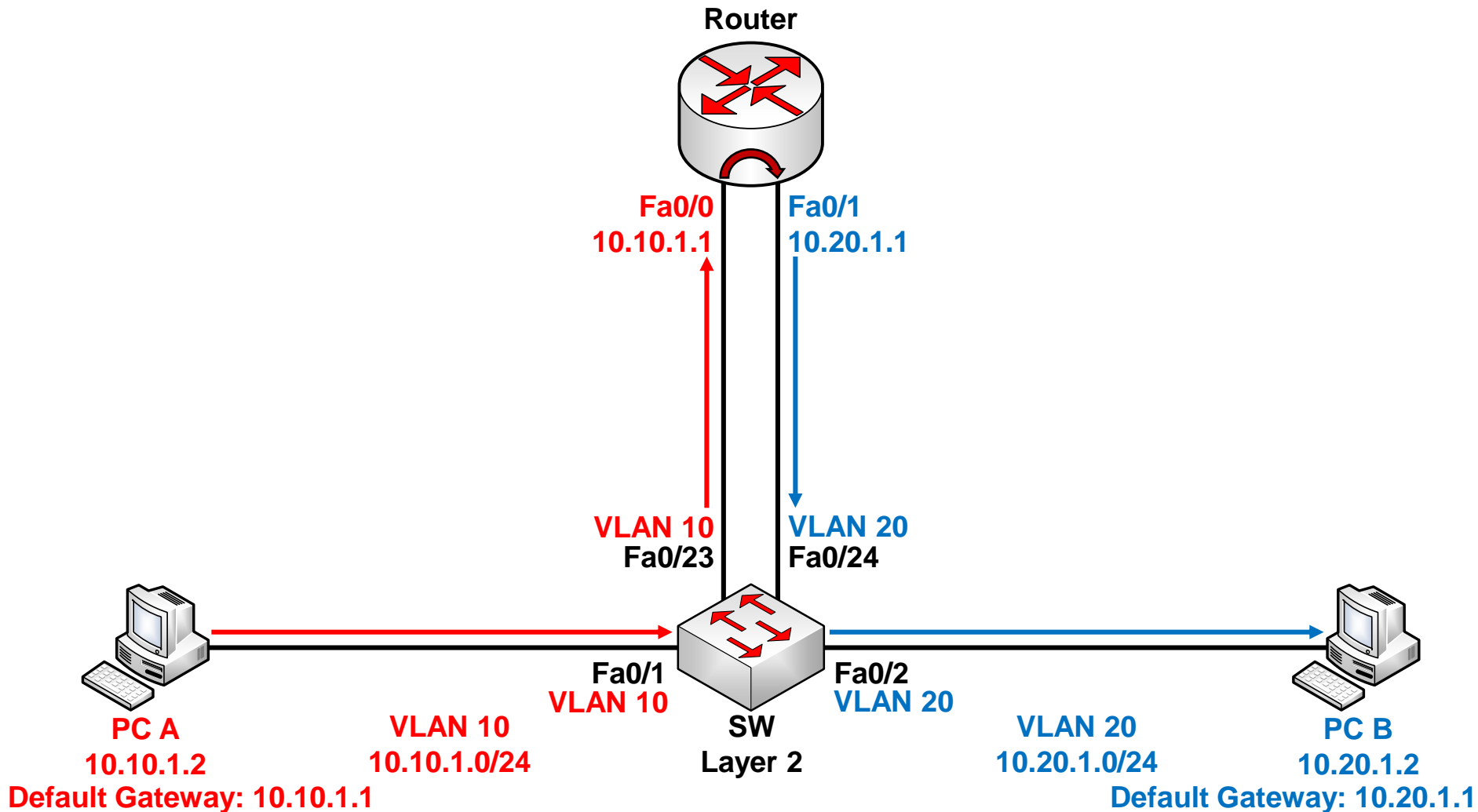




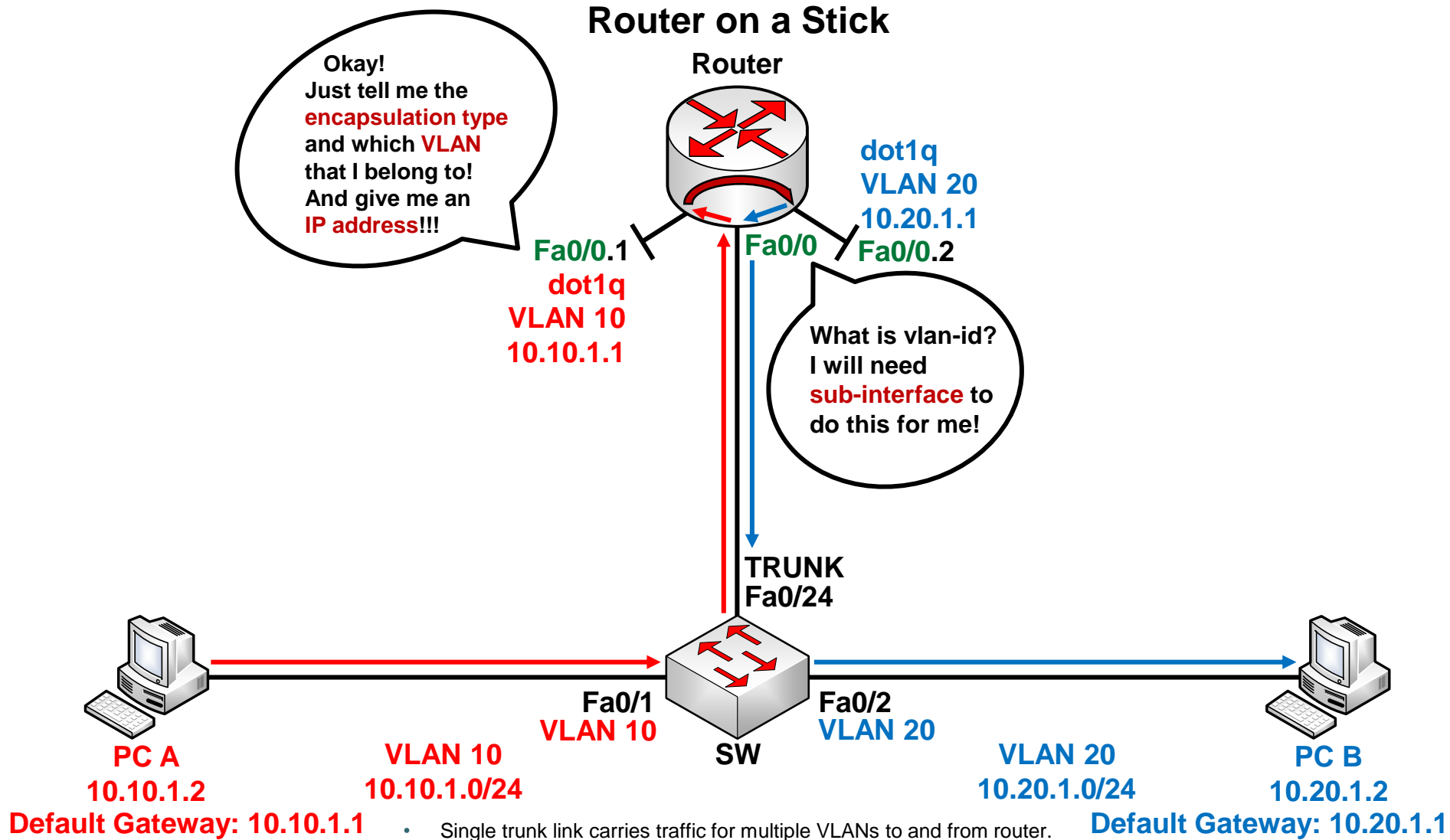
