

SUSE® Storage

FUT7537

Software Defined Storage Introduction and Roadmap:
Getting your tentacles around data growth

Larry Morris

Sr. Product Manager

lmorris@SUSE.com



AGENDA

Enterprise Data Storage Market

SUSE Storage Product

SUSE Storage Solutions (Futures)

SUSE Storage Roadmap

Questions

Enterprise Data Storage Market

Current Enterprise Data Storage Market

More data to store

- business needs
- more data driven processes
- more applications
- e-commerce



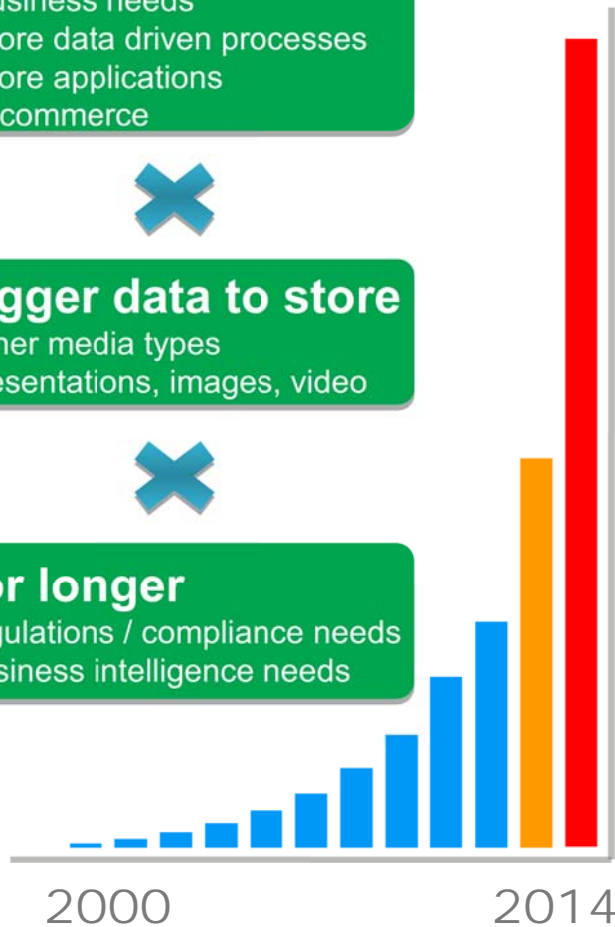
Bigger data to store

- richer media types
- presentations, images, video



For longer

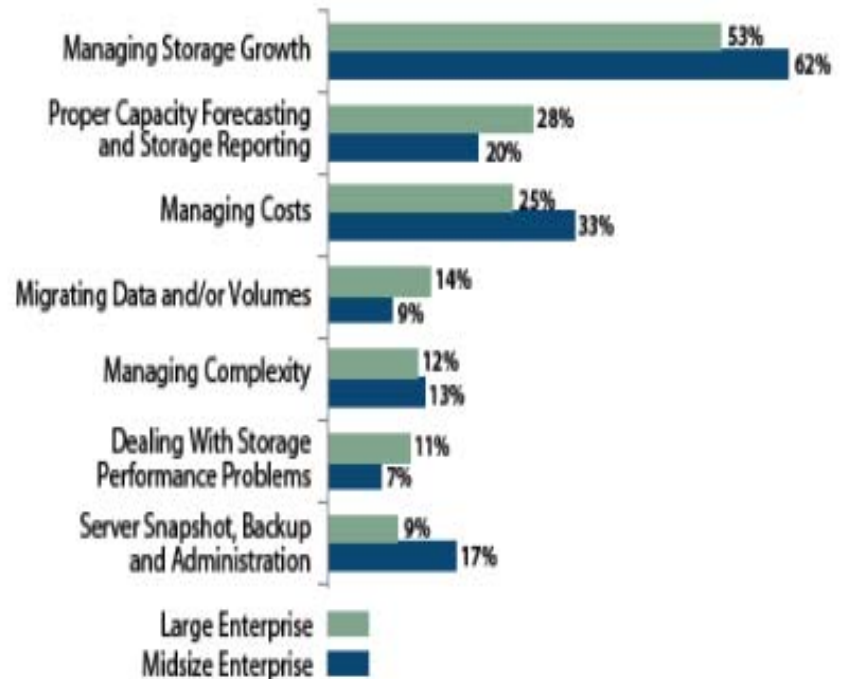
- regulations / compliance needs
- business intelligence needs



Top Seven Pain Points:

What are your top storage-related pain points?

Large Enterprise Sample: n=180; Midsize Enterprise Sample: n=69.



The InfoPro Storage Study 1H12 – 451 Research



Enterprise Storage Today

Proprietary products and tools

- Integration and management complexity (OPEX)
- Expensive (CAPEX)

Business pressure on CIO

- Improve service level agreements
- Deliver innovation to the business
- Manage information explosion
- Flat budgets

