

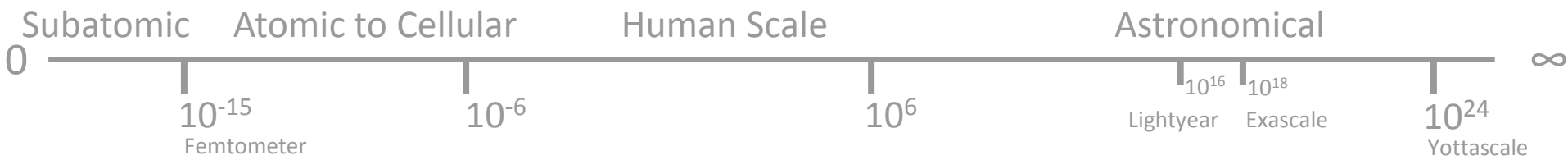
# IDC HPC User Forum

## SGI Update

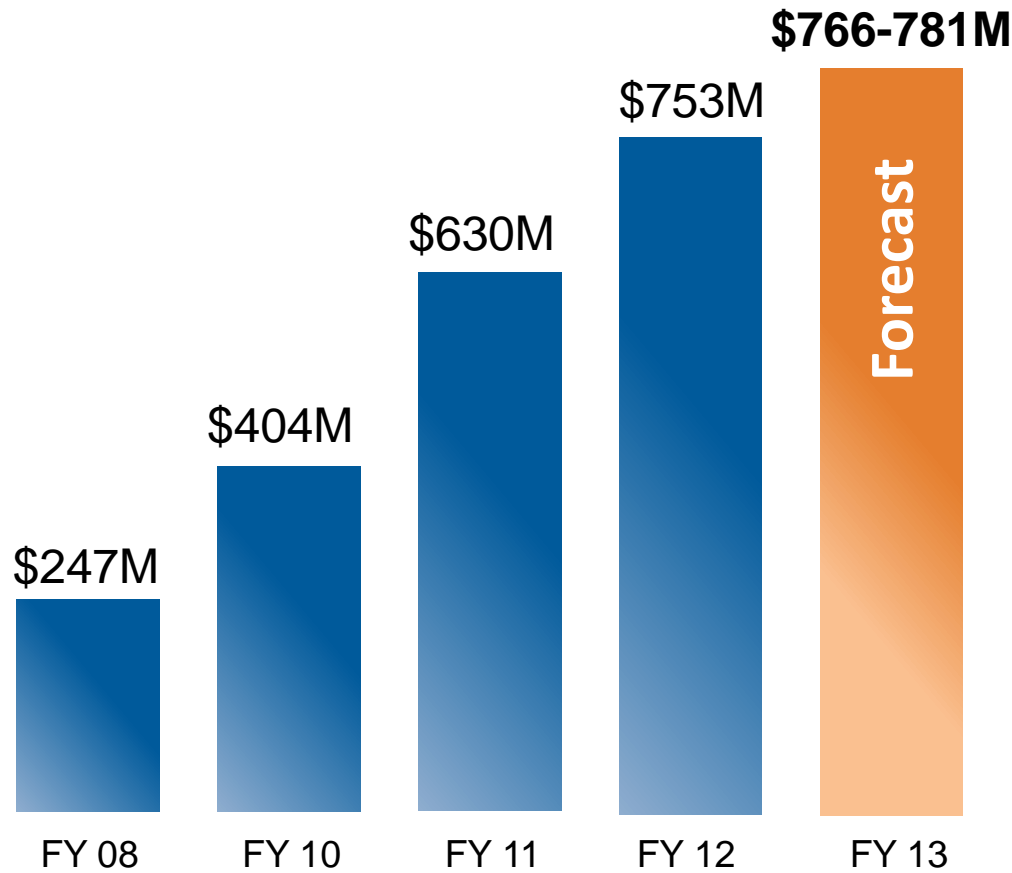
*Jill Matzke, PhD, Director Product Marketing*