Implementing Inter-VLAN Routing

Describing Routing Between VLANs

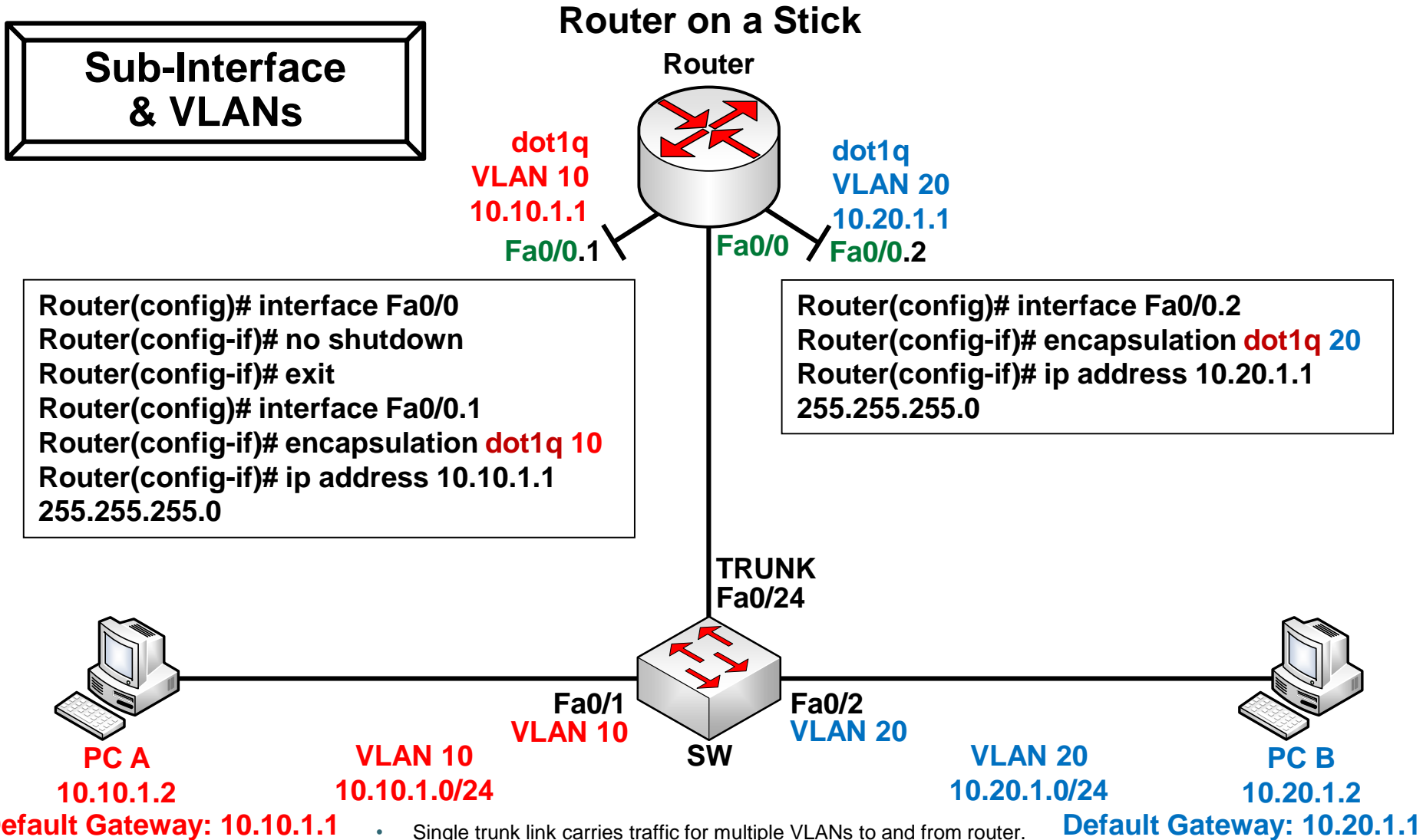
Inter-VLAN Routing with External Router 802.1Q Trunk Link



