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Building SD-Access Fabric with Catalyst Center

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LTRARC-1050

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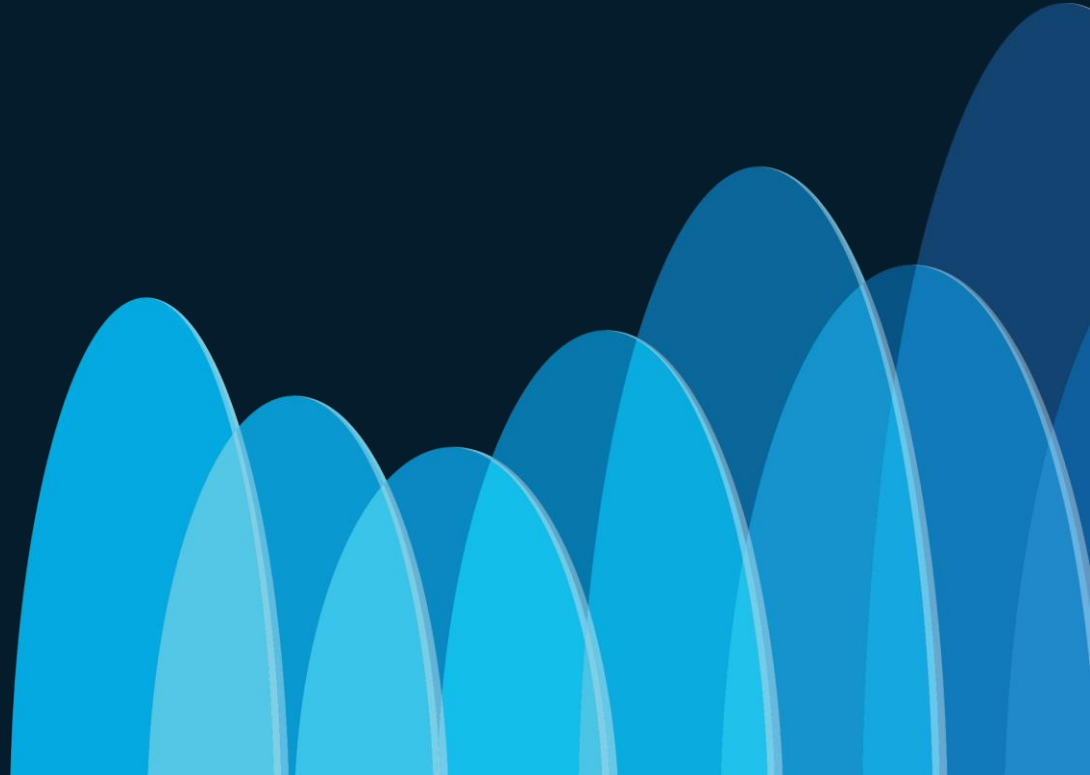
Agenda

