



Inter-VLAN Routing & SVIs



Keith Bogart

CCIE #4923



- ✉ kbogart@ine.com
- 🐦 [@keithbogart1](https://twitter.com/keithbogart1)
- in [linkedin.com/in/keith-bogart-2a75042](https://www.linkedin.com/in/keith-bogart-2a75042)

CCIE Routing & Switching



Course Overview

- ▶ Why We Need Routing In VLANs
- ▶ Router-On-A-Stick Theory
- ▶ Router-On-A-Stick Configuration And Monitoring
- ▶ Difference Between VLANs And SVIs
- ▶ Configuring SVIs For Inter-VLAN Routing



Why We Need Routing In VLANs



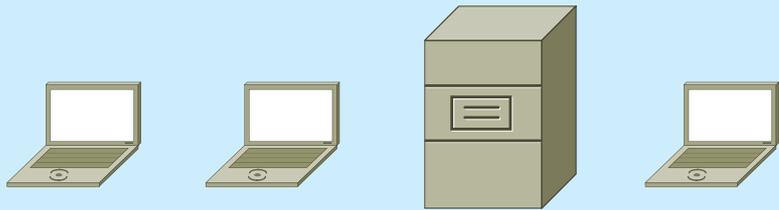
Topic Overview

- ▶ A Brief Overview Of VLANs
- ▶ IP Addresses And ARP In VLANs

VLAN Overview

- ▷ VLAN = Broadcast Domain
- ▷ Each VLAN is assigned a unique, numerical identifier
(and optional, descriptive name)
- ▷ VLANs must be assigned to switchports

IP Addresses & ARP In VLANs



HR



Payroll



Router-On-A-Stick Theory



Topic Overview

- ▶ Introducing A Router To A VLAN
- ▶ Following The Frame

Introducing A Router To A VLAN

- ▶ For a router to route between VLANs the following must be true:
 - ▶ Router must have a unique IP addresses appropriate for each VLAN subnet
 - ▶ Router may be required to support 802.1q VLAN tagging
 - ▶ Hosts must become aware of the router and its IP Address



Router-On-A-Stick Configuration And Monitoring



Topic Overview

- ▶ Configuring The Router
- ▶ Monitoring Routing Between VLANs



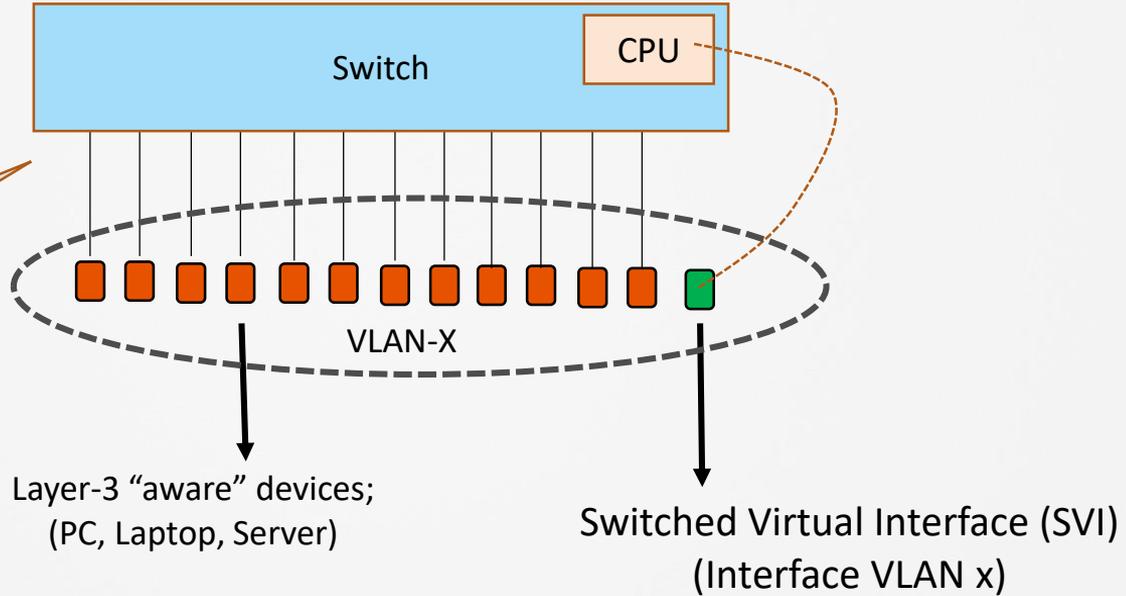
Switched Virtual Interfaces



Topic Overview

- ▶ Using SVIs In The Management Plane
- ▶ Using SVIs In The Data Plane

Switched Virtual Interfaces



How do I ping the switch...or Telnet to it?



Configuring Switched Virtual Interfaces



Topic Overview

- ▶ Configuring SVIs For IP Routing
- ▶ Monitoring SVI Routing Effectiveness

A person is seen from behind, sitting on a boat deck. The background features a large window with a grid pattern, looking out onto a bright, hazy outdoor scene. The entire image is covered with a warm, orange-toned filter. The text "Thank you!!" is overlaid in white on the left side of the image.

Thank you!!