



Asterfusion Campus Network Solution with Cloud Tech

A network diagram background with a dark blue gradient. It features a complex web of light blue lines connecting various nodes, some of which are highlighted in a darker purple. The overall aesthetic is technical and modern.

A G E N D A

01 Underlay Network

02 Overlay L2 VPN

03 Zero-perception WiFi Roaming

04 Broadcast-Free Network

05 Security

06 OpenWiFi Controller

07 Case study

Asterfusion Campus Network Portfolio



Smart Gateways

4 x 10G SFP+, 4 x 2.5G PoE++, 8 x 1G PoE+
1 x DPU (8core ARM, 16G DDR5), 1 x AI chip, 4T SSD



ET250

2 x 10G SFP+, 16 x 1G PoE++
2 x DPUs (4core ARM, 8G DDR4)



CX102S-16GT-M-D2-SWP

Spine Switches

48 x 25G SFP+, 8 x 100G QSFP28 /40G QSFP+



CX308P-48Y-M-H

48(24) x 10G SFP+, 6 x 100G QSFP28 /40G QSFP+



CX206P-48(24)S-M-H

24 x 25Gb SFP28 SFP+, 2 x 100Gb QSFP28 /40Gb QSFP+



CX202P-24Y-M-H

Leaf Switches

8 x 1G/2.5G RJ45 PoE++, 2 x 10G SFP28



CX102S-8MT-(SWP)

24 x 1G RJ45 PoE+, 4 x 10G/25G SFP28



CX204Y-24GT-M-S(WP2|4)

48 x 1G RJ45 PoE+, 4 x 10G/25G SFP28



CX204Y-48GT-M-S(WP4)

48 x 1G/2.5G RJ45 PoE++, 6 x 10G/25G SFP28



CX206Y-48MT-M-H(WP4|8)

Wireless APs

Wi-Fi 6E 8.2Gbps, 1 x 1G RJ45, 1 x 2.5G PoE+



AP6050

Wi-Fi 6 3.0Gbps, 1 x 1G RJ45, 1 x 2.5G PoE+



AP6030

Wi-Fi 6 3.0Gbps, outdoor, 1 console, 1 x 1G PoE+



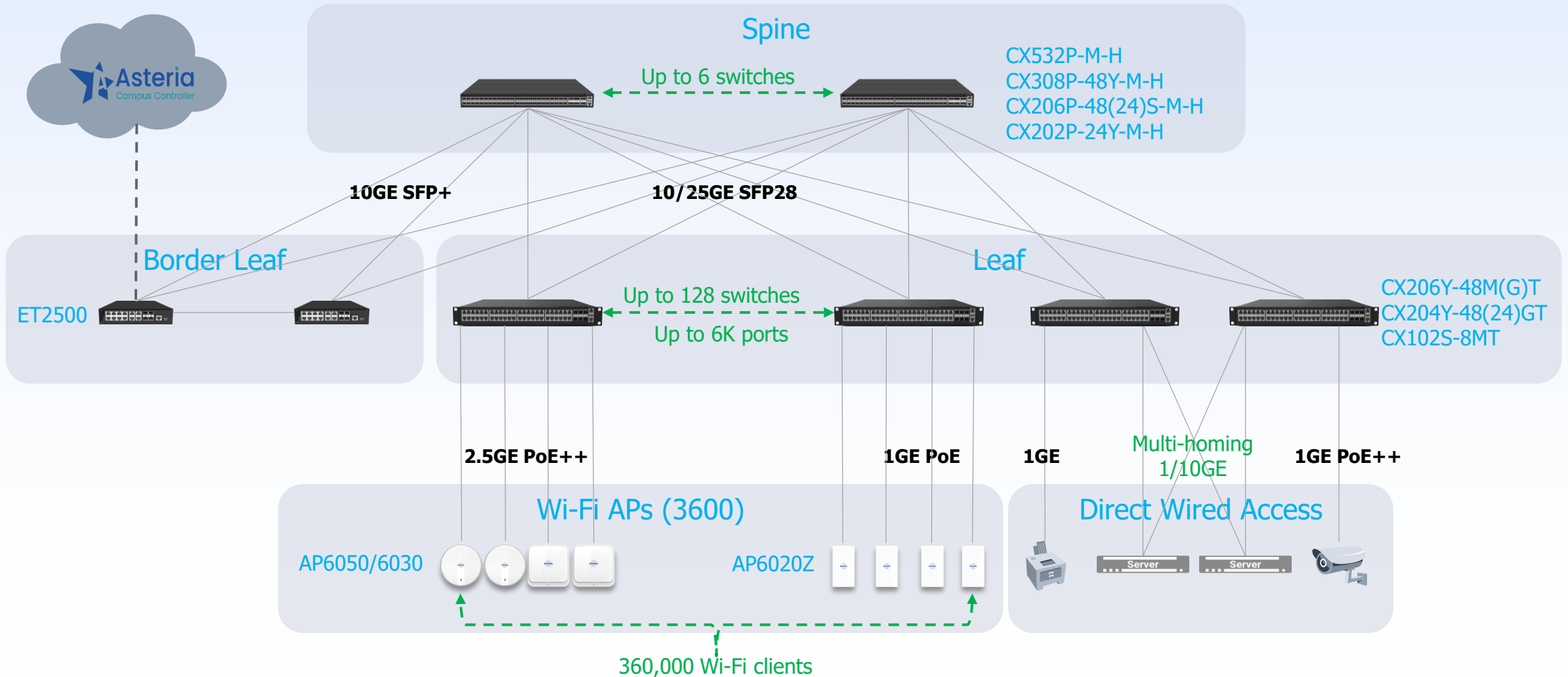
AP6031

Wi-Fi 6 1.8Gbps, Wall Mount, 4 x 1G RJ45, 1 x 1G PoE

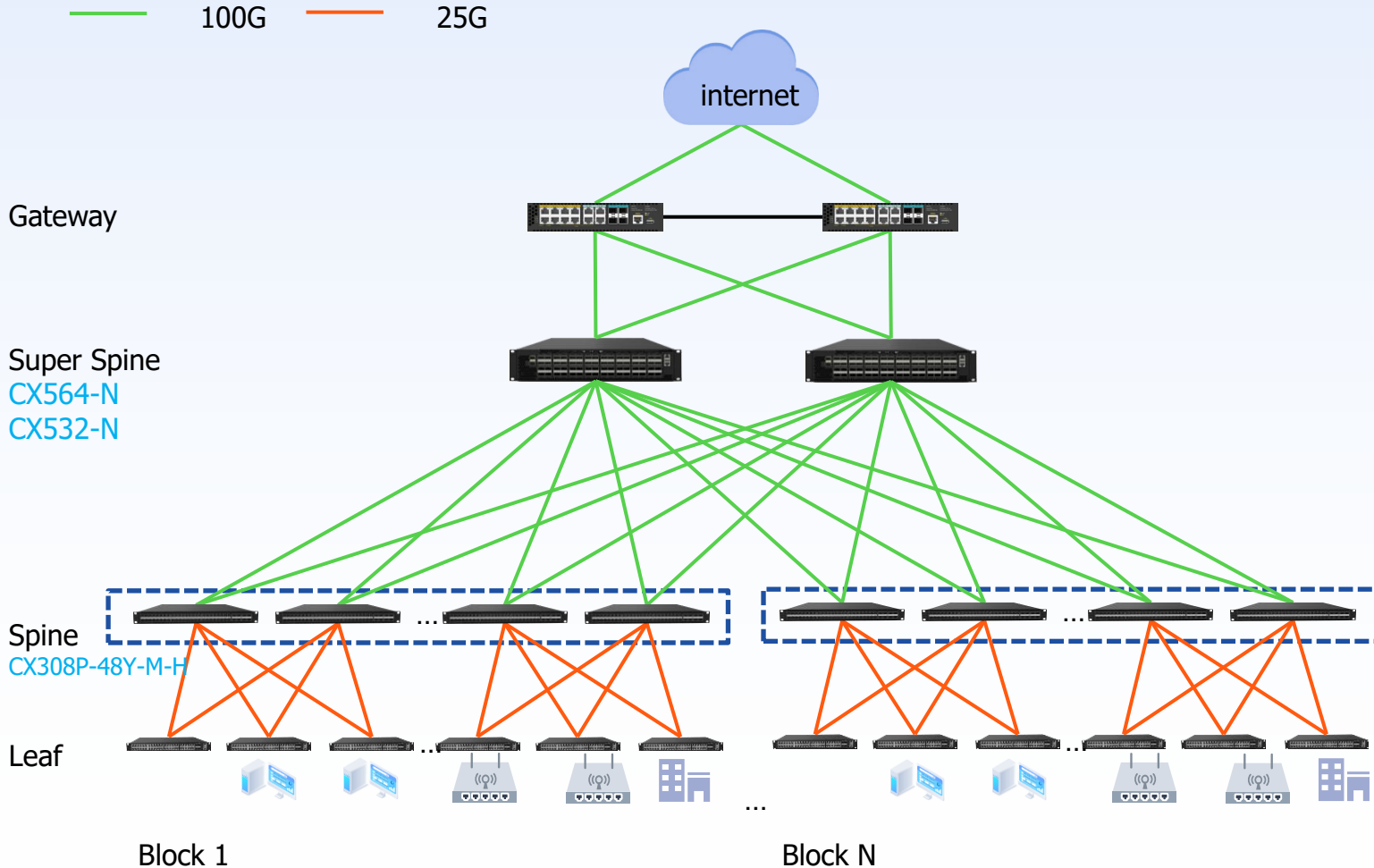


AP6020W

Spine Leaf Topology



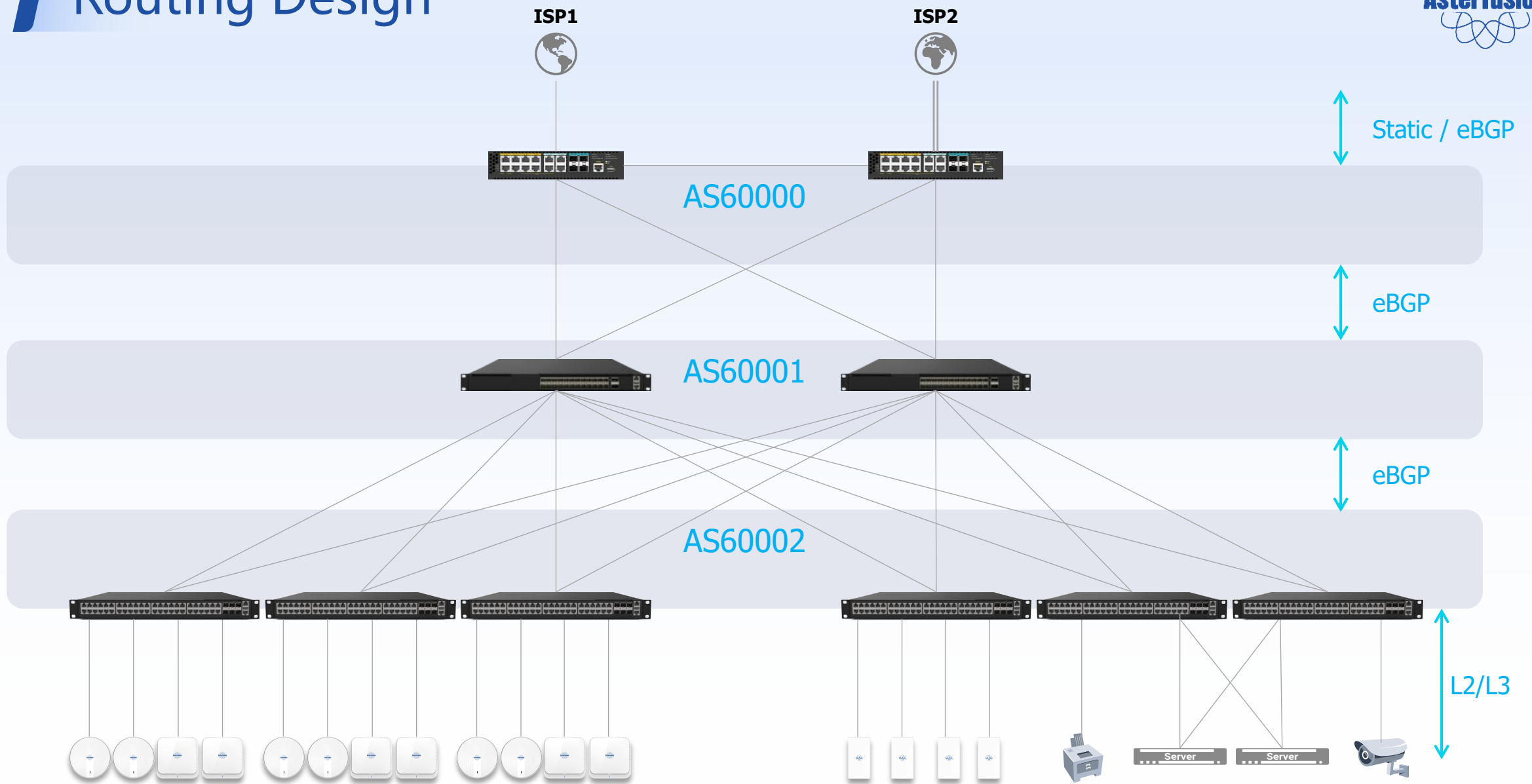
Multi-POD for Larger Scale-out Campus Networking



- Super Spine to scale to larger campus network with 180K access ports/APs

Super Spine	CX532-N	CX564-N
POD #	15	30
Ports #/PoD	6K	6K
Spine#	30	60
Leaf#	1920	3840
1G Ports #	90K	180K

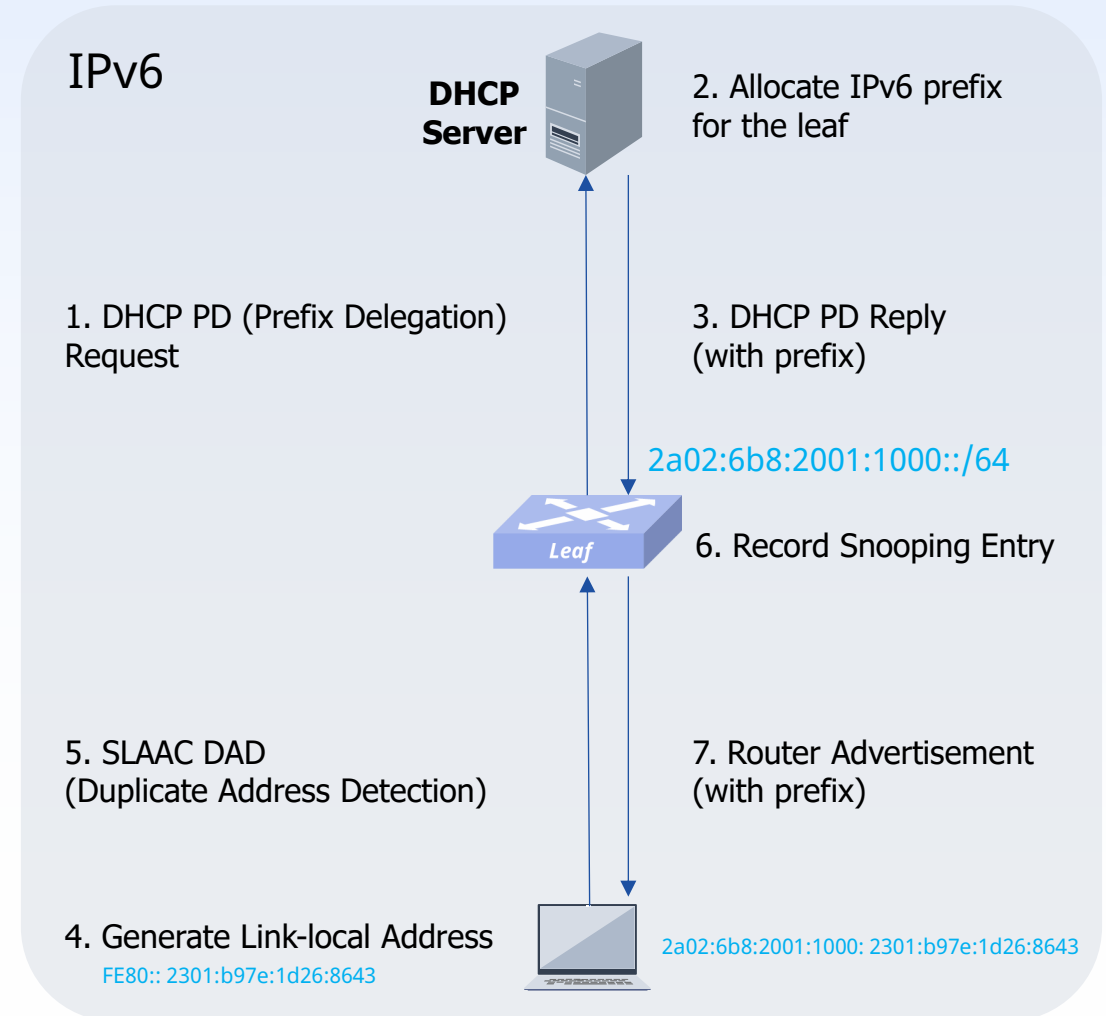
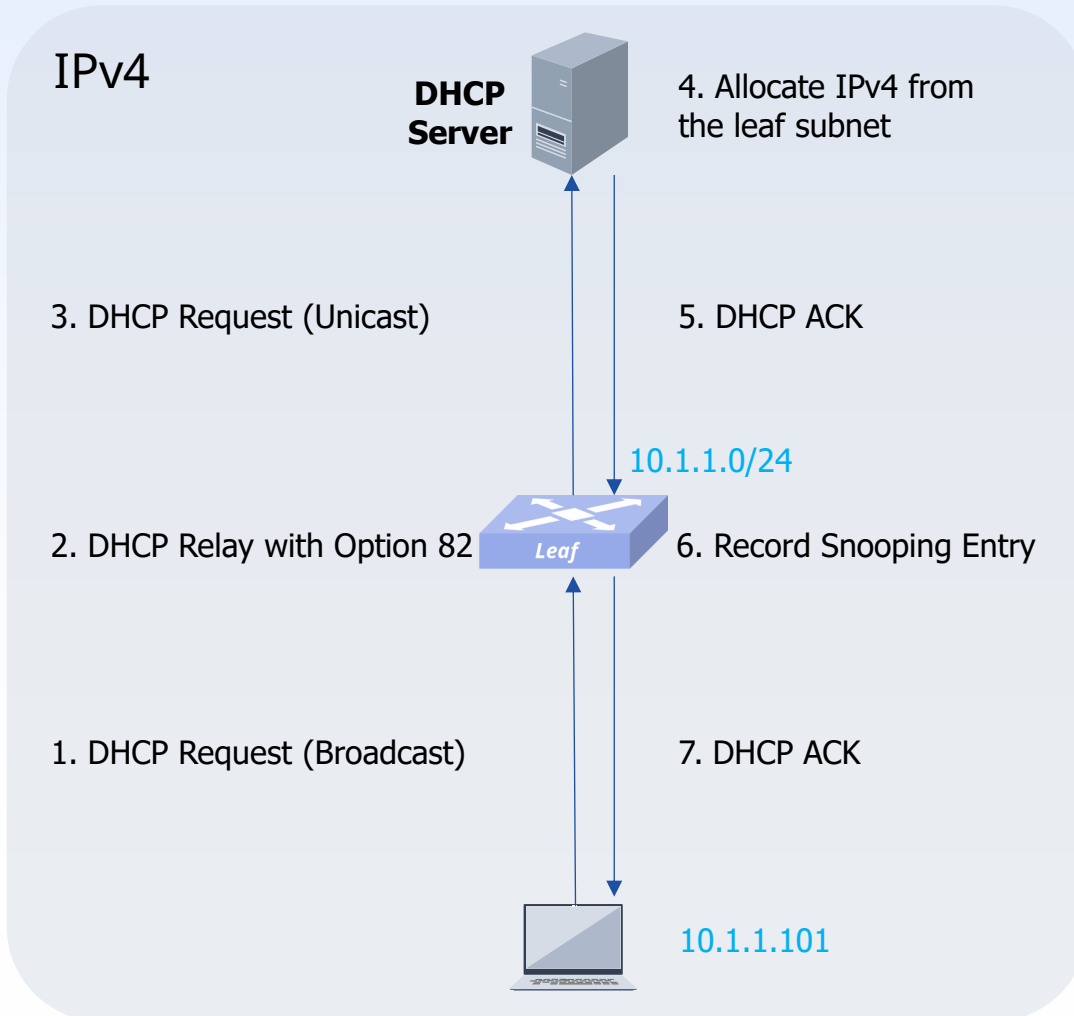
Routing Design



