

# Building and Troubleshooting a Network with ICND1 Skills for Cisco CCNA 200-125/100-105

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REVIEW AND LAB NETWORK DRAWING



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NETWORK ENGINEER

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# Module Goals



**Review OSI model protocols and concepts**

**Describe ICND1 lab network**

**Label ICND1 lab network drawing**



## Physical

CAT5 RJ45	Single Mode Multi Mode	Hub Collision Domain
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## Data Link

MAC Address CSMA/CD FCS 802.11	Ethernet Port Security Broadcast Domain VLAN Tag	MTU 802.1q Native VLAN	PPP LLDP	DTP ISL	Frame VLAN Switch CDP
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## Network

ICMP EIGRP No switchport Subnet Mask	IPv6 Link State Layer 3 Switch IP	TTL Router Packet SVI	LSDb RIP	OSPF IPv6 NDP Default Gateway IP Address
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## Transport

Segment	UDP	TCP	Port Number
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## Application

TFTP	BGP	SSH
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# TCP/IP and OSI Model

	OSI
7	Application
6	Presentation
5	Session
4	Transport
3	Network
2	Data Link
1	Physical



# TCP/IP and OSI Model

TCP/IP	OSI
Application	Application
	Presentation
	Session
Transport	Transport
Internet	Network
Network Interface	Data Link
	Physical



# TCP/IP and OSI Model

TCP/IP	OSI	Datagram
Application	Application	--
	Presentation	--
	Session	--
Transport	Transport	Segment
Internet	Network	Packet
Network Interface	Data Link	Frame
	Physical	Signal



# TCP/IP and OSI Model

TCP/IP	OSI	Datagram
Application	Application	--
	Presentation	--
	Session	--
Transport	Transport	Segment
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Network Interface	Data Link	Frame
	Physical	Signal



# TCP/IP and OSI Model

TCP/IP	OSI	Datagram	Device
Application	Application	--	Firewall
	Presentation	--	--
	Session	--	--
Transport	Transport	Segment	Firewall
Internet	Network	Packet	Router
Network Interface	Data Link	Frame	Switch
	Physical	Signal	Hub





# TCP/IP and OSI Model

TCP/IP	OSI
Application	Application
	Presentation
	Session
Transport	Transport
Internet	Network
Network Interface	Data Link
	Physical



# TCP/IP and OSI Model

TCP/IP	OSI	Protocols
Application	Application	
	Presentation	
	Session	
Transport	Transport	
Internet	Network	
Network Interface	Data Link	
	Physical	



# TCP/IP and OSI Model

TCP/IP	OSI	Protocols
Application	Application	HTTP, HTTPS, Telnet, SSH, FTP, TFTP, SFTP, SNMP, SMTP, POP3, IMAP
	Presentation	
	Session	
Transport	Transport	
Internet	Network	
Network Interface	Data Link	
	Physical	



# TCP/IP and OSI Model

TCP/IP	OSI	Protocols
Application	Application	HTTP, HTTPS, Telnet, SSH, FTP, TFTP, SFTP, SNMP, SMTP, POP3, IMAP
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	Session	
Transport	Transport	TCP and UDP
Internet	Network	
Network Interface	Data Link	
	Physical	



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	Session	
Transport	Transport	TCP and UDP
Internet	Network	IP , ICMP
Network Interface	Data Link	
	Physical	



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	Session	
Transport	Transport	TCP and UDP
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Network Interface	Data Link	Ethernet , PPP , 802.11
	Physical	



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Network Interface	Data Link	Ethernet , PPP , 802.11
	Physical	Wires , Glass , RF/Photons



