




Cloud OS

Philip Meyer
Partner Technology Specialist - Hosting



The New Era of Hosting

52.4% 

Customers

Grow their business or
realign to new
company strategy

68%



Cloud

Plan to adopt
hybrid cloud
models

62.5%



Applications

Will use Software
online previously
used on-prem

The Cloud OS

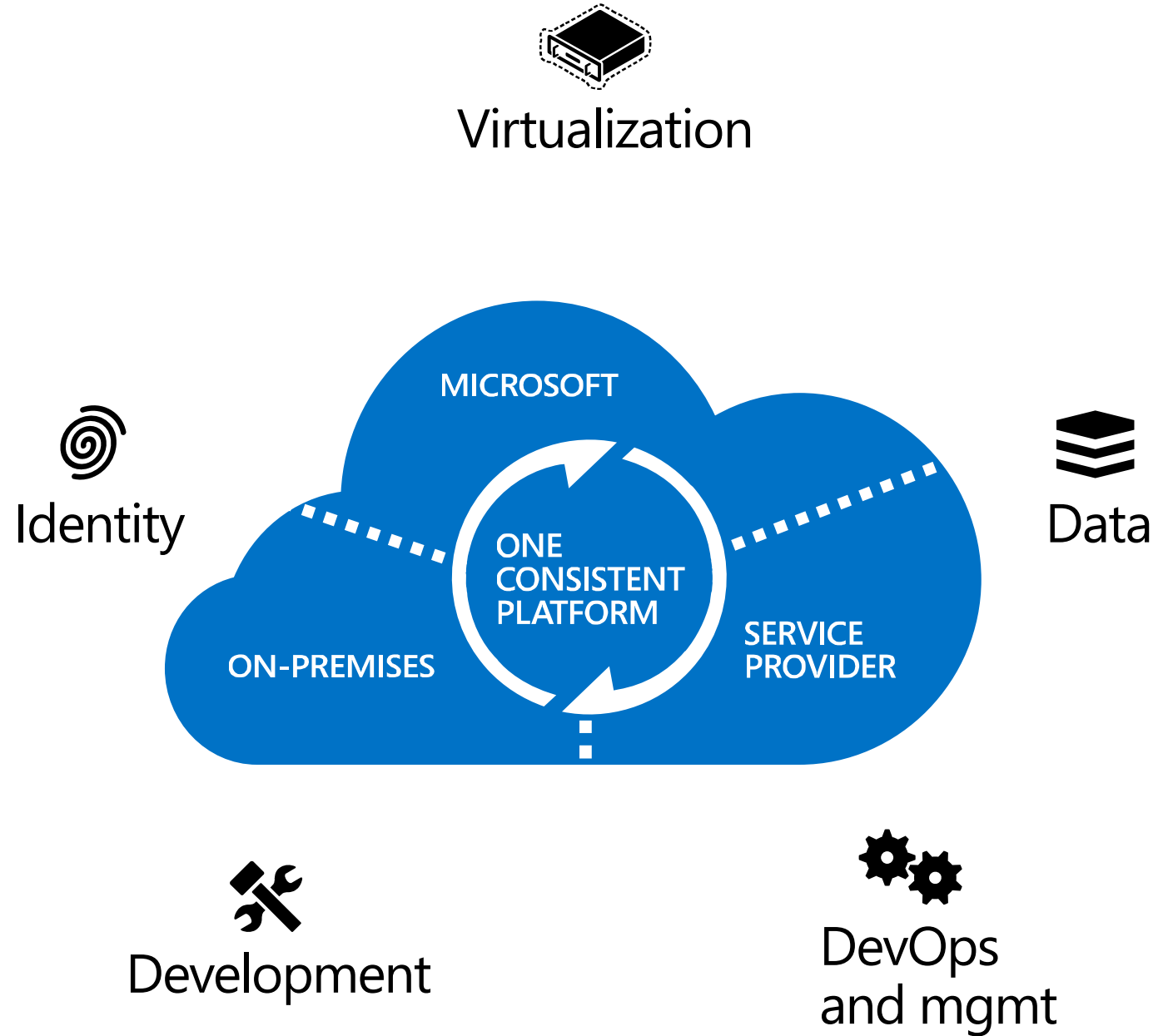
Modern platform
for the world's apps

Transforms **datacenter**

Enables **modern apps**

Unlocks **insights on any data**

Empowers **people-centric IT**



Cloud OS: Innovation at Scale

93%

of the Fortune 1000
use **Active Directory**

&

265+

billion **Windows Azure AD**
authentications

46%

SQL Server: most
widely deployed
database in the world

&

300+

thousand databases
in **Windows Azure**

75%

of servers
worldwide run on
Windows Server

50%

of Global 100 use
Windows Azure

&

76%

of enterprise apps
run on **Windows
Server**

&

100+

thousand websites hosted
in **Windows Azure**

Accelerating the Transition



SMBs
Moving to Cloud

2/3

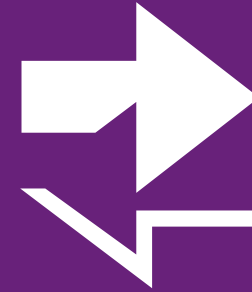
Leveraging Cloud Services



ISV
Building Solutions

70,000

Built on .NET Platform



Enterprise
Going Hybrid

60%+

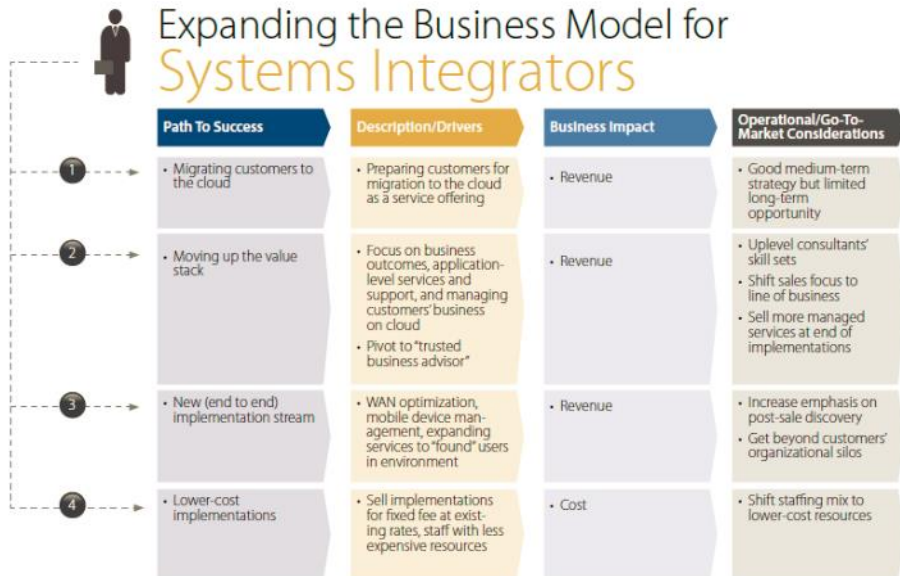
Cloud OS Ready

Successful Cloud Partners *by IDC and Microsoft*

Successful Cloud Partners HIGHER, FASTER, STRONGER

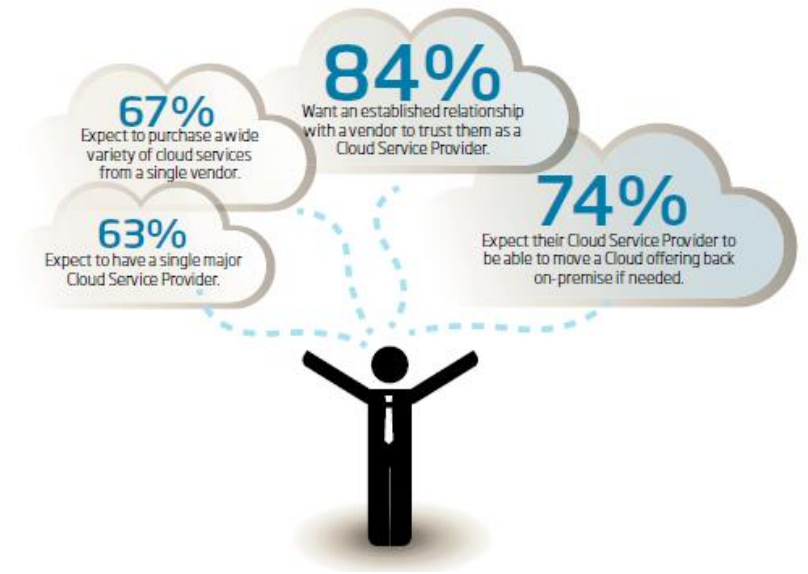
An IDC InfoQ sponsored by Microsoft

1. Market Opportunity | 2. Managing for Cloud | 3. Organizing for Cloud | 4. Insights By Partner Type

