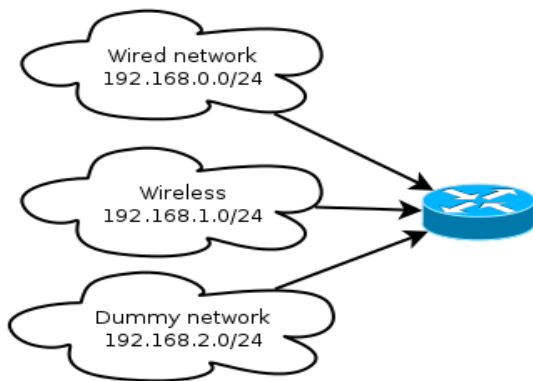


# Introduction to BGP4

Sylvain Laurent

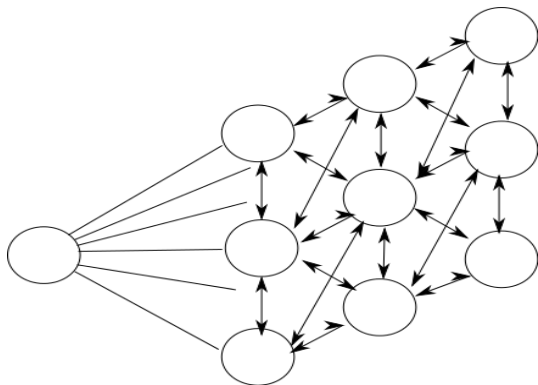
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<http://www.lse.epita.fr>

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## Example:

```
192.168.0.0/24 dev eth0 scope link src 192.168.0.254
192.168.1.0/24 dev wlan0 scope link src 192.168.1.254
192.168.2.0/24 dev tap0 scope link src 192.168.2.254
default via 192.168.3.254 metric 100
```



Complex network

# Sample network with multihoming

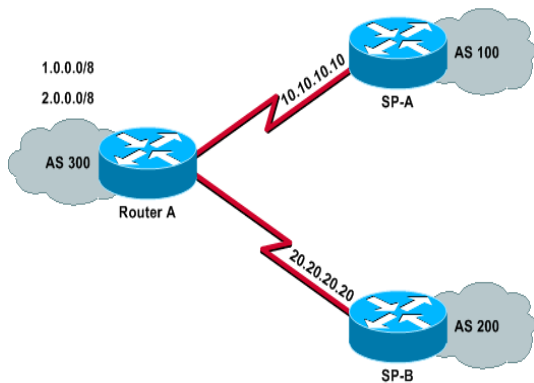
Why routing  
protocol is  
important ?

BGP

What is the purpose of BGP  
?

Configuration

AS PATH



## Example:

```
interface ethernet 1/1
ip address 10.10.10.9/30
interface ethernet 1/2
ip address 20.20.20.19/29
!
ip prefix-list announce-out seq permit 5 1.0.0.0/8
ip prefix-list announce-out seq permit 10 1.0.0.0/8
ip prefix-list announce-out seq deny 100 0.0.0.0/0 le 32
```

## Example:

```
router bgp
local-as 300
network 1.0.0.0/8
network 1.0.0.0/8
neighbor 10.10.10.10 remote-as 100
neighbor 10.10.10.10 route-map announce-out out
neighbor 20.20.20.20 remote-as 200
neighbor 20.20.20.20 route-map announce-out out
```

## Example:

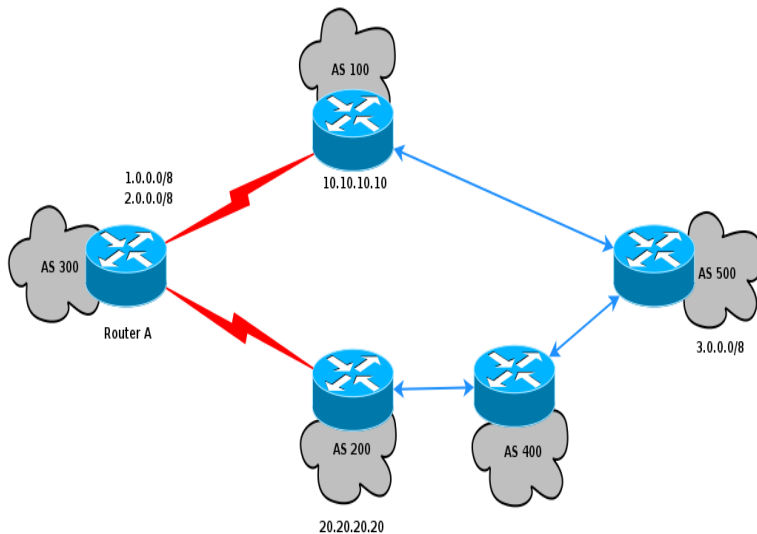
Router ID: 10.10.10.9 Local AS Number: 300

Neighbor	Address	AS	State	Time	Accepted	Filtered	Sent	ToSend
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10.10.10.10	100	ESTAB	63d	409224	0	2	0
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20.20.20.20	200	ESTAB	29d	131	0	2	0
-------------	-----	-------	-----	-----	---	---	---





## Example:

```
>sh ip bgp 3.0.0.1
```

```
Network Next Hop MED LocPrf Weight Path
```

```
*> 3.0.0.0/8 10.10.10.10 50 50 0 100 500
```

```
* 3.0.0.0/8 20.20.20.20 50 50 0 200 400 500
```