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The Importance of Analytics in Storage Management
February 16, 2016

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VIV it
YOUR INDEPENDENT HPE SOFTWARE COMMUNITY

Hosted By:

Mark Herbert
Vivit Vice President
HPE Software Education SIG Leader
Arizona Chapter Leader

Today's Speakers:

Kara McMillan
Product Manager Storage Management
Hewlett Packard Enterprise

Vijay Ram S
Functional Architect
HPE Software Storage Management
Hewlett Packard Enterprise

Housekeeping

- This "LIVE" session is being recorded
   Recordings are available to all Vivit members

- Session Q&A:
   Please type questions in the Questions Pane

Webinar Control Panel

Toggle View Window between Full screen/window mode.

Questions

Agenda and speakers

Agenda

– Storage Management and Analytics

– Storage Operations Manager Analytics

– SOM 10.10 Analytics demo

– Call to action

– Q&A

Kara McMillan
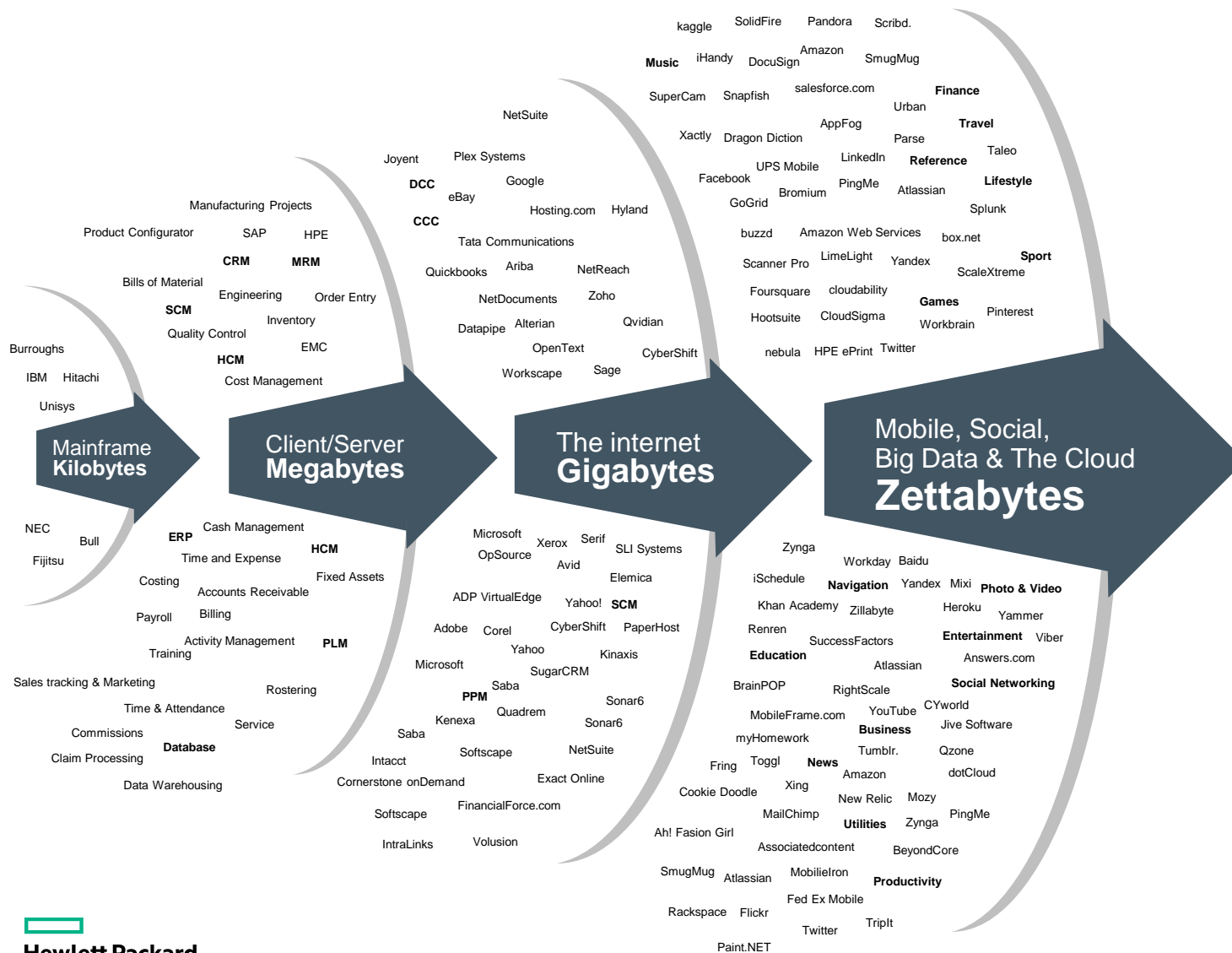**Product Manager**
HPE Software Storage Management

Vijay Ram S
Functional Architect
HPE Software Storage Management

Hewlett Packard
Enterprise

Storage Management and Analytics

Our world is data rich

Mainframe Kilobytes

Client/Server Megabytes

The internet Gigabytes

Mobile, Social, Big Data & The Cloud **Zettabytes**

Every 60 seconds

- **98,000+** tweets
- **695,000** status updates
- **11million** instant messages
- **698,445** Google searches
- **168 million+** emails sent
- **1,820TB** of data created
- **217** new mobile web users

