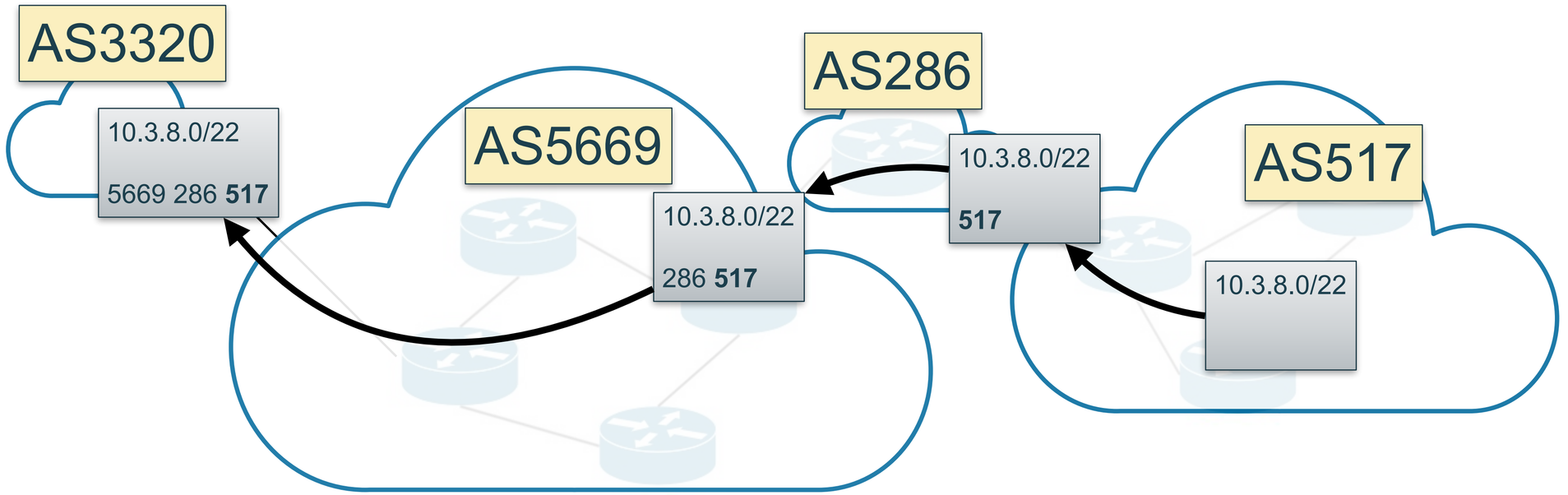
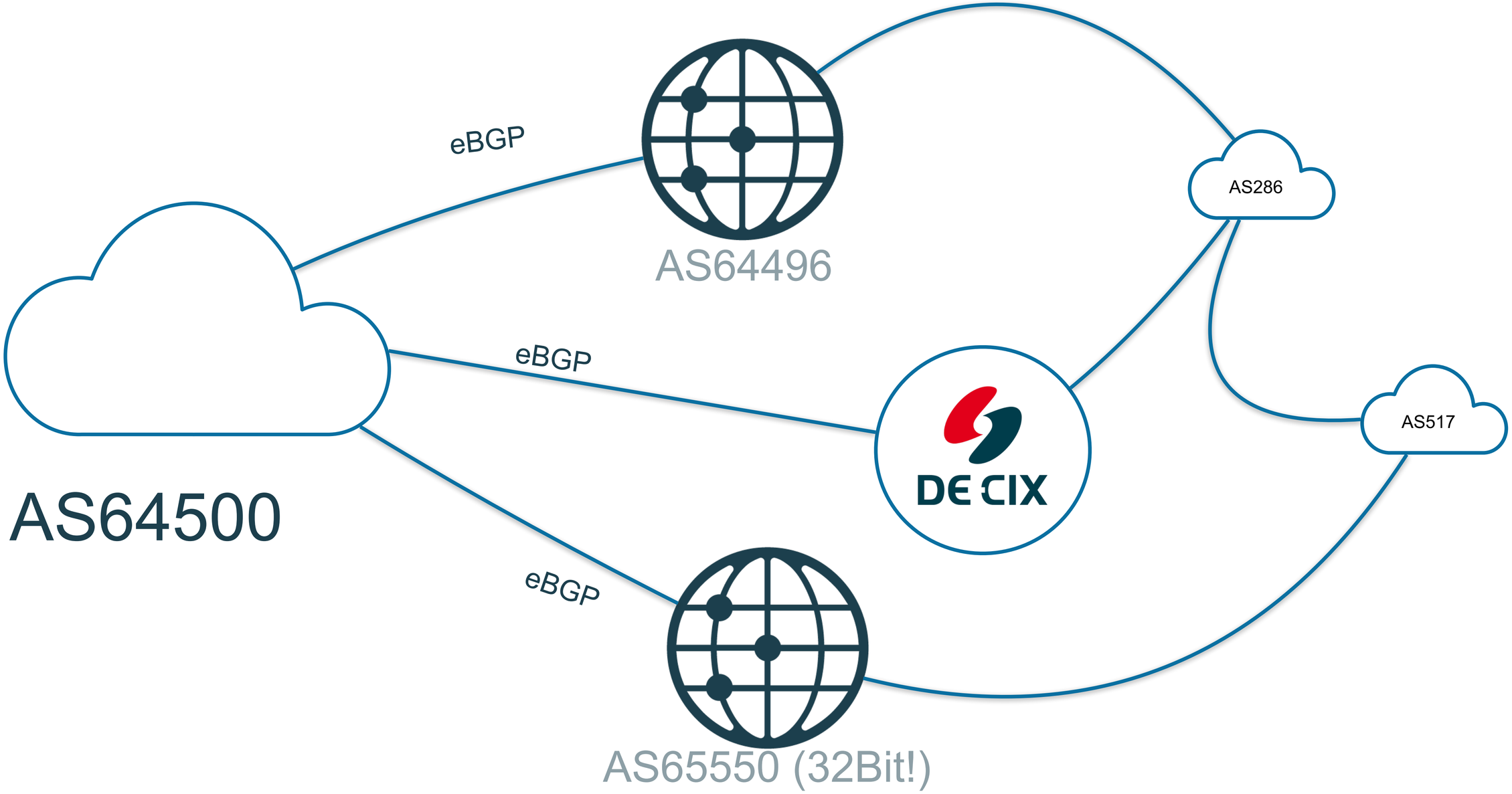
IP Address: 198.51.100.1 /24

