



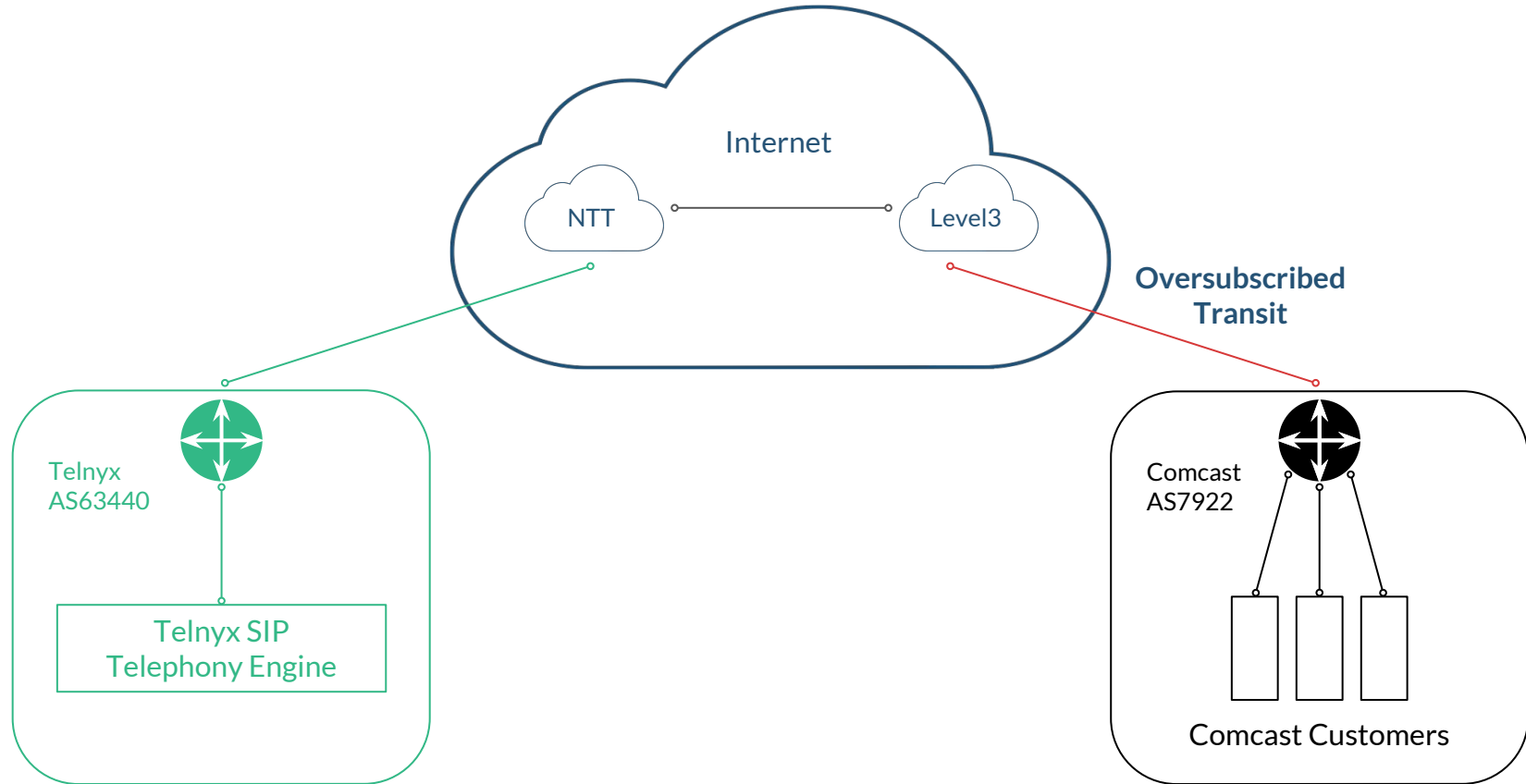
May 2017



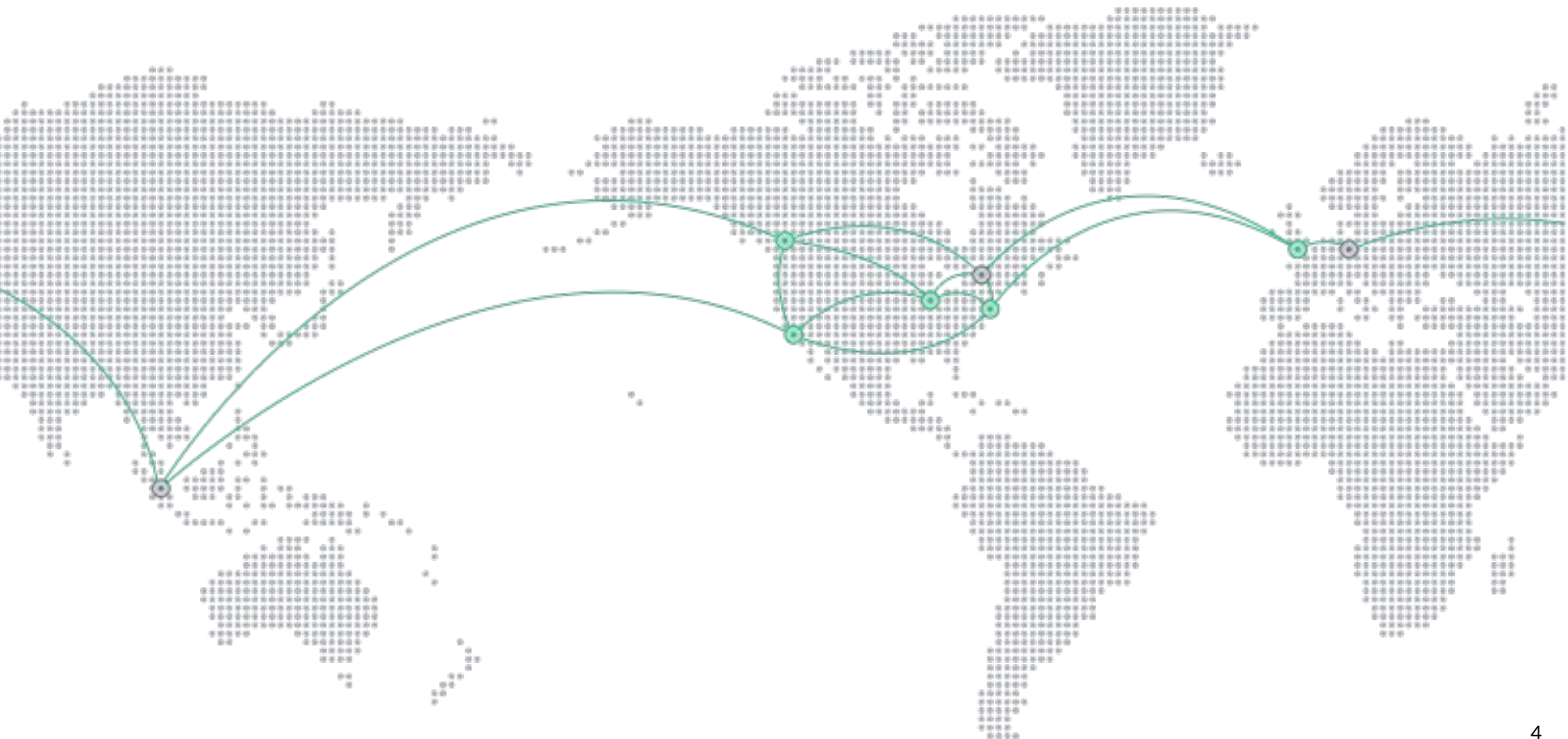
Real Time Communications over the Internet is not a solved problem



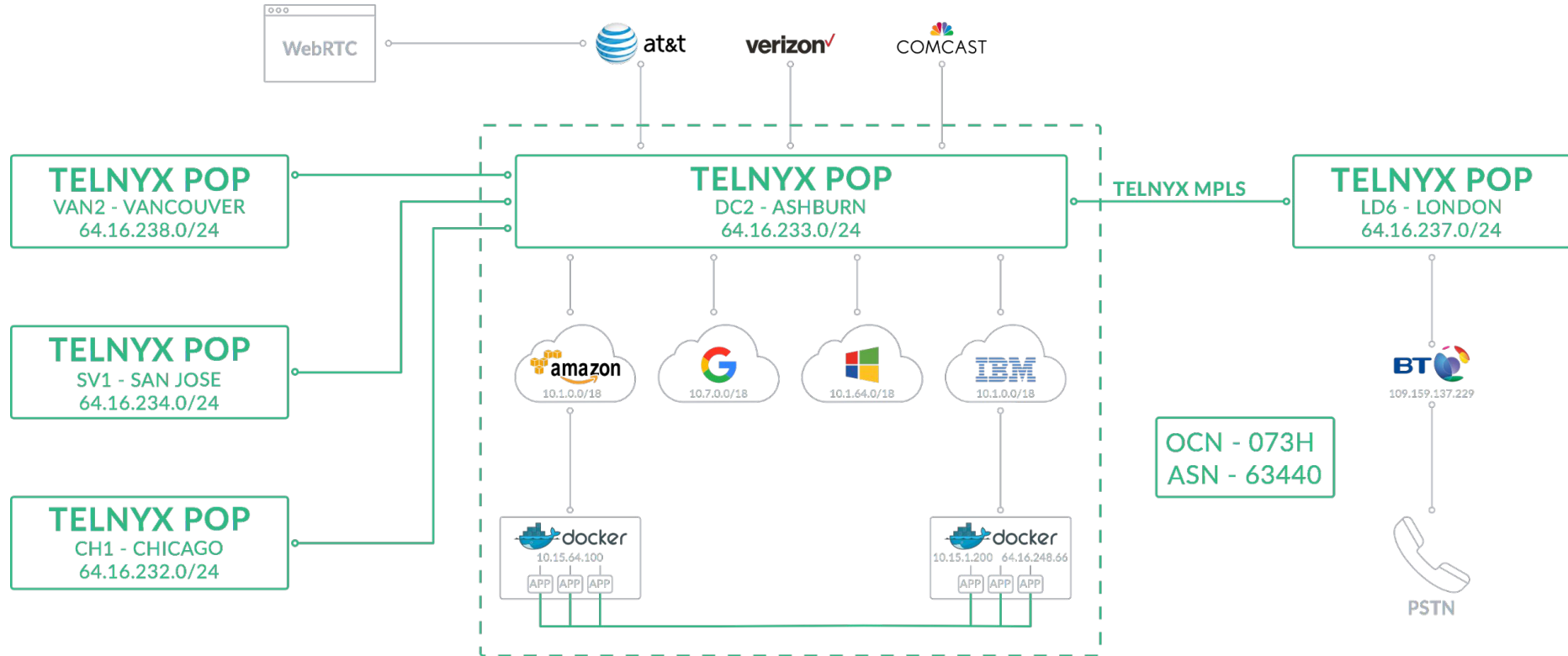
Access via Transit



We've built a phone company with the Internet in mind



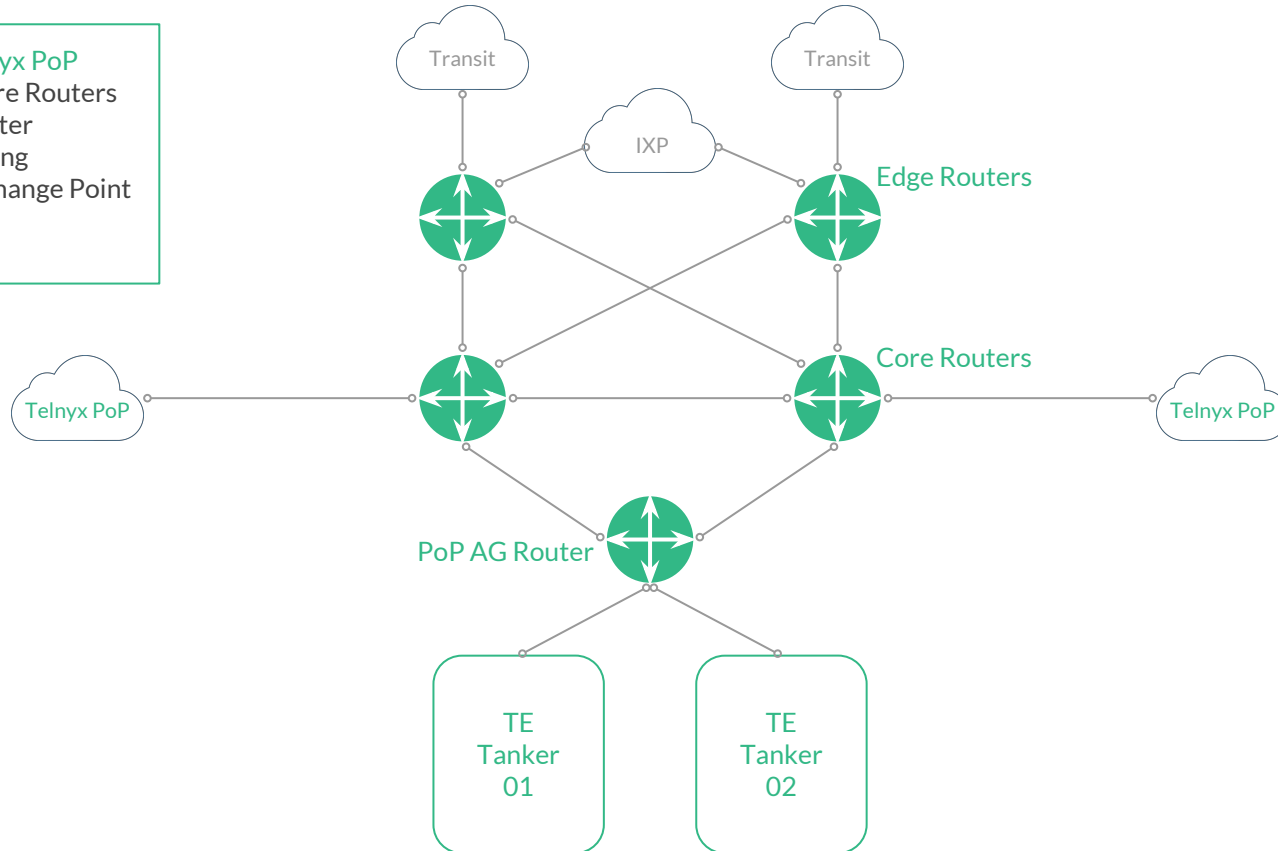
Our infrastructure is designed to displace the PSTN, not bolt onto it



