BGP can mean stress for your router. Know your hardware and your environment.

Scaling Mount BGP

Level 5

Full Internet Routes, multiple external peers + VRF instances

High to very high CPU demand, hardware forwarding platforms required, with a minimum of 1M routes support.

CISCO7600/RSP720 is a baseline here, with an ASR 9000 platform preferred for the highest-scale environments.

Service provider edge routers and border routers for large IaaS oriented datacenters fall into this category.

Level 4

Full Internet Routes, 3+ external peers

High CPU demand, hardware forwarding platforms required, and need to support >512k routes, with 1M routes highly recommended.

Modular ASR1000 with RP2, CISCO7600/RSP720, and ASR 9000 are the common platforms at this level.

Found in medium to large service provider environments, especially at internet exchange points.

Level 3

Full Internet Routes, 1-2 external peers

Moderate CPU demand, hardware forwarding platforms need to support >512k routes, with 1M routes preferred for future growth.

Cat6500/Sup720-3BXL is the baseline hardware for this kind of environment, but many customers prefer a modular ASR1000 or CISCO7600/RSP720 here if future growth is anticipated.

Very common for small service providers or larger enterprises with customer-facing resources.

Level 2

Partial Internet Routes

Low CPU demand. Hardware forwarding platforms should support > 100k routing table entries.

Often seen on internal routers in datacenters, so common hardware tends to be switching oriented.

6500/VS-S2T-10G or Nexus 7000 are very popular in this role.

Level 1

Default Routes

Minimal demands on CPU and hardware.

Any BGP capable platform can do this - ISR G2s are common, and many customers still use legacy routers like the ISR G1 or 7200 series in this role.

Common for medium-sized enterprise environments.

CURVATURE