



Software Defined Infrastructure

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Cloud

80% of new applications will include cloud delivery or deployment

New consumption models



Big Data, Analytics (HPC)

2.5 billion GB of data are being generated every day

Ability to gain insights quickly



Social & Mobile

500 million Tweets a day;
95% of mobile traffic is data

Explosive growth of file and object data

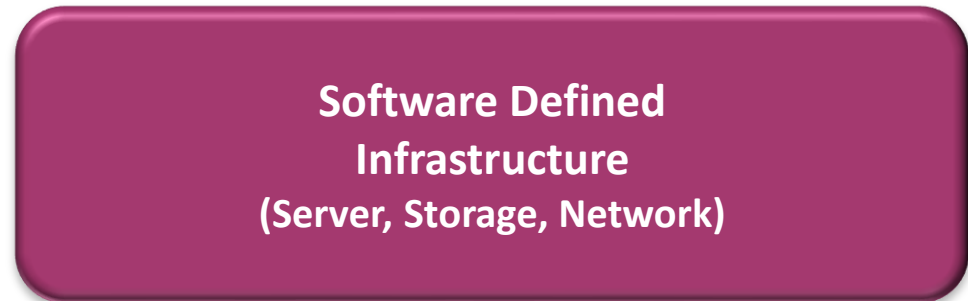
Optimization
of performance
and agility of the
application lifecycle



Automation
via open standards and policy
driven patterns



Abstraction
of capabilities and service
delivery from physical
infrastructure



- Accelerate results and lower costs with a scalable, efficient environment
- Save money, time and resources
- Transform a static IT infrastructure into a dynamic resource, workload and data-aware environment
- Securely integrate mobile services
- Use data efficiently for analytics services
- Manage in an always-on world for service predictability

- Accelerate results and lower costs with a secure, efficient environment
- Save money, time and resources
- Transform a static IT environment into a dynamic environment
- **Application workloads are serviced automatically by the most appropriate resource running locally, in the cloud, or in a hybrid cloud environment**
- Services
- Analytics services
- An always-on world for service predictability

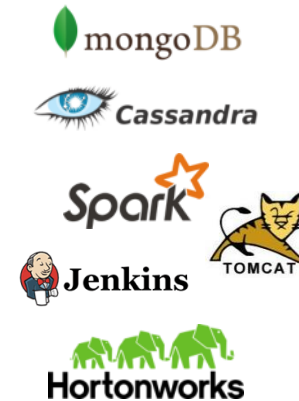
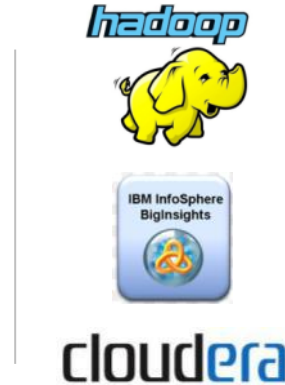
High Performance Analytics (Low Latency Parallel)

Hadoop / Big Data

High Performance Computing (Batch, Serial, MPI, Workflow)

Application Frameworks (Long Running Services)

Example Applications



Do you have any Scale Out application?
Do you have resource sharing to address utilization?
Are you looking to improve time-to-results?

Scheduling & Acceleration With Infrastructure Sharing

High Performance Analytics
(Low Latency Parallel)

Hadoop / Big Data

High Performance Computing
(Batch, Serial, MPI, Workflow)

Application Frameworks
(Long Running Services)