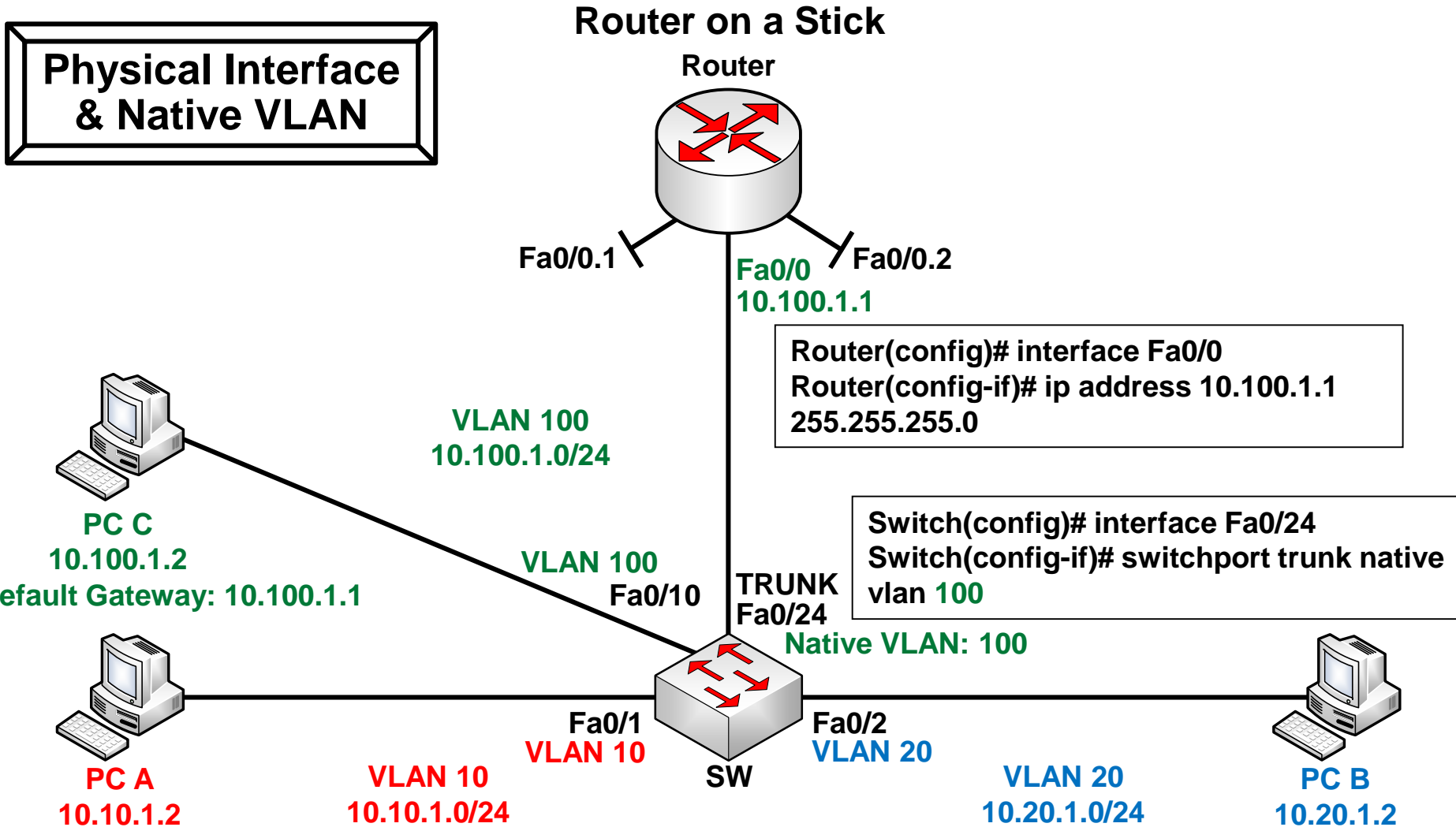
Inter-VLAN Routing with External Router 802.1Q Trunk Link (Cont.)



Inter-VLAN Routing with External Router 802.1Q Trunk Link (Cont.)