Telnix Point of Presence (PoP)

Standard Telnix PoP

- Edge and Core Routers
- POP AG Router
- Transit Peering
- Internet Exchange Point
- Backbone
- TE Tankers



Telnyx PoP

Standard Telnyx PoP
- Edge and Core Routers



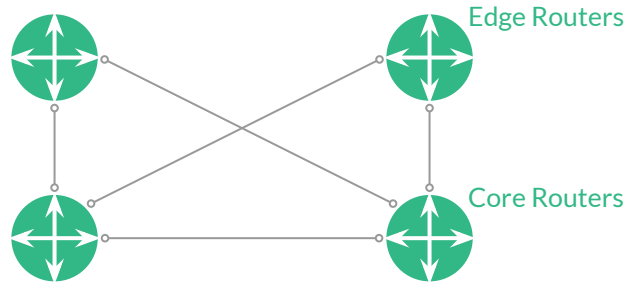
Edge Routers



Core Routers

Telnyx PoP

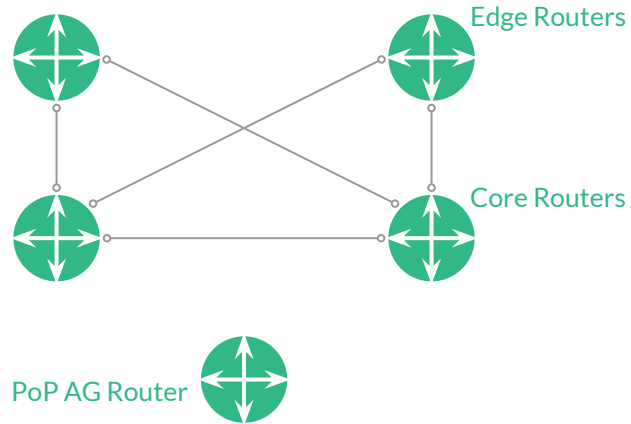
Standard Telnyx PoP
- Edge and Core Routers



Telnyx PoP

Standard Telnyx PoP

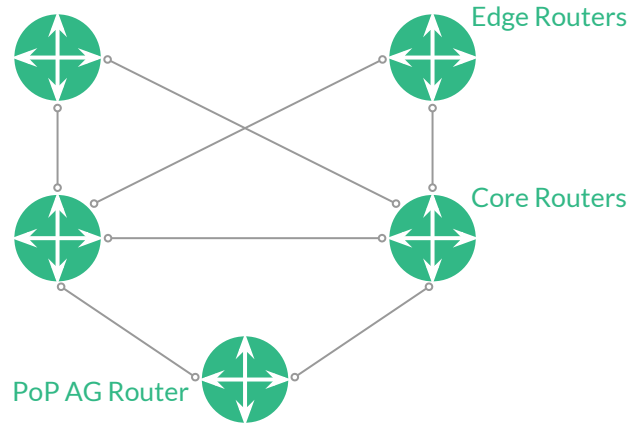
- Edge and Core Routers
- PoP AG Router



Telnyx PoP

Standard Telnyx PoP

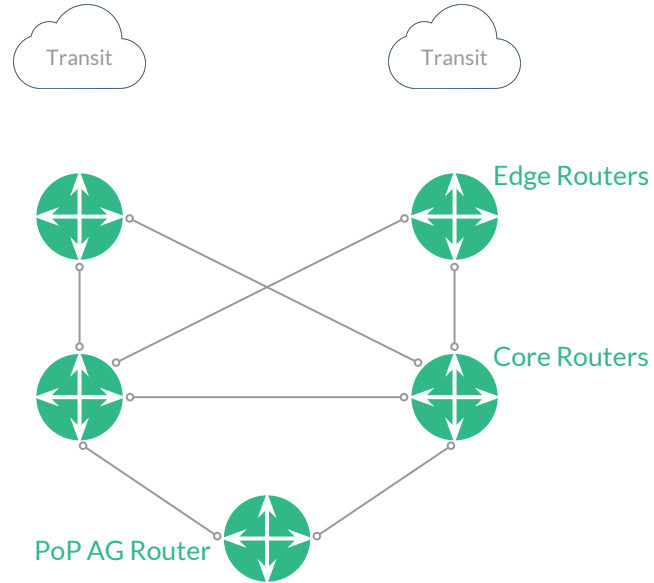
- Edge and Core Routers
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Telnyx PoP

Standard Telnyx PoP

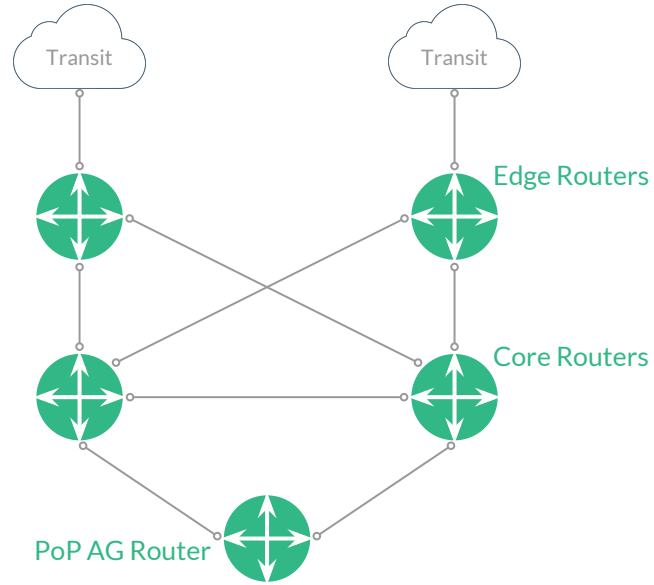
- Edge and Core Routers
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Telnyx PoP

Standard Telnyx PoP

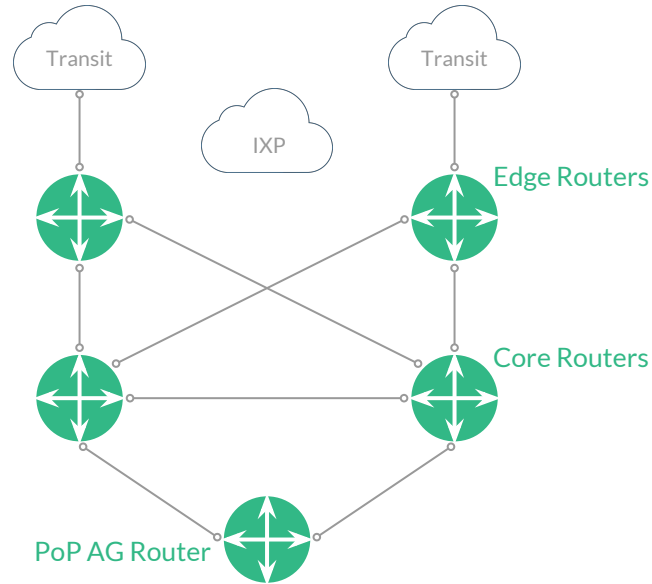
- Edge and Core Routers
- PoP AG Router
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Telnyx PoP

Standard Telnyx PoP

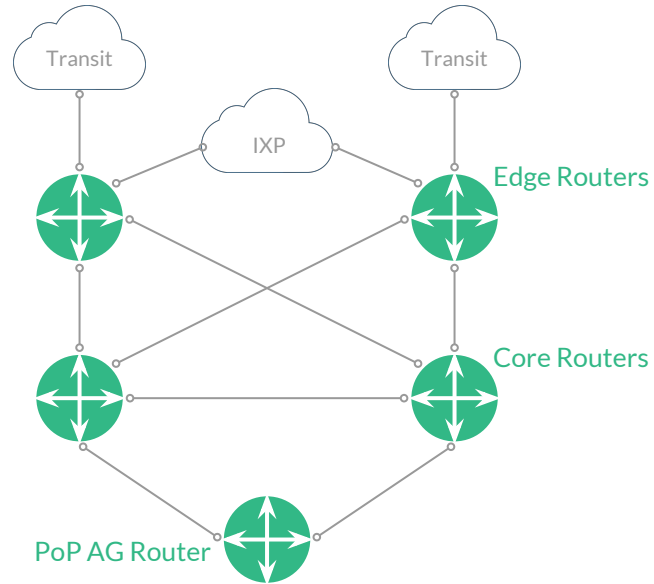
- Edge and Core Routers
- PoP AG Router
- Transit Peering
- Internet Exchange Point



Telnyx PoP

Standard Telnyx PoP

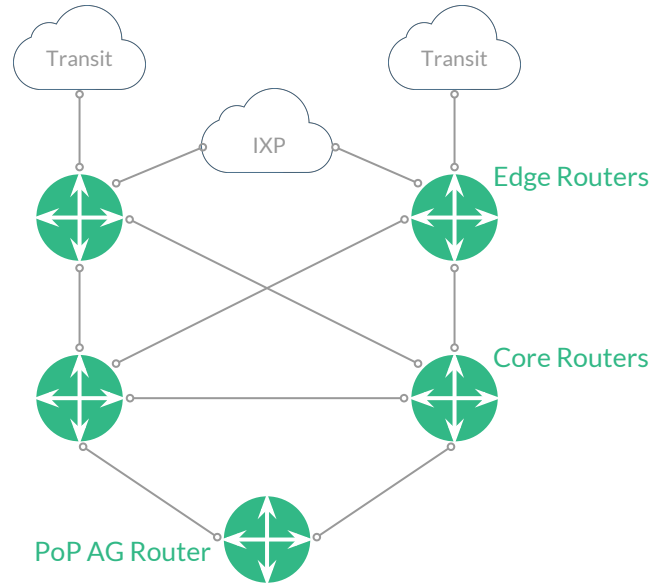
- Edge and Core Routers
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- Internet Exchange Point



Telnyx PoP

Standard Telnyx PoP

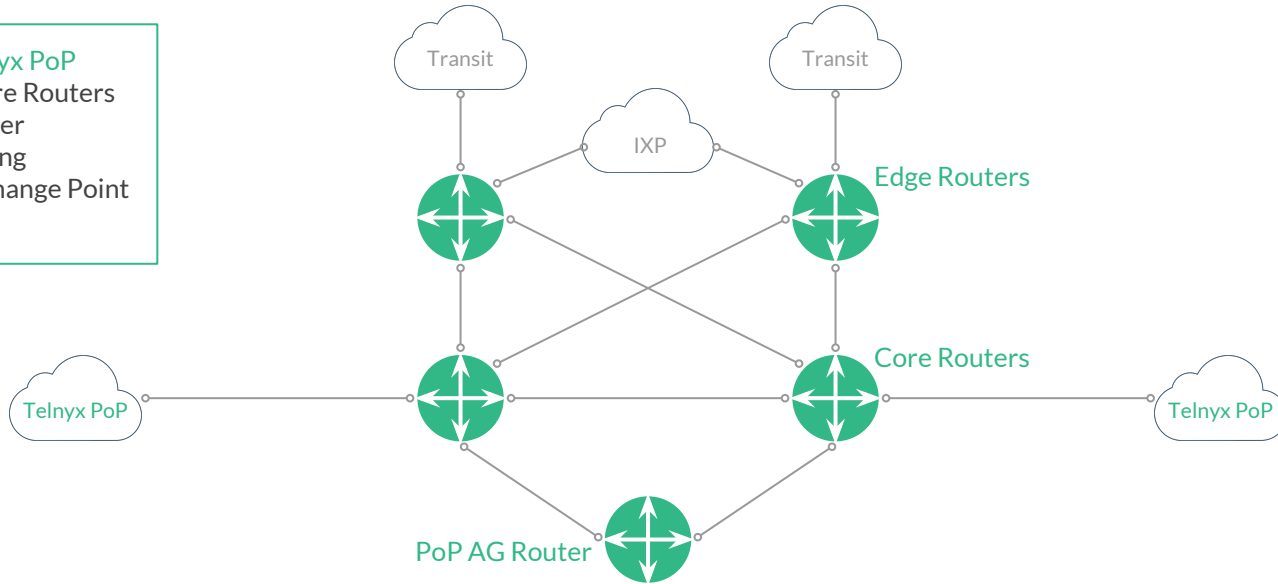
- Edge and Core Routers
- PoP AG Router
- Transit Peering
- Internet Exchange Point
- Backbone



