









Server Fabric Switching and Virtualization

At-A-Glance

				
Switch Type	Cisco® SFS 7000P InfiniBand Server Switch Cisco® SFS 7000D InfiniBand Server Switch	Cisco® SFS 7008P InfiniBand Server Switch	Cisco® SFS 7012P InfiniBand Server Switch Cisco® SFS 7012D InfiniBand Server Switch	Cisco® SFS-7024P InfiniBand Server Switch Cisco® SFS-7024D InfiniBand Server Switch
Description	Fixed configuration, 1-rack-unit (1-RU), InfiniBand switch with twenty-four 4x InfiniBand ports; 10 Gbps; embedded Subnet Manager; fully nonblocking architecture; supports optical powered ports. The 7000D supports 24 Autosensing Dual-speed 4X InfiniBand DDR (20Gbps) and SDR (10-Gbps) ports; Supports DDR-to-SDR switching	Modular configuration, 6-RU, InfiniBand switch with up to ninety-six 4x; fully redundant, hot Pluggable components with stateful failover; Embedded Subnet Manager; fully nonblocking; Supports optical powered ports	Modular Configuration, 7-RU, InfiniBand switch with up to one hundred forty-four 4X InfiniBand ports; supports optical powered ports; fully Redundant components; fully non-blocking. The 70 12D supports up to 144 Autosensing Dual-speed 4X InfiniBand DDR (20Gbps) and SDR (10-Gbps) ports; Supports DDR-to-SDR switching	Modular Configuration, 14-RU, InfiniBand switch with up to two hundred eighty-eight 4X InfiniBand ports; supports optical powered ports; fully Redundant components; fully non-blocking. The 7024D supports up to 288 Autosensing Dual-speed 4X InfiniBand DDR (20Gbps) and SDR (10-Gbps) ports; Supports DDR-to-SDR switching
Maximum Ports	24 4X InfiniBand Ports	96 4X InfiniBand Ports	144 4X InfiniBand Ports	288 4X InfiniBand Ports
Supported Modules	–	24-port 4X InfiniBand LIM card; management module	24-port 4X InfiniBand LIM card; management Spine module; Non-management spine module	24-port 4X InfiniBand LIM card; management Spine module; Non-management spine module
				
Switch Type	Cisco® SFS 3001 Multifabric Server Switch	Cisco® SFS 3012 Multifabric Server Switch	Cisco® SFS 3000 Series InfiniBand to Ethernet Gateway	Cisco® SFS 3000 Series InfiniBand to Fibre Channel Gateway
Description	Modular configuration, 1-RU, fully nonblocking InfiniBand switch with transparent topology architecture; twelve 4x InfiniBand ports and one gateway slot for a 6-port Ethernet gateway or 2-port Fibre Channel gateway; embedded Subnet Manager	Modular configuration, 4-RU, 24 InfiniBand ports with 12 expansion slots for Ethernet or Fibre Channel gateways; 10 Gbps fabric-to-server interconnect; high availability in a single chassis; embedded Subnet Manager	InfiniBand-to-Ethernet gateway; two 4x InfiniBand ports with six 100/1000 Ethernet ports; 12-Gbps full duplex throughput at wire speed; dynamic load balancing across gateways; link aggregation between ports	InfiniBand-to-Fibre Channel gateway; two 1-2 Gbps Fibre Channel ports; dynamically hot-pluggable; transparent topology support with zoning and logical unit number (LUN)-based access control; high availability and load balancing
Maximum Ports	12 InfiniBand ports and one gateway slot for 6 Ethernet or 2 Fibre Channel ports	24 InfiniBand ports and 12 gateway slots for up to 72 Ethernet ports or 24 Fibre Channel ports or various combinations of the two	6 100/1000 Ethernet Ports	2 Fibre Channel Ports
Supported Modules	6-port Ethernet gateway; 2-port Fibre Channel gateway	6-port Ethernet gateway; 2-port Fibre Channel gateway; 12-port 4x InfiniBand LIM card	–	–