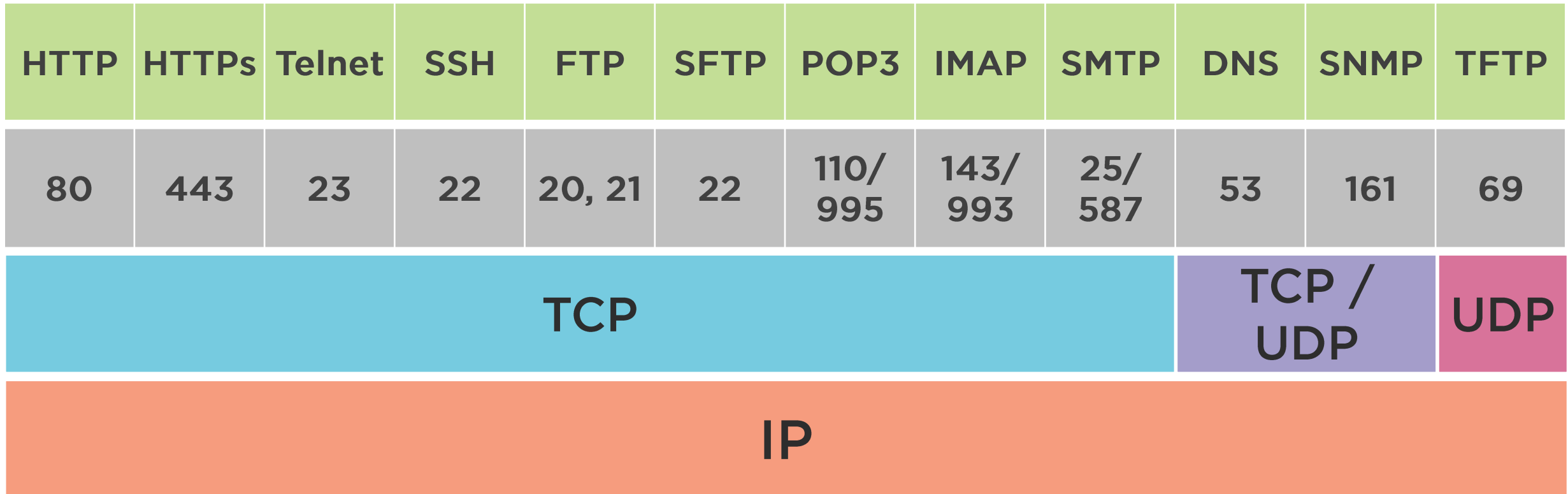
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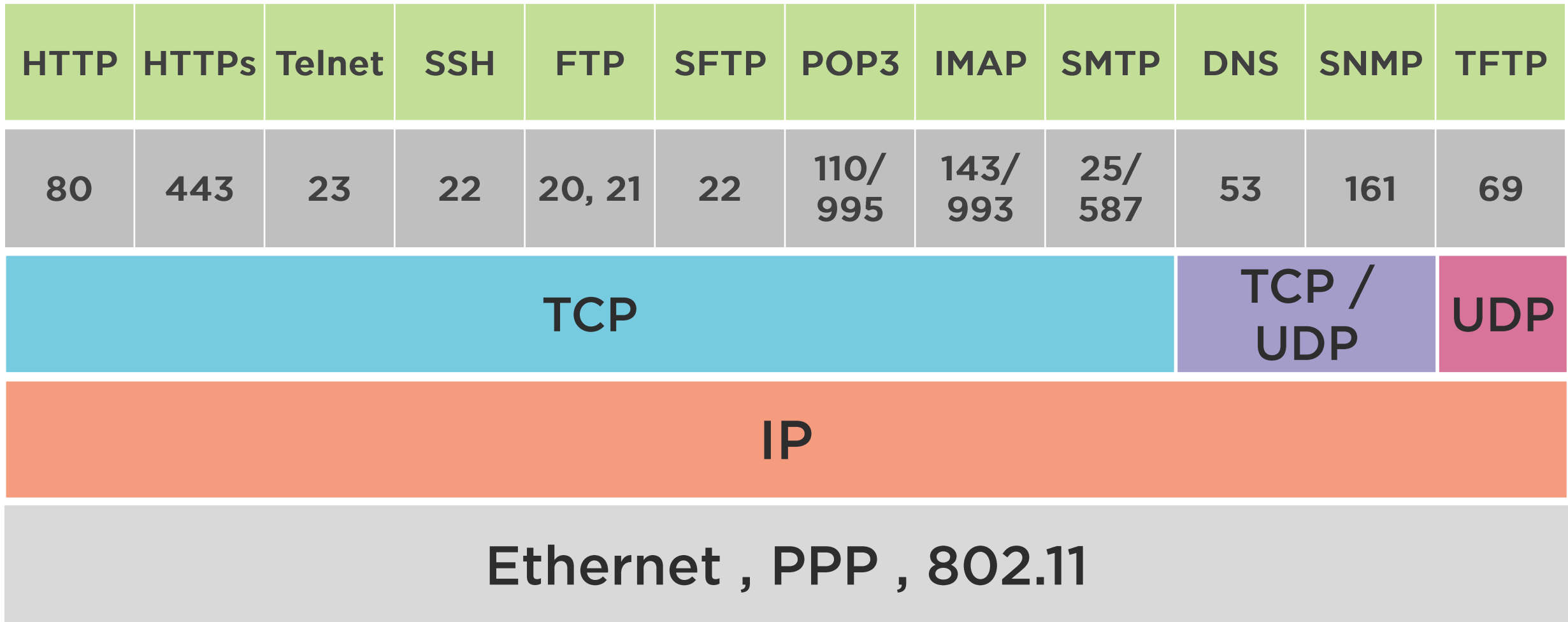