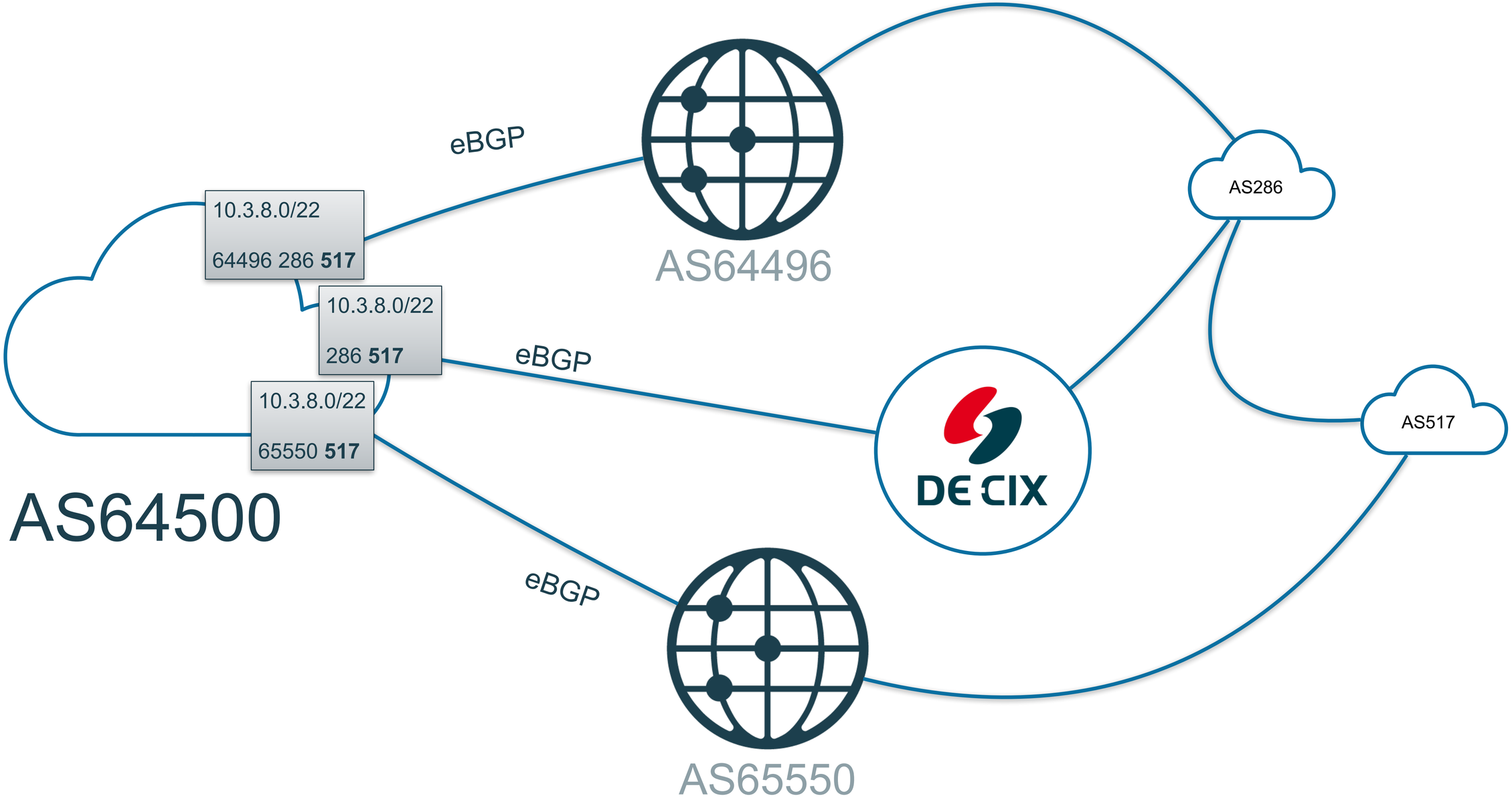
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 25 27 28 29 30 31 32

1100 0110 0011 0011 0110 0100 0000 0001

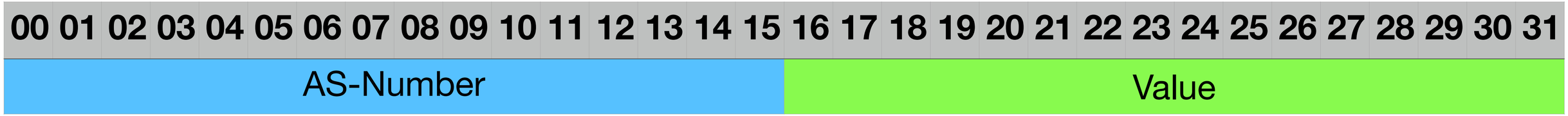
IP Prefix: 198.51.100.0 /24


AS3320
10.3.8.0/22
5669 286 517
AS5669
10.3.8.0/22
286 517
AS286
10.3.8.0/22
517
AS517
10.3.8.0/22

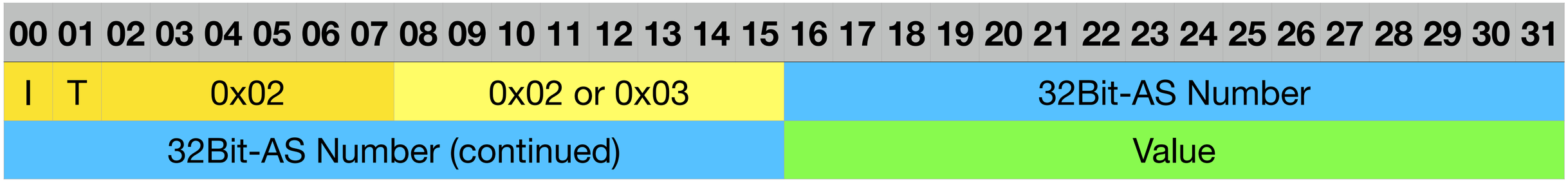

eBGP
AS64496
AS286
AS64500
eBGP
DE CIX
AS517
eBGP
AS65550 (32Bit!)


eBGP
AS64496
AS286
10.3.8.0/22
64496 286 517
10.3.8.0/22
286 517
eBGP
10.3.8.0/22
65550 517
AS64500
DE CIX
AS517
eBGP
AS65550

