

# SUSE HPC Update

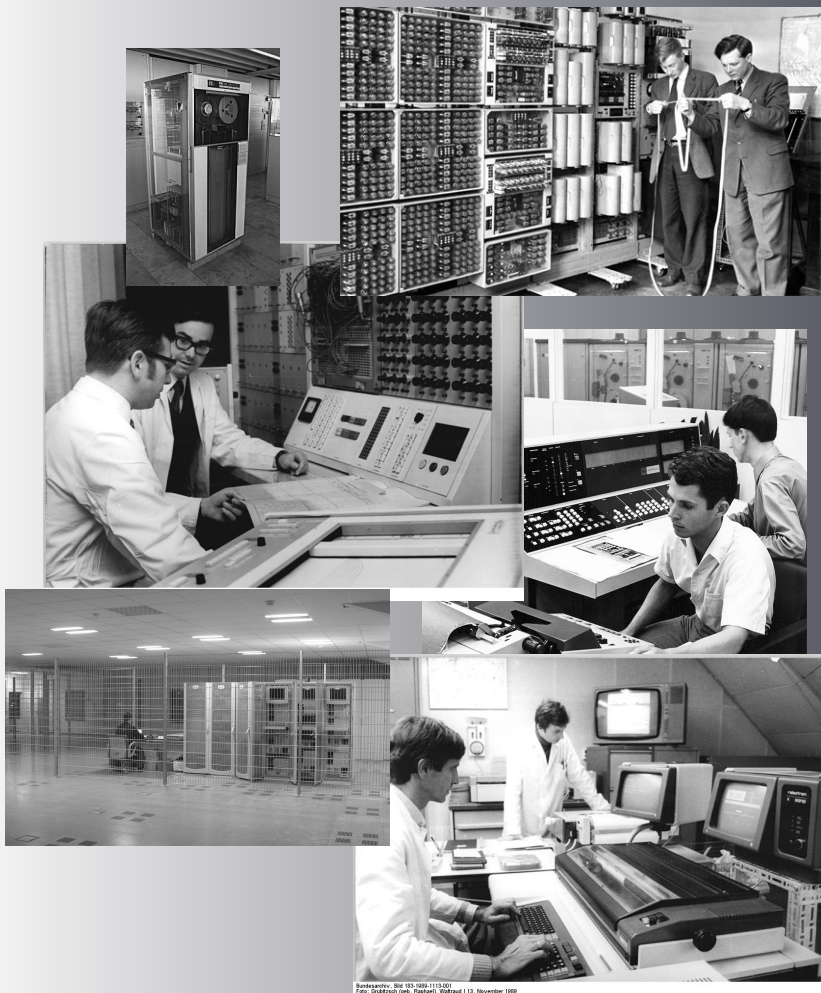
**Kai Dupke**

Senior Product Manager

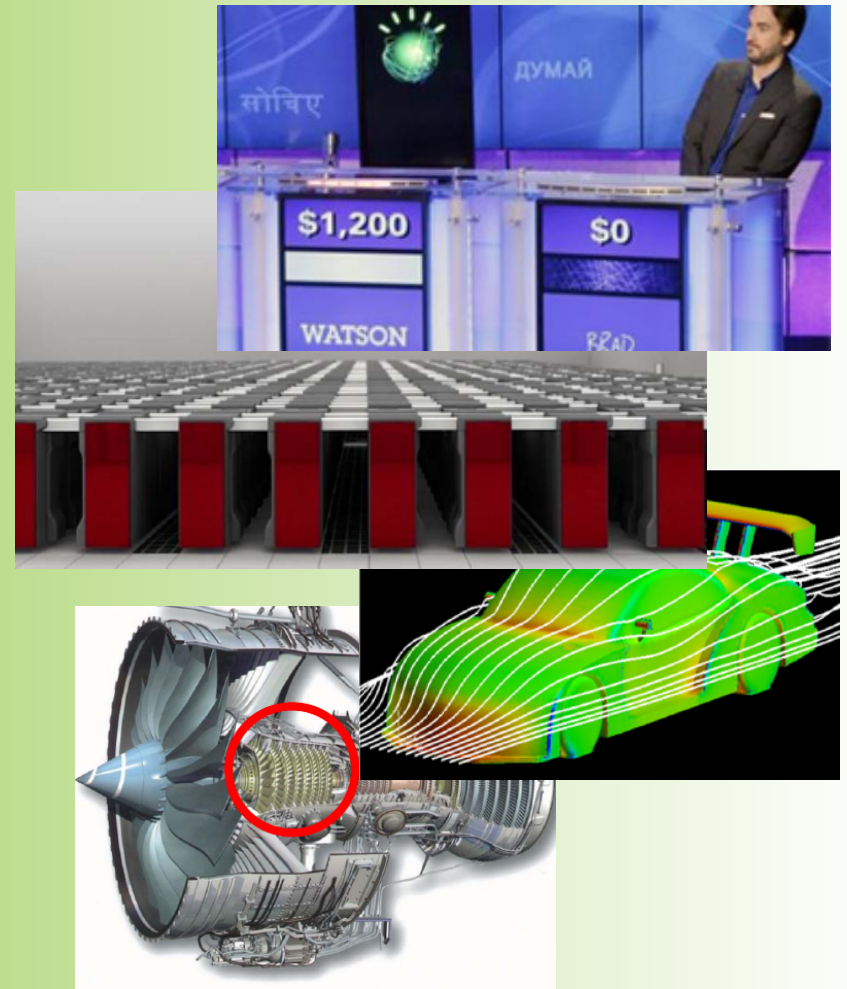
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**History**



