

Gateway settings are configured on the core switch



Overview

SME Network Solution Typical Configuration Examples "Gateway + Core Switch + Aggregation Switch + Access Switch + WAC + AP + AR180" Networking: Local Entire.

Key Takeaways

The default gateway for a core switch is typically the IP address of the router or firewall that connects the network to external networks, and for Layer 2 switches, the core switch itself usually serves as the gateway. Default Gateway Configuration

For a Layer 3 core switch, the default gateway is the IP address of the device that provides external network access, such as a firewall or router. This allows the core switch to forward traffic destined for networks outside its local subnets. If the core switch is performing Layer 3 routing for multiple VLANs, each VLAN interface (SVI) on the core switch acts as the default gateway for devices within that VLAN. For Layer 2 access switches, the default gateway should point to the core switch SVI in the management VLAN. For example, if the management VLAN is 172.20.10.0/24, the core switch SVI could be 172.20.10.1, and all access switches would use this as their default gateway.

VLAN and Subnet Considerations

- The management VLAN is used for switch management and should have a dedicated subnet. Assign an IP to the core switch SVI in this VLAN and configure all Layer 2 switches to use it as their gateway.

- For external connectivity, the firewall or router can be placed in a separate VLAN, often with a small subnet like /30, to limit exposure and simplify routing .
- If the core switch handles routing for multiple VLANs, ensure the firewall or router has routes back to all VLAN subnets to maintain connectivity .

Redundancy and High Availability

To ensure network stability, consider using HSRP (Hot Standby Router Protocol) or VRRP (Virtual Router Redundancy Protocol) on the core switch or firewall. This provides a virtual gateway IP that can failover between devices, maintaining uninterrupted network access .

Configuration Steps (Cisco Example)

- Assign an IP address to the core switch SVI for the management VLAN:

```
interface vlan 10ip address 172.20.10.1 255.255.255.0no shutdown
```

- Set the default gateway for the core switch (if needed for out-of-band management):

```
ip default-gateway 172.20.10.254
```

- Configure Layer 2 switches to use the core switch SVI as their default gateway:

```
ip default-gateway 172.20.10.1
```

- Ensure routing or static routes exist on the firewall/router for all VLAN subnets if the core switch is performing inter-VLAN routing .

Best Practices

- Use a dedicated management VLAN separate from user data VLANs.
- Keep the default gateway for Layer 2 switches pointing to the core switch to simplify management.
- Place the firewall/router in a separate VLAN with a small subnet for external access.
- Implement redundancy protocols like HSRP or VRRP for high availability.
- Document all VLANs, SVIs, and gateway IPs to avoid misconfigurations. By following these guidelines, core switches can efficiently manage internal traffic, provide a stable default gateway for access switches, and maintain connectivity to external networks.

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ip default gateway needed on L2 switch uplinked to L3 core switch

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Configuring a new core switch with VLANs

Configuring a new core switch with VLANs Ask Question Asked 15 years, 4 months ago Modified 15 years, 4 months ago

Should the gateway for devices on a VLAN be set to the L3 switch

The host gateways needs to be set to the gateway, which is the address on that network of the device that will route

Configure Initial Settings on a Switch using the Getting ...

This article provides instructions on how to use the Getting Started Wizard to configure the initial settings of your switch.

Initial Switch Configuration

Whether the configuration deployment of a switch is completed all at once or done in phases, the basic switch settings must first be

How to set the default gateway on a Cisco switch?

If your network has a layered architecture (e.g., core, distribution, access), you typically only configure the default

Guide to Basic Switch Configuration | Auvik

And overall, effective switch management is a detailed topic in its own right. Our goal here is to cover some switch

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HI TEAM, I have a 2 3850 core switch which is on HA and 2960x for my access switch, i requiried help on 2 things. 1)

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Best Practice for default gateway for vlans and layer 3 switch

Is it better to have the default gateway locally at each branch (the 2920 at each office) with a route to the core, or to

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