



Internet Exchange Workshop Lab

R16 Configuraion

Basic Configuraiton

```
config t
hostname r16
ip routing
ipv6 unicast-routing
ip cef
ipv6 cef
no ip domain-lookup
no ip http server
no ip http secure-server
no ip finger
no service pad
no service udp-small-servers
no service tcp-small-server
no ip bootp server
no ip source-route
no ipv6 source-route
no cdp run
logging source-interface loopback 0
service timestamps log datetime localtime msec show-timezone year
service timestamps debug datetime localtime msec show-timezone year
clock timezone AEST 10
ip subnet-zero
ip classless
line console 0
logging synchronous
transport preferred none
exit
ip tcp synwait-time 15
security authentication failure rate 3 log
exit
wr
```

Interface Configuraiton

```
config t
interface Loopback0
description LAN r16
ip address 172.16.22.254 255.255.255.255
ipv6 address 2406:6400:B800:0000::1/64
no ip redirects
no ip unreachablees
!
interface FastEthernet0/1
description Upstream WAN r16-UR
ip address 172.16.11.98 255.255.255.252
ipv6 address 2406:6400:001C:0000::2/64
no ip redirects
no ip unreachablees
speed auto
duplex auto
no clns route-cache
no shut
!
exit
exit
wr
```

eBGP Configuraiton

```

config t
!
router bgp 135536
! Not enforce that the first ASN in the AS path matches the peering ASN
no bgp enforce-first-as
neighbor IPV4-eBGP-UPSTREAM peer-group
neighbor IPV6-eBGP-UPSTREAM peer-group
!
address-family ipv4
neighbor 172.16.11.97 remote-as 17821
neighbor 172.16.11.97 peer-group IPV4-eBGP-UPSTREAM
neighbor 172.16.11.97 activate
network 172.16.22.0 mask 255.255.254.0
exit-address-family
!
address-family ipv6
neighbor 2406:6400:1c::1 remote-as 17821
neighbor 2406:6400:1c::1 peer-group IPV6-eBGP-UPSTREAM
neighbor 2406:6400:1c::1 activate
network 2406:6400:b800::/48
!
exit
exit
!
ip route 172.16.22.0 255.255.254.0 null 0
ipv6 route 2406:6400:b800::/48 null 0
exit
wr

```

Prefix Filter

```

config t
!
ip prefix-list ANNOUNCE-PREFIX-IPv4 seq 5 permit 172.16.22.0/23 le 24
ip prefix-list ANNOUNCE-PREFIX-IPv4 seq 100 deny 0.0.0.0/0 le 32
!
ipv6 prefix-list ANNOUNCE-PREFIX-IPv6 seq 5 permit 2406:6400:b800::/48
ipv6 prefix-list ANNOUNCE-PREFIX-IPv6 seq 100 deny ::/0 le 48
!
router bgp 135536
address-family ipv4
neighbor IPV4-eBGP-UPSTREAM prefix-list ANNOUNCE-PREFIX-IPv4 out
exit-address-family
!
address-family ipv6
neighbor IPV6-eBGP-UPSTREAM prefix-list ANNOUNCE-PREFIX-IPv6 out

```

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Created: 20 October 2016

Version 1.1