Enterprise storage solutions

- Similar hardware components
- Similar software functionality

**Undifferentiated
Market**

Enterprise Storage Tomorrow

Differentiated “Tiered” Information

- Timely Identification, Classification, and Efficient Placement

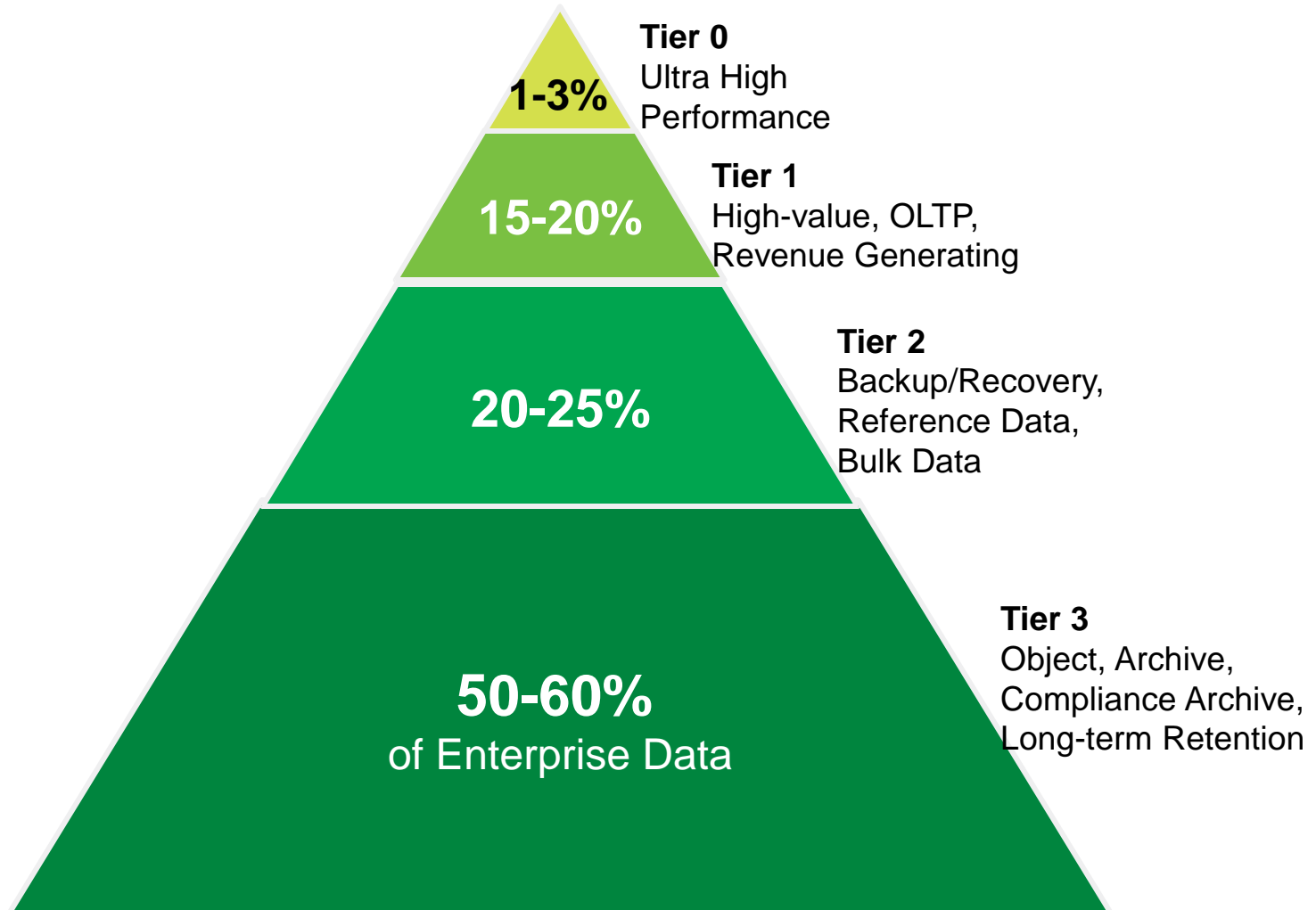
Software-Based Storage (OPEX)

- Separated Control Plane and Data Plane
- Open, Extensible, Unified and Simplified

Industry Standard Hardware Building Blocks (CAPEX)

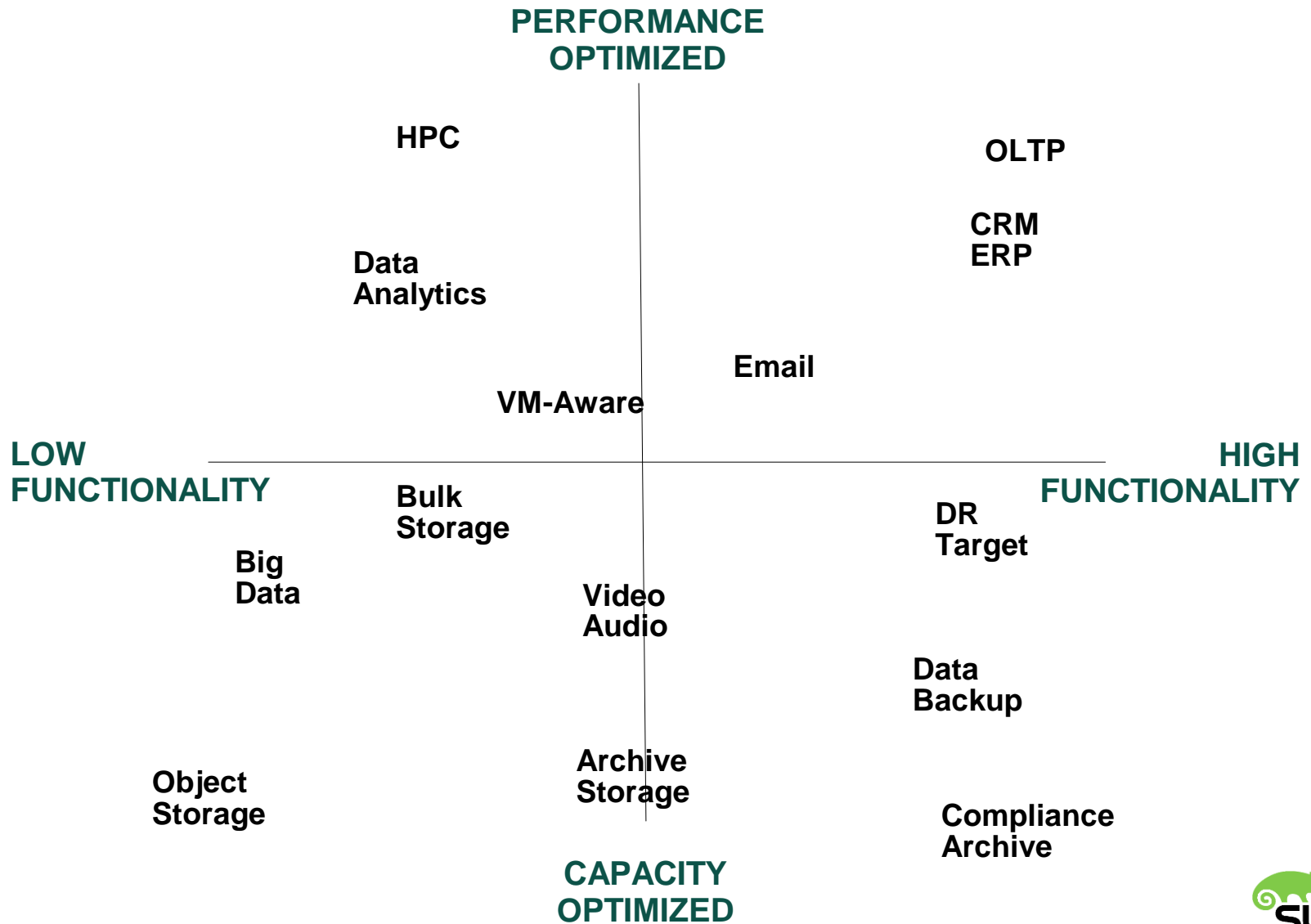
- Commodity Off-the-Shelf Servers for Control Plane
- Commodity Off-the-Shelf Drives for Data Plane