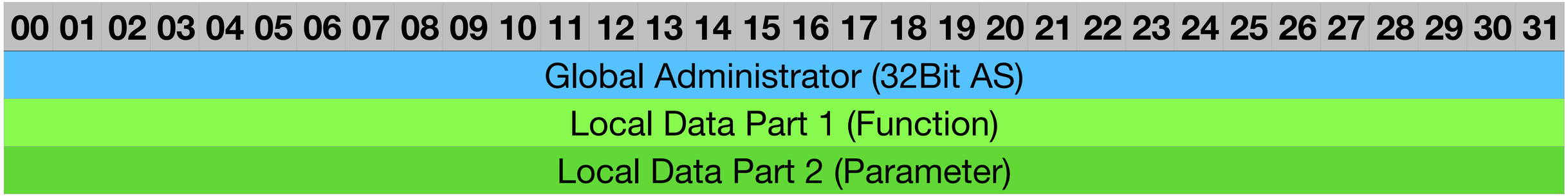
Original Community

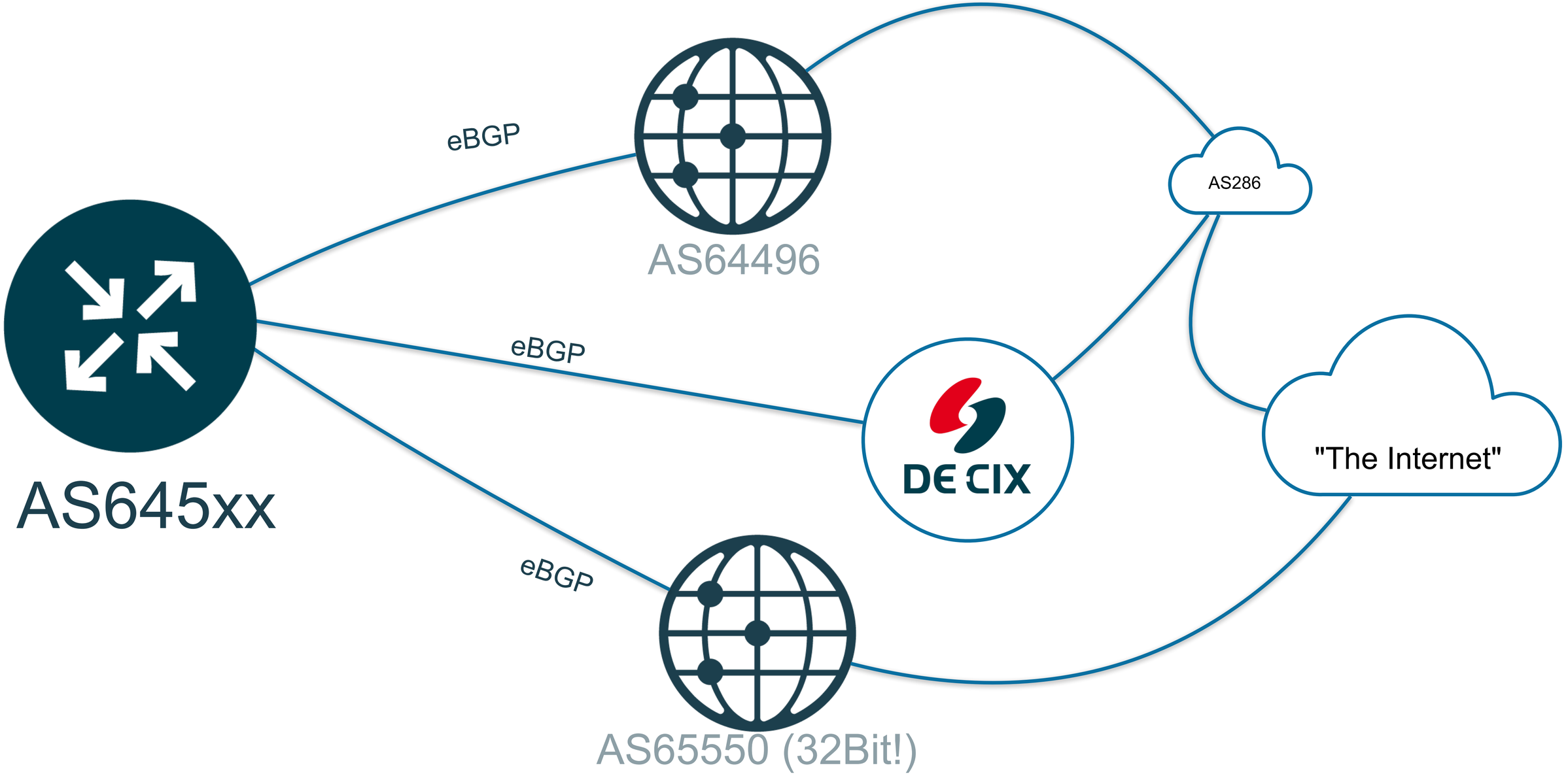


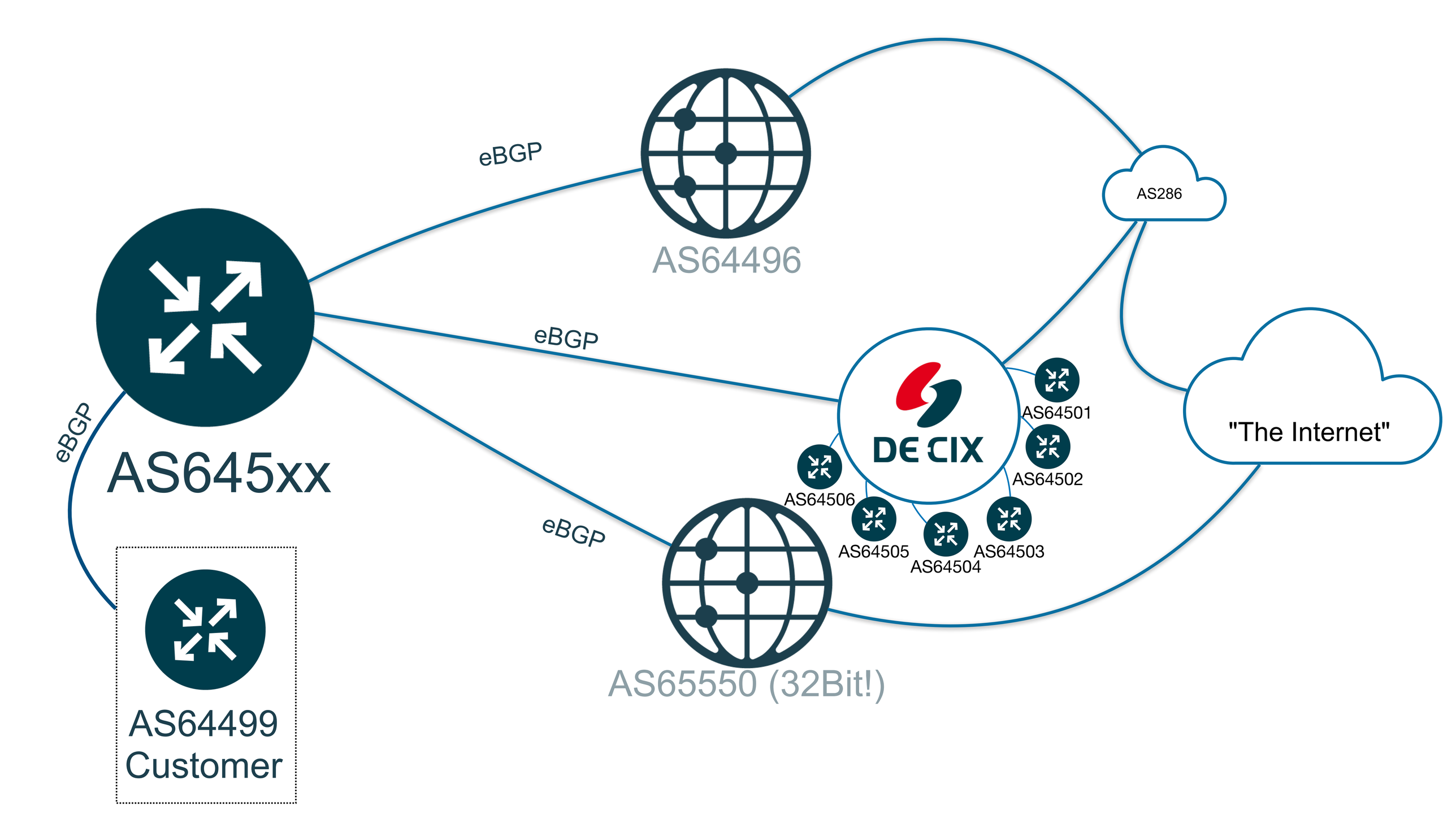
Extended Community

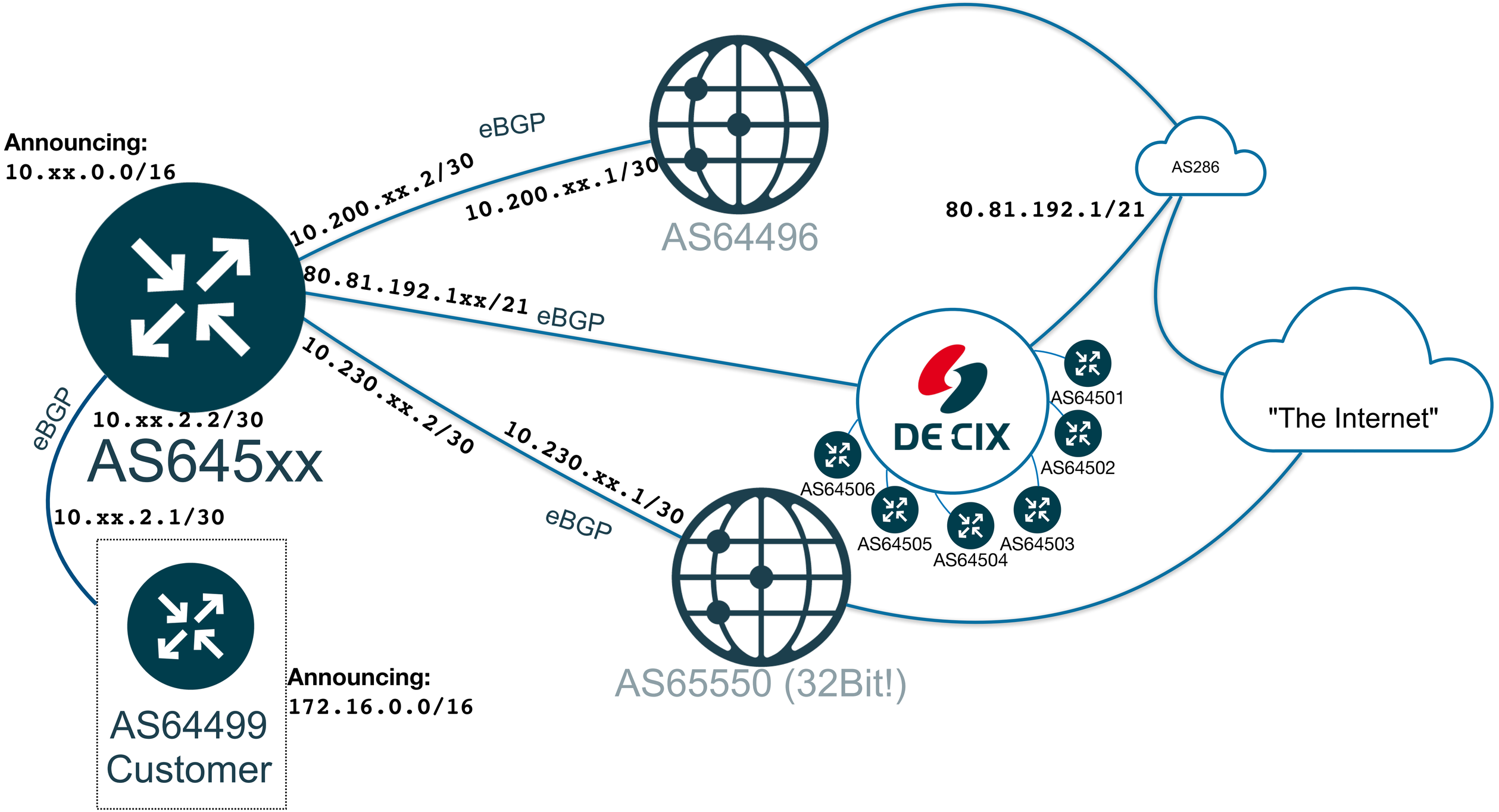


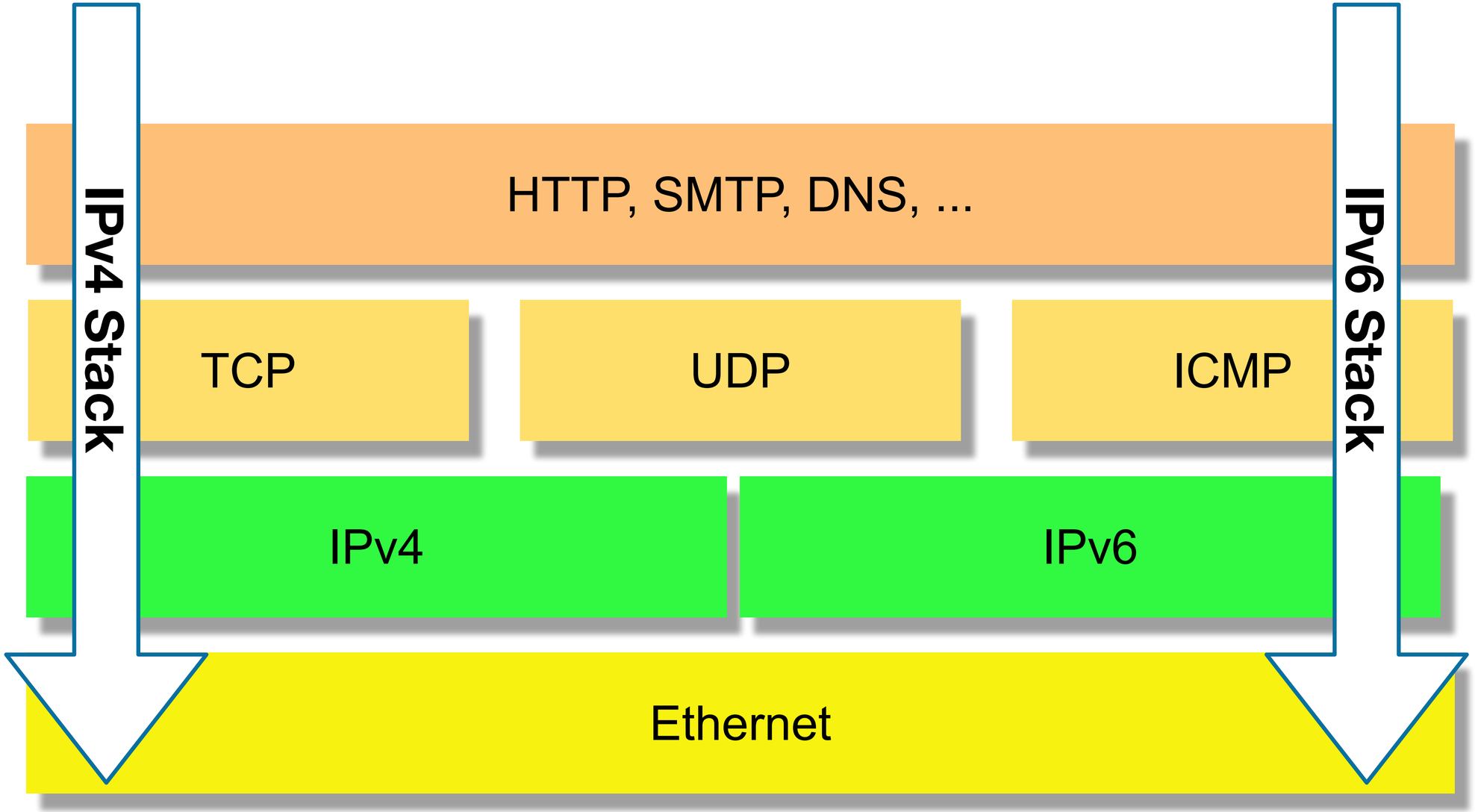
Large Community

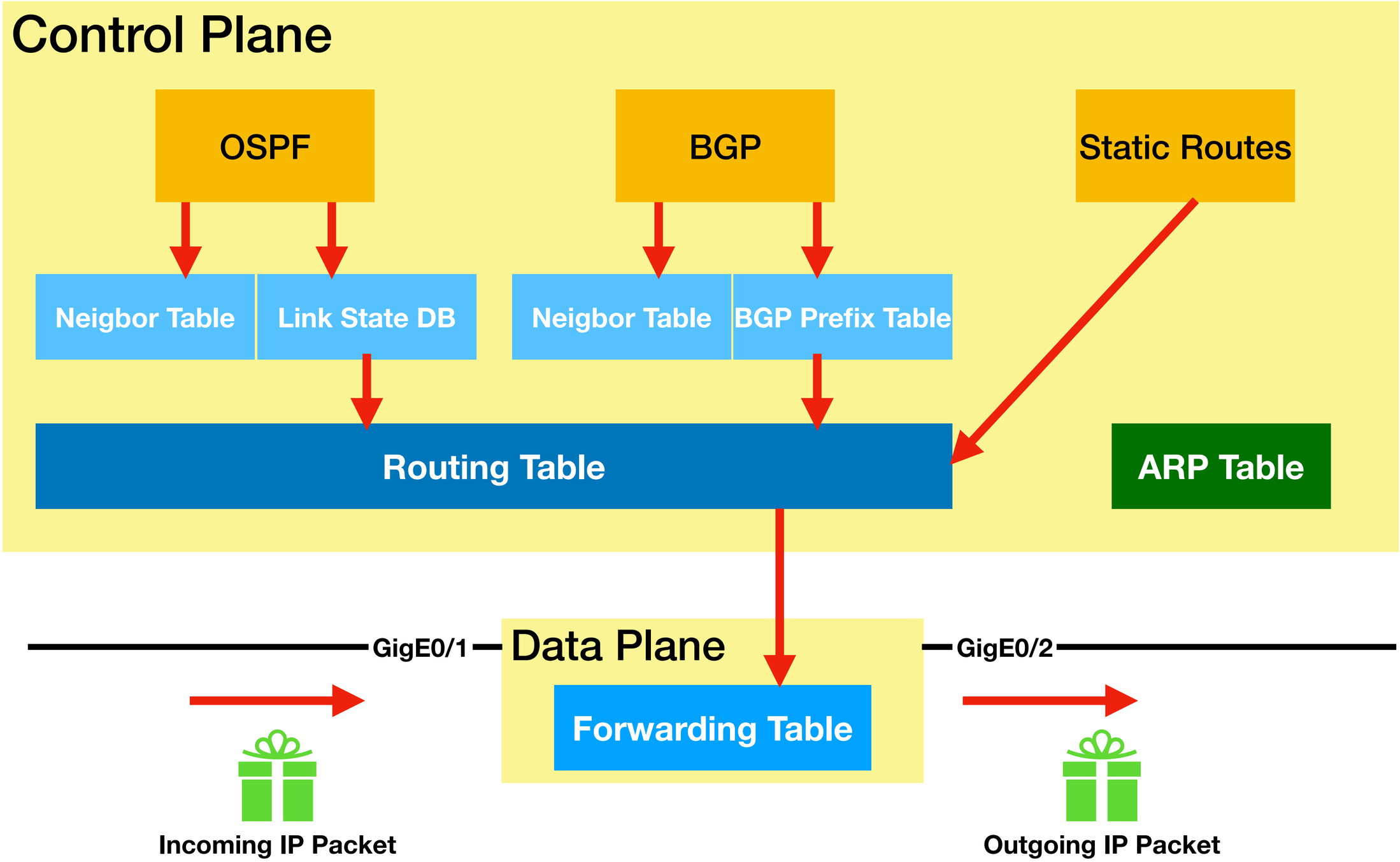



eBGP
AS64496
AS286
AS645xx
eBGP
DE CIX
"The Internet"
eBGP
AS65550 (32Bit!)