Yottabytes

9

More than Half Spent 15% or More of Their IT Budget on Storage

Approximately what percentage of the IT budget is spent on storage?
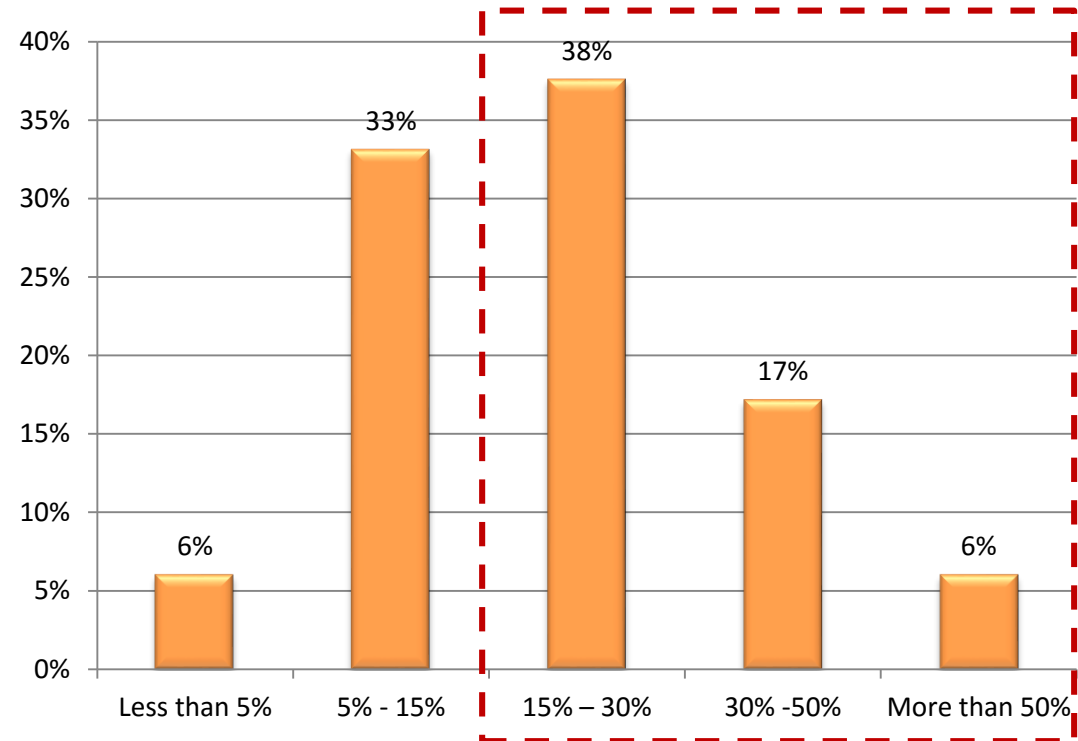
dimensional research

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Diverse Requirements Important for SRM Solutions

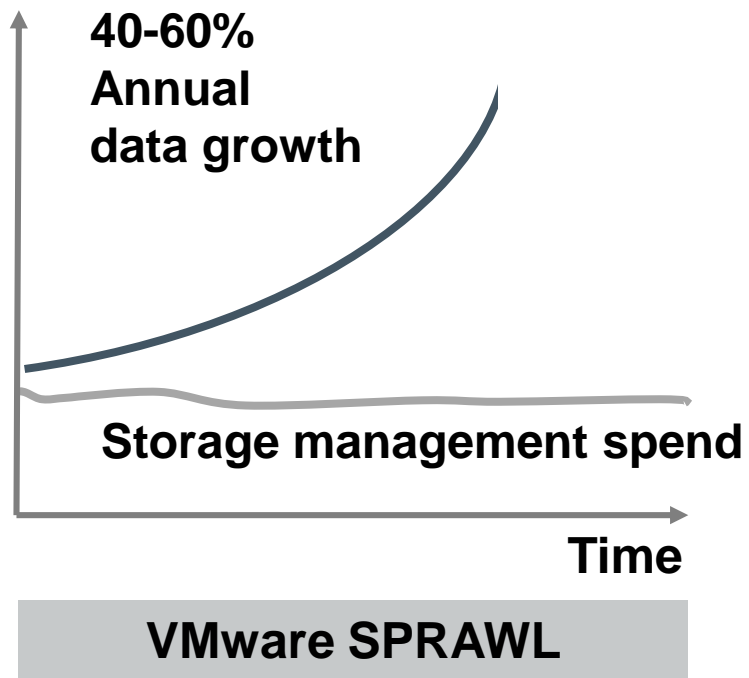**Which analytical capabilities are important for a SRM solution?**

Reclaim unused storage capacity	70%
Predict when storage arrays will run out of capacity	64%
Correlate events that cause performance issues	60%
Visual representation of storage allocations and actual usage	59%
Drill down from dashboard to individual storage devices for troubleshooting	53%
Capability to release storage reserved by dormant apps or VMs	53%

dimensional research

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Storage Reclamation Projects Save Money

What benefits were received from the storage reclamation project?