Telnyx PoP

Standard Telnyx PoP

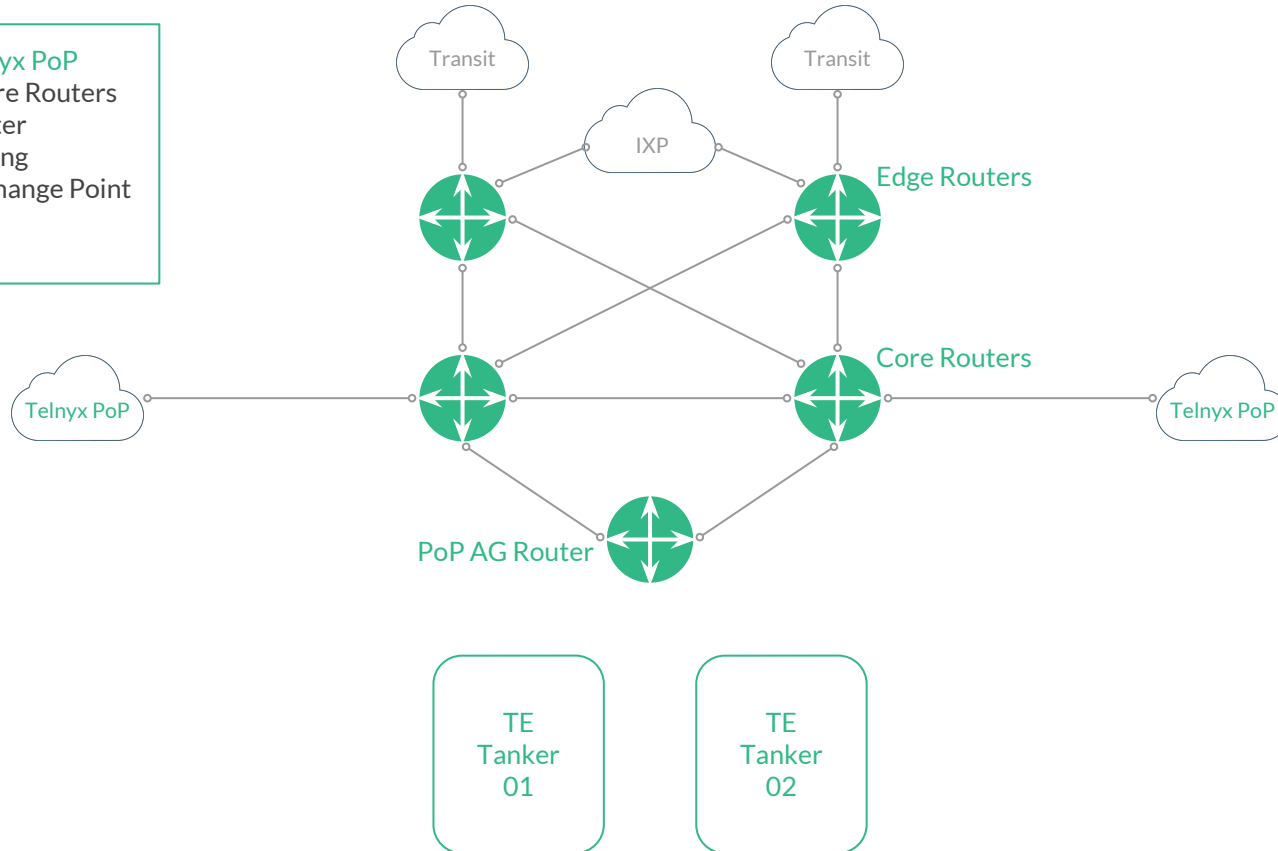
- Edge and Core Routers
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- Internet Exchange Point
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Telnyx PoP

Standard Telnyx PoP

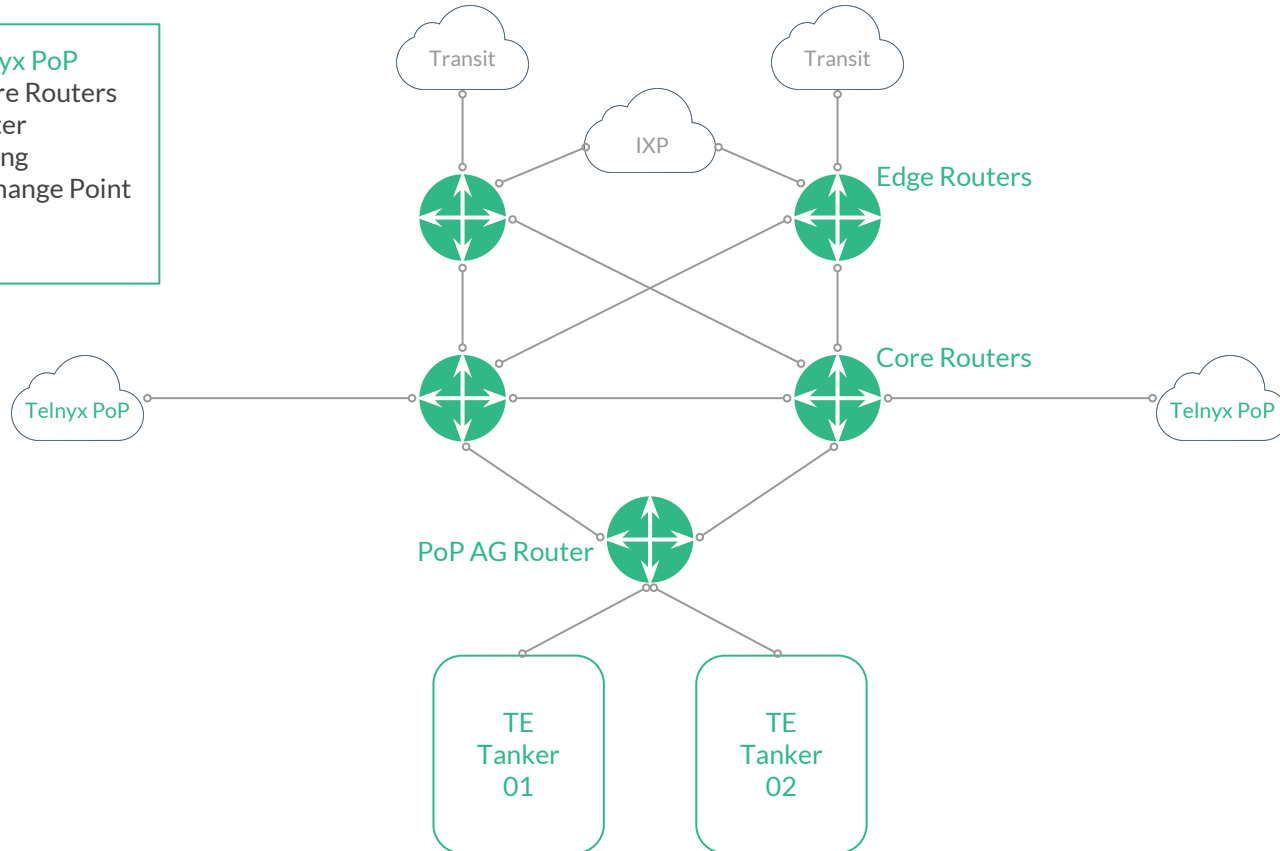
- Edge and Core Routers
- PoP AG Router
- Transit Peering
- Internet Exchange Point
- Backbone
- TE Tankers



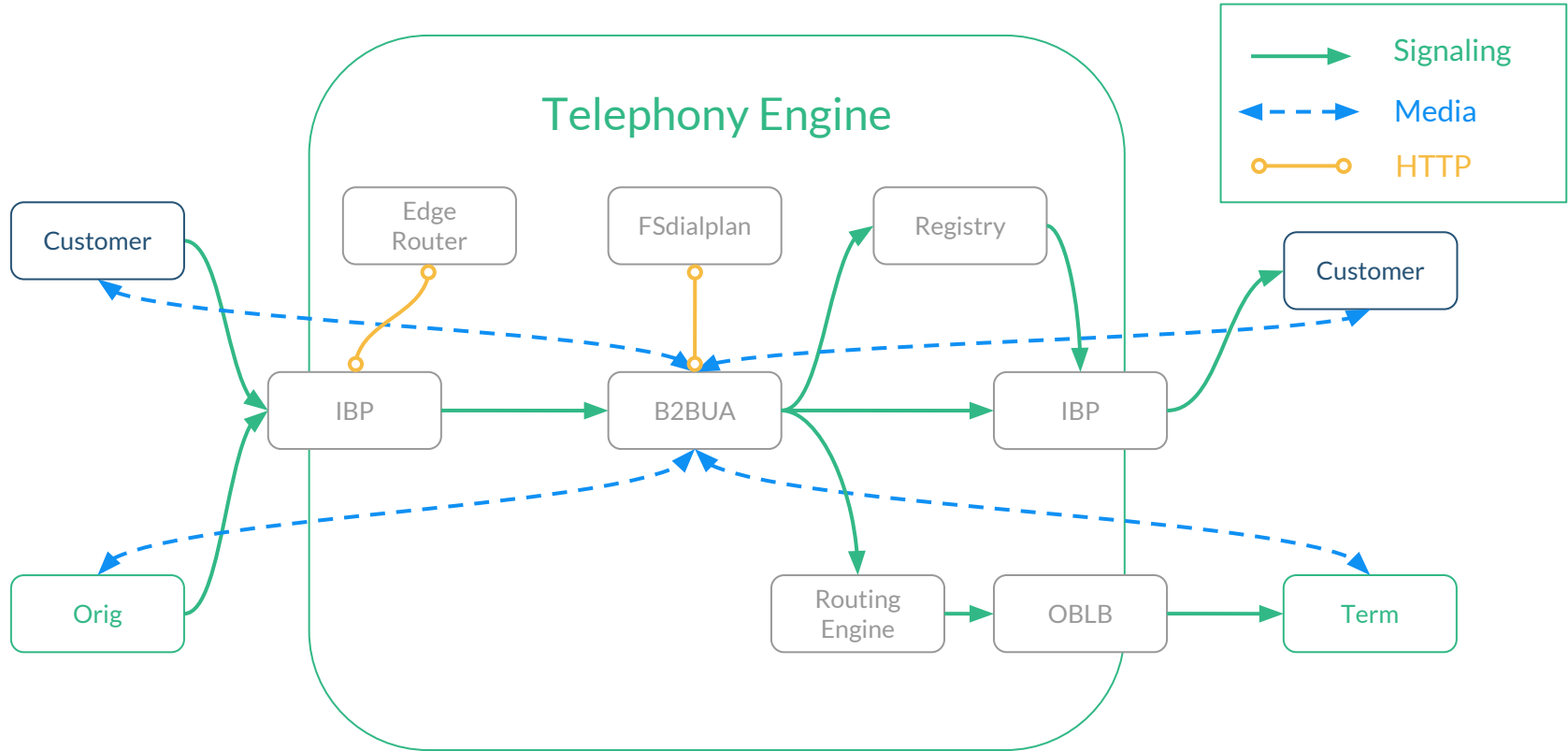
Telnyx PoP

Standard Telnyx PoP

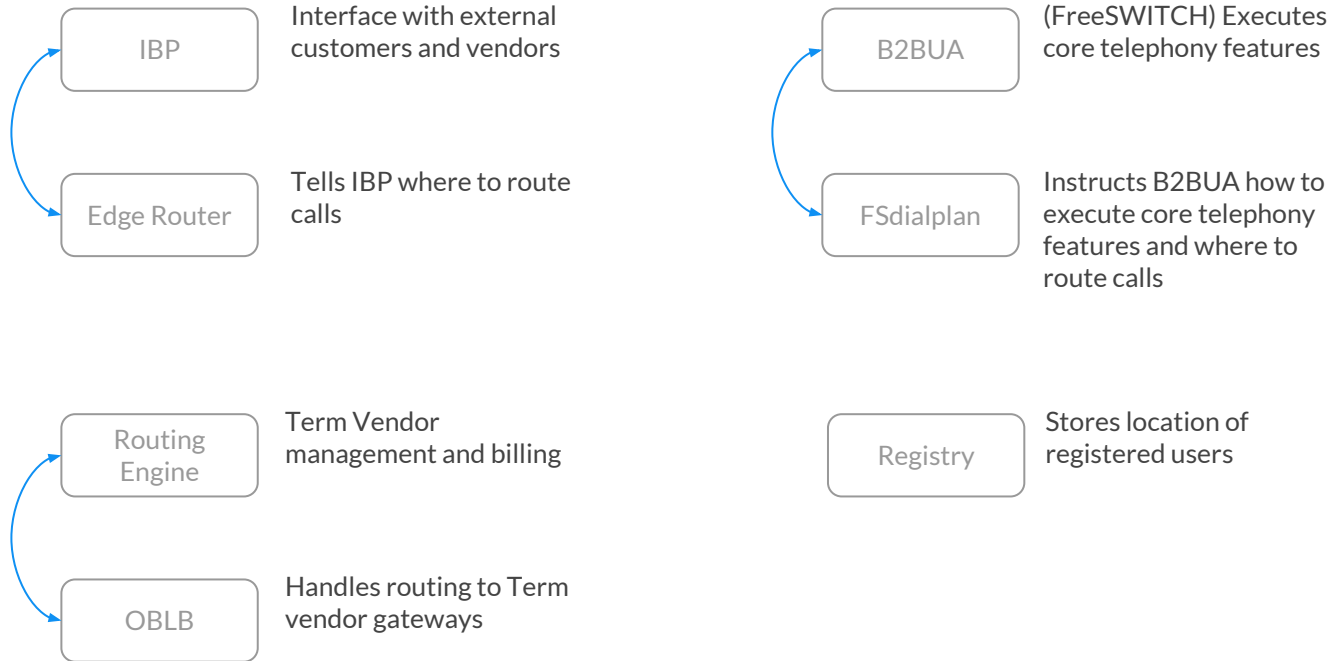
- Edge and Core Routers
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- Transit Peering
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- TE Tankers