- Introduction
- Why Fabric
- Lab Overview
- Conclusion

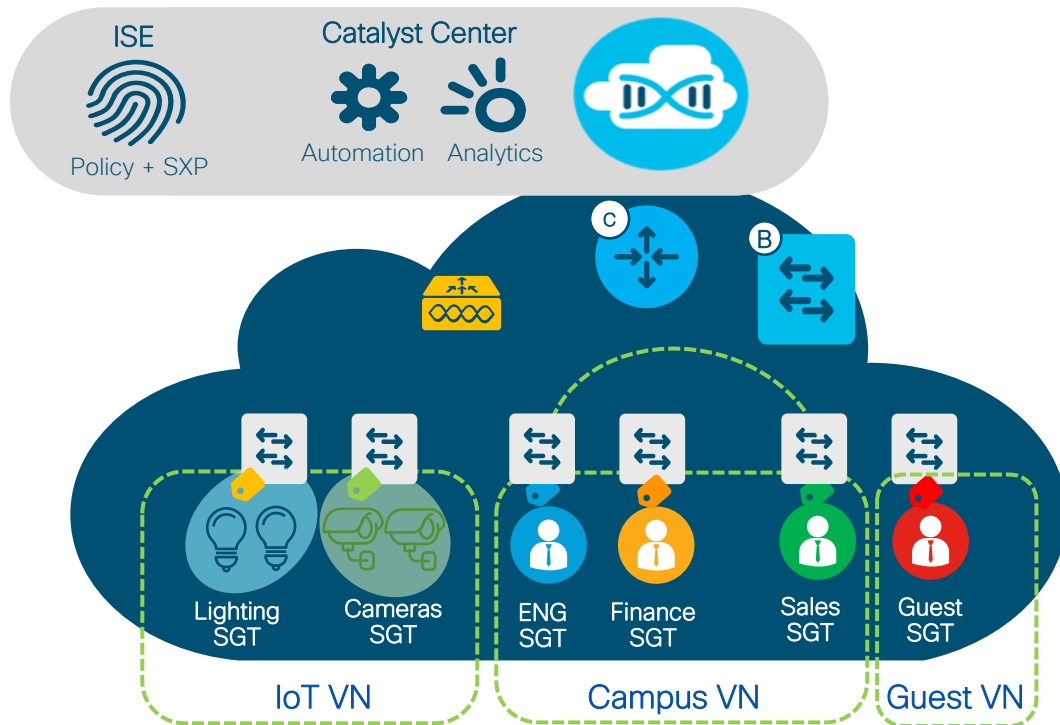
Introduction



Why Fabric?



Why SD-Access Fabric?



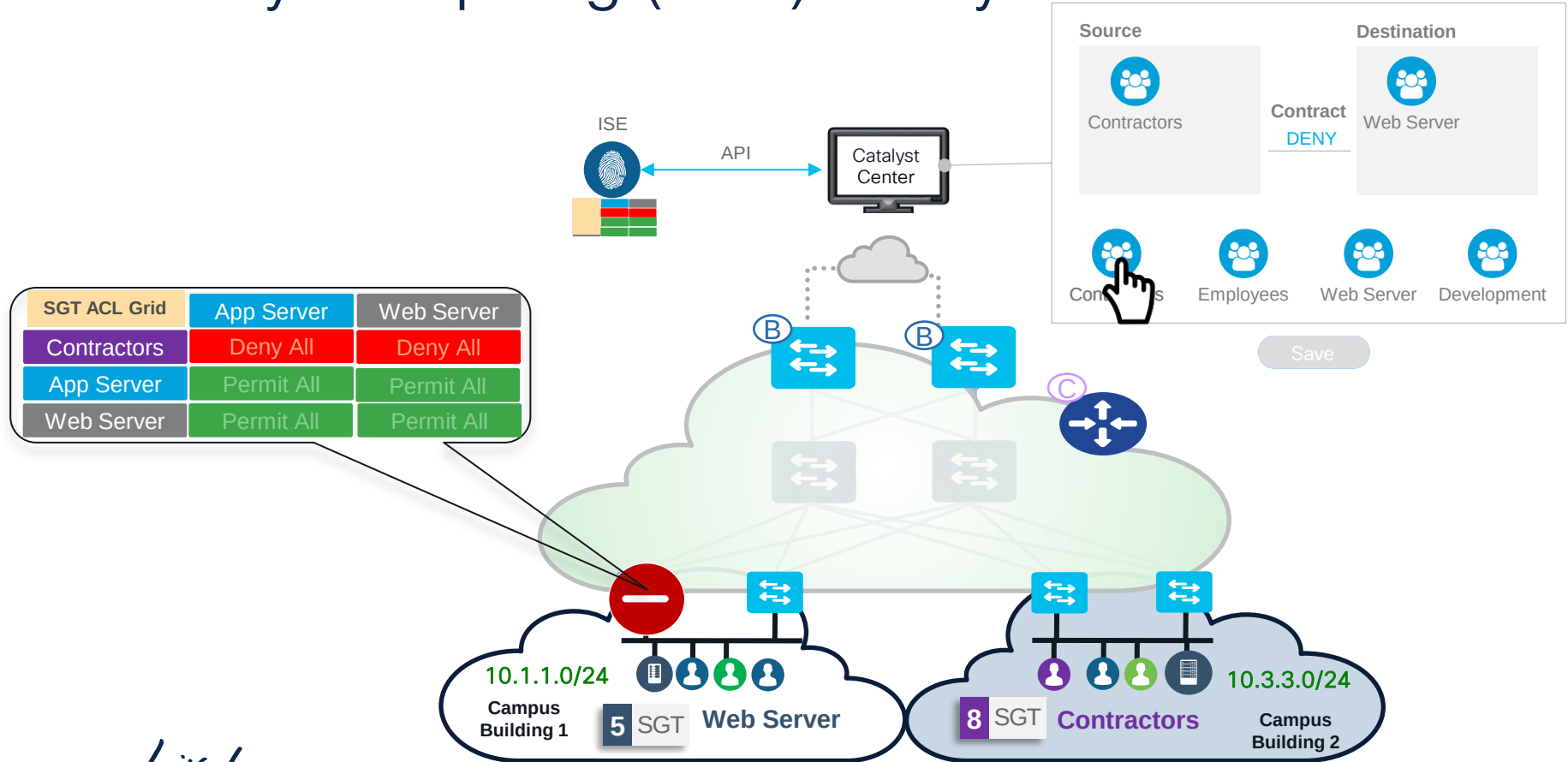
- User and endpoint segmentation based on identity
- Uniform policy applied regardless of connectivity method or location
- Optimal forwarding of traffic
- Layer-3 and layer-2 extension
- Analytics and insights into user and application behavior
- Extend over prior generation and 3rd party intermediate network infrastructure