Benefit	Percentage
Reduced or delayed need to purchase more storage	67%
Resolved storage issues	55%
Improved storage performance	54%
Reduced time spent on storage tasks	37%
Created storage flexibility for new projects	36%
Better application performance	36%
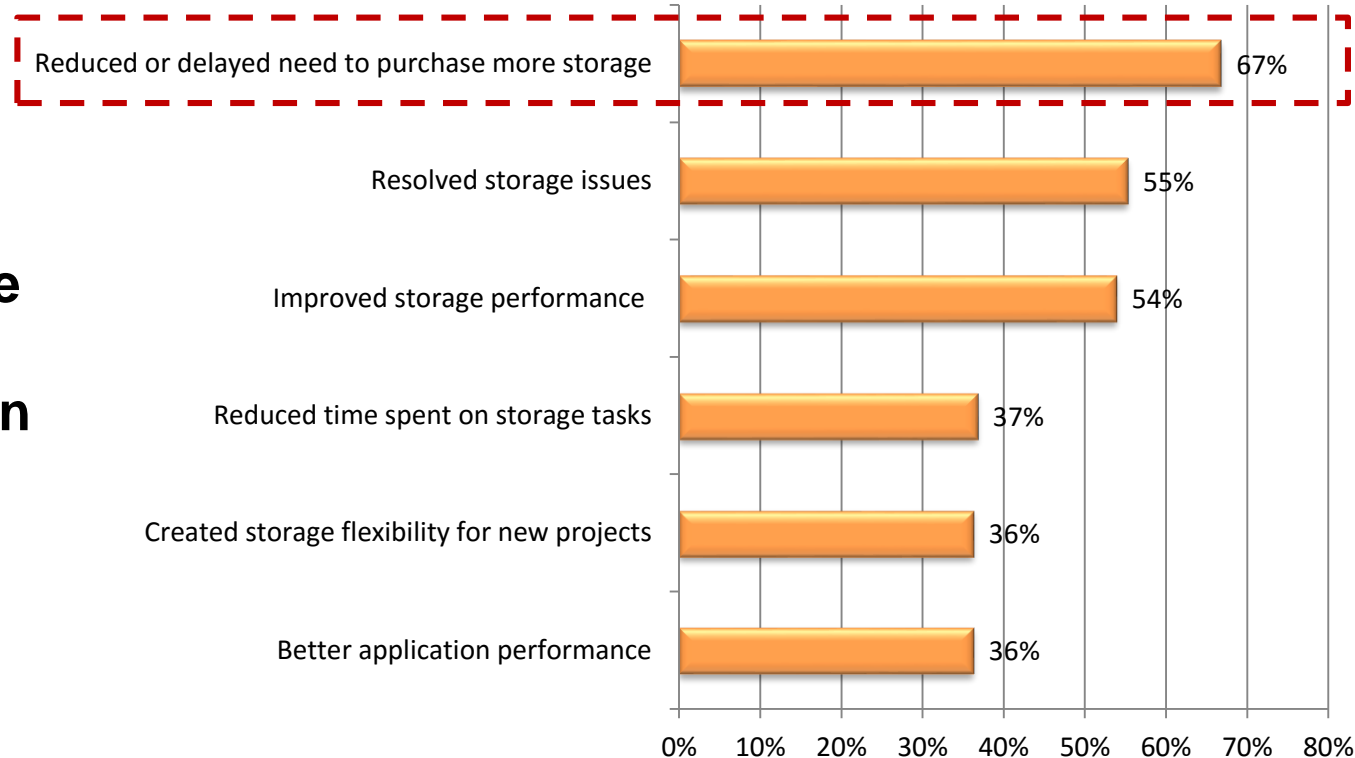
Storage management challenges

Data growth

40-60% Annual data growth

Storage management spend

Time

VMware SPRAWL

Complexity

Services

Apps

Host

Virtualization Geography

Clustering / HA
Multiple OS's

Transport

FC
ISCSI
NAS
Direct attach

Storage

Thin provisioning
Different tiers of storage
Multi systems /vendors
Snapshot / replication

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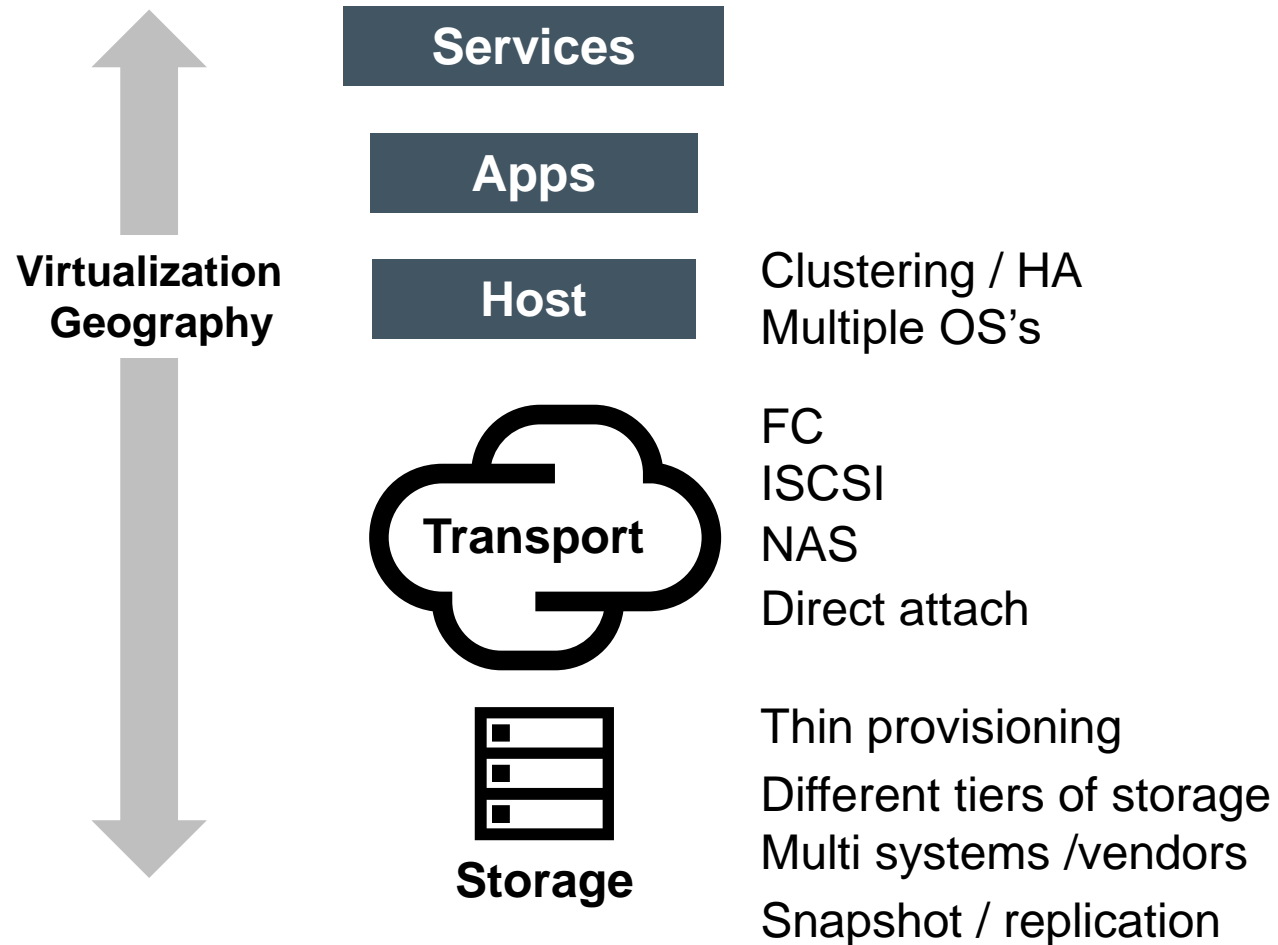
End-to-end storage management