Enterprise Data Capacity Utilization (Percent)



Source: *Horison Information Strategies* - Fred Moore

Enterprise Data Storage: Use Cases



SUSE Storage Product

SUSE Storage Architectural Benefits

SCALABILITY

NO SINGLE POINT OF FAILURE

100% SOFTWARE BASED

AUTOMATED MANAGEMENT

- Self Managing
- Self Repairing

SUSE Storage with Ceph

Most Popular OpenStack Distributed Storage Solution

Extensively Scalable

- Storage Appliance to Cost Effective Cloud Solution

Industry Leading Storage Functionality (As of Firefly Release)

- Unified Block and Object with File Coming
- Thin Provisioning
- Erasure Coding
- Cache Tiering

Built upon Clustered Servers

- Self Healing
- Self Managing



SUSE Storage Product Positioning

High-End
Disk Array



Mid-Range
Array



Fully Featured
NAS Device



Mid-Range
NAS

Entry Level
Disk Array



JBOD Storage



SUSE Storage List Pricing

Capacity Based Pricing

- Tiered Capacity Pricing
 - \$5000 for 36 Terabytes (Raw Capacity)
- Storage Servers and Monitors (SUSE Linux Enterprise Server)
 - \$1499 per Server (Socket Pair)

Example (Software Only)

- 36 Terabytes + 1 Server = \$6500
- 250 Terabytes + 10 Servers < \$50,000
 - \$0.017 per GB per Month



SUSE Storage Business Benefits

SAVINGS: Total Cost of Ownership

- Reduced CAPEX Expenditures
- Reduced OPEX Expenditures
- SUSE Focus On Ease of Management

FLEXIBILITY: Adaptability to Evolving Business Needs

- Reduced Dependency Upon Proprietary “Locked In” Storage

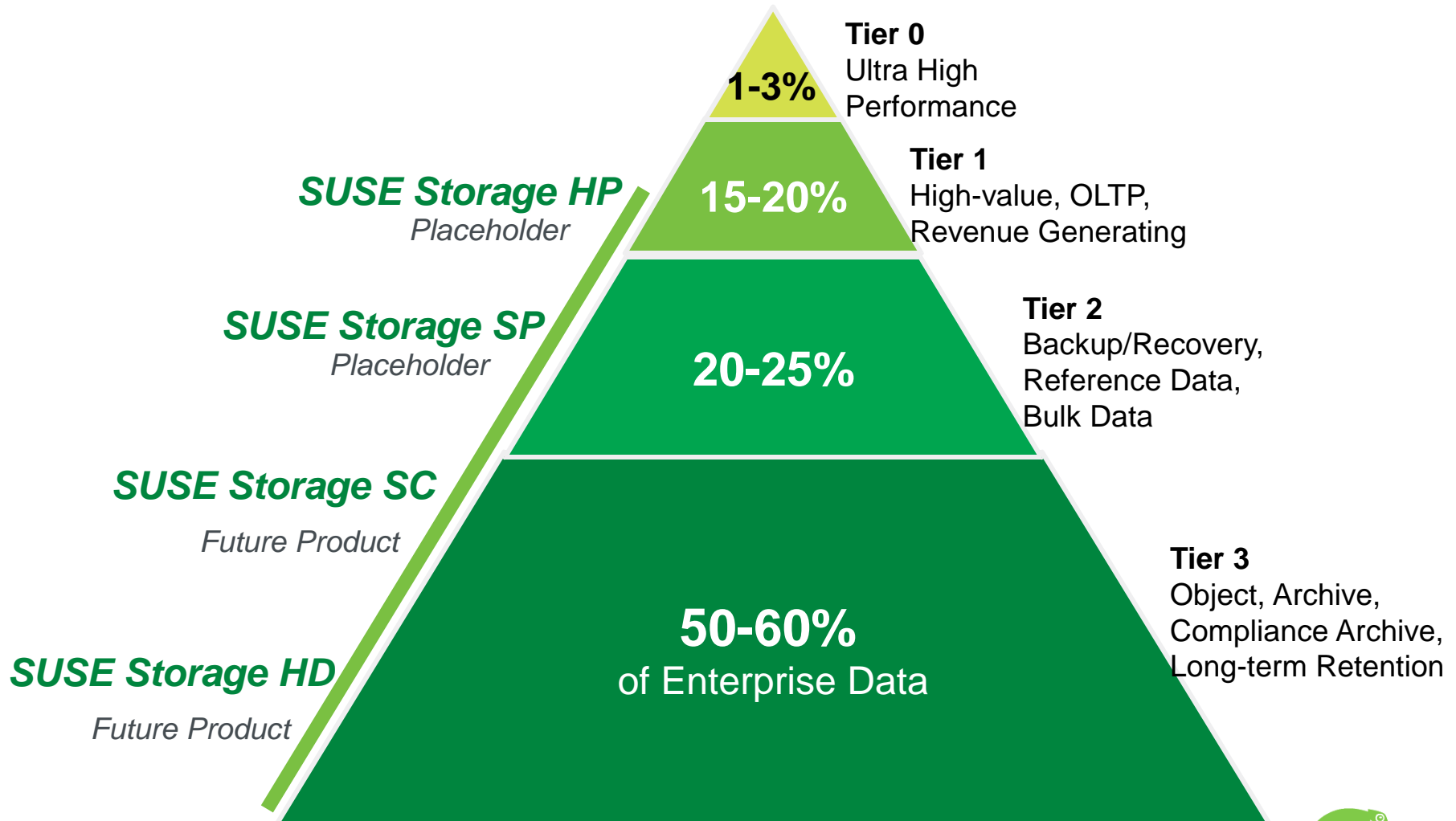
CONFIDENCE: Reliability and Availability