What's the business intent here?

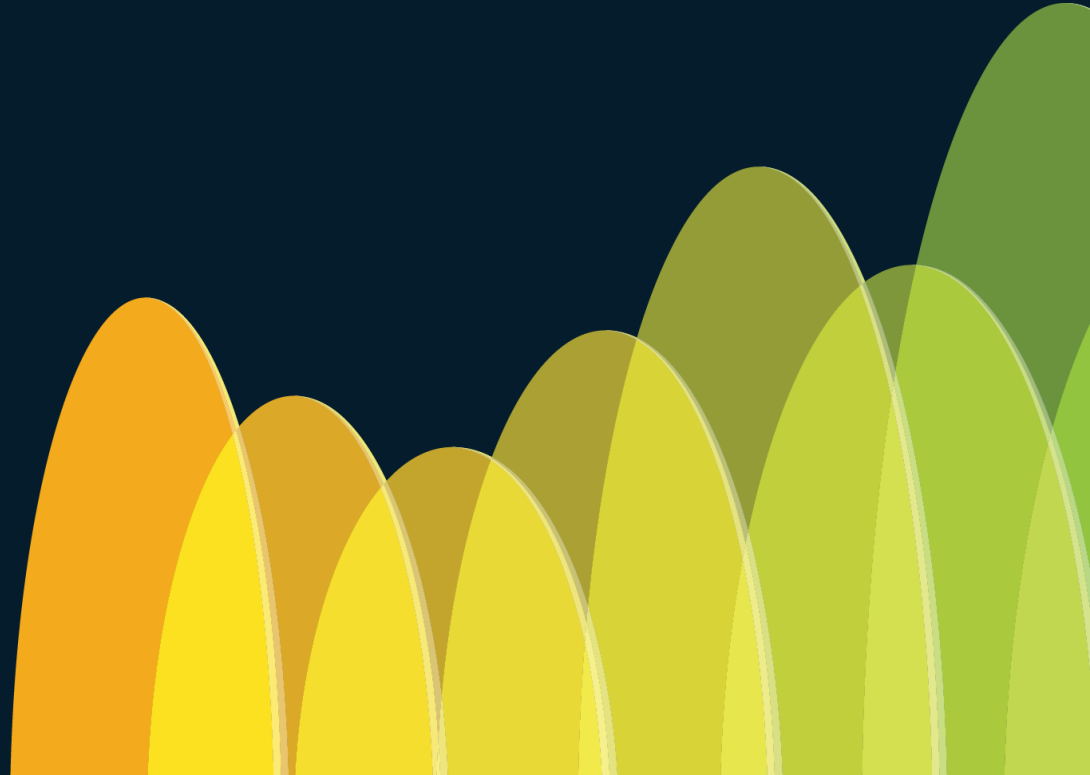
Traditional Security Policy

```
access-list 102 permit ip 178.97.113.59 255.255.255.255 gt 178 111.184.163.103 255.255.255.255 gt 959
access-list 102 deny ip 164.149.136.73 0.0.0.127 gt 1624 163.41.181.145 0.0.0.255 eq 810
access-list 102 permit icmp 207.221.157.104 0.0.0.255 eq 1979 99.78.135.112 0.255.255.255 gt 3231
access-list 102 permit tcp 100.126.4.49 0.255.255.255 lt 1449 28.237.88.171 0.0.0.127 lt 3679
access-list 102 deny icmp 157.219.157.249 255.255.255.255 gt 1354 60.126.167.112 0.0.31.255 gt 1025
access-list 102 deny icmp 76.176.66.41 0.255.255.255 lt 278 169.48.105.37 0.0.1.255 gt 968
access-list 102 permit ip 8.88.141.113 0.0.0.127 lt 2437 105.145.196.67 0.0.1.255 lt 4167
access-list 102 permit udp 60.242.95.62 0.0.31.255 eq 3181 33.191.71.166 255.255.255.255 lt 2422
access-list 102 permit icmp 186.246.40.245 0.255.255.255 eq 3508 191.139.67.54 0.0.1.255 eq 1479
access-list 102 permit ip 209.111.254.187 0.0.1.255 gt 4640 93.99.173.34 255.255.255.255 gt 28
access-list 102 permit ip 184.232.88.41 0.0.31.255 lt 2247 186.33.104.31 255.255.255.255 lt 4481
access-list 102 deny ip 106.79.247.50 0.0.31.255 gt 1441 96.62.207.209 0.0.0.255 gt 631
access-list 102 permit ip 39.136.60.170 0.0.1.255 eq 4647 96.129.185.116 255.255.255.255 lt 3663
access-list 102 permit tcp 30.175.189.93 0.0.31.255 gt 228 48.33.30.91 0.0.0.255 gt 1388
access-list 102 permit ip 167.100.52.185 0.0.1.255 lt 4379 254.202.200.26 255.255.255.255 gt 4652
access-list 102 permit udp 172.16.184.148 0.255.255.255 gt 4163 124.38.159.247 0.0.0.127 lt 3851
access-list 102 deny icmp 206.107.73.252 0.255.255.255 lt 2465 171.213.183.230 0.0.31.255 gt 1392
access-list 102 permit ip 96.174.38.79 0.255.255.255 eq 1917 1.156.181.180 0.0.31.255 eq 1861
access-list 102 deny icmp 236.123.67.53 0.0.31.255 gt 1181 31.115.75.19 0.0.1.255 gt 2794
access-list 102 deny udp 14.45.208.20 0.0.0.255 lt 419 161.24.159.166 0.0.0.255 lt 2748
access-list 102 permit udp 252.40.175.155 0.0.31.255 lt 4548 87.112.10.20 0.0.1.255 gt 356
access-list 102 deny tcp 124.102.192.59 0.0.0.255 eq 2169 153.233.253.100 0.255.255.255 gt 327
access-list 102 permit icmp 68.14.62.179 255.255.255.255 lt 2985 235.228.242.243 255.255.255.255 lt 2286
access-list 102 deny tcp 91.198.213.34 0.0.0.255 eq 1274 206.136.32.135 0.255.255.255 eq 4191
access-list 102 deny udp 76.150.135.234 255.255.255.255 lt 3573 15.233.106.211 255.255.255.255 eq 3721
```