# Protocol Hierarchy



# Protocol Hierarchy



# Lab

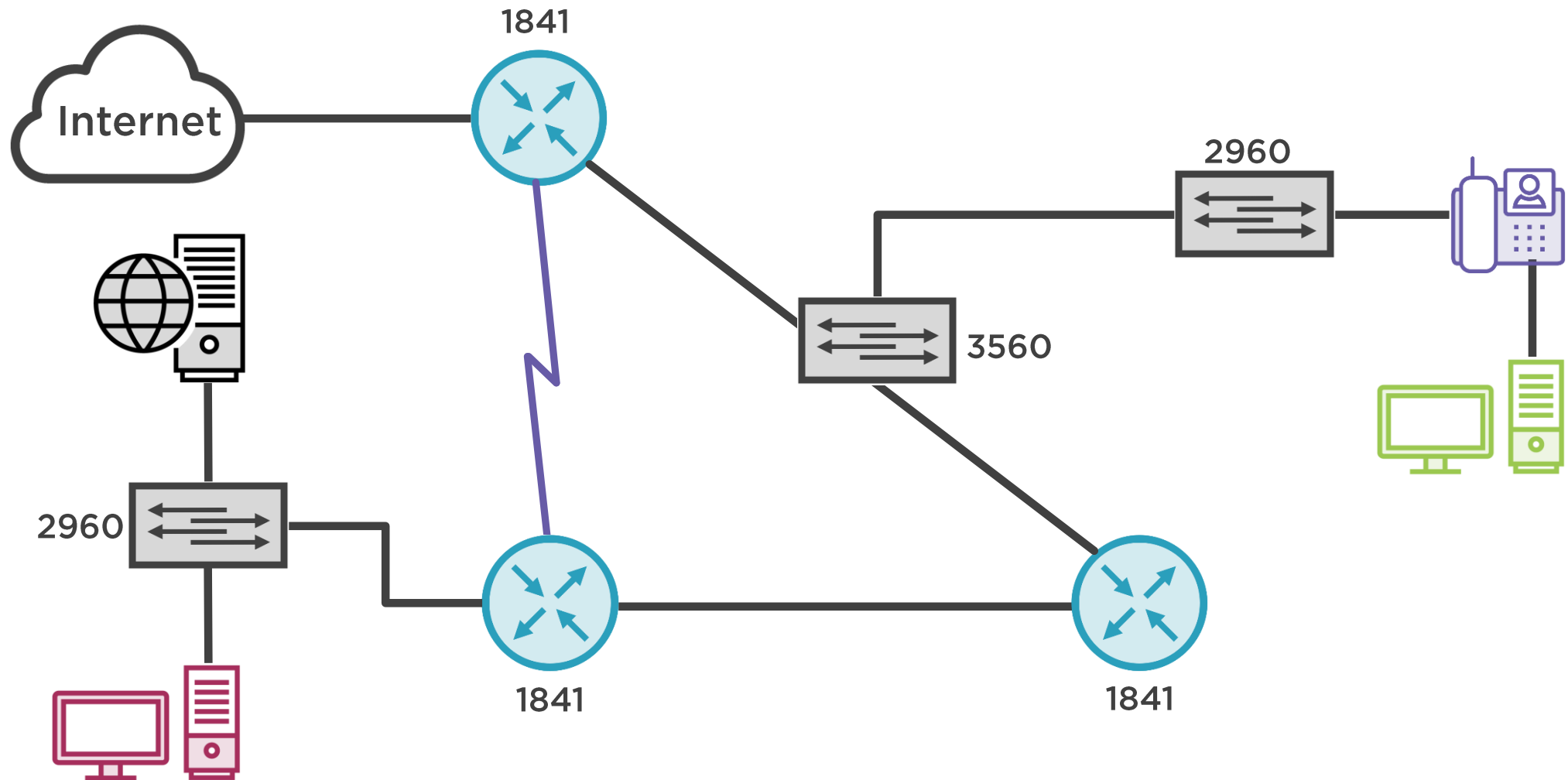




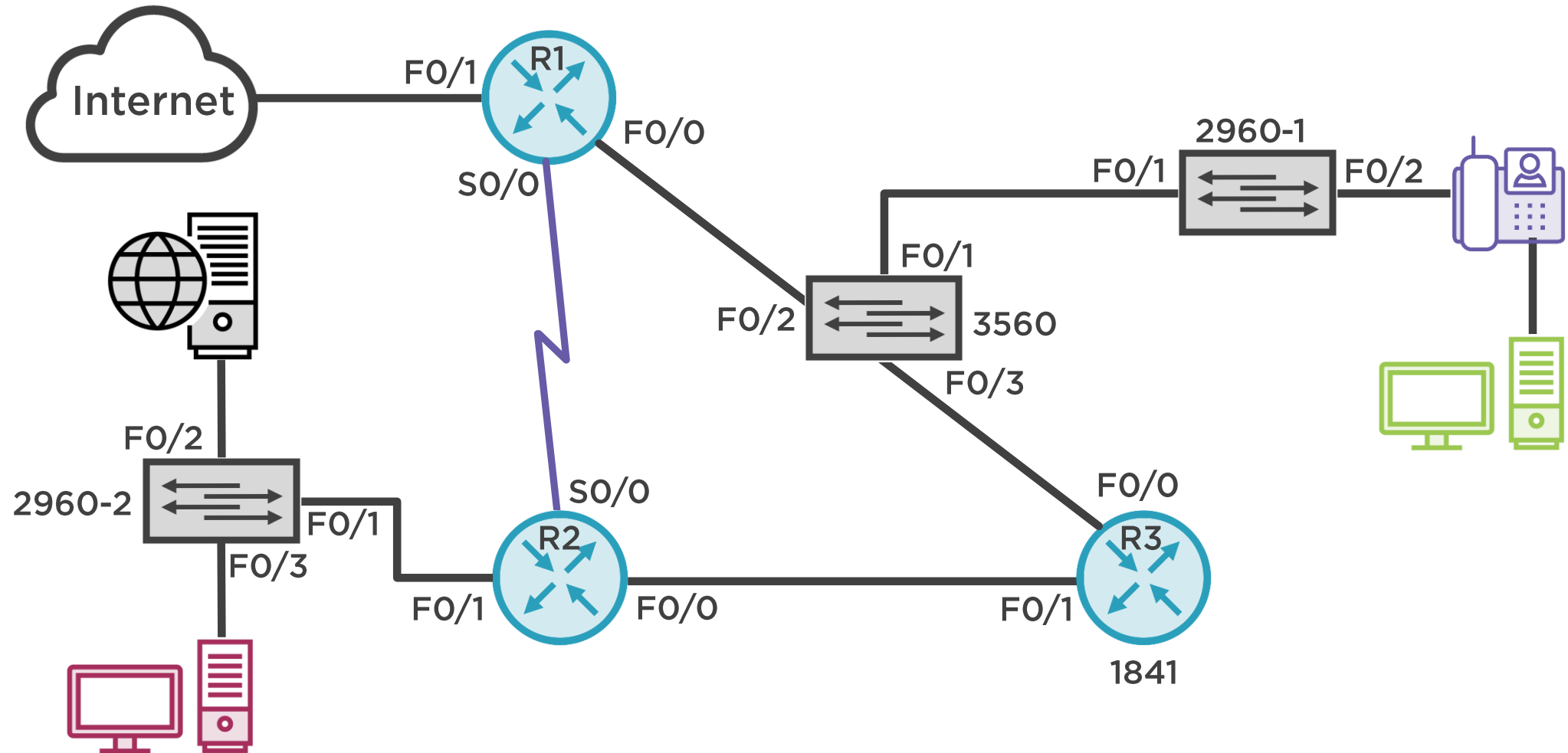
## CCENT Review Topics

- IP addressing
- Static/dynamic routing
- Ethernet, VLANs, trunks, port security
- Serial link
- Static and dynamic NAT
- Access control lists
- Web server
- Voice VLAN and PC