# Speed and Scale

Finding Answers™



# Building Momentum



**Profitability**

**\$ Strong Balance Sheet**

# Solution Focused

## Strategic Offerings

### Compute

Scale Up  
Scale Out  
Management

### Storage

DAS, NAS, SAN  
Archive  
Management

### Services

+

## Environment Expertise

Government

Life Sciences

Earth Sciences

Manufacturing

Digital Media

Financial

Cloud Services

+

## Technology Leadership

### Speed

Data Access  
Compute

### Scale

Volume  
Distance

### Efficiency

Power  
Density  
Cost  
Industry Stds

# Solution Pillars

## Compute

- ICE
- UV
- Rackable
- Management Center
- Performance Suite

## Storage

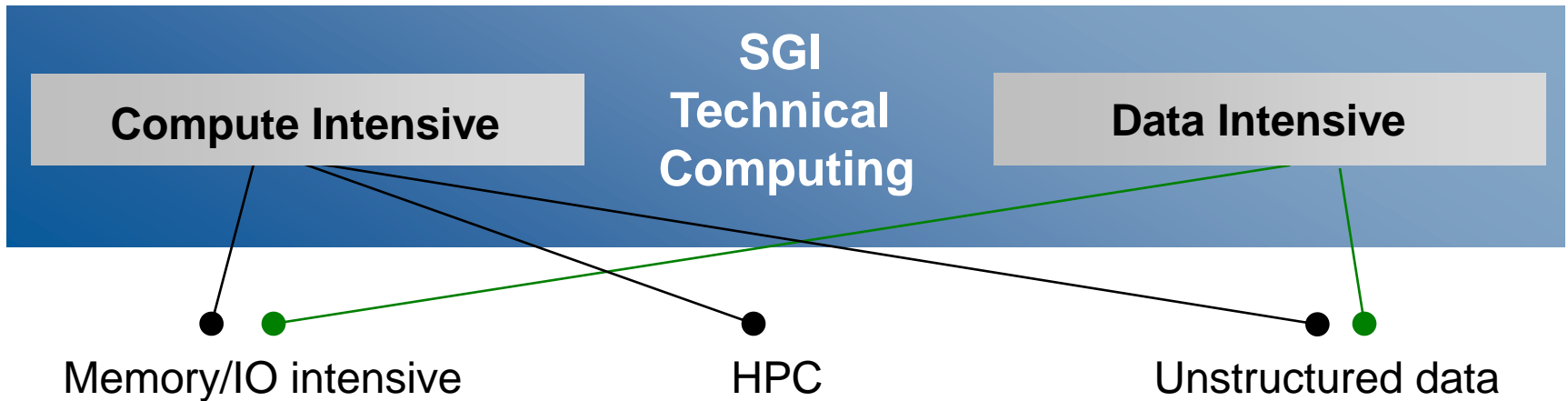
- DAS, NAS, SAN
- Modular InfiniteStorage
- MAID
- DMF, LiveArc
- XFS, CXFS, XVM

