IBM FlashSystem Cloud Performance and Capability Case Studies
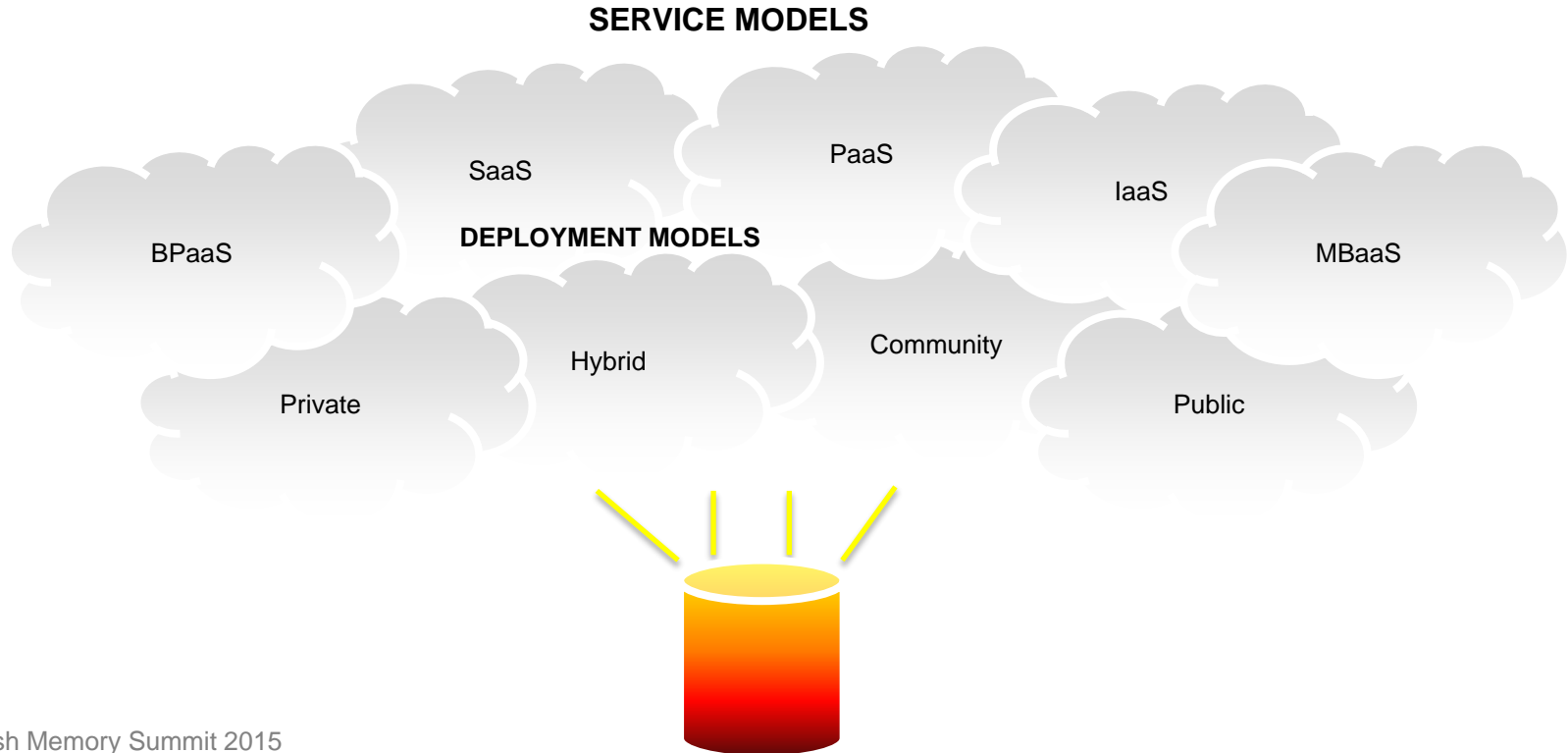
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Manager, IBM FlashSystem Portfolio Strategy

Agenda

- Cloud service models and how they can benefit from flash
  - IaaS
  - PaaS
  - SaaS

Premise: Every Cloud Needs Storage

SERVICE MODELS

SaaS

PaaS

IaaS

BPaaS

DEPLOYMENT MODELS

MBaaS

Hybrid

Community

Private

Public

But not all clouds are the same

IaaS

Mixed Workload

Utility Pricing

Offer Infrastructure resource

Public Cloud

PaaS

Mixed Workload

Mixed Pricing

Host client's custom/acquired application

Public Cloud

SaaS

Single Workload

Licensing

Vendor's application

Community Cloud

IaaS – Why speed and efficiency matter

Performance SLAs

Unpredictable array of client use cases & workloads

Noisy neighbors impact performance

Customer retention

Switching costs are low

Deliver a great experience or lose customers

High capital and operating costs

High cost to deliver high performance

Managing complex infrastructure is costly

Data center space, power & cooling are costly

Why IaaS providers use flash

- Reduce Costs
  - Meet performance SLAs
  - Decrease software licensing costs
  - Lower cost for performance
- Gain & Retain Customers
  - Improve customer satisfaction
  - Easily handle mixed workloads
  - Scale performance and capacity
  - Eliminate noisy neighbor problems
- Create new revenue sources
  - Drive revenue expansion/upsell opportunities with performance offerings for critical applications