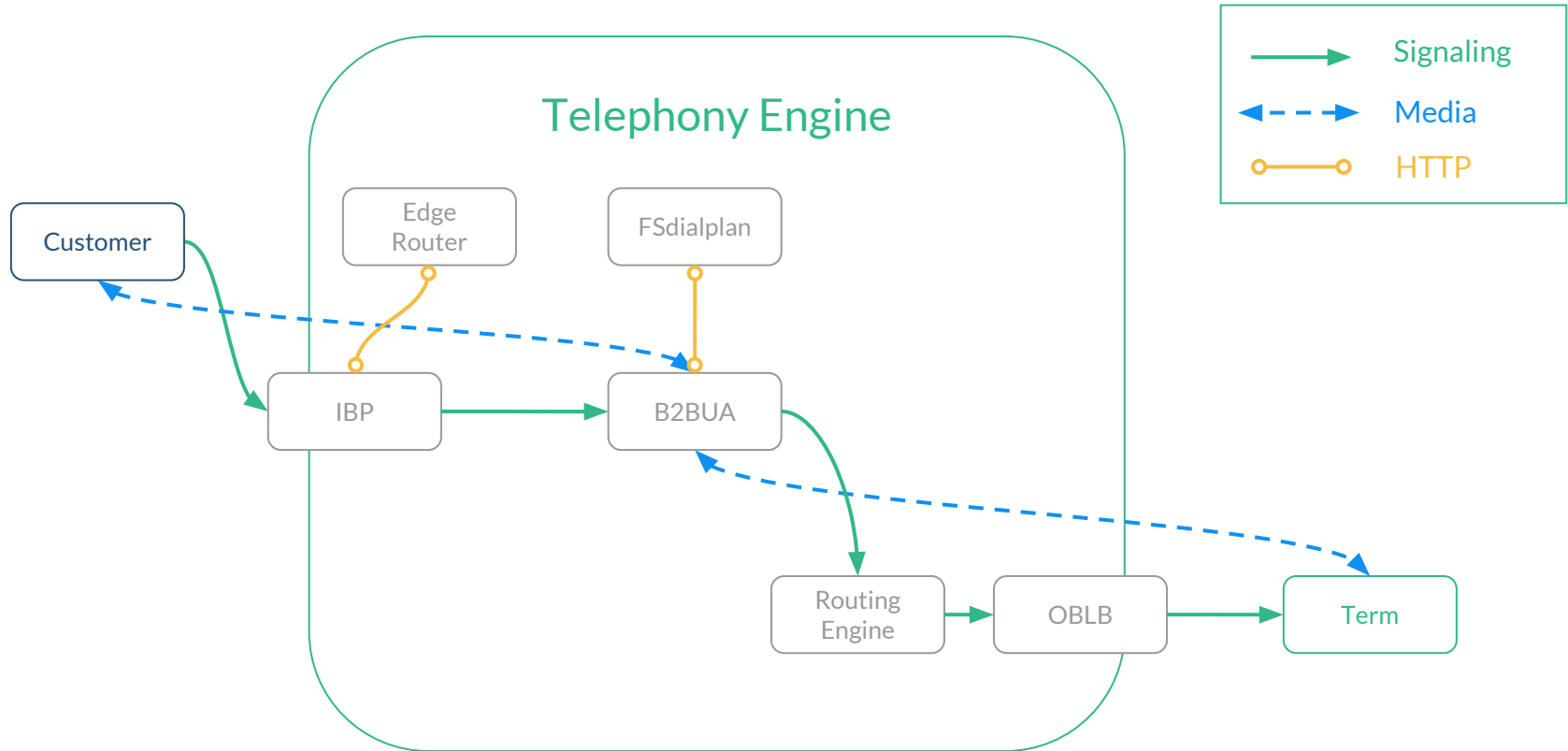
Telephony Engine Architecture



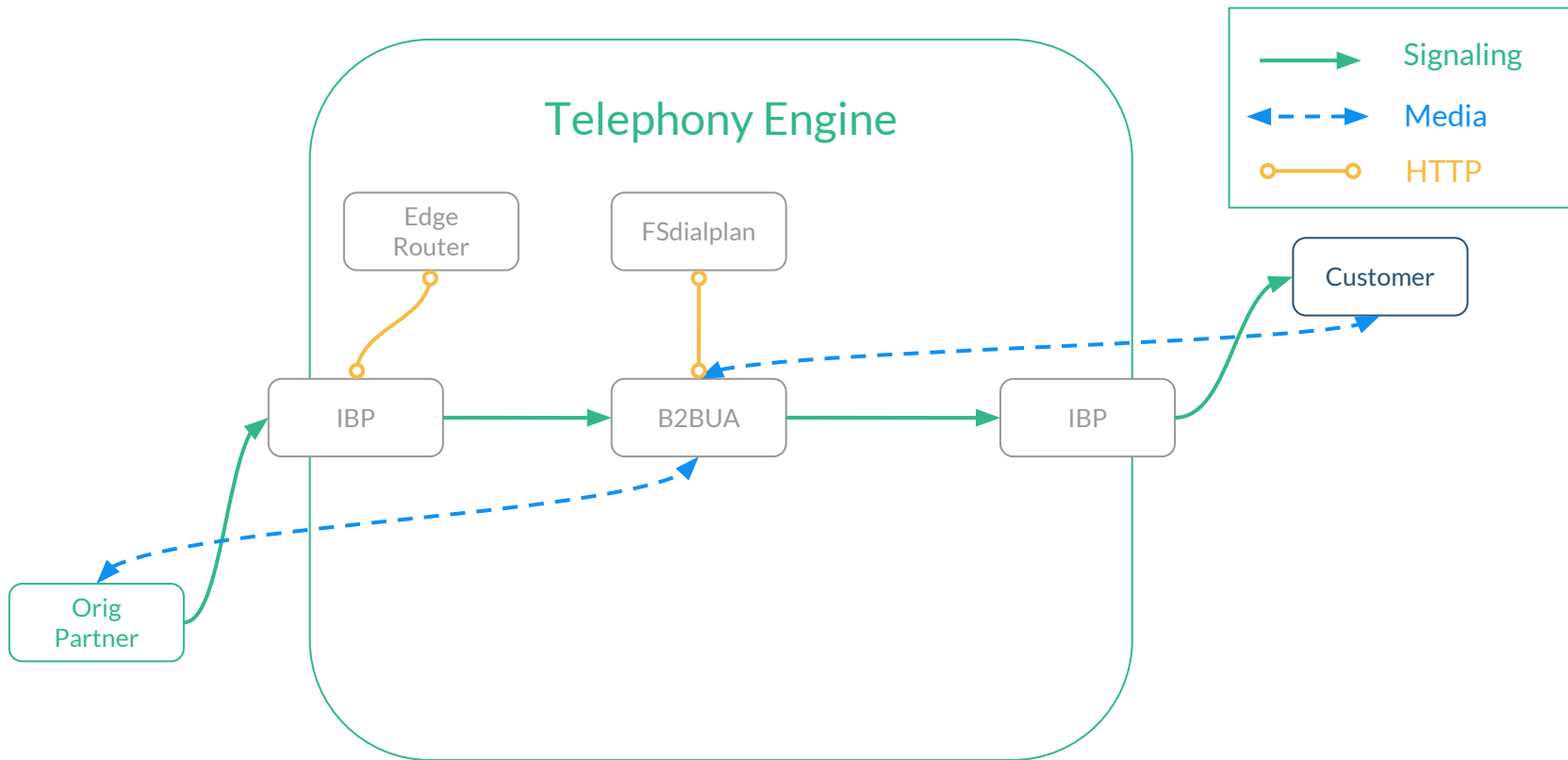
Telephony Engine Components



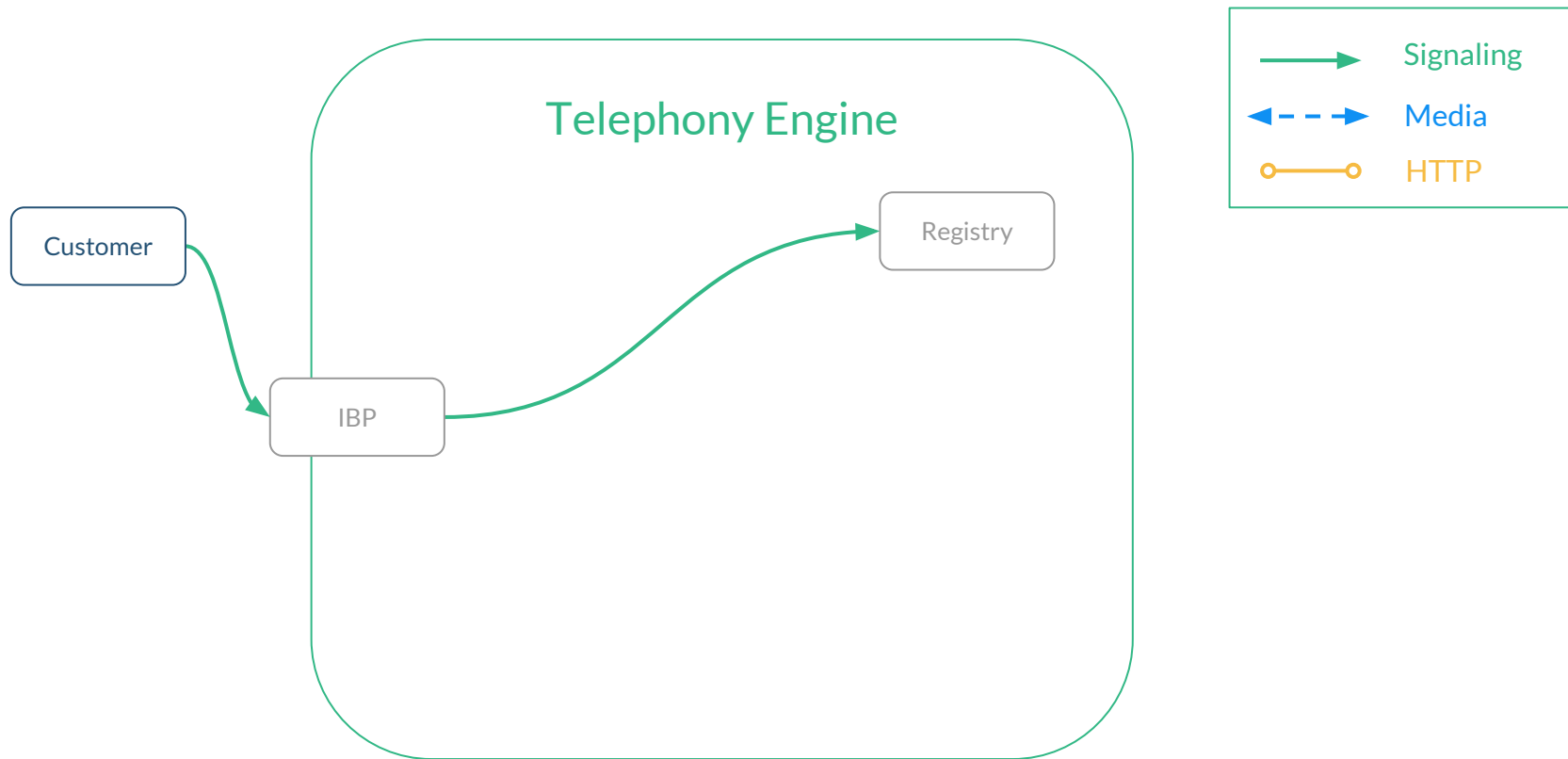
Telephony Engine Term Flow



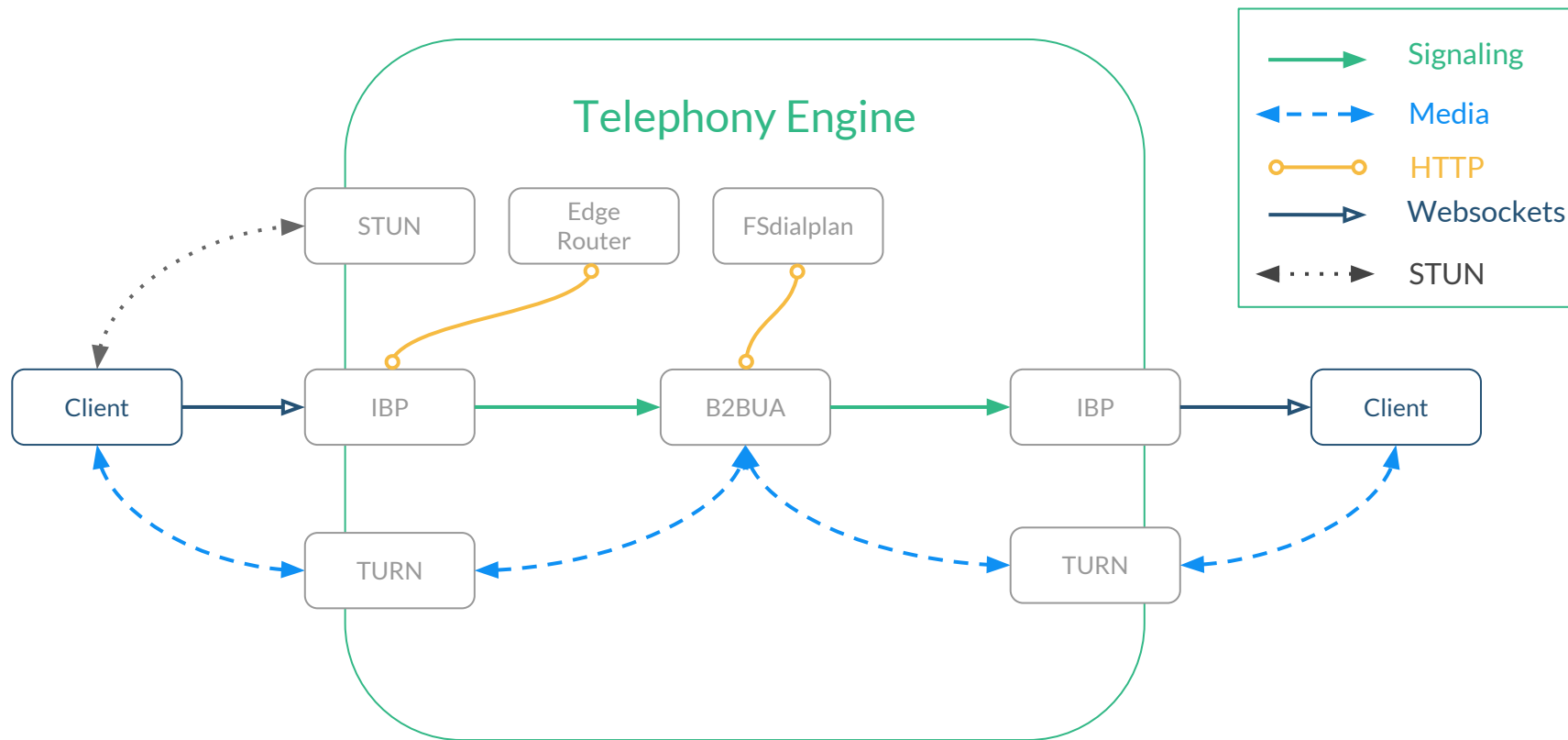
Telephony Engine Orig Flow (IP auth)



