

Unified
Computing
System
Launch

Welcome to Yas Island



Unified
Computing
System
Launch



vmware®



Walid Yehia

Pre-sales Manager
Middle East, Africa, & Turkey

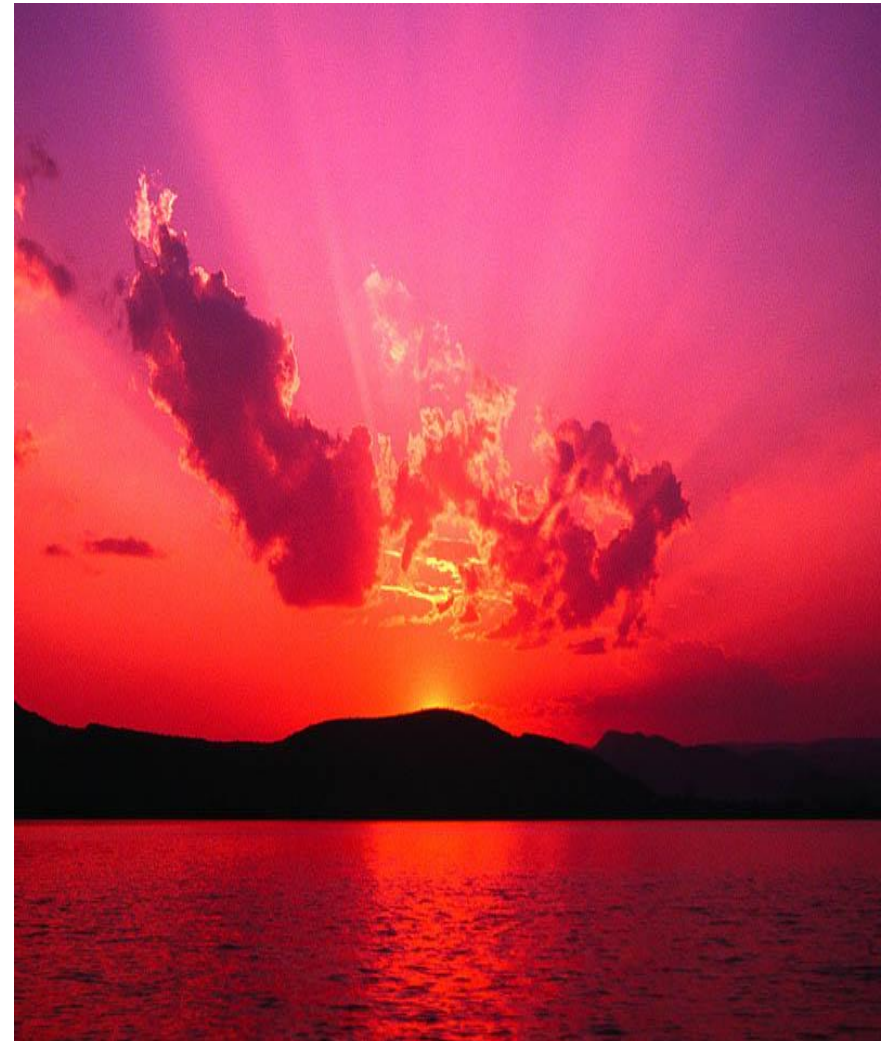
Information & Infrastructure
Management for Cloud Computing