VOLATILITY NEXT EXIT

5x increase

in VMware density

300 percent

better response time

close to 100%

hardware investment financed by VMware license savings

Solution Components

- IBM FlashSystem 840
- IBM Storwize V5000 & V3700
- VMware

Business challenge: A leading hosting provider in Sweden needed to create efficiencies in their IT infrastructure to protect and grow market presence amid significant competition.

The solution: Dual IBM FlashSystem 840 arrays virtualized by Storwize V5000 at two data center sites configured to Intel and VMware platforms.

Business impact: Substantial increase in performance and VMware density provided excellent ROI and better cost structure which protected market position.

PaaS – Why speed matters

Performance SLAs

Unpredictable client workloads

Noisy neighbors impact performance

Customer retention

Switching costs are low

Deliver a great experience or lose customers

Cost management

Often highly complexity applications

Diagnosing performance issues is hard

Data center space, power & cooling are costly

Why PaaS providers use flash: accelerate big clients

- Gain and retain clients
  - Scale as clients grow (count & size)
  - Improve customer satisfaction
  - Eliminate noisy neighbor problem
  - Support massive concurrency
- Reduce costs
  - Meet performance SLA's
  - Decrease infrastructure costs
  - Easy to install and manage
- Create new revenue sources

YOUR BIGGEST CLIENT INC.

Cegeka

Enabling lightning-fast performance to lead enterprises to the cloud

66 percent

reduction in SAP ERP
application response times

97 percent

cut in potential footprint
requirement

95 percent

decrease in power consumption

Solution Components
- SAP ERP
- IBM FlashSystem 820
- IBM SAN Volume Controller
- Oracle database
- VMware

Business challenge: To broaden its cloud-services client base, Cegeka targeted enterprises with demanding SLA requirements. Could it meet data performance and scalability needs without costs spiraling out of control?

The solution: Cegeka gained the capacity to support enterprise clients in the cloud, helping to meet corporate growth objectives, while continuing to attract and retain business from existing customers.

"IBM FlashSystem Enterprise Solution accelerates some SAP ERP processing jobs by up to 90 percent."

- Luc Greefs, Director of Cloud Services, Cegeka

CloudAccess.net

IBM FlashSystem unthrottles performance for cloud platforms

Over 17,000

active Joomla sites hosted

Tens of 1000s

of users supported

2 hours

to configure and implement – quick time to value

Solution Components
- IBM FlashSystem
- Fibre Channel SAN
- Citrix XenServer
- Joomla! VPMC

Business challenge: Overwhelming demand as exclusive Joomla! demo site, pressure to keep costs low, original infrastructure not up to the task.
The solution: The IBM FlashSystem was implemented quickly and easily and provides a bottleneck-free storage environment. It has exceeded the requirements CloudAccess.net had as the world's premier hosting site for Joomla!

". . . performance and ease-of-use has gone way beyond our expectations"
"When it comes down to flash technology, they really can't be beaten."
- Gary Brooks, CEO, CloudAccess.net

SaaS – why performance matters

Constant use

Highlights flaws

Exacerbates perception of slowness

Customer retention

Switching costs are low

Deliver a great experience or lose customers

Hard to ensure performance

Large user base

More complex application stack

Heavy, intricate front ends

Complicated application delivery chain

Source: http://www.yottaa.com/blog/bid/316645/3-Reasons-Why-SaaS-Application-Performance-Matters, Ari Weil

Why SaaS providers use flash: slow customer churn

- **Gain and retain customers**
  - Improve customer satisfaction
  - Increase application stability
  - Handle more concurrent users
- **Create new revenue sources**
  - Drive revenue expansion/upsell opportunities with performance offerings for critical applications
  - Add data rich features without sacrificing performance
- **Reduce costs**
  - Lower cost for performance
  - Decrease infrastructure costs

SciQuest

Staying ahead of the competition with IBM FlashSystem

2x faster
response times

5x increase
in system load on the 1st day of install

14x reduction
in physical rackspace for significant cost savings

Solution Components
• IBM FlashSystem
• IBM System x
• IBM Storwize V7000
• IBM DB2

Business challenge: New challenges for optimal performance and availability amid growing user demand for cloud solutions, constraints around costs, energy, and rackspace.

The solution: Replaced a full rack of standard spinning disks with an IBM FlashSystem occupying only 3U of rackspace.

"With IBM FlashSystem . . . we're able to focus on bringing new customers in. . . it's a wonderful thing to show the performance."
- Bill Kirchhoff, Production Infrastructure Manager, SciQuest