



Configure EBGp

Objectives

In this project/lab the student will:

- Configure and verify EBGp

Assignment

Upload your completed Packet Tracer file for grading as well as a document answering the questions you find throughout the lab.

Equipment/Supplies Needed

- Cisco Packet Tracer

Procedure

Configure EBGp

1. Recreate the topology in Packet Tracer. Configure the ip addressing as shown in the diagram.
2. Add static routes on routers Site1 and Site2.

```
Site1(config)# ip route 192.168.2.0 255.255.255.0 192.168.1.1
```

```
Site2(config)# ip route 192.168.1.0 255.255.255.0 192.168.2.1
```

3. Ping to make sure there is connectivity between the routers (Site 1 to Site 2). Record the results.

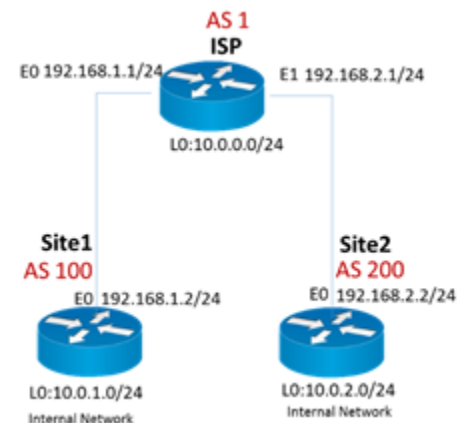
4. Set the loopback addresses on each router.

```
ISP(config)# interface loopback0
```

```
ISP(config-if)# ip address 10.0.0.1 255.255.255.0
```

```
Site1(config)# interface loopback0
```

```
Site1(config-if)# ip address 10.0.1.1 255.255.255.0
```



```
Site2(config)# interface loopback0  
Site2(config-if)# ip address 10.0.2.1 255.255.255.0
```

5. Configure ISP Router for EGP

```
ISP(config)# router bgp 1  
ISP(config-router)# network 10.0.0.0 mask 255.255.255.0  
ISP(config-router)# neighbor 192.168.1.2 remote-as 100  
ISP(config-router)# neighbor 192.168.2.2 remote-as 200  
Router(config-router)r# exit
```

6. Configure Site 1 Router for EGP

```
Site1(config)# router bgp 100  
Site1(config-router)# network 10.0.1.0 mask 255.255.255.0  
Site1(config-router)# neighbor 192.168.1.1 remote-as 1  
Site1(config-router)# neighbor 192.168.2.2 remote-as 200  
Site1(config-router)# neighbor 192.168.2.2 ebgp-multihop  
Site1(config-router)# neighbor 192.168.2.2 update-source loopback0  
Site1(config-router)r# exit
```

7. Configure site2 Router for EGP

```
Site2(config)# router bgp 200  
Site2(config-router)# network 10.0.2.0 mask 255.255.255.0  
Site2(config-router)# neighbor 192.168.2.1 remote-as 1  
Site2(config-router)# neighbor 192.168.1.2 remote-as 100  
Site2(config-router)# neighbor 192.168.1.2 ebgp-multihop  
Site2(config-router)# neighbor 192.168.1.2 update-source loopback0  
Site2(config-router)r# exit
```

8. Verify BGP with the following commands:

```
Show ip bgp  
Show ip bgp summary  
Show ip bgp neighbors  
Show ip routes
```

9. Record the output of each of the following commands, and answer any questions related to each:

- a. show ip route**
 - i. Which routes were learned via BGP?
- b. show ip bgp on ISP**
 - i. Record the 3 networks shown

c. show ip bgp summary on ISP

- i. Record the two neighbors shown.

d. show ip bgp neighbor

- i. Record first line of each neighbor listed
- ii. What is the remote Router ID for the first one listed?
- iii. What is its BGP state?
- iv. How long has it been up?
- v. What is the local host listed? Port number?
- vi. What is the foreign host? Port number?

Rubric

Checklist/Single Point Mastery

<u>Concerns</u> Working Towards Proficiency	<u>Criteria</u> Standards for This Competency	<u>Accomplished</u> Evidence of Mastering Competency
	Criteria #1: Site1 Router <i>show ip route</i> content (10 points)	
	Criteria #2: Site2 Router <i>show ip route</i> content (10 points)	
	Criteria #3: ISP Router <i>show ip route</i> content (10 points)	
	Criteria #4: Which routes were learned by BGP? (20 points)	
	Criteria #5: ISP Router <i>show ip BGP</i> content (10 points)	
	Criteria #6: ISP Router <i>show ip bgp summary</i> - which two neighbors are shown? (10 points)	
	Criteria #7: Site1 Router <i>show ip bgp neighbor</i> - Record first line of each neighbors listed (5 points)	
	Criteria #8: Site1 Router <i>show ip bgp neighbor</i> - What is the Router ID for the first one listed? (5 points)	

	Criteria #9: Site1 Router <i>show ip bgp neighbor</i> - What is the BGP State? (5 points)	
	Criteria #10: Site1 Router <i>show ip bgp neighbor</i> - How long has it been up? (5 point)	
	Criteria #11: Site1 Router <i>show ip bgp neighbor</i> - What is the local host listed? Port number? (5 point)	
	Criteria #12: Site1 Router <i>show ip bgp neighbor</i> - What is the foreign host listed? Port number? (5 point)	