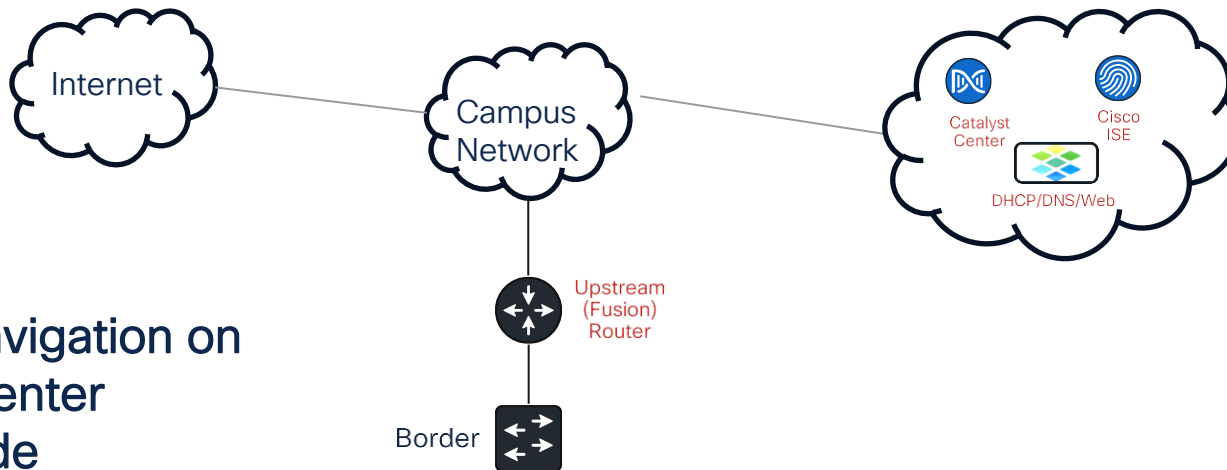
Security Group Tag (SGT) Policy Enforcement



Lab Overview



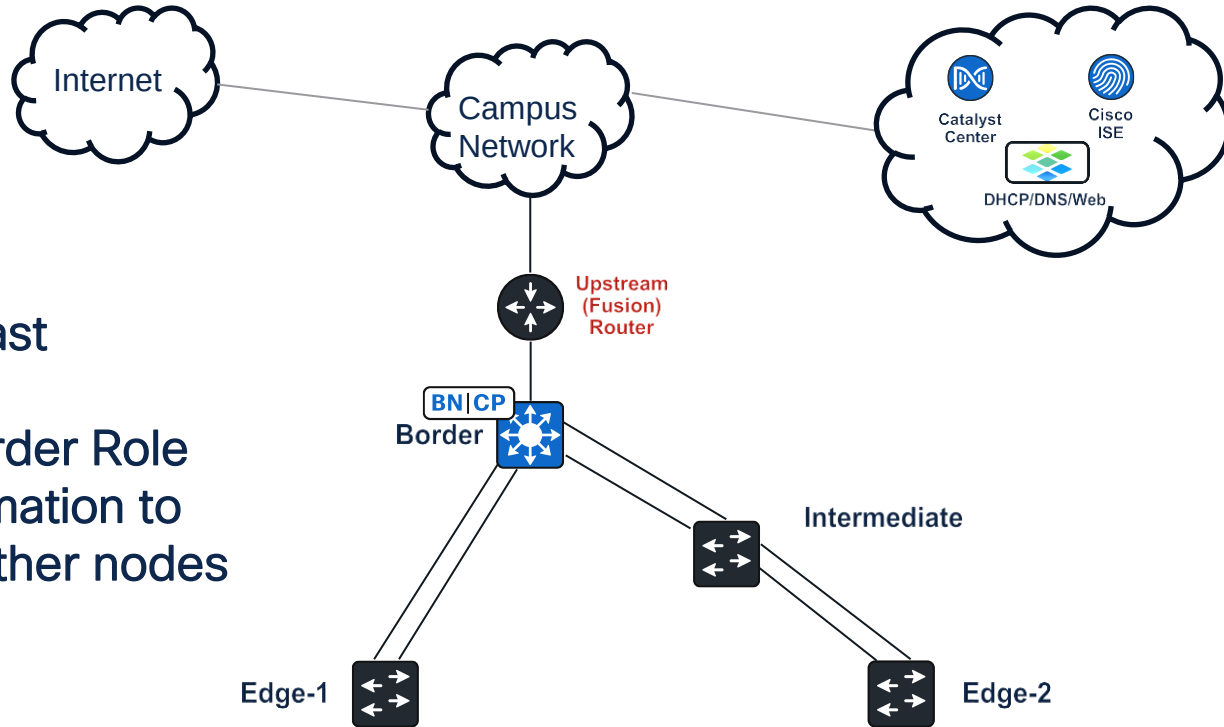
Initial Topology and Border Node Onboarding (Tasks 1 – 3)