IP Address Assign



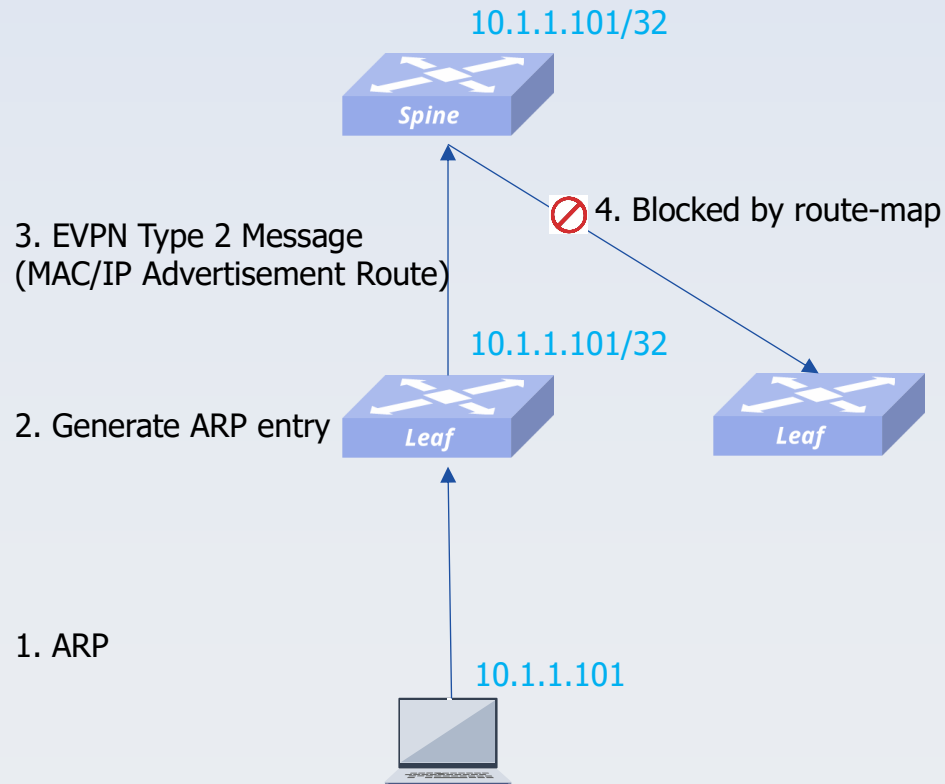
Assign a unique subnet to each leaf switch for route aggregation.



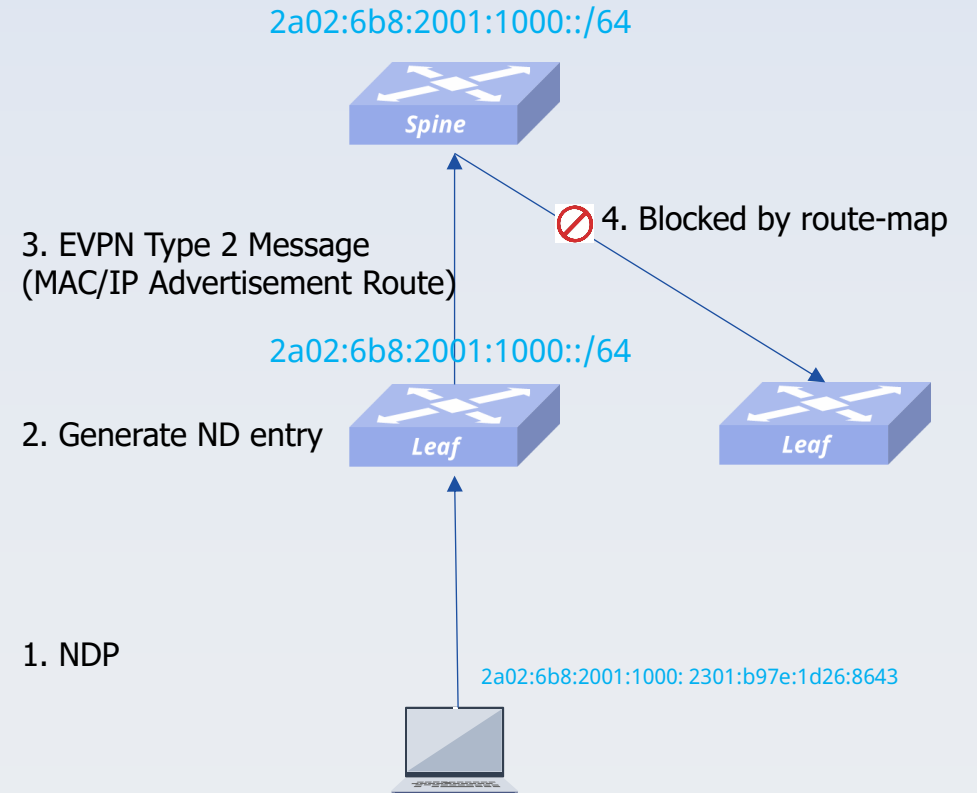
ARP-to-Host



IPv4

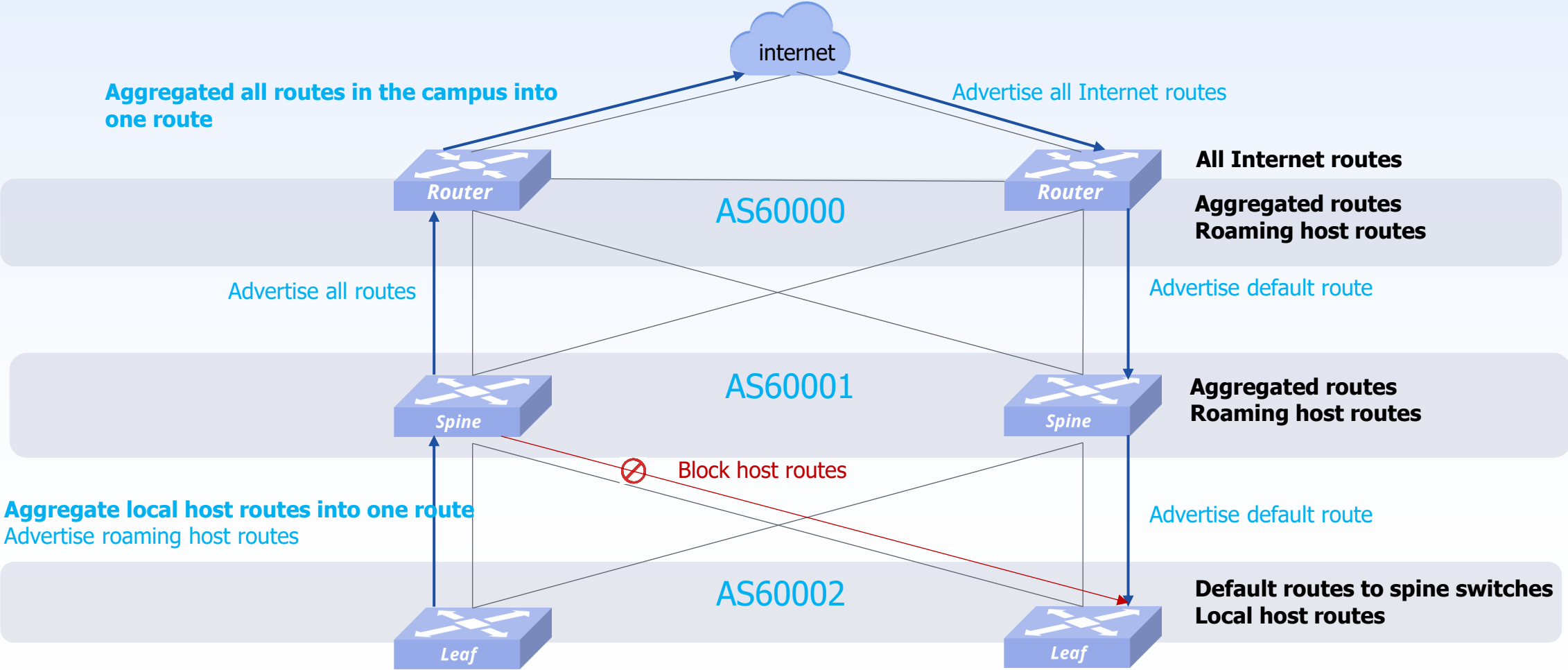


IPv6

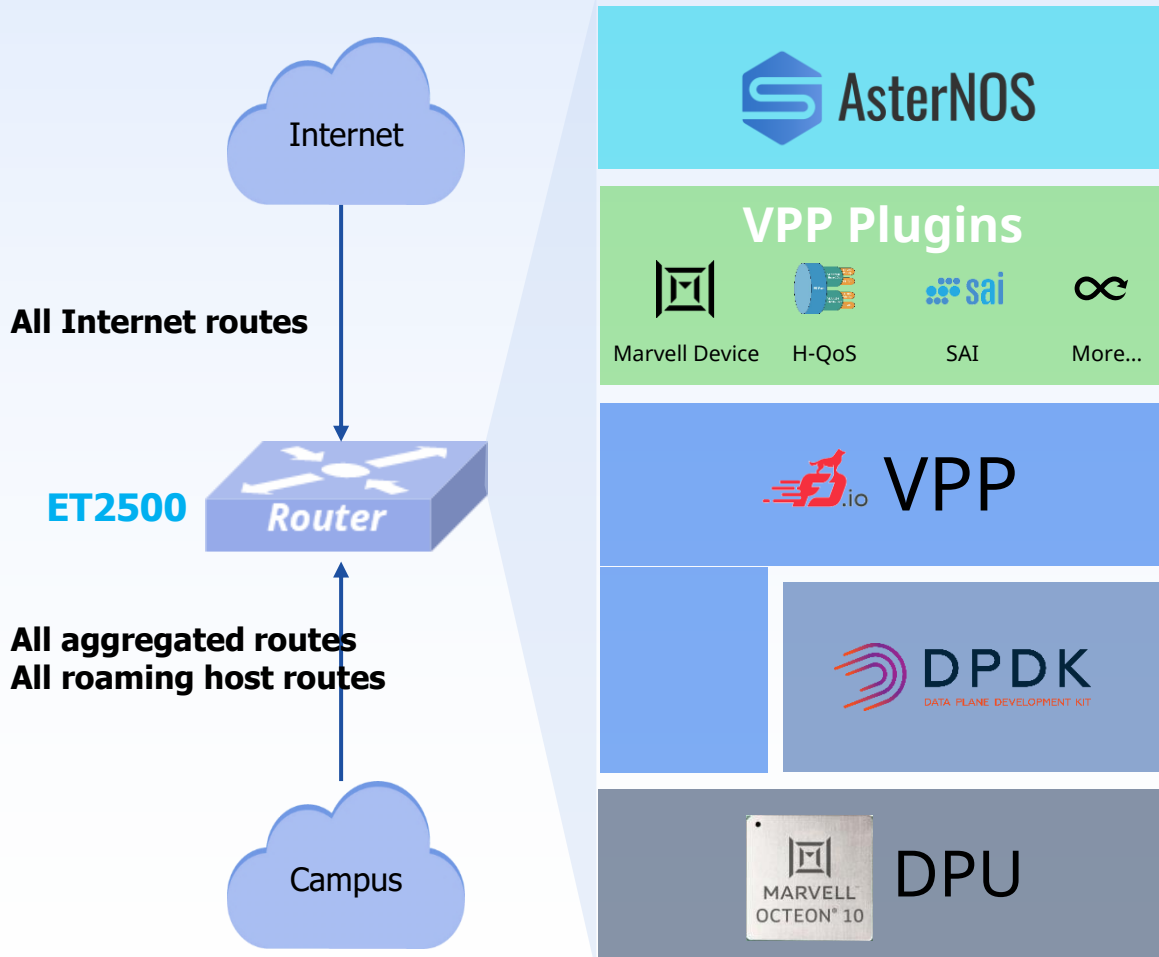


Route Aggregation

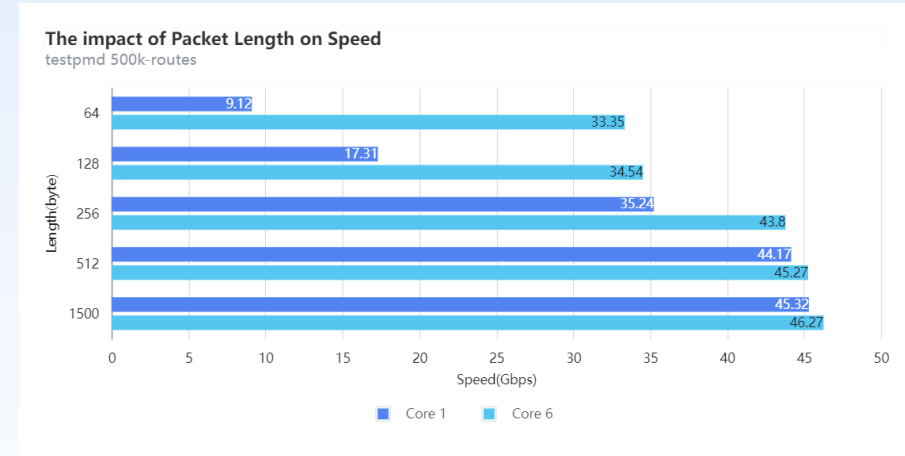
Significantly save routing table size of both leaf and spine switches