- Leverage SUSE World Class Support and Services



SUSE Storage Solutions (Futures)

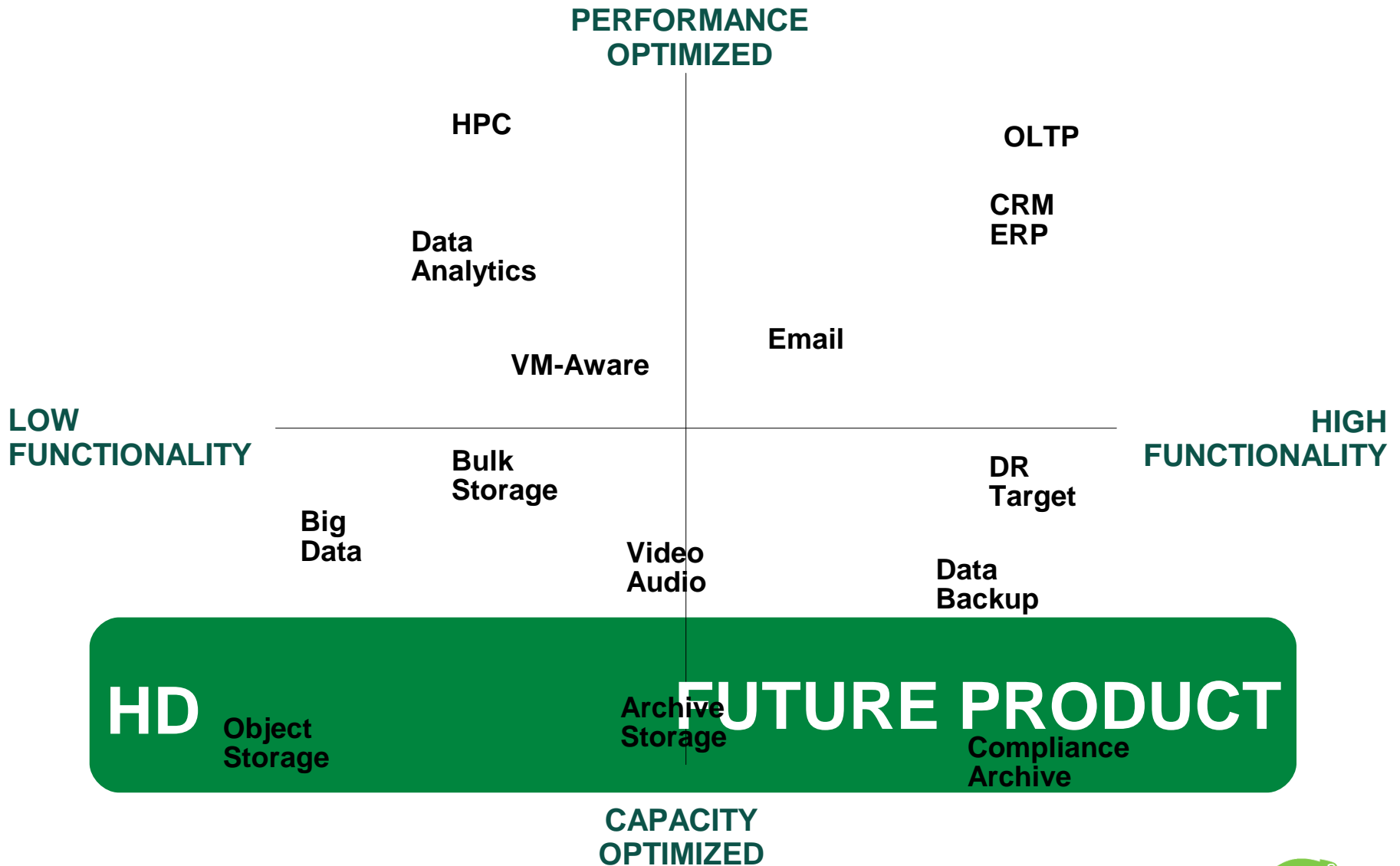
SUSE Storage Configuration Positioning



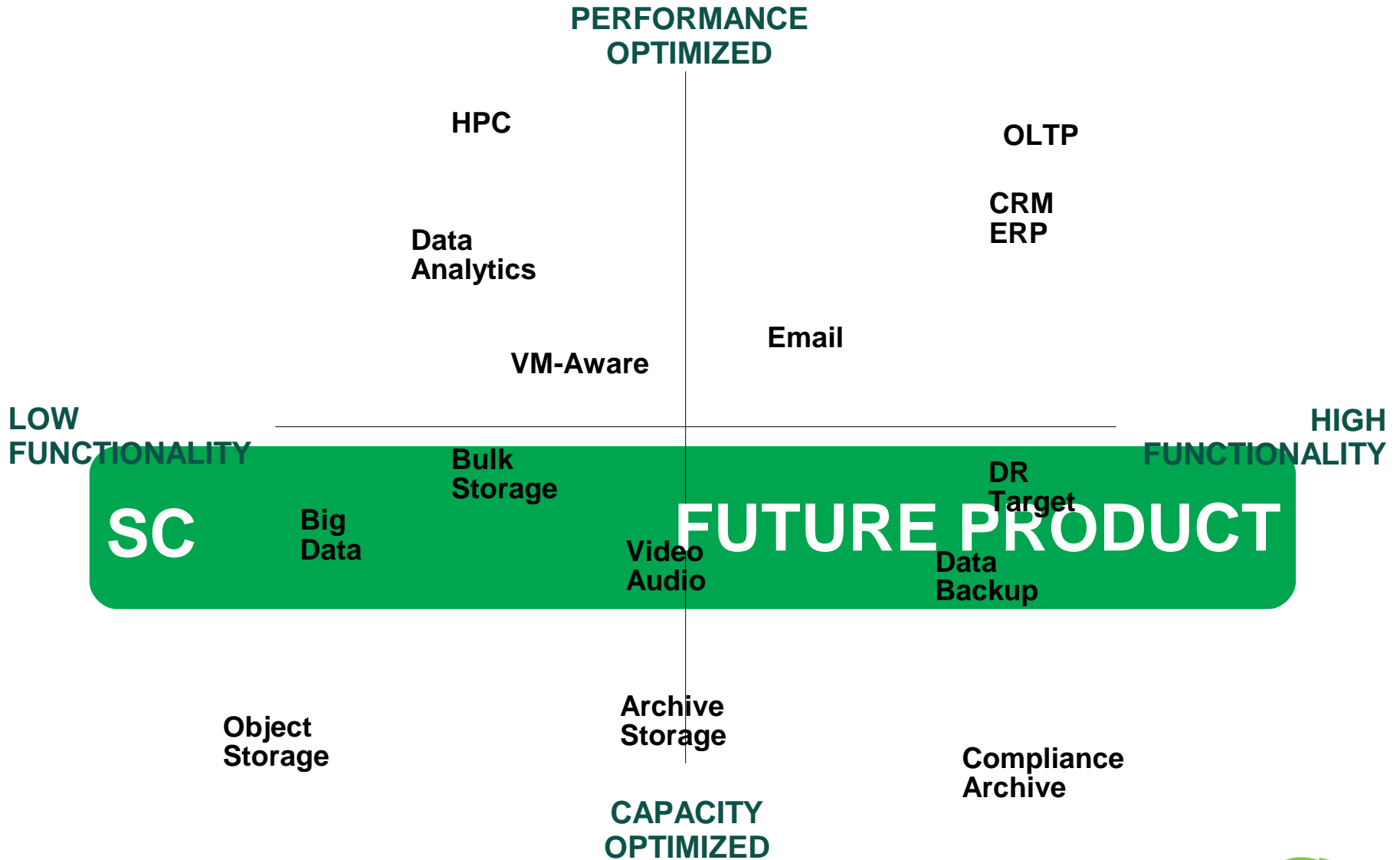
Source: Horizon Information Strategies - Fred Moore



