

Cisco Catalyst 6500 Borderless Services Node

Borderless Network Services for Cisco Catalyst 6500 Series Switches

The Cisco® Catalyst® 6500 Borderless Services Node integrates the Cisco Wireless Services Module (WiSM) and the Cisco Firewall Services Module (FWSM) with the Cisco Catalyst 6500 Virtual Switching Supervisor Engine 720 to enable three important pillars of Borderless Networks architecture—security, performance, and mobility (Figure 1). This easily deployed solution delivers a secure and mobile solution that enables system virtualization and provides increased throughput with scalable performance.

Figure 1. Cisco Catalyst 6500 Borderless Services Node



Enterprises around the world must provide connectivity anywhere and anytime, on an ever-larger number of devices and to a global workforce, customers, and trusted partners. This necessity essentially means breaking down the traditional device, location, and application border. The challenges that it introduces are not all new, but they are definitely more complex—and they put more demands on security, high availability, scalability, and manageability.

Cisco Catalyst 6500 Borderless Services Node Primary Features

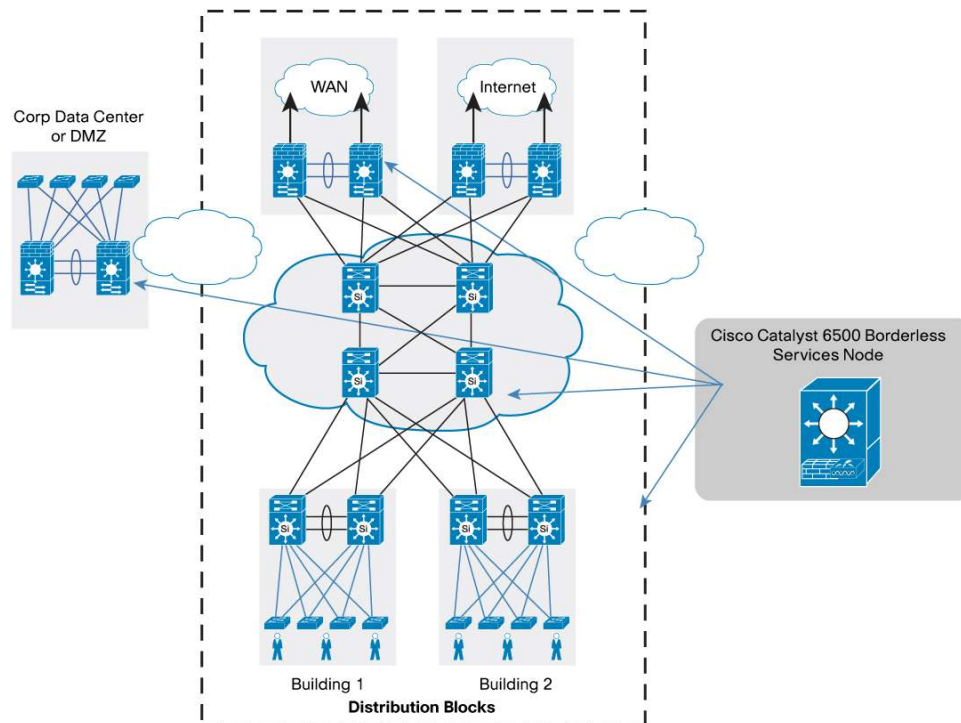
- The borderless services node offers dual FWSMs for increased security and application performance.
- The WiSM enables mobility through up to 300 access points and 10,000 clients.
- The Supervisor Engine 720 with 10 Gigabit Ethernet uplinks and IPv6 combines high-density Cisco Catalyst 6500 Virtual Switching System (VSS) uplinks, system virtualization, and increased throughput with scalable performance and a rich IP feature set.
- The node has a 16-port 10G module option or 24-port Small Form-Factor Pluggable (SFP) module.
- Workflow automation is managed through CiscoWorks LAN Management Solution (LMS) templates that simplify device detection and provisioning.
- Cisco EnergyWise technology reduces energy consumption across the entire corporate infrastructure and optimizes operating costs.

- The Cisco Catalyst 6509-E chassis offers high port density and side-to-side airflow.

Deployment Options for Integrated Services

The Cisco Catalyst 6500 Borderless Service Node can be the switching system in the distribution block or it can complement the existing switching infrastructure in distribution or core as a services chassis (Figure 2). For customers who have a collapsed distribution or core, the Cisco Catalyst 6500 Borderless Services Node can be the collapsed node. It can also be the services chassis that replaces a host of service appliances in a demilitarized zone (DMZ).