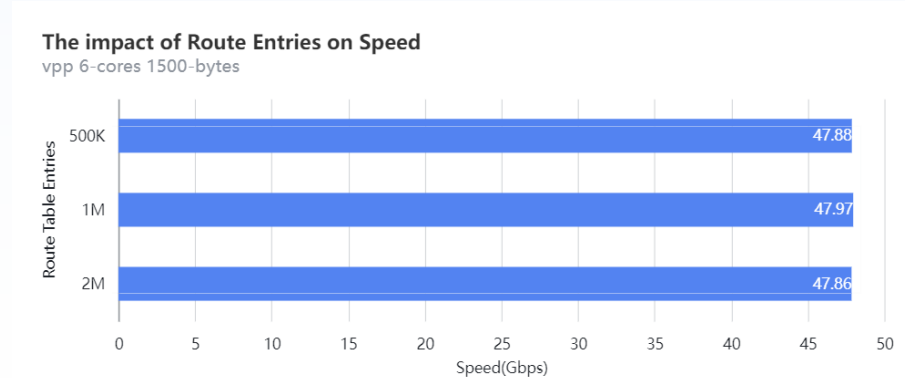
High Performance Border Router



High performance across various packet sizes



Consistent performance across various routing table sizes



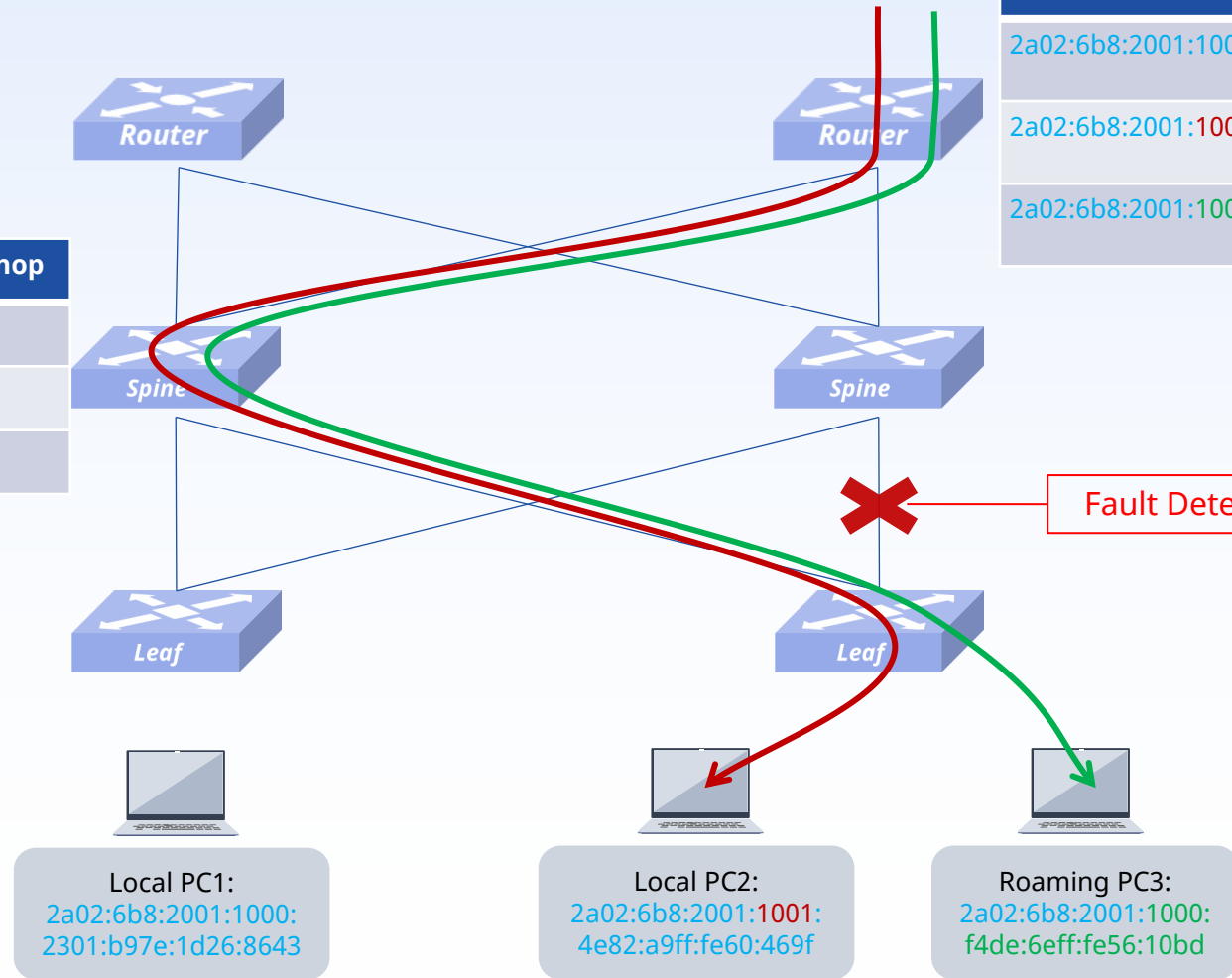
Link Fault Detection and Re-routing based on BFD



Prefix	Next hop
2a02:6b8:2001:1000::/64	Leaf1
2a02:6b8:2001:1001::/64	Leaf2
2a02:6b8:2001:1000:f4de:6eff:fe56:10bd/128	Leaf2

Longest Prefix Match

Prefix	Next hop
2a02:6b8:2001:1000::/64	Spine1 Spine2
2a02:6b8:2001:1001::/64	Spine1 Spine2
2a02:6b8:2001:1000:f4de:6eff:fe56:10bd/128	Spine1 Spine2



Fault Detection in 50ms via BFD

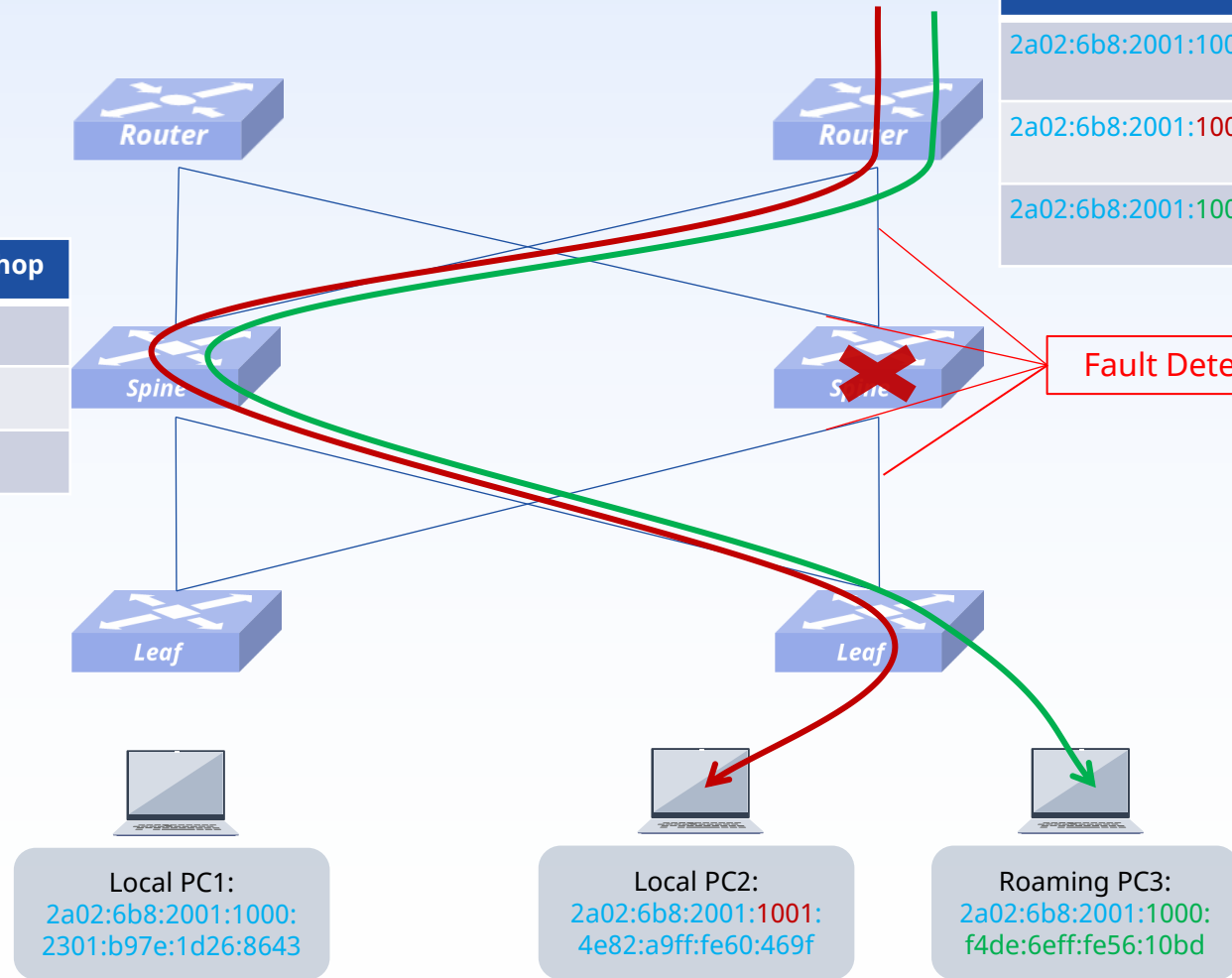
Node Fault Detection and Re-routing based on BFD



Prefix	Next hop
2a02:6b8:2001:1000::/64	Leaf1
2a02:6b8:2001:1001::/64	Leaf2
2a02:6b8:2001:1000:f4de:6eff:fe56:10bd/128	Leaf2

Longest Prefix Match

Prefix	Next hop
2a02:6b8:2001:1000::/64	Spine1 Spine2
2a02:6b8:2001:1001::/64	Spine1 Spine2
2a02:6b8:2001:1000:f4de:6eff:fe56:10bd/128	Spine1 Spine2



Fault Detection in 50ms via BFD

Local PC1:
2a02:6b8:2001:1000:
2301:b97e:1d26:8643

Local PC2:
2a02:6b8:2001:1001:
4e82:a9ff:fe60:469f

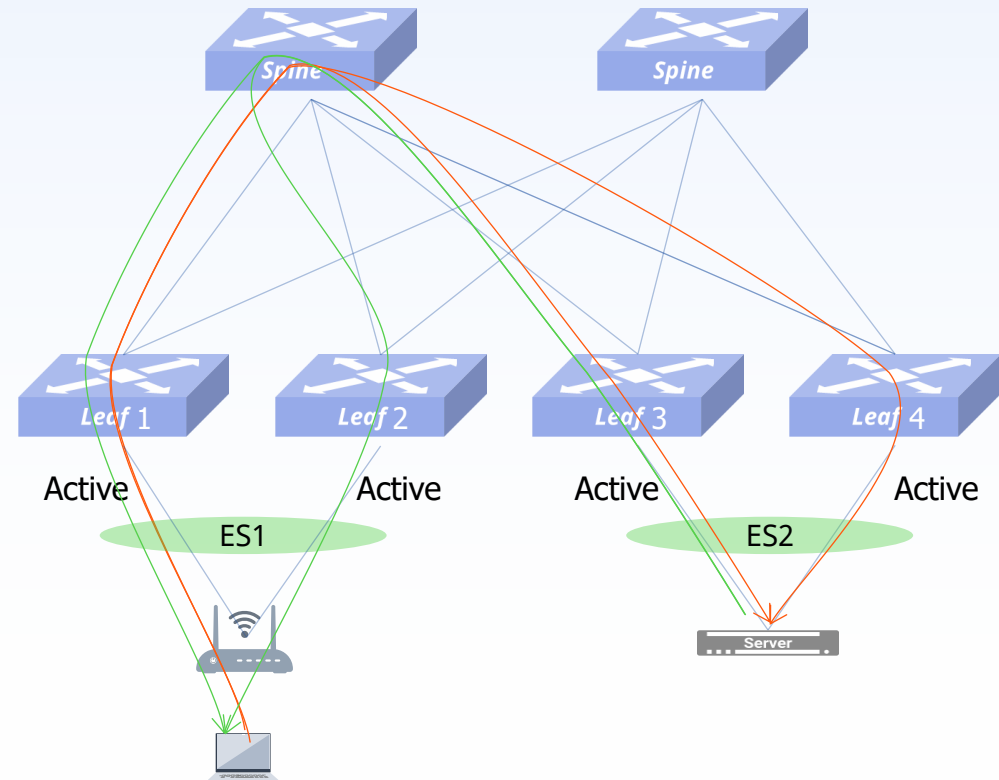
Roaming PC3:
2a02:6b8:2001:1000:
f4de:6eff:fe56:10bd

EVPN Multihoming of servers and APs



- Support Multihoming of servers and APs in **active-active** mode.
- Multihoming of servers.
 - Import server's static IP to all leaf switches in the group.
 - Or allocate fixed IP from DHCP server, generate host route in the process of DHCP relay.
- Multihoming of APs
 - The first leaf switch received ARP will MAC-trigger a host route with ESI and advertise it to spines and other leaf switches in the group.
 - Subsequent leaf switches receiving ARP will not generate a host route because it already exists with the same ESI.
- When a client **roams** to a new ES, the host route will migrate there with updated ESI.

Prefix	Next hop
Server host route	Leaf3 Leaf4
AP host route	Leaf1 Leaf2
Client host route	Leaf1 Leaf2



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03 Zero-perception WiFi Roaming

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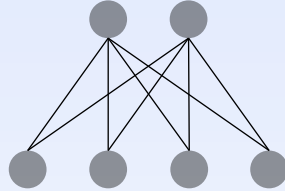
Overlay Networks



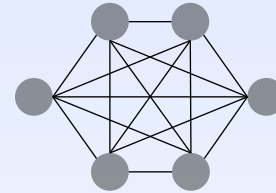
**Overlay L2 VPN
VPWS**



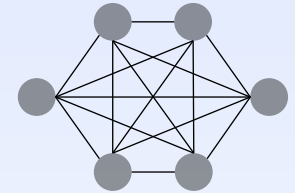
**Overlay L2 VPN
E-Tree**



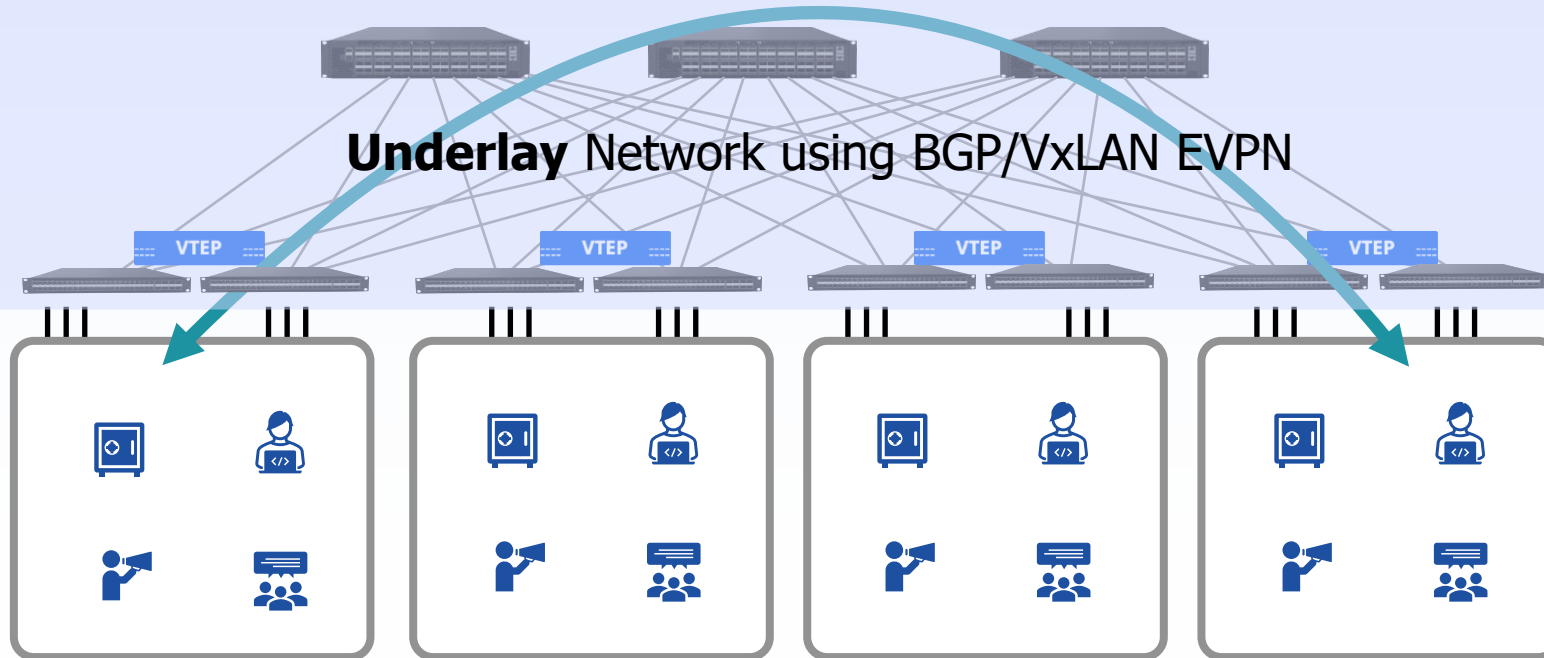
**Overlay L2 VPN
E-LAN**



**Overlay L3 VPN
Full-mesh**



Underlay Network using BGP/VxLAN EVPN



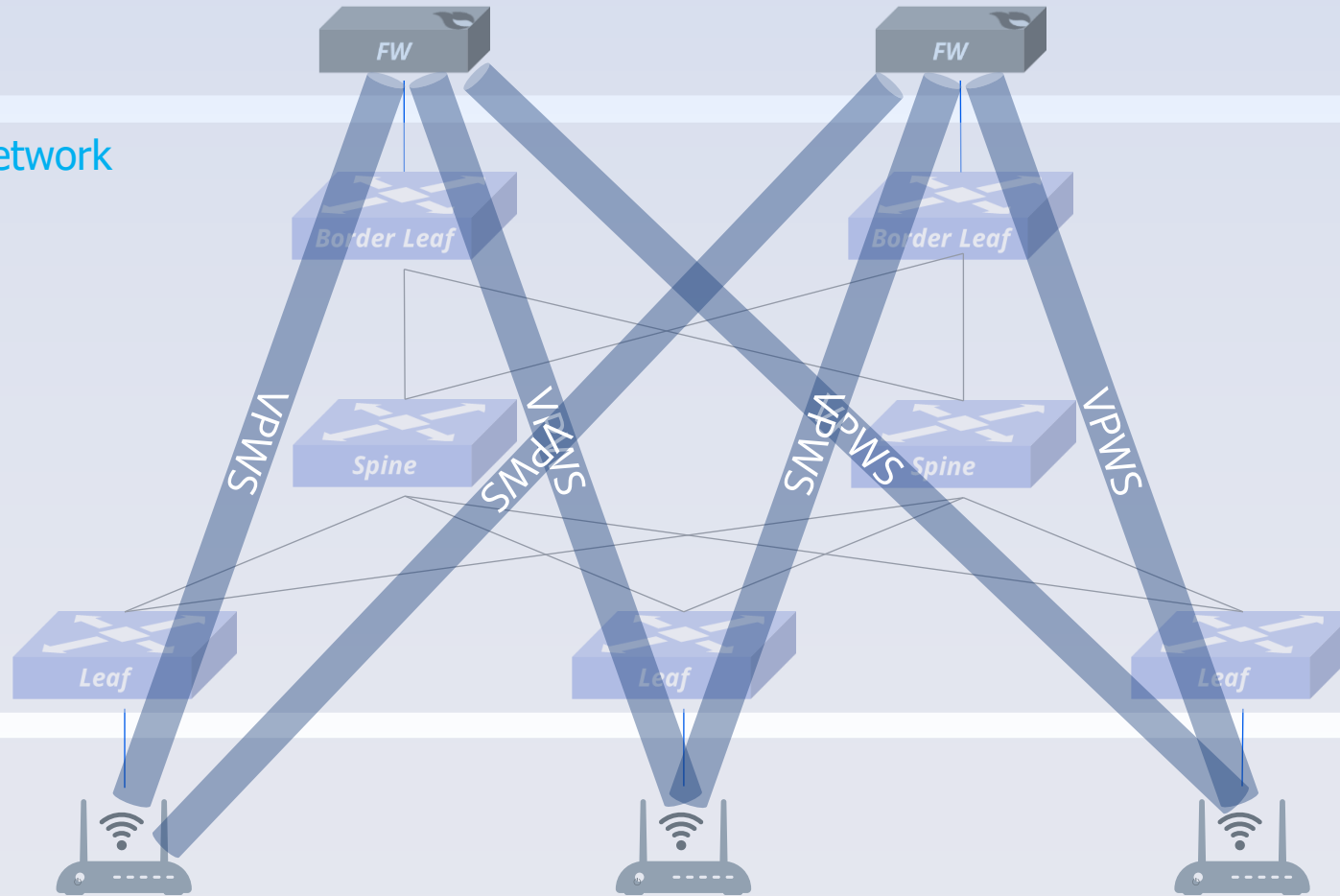
VPWS Overlay Network



Root nodes

Underlay Network

Leaf nodes

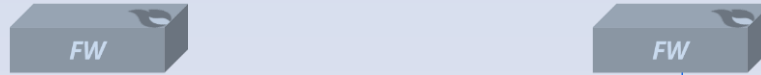


- L2 traffic is forwarded from interface to interface without looking up MAC table.

