

**VIRTUAL
APPLIANCES**
LEADERSHIP
SUMMIT

Simplifying The Customer Experience

Mark Lewis
President
Content Management & Archiving Division
EMC Corporation





In the beginning.....

- Computing and storage were very expensive
- Networks had very limited bandwidth
- Mainframes ruled the earth
- Applications ran centrally
- IT was the single point of delivery and service





And we “evolved”

To multiple HW platforms

... operating systems

... middleware layers

... client server computing

● ● ● | And we saved tons of money.....

- Broke the “IBM monopoly”
- Leveraged open source software
- Moved to PC servers
- Wrote thick clients



But the savings stagnated

- Hardware got “super cheap”
- Bandwidth fast & cheap

Yet costs continued to rise – mostly due to

- Complexity
- Integration costs
- Utilization
- Maintenance



● ● ● | New technologies will take IT to the next wave.....

- SaaS
- Virtual SW Appliances
- Cloud Infrastructure



The Challenges

- One Application
- Many HW platforms
- Tons of custom “middleware”
- Many OS qualifications
- The customer perception remains “*How come you don’t test this SW*”
- The problem is simply that every Enterprise SW installation is unique!
- Software vendors spend too much time on integration vs functionality



Today's IT Delivery Models

Enterprise IT

Applications

Admin & Security

Operating Systems

Hardware



SaaS

Applications





A Binary Choice

Enterprise



- Complete control
- Own everything (H/W,S/W, etc)
- Upfront investment
- Ongoing Support Costs



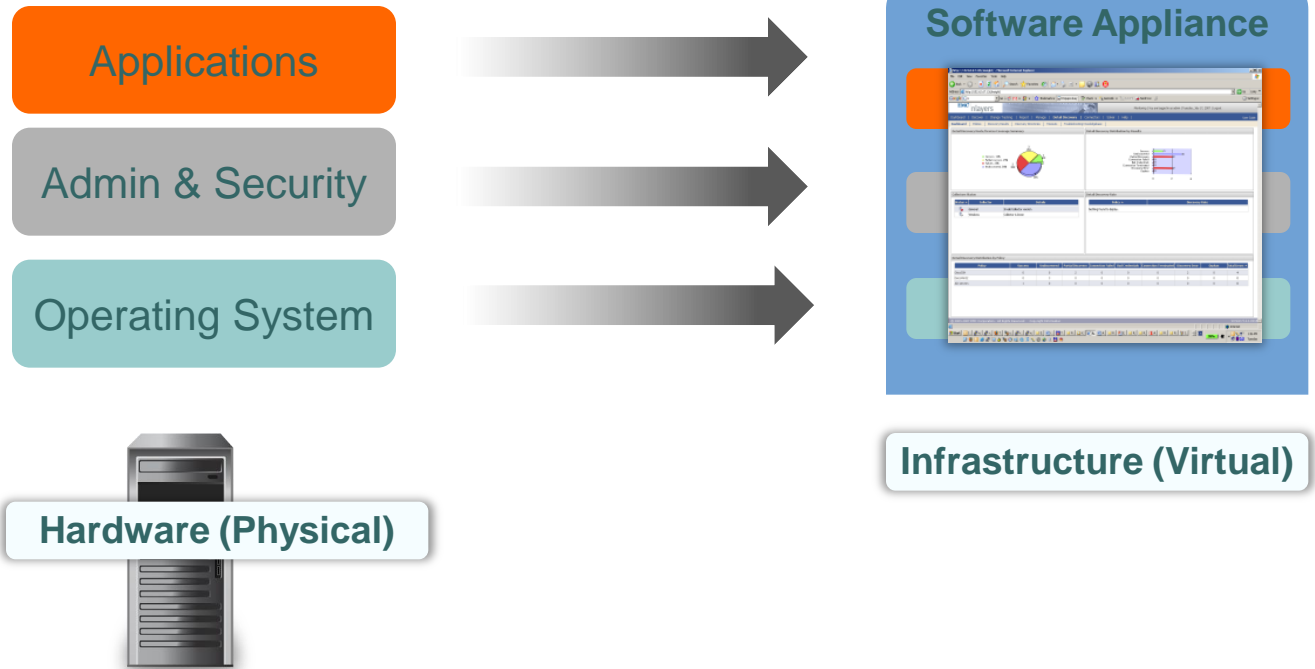
SaaS



- Limited Control
- No hardware/software ownership
- Pay-as-you-go
- Rapid TTV
- Limited flexibility



Software as an Appliance – What is it?