Mail / Database
Administrators

Infrastructure
Operations

Storage Operations

HPE EVA = *Command View and
Performance Advisor*
HPE 3PAR = *Reporter and
InForm*
EMC VNX = *Solution Enabler*

APP **APP** **APP**

VM **VM** **VM** **VM**

Host **ESX** **ESX** **Host**

SAN

**Storage
system**

LUNS

**Management
points**

**Management
points**

**Management
points**

**Management
points**

**Storage
Resource
Management**

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Storage Operations Manager overview

Storage Operations Manager
Built on highly scalable NNMi Architecture
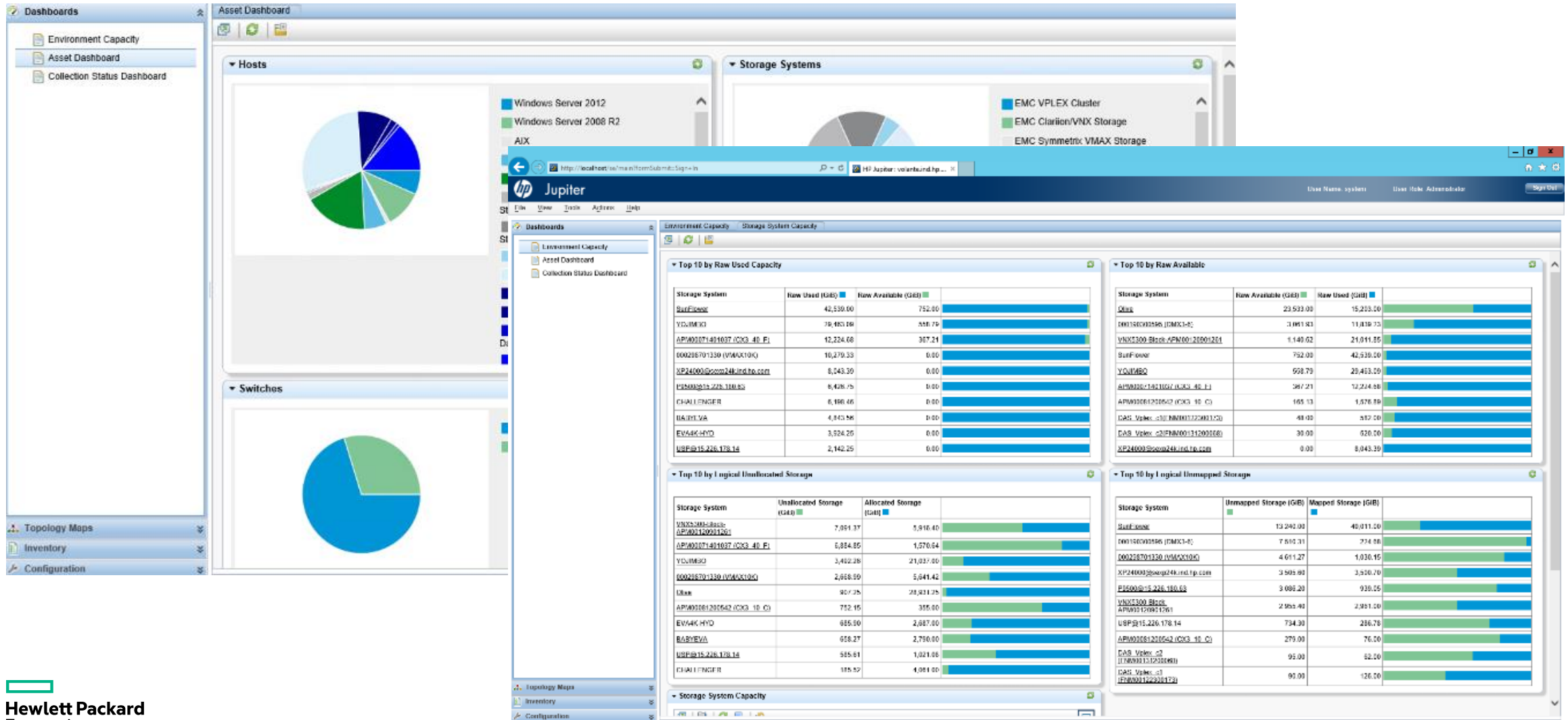
Unified resource optimization
HPE's approach to global SRM

Business value

Embrace complexity and innovation

Improve service quality and delivery while driving consistent performance and increase profitability to the business

Capacity optimized

E2E SAN health mgmt.