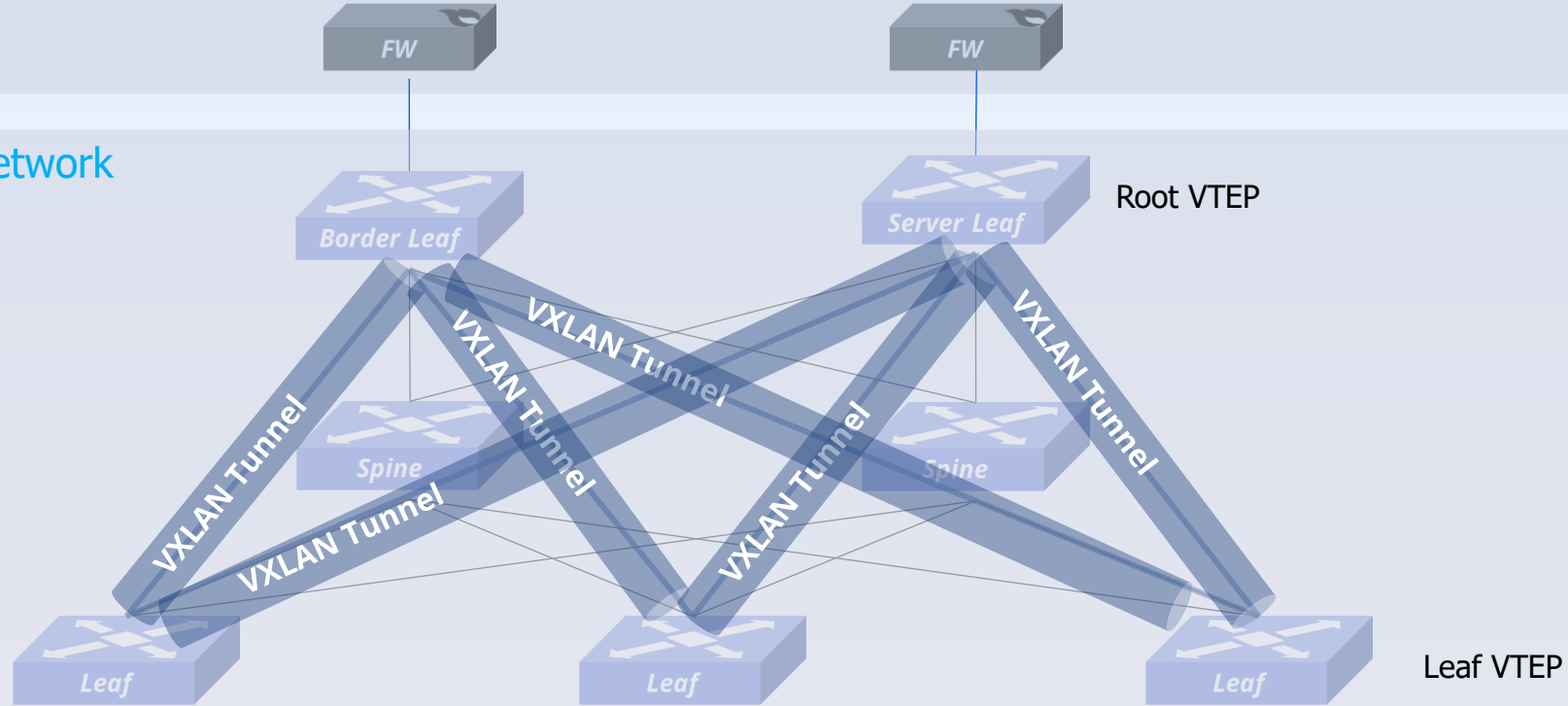
E-Tree Overlay Network



Root nodes



Underlay Network

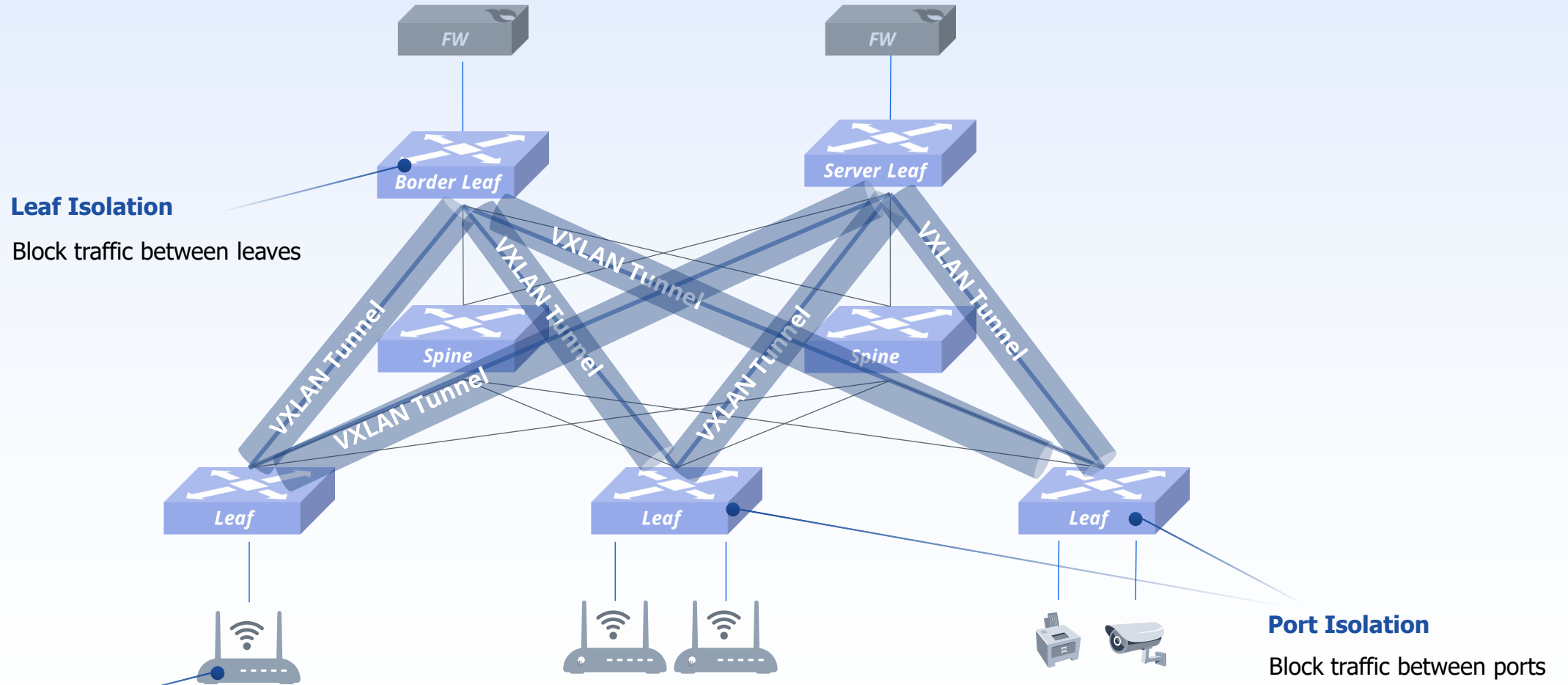


Leaf nodes



- A leaf node can send or receive traffic only from a root node.
- A root node can send traffic to another root or any of the leaf nodes.
- Root VTEP will block traffic between leaf nodes

Isolate clients in L2 VPN



Leaf Isolation

Block traffic between leaves

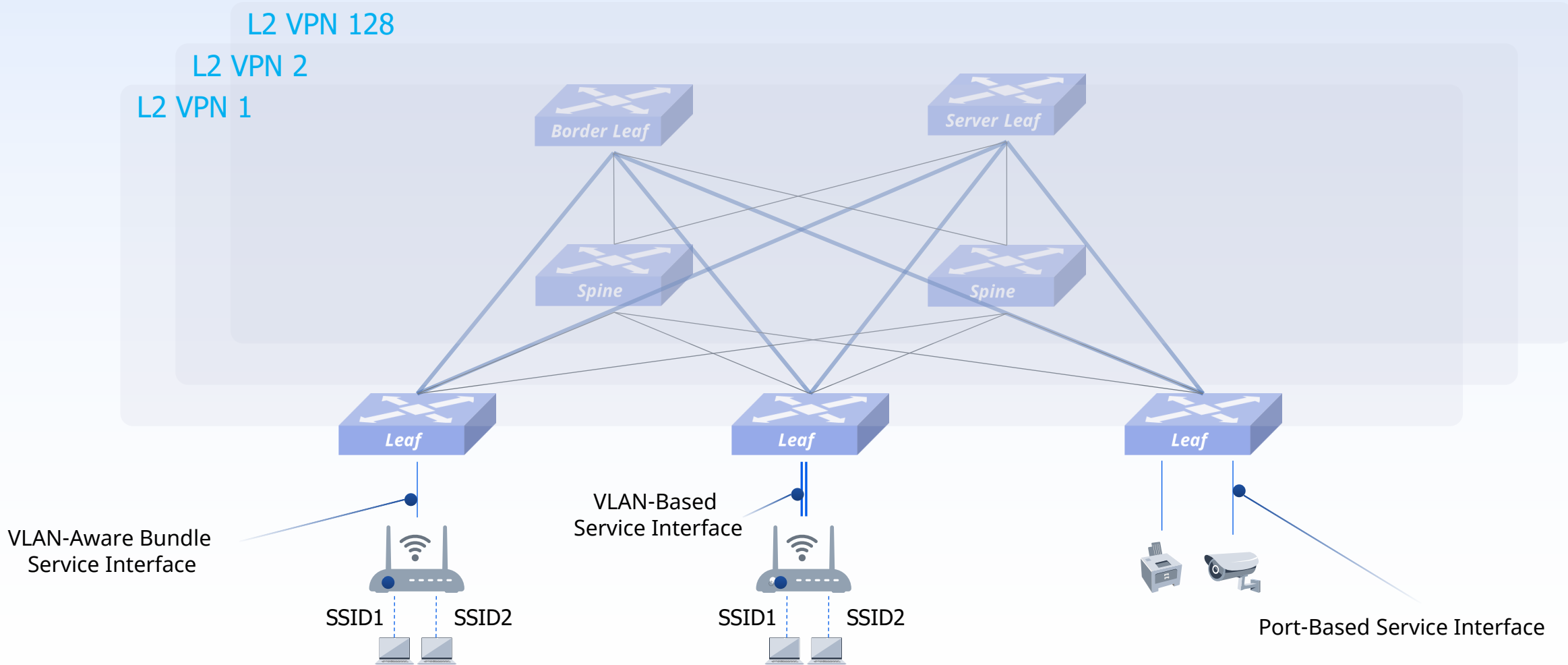
AP Strict Forwarding

Block traffic between Wi-Fi clients

Port Isolation

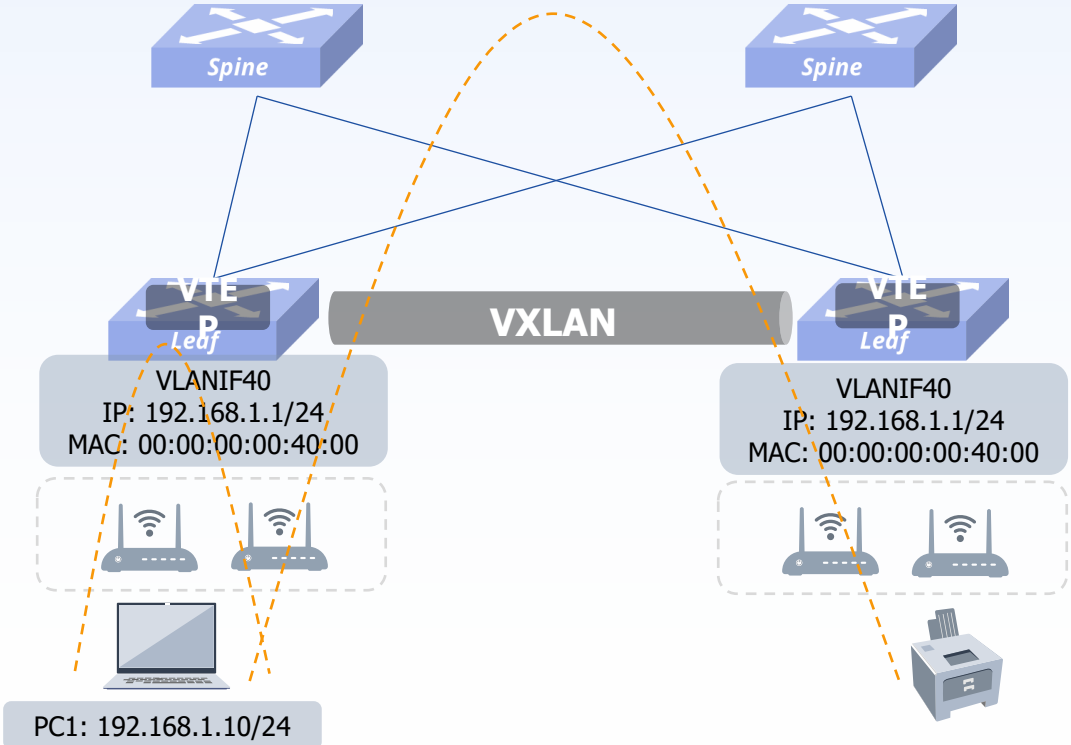
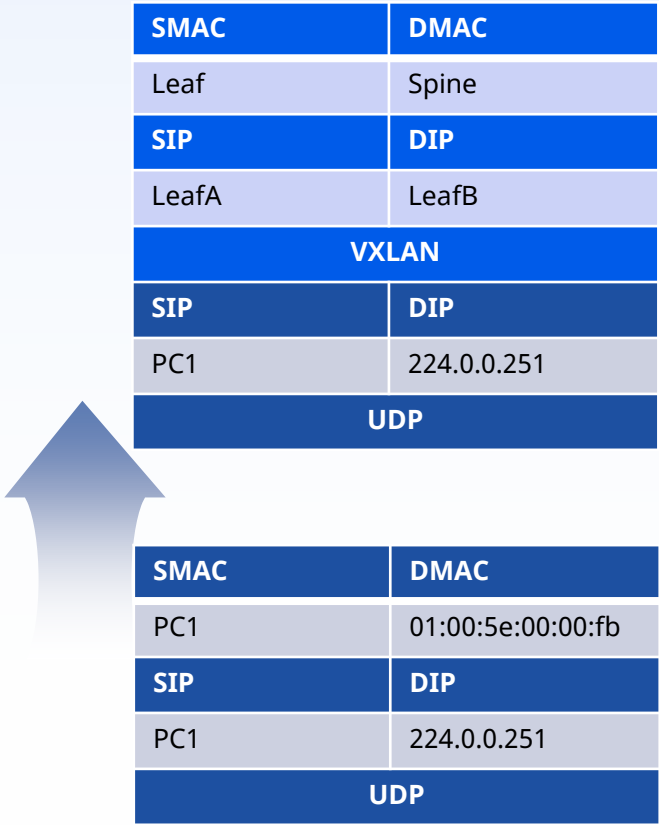
Block traffic between ports

L2 VPN Service Interfaces



L2 EVPN for multicast discovery

- In traditional LAN environments, multicast protocols like MDNS, SSDP, and LLMNR are widely used for device discovery, allowing clients to find printers, projectors, and other devices within the same L2 network.
- Leaf switches actively identify these types of packets, then encapsulate them with VXLAN headers and forward them over VXLAN tunnels to other Leaf switches.