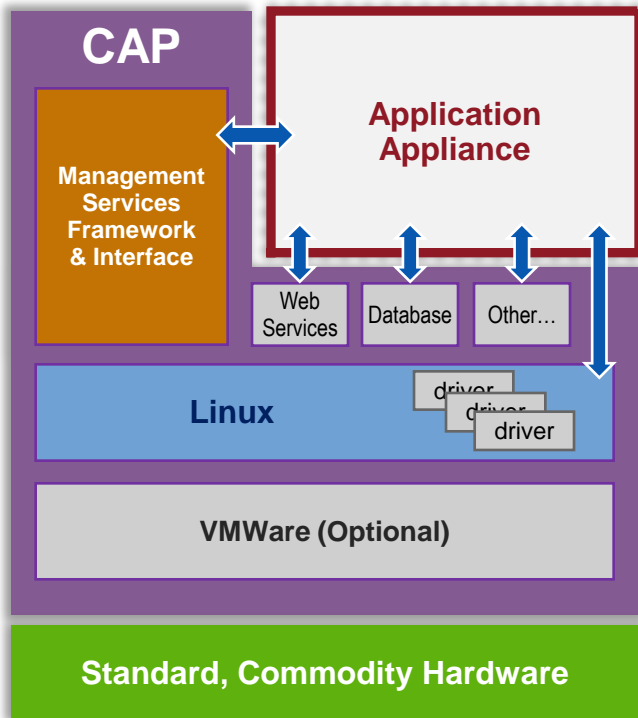


Software as an Appliance – Why?

- Rapid Time-To-Value
 - Instantaneous business value
- Eliminate complexity
 - Ultimate Quality
 - Inherent reliability
- Single point for delivery and service
 - One ‘throat-to-choke’
- Optimized
 - Streamline to deliver maximum utilization and performance
- ISVs leverage standardized, repeatable, cloud computing-friendly Appliance Lifecycle Management platform



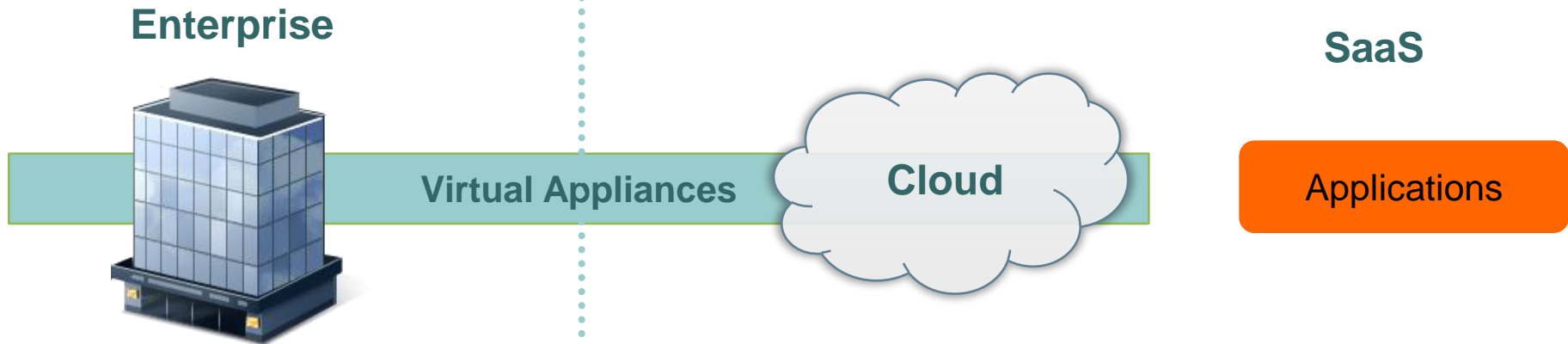
EMC Common Appliance Platform (CAP)



- Platform to minimize variations in common technologies
 - Standardize on Linux OS (rPath Linux today, SuSE in future)
 - Converge on use of common software components
- Common capabilities for consistent user experience
 - Common way to install & deploy the appliance
 - Common platform management web UI
- Tools & technology for building appliances
 - Easy, repeatable
 - Same recipe to produce ISO or virtual image
 - Minimize size of the appliance image
- Remote management capabilities & framework
 - Remote update & entitlement
 - Active & passive platform monitoring/mgmt