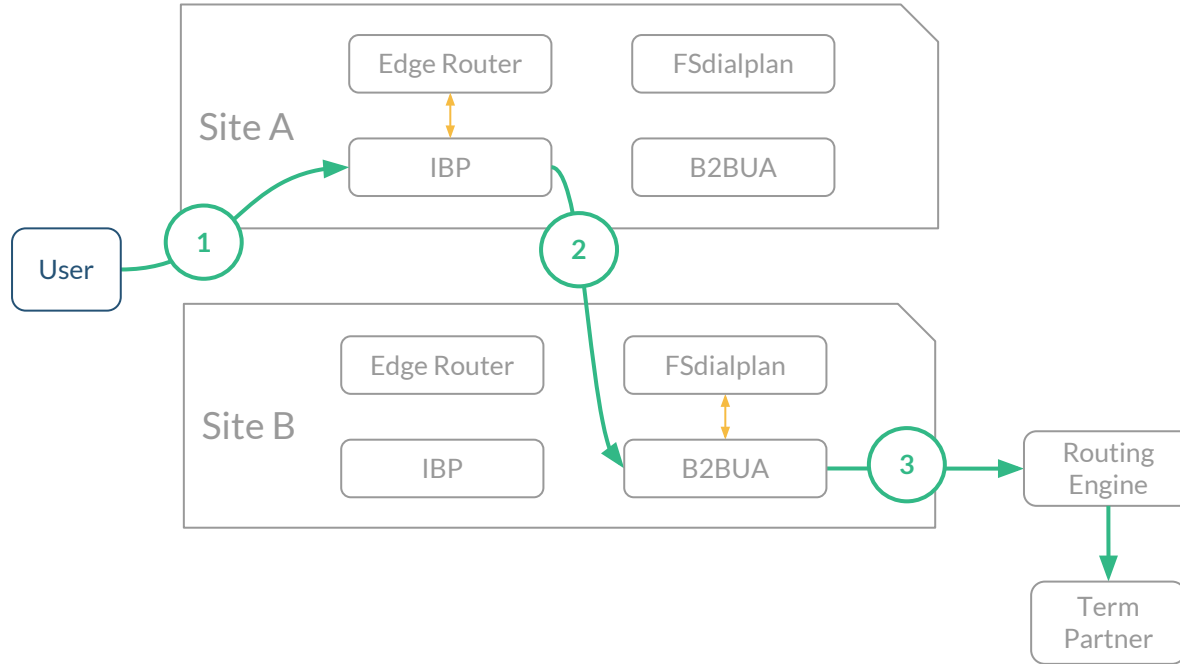
Telephony Engine Reg Flow



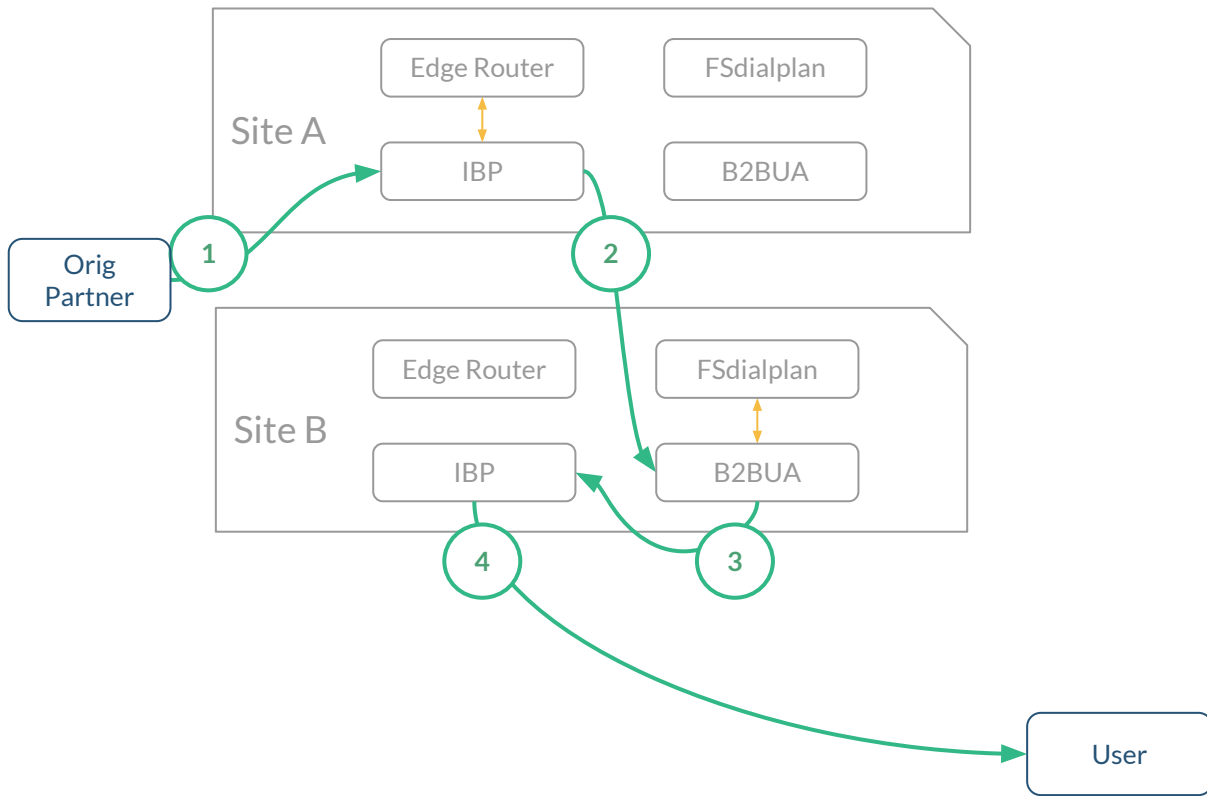
Telephony Engine WebRTC Flow



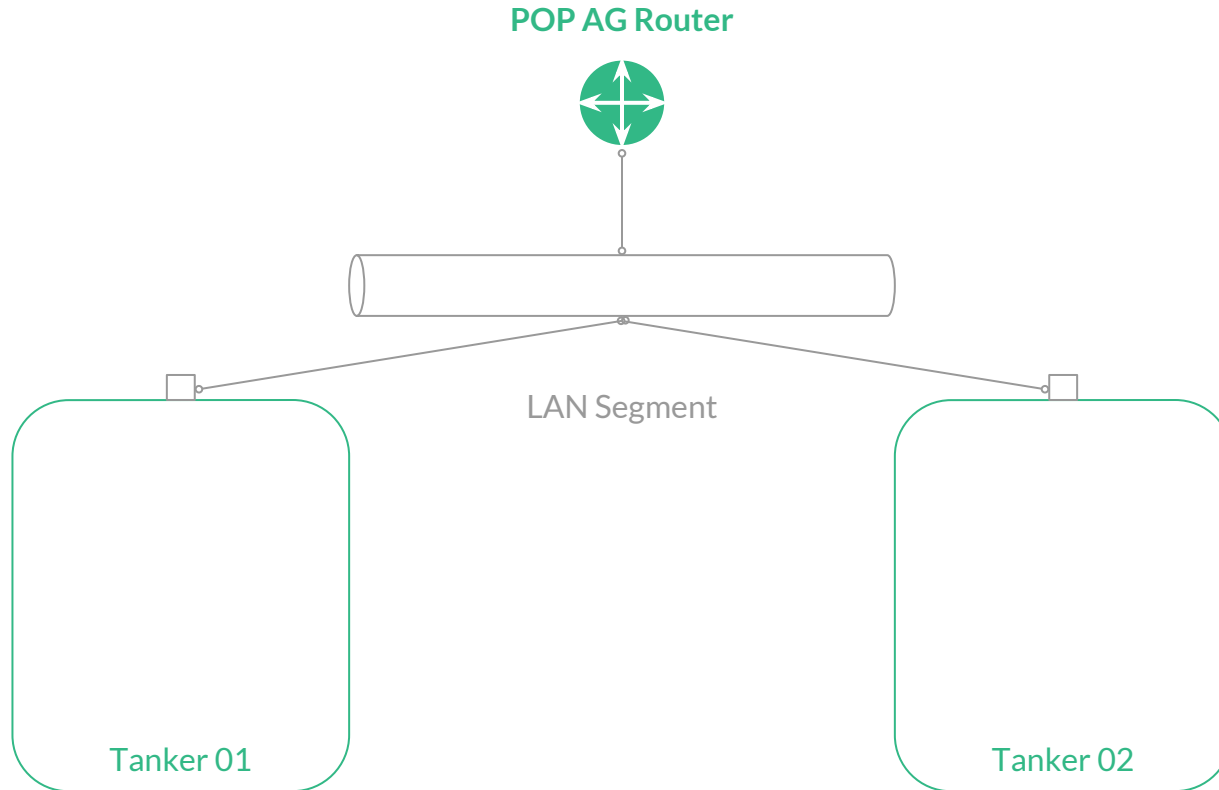
Telephony Engine Term Anycast + Multi-site



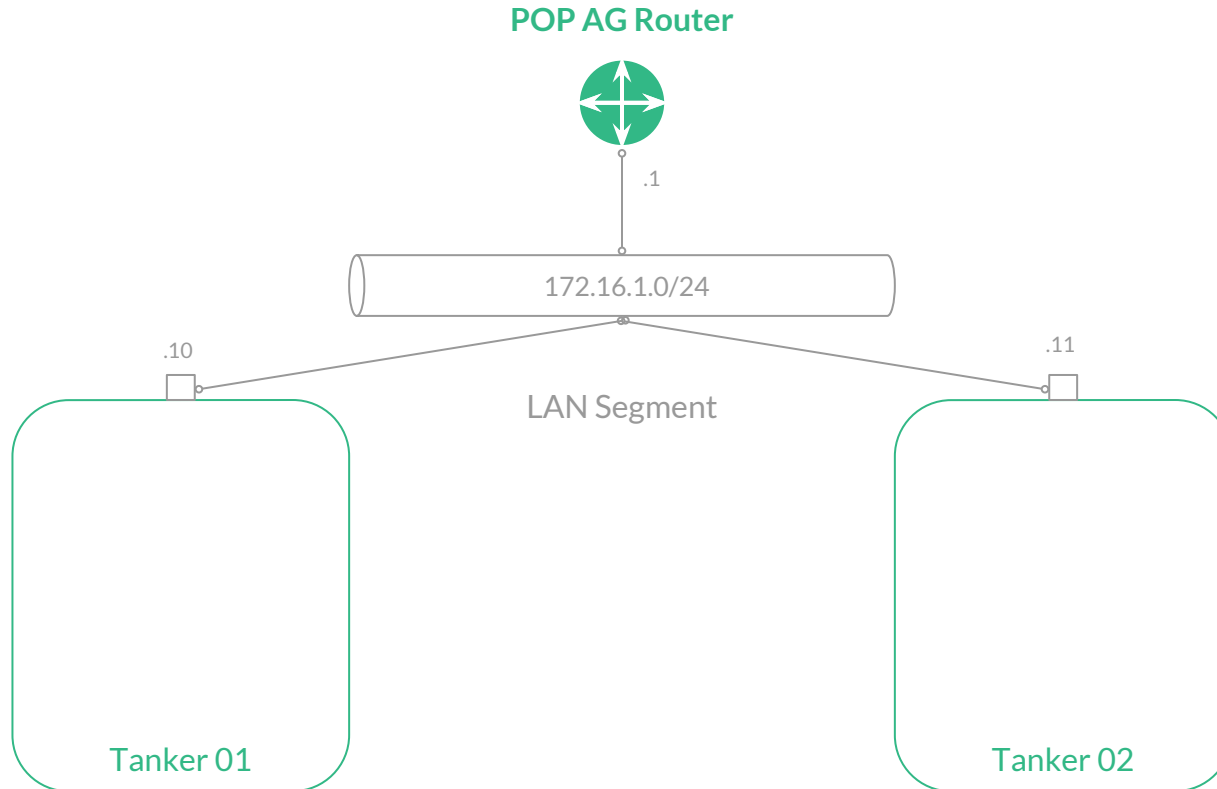
Telephony Engine Orig Anycast + Multi-site (IP Auth)