Performance, utilization

Physical and virtual storage management

Admin

Resources

Geo

Efficiency

Speed
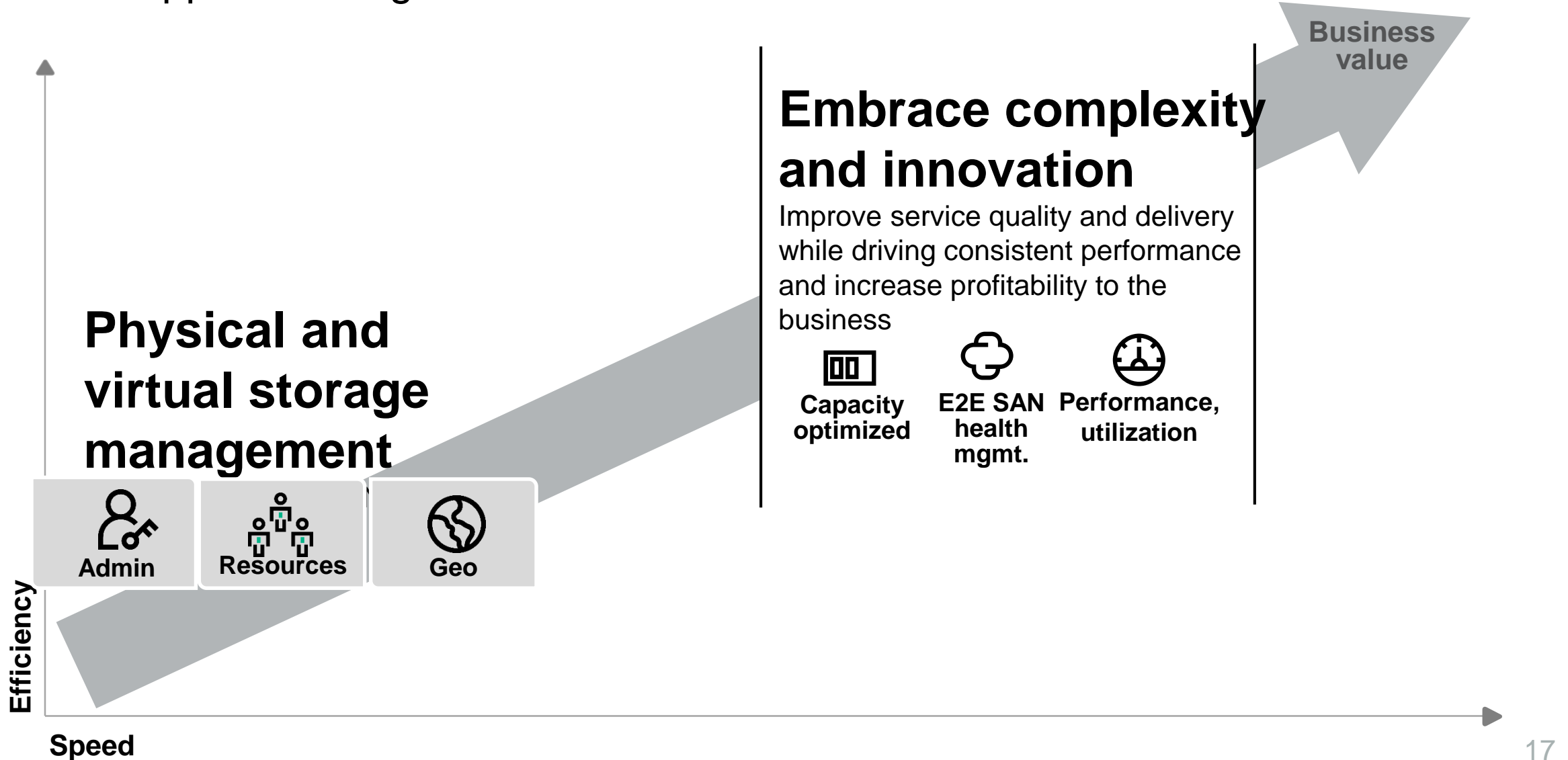
Massive scalability
Scalable architecture, NAT support, element-based discovery
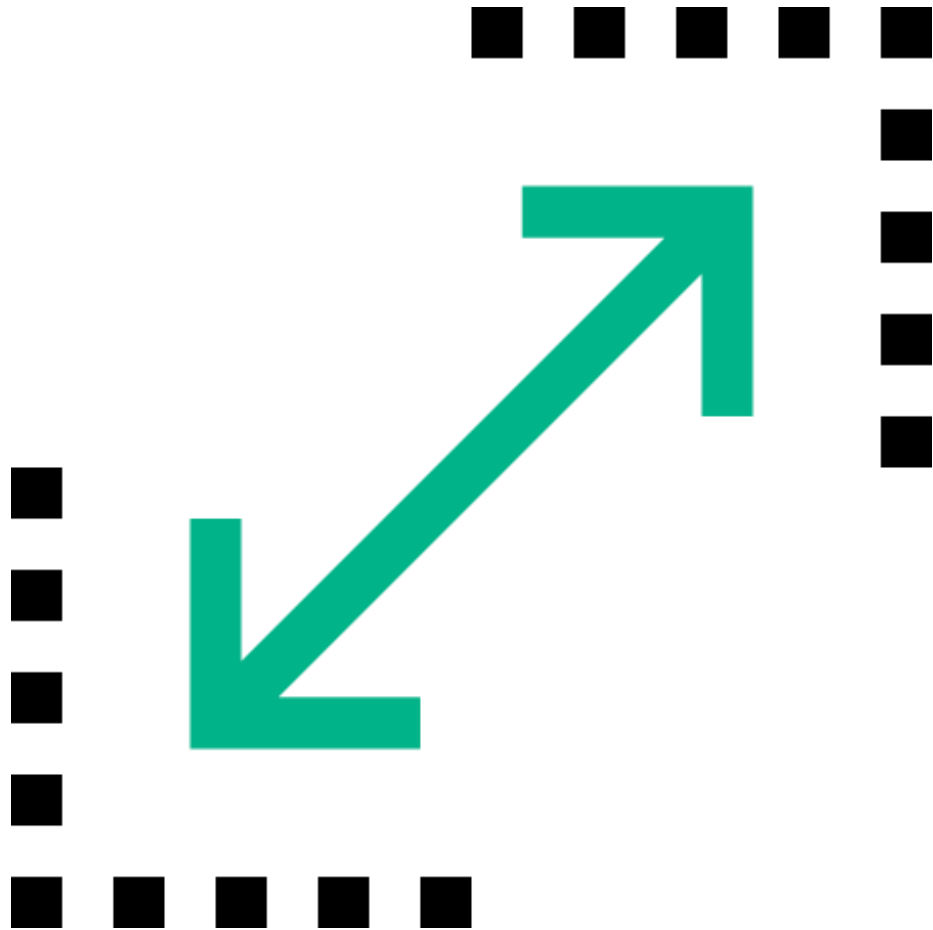
Features