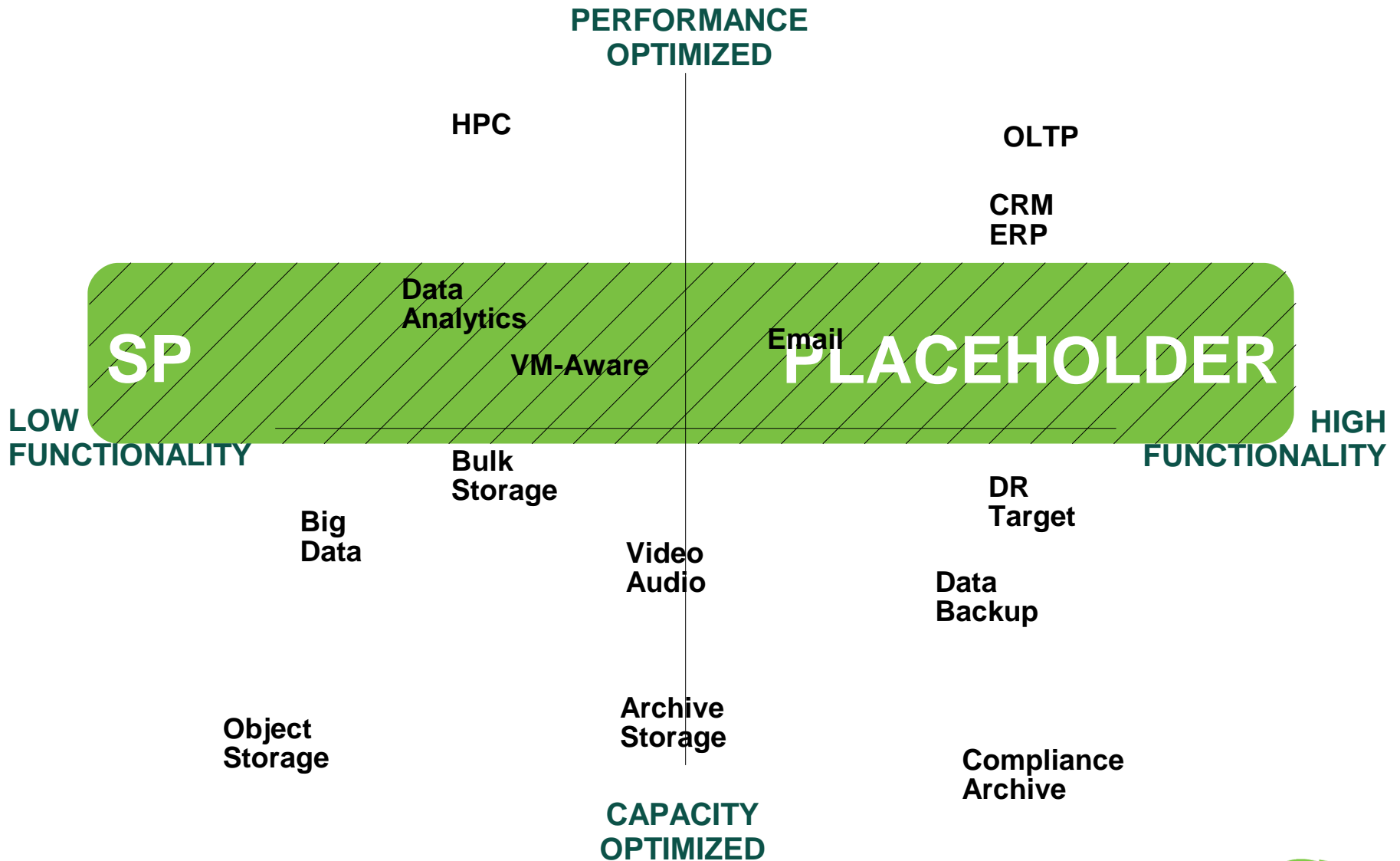
SUSE Storage High Density



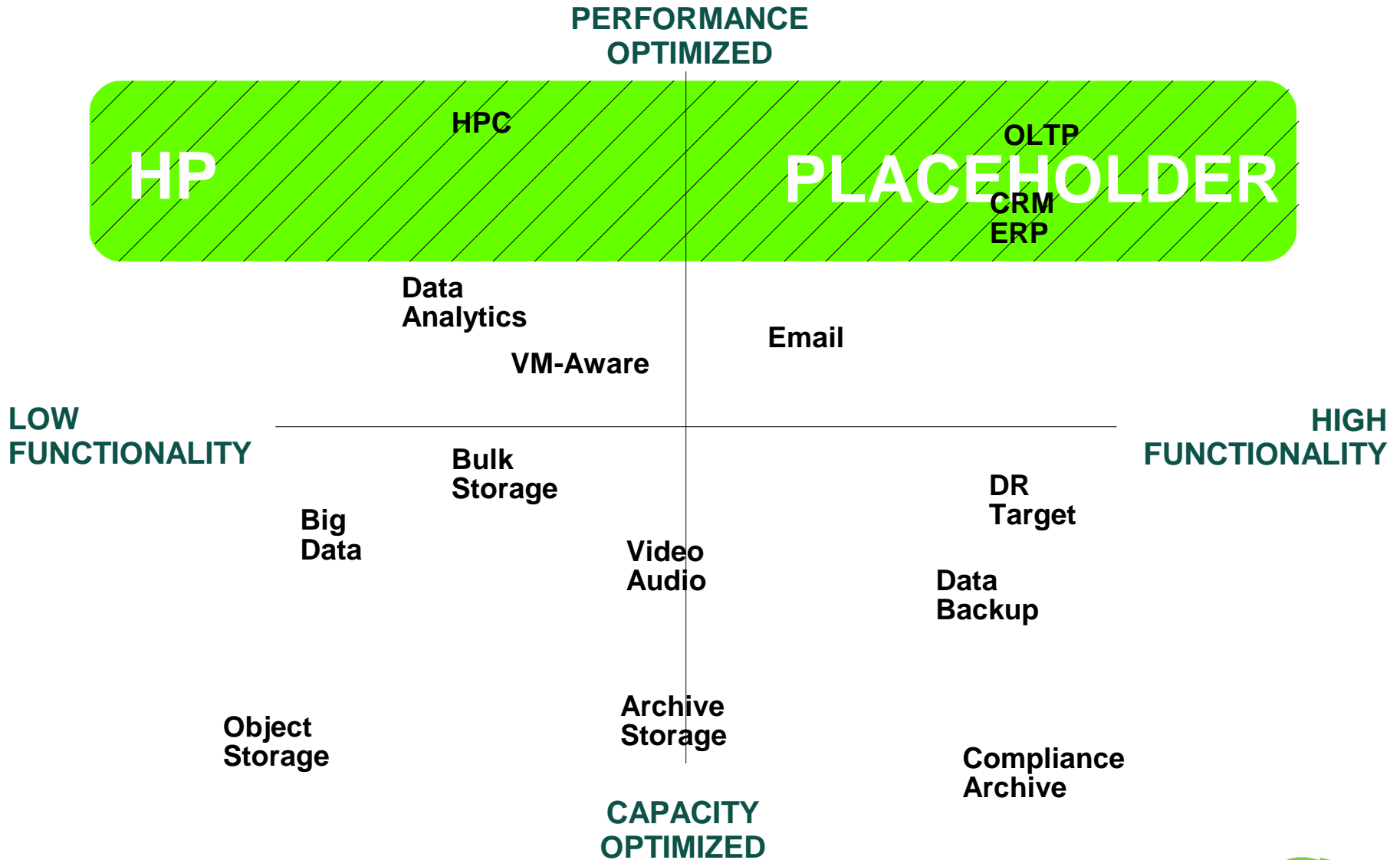
SUSE Storage Standard Capacity



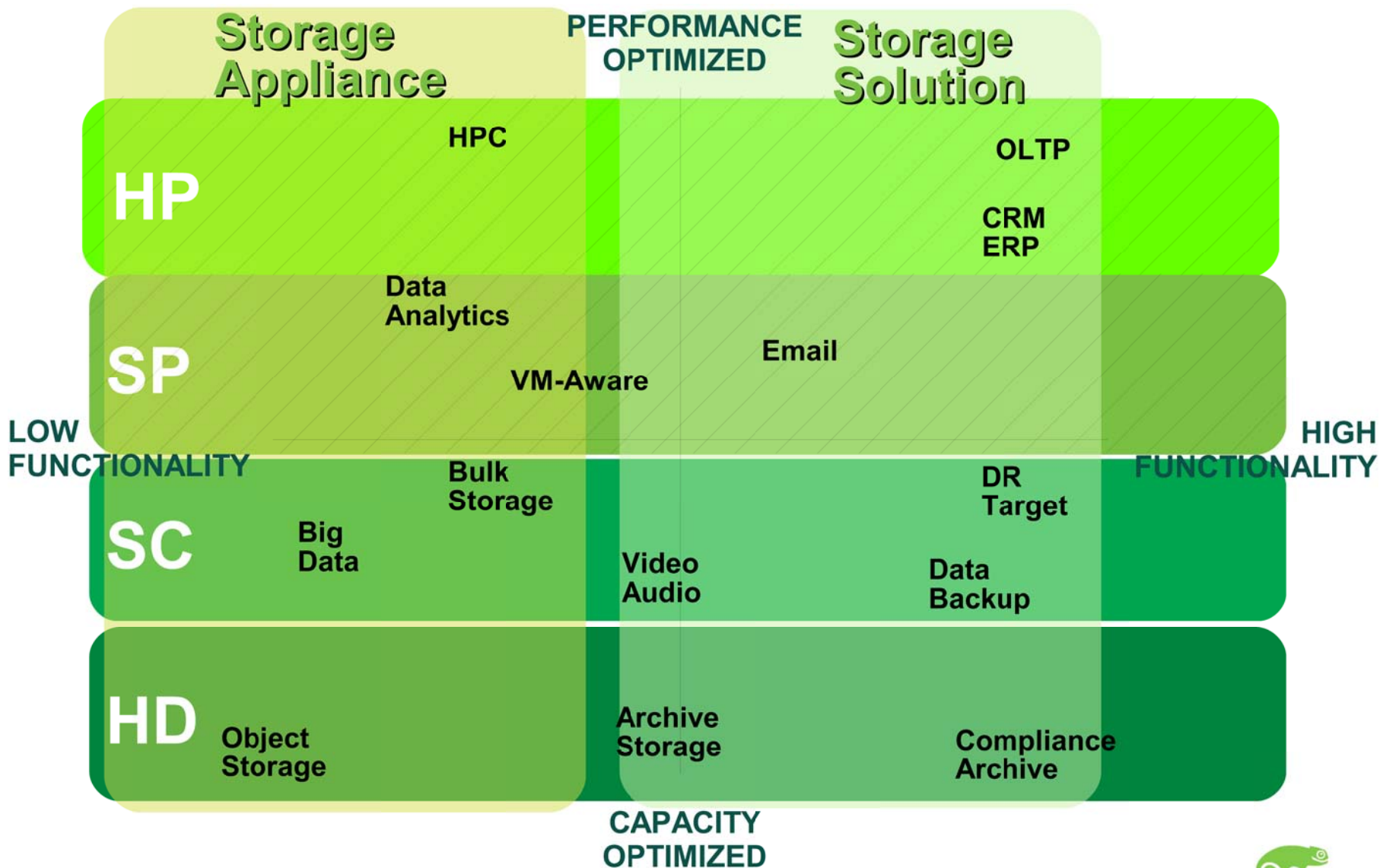
SUSE Storage Standard Performance



SUSE Storage High Performance



SUSE Storage: Appliance and Solution



SUSE Storage HD

High Density

- Erasure Coding for Redundancy