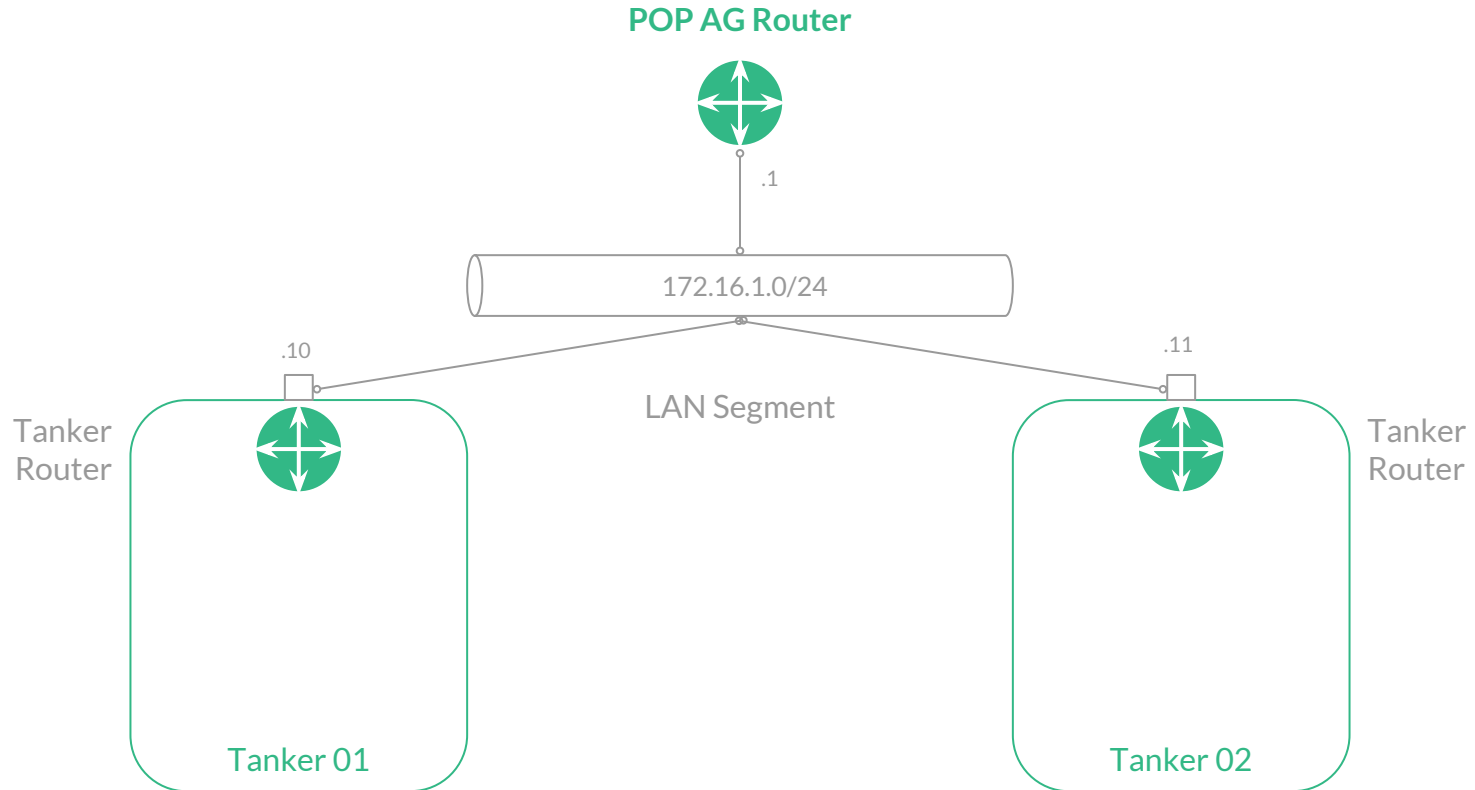
Telnyx Telephony Engine Deployment



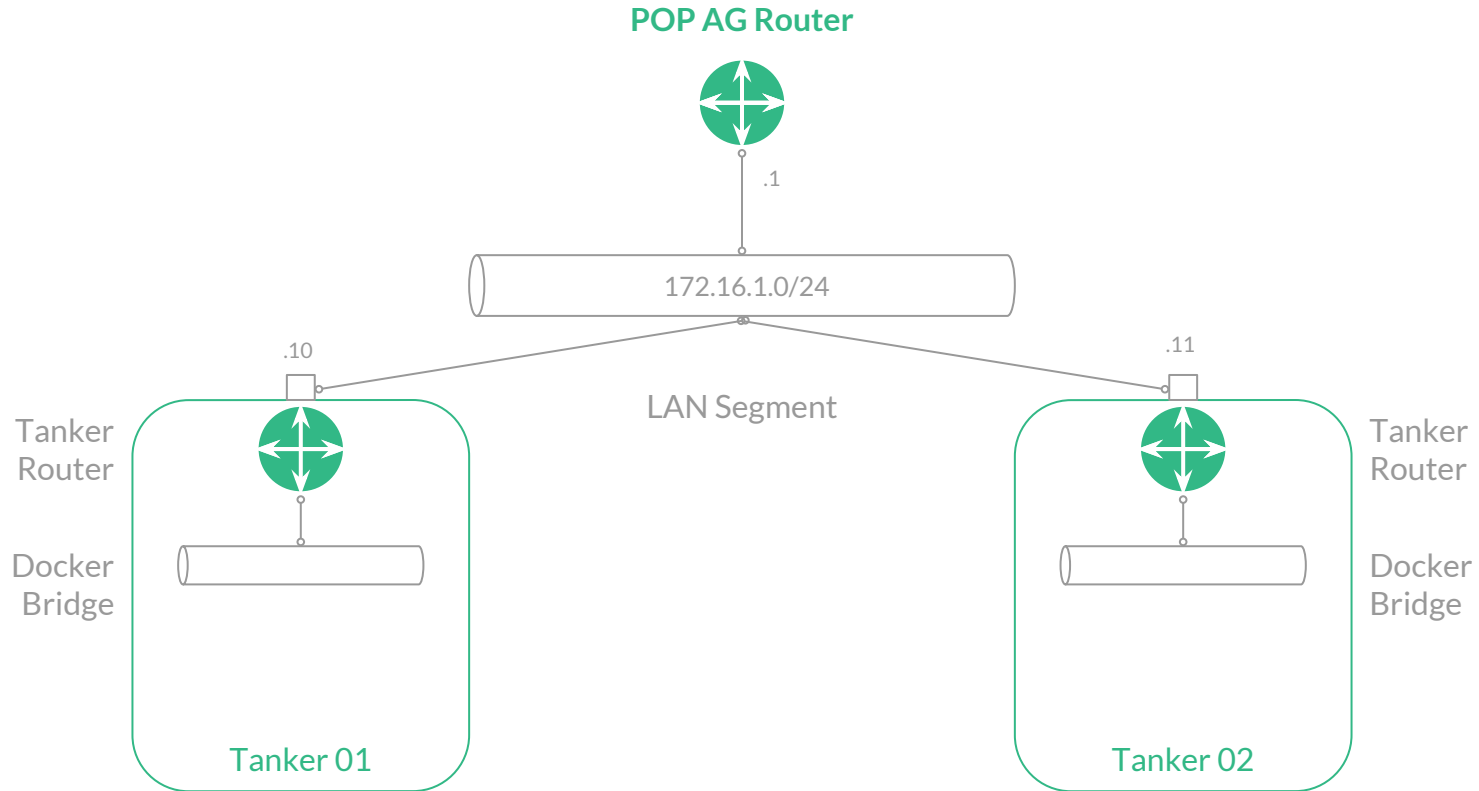
Telnyx Telephony Engine Deployment



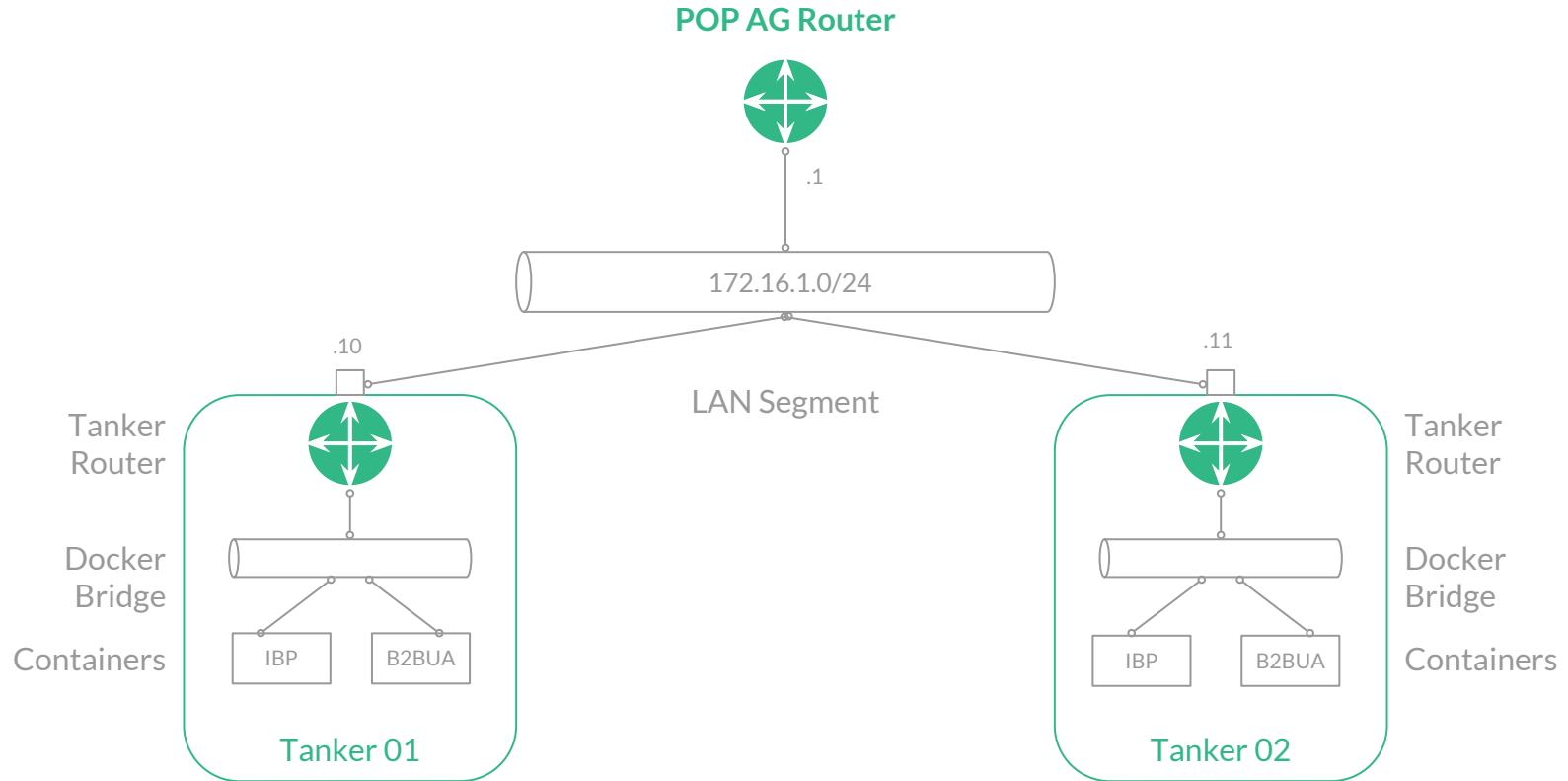
Telnyx Telephony Engine Deployment



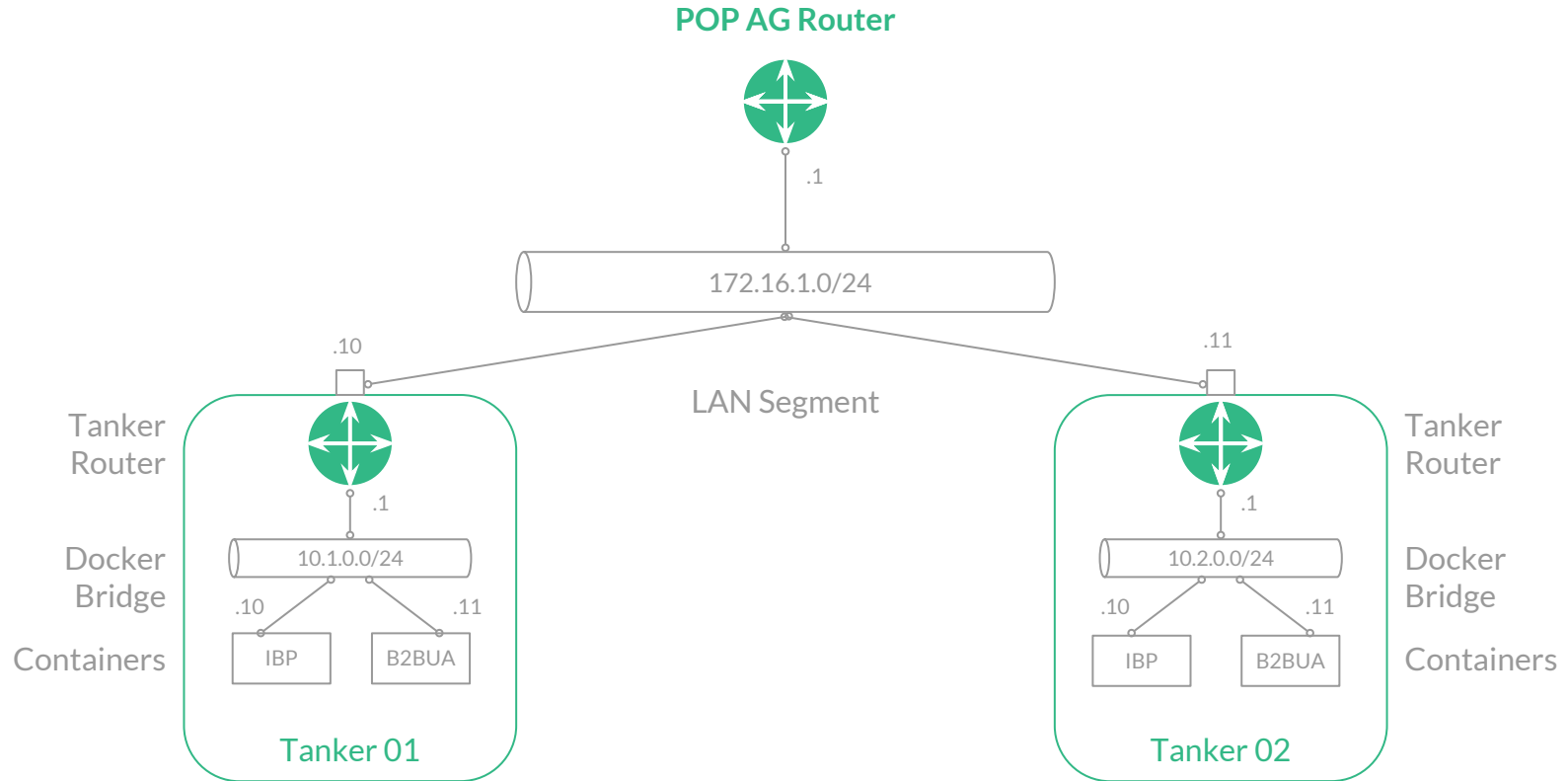
Telnyx Telephony Engine Deployment



Telnyx Telephony Engine Deployment