- Time-tested NNMi platform

- Massive horizontal scalability

- Support for NAT and Cloud environments

- Path and dependency resolution at the global reporting level - OBR

- Continuous element-based discovery

Storage Analytics
Prepare, predict and pinpoint IT issues to defend against complex system failure

SRM Analytics Use Cases

- Analytics of Thin Provisioning in a virtual environment

- Advanced Analytics in the Virtual Infrastructure

- DTT analytics for physical array capacity

- Storage Path Performance Analytics

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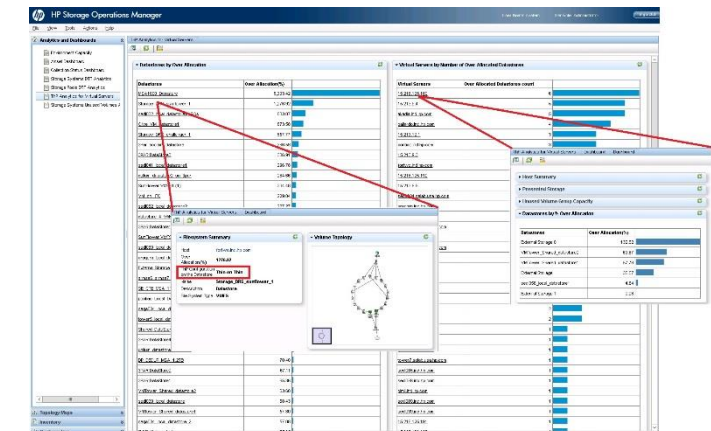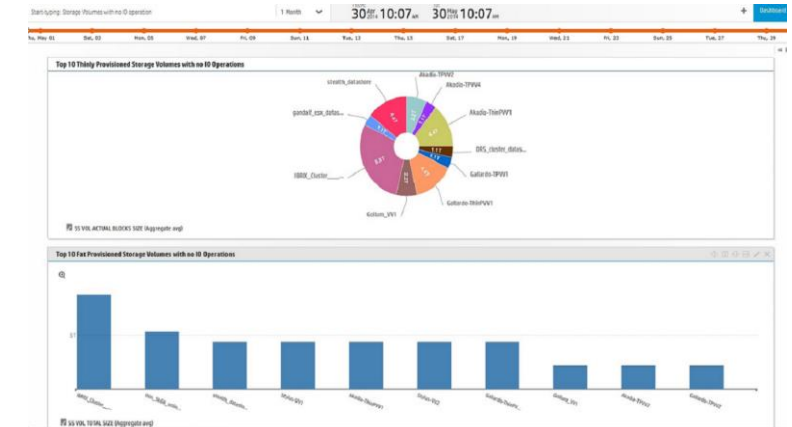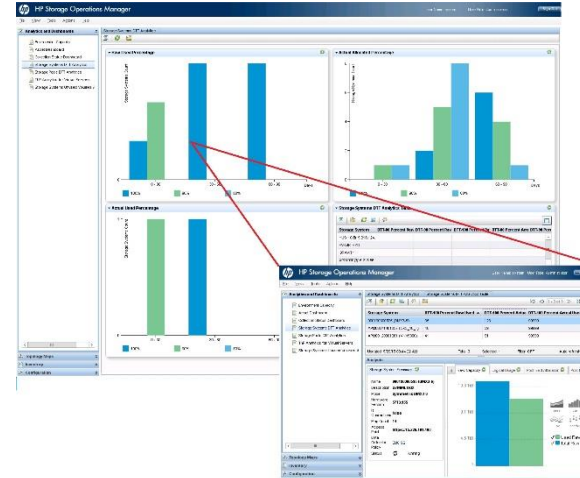
Virtual Server Analytics dashboard: Capacity Management