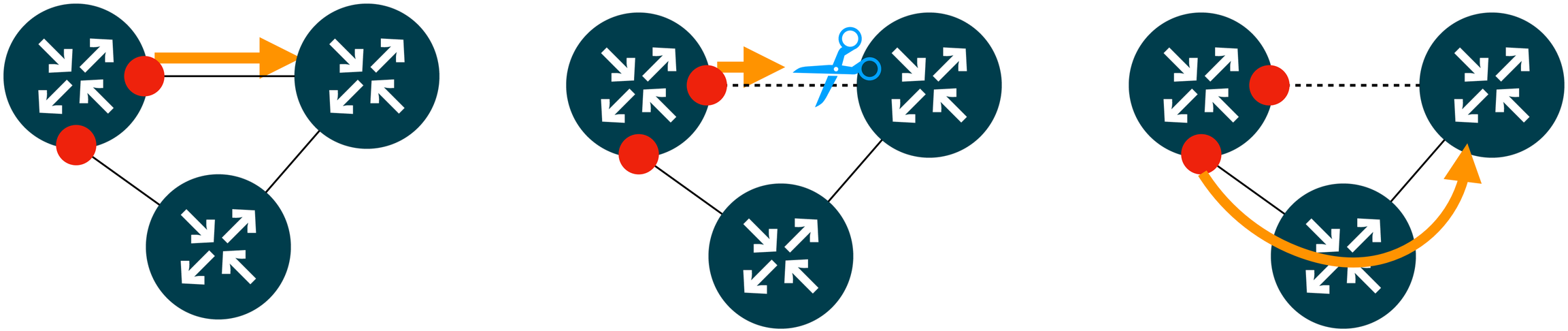

eBGP
AS64496
AS286
eBGP
eBGP
AS645xx
DE CIX
AS64501
AS64502
AS64506
AS64505
AS64504
AS64503
"The Internet"
eBGP
AS65550 (32Bit!)
AS64499
Customer


Announcing:
10.xx.0.0/16
10.200.xx.2/30
eBGP
10.200.xx.1/30
AS64496
AS286
80.81.192.1/21
80.81.192.1xx/21 eBGP
10.230.xx.2/30
10.230.xx.1/30
eBGP
eBGP
10.xx.2.2/30
AS645xx
10.xx.2.1/30
DE CIX
AS64501
AS64502
AS64506
AS64505
AS64504