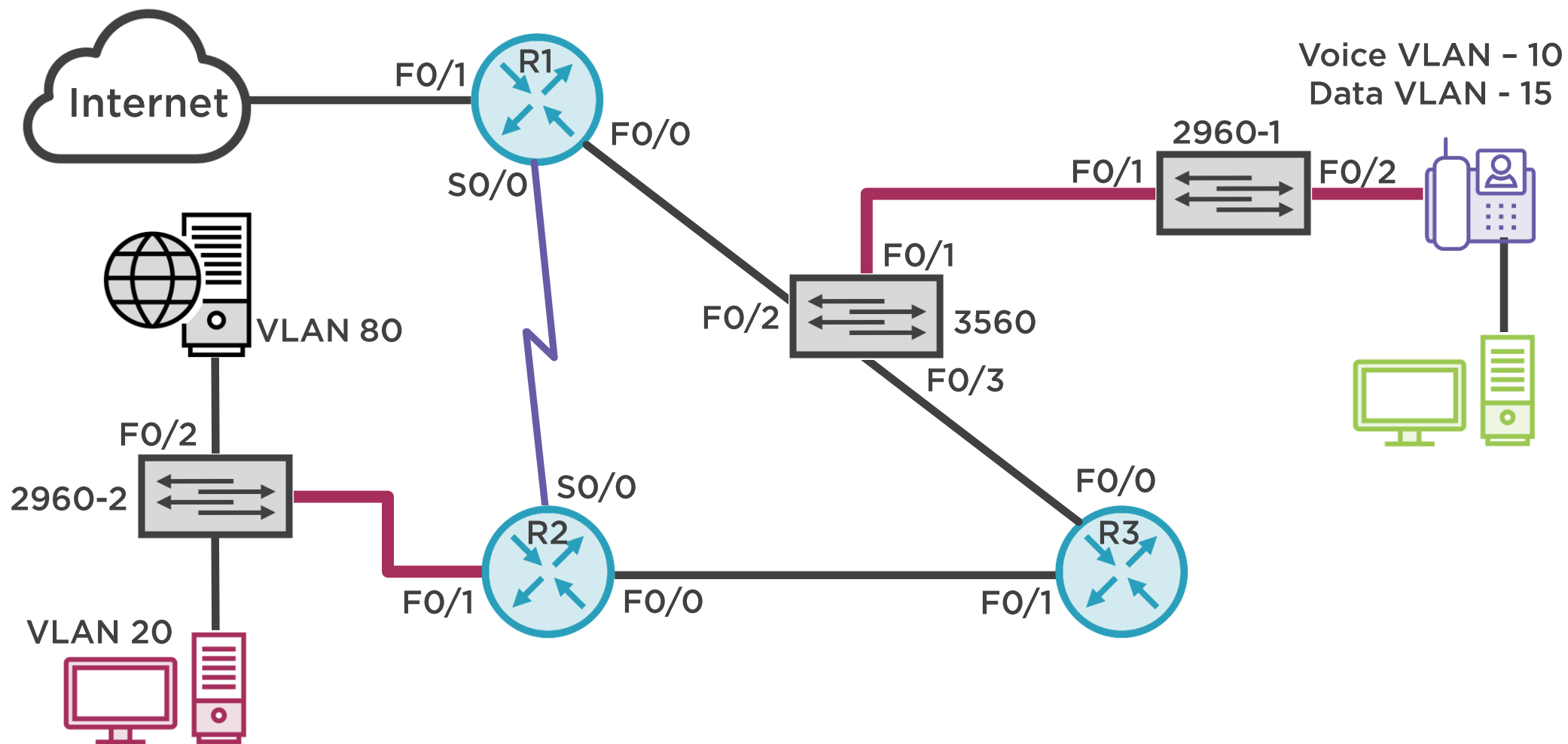
# Lab Network



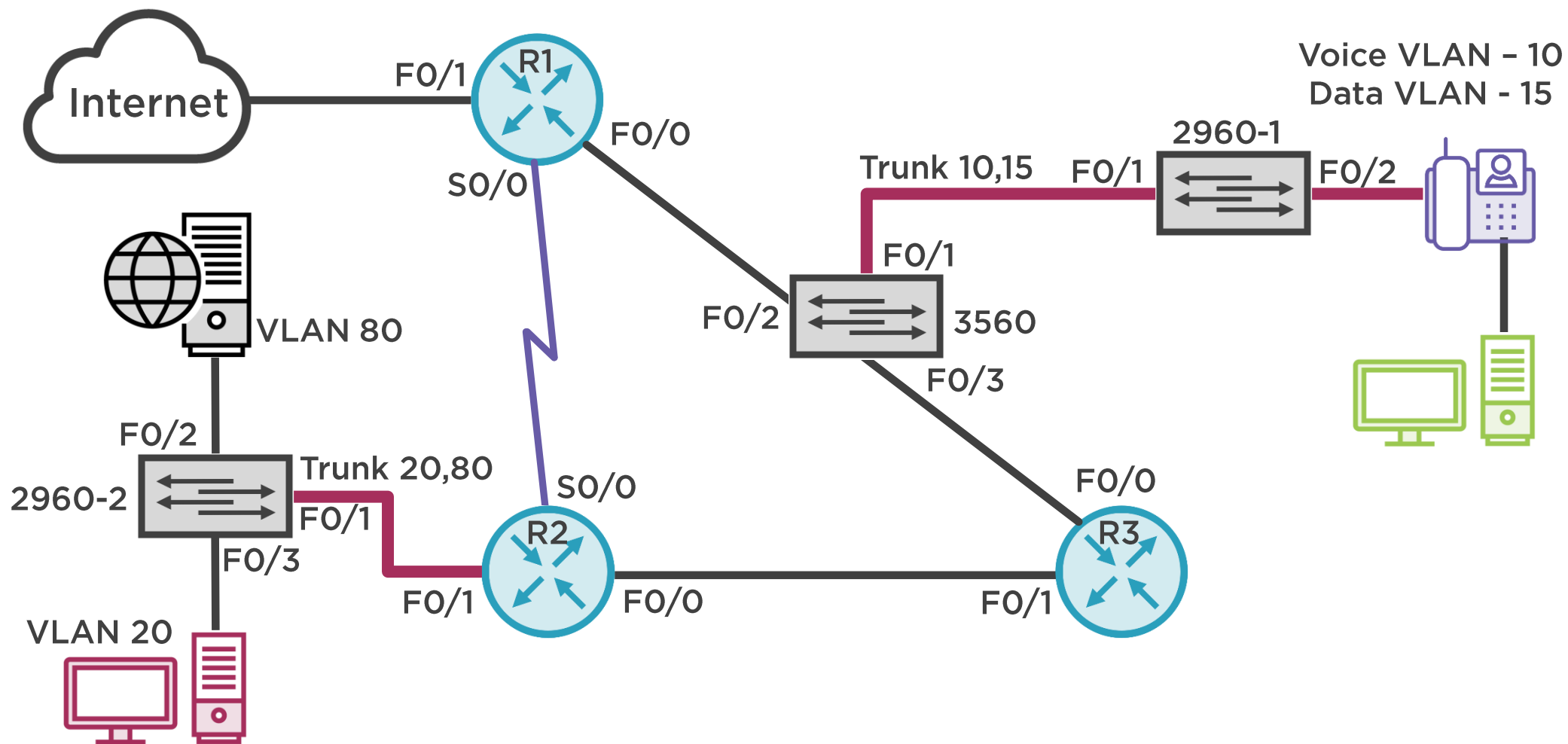