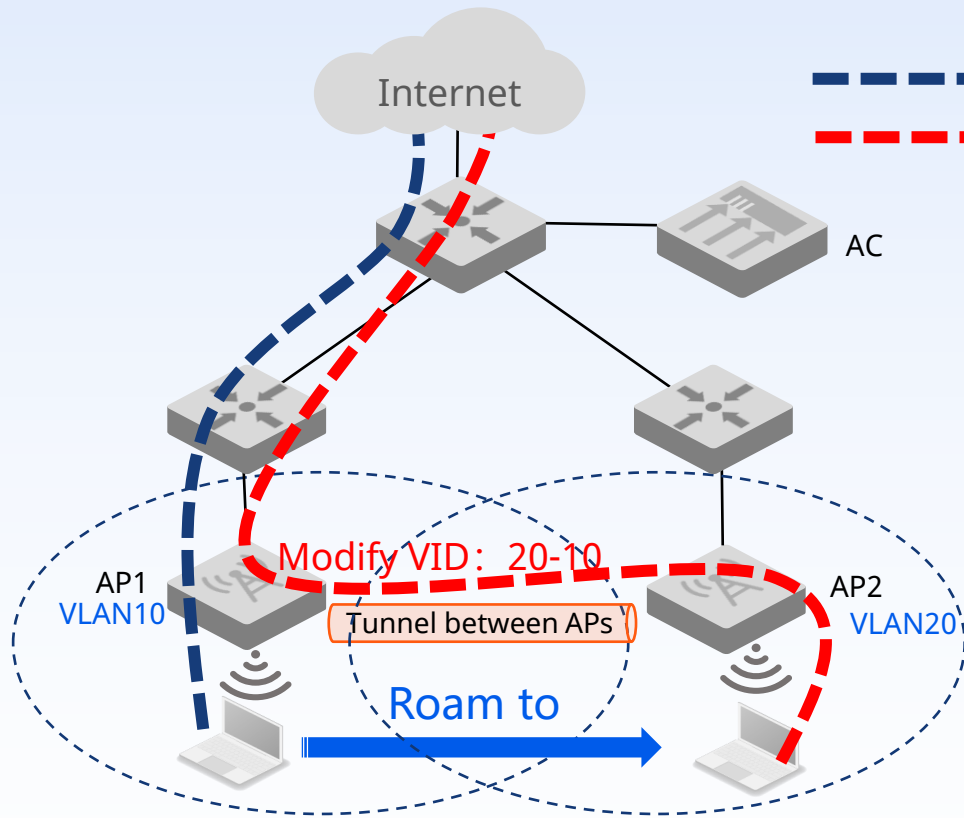
组播转发路径

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A G E N D A

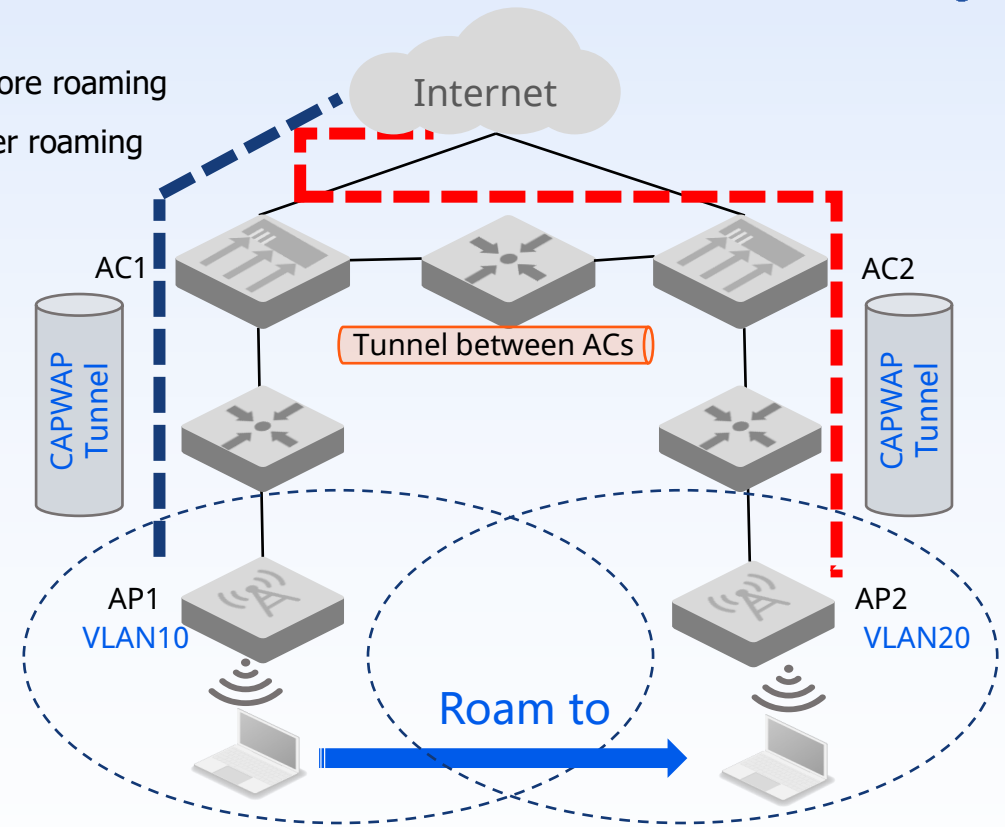
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Inefficient traditional L3 roaming



L3 roaming within an AC

1. Build a tunnel between APs
2. Route roamed traffic via the tunnel to original AP
3. The original AP modify VLAN ID before forwarding it



L3 roaming between ACs

1. Build roaming group and tunnel between ACs
2. After roaming, traffic will be sent to AC2 first, then sent to AC1 via the tunnel
3. AC1 relays the traffic

Asterfusion Anycast Gateway WiFi Roaming

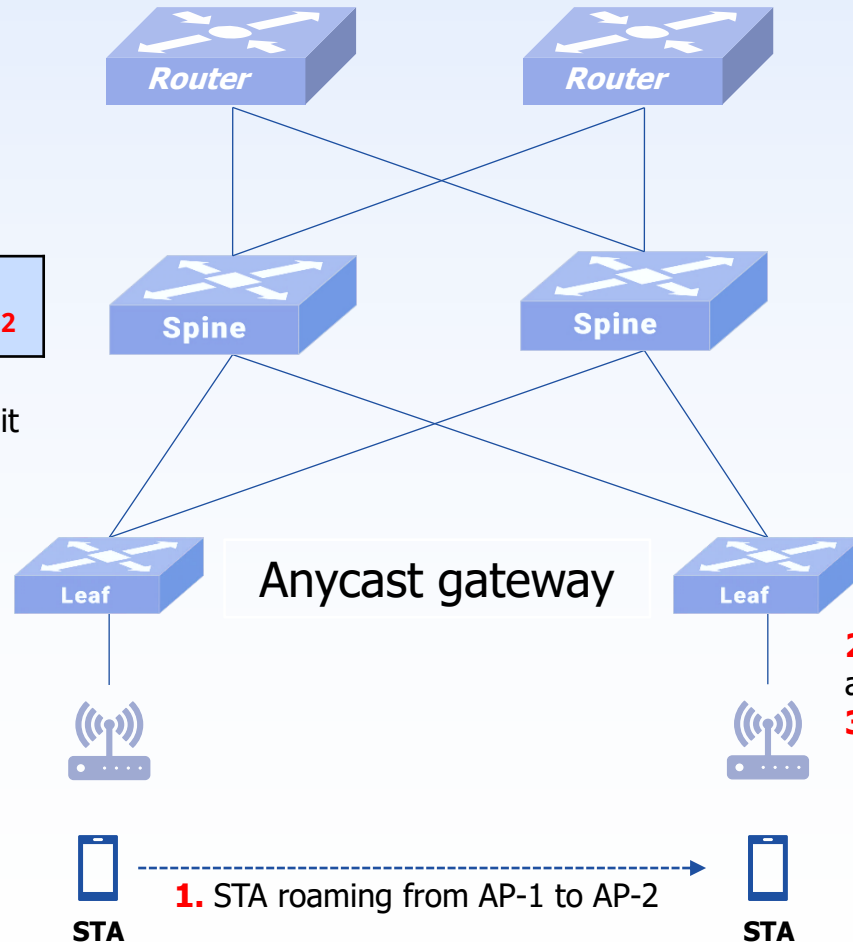


Spine-1 RIB:	Default STA	Router 1&2 Leaf-1&Leaf-2
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- 4. Spine received host route and add it
- 6. Delete BGP route of STA to Leaf-1

Leaf-1 RIB:	Default STA	Spine 1&2 Local
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- 5. Leaf-1 received notification from fast-migration, delete local host route of STA and revoke BGP host route



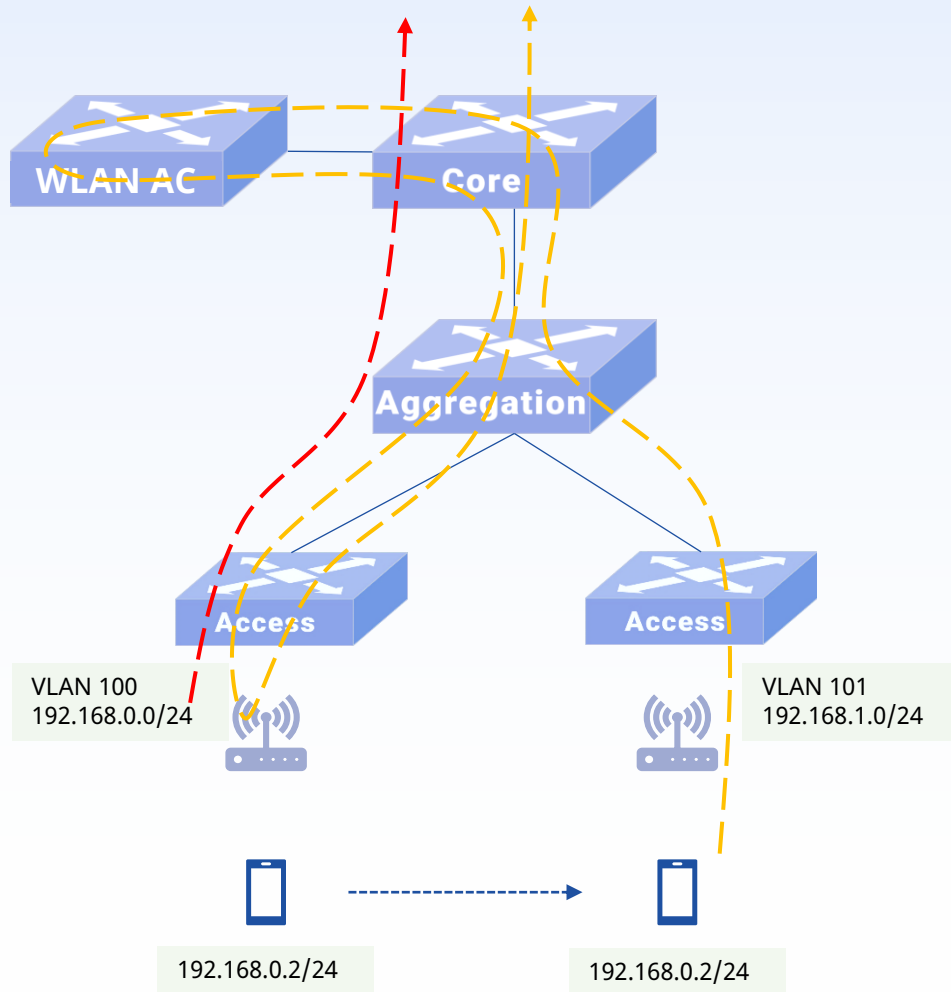
- AP simply forwards all traffic to its uplink leaf switch but do no local switching
- Anycast gateway on each leaf switch so that roaming clients always keep the same IP address to eliminate reconnecting when hand over from one switch to another
- BGP-EVPN between leaf and spine, leaf distributes local ARP hosts to all spines so that spines understand how to route roaming traffic.
- Home leaf switch authenticating clients and storing info, then sync the info to the remote leaf switch when clients hand over to the new one.

- 2. mac-trigger: Learn ARP, ARP-TO-HOST, BGP host route advertise
- 3. fast-migration: notify to revoke the original route

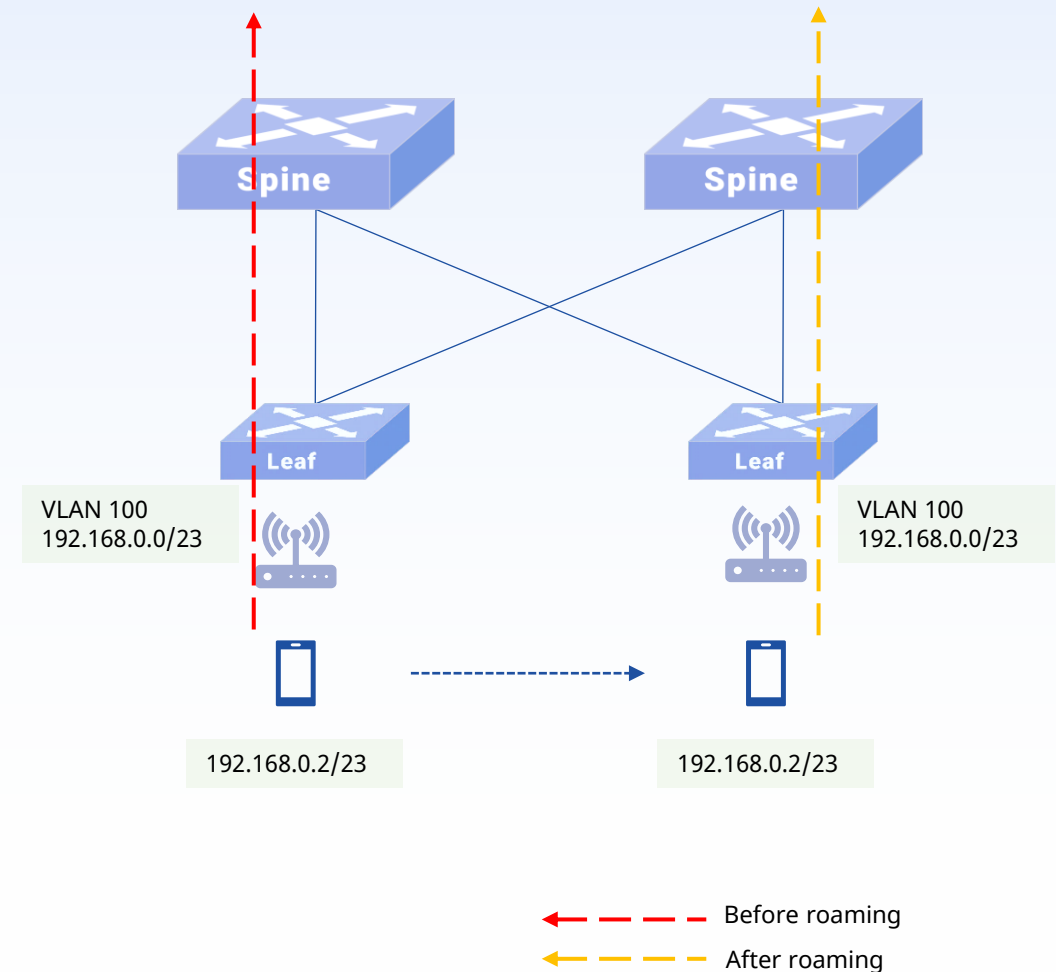
Comparison



Traditional Wireless Roaming:
Dividing subnets results in L3 roaming



Anycast Gateway Roaming:
All L2 roaming in a big subnet



Test result



- Asterfusion's unique algorithm achieves zero-perception roaming and low latency, with an average roaming handover time of **10ms**



A network diagram background with a dark blue gradient. It features a complex web of white and light blue lines connecting various nodes, representing a network topology. The nodes are small circles, and the lines are of varying thickness and opacity, creating a sense of depth and connectivity. The overall aesthetic is technical and modern.

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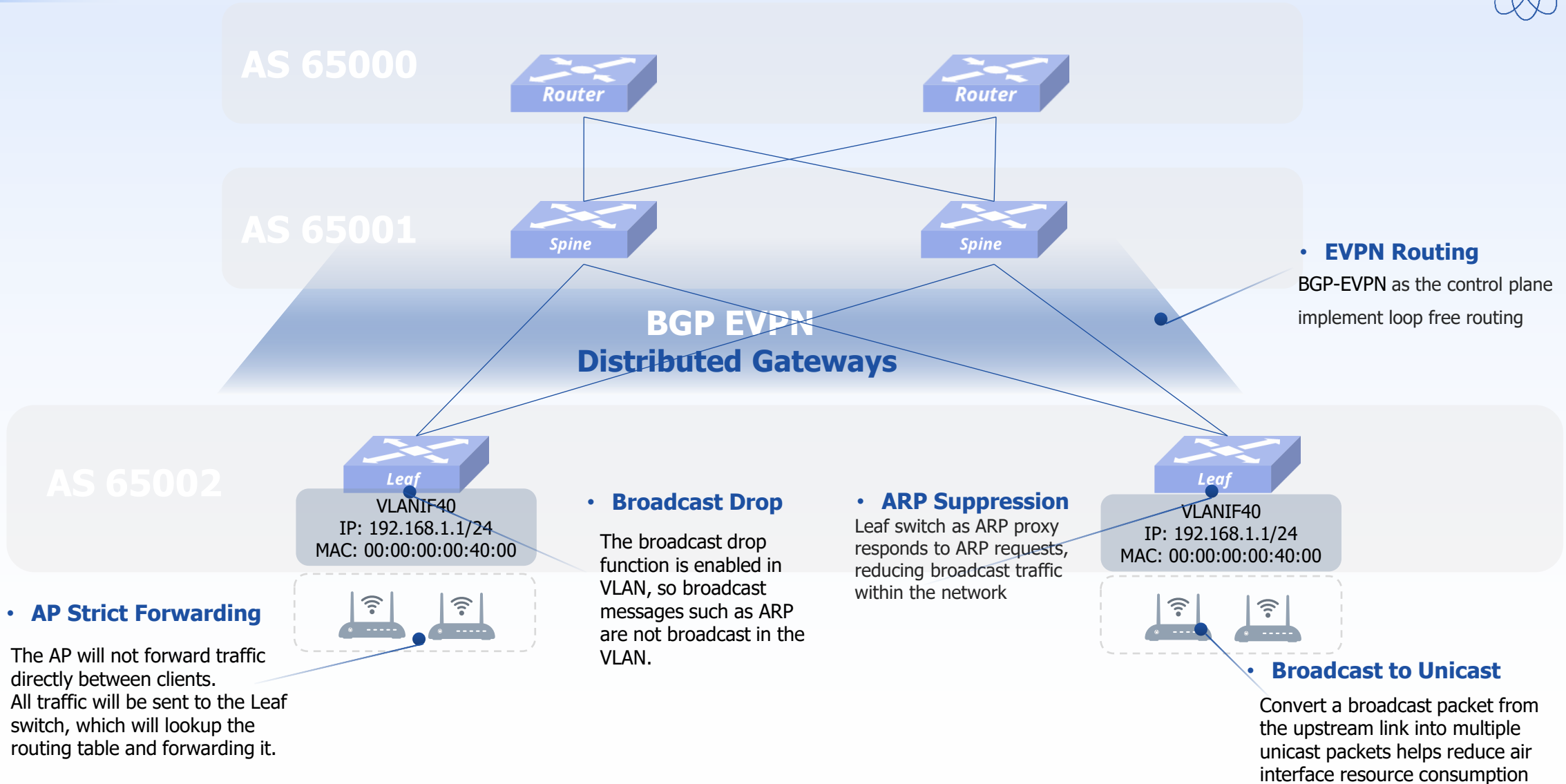
04 Broadcast-Free Network