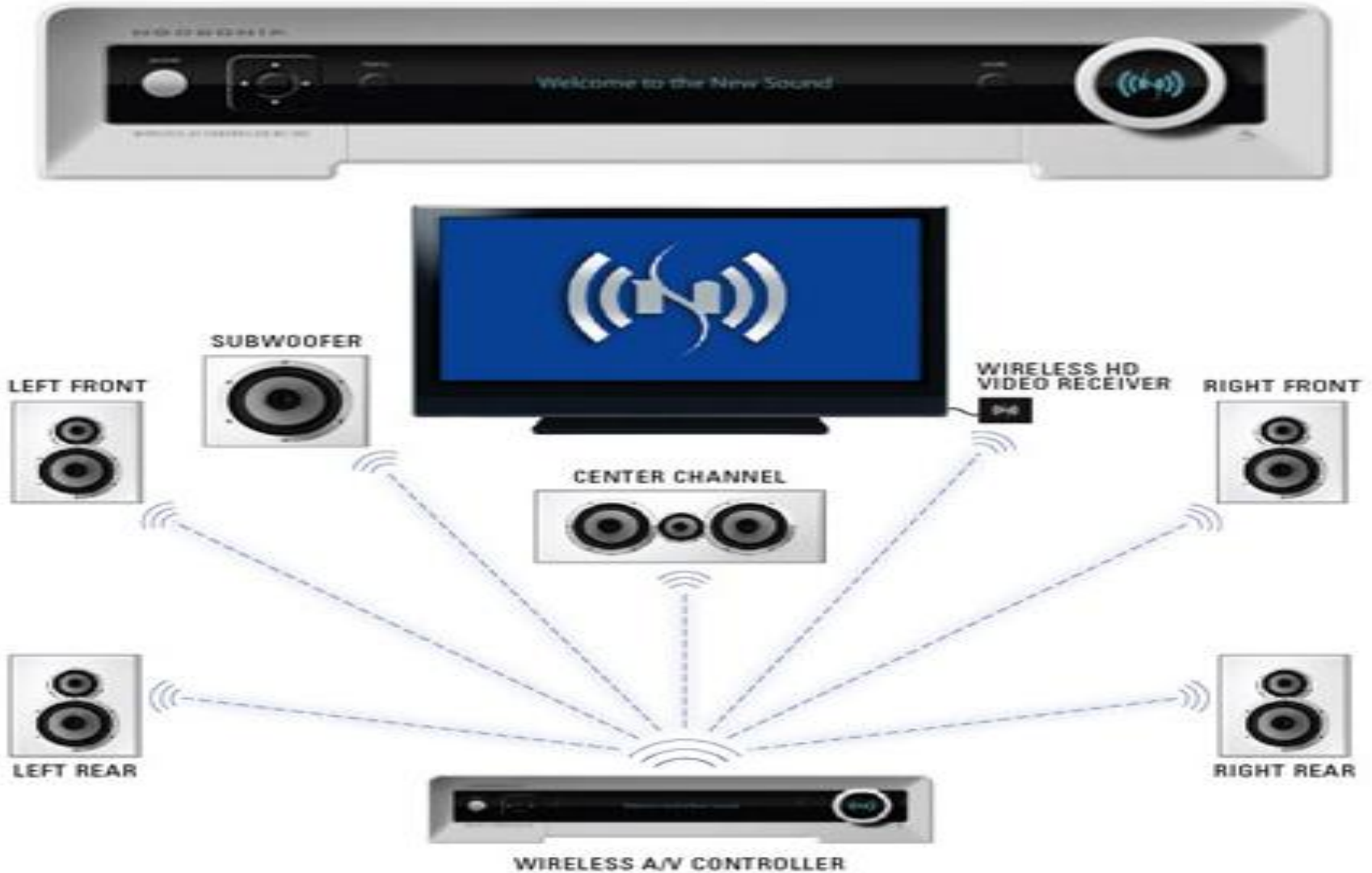
Coming up...

Points Covered

- Introduction
- Unified Infrastructure Management
- Information Security
- Information Management



They way we build IT Today



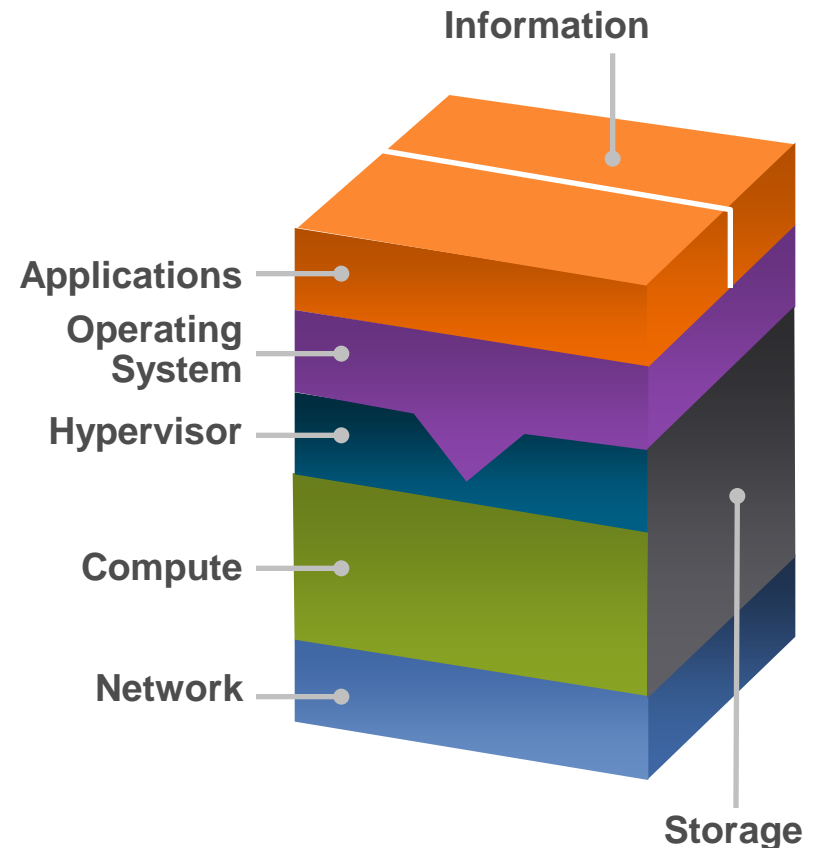
What Makes the Private Cloud Different?