- Monitor storage availability on virtual servers

- Snapshot management

- Powered-off VM management
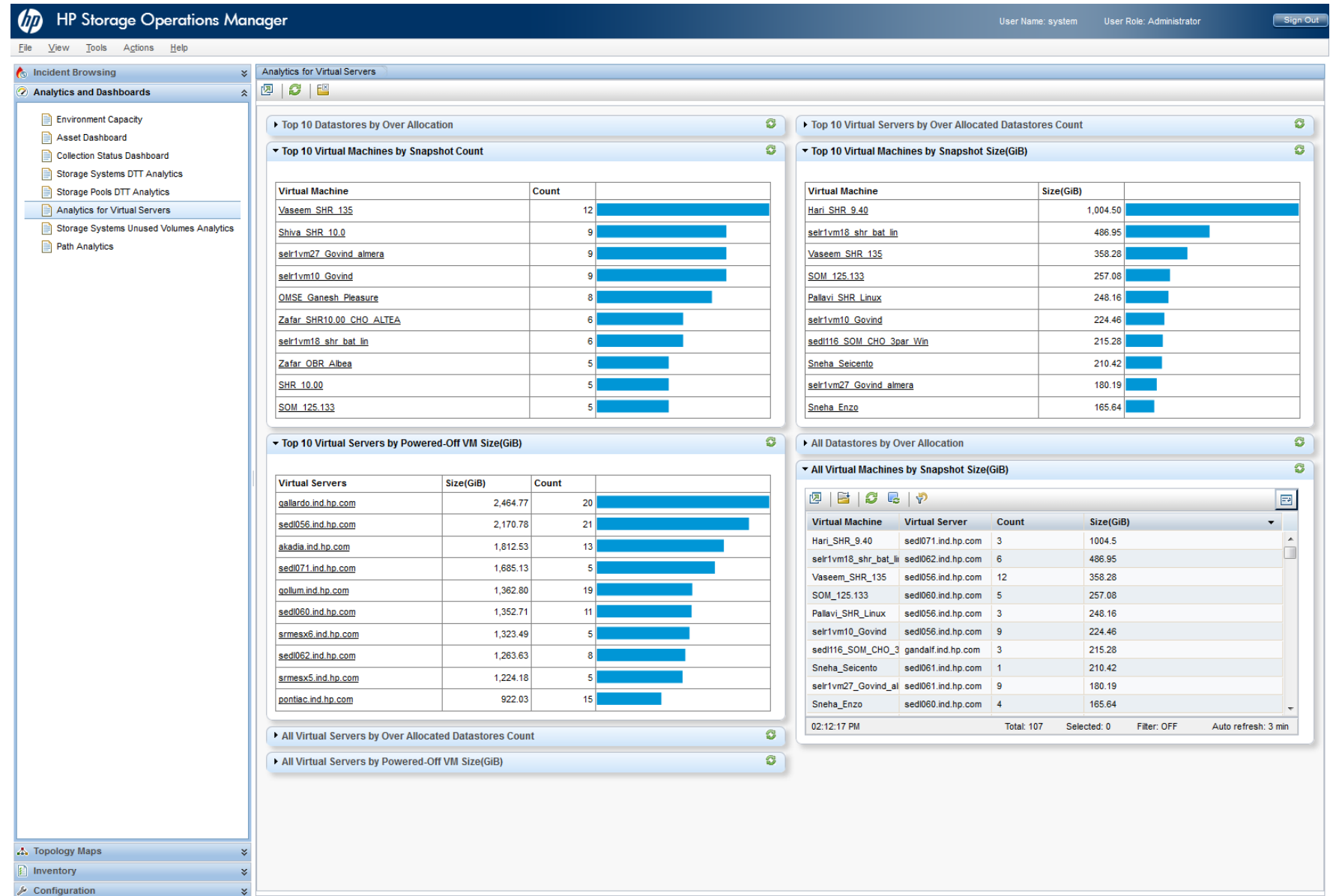
Virtual Server Analytics dashboard: Thin Provisioning (ThP)

- Enhanced ThP Analytics

- Track physical storage available for expansion
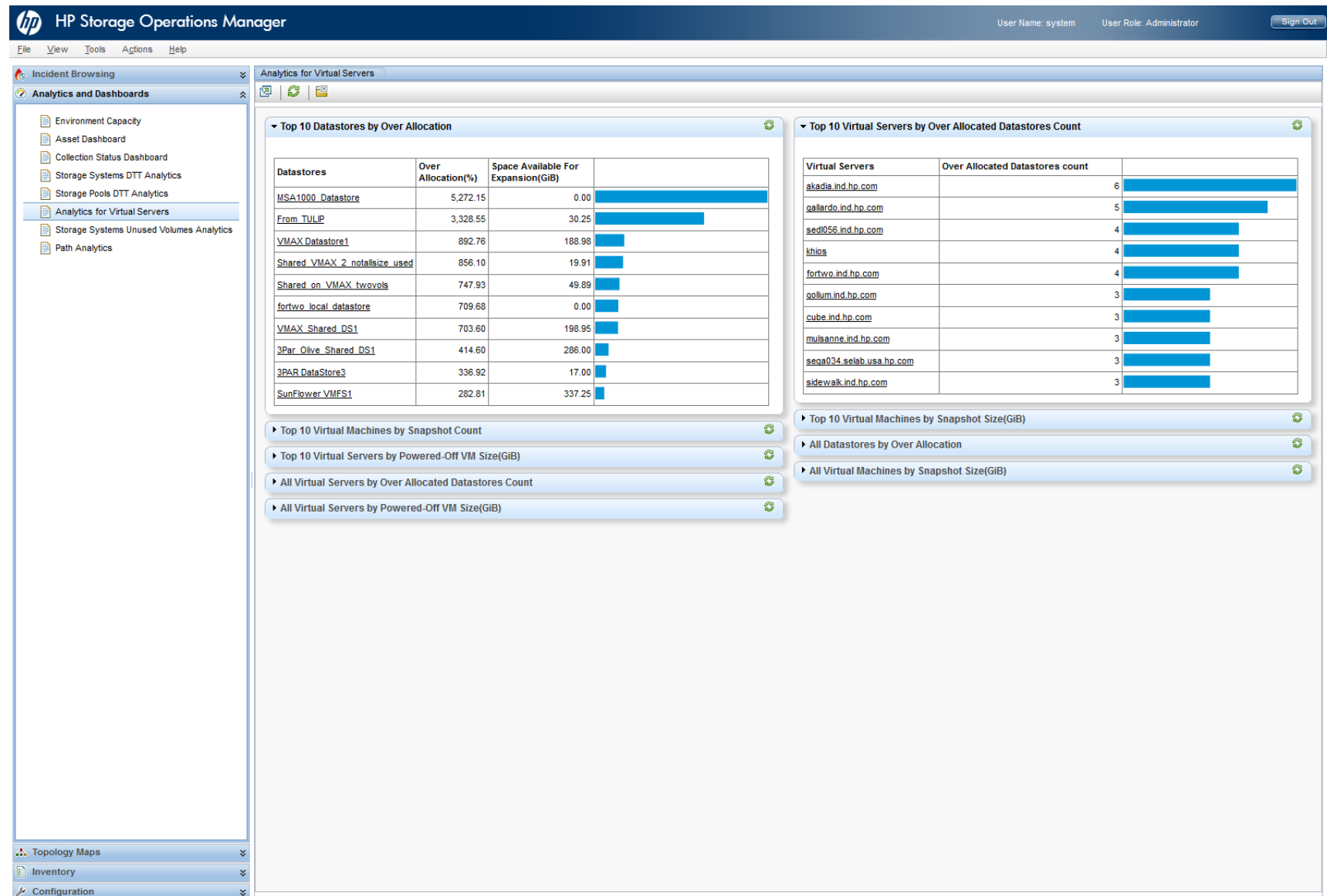
Virtual Server Analytics dashboard: Host Level