Example Applications



Homegrown



cloudera



Homegrown



Hortonworks

Workload Engines

IBM Spectrum Symphony

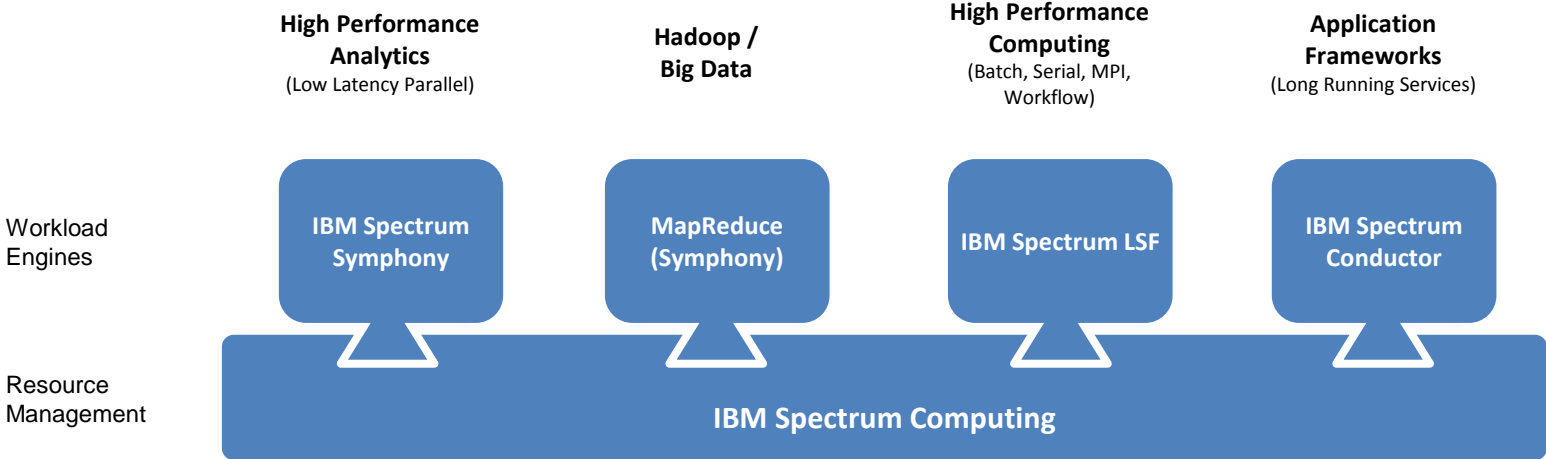
MapReduce (Symphony)

IBM Spectrum LSF

IBM Spectrum Conductor

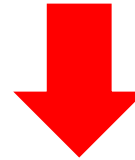
Resource Management

IBM Spectrum Computing

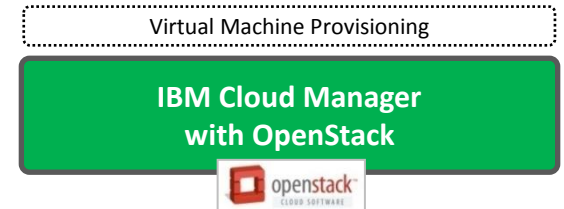
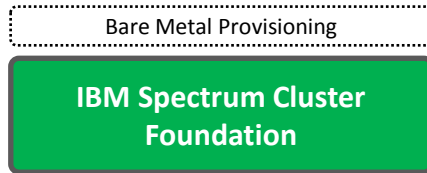


On-premise, On-cloud, Hybrid Infrastructure
(heterogeneous distributed computing and storage environment)

Bare Metal, Private Cloud, Public / Hybrid Cloud



Infrastructure Management



On-premise, On-cloud, Hybrid Infrastructure
(heterogeneous distributed computing and storage environment)