- IT is **built** differently
 - e.g. pooled architectures, service orientation
- IT is **consumed** differently
 - variable consumption, expectations of infinite capacity
- IT is **run** differently
 - low-touch administration
- IT is **governed** differently
 - traditional methods of IT control will no longer work
- IT **organization** will evolve
 - roles, required skills and organizations need to support the new technologies, processes, governance and usage behaviors

A New Way of Delivering IT

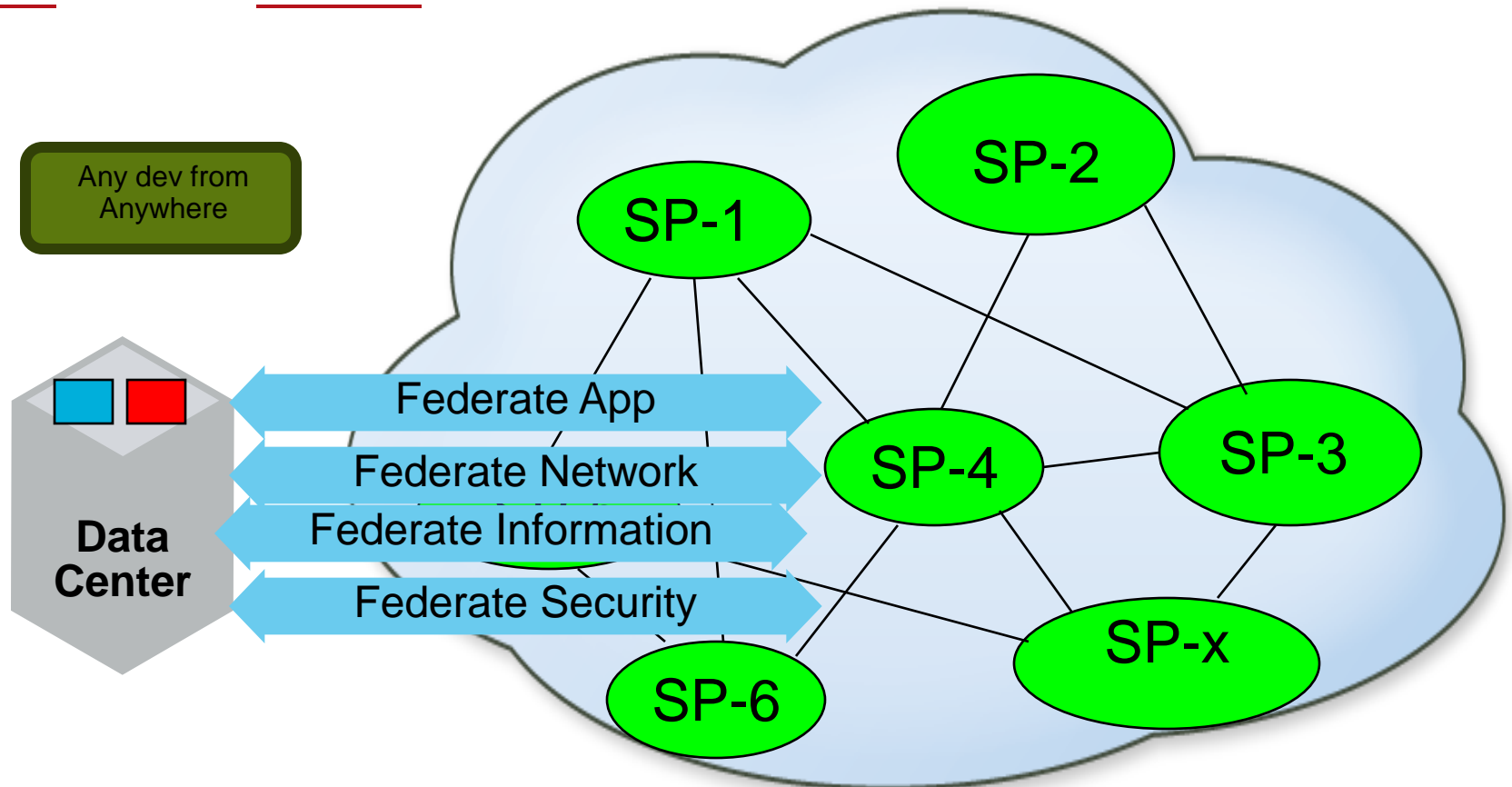
- Rapid deployment model of virtualized infrastructure
- Reduced total cost of ownership based on pre-integrated and validated solutions
- Service-level driven through predictable performance & operational characteristics
- Improved compliance/security and reduced risk



Accelerate time to results, Reduce TCO

Paradigm Shift – New Opportunities

Cloud computing describes a new supplement, consumption and delivery model for IT services based on Internet, and it typically involves the provision of dynamically scalable and often virtualized resources as a service over the Internet



EMC Enabling Technology For Private Clouds

intelligent storage

V-Max, Atmos
Celerra, CLARiiON

widest set of storage choices

full VMware integration

“single giant array”

fully automated storage tiering

Info mgmt and data protection

Avamar,
Networker,
Recoverpoint,
PowerPath

deduplication for VMware

SRM-integrated business cont.