## Services

- Consulting
- Managed Services
- Customer Support

DataRaptor with MarkLogic® Database

# Compute



**SGI® UV™**  
Very large  
memory SMP

**SGI® ICE™ X**  
High performance  
bladed cluster

**SGI® Rackable™**  
High density  
Optimized cluster

# SGI ICE X

6912 Nodes

# SGI ICE X

World's Largest

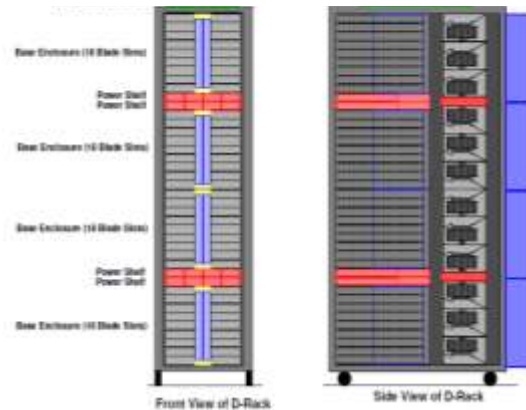


Commercial Cluster

6912 Nodes

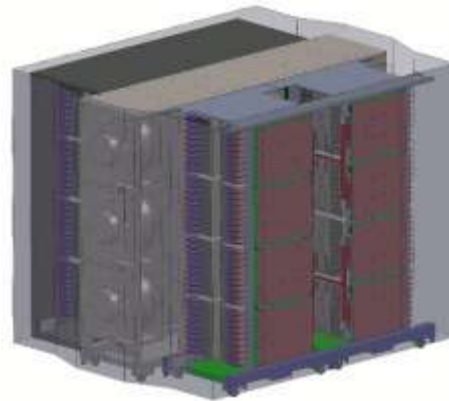


# Large-scale Packaging Options

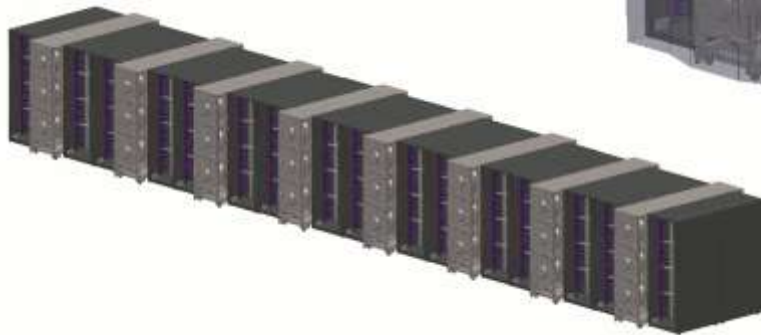


**Traditional Data Center:**  
High Density,

*CPU, GPU, Phi*



**Large Scale HPC:**  
M-Cell  
Super-high Density

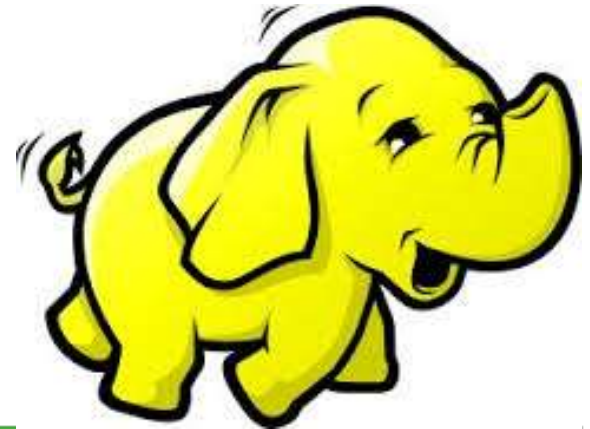


**Container Environments:**  
Leverage Cell Solutions

# SGI Rackable

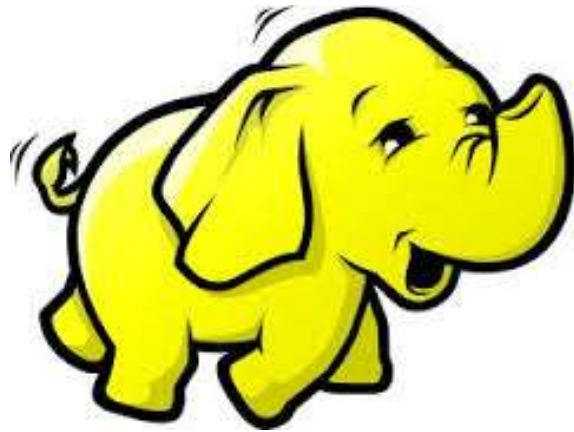
4-40,000 Node

# SGI Rackable



4-40,000 Node

# Scale-out: Rackable



Yahoo SGI Rackable Cluster



Facebook SGI Rackable Cluster



Large GVMT SGI Rackable Cluster

# SGI UV

64 TB, 4 TB/s

# SGI UV

→ >500 Deployed

64 TB, 4 TB/s

# Scale Up: SGI UV “Big Brain”





# SGI UV 2

Start small and grow ... or start big.