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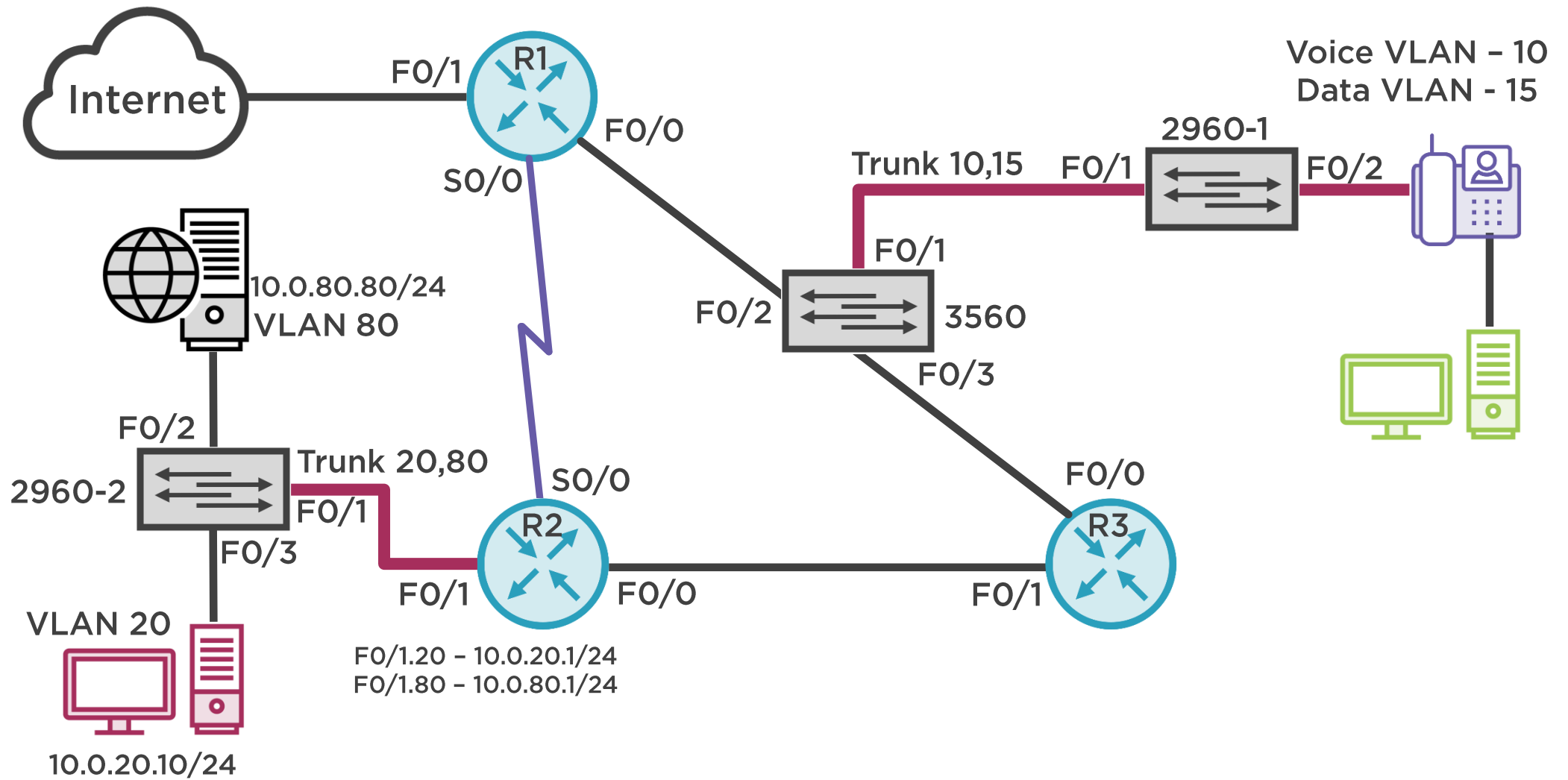