archiving of virtualized data

optimized vClient solutions

resource mgmt

Ionix portfolio

vCenter plug-ins

VM-aware discovery

VM-aware ITIL workflows

VM-aware IT compliance

information security

RSA portfolio

encryption and key mgmt

advanced authentication

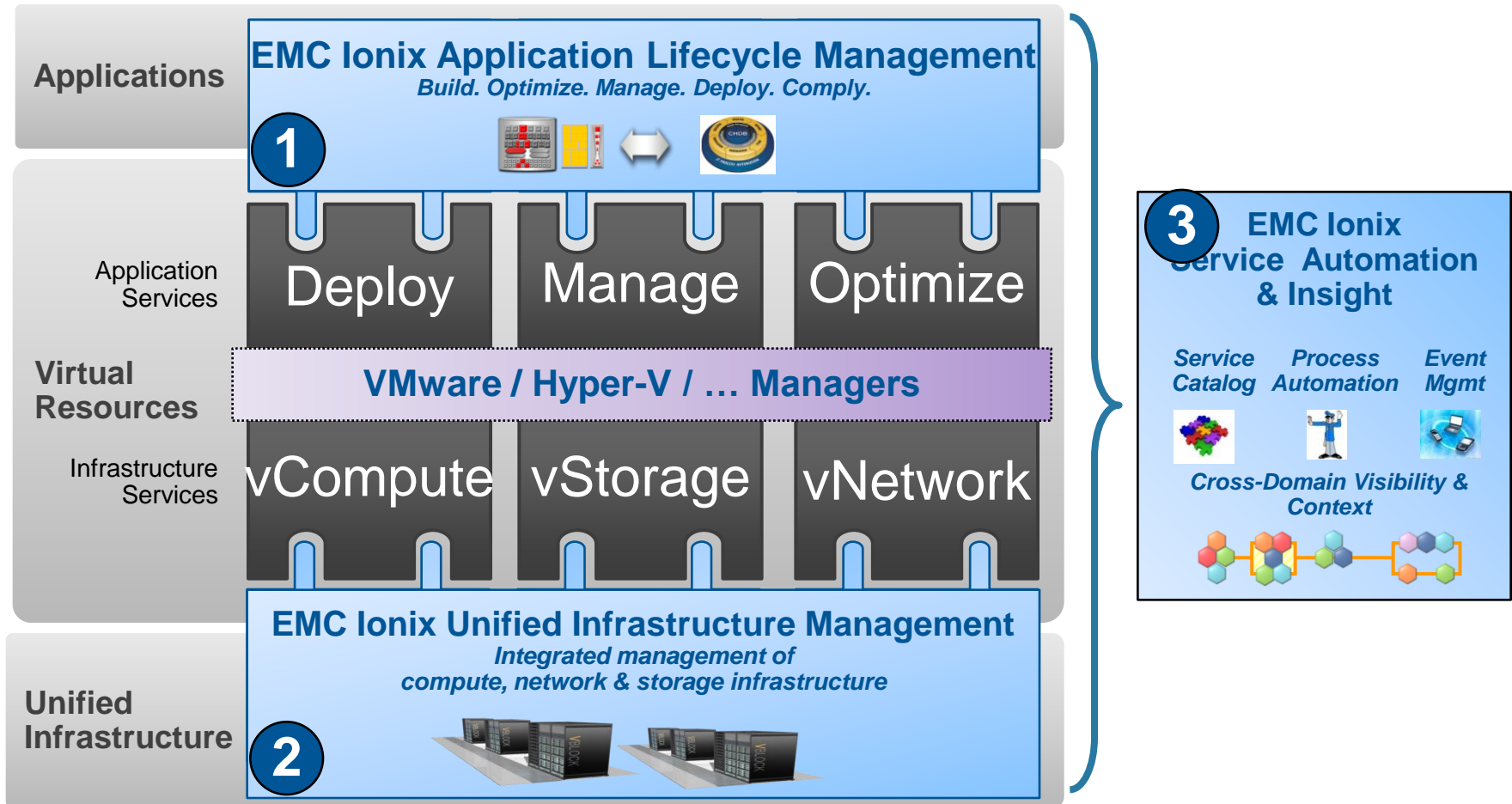
data loss prevention

auditing and compliance

Management of Next Generation Enterprise IT



Only EMC Ionix simplifies & optimizes the *entire* next generation environment spanning network connectivity, storage, compute blades, virtual infrastructure, operating system & application stacks.