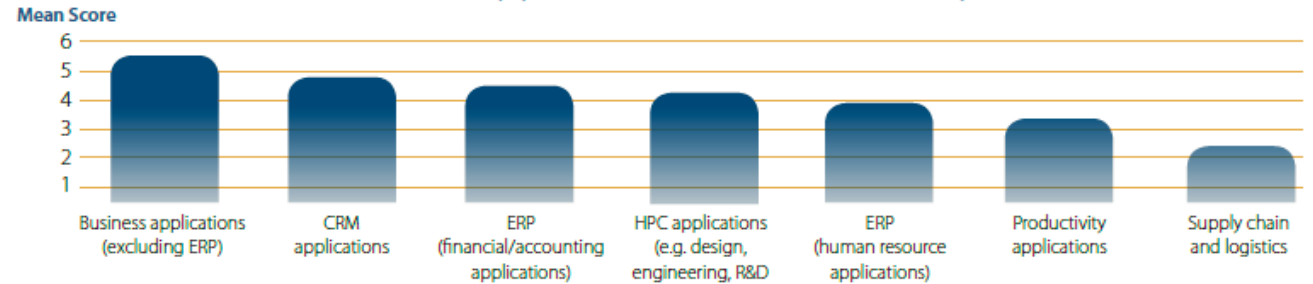


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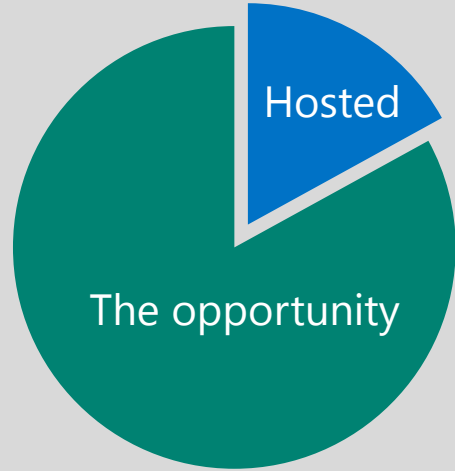
The next wave of applications suitable for the public cloud*



PARTNERS WHO SWITCH OVER TOO FAST FROM THE TRADITIONAL TO THE SUBSCRIPTION MODEL MAY FIND THEMSELVES WITH CASH FLOW ISSUES. THOUGH THIS IS BETTER THAN WAITING TOO LONG TO MOVE TO CLOUD, AND LOSING CUSTOMERS.

Email philme@microsoft.com for link to full report

Service Provider Opportunity



Hosting leads shift with projected instance growth of 144%.



Hosting growth is
4x
that of on-premises.



Off-premises
instances will grow
127%
between now and 2015.

Enterprise applications

**Easily transfer
workloads:**



On-premise
Cloud



Server provider
Cloud

Today's Market



Desktop Hosting

By 2015, the estimated market size for Desktop Virtualization is \$5.6B and an estimated 75% in session-based computing¹.



Database Hosting

The total data platform market will reach to \$39.9B by 2012. Cloud (Database-as-a-Service) + Hosted Database market will reach \$4B in FY15².



Application Hosting

50% of enterprise customers are "on the road" to cloud



Web Hosting

The estimated market size of Website hosting and maintenance in 2012 is \$48B and a CAGR of 8% over the next three years³.



VM Hosting

Off-premises instances will grow 90% between 2012 – 2015⁴.

¹451 Research, Desktop as a service, 2012

²Microsoft Internal Analysis, 2012

³Source: AMI-Partners; www.ami-partners.com, 2H2011 Routes to Market Report

