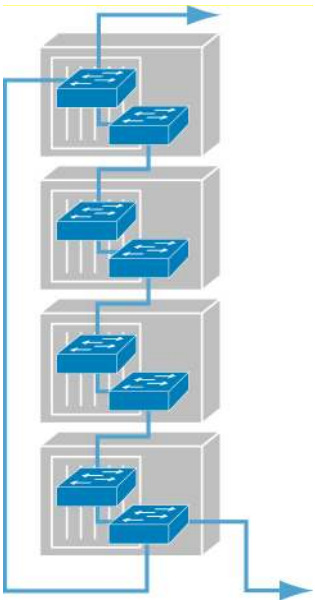
Cisco Catalyst Blade Switch 3100 Series: Next-Generation Support for Blade Server Environments

Organizations of all types continue to invest in IT to develop new revenue opportunities, reduce costs, and improve service levels. However, this continuing investment is exacerbating facilities concerns for organizations, especially in the areas of power, cooling, rack space, and cable management. These challenges are especially salient in the area of server infrastructure, where the rapid growth of application use has lead to significant server sprawl in the data center.

In response to these challenges, organizations have deployed blade servers as a strategy to deal with server sprawl. With the success of this strategy, blade servers are playing a more prominent role in businesses' overall server strategies. Because of the more central role that blade servers are playing, it is important that they have access to enterprise-class networking, including availability, performance, and end-to-end network services.

Figure 1. VBS allows up to 8 switches to be treated as a single virtual switch



The Cisco Catalyst® Blade Switch 3100 Series represents the next-generation networking solution for blade server environments. Built on the market-leading Cisco hardware and Cisco IOS® Software, the Cisco Catalyst Blade Switch 3100 Series is engineered with innovative technologies specifically designed to meet the rigors of blade server–based application infrastructure. Specifically, the switch is designed to support blade servers in their new role by delivering scalable, high-performance, highly resilient connectivity while supporting ongoing initiatives to reduce server infrastructure complexity and total cost of ownership (TCO). For the server team, this translates to specific features and functions that enhance the capability of the server infrastructure to support the organization's application environment.

With the Cisco Catalyst Blade Switch 3100 Series, Cisco introduces a unique technology called the virtual blade switch (VBS). Like server virtualization technology, this switch virtualization technology treats the individual physical switches within a rack as one logical switch, allowing the switches to deliver better utilization, increased performance, and higher resilience while simplifying operations and management.

The VBS delivers a number of specific advantages to the supported servers:

- By significantly simplifying data center design and operations, the VBS reduces infrastructure complexity, improves network resiliency, and increases the operational manageability of the blade-switching environment. For example, the VBS appears as a single network device, so the network topology is greatly simplified, enabling quicker deployment, a more robust network, and faster troubleshooting and problem resolution.
- By providing up to160 Gbps upstream, the VBS provides exceptional performance. At the same time, the VBS can double the bandwidth available to a server. These features give server administrators significant flexibility in supporting the performance requirements of their severs and applications.
- The VBS makes extensive use of link virtualization for both upstream connectivity and server connectivity, increasing both available bandwidth and redundancy. Note that the VBS can recover from a physical link failure without having to reconverge the network, helping eliminate session drops.
- The VBS uses the same Cisco IOS Software interface, MIBs, and management tools as the rest of the Cisco Catalyst products, simplifying operations and management by the network operations team and helping ensure that attached servers can fully participate in end-to-end network services such as quality of service (QoS) and security policies, helpful in maintaining regulatory compliance.
- The Cisco Catalyst Blade Switch 3100 Series allows mixing and matching of Gigabit Ethernet and 10 Gigabit Ethernet switches, providing customers with a cost-effective migration path. Switch capacity can be incrementally upgraded as server needs demand.

The Cisco Catalyst Blade Switch 3100 Series is another example of why so many companies choose Cisco to meet their switching requirements. The Cisco Catalyst Blade Switch 3100 Series combines Cisco Catalyst heritage with product innovation to meet the unique demands of today's blade server environment.

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