Virtual Data Centers are Changing Storage Requirements

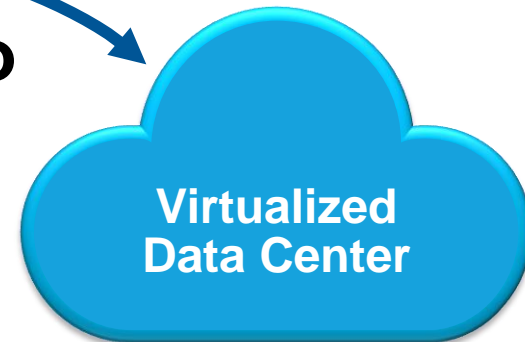


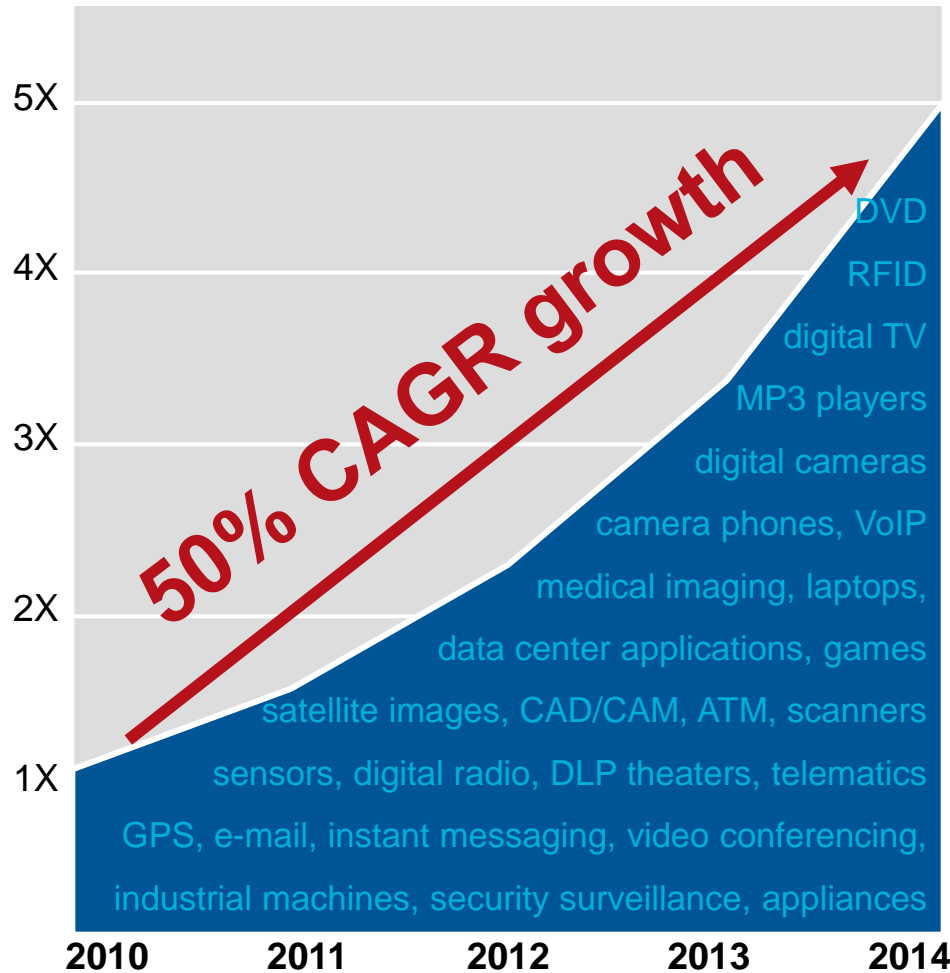
Storage Architecture Required to be More...

- Flexible...** Start small and grow without limits
- Dynamic...** Self managing to adapt automatically
- Simple...** Add more resources without adding more complexity
- Efficient...** Lower costs with increased functionality and capabilities



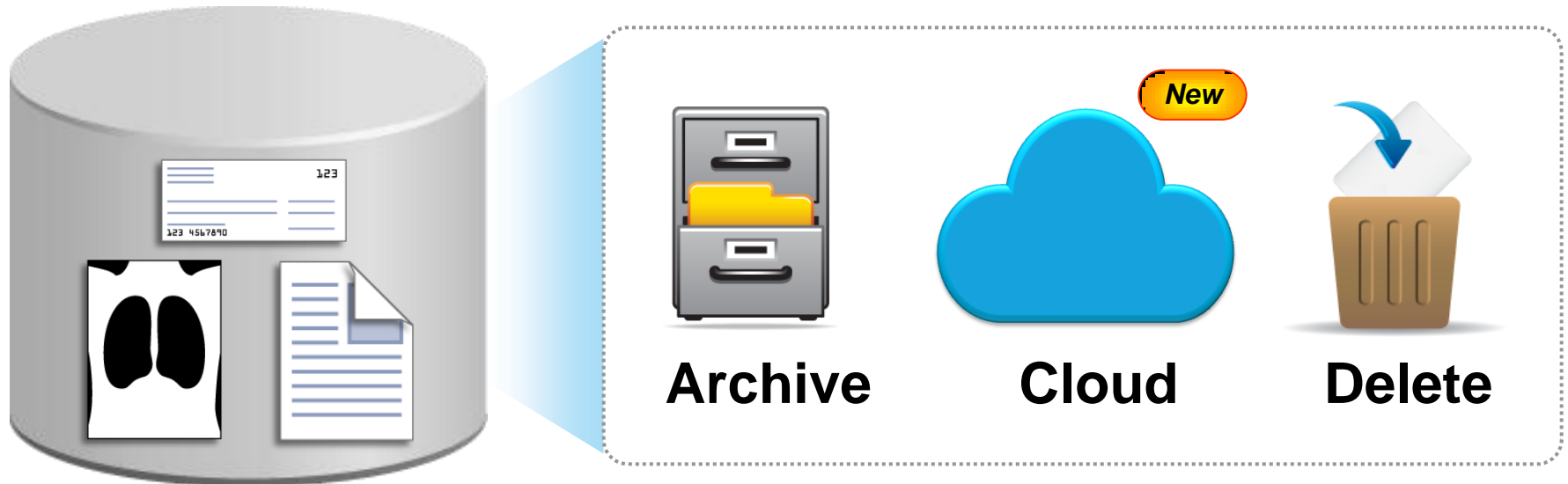
... And enable users to bridge between the physical and the virtual





