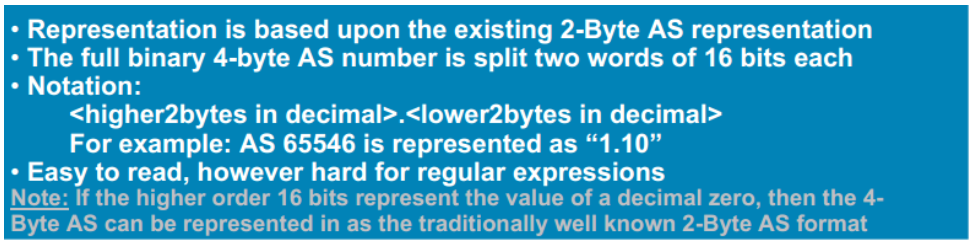
BGP AS 4 Bytes

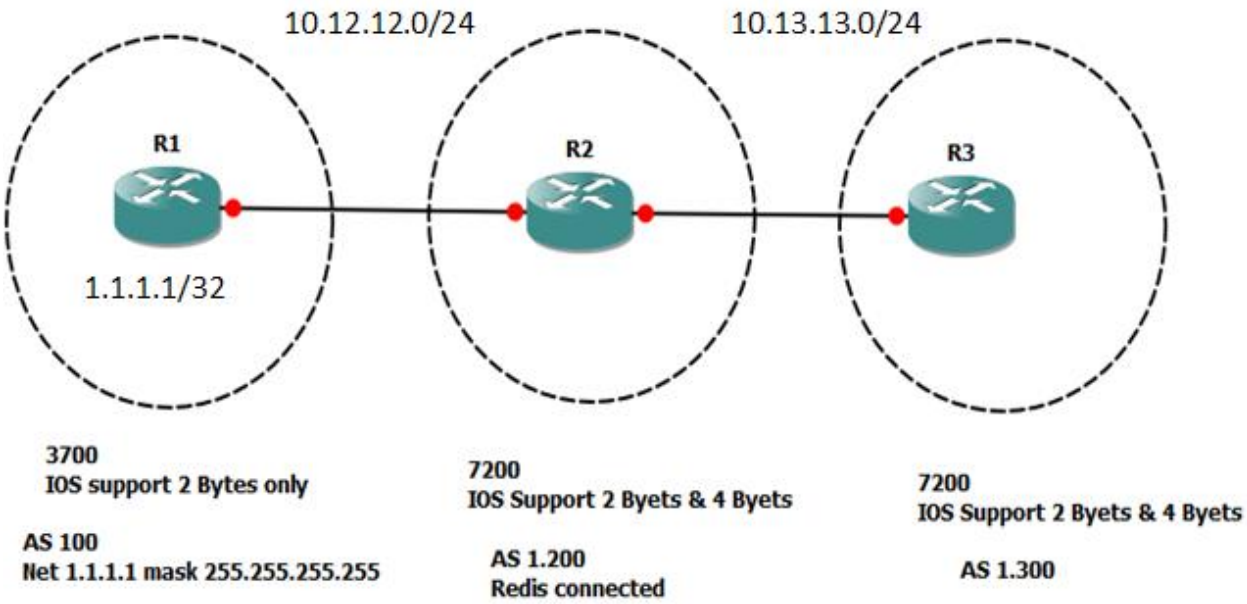
- AS number obtained from IANA and internet committees from 1-65535 (2 Bytes) , 64512 to 65525 is reserved for private use , since we are using most of AS numbers , (4Bytes) format can be used as BGP AS# , we call 2 Bytes AS "**asplain**" while we call 4 Byte AS "**asdot**"
- 4 Bytes explained in RFC 4893 (iso 12.4(24)T & later)
- Speakers who support 4-byte AS are known as **NEW BGP Speakers** while Those who do not are known as **OLD BGP speakers**



The special 16-bit ASN 23456 ("AS_TRANS) was assigned by IANA as a placeholder for 32-bit ASN values for the case when 32-bit-ASN capable routers ("new BGP speakers") send BGP messages to routers with older BGP software ("old BGP speakers") which do not understand the new 32-bit ASNs.

A BGP session uses an initial handshake to determine the identity of its neighbor. To allow a "new" version of BGP to speak to an "old" version of BGP it presents itself as the 16-bit AS 23456 in the initial handshake and includes a 32-bit capability advertisement.
http://icons.apnic.net/display/ASN/Using+AS+23456

4 Bytes ASN Lab



R1

router bgp 100
network 1.1.1.1 mask 255.255.255.255
neighbor 10.12.12.2 remote-as **23456**

R2

router bgp 1.200
bgp asnotation dot < this command will help you to see AS # in dotted Format not decimal format
redistribute connected
neighbor 10.12.12.1 remote-as 100
neighbor 10.13.13.3 remote-as 3.300

R3

router bgp 3.300
bgp asnotation dot
neighbor 10.13.13.2 remote-as 1.200

R2#sh ip bgp summ
BGP router identifier 10.13.13.2, local AS number 1.200

Neighbor	V	AS	MsgRcvd	MsgSent	TblVer	InQ	OutQ	Up/Down	State/PfxRcd
10.12.12.1	4	100	6	7	4	0	0	00:02:27	1
10.13.13.3	4	3.300	5	7	4	0	0	00:02:19	0

R1#sh ip bgp summ
BGP router identifier 1.1.1.1, local AS number 100

Neighbor	V	AS	MsgRcvd	MsgSent	TblVer	InQ	OutQ	Up/Down	State/PfxRcd
10.12.12.2	4	23456	2	2	0	0	0	00:00:07	0

R3#sh ip bgp summ
BGP router identifier 10.13.13.3, local AS number 3.300

Neighbor	V	AS	MsgRcvd	MsgSent	TblVer	InQ	OutQ	Up/Down	State/PfxRcd
10.13.13.2	4	1.200	7	6	4	0	0	00:02:44	3

Without bgp asnotiation dot command
R2#sh run | sec router
```
router bgp 65736
 bgp log-neighbor-changes
 redistribute connected
 neighbor 10.12.12.1 remote-as 100
 neighbor 10.13.13.3 remote-as 196908
```

With asnotiaition dot command

```
router bgp 1.200
 bgp asnotation dot
 bgp log-neighbor-changes
 redistribute connected
 neighbor 10.12.12.1 remote-as 100
 neighbor 10.13.13.3 remote-as 3.300
```

Good Luck
CCSI: Yasser Auda
https://www.facebook.com/YasserRamzyAuda
https://learningnetwork.cisco.com/people/yasser.r.a?view=documents
https://www.youtube.com/user/yasserramzyauda