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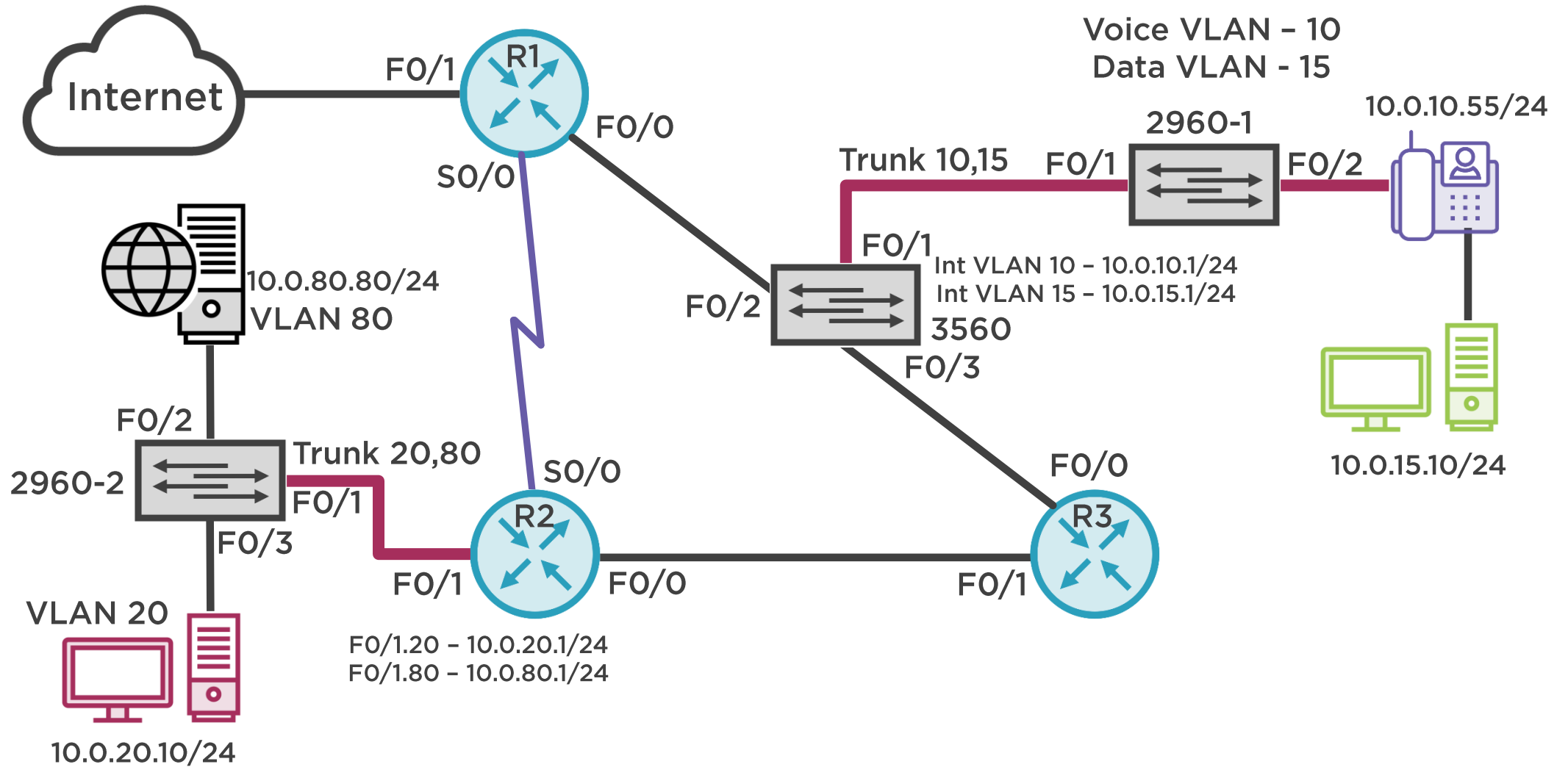