Manage five times more information in the next four years

API and application stack integration for policy-based data lifecycle management



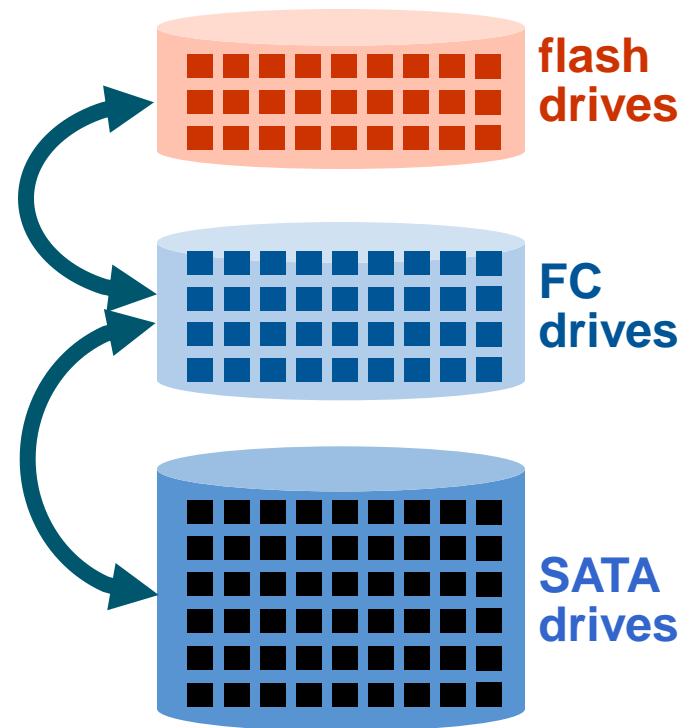
**Manage *more* information
with *less* capacity and *fewer* resources**

What if storage could tier itself?

