

Dual Hot Backup of Core Switches



AI Overview

Dual-machine hot backup ensures continuous network availability by deploying two core switches in an active-standby configuration with automatic failover and split-brain prevention.

Overview A dual-machine hot backup setup involves two core switches configured in an active-standby (hot standby) mode, where one switch actively handles traffic while the other remains synchronized and ready to take over immediately if the primary fails. This architecture is critical for environments requiring high availability, such as industrial networks, data centers, or smart manufacturing facilities.

Key Components and Mechanisms

- Active-Standby Architecture:** The primary switch handles all traffic, while the standby switch mirrors configuration, routing tables, and VLAN information. Failover occurs automatically within milliseconds to prevent service interruption.
- Floating IP Address:** Both switches share a floating IP that clients use as the default gateway. The active switch holds the IP, and the standby takes over if the primary fails, ensuring seamless connectivity.
- Split-Brain Prevention:** To avoid both switches assuming the active role simultaneously, the system monitors connectivity with a gateway and the floating IP status. Only the switch with verified network connectivity and proper IP ownership becomes the master.
- Redundancy Protocols:** Protocols like ERPS (Ethernet Ring Protection Switching) or VRRP (Virtual Router Redundancy Protocol) are commonly used to manage failover and maintain sub-50ms recovery times.
- Traffic Segmentation and QoS:** VLANs can isolate different types of traffic (e.g., control vs. vision data), and QoS ensures critical traffic receives priority bandwidth during failover.

Implementation Best Practices

- Synchronized Configuration:** Ensure both switches have identical firmware, VLANs, ACLs, and routing configurations.
- Health Monitoring:** Use built-in monitoring or management platforms to track switch status, link quality, and potential failures. Predictive alerts can prevent downtime.
- Regular...**

Article Content

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The application discloses a method, a system, equipment and a medium for switching dual-computer hot standby, and belongs to the technical field of dual-computer hot standby.

Hot Standby in PLC Systems: Architecture, Working, and Benefits

Hot standby PLC systems are the best in the business when it comes to reliability in industrial control. They offer data integrity, quick switchovers, flexible maintenance, and operations

Application Scenarios for Dual-Device Backup

Dual-device ARP hot backup enables the master device to back up the ARP entries at the control and forwarding layers to the backup device in real time. When the backup device switches to a master

FS Community

Hier sollte eine Beschreibung angezeigt werden, diese Seite lässt dies jedoch nicht zu.

Features and Applications of Core Switches

Core Switches typically employ redundant designs, such as dual power supplies and dual engines, ensuring quick switchover and stable network

Dual-Device ND Hot Backup

Networking Description Dual-device ND hot backup enables the master device to back up ND entries at the control and forwarding layers to the backup device in real time. When the backup device

Fortifying Your Network with Cisco Switch Power Redundancy Setup: Dual ...

Ensure high network availability with a complete Cisco switch power redundancy setup guide. Learn dual PSU deployment, StackPower, PoE budgeting, and best practices.

Detailed explanation of Huawei firewall's dual-system hot backup ...

As shown in the figure, the dual-system hot backup function of Huawei firewalls is to provide a backup link (heartbeat line), negotiate the active and standby status between the firewalls, backup session

The Dual-system Hot Backup (master/slave) Fails When the Save

1. Two firewalls of the same model implement dual-system hot backup in master/slave mode. They are connected to a core switch for traffic diversion. 2. After a simulated shutdown, the

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The invention discloses a hot standby method for implementing a dual-machine hot standby system.

How to configure redundant core switch in collapsed core?

I am currently working with IOL Cisco devices in a virtual lab and have a collapsed core design. I have 2 core/distribution switches. On core 1 I have configured SVI for each VLAN. I want a second core

Hot backup

Hot backup is a device-level HA solution. It relies on Remote Backup Management (RBM) to enable two devices to back up each other dynamically to ensure user

Cisco Nexus 9000 Series NX-OS High Availability and Redundancy

Cisco NX-OS provides switching fabric availability through redundant switch fabric module implementation. You can configure a single Cisco Nexus 9504, 9508, or 9516 chassis with

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Schneider 140CPU67060 dual-machine hot standby

Schneider Electric's 140CPU67060 dual hot-standby control system delivers robust fault-tolerant protection for critical industrial scenarios through its

Recommendations: Dual Core Switch for redundancy.

Hi Experts, May I ask for your recommendations for this kind of setup. Best practices and other routing and switching stuff. I have the following: 1

VMware Cloud Foundation (VCF) Blog - Home Page

VMware Cloud Foundation (VCF) - The simplest path to hybrid cloud that delivers consistent, secure and agile cloud infrastructure. Read more.

Cisco Nexus 7000 Series NX-OS High Availability and Redundancy

A dual supervisor configuration operates in an active or standby capacity in which only one of the supervisor modules is active at any given time, while the other acts as a standby backup.

Backup Core switch

This means that each switch has at least 2 interfaces in the EtherChannel which provides capacity and most importantly failover if there is a

Changes with Storage on Cloud and Storage Classification in VMM

First published on TECHNET on May 19, 2014 Storage Classification was introduced in System Center 2012 Virtual Machine Manager (VMM 2012) to provide the...

Huawei Network-Firewall dual-system hot backup experiment (VGMP,

HRP (Huawei Redundancy Protocol) dual-system hot backup protocol (Huawei Redundancy Protocol): The protocol is carried on the VGMP message for transmission. It is used when the master device

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