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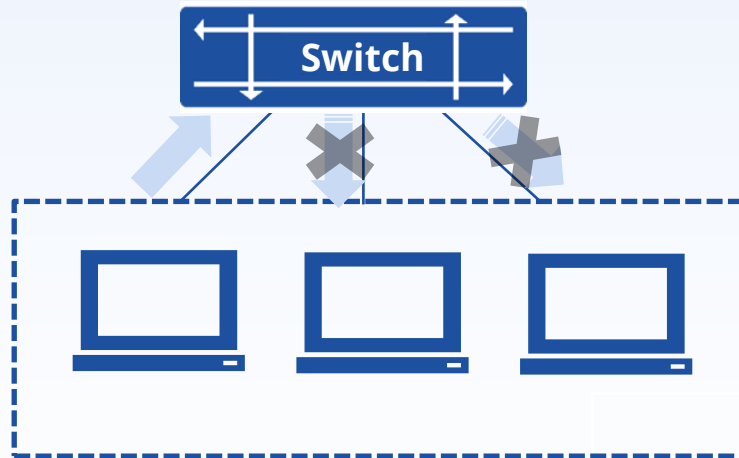
Full Layer 3 Network avoid Broadcast and Loop



Implementation of Full Layer 3 Broadcast-Free Network

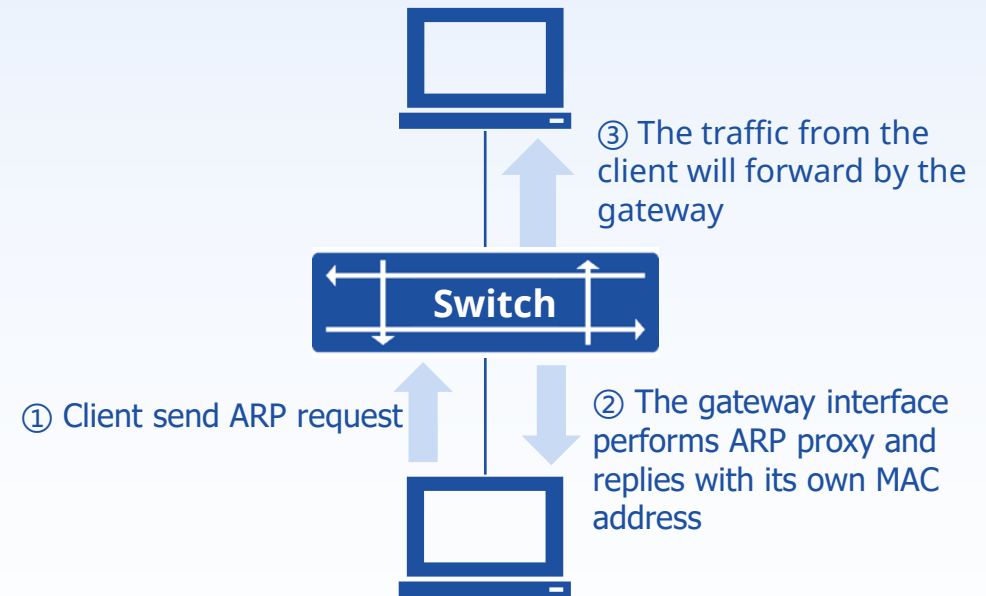


Broadcast Drop



Broadcast packets sent by clients, except for protocol packets such as ARP, will be sent to the switch CPU for processing, while other broadcast packets will be discarded. Isolate Layer 2 broadcast attacks between clients.

ARP Suppression

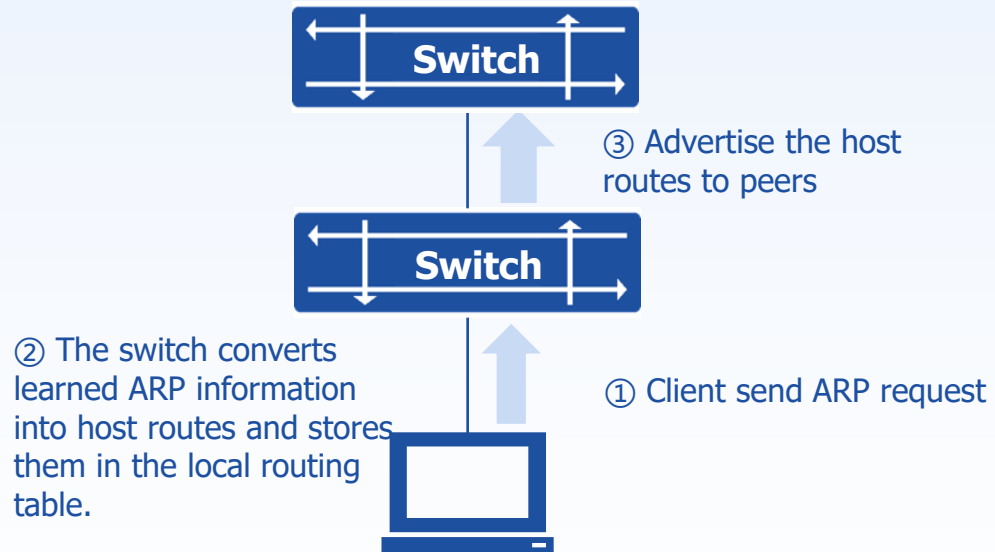


The Leaf switch turns on the ARP proxy function and uses its own MAC address to quickly proxy the client's request. The client's access is forwarded by the gateway, further suppressing the propagation of broadcasts in the network.

Implementation of Full Layer 3 Broadcast-Free Network

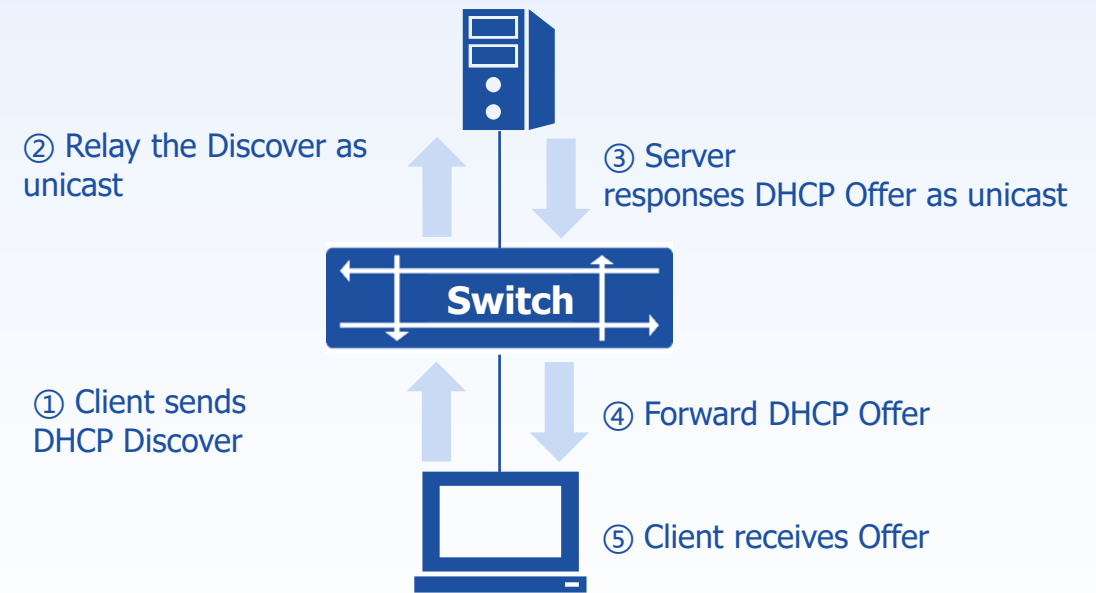


ARP-TO-HOST



With the ARP-to-Host feature, the switch converts ARP/NDP entries into precise host routes for routing, eliminating excessive broadcast flooding and improving forwarding efficiency.

DHCP Relay

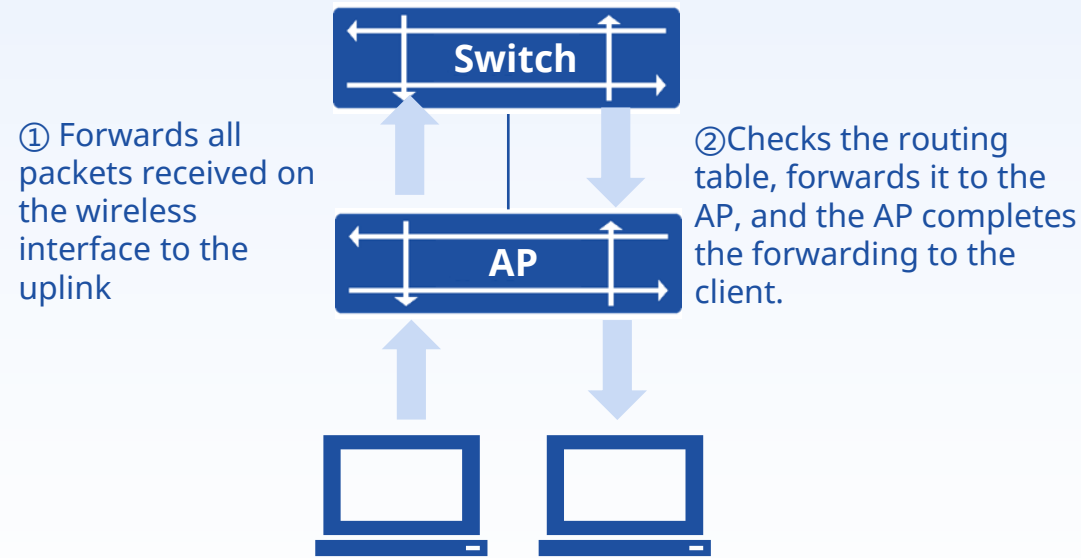


With DHCP relay, the switch forwards all DHCP interactions from clients as unicast.

Implementation of Full Layer 3 Broadcast-Free Network

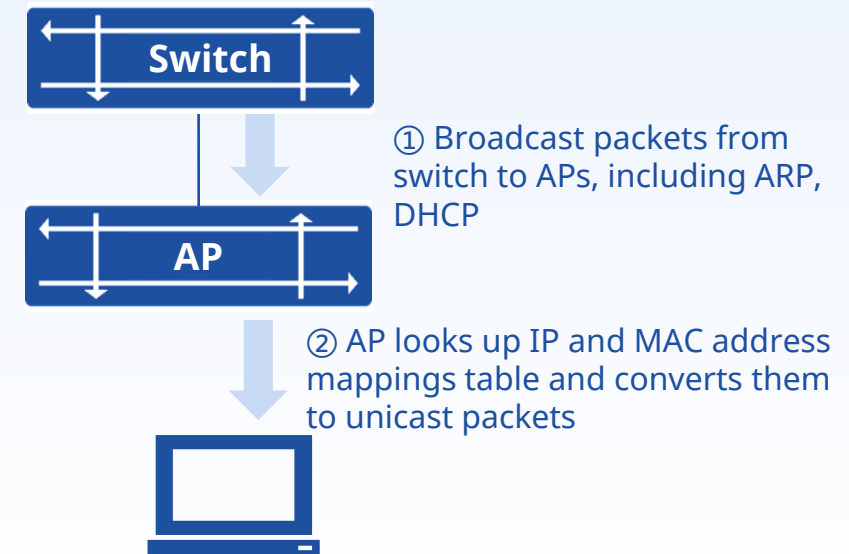


Strict Forwarding



With strict forwarding enabled on the AP, all packets received on the wireless interface, except multicast packets, are forwarded to the uplink, preventing wireless clients from directly learning each other's real MAC addresses on the AP.

Broadcast to Unicast



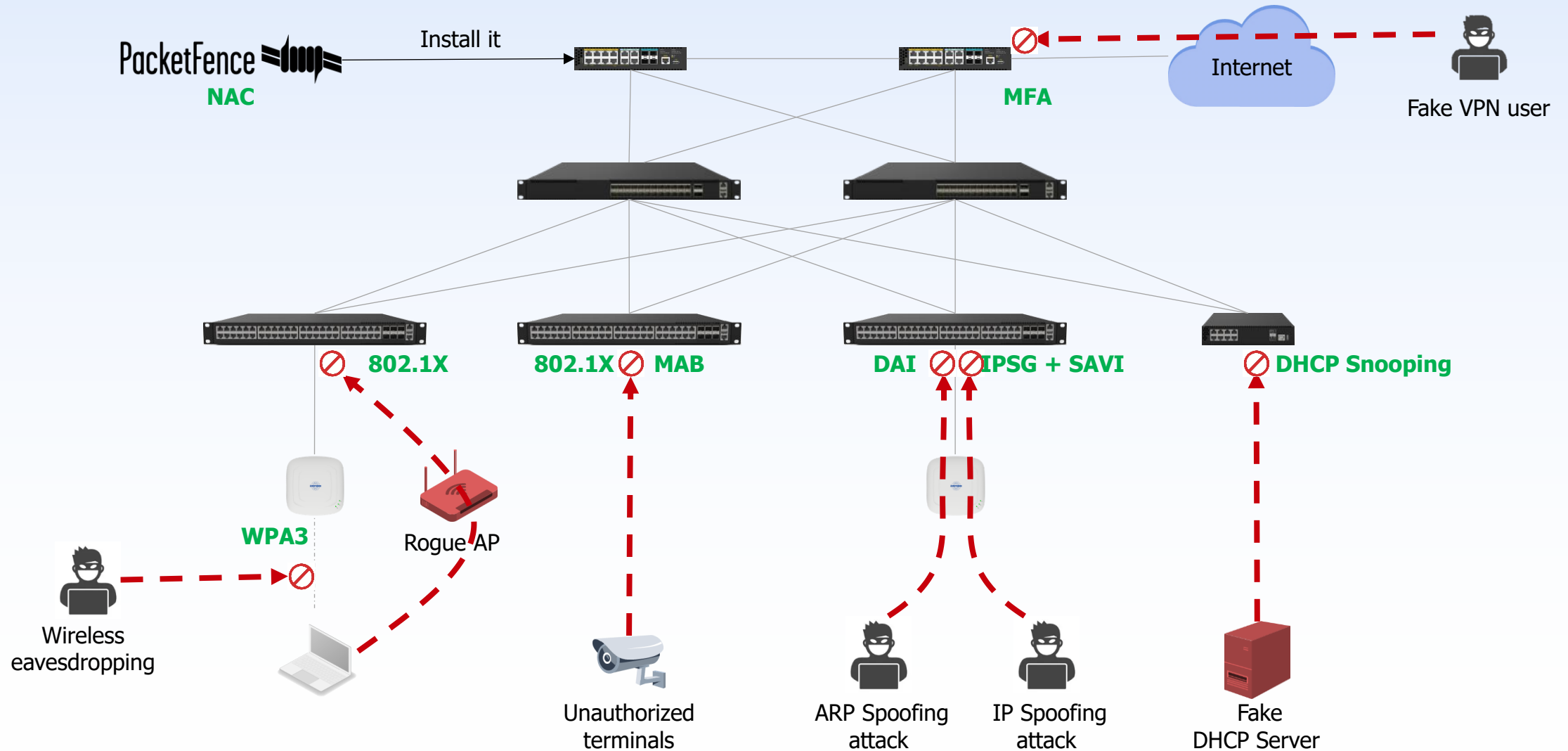
The AP converts broadcast packets received from the uplink into unicast packets by matching local IP and MAC address mappings table, reducing the use of air interface resources by minimizing broadcast traffic.

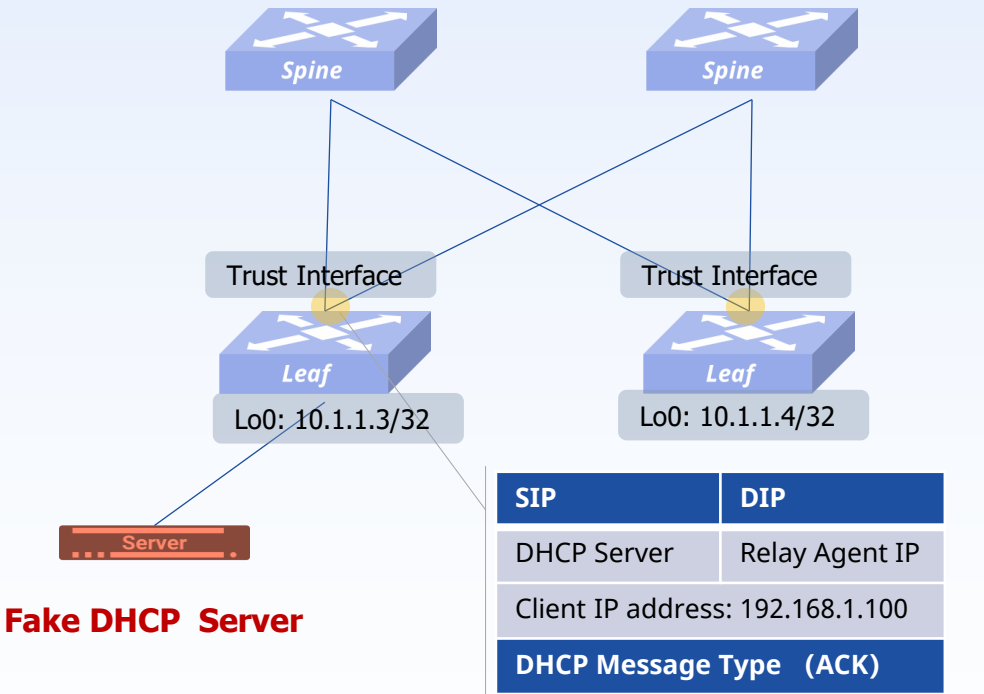
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Comprehensive Access Security Mechanisms





● The generation of DHCP Snooping Table

The DHCP server sends the DHCP ACK packet to the Leaf switch via unicast. Upon receiving the DHCP ACK packet from a trusted interface (DHCP Snooping), the Leaf extracts key information (including the PC's MAC address, assigned IP address, and lease time) and generates a Snooping entry.

