

Should the core switch be configured with DHCP



Overview

Solved: Configure dhcp on core switch Below are the dhcp configs for the core switch. "Service DHCP" is enabled. "IP Routing" is enabled on the core switch.

Key Takeaways

To configure DHCP on a core switch, enable the DHCP service, create VLAN interfaces (SVIs), define DHCP pools with IP ranges, default gateways, and optionally DNS, then ensure trunk links to access switches are properly configured. Step-by-Step Configuration

- Enable DHCP Service Enter global configuration mode and enable DHCP on the switch:

```
Switch# configure terminalSwitch(config)# service dhcp
```

- Create VLAN Interfaces (SVIs) Each VLAN that requires DHCP must have an SVI with an IP address:

```
Switch(config)# interface vlan 10Switch(config-if)# ip address 192.168.10.1 255.255.255.0Switch(config-if)# no shutdown
```

- Create DHCP Pools Define a DHCP pool for each VLAN:



```
Switch(config)# ip dhcp excluded-address 192.168.10.1
192.168.10.10Switch(config)# ip dhcp pool VLAN10Switch(dhcp-config)# network
192.168.10.0 255.255.255.0Switch(dhcp-config)# default-router
192.168.10.1Switch(dhcp-config)# dns-server 8.8.8.8Switch(dhcp-config)# exit
```

- Configure Trunk Links to Access Switches Ensure the links between the core and access switches are trunked and allow the VLANs:

```
Switch(config)# interface gigabitEthernet 1/0/1Switch(config-if)# switchport mode
trunkSwitch(config-if)# switchport trunk encapsulation dot1qSwitch(config-if)# no
shutdown
```

- Enable IP Routing If the core switch is Layer 3, enable IP routing to allow inter-VLAN communication:

```
Switch(config)# ip routing
```

- Verify DHCP Operation Use the following commands to check DHCP bindings and statistics:

```
Switch# show ip dhcp bindingSwitch# show ip dhcp poolSwitch# debug ip dhcp
server events
```

Best Practices

- Exclude static IP addresses from DHCP pools to avoid conflicts.
- Ensure SVIs are active (no shutdown) for each VLAN.
- Avoid overlapping DHCP pools if multiple servers exist.
- Use IP helper addresses if clients are on different VLANs and the DHCP server is centralized.
- Save the configuration:

```
Switch# copy running-config startup-config
```

Troubleshooting Tips

- If clients do not receive IP addresses, check that the VLAN exists on the core switch and is allowed on trunk links.
- Verify that service dhcp is enabled.
- Confirm that IP routing is enabled on the core switch and disabled on access switches if they are Layer 2.
- Use debug ip dhcp server events to monitor DHCP requests and responses in real time. By following these steps, the core switch can successfully provide DHCP services to clients connected through access switches across multiple VLANs, ensuring proper IP assignment and network connectivity .

Article Content

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issue Dynamic Host Control

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configure the interface Gi0/0 on the switch "access"

DHCP server on Switch or on Router

This way each port can only communicate with gateway (uplink port). With such
setup it does not matter whether

Design questions for DHCP Snooping

2) I understand that interswitch links need to be configured with "dhcp snooping
trust", do I need to configure this on

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How to Configure DHCP on Cisco Routers (With Command Examples)

However, Cisco Routers (and other devices such as ASA firewalls etc) can work also
as DHCP server thus replacing a dedicated

Configuring DHCP on Cisco Switches for Seamless Network Allocation

Familiarity with new switch firmware, management platforms, and security protocols
ensures that DHCP configurations remain

DHCP Pool from Switch VS Particular DHCP Server

I would like to gather your opinions about having DHCP server versus switch DHCP
POOL configuration. Currently

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