AS64503
"The Internet"
AS65550 (32Bit!)
Announcing:
172.16.0.0/16
AS64499
Customer

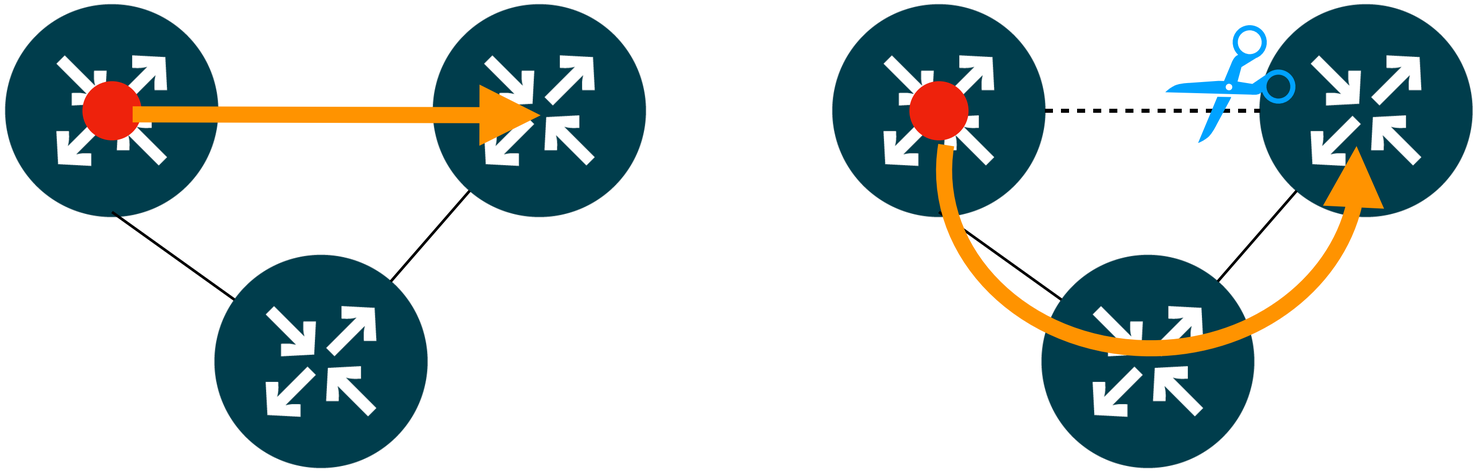

IPv4 Stack
HTTP, SMTP, DNS, ...
IPv6 Stack
TCP
UDP
ICMP
IPv4
IPv6
Ethernet


Control Plane
OSPF
BGP
Static Routes
Neigbor Table
Link State DB
Neigbor Table
BGP Prefix Table
Routing Table
ARP Table
GigE0/1
Data Plane
GigE0/2
Forwarding Table
Incoming IP Packet
Outgoing IP Packet