- General navigation on Catalyst Center
- Border node onboarding via PnP day0 template

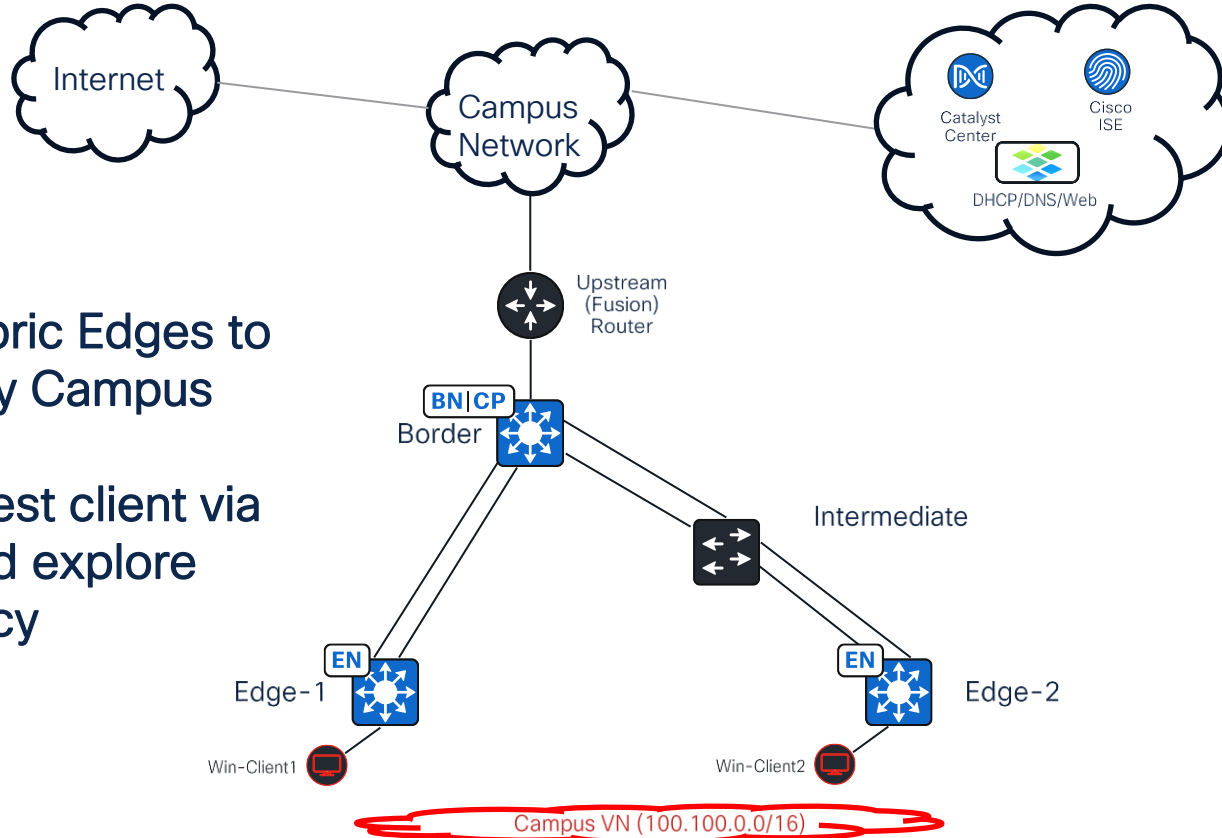
Border Role and LAN Automation (Tasks 4 – 7)