Telnyx Telephony Engine Deployment



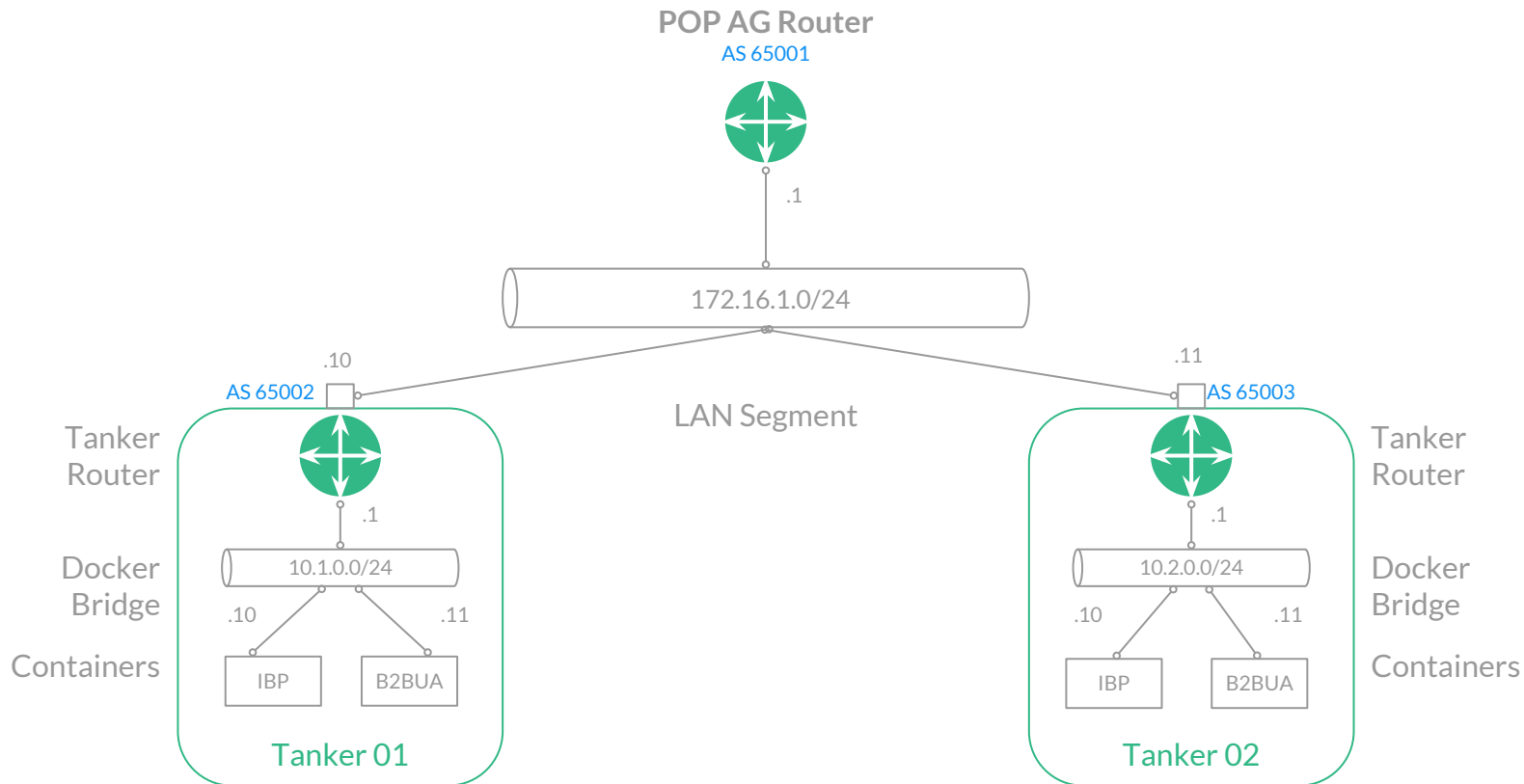


Building the Tanker-Router

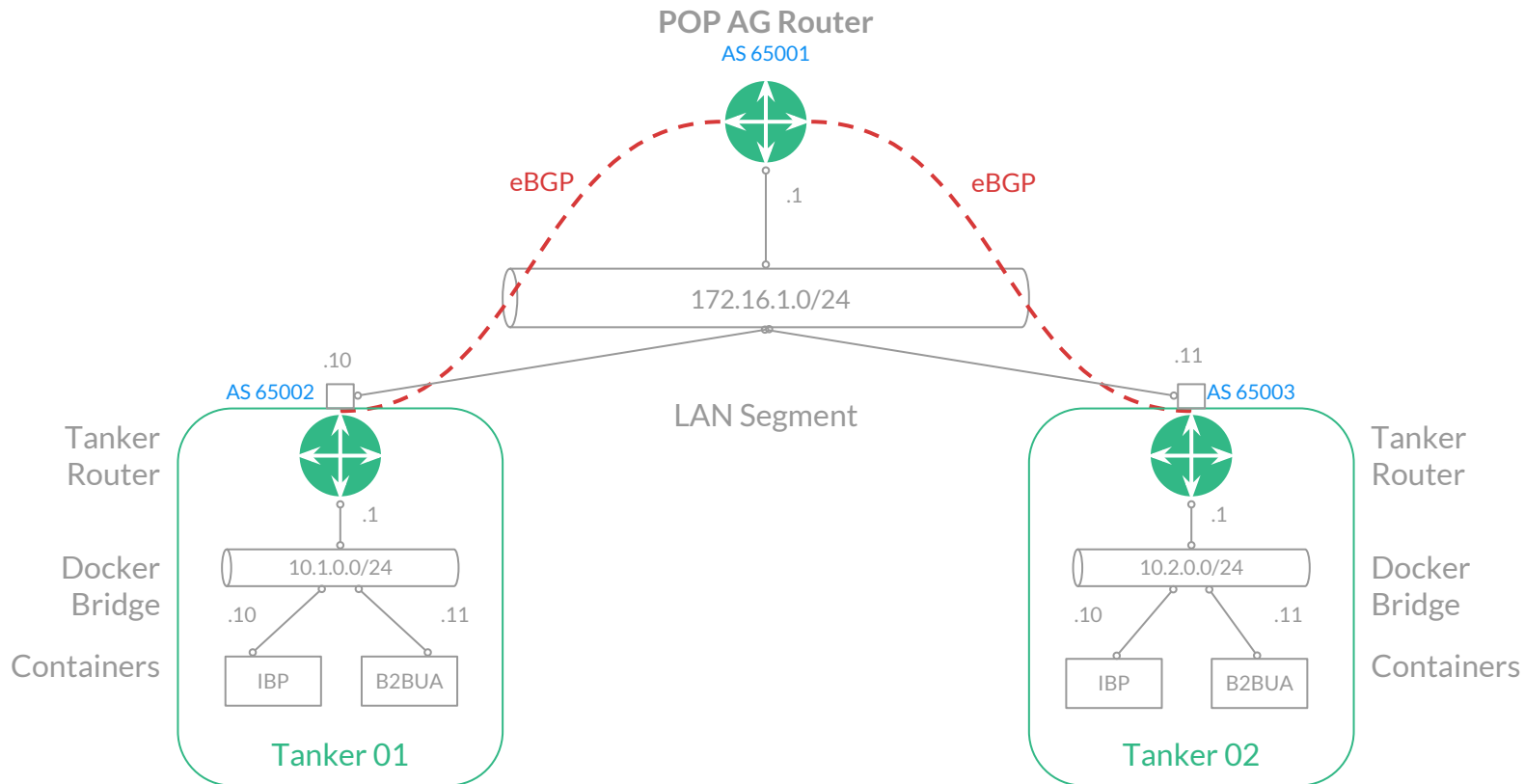
Building the Tanker-Router

- Routing daemon to turn the tanker into a router
- Peer sessions with upstream nodes
- Announce the docker bridges
- Achieve reachability

