

# HP Virtual Connect Enterprise Manager and HP StorageWorks Simple SAN Connection Manager

A complete end-to-end c-Class, VCEM, and P2000 MSA Storage Array/EVA storage solution with SN6000 switch and Simple SAN Connection Manager (SSCM)

Solution brief

## HP Converged Management

HP Virtual Connect Enterprise Manager centralizes network connection management and workload mobility for thousands of HP BladeSystem servers. HP StorageWorks Simple SAN Connection Manager provides revolutionary end-to-end SAN deployment and management by cutting typical startup times from days to hours and typical management tasks from hours to minutes. Now these two feature-rich and value-add HP applications are coupled together to provide a complete end-to-end HP BladeSystem c-Class to HP StorageWorks EVA or MSA storage array solution.

System administrators want tools and applications to work together and complement each other. HP believes in this philosophy as well; therefore, HP has created the VC FlexFabric application programming interface (API) for its industry-leading HP Virtual Connect Enterprise Manager. The VC FlexFabric API enables integration with other applications to provide converged management solutions. HP StorageWorks Simple SAN Connection Manager has incorporated the VC FlexFabric API in order to provide a comprehensive view and management experience for HP BladeSystem c-Class and HP EVA and MSA storage customers. This gives HP customers a "single pane of glass" view of their SAN environment, from c-Class to MSA and EVA storage.

## Solution overview

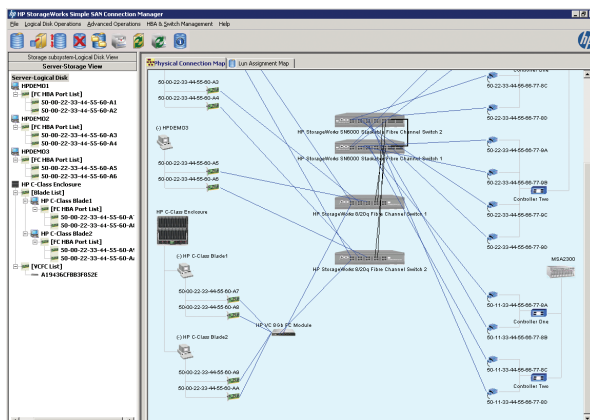
The following HP products combine to provide a unique, comprehensive end-to-end solution and management experience not found with any other server or storage vendor:

- HP BladeSystem c-Class chassis
- HP Virtual Connect Fibre Channel module for the HP BladeSystem c-Class enclosure
- HP Virtual Connect Enterprise Manager (VCEM)
- HP StorageWorks Simple SAN Connection Manager (SSCM)
- HP StorageWorks Enterprise Virtual Array (EVA) and/or Modular Storage Array (MSA)
- HP FC HBAs for the HP BladeSystem c-Class enclosure
- HP StorageWorks H-series Fibre Channel switches (SN6000 and 8/20q)

### HP Virtual Connect Enterprise Manager

HP Virtual Connect is an interconnect option for BladeSystem c-Class that provides the smartest way to connect your server blades to LANs and SANs. Virtualizing I/O connections reduces cable count by up to 95%, simplifies management, and helps everyone—system, network, and storage administrators—to work smarter. The VC FlexFabric API provides SSCM with access to vital c-Class chassis information, allowing HP customers to experience single-pane-of-glass management of their entire solution—from c-Class server to EVA/MSA storage LUN.

### End-to-end SAN connection view



### **HP BladeSystem c-Class chassis**

The BladeSystem c-Class is a modular server platform that can be scaled for computing, storage, and networking. It is designed to meet the ever-expanding needs of IT organizations. Numerous BladeSystem c7000 or c3000 systems can be combined. SSCM will manage all of the associated HP StorageWorks H-series switches, HP StorageWorks HBAs, and HP StorageWorks arrays.

### **HP Virtual Connect Fibre Channel module**

The HP Virtual Connect module for Fibre Channel reduces cabling and simplifies network management of storage resources for c-Class server blades. It also adds the unique ability to wire everything once—and then be able to add, replace, or reassign servers in minutes.

### **HP StorageWorks EVA and MSA**

The HP StorageWorks EVA and MSA are proven choices for virtualized storage. HP storage arrays provide powerful, simple enterprise-class storage for the enterprise customer. IT managers can choose any model of EVA and MSA, along with any number of systems to deploy with this solution.

### **HP StorageWorks Simple SAN Connection Manager**

HP provides revolutionary end-to-end SAN management with Simple SAN Connection Manager (SSCM). SSCM is available to use at no cost with every H-series switch. Traditional SANs require that administrators employ separate management tools for the individual SAN components. There may be different interfaces, conflicting naming conventions, and management tools that do not talk to one another. Consequently, setups and minor changes may take hours or days, and it can be difficult to add servers and deploy new applications—making SANs prone to potentially expensive configuration errors. HP StorageWorks Simple SAN Connection Manager facilitates SAN installation by automating every aspect of setup and configuration. Automatic SAN discovery and the use of point-and-click installation wizards allow deployment of an entire SAN in minutes, not

days. This includes EVA and MSA storage setup and provisioning, as well as switch and HBA setup and deployment. Utilizing the VC FlexFabric API, SSCM has a greater level of visibility into the c-Class chassis than ever before to provide a comprehensive view of the BladeSystem environment. SSCM is the software that ties the entire HP end-to-end solution together.

### **HP 8Gb FC Mezzanine Cards for HP BladeSystem c-Class enclosure**

The HP 8Gb Fibre Channel Mezzanine Cards for the HP BladeSystem c-Class enclosure are optimized for virtualization, low power usage, management, security, reliability, availability, and serviceability. Data center consolidation through server virtualization is optimized with the mezzanine cards because multiple logical (virtual) connections can share the same physical port.

### **HP StorageWorks H-series Fibre Channel switches**

The HP StorageWorks SN6000 Stackable 8Gb Fibre Channel Switch and HP StorageWorks 8/20q 8Gb Fibre Channel Switch are designed to make enterprise SANs affordable and easy to use, especially as the network expands. Built with low-cost, high-performance scalability in mind, each SN6000 switch features 20 device ports supporting 8/4/2 Gbps speeds, plus 4 high-speed 10/20 Gbps stacking ports for linking SN6000 switches. Each 8/20q switch features 20 device ports supporting 8/4/2 Gbps speeds. Transparent Router functionality, standard on H-series switches (HP StorageWorks SN6000 Stackable 8Gb Fibre Channel Switch and HP StorageWorks 8/20q Fibre Channel Switch), provides seamless, nondisruptive access to servers and storage on HP B-series and HP C-series SANs. Begin with 20 device ports, then add new switches for up to 120 usable device ports per stack (single manageable unit), or 500+ ports in multi-stack topologies. Included SN6000 10 Gbps stacking ports may be upgraded to 20 Gbps speed at any time to extend the life of the solution as SAN performance requirements increase.

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