HP OV-SAM Storage Management and Brocade Fabric Manager Deliver Single-Console Management of Heterogeneous Storage Networks

#### **AJ Casamento**

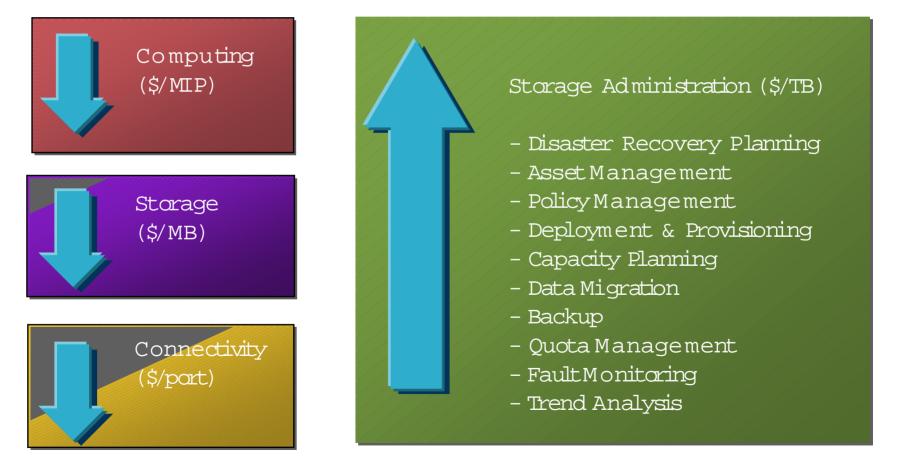
Solutioneer Brocade Communications Systems, Inc.



# The problem: cost of storage administration

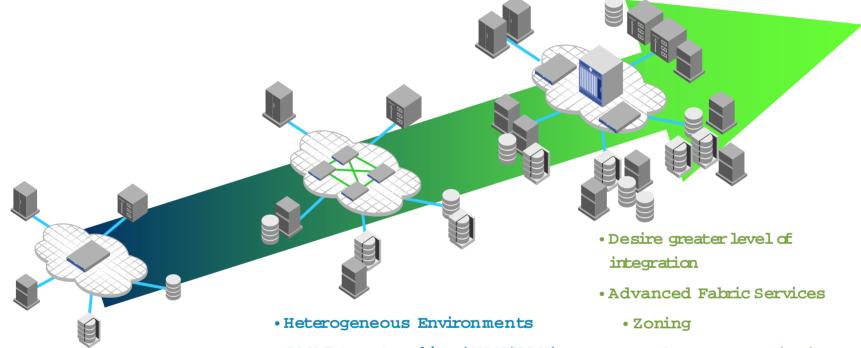


Storage administration costs are typically 6-10x the purchase price of storage!



## **Evolution of the intelligent infrastructure**





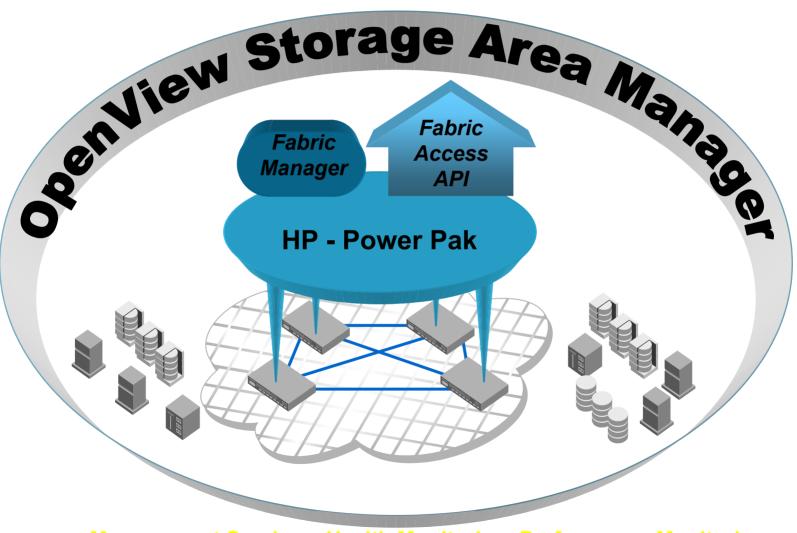
- Basic connectivity, shared storage
  - improve resource utilization
  - more scalable
  - eliminates SPF

- SAN Internetworking (WAN/MAN)
- Optimize storage infrastructure
  - LAN Free, serverless backup
  - Server, storage consolidation
  - Clustering, high availability
- SNMP Management

- Performance Monitoring
- Health Monitoring
- Security
- Accessed through open API

#### HP & Brocade – the complete SAN solution! highly available; highly secure





Management Services, Health Monitoring, Performance Monitoring

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## HP OpenView SAM – Brocade integration



