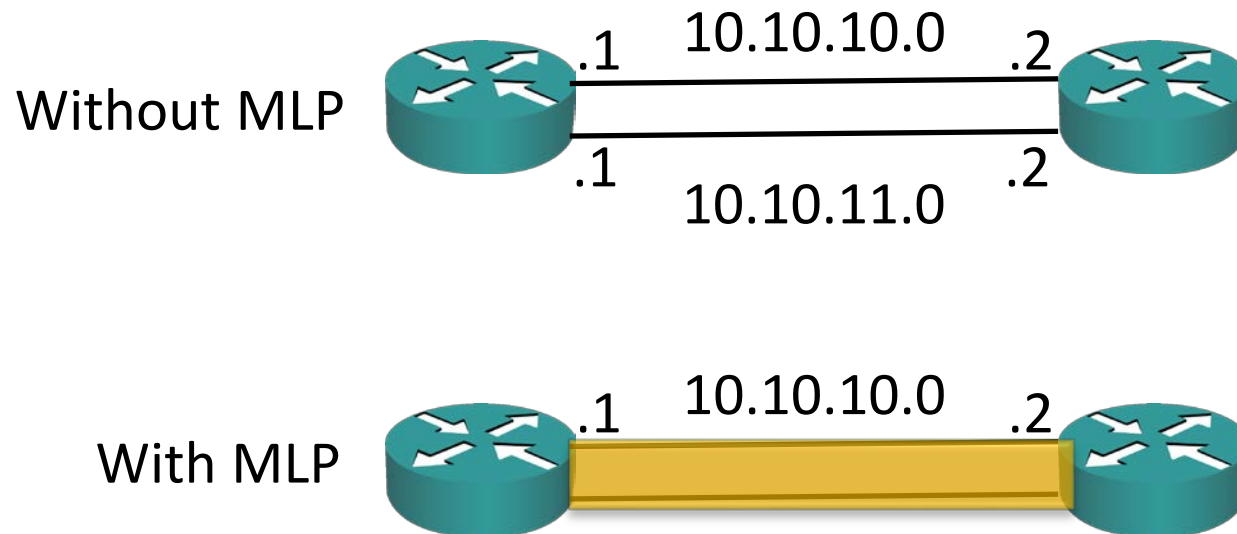


MLP MultiLink PPP

- MultiLink PPP groups multiple physical PPP links together into a single logical bundle with a single IP address on either side



MLP MultiLink PPP



- MLP aggregates the total bandwidth together and provides redundancy and load balancing
- Optional PPP MultiLink LFI (Link Fragmentation and Interleaving) allows a router to chop big frames into smaller fragments so that smaller, delay sensitive packets can be sent between them.
- If LFI is not enabled, a packet will have to wait for the larger one to finish sending before it can be sent.

MultiLink Interface



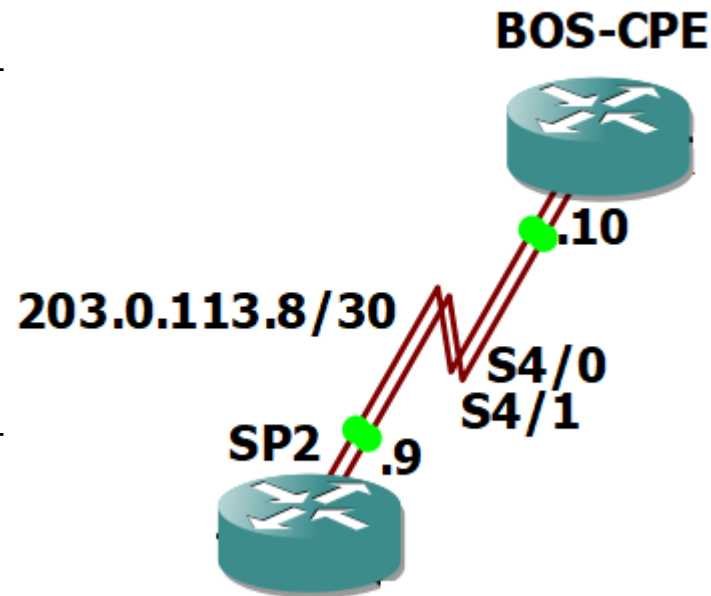
- MLP uses a logical 'interface multilink'
- Interface level configuration such as IP address, bandwidth and authentication should be applied to the multilink interface, not to the member physical ports

MLP Configuration

```
BOS-CPE(config)#interface multilink 1
BOS-CPE(config-if)#ip address 203.0.113.10 255.255.255.252
BOS-CPE(config-if)#ppp multilink
BOS-CPE(config-if)#ppp multilink group 1
```

```
BOS-CPE(config)#interface serial 4/0
BOS-CPE(config-if)#no ip address
BOS-CPE(config-if)#encapsulation ppp
BOS-CPE(config-if)#ppp multilink
BOS-CPE(config-if)#ppp multilink group 1
BOS-CPE(config-if)#no shutdown
```

```
BOS-CPE(config)#interface serial 4/1
BOS-CPE(config-if)#no ip address
BOS-CPE(config-if)#encapsulation ppp
BOS-CPE(config-if)#ppp multilink
BOS-CPE(config-if)#ppp multilink group 1
BOS-CPE(config-if)#no shutdown
```



MLP Verification – show ip interface brief

```
BOS-CPE#show ip int brief
```

Interface	IP-Address	OK?	Method	Status	Protocol
FastEthernet0/0	unassigned	YES	NVRAM	administratively down	down
Serial4/0	unassigned	YES	unset	up	up
Serial4/1	unassigned	YES	unset	up	up
Serial4/2	unassigned	YES	unset	administratively down	down
Serial4/3	unassigned	YES	unset	administratively down	down
Multilink1	203.0.113.10	YES	manual	up	up

MLP Verification – show ppp all



```
BOS-CPE#show ppp all
```

Interface/ID	OPEN+ Nego* Fail-	Stage	Peer Address	Peer Name
Mu1	IPCP+ CDPCP+	LocalT	203.0.113.9	SP2
Se4/1	LCP+ CHAP+	LocalT	203.0.113.9	SP2
Se4/0	LCP+ CHAP+	LocalT	203.0.113.9	SP2

Lab