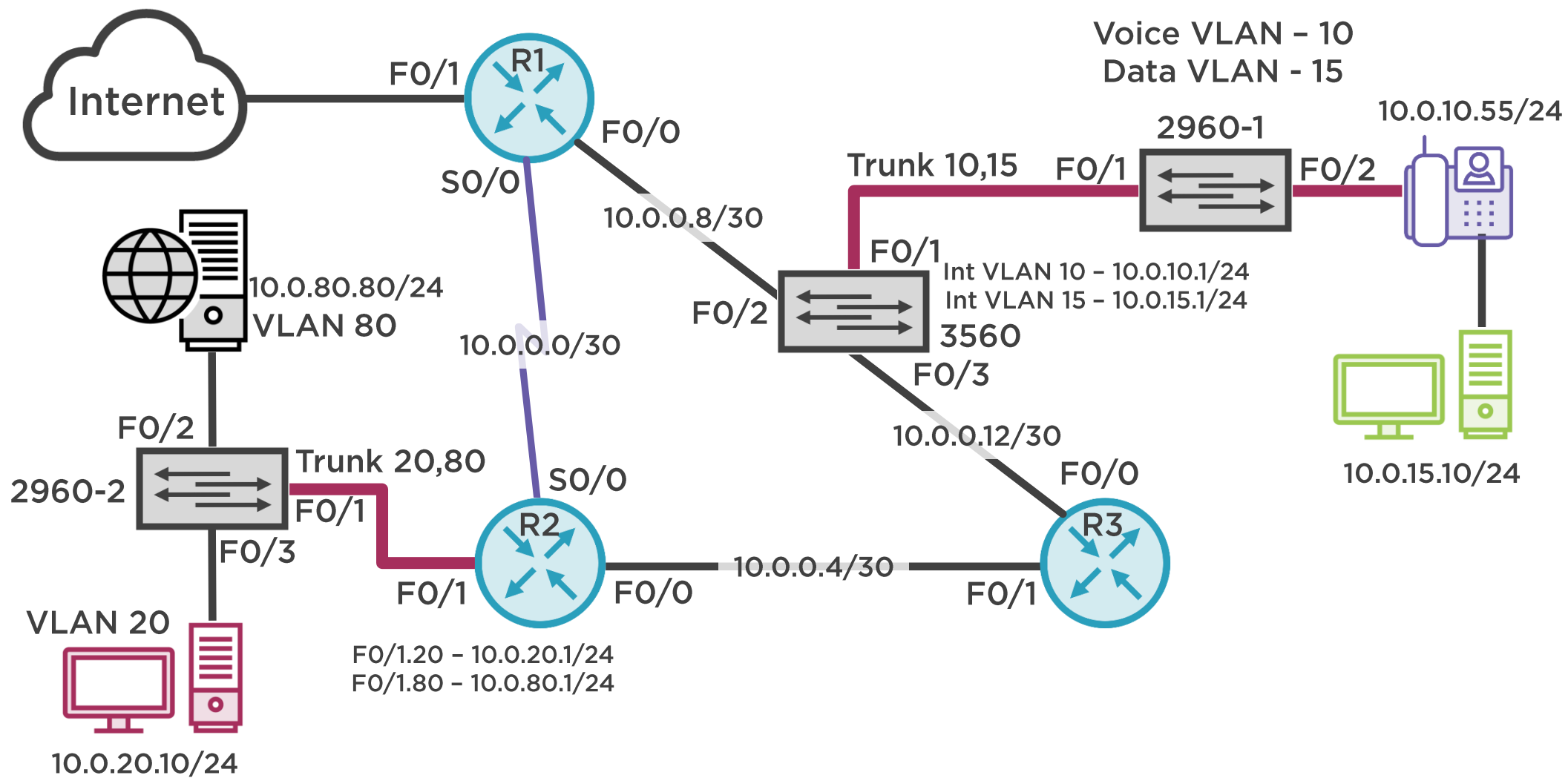
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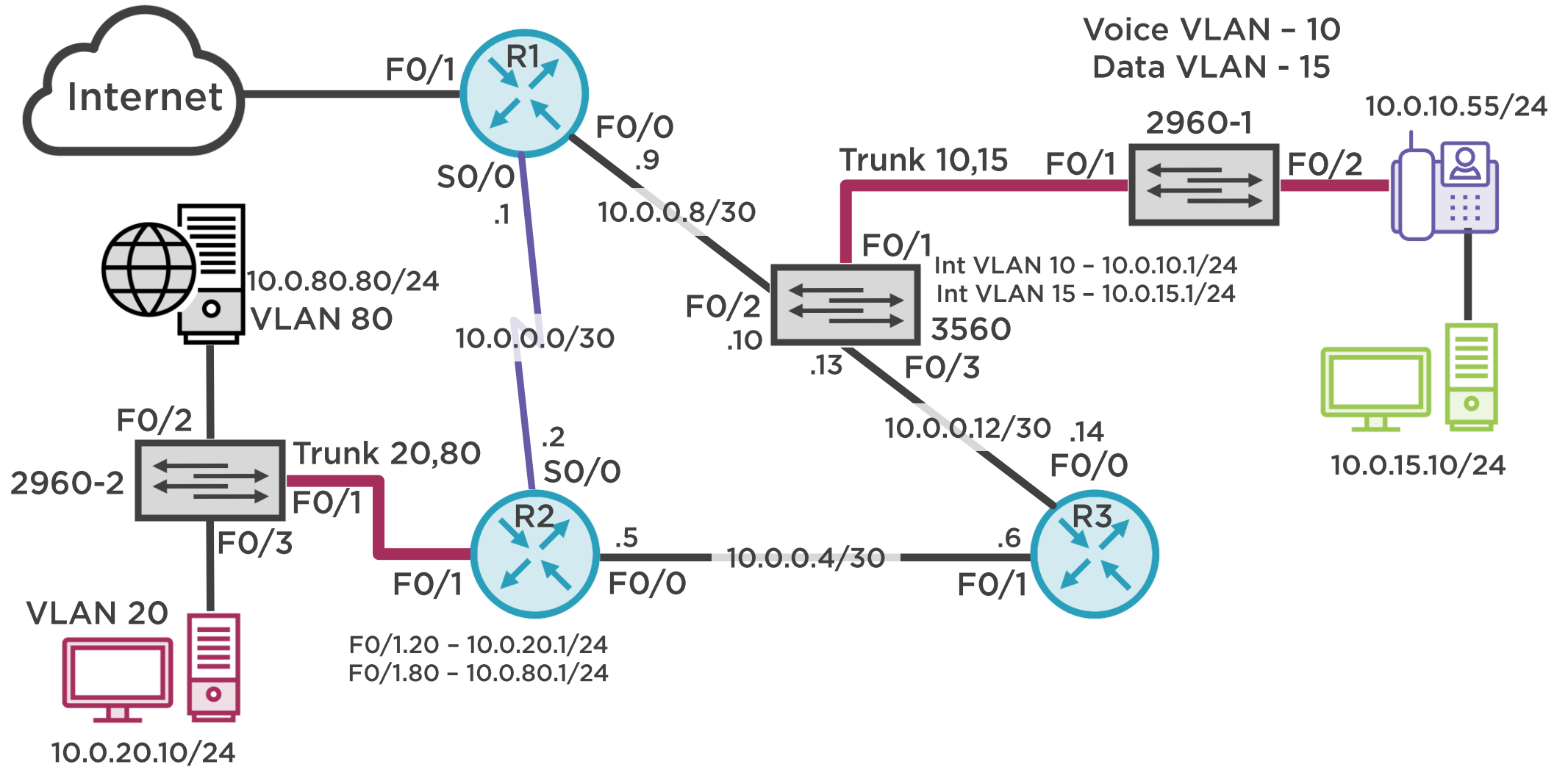
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