#### Storage Area Manager

Allocater	Accountant	Builder	Optimizer	<u>Storage Node Manager</u>		
LUN Security LUN binding	Chargeback Storage account set up	Resource management Resource usage	Performance metric monitoring Graphical metric data	Discovery Topologymap Status monitoring Alerts Device mgmt	<b>Fabric Manager</b> Multiple Fabrics Switch Grouping License Key mgmt	
Access Control	Usage billing	LUN — Volume relationships Capacity analysis	AP & SMI Performance Monitor Point-to-Point Snapshot in time Presented in Optimizer Support w/o agents	г	Firmware Download Fabric Merge Secure Fabric OS management	

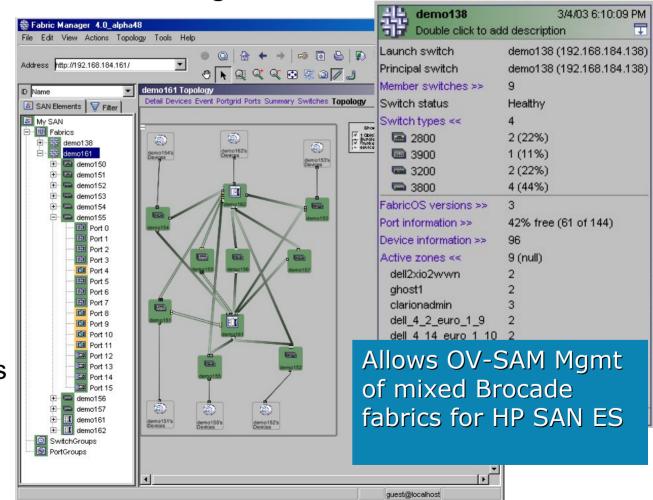


#### **FM Benefits – Monitoring**

#### Lowers the cost of Monitoring B-Series Fabrics

- Large Fabrics and Multiple Fabrics
- At-A-Glance Views
- Topology visualization
- ISL Monitoring
- Fabrics and Groups

Events





Removed

## **FM Benefits - Administration**

#### Lowers the cost to Administer B-Series Fabrics

- **Change Management**
- User-Defined Switch Groups
- Secure
- Fabric a
- Login
- Set Tim

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Difference Summary

11/17/2003

2 item(s)

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×

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#### **FM Benefits - Provisioning**

#### Lowers the cost to Provision B-Series Fabrics

- Firmware Management
- Configuration Profile Management
- Sequenced Switch Reboot Control

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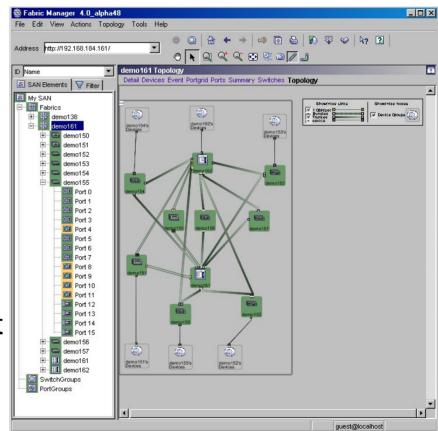
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# Fabric - Focused Topology

- Visualize Link Details
  - Trunking
  - 1g/2g links
  - Bundled (logical)/Physical
- Performance Monitoring of Links
- Automatic Core-Edge Layout
- Visualize Switch Status
- Right-Click to Launch Management operations from the Map
- Device Nodes expand to display devices connected to a switch



#### SAN Information 'At-A-Glance'



3/4/03 6:10:09 PM

- View consolidated SAN, Fabric, Group, or Switch Information
- Expand/Collapse to view varying detail
- Expand individual items to drill down
- More information at the administrator's fingertips
- Ports/Zones/Switches rolled up

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2 demo138



# **Fabric Snapshot/Compare**

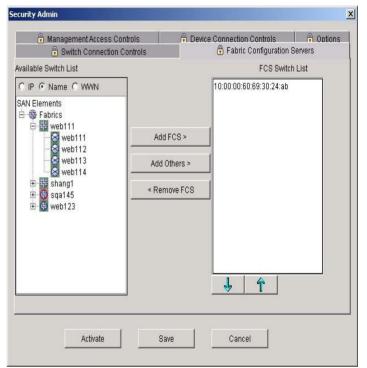
- Track Fabric Configuration Changes
  - ISLs
  - Devices
  - Switches
  - Switch Configuration
  - Zones
  - Licenses
- Report Generated to highlight differences
- Drill down to view change details

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## **Security Management**

- Administer a Secure FabricOS™ Environment
- Implement and Manage security policies that:
  - Control Switch Memberships in Fabrics
  - What edge devices can connect to the fabric and where
  - Management protocol access (what protocols can be used from what management stations)
- Fabric Manager Users log in using Windows host native user name and password
- User Profiles stored centrally
- Switch Passwords stored centrally



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## **HBA Management coming**

- 'Agent-less' HBA Discovery and Asset Management
  - Retrieves HBA Asset Data from fabric
  - No Host-Based agents necessary
- Upgrade HBA firmware through the fabric
- Supported by Emulex HBAs

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