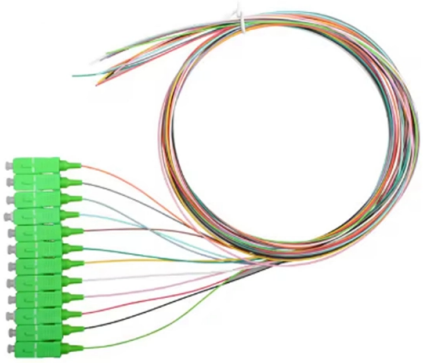
H3C Core Redundant Layer 3 Switch



Overview

H3C industrial switches can operate in -40°C - 75°C environments for a long time, and use industrial components to reach IP40 rating.

Key Takeaways

H3C offers high-performance Layer 3 switches like the S6510-50QS, S6520X, and S7500X series, designed for core network redundancy and high availability.

Key H3

C Core Switch ModelsH3C S6510-50QS The S6510-50QS is part of the S6500 series, providing 48x10GE SFP+ and 2x40GE QSFP+ ports for high-density Layer 3 aggregation. It is optimized for large enterprises and data centers, offering scalability, robust security, and high reliability, making it suitable for core network deployment.

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C S6520

X Series The S6520X-SI series is a high-performance Layer 3+ 10GE access switch with modular uplinks and dual power supplies. It supports IRF (Intelligent Resilient Framework) 2, which allows multiple switches to be virtualized into a single logical device, providing non-stop Layer 3 forwarding, redundancy, and elimination of single points of failure. The series also supports OSPF, BGP, multicast, and SDN-enabled management for flexible deployment.

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C S7500

X Enterprise Core Switch Series The S7500X series is designed for next-generation enterprise core networks. It features a modular design, Comware V7 OS, and IRF2 virtualization, allowing up to four switches to operate as a single logical fabric. The series supports high-density 10G/40G/100G line cards, VXLAN, MP-BGP EVPN, and multi-VRF for advanced Layer 2 and Layer 3 services.

Its triple per-slot bandwidth and hot backup technology ensure high availability and seamless failover in core deployments. Redundancy and High Availability FeaturesIRF/IRF2 Virtualization: Combines multiple switches into a single logical device, enabling control and data plane redundancy and simplified management. Hot Backup Technology: Ensures non-stop Layer 3 forwarding and automatic failover if a switch or module fails.

VRRP/HSRP Support: Provides virtual IP redundancy for Layer 3 interfaces, allowing backup switches to take over automatically in case of failure. Dual Power Supplies and Modular Uplinks: Prevents single points of failure and supports continuous operation during maintenance or power issues.

VXLA

N and MP-BGP EVPN: Enables Layer 2 connectivity over Layer 3 networks with redundancy and optimal traffic distribution.

Deployment Considerations

Core Layer Design: Deploy two or more H3C core switches in IRF or VRRP configurations to ensure redundancy.

Trunk and SV

I Configuration: Use Layer 2 trunk links for heartbeat communication between switches and configure SVIs for HSRP/VRRP to maintain Layer 3 redundancy. Scalability: IRF allows adding new switches without changing the network topology, supporting future growth.

High-

Density Environments: S7500X and S6510-50QS are ideal for data centers or large enterprise cores requiring high throughput and multiple 10G/40G/100G interfaces.

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C core Layer 3 switches provide a robust, scalable, and highly available solution for enterprise and data center networks, combining advanced routing, virtualization, and redundancy technologies to ensure continuous network operation.

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Article Content

Switches-H3C

H3C industrial switches can operate in -40°C - 75°C environments for a long time, and use industrial components to reach IP40 rating. At the same time, with shockproof, anti-electromagnetic

H3C Switch Enable Routing: Layer 3 Leap? Can Your Network Ditch

Imagine your H3C switch handling inter-VLAN routing, dynamic OSPF/BGP paths, and ACL enforcement natively without bottlenecked router uplinks. For businesses expanding sites ...

H3C Switch Layer 3 Routing FAQ: Expert Answers to Technical ...

Yes, H3C Layer 3 switches can simultaneously perform routing and serve as a DHCP server. This is a common configuration for branch offices or campus networks where the switch ...

Solved: core switch redundancy

Does the core have 2 sups that would provide some level of redundancy once it had to power supplys with separate feeds that would just

H3C S7500E SEriES Modular CorE SwitCHES

With modern merchant silicon, high-speed backplanes and the latest distributed switching technology, these switches deliver wire-speed Layer 2 and Layer 3 routing services for the most demanding

Configuring Redundancy on Layer 3 switches with multiple VLANs

I have chosen to use layer 3 switches with a trunk connection between, mainly for the convenience of inter-VLAN routing. There are two layer 3 switches within each building with the

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In addition to node and link protection, the switch offers the following hardware high availability features: 1+1 power module redundancy and 1+1 fan tray redundancy.

H3C S5800 SERIES SWITCH CONFIGURATION

Configure static router BFD so that when the link over which Switch A communicates with Switch B through the Layer 2 switch fails, BFD can detect the

The Importance of Layer 3 Redundancy: Understanding HSRP – Pt. 1

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Providing Layer 3 redundancy is crucial for uninterrupted network services and communications in enterprise networks. This approach provides hardware redundancy in the event of a device failure. It

Switches

H3C S6520X-HI Series Advanced Aggregation 10GE Switches H3C S6520X-HI Switch Series —Industry-leading high performance and scalable Layer 3+ 10GE access switching solution with

H3C S6550X-HI Series High-Density Intelligent Switch-H3C

Rich QoS Features H3C S6550X switch series support Layer 2 to Layer 4 packet filtering, which can provide traffic classification based on source MAC address, destination MAC address, source IP

H3C S9850 Series Data Center Switches

H3C S9850 series switches supports VXLAN (Virtual Extensible LAN), which provides two major benefits, higher scalability of Layer 2 segmentation and better utilization of available network paths.

Manar-Hossam/HSRP-Redundant-Network

This project demonstrates a fault-tolerant and highly available Layer 3 network using the HSRP (Hot Standby Router Protocol). It implements redundant multilayer switches, VLAN

H3C S12500X-AF Data Center Cloud Core Series Switches

The H3C S12500X-AF DataCenter Cloud Core Switch Series is designed for cloud services data centers. It provides the following features: CLOS+ multi-grade multi-plane architecture With 768 line

H3C S12500G-AF Data Center Intelligent Core Switch

H3C S12500G-AF is H3C''s new generation of AI intelligent switches for the core scenarios of data centers, providing the industry''s highest switching. It provides the following features: CLOS+ multi

H3C S6520X-SI Series

Product overiew H3C S6520X-SI Switch Series —Industry-leading high performance and scalable Layer 3+ 10GE access switching solution with modular dual power, fixed or modular uplinks

H3C S6520X-SI Series 10GE Layer 3 Runrate Switch-H3C

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H3C S6520X-SI Series Switch-High performance and scalable 10GE access switching solution with fixed power or dual pluggable power, IRF feature for resiliency. The series offers OSPF/BGP/ISIS

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Product overview H3C S5560S-EI Switch Series is robust (modular dual power), and easy to deploy Layer 3 access switching solution that offers enhanced security and 10GbE uplinks, BGP and

Related Video Reference

This video was associated with the source search result. Verify technical details against current product documentation and project requirements.

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Website: https://aboutkitchens.biz
Technical inquiry: https://aboutkitchens.biz/project-desk.html
North American project location: Research Triangle Park, North Carolina, United States

This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

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