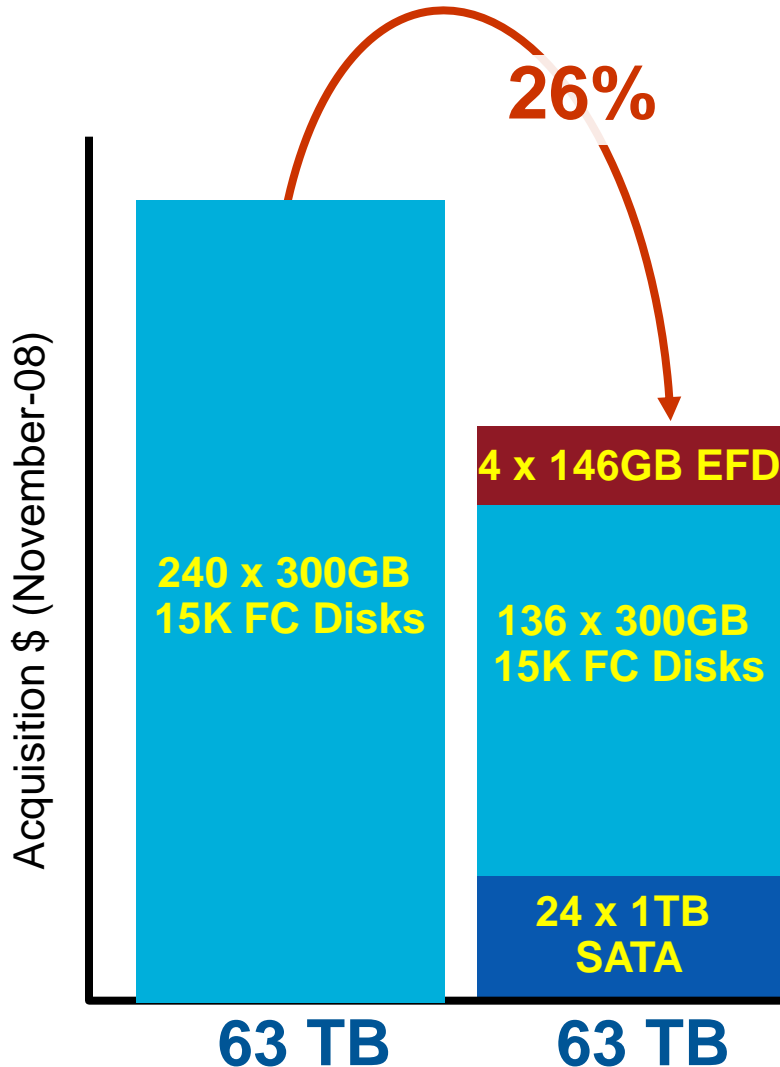
FAST

automates
movement and
placement of data
based on
changing needs

tiered storage



Symmetrix DMX-4 Upgrade Example



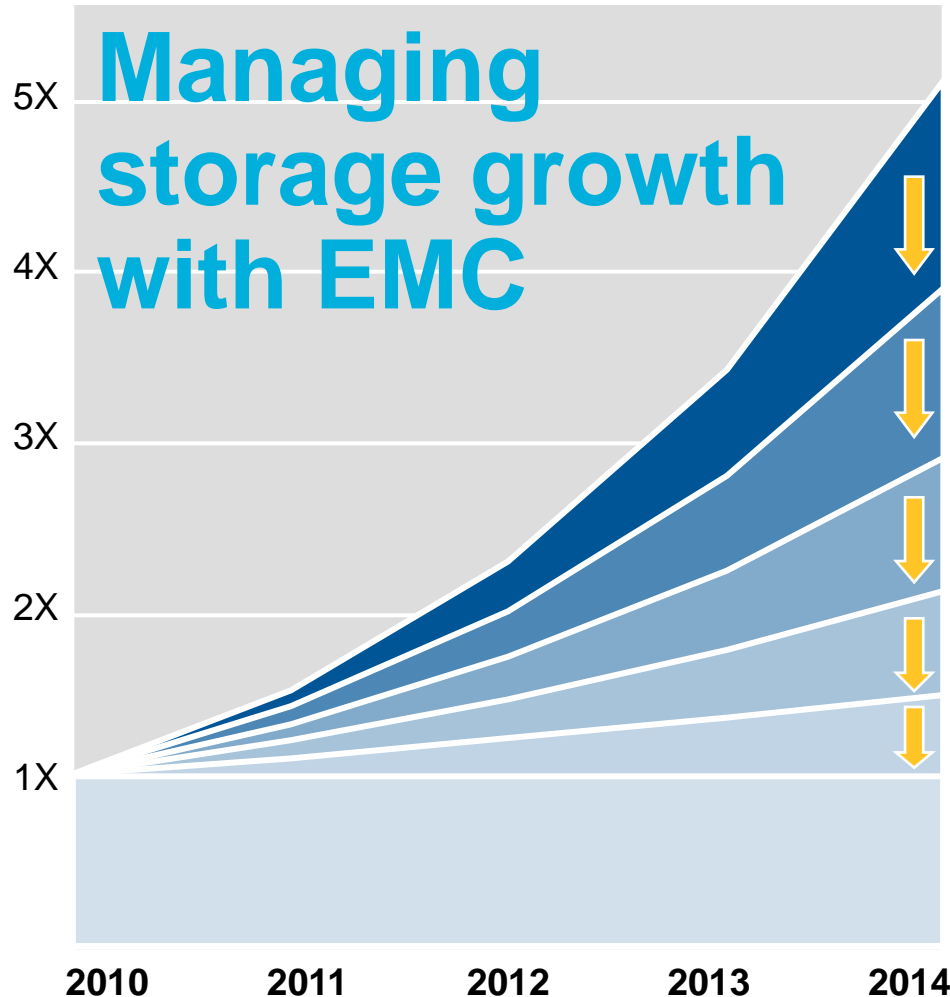
26% Lower Storage Costs
+ Reduce Maintenance & SW costs

38% More Disk IOPS
64,000 vs 40,000 Aggregate IOPS

17% Less Power & Cooling
6.48 kVA vs 7.82 kVA

32% Fewer Disk Drives
164 EFD+FC+SATA vs 240 FC

Efficient Management of Information Growth



Fully automated storage tiering
Optimize performance and capacity

Virtual Provisioning
Allocate capacity on demand

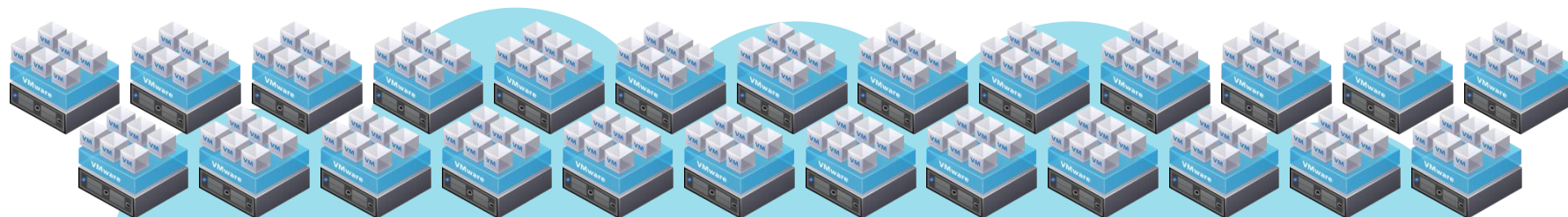
Deduplicate, compress, spin down
Efficiency to store more with less

Archive and delete
Policy-based lifecycle management

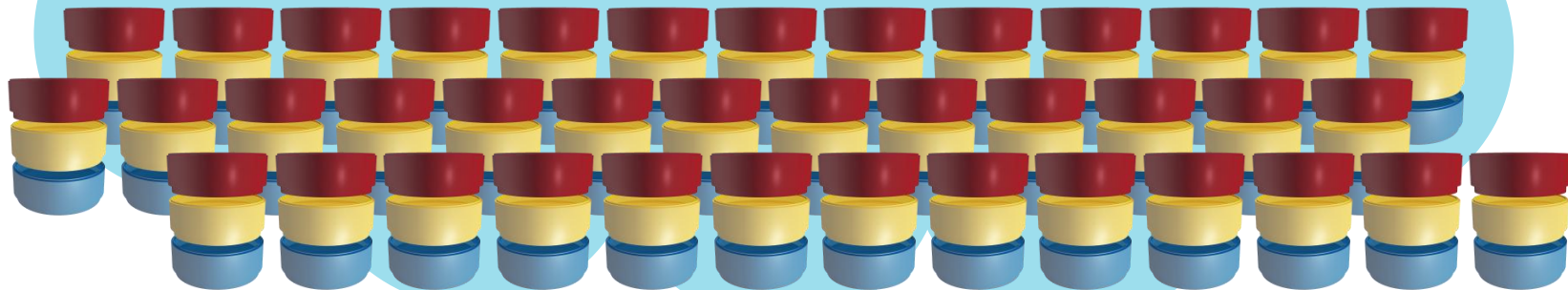
Federate to the cloud
Public and private cloud integration