- 36-62 Drive Storage Node Configuration
 - 2 High Performance SAS Drives
 - 34-60 High Capacity SATA Drives

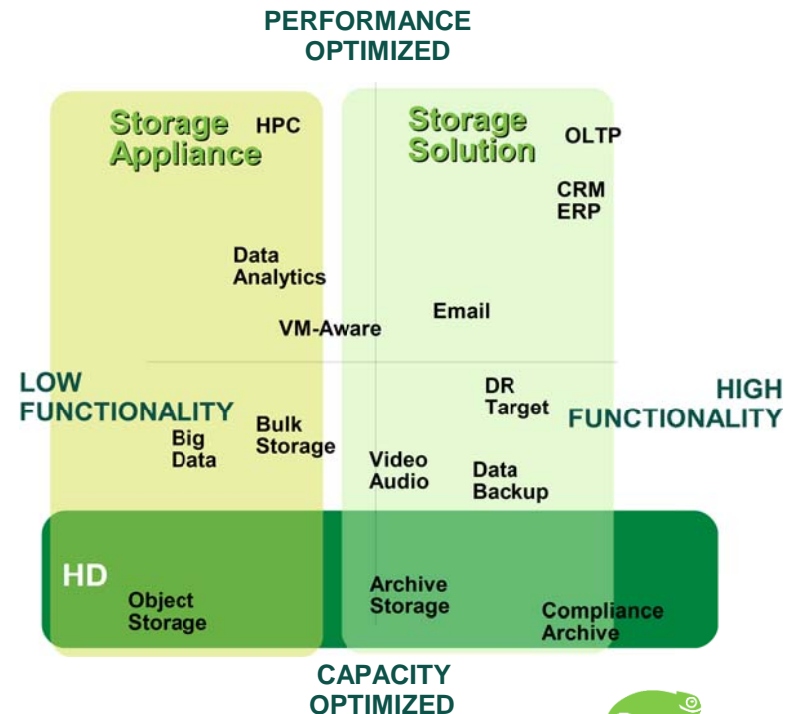


Storage Appliance Use Case:

- Object Storage
 - RESTful APIs (Swift or Amazon S3)

Storage Solution Use Cases:

- Archive Storage
 - Integrate De-Duplication Software
 - Integrate Backup Software
