

RIVO MULTITRADE OPTICAL SYSTEMS

Two machines connected to VRRP on one switch



Overview

Chapter: Configuring VRRP In a topology where multiple VRRP groups are configured on a router interface, the interface can act as a master for VRRP Design.

Key Takeaways

Two devices on a single switch can use VRRP to provide a redundant default gateway, with one device as master and the other as backup.

VRRP Overview

VRRP allows multiple routers or Layer 3 devices to share a virtual IP address that acts as the default gateway for hosts on a LAN. One device is elected as the Master, handling all traffic for the virtual IP, while the other device remains in Backup mode, ready to take over if the master fails . This ensures high availability without requiring hosts to change their default gateway configuration .

Basic Configuration Steps

- Assign IP addresses to the physical interfaces of both devices connected to the switch.
- Configure the VRRP group with a virtual IP address that will serve as the default gateway for hosts. Both devices share the same VRID (Virtual Router ID).

- Set priorities: The device with the higher priority becomes the master. The backup device has a lower priority. Preemption can be enabled so that the master regains control when it comes back online .
 - Enable VRRP on the interfaces connected to the switch. Ensure the switch allows VRRP multicast packets to pass through (Layer 2 broadcast domain).
 - Verify operation: Use VRRP status commands to confirm which device is master and which is backup. Test failover by shutting down the master interface and observing the backup take over the virtual IP .
- Example (Cisco-like syntax)

Device A (Master):

```
interface vlan 10 ip address 192.168.10.2 255.255.255.0 vrrp 10 ip 192.168.10.1 vrrp 10 priority 110 vrrp 10 preempt
```

Device B (Backup):

```
interface vlan 10 ip address 192.168.10.3 255.255.255.0 vrrp 10 ip 192.168.10.1 vrrp 10 priority 100 vrrp 10 preempt
```

In this setup, hosts use 192.168.10.1 as their default gateway. If Device A fails, Device B automatically becomes the master and continues forwarding traffic .

Considerations

- Single switch limitation: Both devices are on the same Layer 2 domain, so a switch failure will affect both devices. For full redundancy, consider connecting devices to separate switches with VRRP or MLAG/stacking support .
- Timers and advertisement intervals: Adjust VRRP advertisement intervals to control failover speed. Default is 1 second; increasing it can reduce unnecessary failovers.
- Preemption delay: Adding a preemption delay prevents flapping when the master comes back online .
- Monitoring: Use ping or VRRP status commands to monitor the health of the master and backup devices.

By following these steps, two machines connected to a single switch can provide a highly available default gateway for LAN hosts using VRRP.

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