**Future**

# Split Market

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## Scientific Top 500-class

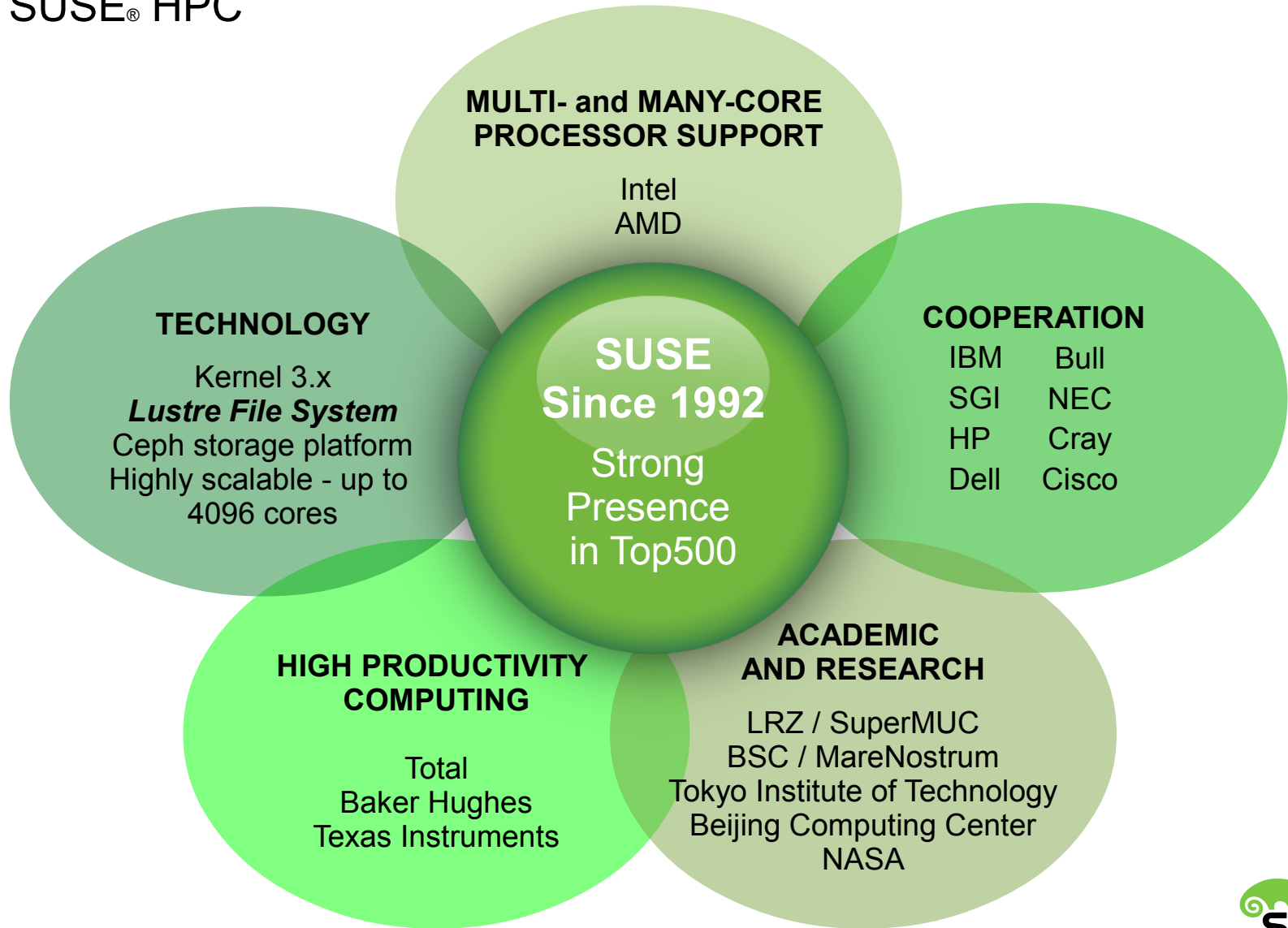
- Lighthouse projects
- Government sponsored
- Generic workloads
- Often self-supported by Academic staff
- Specialized hardware

