

NE20ES6E Core Switch Functions



Overview

The NE20E-S runs on the Versatile Routing Platform (VRP) operating system and uses Huawei-developed NP chips and hardware-based forwarding and non-blocking switching technologies.

Key Takeaways

The Huawei NE20ES6E serves as a high-performance aggregation and core switch, supporting advanced routing, switching, redundancy, and service-level reliability in enterprise and campus networks.

Deployment Roles

The NE20ES6E, part of the NE20E-S series, can be deployed as:

- Aggregation node on IP/MPLS networks
- Core node for small and medium enterprise networks
- Edge node on campus networks
- Access node for small and medium education networks

It is designed to work with other NE routers to provide a flexible, scalable network solution for diverse service requirements. Hardware and Architecture

VRP Operating System: Runs on Huawei's Versatile Routing Platform (VRP) with a Resilient Distributed Framework (RDF), separating management, service, and data planes for high flexibility and reliability.

N



P Chips: Huawei-developed network processors enable hardware-based forwarding and non-blocking switching, supporting high throughput and low latency. **Main Processing Unit (MPU) and Network Service Processors (NSP):** Support up to 25 million IPv4 BGP routes and 4 million IPv4 FIB entries, ensuring large-scale routing capacity. **Hot Swap and Redundancy:** Key components support hot swap, hot backup, Non-Stop Routing (NSR), Non-Stop Forwarding (NSF), and In-Service Software Upgrade (ISSU) for uninterrupted service.

Switching and Routing Capabilities

Layer 2 and Layer 3 Switching: Supports VLANs, trunking, and high-speed L2/L3 forwarding. **Multicast Support:** IPv4/IPv6 multicast protocols including PIM-SM, PIM-SSM, MLDv1/v2, IGMPv3, and IGMP snooping, enabling IPTV and other multicast services.

VPN and Service-

Level Reliability: Provides VPN FRR, E-VRRP, VLL FRR, Ethernet OAM, and PW redundancy, ensuring stable L2VPN and L3VPN operations.

OA

M and Protection Switching: Supports MPLS OAM, Ethernet OAM, and end-to-end protection switching with 200 ms failover without service interruption.

Security and Management

Packet Inspection and ACLs: Ensures packets conform to configured policies for central processing. **Flexible Programmable Architecture:** Microcode programming allows new service deployment without hardware replacement, reducing operational costs.

Summary

The NE20ES6E is a high-performance, reliable, and scalable core switch suitable for enterprise, campus, and WAN environments. Its combination of advanced routing, multicast, redundancy, and security features, along with hardware-based forwarding and VRP OS, ensures high availability, service continuity, and future-proof network expansion.

Article Content

Huawei NE20E-S2F Routers Support Guide, Manuals & PDF – Huawei

Configuration Examples for Routers in Typical Enterprise Scenarios 4.0 (Video)

Typical Configuration Examples for Enterprise Routers-Example for the internal sever function through 1-to-1 NAT

NE20E-S Universal Service Router

The NE20E-S runs on the Versatile Routing Platform (VRP) operating system and uses Huawei-developed NP chips and hardware-based forwarding and non-blocking switching technologies.

ACL Special Topic (V1.0)

NE20E-S series routers can function as egress routers on large-scale campus networks or small-scale data centers, access or aggregation routers on large-scale WANs, backbone routers on small-scale

Huawei Quidway NetEngine 20 series Configuration Manual

The NE provides the patch function, and you can use the patch program released by Huawei to upgrade the system software. A patch program has three statuses: activated, deactivated and running.

Core Switch vs. Edge Switch: What's the Difference?

Core Switch vs. Edge Switch: What's the Difference? Core switches and edge switches are two essential components that play distinct roles in the functioning of a network. This article

How to Choose the Right Core Switch for Enterprise Network?

Learn how core switches for enterprise networks and LAN campus networks function in the hierarchical internetworking model and how to choose the right core switch for enterprise networks.

Understanding the Core Switch: Key Differences and Uses

Explore the core switch's role as the backbone of your network. Discover key differences, uses, and insights into layer 3 core switch technology.

Configuring the Core Switch to Be Managed by the Controller

Configuring the Core Switch to Be Managed by the Controller Context After devices to be managed are added to the campus network site, iMaster NCE-Campus needs to establish a

Core Switch vs. Distribution Switch vs. Access Switch

Core Switch vs. Distribution Switch vs. Access Switch: Understand Their Roles in Ethernet Networks Ethernet networks are growing and becoming more complex, with high-capacity WANs now being

Buttons and Switches

Buttons and switches: why the difference and how to configure them A typical device usually has at least one button (exception being bulbs and some lights) to control the power state (s). Additional buttons

Understanding Core Switch: What It Is and How to Choose the

In the realm of system networking, three key types of switches are frequently mentioned: access switches, aggregation switches, and core switches. The part of the network that directly

Core Switch vs Access Switch | Definitions and Key Differences

Core Switch vs Access Switch The core switch is used in the center of your network, while an access switch is placed on its edge. The main difference between these two kinds of hardware is

003-ECS2020 Series DS R07 20210115

Multi Management The ECS2020 Series supports Web, SNMP v1/v2c/v3, and Telnet management to provide CLI access. The switch supports a private MIB for detailed information. This

Managed Versus Unmanaged Switches

Managed switches vs unmanaged switches When selecting the right type of switch to meet your needs, one consideration is whether to use a managed or an unmanaged switch. The key difference is in the

Understanding Core Switch: What It Is and How to Choose the Right

A core switch is not merely a type of switch but rather denotes the switch that operates at the core layer (the network's backbone). Positioned at the top of the three-layer network architecture,

Ignition switch

An ignition switch, starter switch or start switch is a switch in the control system of a motor vehicle that activates the main electrical systems for the vehicle, including "accessories" (radio, power windows,

[Digital Foundry] Nintendo Switch 2 Confirmed Specs: CPU ...

[Digital Foundry] Nintendo Switch 2 Confirmed Specs: CPU, GPU, Memory, System Reservation + More (6 CPU cores for games, 9GB RAM for games)

STM32CubeIDE user guide

The user may switch between workspaces, but only one workspace can be active at a time. Switching workspace is a quick way of switching from one set of projects to another. In practice, the workspace

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