- Monitor storage availability at each virtual server

- Over-allocated datastores

- Powered off VMs

Path Analytics dashboard

- Storage volumes with single points of failure

- Hosts with missing LUN paths

- Hosts with shared storage volumes
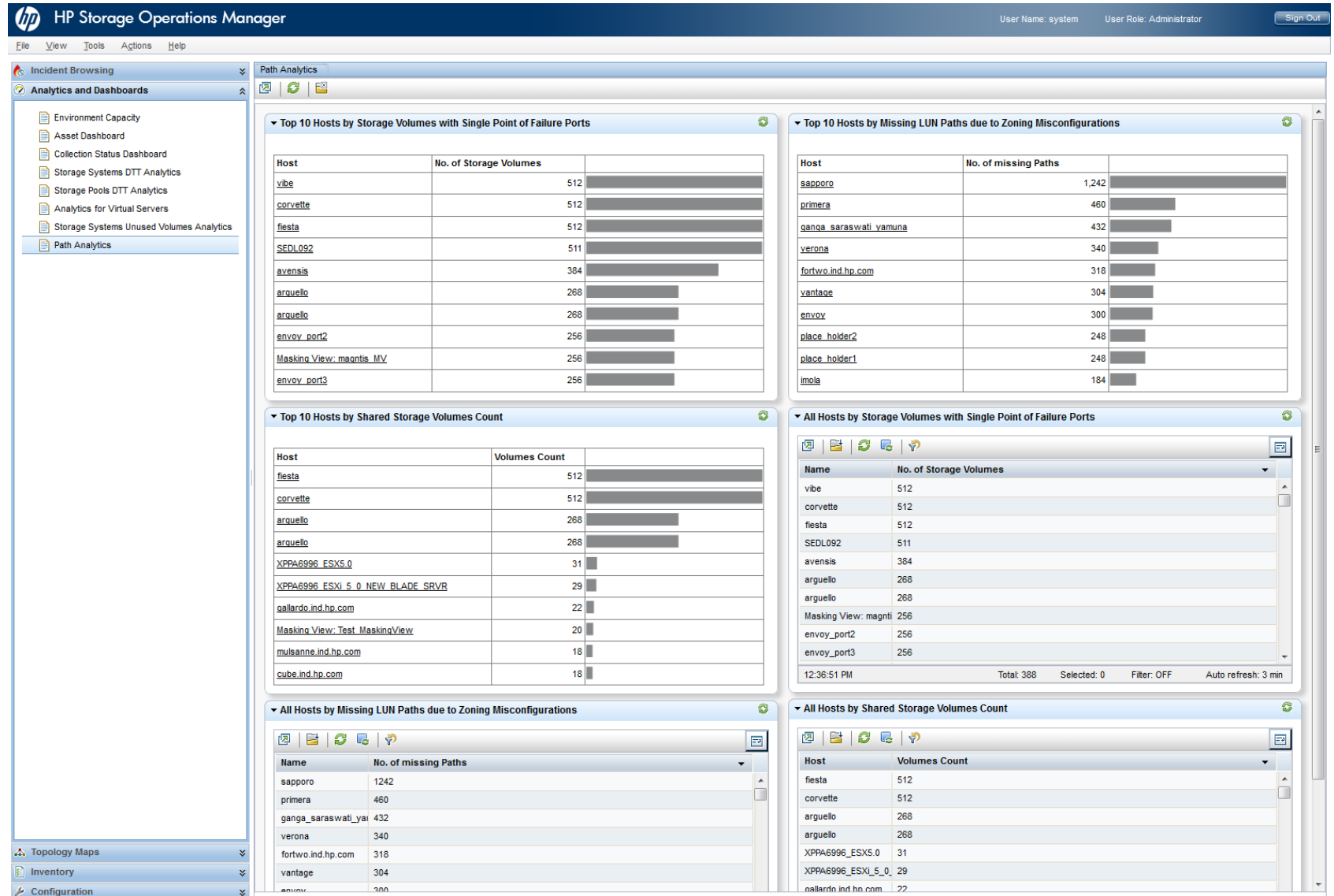
Path Analytics dashboard: Host level

- Storage paths that lack redundancy

- Zoning misconfigurations

- Volumes shared with other hosts

Storage Operations Manager 10.10
New feature demo

Storage Operations Manager 10.10
Call to action

Where can I learn more?

SOM 60-day Free Trial - hpe.com/software/som

SOM Documentation - https://softwaresupport.hp.com/group/softwaresupport/search-result/-facetsearch/document/KM01435209

SOM Blogs

- http://www.techazine.com/2015/06/03/evaluating-hp-storage-operations-manager-from-the-customer-perspective/
- http://www.techazine.com/2015/06/03/installing-off-cycle-device-bundles-for-hp-storage-operations-manager/
- http://www.techazine.com/2015/06/10/installation-walkthrough-of-hp-storage-operations-manager/
- http://h30499.www3.hp.com/t5/Business-Service-Management-BAC/How-to-reclaim-your-storage-from-unused-VMs-in-2-easy-steps/ba-p/6741757#.VUprRPlVhBc
- http://h30499.www3.hp.com/t5/Business-Service-Management-BAC/How-the-new-Storage-Operations-Manager-finally-gets/ba-p/6745111#.VVaNaflViko
- http://h30499.www3.hp.com/t5/Business-Service-Management-BAC/Storage-Operations-Manager-the-next-evolution-of-storage/ba-p/6746364
- http://community.hpe.com/t5/Business-Service-Management/Announcing-Storage-Operations-Manager-version-10-10/ba-p/6830467#.VrOmq-a2Wuo

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