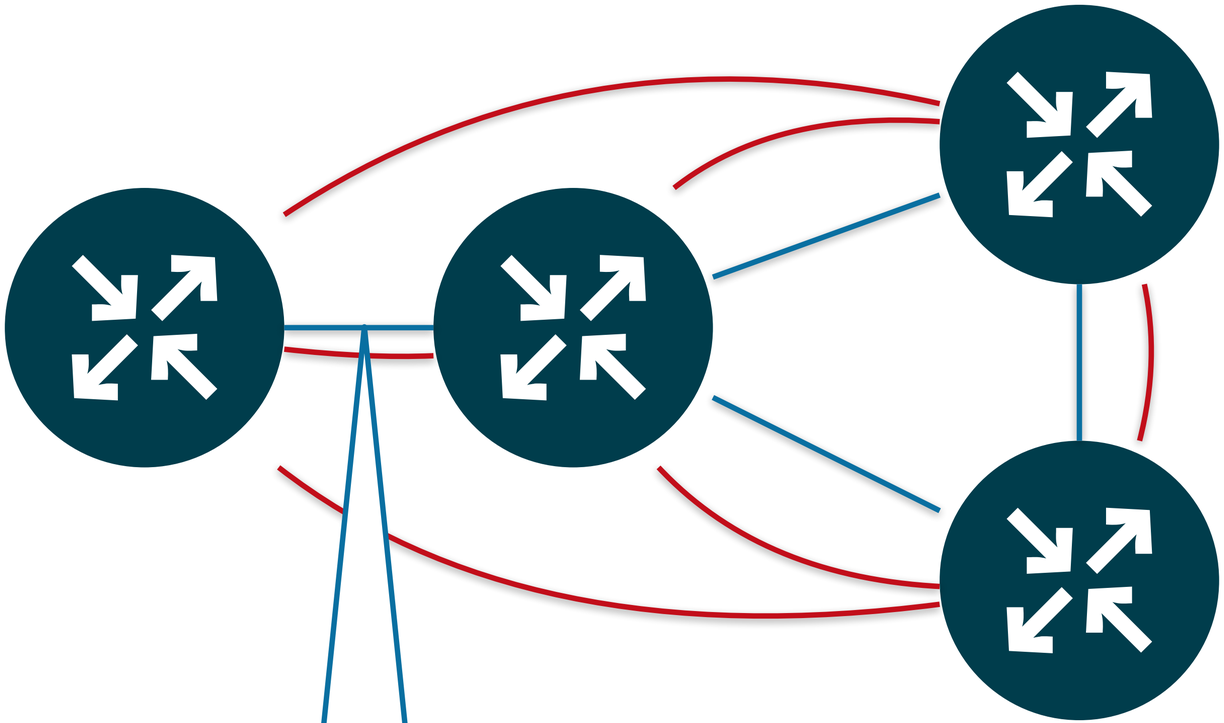
Using an interface address as iBGP source IP