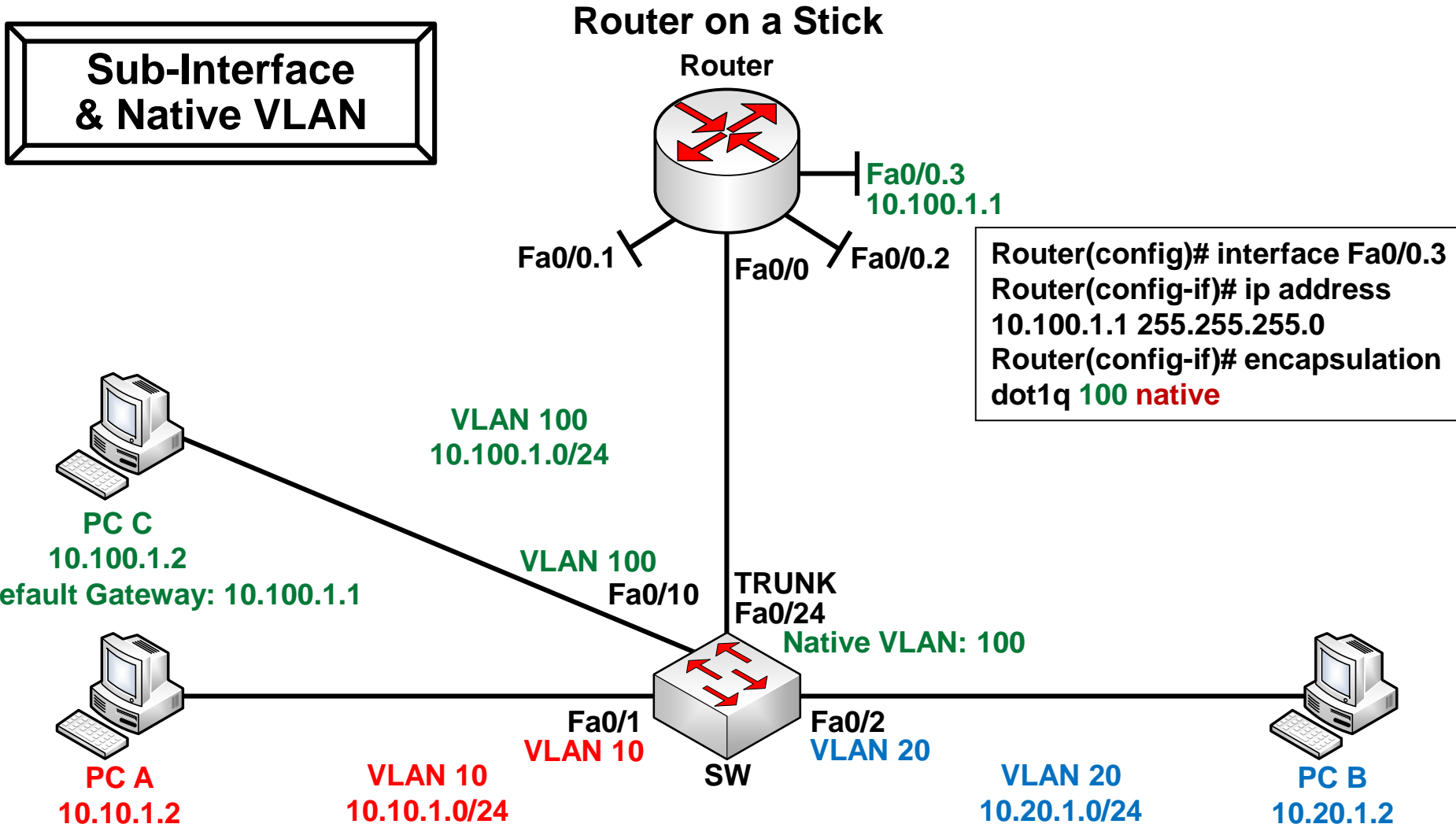


Inter-VLAN Routing with External Router 802.1Q Trunk Link (Cont.)