*Modular Design,  
Configuration Flexibility  
Supports GPU, Intel® Xeon®  
Phi™ and NVIDIA® Tesla® K20*

## UV 20

16-32 core  
32GB-1.5TB



16-128 core  
32GB-4TB



## UV 2000

64-512 core  
256GB-16TB

256- 4096 core  
Up to 64TB

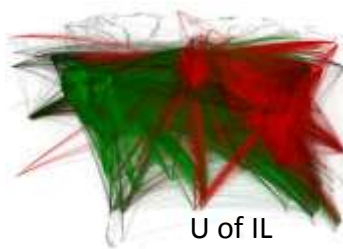




# SGI UV: Broad Commercial, Research and Government Results



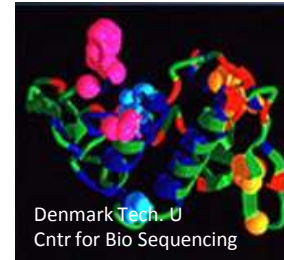
200TB space weather simulations protect power and satellite grids



Political revolt is predictable with fast analysis of 100M web postings



Speed time-to-market with 50% performance boost, fewer servers



Cancer takes a hit as cell network simulation goes from weeks to hours



Major WW Courier

\$Millions saved as 38X speedup makes fraud detection real-time

# Compute: Continuing Innovation

- Integration and scale: Next Gen Processors, accelerators
  - Intel® “IvyBridge”, “Haswell”, AMD® “Abu Dhabi”
  - Intel® Xeon® Phi™, NVIDIA®
- Advanced Power & Cooling Designs
- Super Data-intensive Designs

# Storage

600 Petabytes

# Storage

Deployed last Year

600 Petabytes

# Storage Platforms

## IS1000/IS2000



Cloud Storage

- Low-cost capacity
- High IOPs

## Modular InfiniteStorage



Server and JBOD

- Highest density
  - Maximum Flexibility
- SGI NAS

## IS4100 - IS5500



HPC

- Heavy IOPs or IOPs and bandwidth
- Highly scalable

## IS15000 - IS16000



Highest Performance and Density

- Guaranteed latency
- Bandwidth intensive
- Balanced IOPs and bandwidth

## ArcFiniti



Active Archives

- Massive density
- Power efficient
- VTL, D2D, NAS

- Integrated Compute / Storage platforms
- High-performance multi-tier with our file systems and HSM software

# SGI® InfiniteStorage™ Gateway

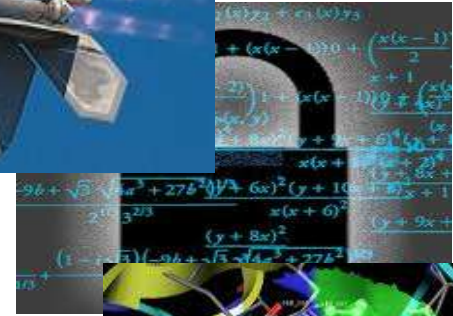


Delivering virtualized data management to  
**lower the cost of high volume storage**

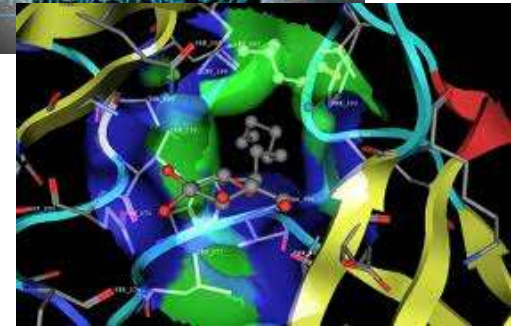
# Storage: Continuing Innovation

- Greater Density & Performance
- Intelligent Data Management
- Cloud Extension
- Client/Server OS, File System





Thank You





# Q & A



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