● The purpose of DHCP Snooping

1. When fake DHCP servers are present in the network, DHCP clients may obtain incorrect IP addresses, leading to communication issues.
2. DHCP Snooping Trust only accepts DHCP Offer and DHCP ACK packets from trusted ports, discarding DHCP packets from untrusted ports.
3. The DHCP Snooping table records the IP and MAC address mappings of DHCP clients. By matching packets with the DHCP Snooping table, unauthorized terminal attacks can be prevented. Additionally, ARP request packets can be generated based on client information in the Snooping table to probe silent terminals.

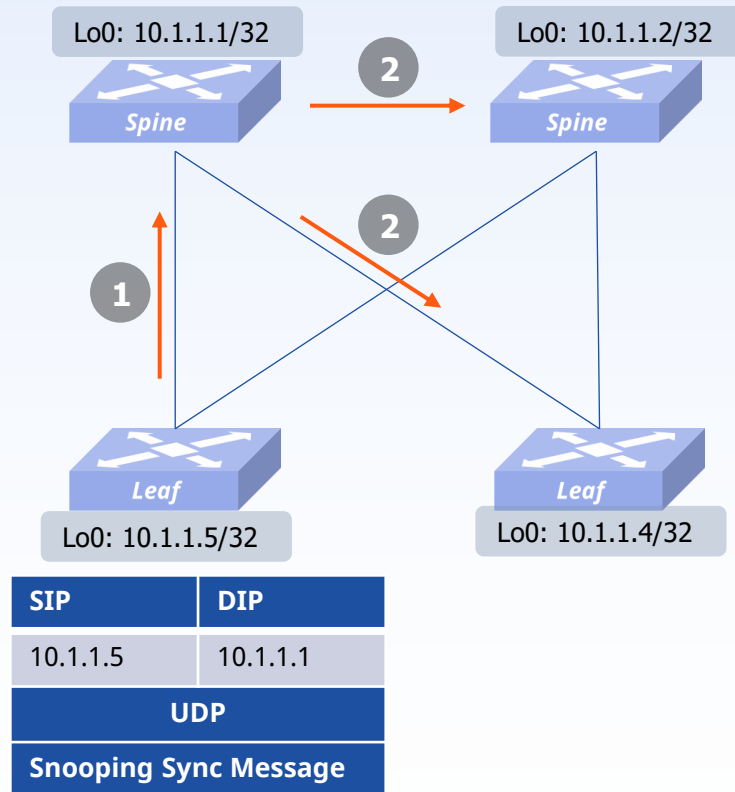
MAC	IP	Lease time	Switch ID	Type
e2:5b:3b:c6:a5:c3	192.168.1.100	7200	10.1.1.3	local
e2:5b:3b:c6:b1:02	192.168.1.101	7200	10.1.1.4	remote

Synchronize Snooping Table across Network



Snooping sync Server

Snooping sync Client

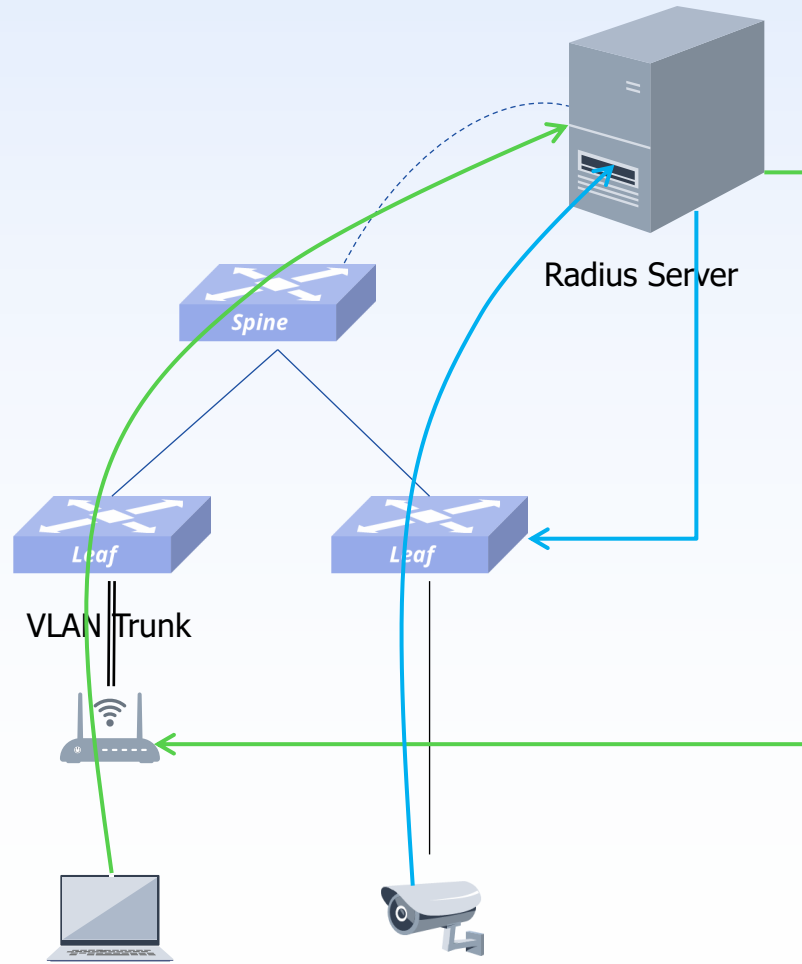


1. The Leaf switch randomly selects a Spine switch to send the Snooping table synchronization message.
2. Upon receiving the Snooping synchronization message and learning the entries, the Spine switch will synchronize these entries with other Leaves and Spines.
3. Finally, DHCP Snooping entries are synchronized across all switches in the network, allowing packet matching and verification as wireless terminals roam within the network, preventing unauthorized terminal attacks.

Dynamic VLAN via Authentication

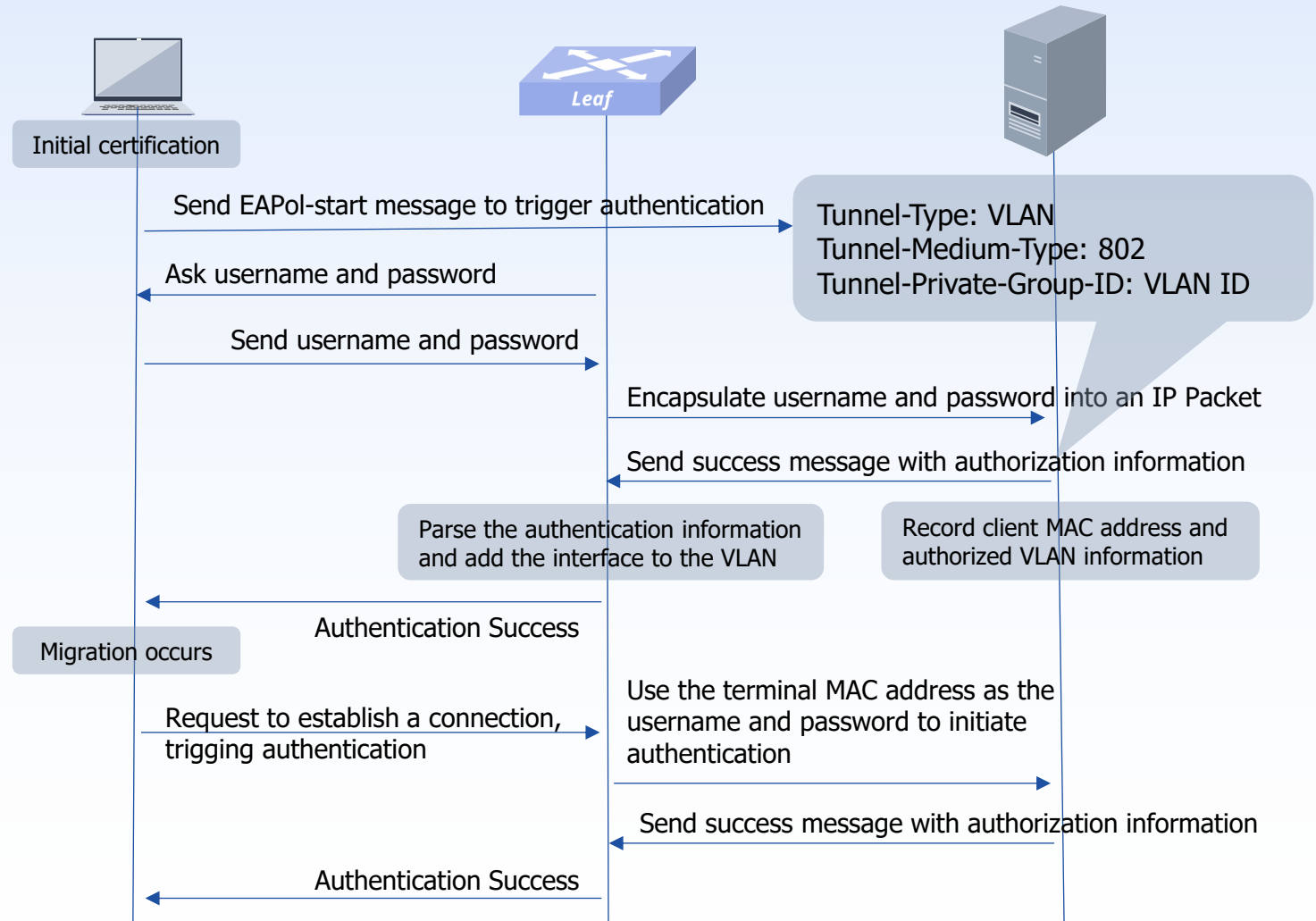
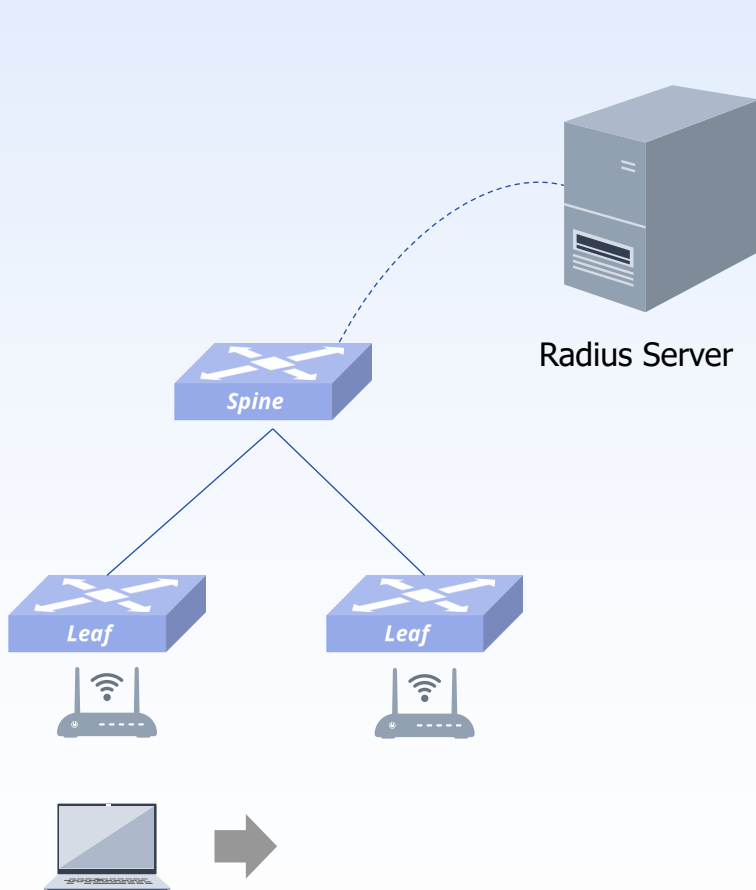


- Allocate dynamic VLAN to Wired clients and configure the leaf switch
- Allocate dynamic VLAN to Wi-Fi clients and configure the AP or the leaf switch



Tunnel-Type: VLAN
Tunnel-Medium-Type: 802
Tunnel-Private-Group-ID: VLAN ID

Authentication Persistence during Roaming



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Asteria Campus Controller



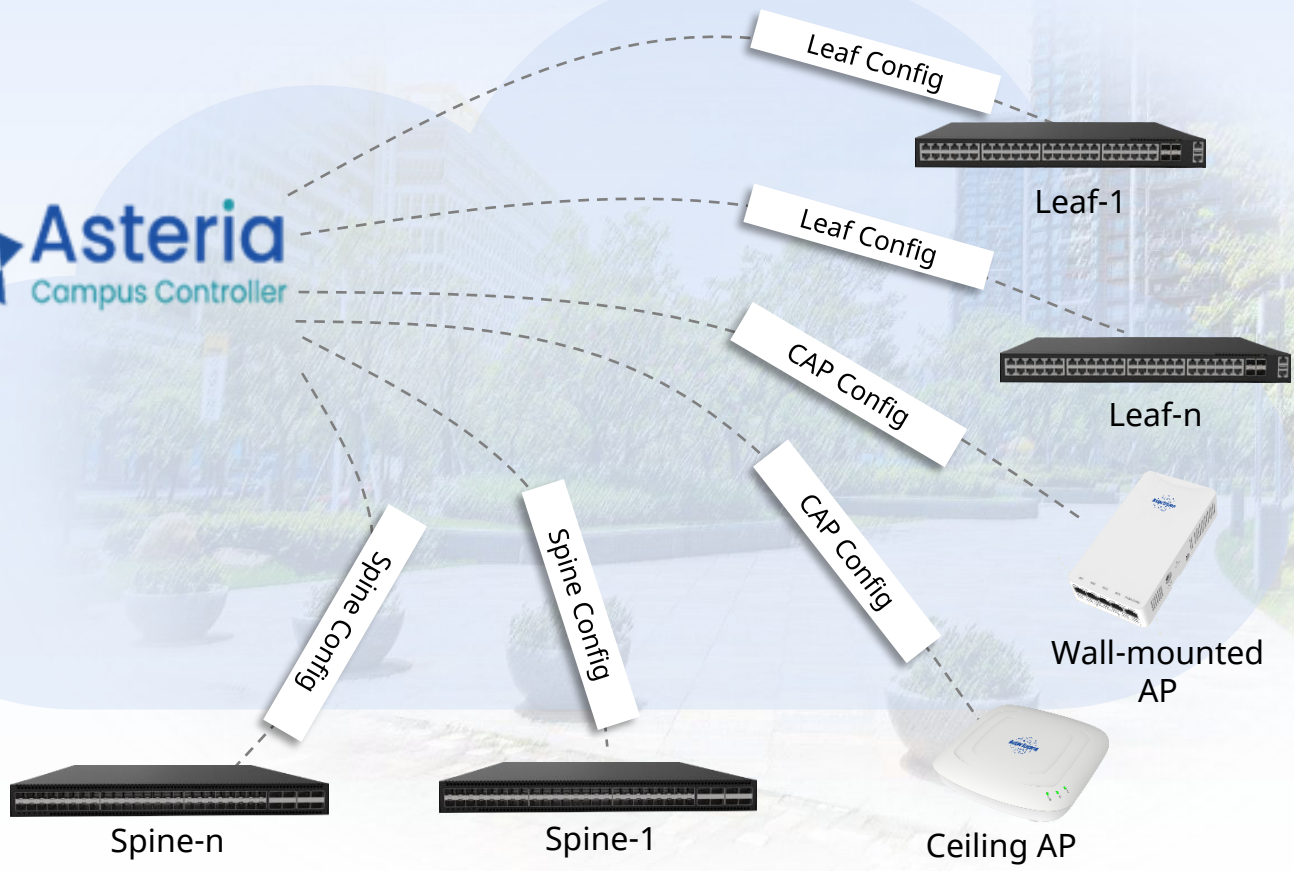
The screenshot displays the Asteria Campus Controller interface, which is divided into several sections:

- Devices:** A table listing network devices with columns for ID, Host Name, Type, Model, and IP. It shows a list of devices with their respective status and configuration details.
- Device Detail (60ab5a0110d3):** A detailed view of a specific device, including its status (Connected, 100%), model (LS33P-401-W), and various hardware and software metrics. It also features a 'Statistics' graph showing network activity over time.
- Device Detail (e001a66e5730):** Another device detail view, showing its status (Connected, 100%), model (MARI-A7000A), and a 'Wi-Fi Analysis' section with a table of active Wi-Fi connections.
- Commands:** A table showing the execution history of various commands, including their status, completion time, and error codes.
- Log Files:** A section for viewing system logs, including health checks, crash logs, and reboot logs.