- Compliance Archive
 - Integrate De-Duplication Software
 - Integrate Backup Software
 - Integrate Authenticity/Data Tampering



SUSE Storage SC

Standard Capacity

- Replicated Copies for Redundancy
- 8-12 Drive Storage Node Configuration
 - 2 SSD Drives
 - 6-10 High Capacity SAS/SATA Drives

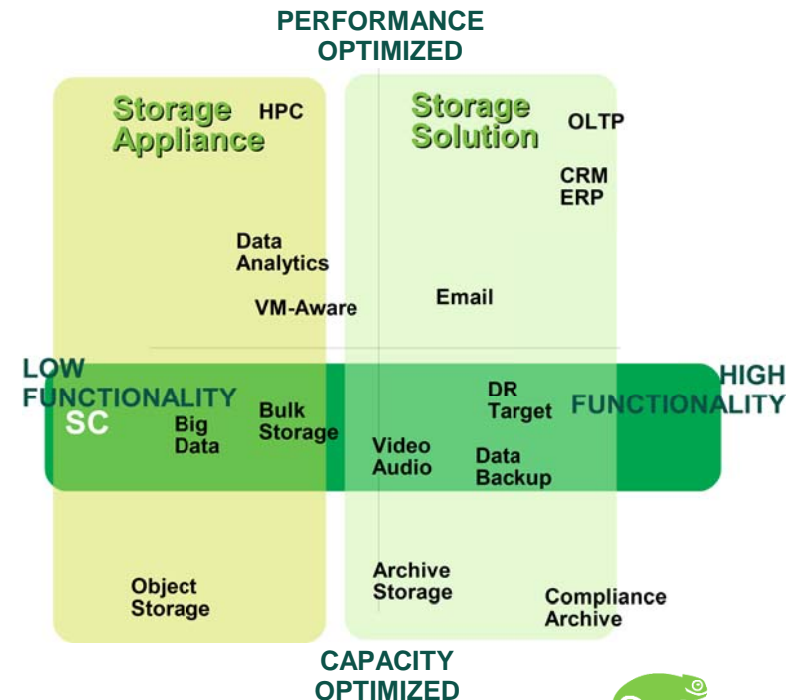


Storage Appliance Use Cases:

- Big Data/Hadoop (**CephFS Dependency**)
- Bulk Storage (not high performance access)

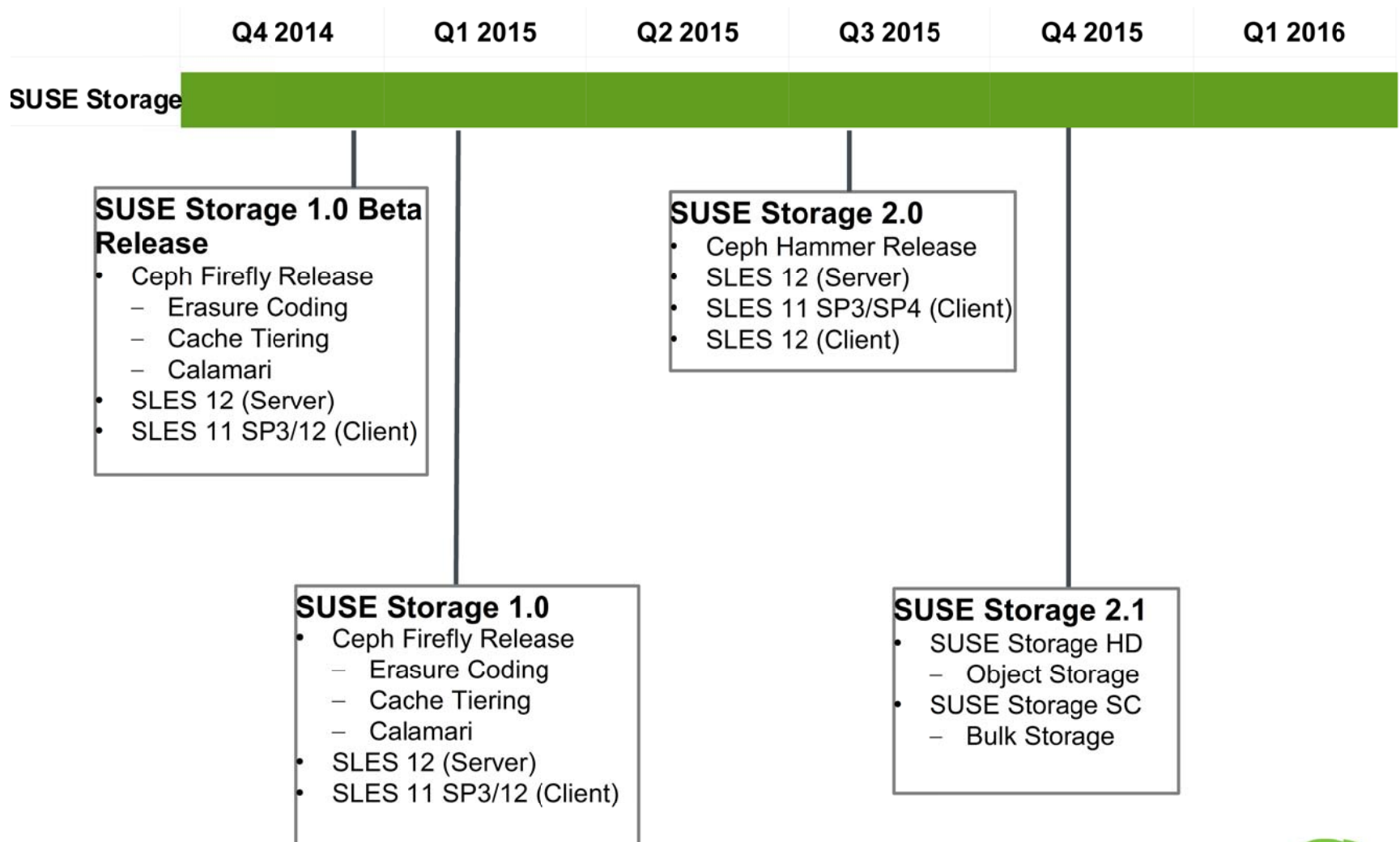
Storage Solution Use Cases:

- Video/Audio
 - Integrate Streaming Software
- Disk-To-Disk Backup Target
 - Integrate De-Duplication Software
 - Integrate Backup Software
- Disaster Recovery Target
 - Integrate Remote Replication Software



SUSE Storage Roadmap

SUSE Storage Roadmap



QUESTIONS



Corporate Headquarters
Maxfeldstrasse 5
90409 Nuremberg
Germany

+49 911 740 53 0 (Worldwide)
www.suse.com

Join us on:
www.opensuse.org

Unpublished Work of SUSE LLC. All Rights Reserved.

This work is an unpublished work and contains confidential, proprietary and trade secret information of SUSE LLC. Access to this work is restricted to SUSE employees who have a need to know to perform tasks within the scope of their assignments. No part of this work may be practiced, performed, copied, distributed, revised, modified, translated, abridged, condensed, expanded, collected, or adapted without the prior written consent of SUSE. Any use or exploitation of this work without authorization could subject the perpetrator to criminal and civil liability.

General Disclaimer

This document is not to be construed as a promise by any participating company to develop, deliver, or market a product. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. SUSE makes no representations or warranties with respect to the contents of this document, and specifically disclaims any express or implied warranties of merchantability or fitness for any particular purpose. The development, release, and timing of features or functionality described for SUSE products remains at the sole discretion of SUSE. Further, SUSE reserves the right to revise this document and to make changes to its content, at any time, without obligation to notify any person or entity of such revisions or changes. All SUSE marks referenced in this presentation are trademarks or registered trademarks of Novell, Inc. in the United States and other countries. All third-party trademarks are the property of their respective owners.