## Commercial High Productivity Computing

- Highly specialized application
- ROI and reliability are key
- Data Center support
- Commodity hardware

# SUSE – Strong in HPC Market!

SUSE® HPC



# Market Challenges

# Challenge I: Commercialization

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- Commercial customer to enter High Productivity Computing
  - Hidden deployments, no benchmarks done/published
  - Just enough performance, time to solve is key
  - Reliability and SLAs are important
  - Data center approach



# Challenge II: Virtualization

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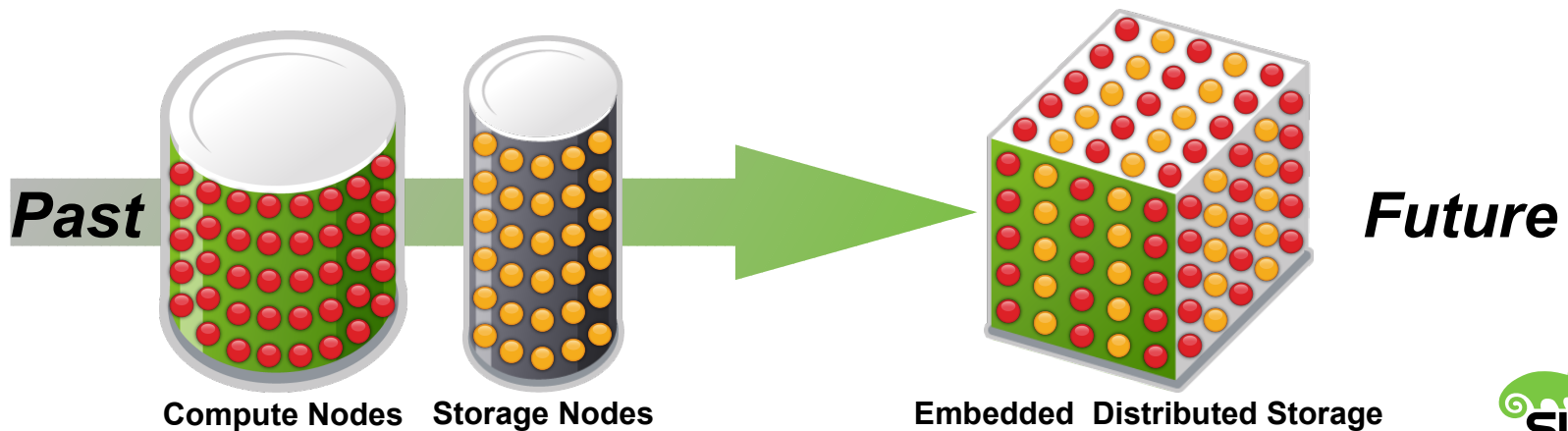
- Adding flexibility and decreasing complexity
  - Simplify systems management
  - Off-line application development
  - Simplified job deployment
  - Integration with cloud and capacity on demand



