

Scalability: IP Address, VLAN, and Routing Maximum Values

The following table lists the switch scalability values for the areas of VLANs, ACLs, hardware, ARP, and routing.

Subject	Maximum
IPv4 ACLs	
total named (extended or standard)	up to 2048 (minus any IPv4 numeric standard or extended ACL assignments and any RADIUS-assigned ACLs) ¹
total numeric standard	up to 99 ¹
total numeric extended	up to 100 ¹
total ACEs in all IPv4 ACLs	up to 3072 ¹
IPv6 ACLs	
total IPv6 ACLs	up to 2048 ¹
total ACEs in all IPv6 ACLs	up to 3072 ¹
¹ Actual availability depends on combined resource usage on the switch. Refer to Appendix E, "Monitoring Resources".	
Layer-3	
VLANs with at least one IP Address	512
IP addresses per system	2048 IP 2048 IPv6 ²
IP addresses per VLAN	32 ³
static routes	256
supported routes	10,000 (including ARP)
² These limits apply only to user-configured addresses and not to auto-configured link local and prefix IPv6 addresses. A maximum configuration could support up to 2048 user-configured and 2048 auto-configured IPv6 addresses for a total of 4096.	
³ There can be up to 32 IPv4 and 32 user-configured IPv6 addresses on a single VLAN. In addition, each VLAN is limited to 3 auto-configured prefix-based IPv6 addresses.	
IPv4 host hardware table	72K (8K internal, 64K external)
IPv4 BMP hardware table	2K

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Subject	Maximum
ARP	
ARP entries	10,000
packets held for ARP resolution	25
Routing Protocol	
RIP interfaces	128
OSPF passive interfaces	512 (minus OSPF active interfaces)
OSPF active interfaces	128
OSPF areas	16
ECMP next hops	4