Clouds + Virtual Appliances



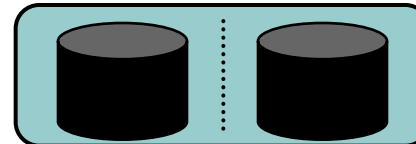
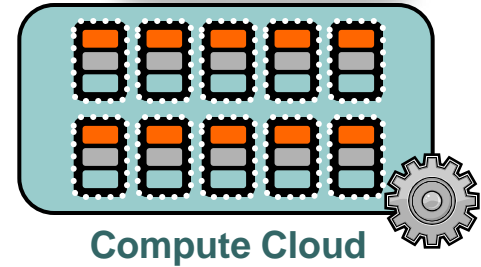
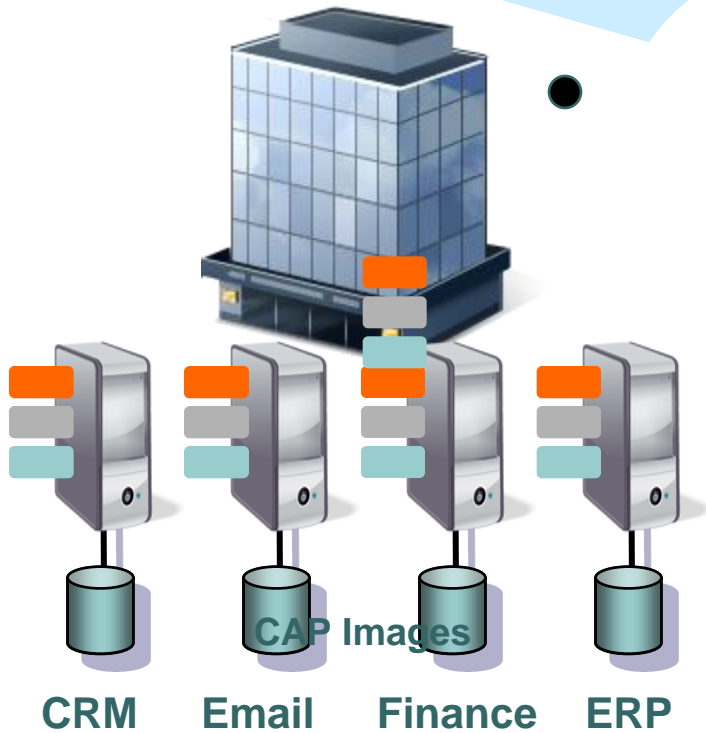
- Complete Storage/Application flexibility
- Dynamic IT Environment
- Composite Application (Web Service) focus
- Cost Optimized



Tomorrow's IT Environment Flexible Computing with Virtual SW Appliances

Enterprise

Cloud



EMC Maui Cloud Storage

myappliances.com

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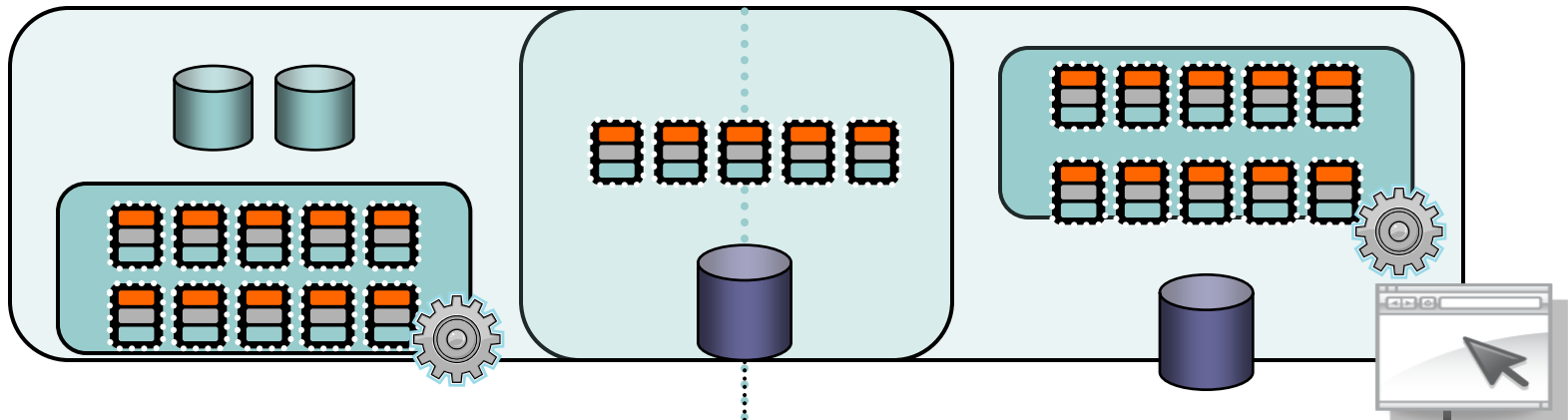


Best of Both Worlds

Enterprise



Cloud



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Summary

- IT dynamics continue to evolve
 - Cheaper HW, Storage and bandwidth
 - Higher integration costs
- Key technologies will take us to the next wave
 - SaaS
 - Virtual Appliances
 - Cloud Infrastructures
- Enterprises need more flexibility at lower cost points
 - SaaS+
 - Flexible Computing and Storage Environments





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