# Challenge III: Storage

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- Move from file system access to object level access
  - Redevelopment of tools and applications
- Embedded distributed storage (e.g. CEPH)
  - End of compute and storage silos
    - CPUs to do what's needed
    - Maximize CPU utilization
    - Maximize return on invest

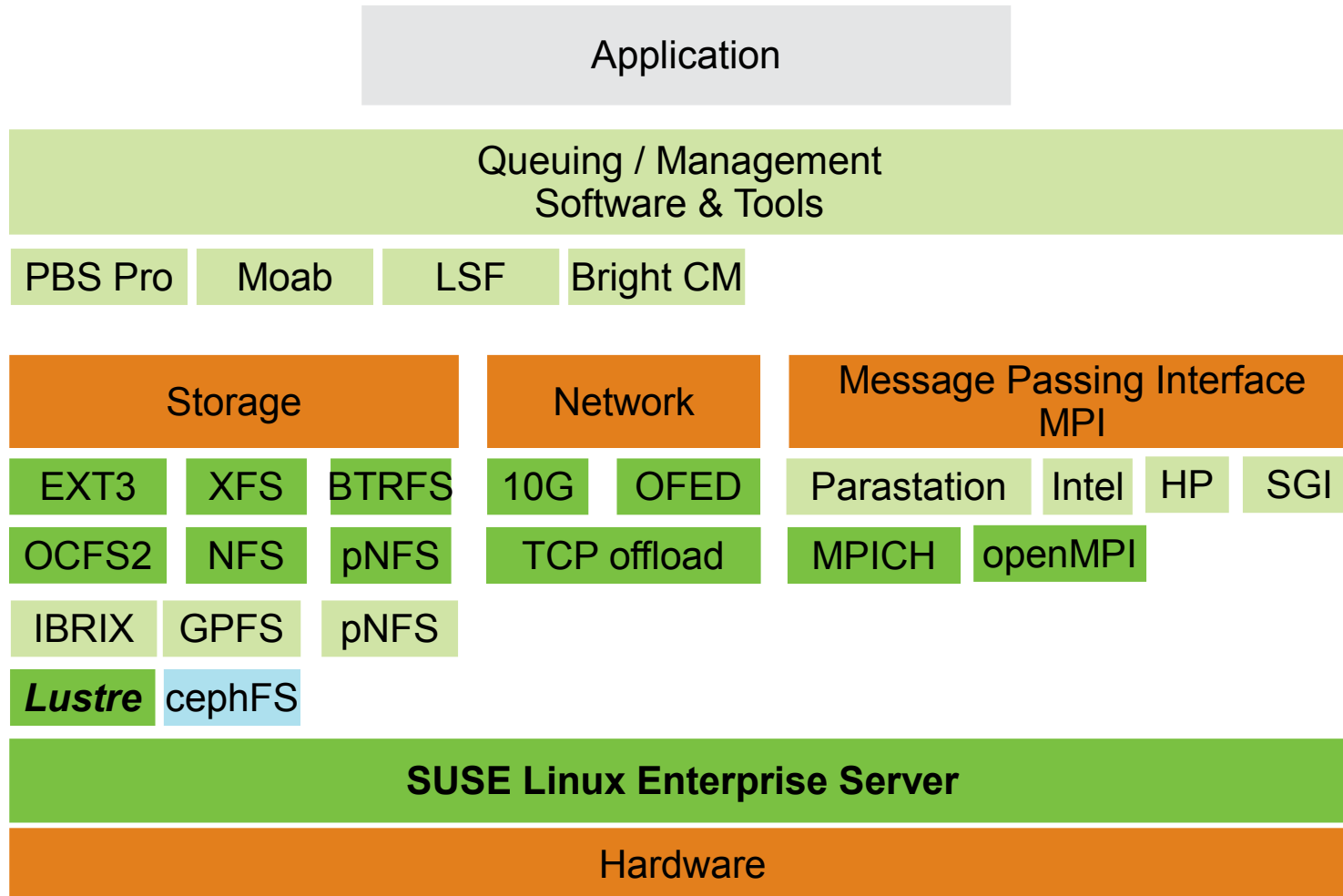




# Stack Update

# HPC Stack Update

SUSE® HPC



■ = SUSE supported ■ = SUSE Partner ■ = SUSE future ■ **S** = **SUSE provided**

# Community – Lustre

SUSE® HPC

- SUSE sponsored and developed port
- Current Maintenance Release 2.1
  - Available for SUSE Linux Enterprise Server 11 SP1 and SP2
- Upcoming Maintenance Release 2.4
  - Preliminary code available for SUSE Linux Enterprise Server 11 SP2
- Client already accepted by Whamcloud  
(<http://downloads.whamcloud.com>)

<http://drivers.suse.com/lustre/>

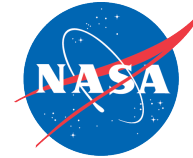


Customers & Partners

# Customers and Partners

SUSE® High Performance Computing