File, Object, Block



Data Management

Elastic Storage, SAN Volume Controller

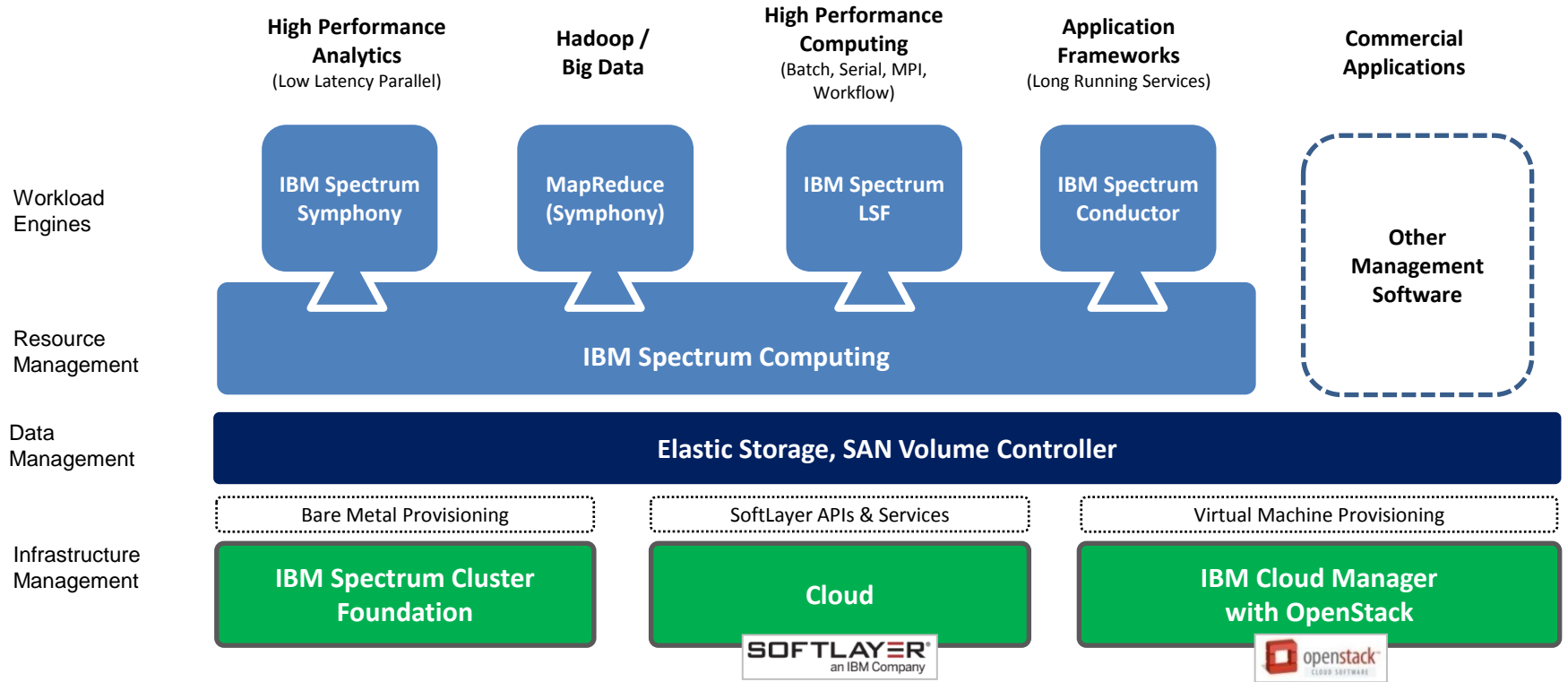
Infrastructure Management

Bare Metal Provisioning	SoftLayer APIs & Services	Virtual Machine Provisioning
IBM Spectrum Cluster Foundation	Cloud 	IBM Cloud Manager with OpenStack









On-premise, On-cloud, Hybrid Infrastructure
(heterogeneous distributed computing and storage environment)

Breadth and Depth of Solution



On-premise, On-cloud, Hybrid Infrastructure
(heterogeneous distributed computing and storage environment)

	Spectrum Control	Analytics-driven data management to reduce management costs by up to 50%
	Spectrum Protect	Optimized data protection to reduce backup costs by up to 38%
	Spectrum Archive	Fast data retention that reduces TCO for active archive data by up to 90%
	Spectrum Virtualize	Virtualization of mixed environments stores up to 5x more data
	Spectrum Accelerate	Enterprise storage for cloud deployed in minutes instead of months
	Spectrum Scale	High-performance highly scalable storage for unstructured data

Agility

- Increased flexibility through support of heterogeneous hardware
- Open standards enable software control across multiple platforms

Cost Efficiency

- Match workload requirements to the appropriate storage
- Provides massive, virtually limitless scalability

Control and QoS

- Automated, policy-driven management helps drive lower cost and operational efficiencies

- **IT managers: reduce costs while maintaining service levels**
- **End users: gain competitive advantage**
- **CIO & CFO: increase business agility while managing costs**

- **What are the organization priorities?**
- **Business Perspective – What is the potential return on investment?**
- **Technology Perspective – What is the current infrastructure and future roadmap?**
- **Can we create a plan in a discovery workshop?**

The logo for GBM, featuring the letters 'G', 'B', and 'M' in a stylized, outlined font. The 'G' and 'B' are connected at the top, and the 'M' is separate. The letters are white with a thin black outline.

GBM

Thank You