- Unified management of wired and wireless networks
- Auto deployment and configuration using ZTP
- Automatically topology showing
- Real-time network status monitoring
- Automated operation using pre-defined scripts
- Comply with OpenWiFi standard
- ZERO license cost for on-prem deployment

Config All Campus Network Devices



● Brief steps

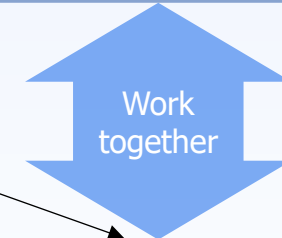
1. Design network topology
2. Connect the devices to the controller
3. Automatically deploy the configuration to the devices by ZTP

OpenWiFi Compatible



Asterfusion OpenWiFi & OpenLAN compatible Switches

Configure and monitor by **open sourced** OpenWiFi compatible **ucentral** client



Asterfusion OpenWiFi+ OS

ACCTON

Edge-core NETWORKS

CIG

3rd Party APs with OpenWrt



AP6050 Wi-Fi6E Ceiling



AP6030 Wi-Fi6 Ceiling



AP6020W Wi-Fi6 Wall Mount



AP6031 Wi-Fi6 Outdoor

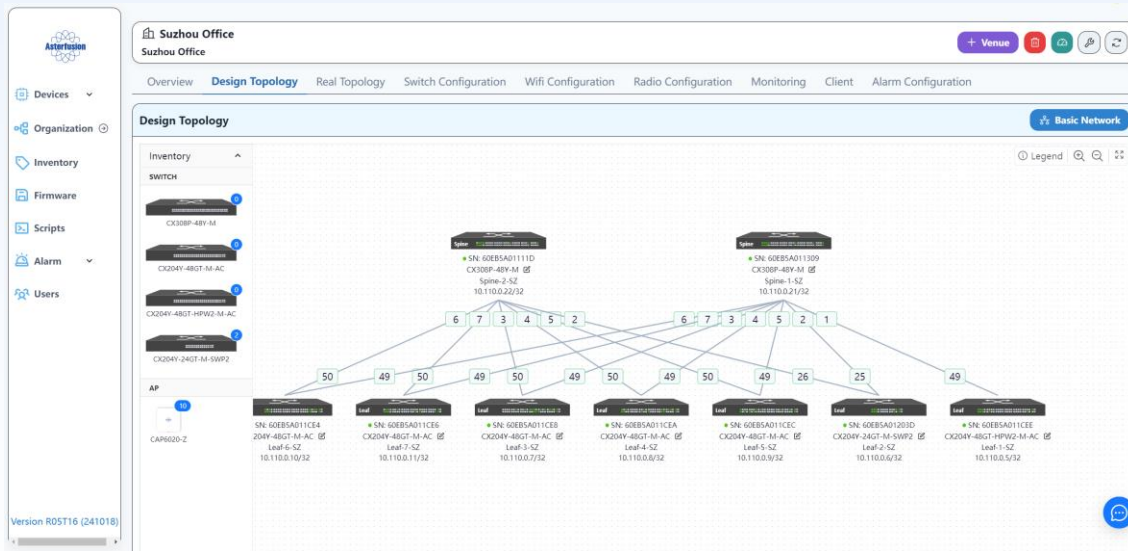
Asterfusion OpenWiFi compatible APs

One-Click Network Configuration after Topology Design



Click it

Design Topology

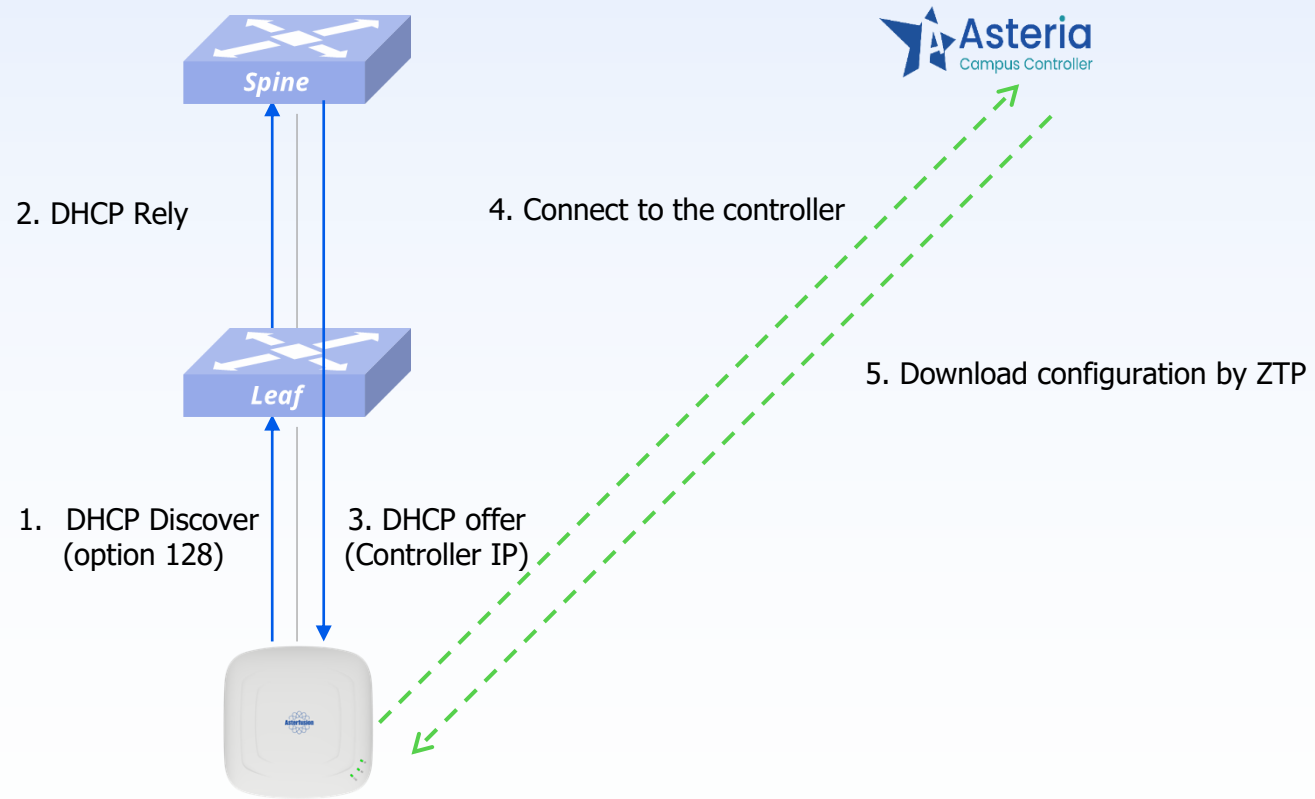


Automatically Deploy via ZTP

Automatically generate configuration of all devices

```
Current Configuration
1 {
2   "app_to_host_policy": {
3     "port_vlan00": {
4       "policy": "permit"
5     },
6     "port_vlan00": {
7       "policy": "permit"
8     }
9   },
10  "container_feature": {
11    "http": {
12      "auto_restart": "enabled",
13      "high_mem_alert": "disabled"
14    },
15    "cluster": {
16      "auto_restart": "enabled",
17      "high_mem_alert": "disabled"
18    },
19    "database": {
20      "auto_restart": "enabled",
21      "high_mem_alert": "disabled"
22    },
23    "dhcp_relay": {
24      "auto_restart": "enabled",
25      "high_mem_alert": "disabled"
26    },
27    "dot1x": {
28      "auto_restart": "enabled",
29    }
30  }
31 }
```

Automated Configuration Process via DHCP and ZTP



One-Click Function Activation for Entire Network



- Easily activate VLAN, DHCP Relay, ACL, DAI, IPSG, 802.1x and more functions on multiple devices

Create Switch Configuration Save

Before configuring, please confirm the topology information

Name * Description

Creator Device * Leaf-6-SZ x Leaf-7-SZ x Leaf-3-SZ x Leaf-4-SZ x Leaf-5-SZ x

Switch Configuration (4) + ≡ ↻

Before configuring, please confirm the topology information

<input type="checkbox"/>	NAME	VLAN	STATUS	LAST MODIFIED	CREATED	CREATOR	DESCRIPTION	ACTIONS
<input type="checkbox"/>	server-I1I2	54	Effective	17 days ago	17 days ago	tip@ucentral.com		
<input type="checkbox"/>	AP-mgmt	51, 52	Effective	17 days ago	19 days ago	tip@ucentral.com		
<input type="checkbox"/>	youxian-user-I4	53	Effective	19 days ago	19 days ago	tip@ucentral.com		
<input type="checkbox"/>	youxian-user-I3	53	Effective	19 days ago	19 days ago	tip@ucentral.com		

Note: A red arrow points to the 'Configure' icon in the Actions column of the 'AP-mgmt' row.

Self-Defined Scripts



- Users can create scripts using Shell, Bundle, or SONiC-CLI languages
- For example, if you need to configure DHCP on all spine switches to initialize leaf deployments, you can create a single, tailored script and deploy it across multiple devices as needed.
- Significantly reduces operational and maintenance (O&M) costs by automating tasks.

The screenshot displays the Asterfusion web interface. On the left is a navigation sidebar with options: Devices, Organization, Inventory, Firmware, Scripts, Alarm, and Users. The main content area is titled 'Scripts (7)' and contains a table with the following data:

NAME	CREATOR	VERSION	LAST MODIFIED	CREATED	DESCRIPTION	ACTIONS
AP 批量关闭 D...	zhenglei@asterfusion.com	1.0.0	1 month ago	1 month ago		[Icons]
ASB Bundle	blogic	1.0	3 months ago	3 months ago	Automated on-demand detailed debugging information collection from an AP	[Icons]
Access Security	litao@asterfusion.com	1.0.0	2 months ago	2 months ago	One-click configuration of access security features	[Icons]
Demo1	litao@asterfusion.com	1.0.0	2 months ago	3 months ago		[Icons]
Show VLAN L...	litao@asterfusion.com	1.0.0	2 months ago	3 months ago	显示设备vlan信息	[Icons]
Spine DHCP C...	asterfusion	1.0	2 months ago	3 months ago	The configuration used in spine to initialize the leaf deployment	[Icons]
苏州 AP 批量...	zhenglei@asterfusion.com	1.0.0	2 months ago	2 months ago	苏州 AP 批量恢复出厂脚本	[Icons]

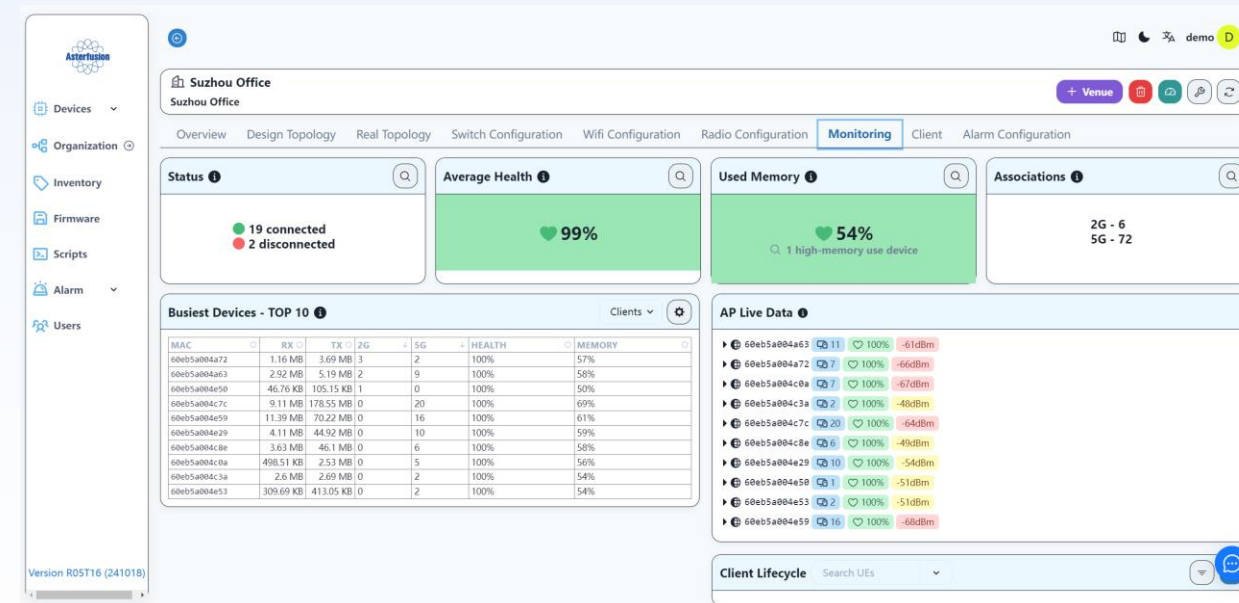
Below the table, the 'Spine DHCP config for Leaf' script is shown in detail. It includes fields for Name, Description, Type (Sonic-cli), Version (1.0), Creator (asterfusion), and Documentation. A 'Daemon' section has a checkbox and a 'Timeout' field set to 120 seconds. The 'Users allowed to run this script' section lists 'system Administrator' and 'General Administrator'. A 'Script' section contains a code block:

```
configure
connect-controller
downlink ethernet 1-10 ip address 192.168.100.1/24
do configure
dhcp pool connect-controller
capwap-ac {{CONTROLLER_SERVER_IP}}
end
```


Real-time & Multi-dimensional Network Status Monitoring



- **Resource Utilization:** Identifying risks of memory or CPU exhaustion
- **Traffic Load:** Pinpointing potential bottlenecks through in-depth traffic analysis
- **Hardware Status:** Ensuring components operate within safe temperature ranges and that power supplies and fans function correctly
- **Signal Status:** Real-time visibility into the status of Wi-Fi signal



Monitor Client Status



NAME	STATUS	AP	BSSID	SSID	CHANNEL	SNR	HOSTNAME	STATION TYPE	VENDOR	MODEL TYPE	MAX. RATE	
0045e27394c5	🟢	192.168.51.132	AP-4-S2	60e5c004c3a	Asterfusion-s2	157 40 MHz	42.00	LAPTOP-BCF98764	Windows PC/LAPTOP	Microsoft LAPTOP-BCF98764	173.4 Mbps	
0212e1c5621a	🟢	192.168.51.65	AP-3-S2	60e5c004e99	Asterfusion-s2	36 40 MHz	3.00				78 Mbps	
02efb3a3d270	🟢	192.168.51.177	AP-3-S2	60e5c004c7c	Asterfusion-s2	36 40 MHz	26.00	BBA-AL00	Android mobile	Huawei BBA-AL00	48 Mbps	
04e8b98217b1	🟢	192.168.51.8	AP-4-S2	60e5c004c3a	Asterfusion-s2	157 40 MHz	35.00		DESKTOP-SHCTQVP	Windows PC/LAPTOP	Microsoft DESKTOP-SHCTQVP	173.4 Mbps
1082d77a500f	🟢	192.168.51.194	AP-3-S2	60e5c004c7c	Asterfusion-s2	11 20 MHz	90.00	zhen-wogT-da-shi-tan-suo-ban	Android mobile	zhen-wogT-da-shi-tan-suo-ban	0 bps	
122304b6664d0	🟢	192.168.51.22	AP-3-S2	60e5c004c7c	Asterfusion-s2	11 20 MHz	15.00	zcf	Android mobile	zcf	17.2 Mbps	
12b0ab25401e	🟢	192.168.51.23	AP-3-S2	60e5c004463	Asterfusion-s2	1 20 MHz	1.00				8.6 Mbps	
147fc9df17e	🟢	192.168.51.49	AP-4-S2	60e5c004c3a	Asterfusion-s2	157 40 MHz	35.00				456.8 Mbps	
1c1bb55f1ec3	🟢	192.168.51.52	AP-4-S2	60e5c004c29	Asterfusion-s2	1 20 MHz	43.00	SK_20221215C-P08	Windows PC/LAPTOP	Microsoft SK_20221215C-P08	72.2 Mbps	
1c8fcb654555	🟢	192.168.51.102	AP-1-S2	60e5c004453	Asterfusion-s2	149 40 MHz	37.00	LAPTOP-754K089K	Windows PC/LAPTOP	Microsoft LAPTOP-754K089K	156 Mbps	
1e7aa30c91c	🟢	192.168.51.87	AP-3-S2	60e5c004463	Asterfusion-s2	149 40 MHz	28.00	Galaxy-S21-5G	Android mobile	Galaxy-S21-5G	273.2 Mbps	
207918e27146	🟢	192.168.51.9	AP-9-S2	60e5c004463	Asterfusion-s2	149 40 MHz	16.00	DESKTOP-80FQ484	Windows PC/LAPTOP	Microsoft DESKTOP-80FQ484	58.5 Mbps	
20c19b7a232a	🟢	192.168.51.122	AP-8-S2	60e5c00440a	Asterfusion-s2	44 40 MHz	19.00	HANA-ThinBook	Windows PC/LAPTOP	Microsoft HANA-ThinBook	156 Mbps	
264d2784708f	🟢	192.168.51.220	AP-3-S2	60e5c004463	Asterfusion-s2	1 20 MHz	5.00	vivo-X200-Pro	Android mobile	vivo vivo-X200-Pro	48 Mbps	
26cdf13958054	🟢	192.168.51.220	AP-3-S2	60e5c004c59	Asterfusion-s2	36 40 MHz	1.00				8.6 Mbps	
2ea393b7e727	🟢	192.168.51.206	AP-3-S2	60e5c004c7c	Asterfusion-s2	11 20 MHz	43.00				0 bps	
364779b113d6	🟢	192.168.51.94	AP-1-S2	60e5c004453	Asterfusion-s2	149 40 MHz	8.00	Huawei_Hate_30_5G-9144100	Android mobile	Huawei Huawei_Hate_30_5G-9144100	156 Mbps	
38378bee045c	🟢	192.168.51.146	AP-11-S2	60e5c00408e	Asterfusion-s2	44 40 MHz	45.00	SharonPC	Windows PC/LAPTOP	Microsoft SharonPC	1.36 Gbps	
38d47f4593d9	🟢	192.168.51.130	AP-3-S2	60e5c004c7c	Asterfusion-s2	36 40 MHz	28.00	system	Windows PC/LAPTOP	Microsoft system	516 Mbps	
3ce9f7604456	🟢	192.168.51.196	AP-3-S2	60e5c004c7c	Asterfusion-s2	36 40 MHz	38.00	evolution	Windows PC/LAPTOP	Microsoft evolution	156 Mbps	
3e8260c75a6e	🟢	192.168.51.220	AP-3-S2	60e5c004463	Asterfusion-s2	36 40 MHz	90.00	zhen-wogT-2	Android mobile	zhen-wogT-2	0 bps	
42b65f0808df	🟢	192.168.51.221	AP-3-S2	60e5c004c7c	Asterfusion-s2	11 20 MHz	19.00	Huawei_Hate_30_5G-9144100	Android mobile	Huawei Huawei_Hate_30_5G-9144100	34.4 Mbps	
42f6cb137f31	🟢	192.168.51.221	AP-3-S2	60e5c004472	Asterfusion-s2	149 40 MHz	18.00	nova_7_5G_5G_771-0832a37	Android mobile	Huawei nova_7_5G_5G_771-0832a37	58.5 Mbps	
4c3d2b1222d	🟢	192.168.51.97	AP-6-S2	60e5c004c29	Asterfusion-s2	157 40 MHz	33.00	巧星	Windows PC/LAPTOP	Microsoft 巧星	173.5 Mbps	
4cd1a153cd64	🟢	192.168.51.109	AP-11-S2	60e5c00408e	Asterfusion-s2	44 40 MHz	28.00	Murvin PC	Windows PC/LAPTOP	Microsoft Murvin PC	65 Mbps	
4fcfaab25991	🟢	192.168.51.109	AP-7-S2	60e5c004472	Asterfusion-s2	11 20 MHz	90.00				0 bps	

Report basic information of clients

Show vendor, hostname, IP and MAC

View online status, including SNR, channel, negotiated rate, etc.



Connection status traceback

Records online status, signal quality, traffic, location of connected AP and other information within 3 hours, making it easier for operator to view the current wireless user's Internet access status and accelerate the rapid location of network faults.

Thanks for Listening



<https://cloudswit.ch>