## Customers



PORSCHE



## Partners



# SuperMUC – SUSE benefits

## SUSE High Performance Computing

- Great support experience
  - Cooperation for more than 15 years
  - Backed by SUSE's winning support
- Support for Itanium2 and x86
  - Smooth migration of old to new system
  - No additional staff training needed
- Easy deployment methods
  - SUSE's autoYAST used today
  - Other SUSE offerings – SUSE Cloud, SUSE Manager – considered

*“We have relied on SUSE Linux Enterprise Server for 15 years, and have always been very satisfied.*

*The SUSE team is close at hand, should we require support or guidance.*

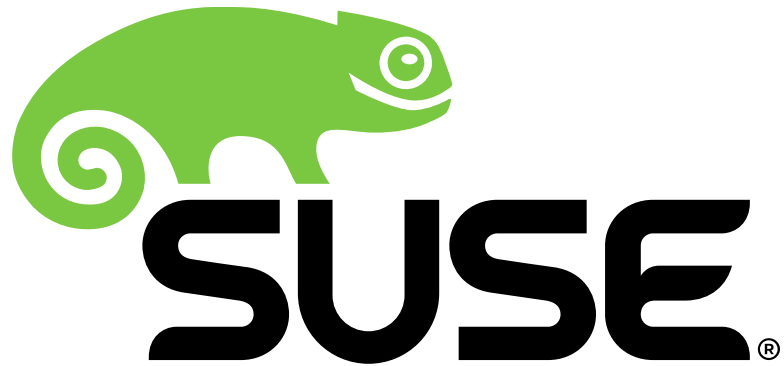
*We have received highly competent support over the years, and look forward to collaborating with them.*

— Dr. Herbert Huber  
Division Head of  
Supercomputing  
Leibniz Rechenzentrum





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We adapt. You succeed.

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