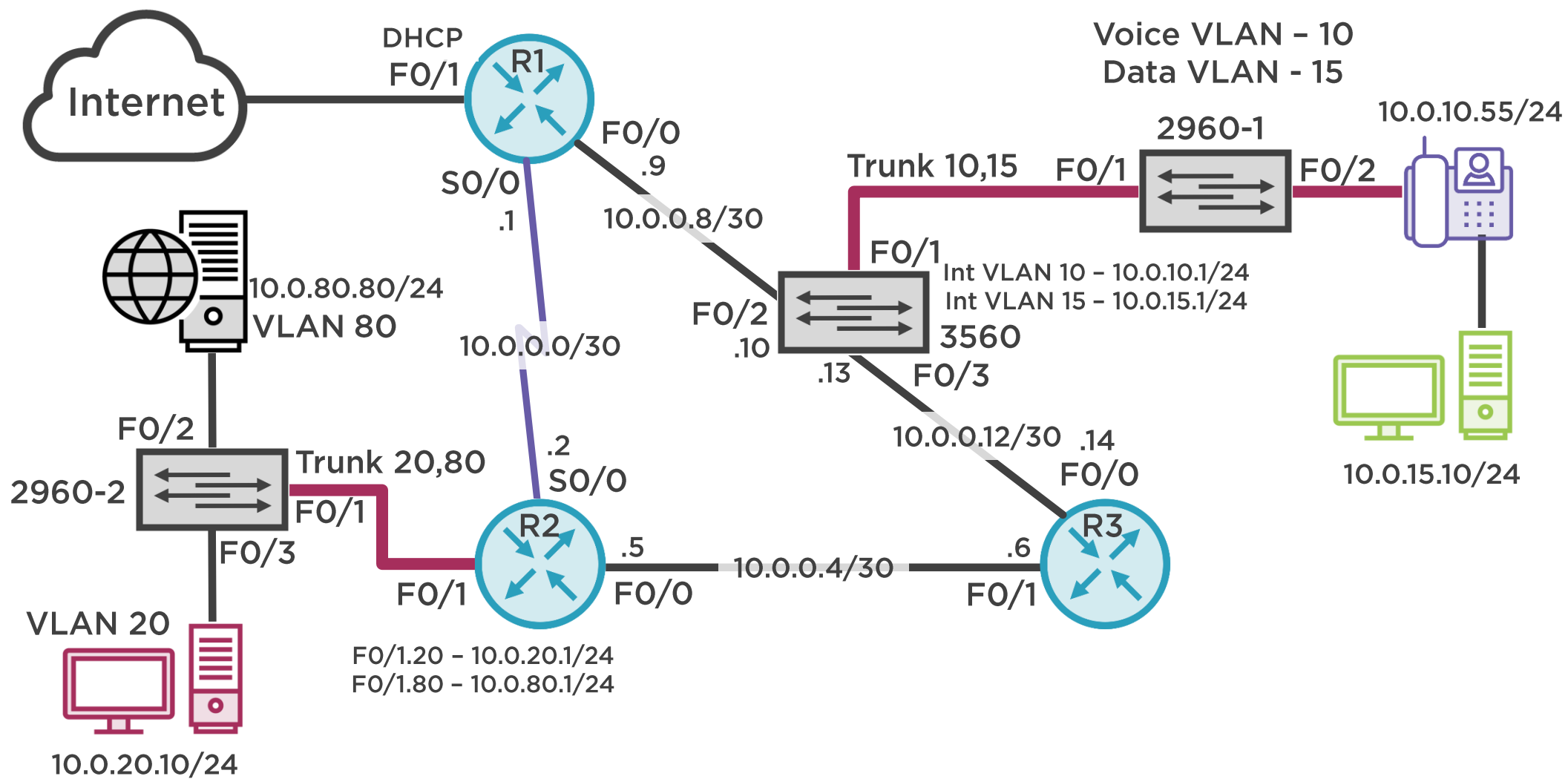
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# Summary



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