Building the Virtualized Data Center: Federate Systems Across the Data Center



V-Storage Engine	V-Storage Engine	V-Storage Engine	V-Storage Engine	V-Storage Engine	V-Storage Engine
V-Storage Engine	V-Storage Engine	V-Storage Engine	V-Storage Engine	V-Storage Engine	V-Storage Engine
V-Storage Engine	V-Storage Engine	V-Storage Engine	V-Storage Engine	V-Storage Engine	V-Storage Engine
V-Storage Engine	V-Storage Engine	V-Storage Engine	V-Storage Engine	V-Storage Engine	V-Storage Engine
V-Storage Engine	V-Storage Engine	V-Storage Engine	V-Storage Engine	V-Storage Engine	V-Storage Engine
V-Storage Engine	V-Storage Engine	V-Storage Engine	V-Storage Engine	V-Storage Engine	V-Storage Engine
V-Storage Engine	V-Storage Engine	V-Storage Engine	V-Storage Engine	V-Storage Engine	V-Storage Engine



The Life of a Typical 1 MB File

- User creates 1 MB ppt file and e-mails it to 10 people
 - They all save the file on the network drive
 - A month later the e-mail is put in a PST folder on the network drive

For an average customer, that one file gets backed up:

1. Weekly for four weeks x 10 on the file server = **40 copies**
2. Daily for four weeks on the e-mail server = **28 copies**
3. Monthly for five years x 10 of PST = **600 copies**
4. Monthly for five years x 10 of file = **600 copies**

**That 1 MB file takes up over
1.2 GB of tape capacity**

Reduce Cost of Back-Up through De-duplication

- Customer Requirements:

- Current Backup Size of All Clients ~ 3.6TB
- Retention Period (D=8 Days, W=2 Weeks)
- Total Backup Capacity needed = 3.6TB x 10 = **36TB**

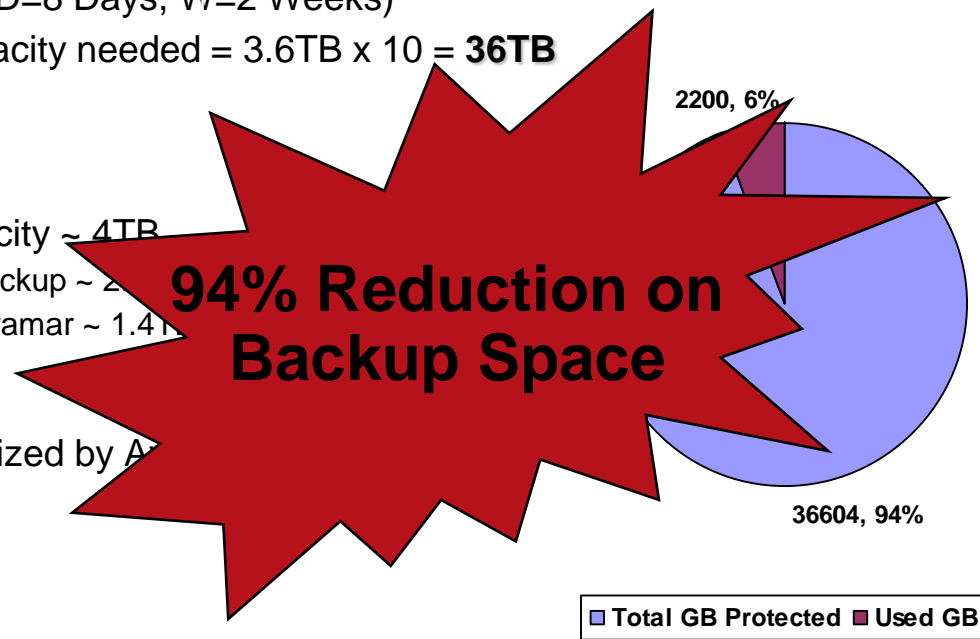
- EMC Proposal:

- Avamar total capacity ~ 4TB
 - Allocated for backup ~ 2.2TB
 - Allocated for Avamar ~ 1.4TB

- Results:

- Total Capacity Utilized by Avamar of data = **2.2TB**

Avamar Capacity Utilization



EMC Enabling Technology For Private Clouds

intelligent storage

V-Max, Atmos
Celerra, CLARiiON

widest set of storage choices

full VMware integration

“single giant array”

fully automated storage tiering

Info mgmt and data protection

Avamar,
Networker,
Recoverpoint,
PowerPath

deduplication for VMware

SRM-integrated business cont.

archiving of virtualized data

optimized vClient solutions

resource mgmt

Ionix portfolio

vCenter plug-ins

VM-aware discovery

VM-aware ITIL workflows

VM-aware IT compliance

information security

RSA portfolio

encryption and key mgmt

advanced authentication

data loss prevention

auditing and compliance

Unified
Computing
System
Launch

Coffee Break





CISCO