Figure 2. Deployment Options for Integrated Services



The integrated switching and services design enables you to install this node easily in your current deployment, it saves rack space, and it helps to reduce total cost of ownership (TCO). The VSS enables load sharing and increases network availability.

The policy enforcement based on user access group—also called identity-based segmentation—is one of the most common applications of the borderless services node. It allows you to use firewall virtual contexts and Virtual Route Forwarding (VRF) instances to virtualize your network to enable security of your network, data, and resources and facilitate compliance with government regulations where needed.

If you have strict traceability requirements because of the confidentiality of data, you can use the Cisco Catalyst 6500 Borderless Services Node to segregate all untrusted traffic to a restricted servers block or DMZ, while permitting the rest of your employee traffic to use corporate servers. Overall phase I of this solution will demonstrate how different Cisco technologies come together to deliver an intelligent and integrated services solution to streamline your network operations and increase the flexibility, security, and resiliency of your network.

Switch Configurations

The Cisco Catalyst 6500 Borderless Services Node comes in two configurations (Table 1).

Table 1. Network Modules

Product Number	Description
BSN09E-VS720-10G	Cisco Catalyst 6509-E Switch with Supervisor Engine VS-SUP720-10G, 6509E Fan, dual 6000W AC power supplies, two FWSM, 1 WiSM, 1 6716-10G-3C and 2 VFW licenses for 20 VC each
BSN09E-VS720-1G	Cisco Catalyst 6509-E Switch with Supervisor Engine VS-SUP720-10G, 6509E Fan, dual 6000W AC power supplies, two FWSM, 1 WiSM, 1 6724-SFP and 2 VFW licenses for 20 VC each

Table 2 lists the data sheets of the individual modules that compose each configuration of the Cisco Catalyst 6500 Borderless Services Node.

Table 2. Network Modules

Part number	Description	Data Sheets
6509E	Cisco Catalyst 6509E Chassis	http://www.cisco.com/en/US/prod/collateral/modules/ps2797/ps5138/product_data_sheet09186a00800ff916_ps708_Products_Data_Sheet.html
VS-S720-10G-3C	Supervisor Engine VS-SUP720-10G	http://www.cisco.com/en/US/prod/collateral/switches/ps5718/ps9336/product_data_sheet0900aecd806ed759_ps708_Products_Data_Sheet.html
WS-SVC-FWM-1	Firewall Services Module	http://www.cisco.com/en/US/prod/collateral/modules/ps2706/ps4452/product_data_sheet0900aecd80711df1.html
WS-SVC-WISM-1-K9	Wireless Services Module	http://www.cisco.com/en/US/prod/collateral/modules/ps2706/ps6526/product_data_sheet0900aecd80364340_ps708_Products_Data_Sheet.html
WS-6716-10G-3C (BSN09E-VS720-10G)	Cisco Catalyst 6500 16-Port 10 Gigabit Ethernet Module with DFC3C, requires X2	http://www.cisco.com/en/US/prod/collateral/switches/ps5718/ps708/product_data_sheet09186a00801dce34.html
WS-6724-SFP (BSN09E-VS720-1G)	24 port SFP based module	http://www.cisco.com/en/US/prod/collateral/switches/ps5718/ps708/product_data_sheet0900aecd801459a7.html

Table 3 lists minimum software requirements for the Cisco Catalyst 6500 Borderless Services Node solution.

Table 3. Minimum Software Requirements

Product Number	Minimum Software Release
VS-SUP720-10G-3C	Cisco IOS® Software Release 12.2(33)SX1 and later Note: For Cisco EnergyWise solution on Cisco Catalyst 6500, use Cisco IOS Software Release 12.2(33)SX14 and later.
WS-SVC-WISM-1-K9	6.0
WS-SVC-FWM-1-K9	4.0.4

For More Information

For more information about the Cisco Catalyst 6500 Borderless Services Node, visit

<http://www.cisco.com/en/US/products/hw/switches/index.html> or contact your local Cisco account representative.



Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV
Amsterdam, The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at www.cisco.com/go/offices.

Cisco and the Cisco Logo are trademarks of Cisco Systems, Inc. and/or its affiliates in the U.S. and other countries. A listing of Cisco's trademarks can be found at www.cisco.com/go/trademarks. Third party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1005R)