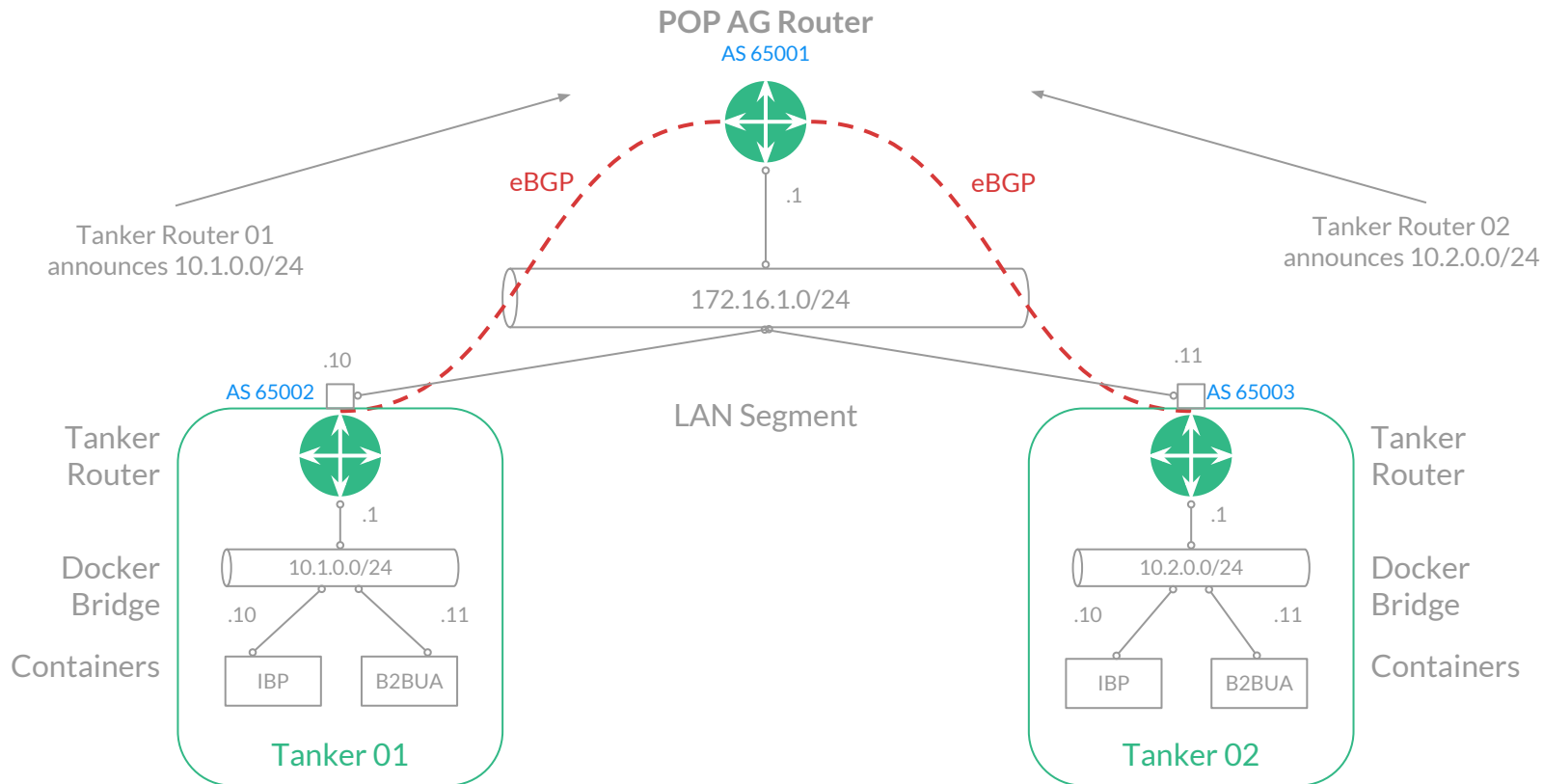
Tanker-Router



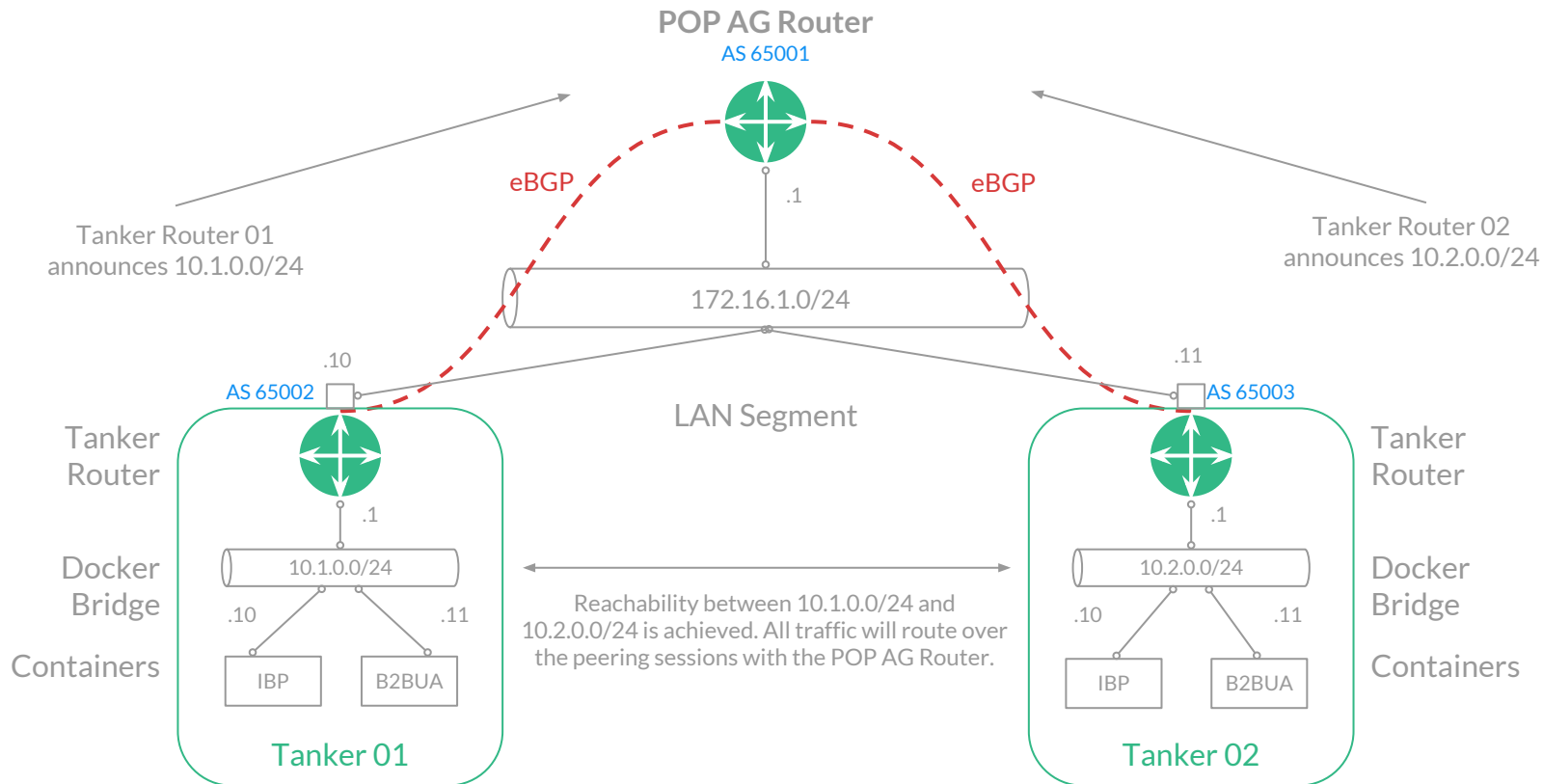
Tanker-Router



Tanker-Router



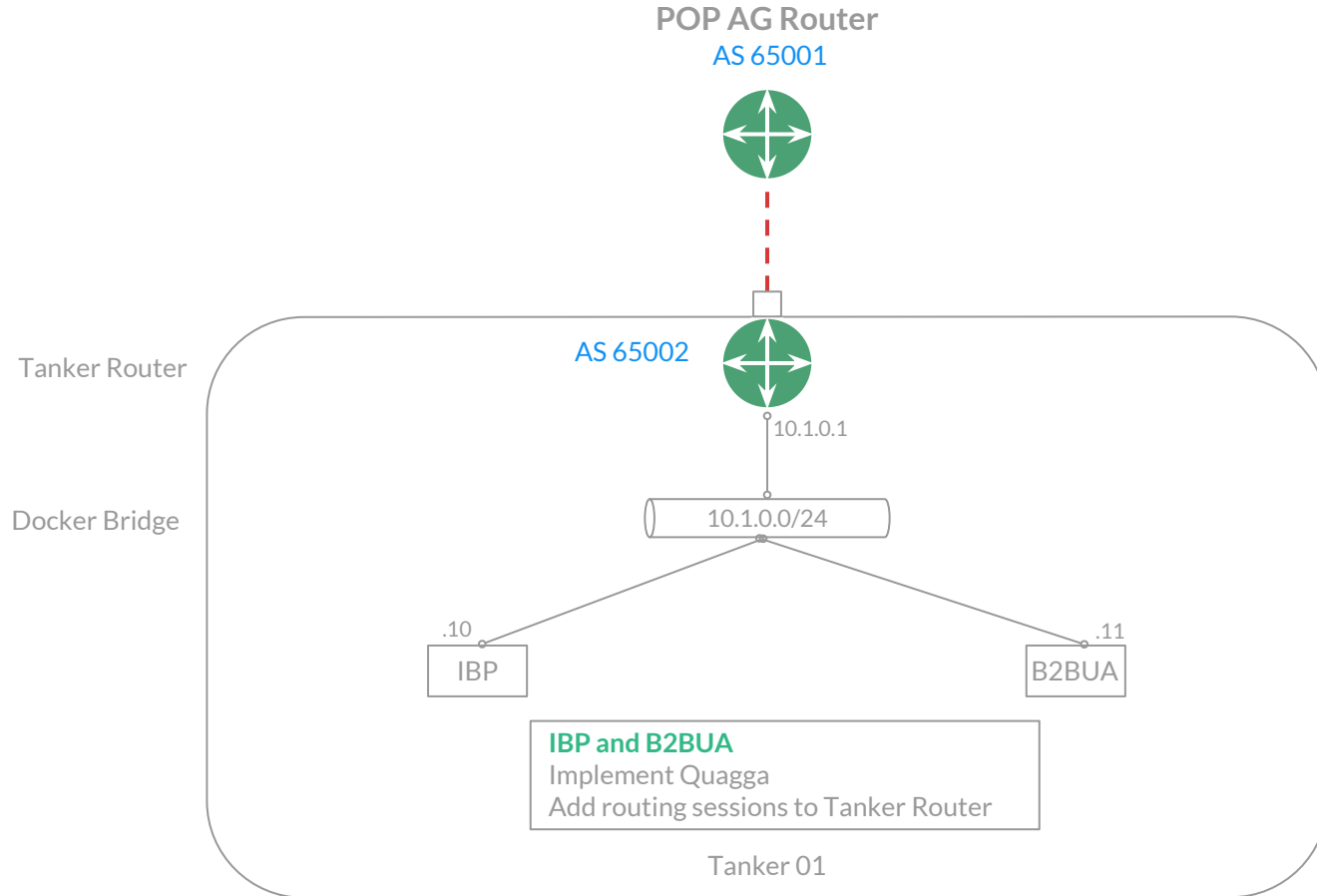
Tanker-Router





Let's take routing a step further
and build into the container...

Container Router



Container Router

POP AG Router

AS 65001



AS 65002

iBGP

iBGP

10.1.0.1

10.1.0.0/24

.10

IBP

.11

B2BUA

IBP and B2BUA

Add routing sessions to Tanker Router
Tanker 01 is an iBGP for AS 65002

Tanker 01

Tanker Router

Docker Bridge

Container Router

Container Router

POP AG Router

AS 65001



AS 65002

iBGP

iBGP

10.1.0.1

10.1.0.0/24

.10

IBP

.11

B2BUA

IBP

Add public IP to eth0
ip addr add 192.76.120.10/32 dev eth0

B2BUA

Add public IP to eth0
ip addr add 64.16.248.50/32 dev eth0

Tanker 01

Tanker Router

Docker Bridge

Container Router

Container Router

POP AG Router

AS 65001



AS 65002



iBGP

iBGP

10.1.0.1

10.1.0.0/24

.10

IBP

.11

B2BUA

eth0

10.1.0.10 = Bridge IP
192.76.120.10/32

eth0

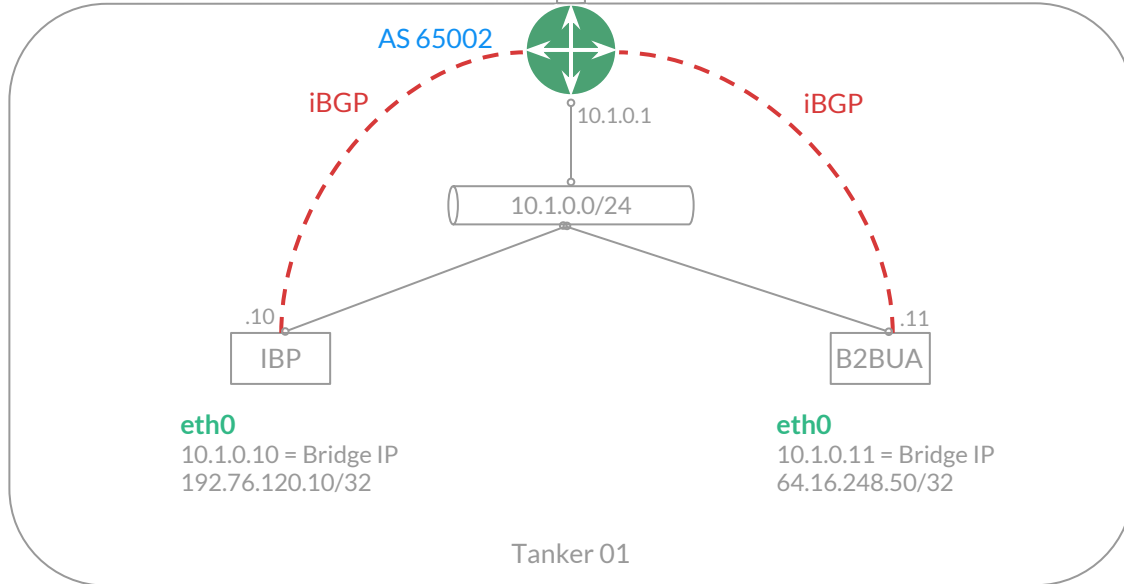
10.1.0.11 = Bridge IP
64.16.248.50/32

Tanker 01

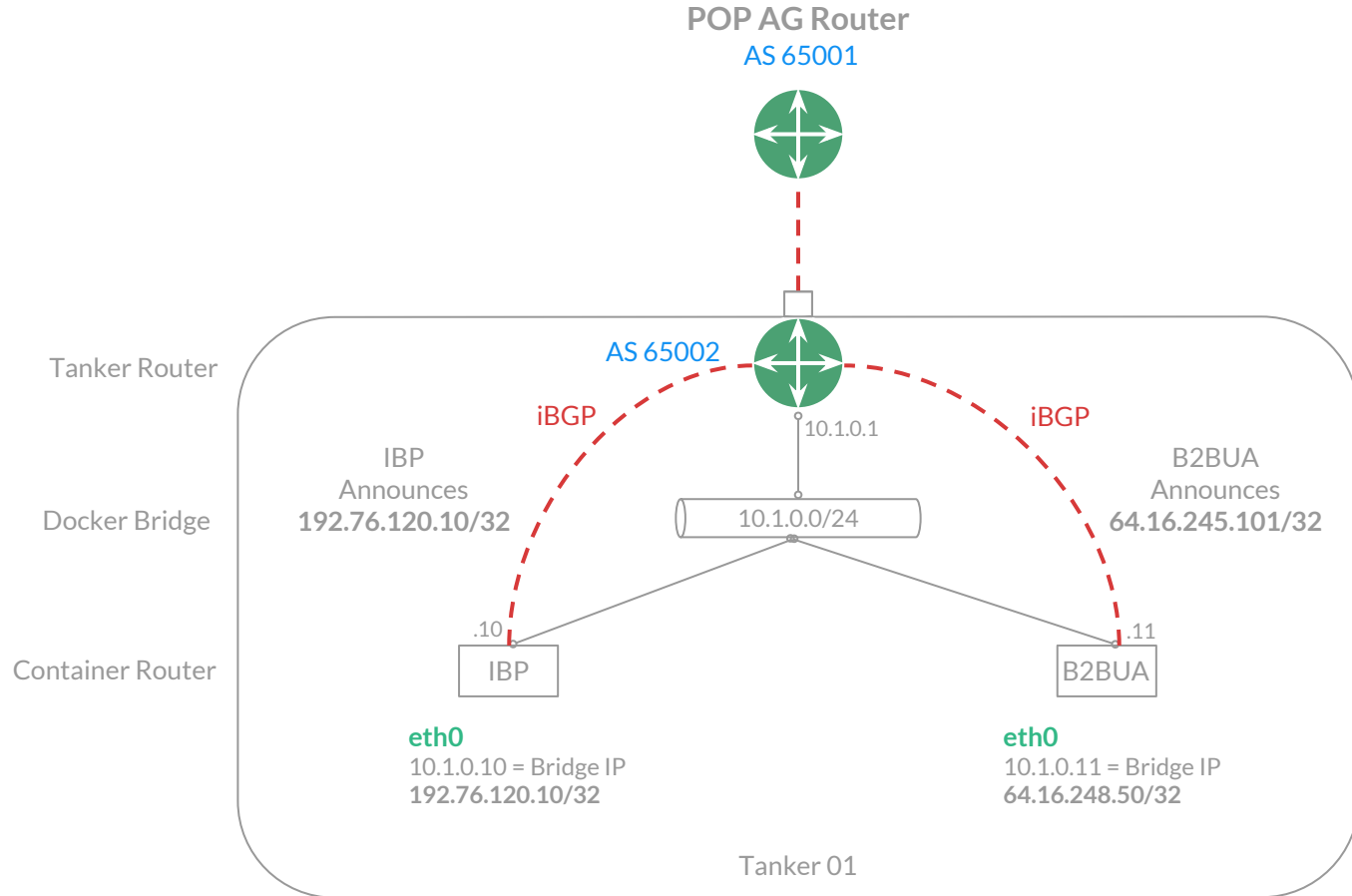
Tanker Router

Docker Bridge

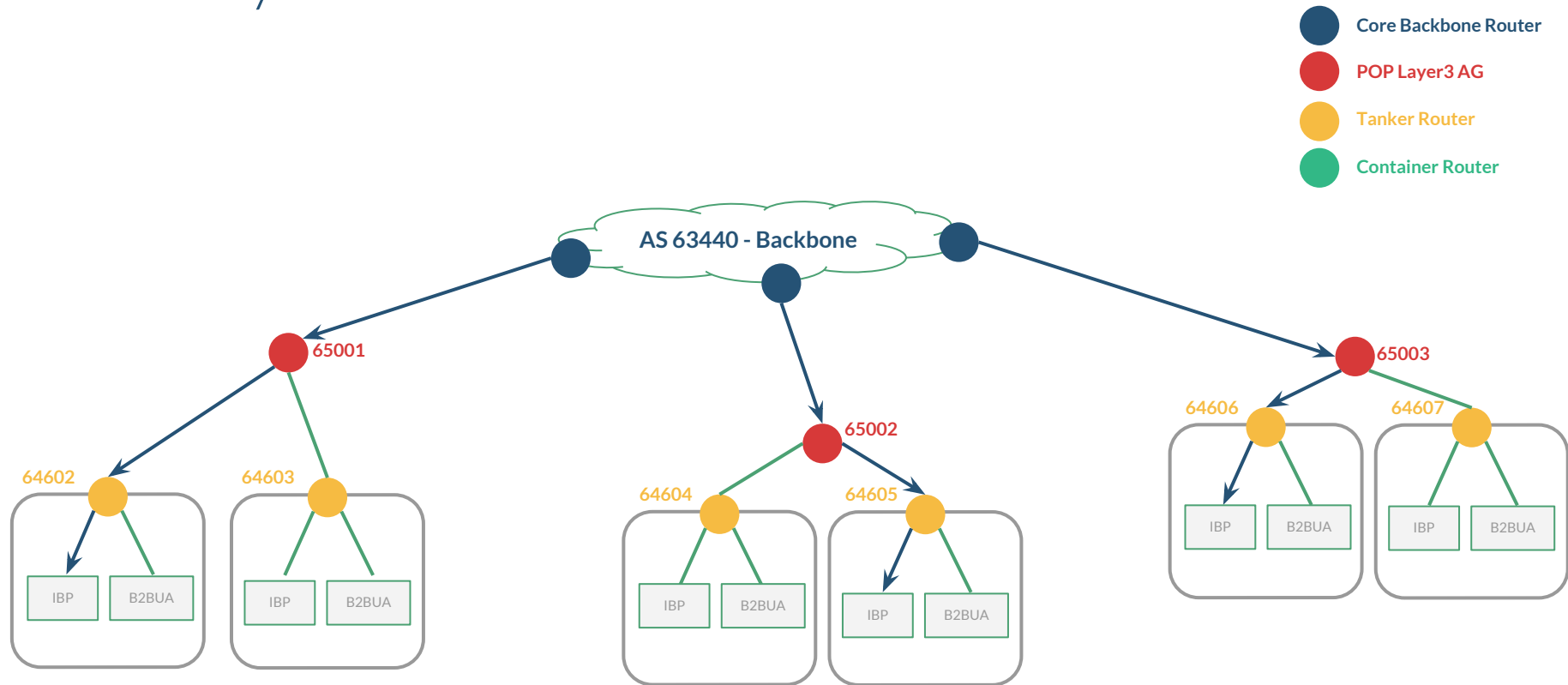
Container Router



Container Router



Summary





Questions?