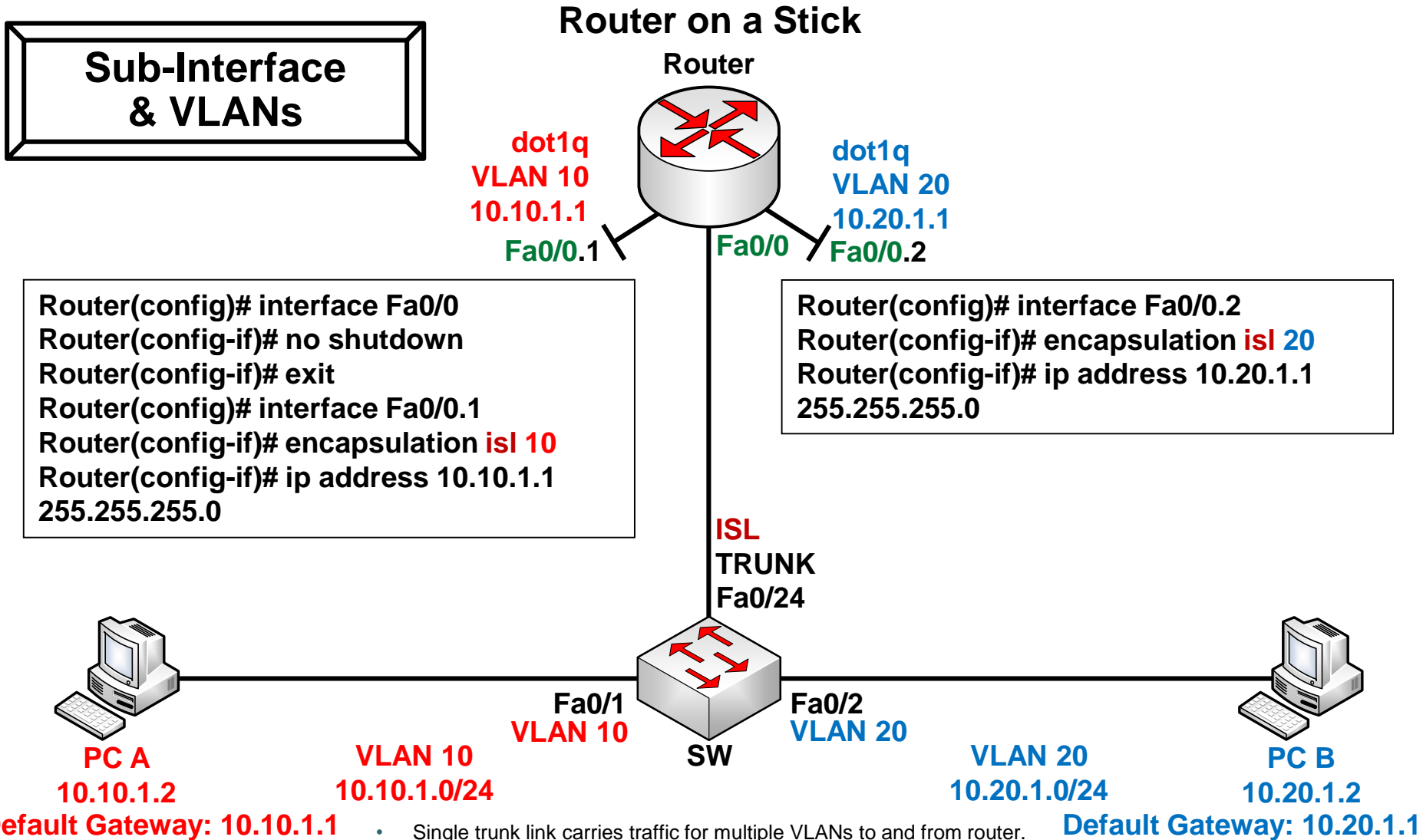
- Single trunk link carries traffic for multiple VLANs to and from router.

Inter-VLAN Routing with External Router 802.1Q Trunk Link (Cont.)



- Single trunk link carries traffic for multiple VLANs to and from router.