Using a Loopback address as iBGP source IP

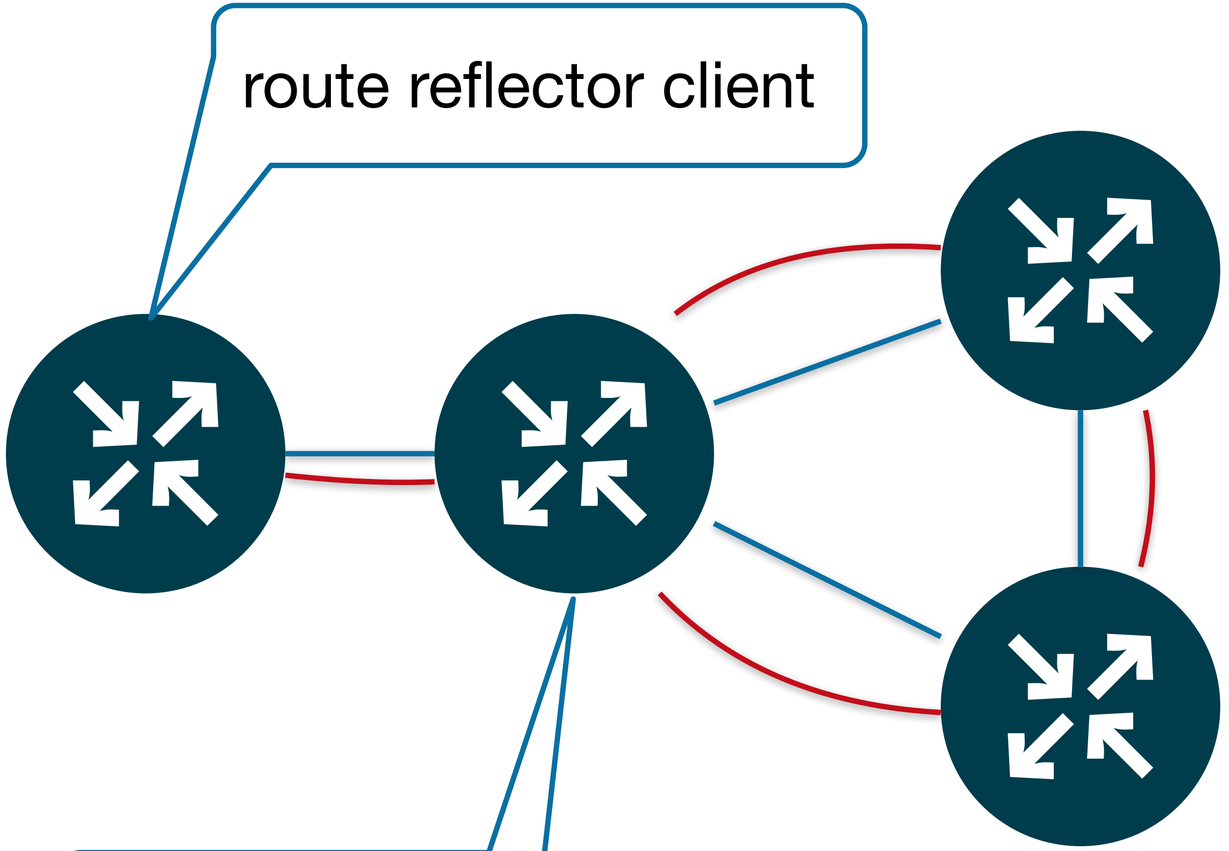


Fully Meshed

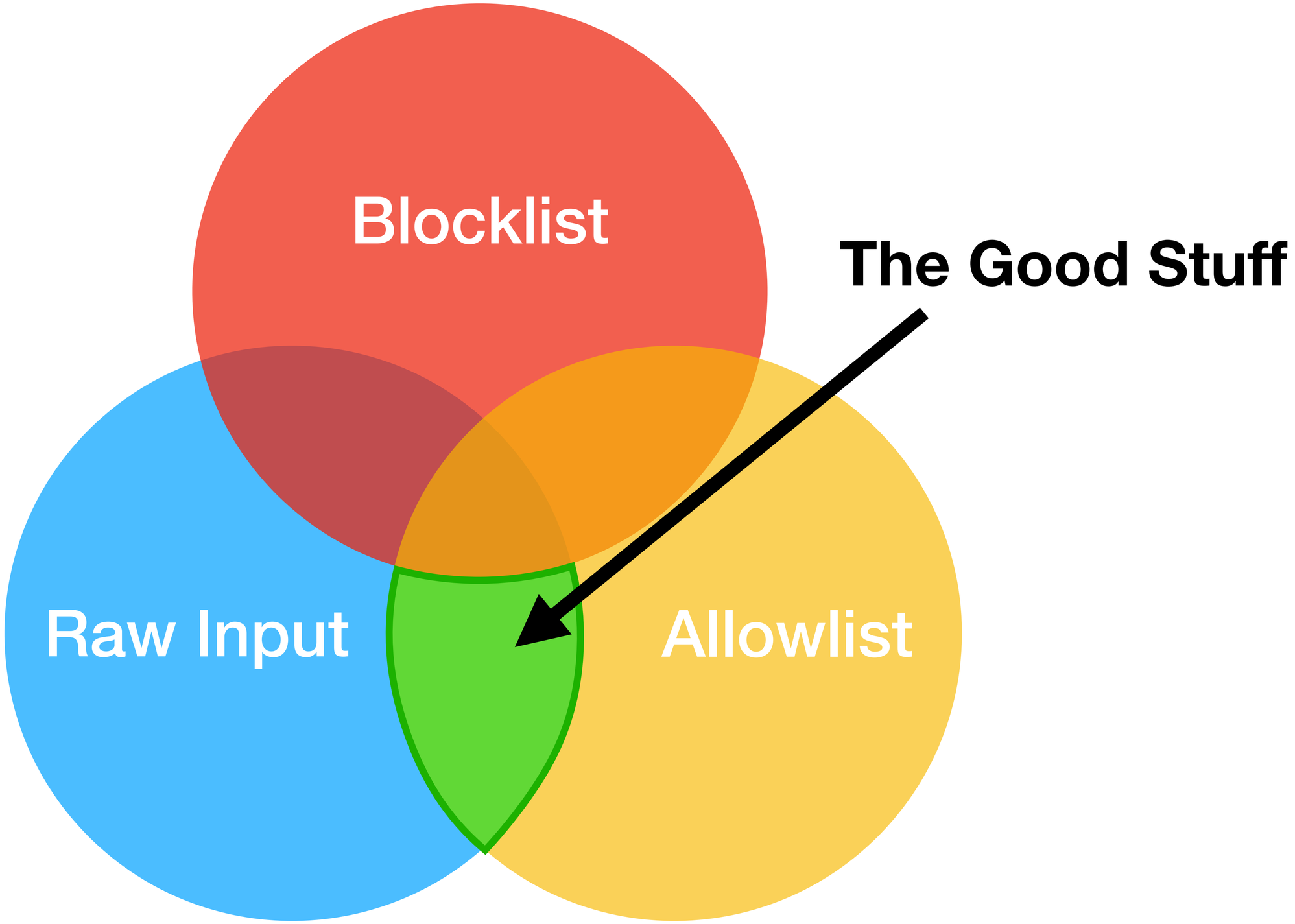


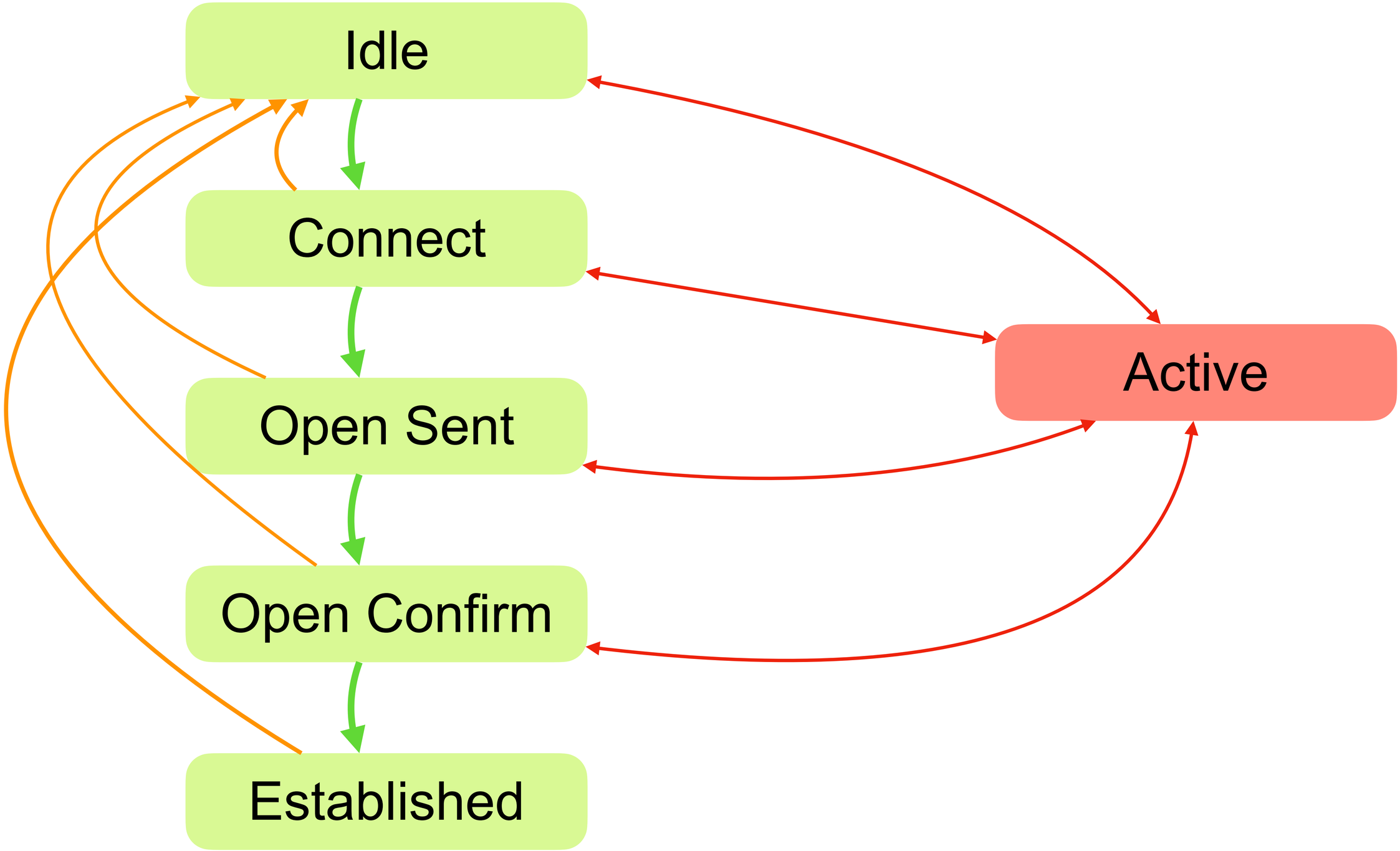
non-redundant

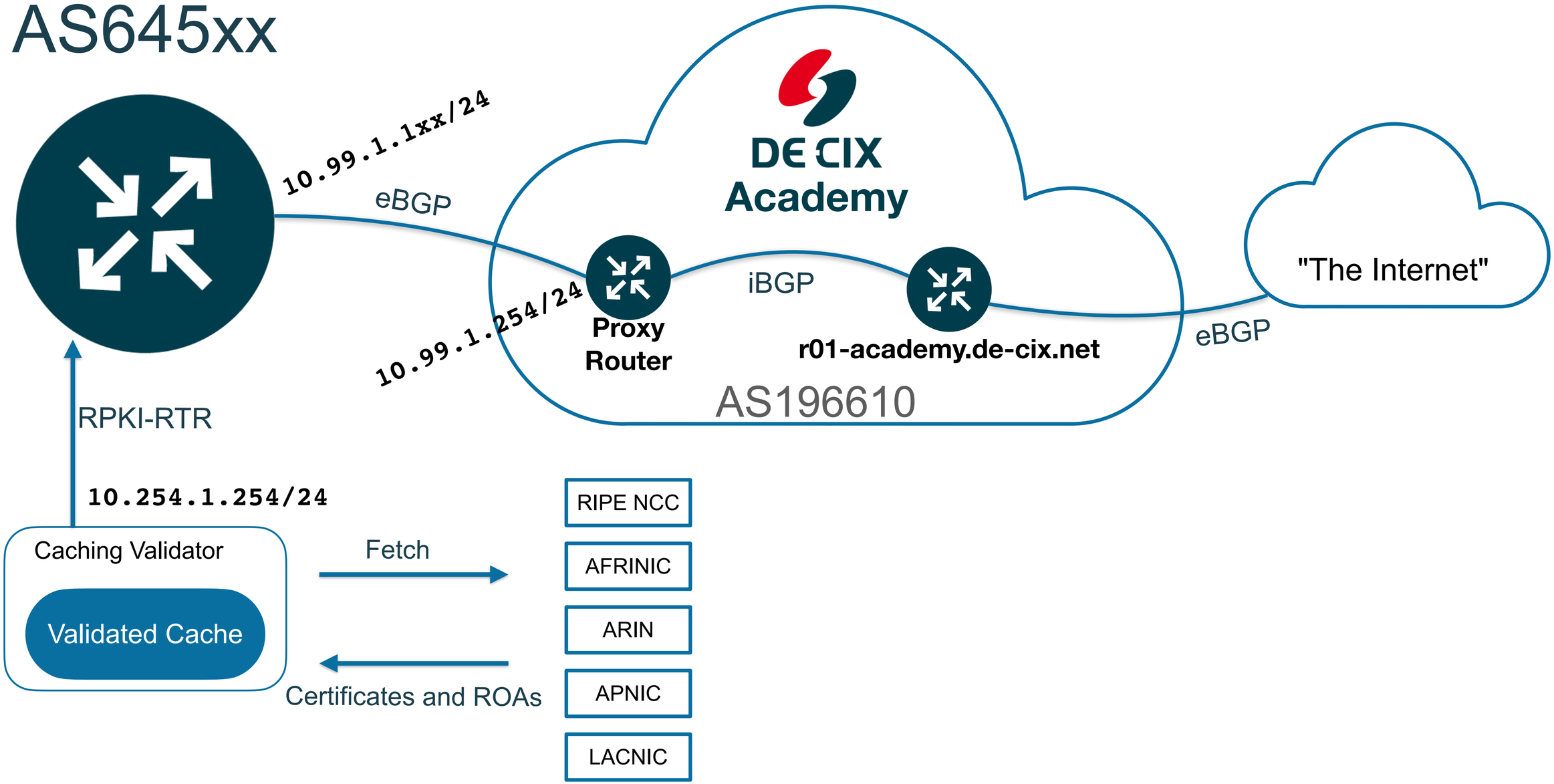
With Route Reflector

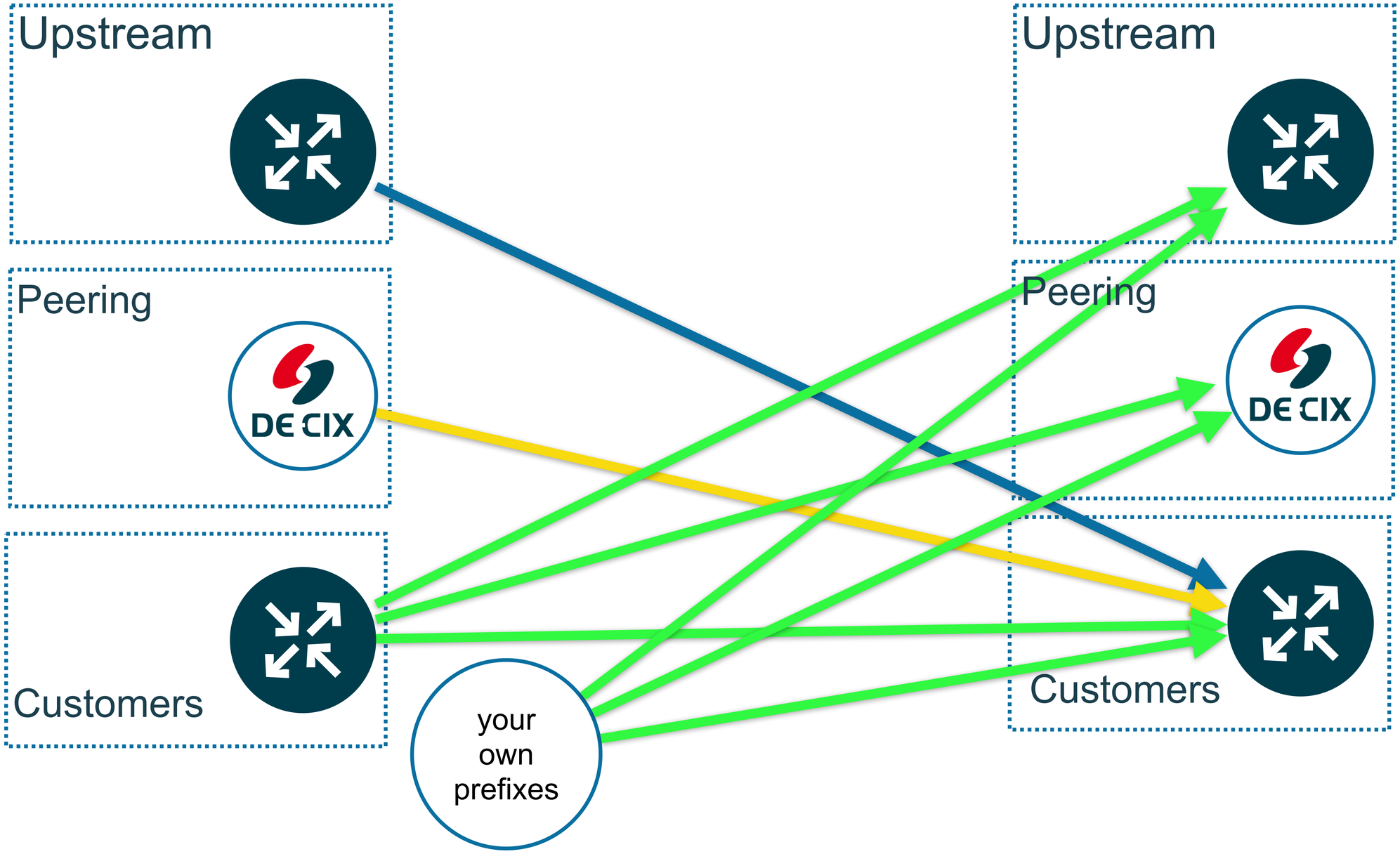


10.3.8.0/22
64496 64500 64500
eBGP
10.3.8.0/22
64500 64500
AS64496
10.3.8.0/22
64496 64500 64500
"The Internet"
10.3.8.0/22
64500 64500
10.3.8.0/22
64500
AS64500
10.3.8.0/22
65550 64500
Better
eBGP
10.3.8.0/22
64500
10.3.8.0/22
65550 64500
AS65550


Blocklist
The Good Stuff
Raw Input
Allowlist


Idle
Connect
Active
Open Sent
Open Confirm
Established


AS645xx
10.99.1.1xx/24
eBGP
DE CIX
Academy
10.99.1.254/24
Proxy
Router
iBGP
r01-academy.de-cix.net
"The Internet"
eBGP
AS196610
RPKI-RTR
10.254.1.254/24
Caching Validator
Validated Cache
Fetch
Certificates and ROAs
RIPE NCC
AFRINIC
ARIN
APNIC
LACNIC

Prefixes from...

...are announced to