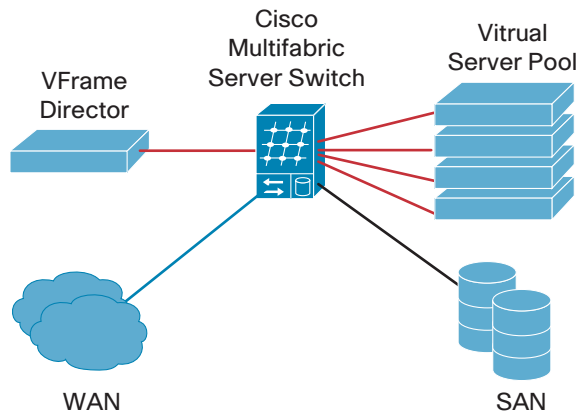
VFrame

Overview

VFrame is the industry's first truly open solution for utility computing. With this software suite and Cisco server switches, data center managers can build their own utility computing data center out of industry-standard servers, storage, applications, and management tools. Reduce IT expenses and enjoy the following advantages using virtual servers:

- Build your own utility computing data center with standards-based components
- Share pools of diskless servers and I/O for failover and capacity on demand
- Virtualize the server and I/O infrastructure beneath the OS and application to enable easy change and migration
- Create unified 10-Gbps fabric for IP, storage area network (SAN), and server-to-server communications
- Enhance third-party management and provisioning applications
- Respond rapidly to business demands by deploying and repurposing servers in seconds
- Add automated failover to any system with a generic pool of failover resources

VFrame Architecture



Building Blocks

Virtual Servers for Utility Computing

- One-click policy-based provisioning
- N+1 hardware failover at component level
- Secure partitioning in hardware; standards-based price and performance
- Heterogeneous: Windows, Linux, or UNIX
- Xeon, EM64T, or Opteron: PCI-X or PCI-Express

Leading Performance

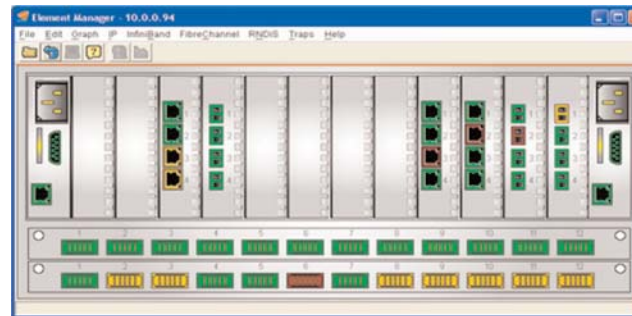
- 10-Gbps or 30-Gbps standards-based InfiniBand leader
- Nonblocking, hardware-based I/O ASIC design
- Extremely low-latency IP and SAN connectivity

Scalable I/O Architecture

- Share centralized pool of I/O with virtual IP and storage interfaces per server
- Remote Direct Memory Access (RDMA)-enabled CPU offload
- I/O scales independently of server or rack
- Up to 72 Gigabit Ethernet or 24 Fibre Channel ports per multifabric server switch

Management Software

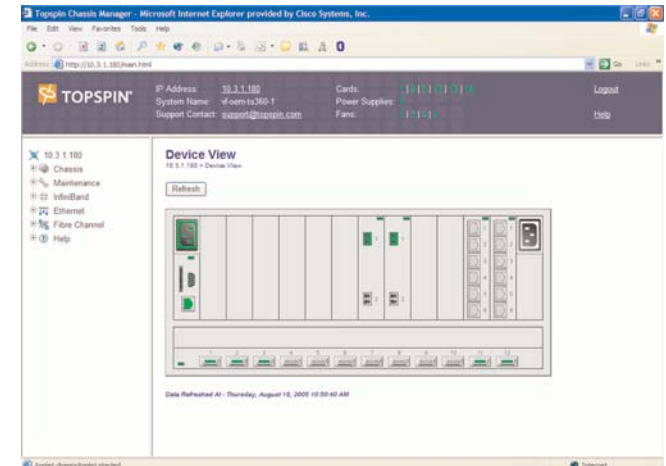
Element Manager



Java-based GUI for managing all server fabric switches.

- Configure system and software management
- Storage manager
- Visually monitor health of ports and network
- Graph and chart performance

Chassis Manager



Web-based embedded GUI for fabric and server switch management.

- Configure system
- Monitor system health

Embedded Subnet Manager

All Cisco SFS switches run a high-performance embedded Subnet Manager.

- InfiniBand Subnet Manager can manage subnets of thousands of nodes
- Highly available and multiple redundant Subnet Managers can be configured
- Topology changes can be detected in large subnets in short durations

Contacts

For more information, email ask_SFS@cisco.com or visit <http://www.cisco.com/go/servernetworking>.