Inter-VLAN Routing with External Router ISL Trunk Link



Verifying the Inter-VLAN Routing Configuration

```
Router#show vlans
```

- Displays the current IP configuration per VLAN

```
Router#show ip route
```

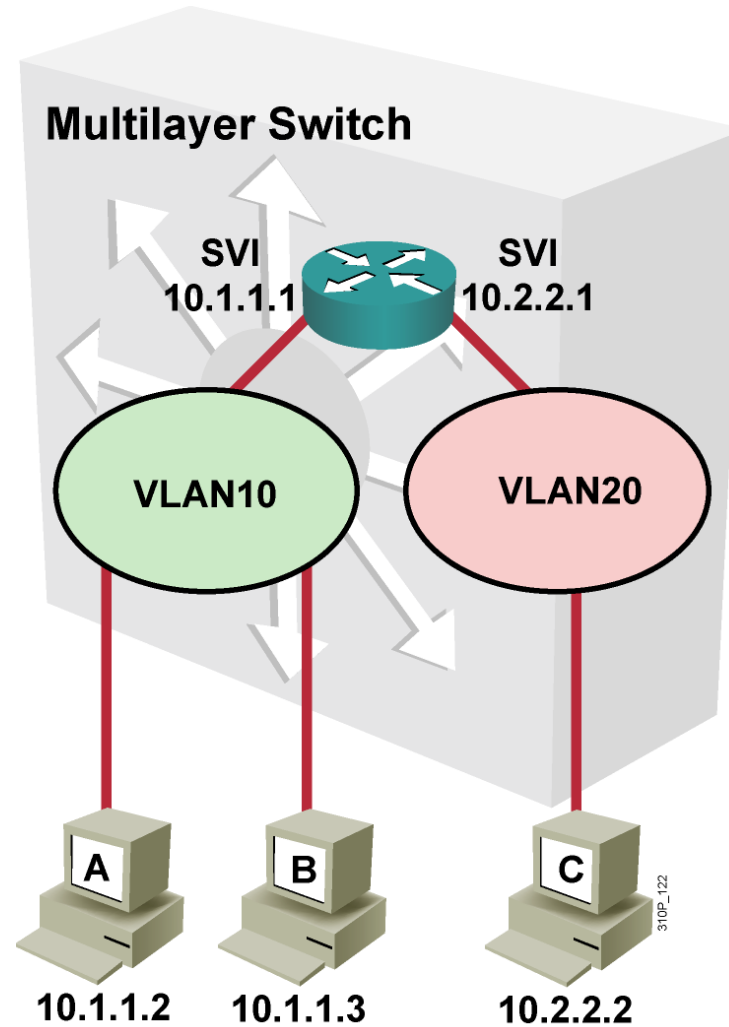
- Displays IP route table information

```
Router#show ip interface brief
```

- Displays IP address on interfaces and current state of interface

Layer 3 SVI

SVI (Switched Virtual Interface)



Configuring Inter-VLAN Routing Through an SVI

Step 1: Configure IP routing.

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

Step 2: Create an SVI interface.

```
Switch(config) #interface vlan vlan-id
```

Step 3: Assign an IP address to the SVI.

```
Switch(config-if) #ip address ip-address mask
```

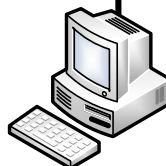
SVI on a Multilayer Switch

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

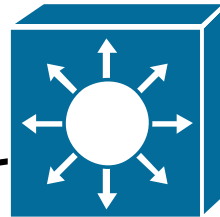
Interface VLAN 10
10.10.1.1/24

```
Switch(config)# interface vlan 10  
Switch(config-if)# ip address  
10.10.1.1 255.255.255.0  
Switch(config-if)# no shutdown
```

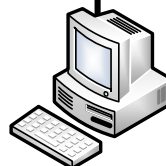
Fa0/1
VLAN 10



PC A
10.10.1.2



Fa0/2
VLAN 20



PC B
10.20.1.2

Interface VLAN 20
10.20.1.1/24

```
Switch(config)# interface vlan 20  
Switch(config-if)# ip address  
10.20.1.1 255.255.255.0  
Switch(config-if)# no shutdown
```

Default Gateway: 10.10.1.1 **Default Gateway: 10.20.1.1**

Routed Ports on a Multilayer Switch

- A routed port is a physical port that acts like a port on a router.
- A routed port is not associated with a particular VLAN.
- A routed port behaves like a regular router interface, except that it does not support VLAN subinterfaces.
- Routed ports can be configured with a Layer 3 routing protocol.
- A routed port is a Layer 3 interface only and does not support Layer 2 protocols, such as DTP and STP.

Routed Ports on a Multilayer Switch (Cont.)