- Add Anycast Gateways
- Enable Border Role
- LAN Automation to onboard other nodes



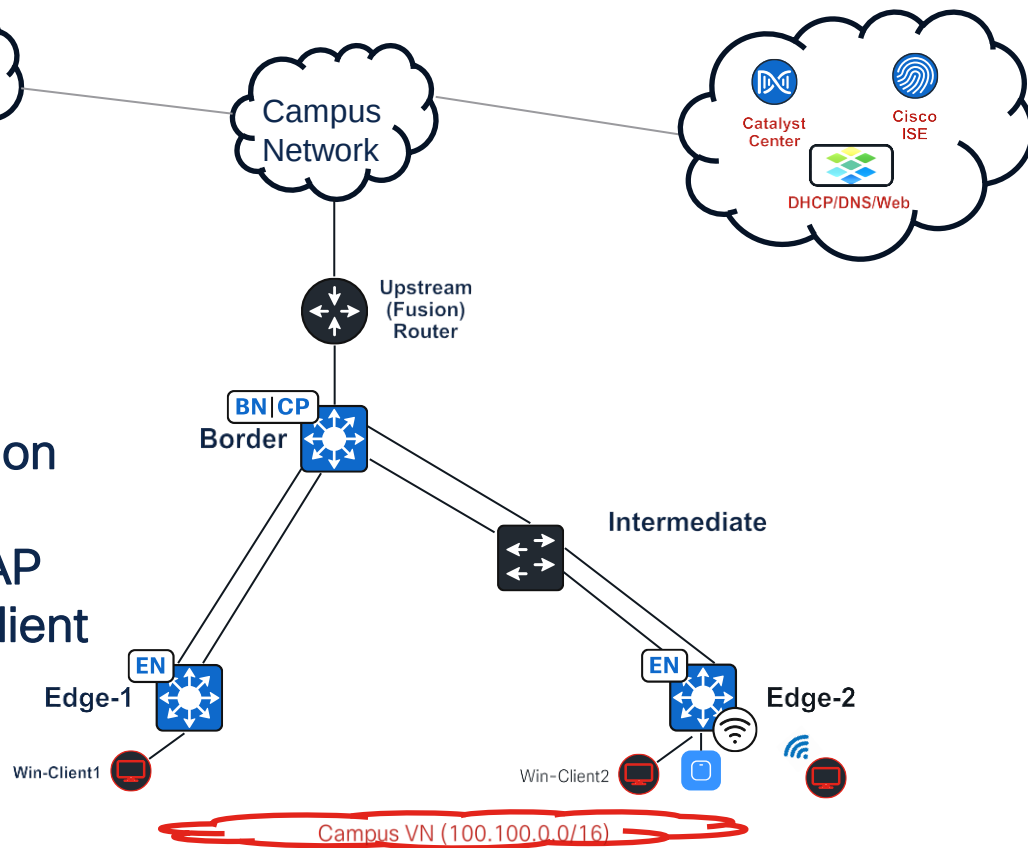
Fabric Edge and 802.1x Client Onboarding (Tasks 8 – 10)

- Enable Fabric Edges to fully deploy Campus VN
- Onboard test client via 802.1x and explore group policy



Fabric Wireless Enablement and Test Client (Tasks 11 – 13)

- Create WLAN and enable Embedded Wireless Controller on Edge-2
- Onboard Wireless AP
- Onboard wireless client



Lab Time!



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