⁴Microsoft Internal Analysis, Spring 2012

Comprehensive Platform for Hosting



Desktop Hosting



Database Hosting



Application Hosting



Web Hosting



VM Hosting

Foundation for Hosting Service Provider Offers

ISV Control Panels

Custom Control Panels

Service Management Portal

Service Management API

Windows Server 2012 R2

Availability

Web Applications
Active Directory



Compute

Scalability

Applications
Virtualization



Storage (File/Block)

Security

Remote Desktop Services
Management



Network

Systems Center 2012 R2

- Service Provider Foundation API
- OS& Application Monitoring
- Manage Service Provider Cloud Infrastructure



Hosting Provider Platform Investments

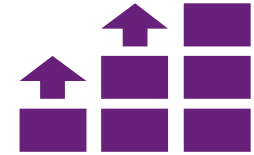
Designed to drive lower infrastructure TCO and deliver new business opportunities



Comprehensive Cloud
Platform



Cost
Efficiency



Expanded
Services

Windows Server 2012

Hyper-V	IIS Performance
Storage Virtualization	RDS for WAN
Network Virtualization	QoS Network
Hyper-V Replica	Scalability

R2 Features:

Hot-add of VM Disk & Memory	Storage Tiering, & Data Deduplication
Improved DR with Hyper-V Replica	Network Gateway
	RDS extensions

Systems Center 2012 SP1

Orchestrator	Application & OS Monitoring
VMM for Managing Windows Server 2012	Multi-tenant Framework
Service Provider API	

R2 Features:

Cluster Upgrades without downtime	Runbooks for SC Deployments
At Scale Management of Network Virtualization	Hyper-V Replica Management

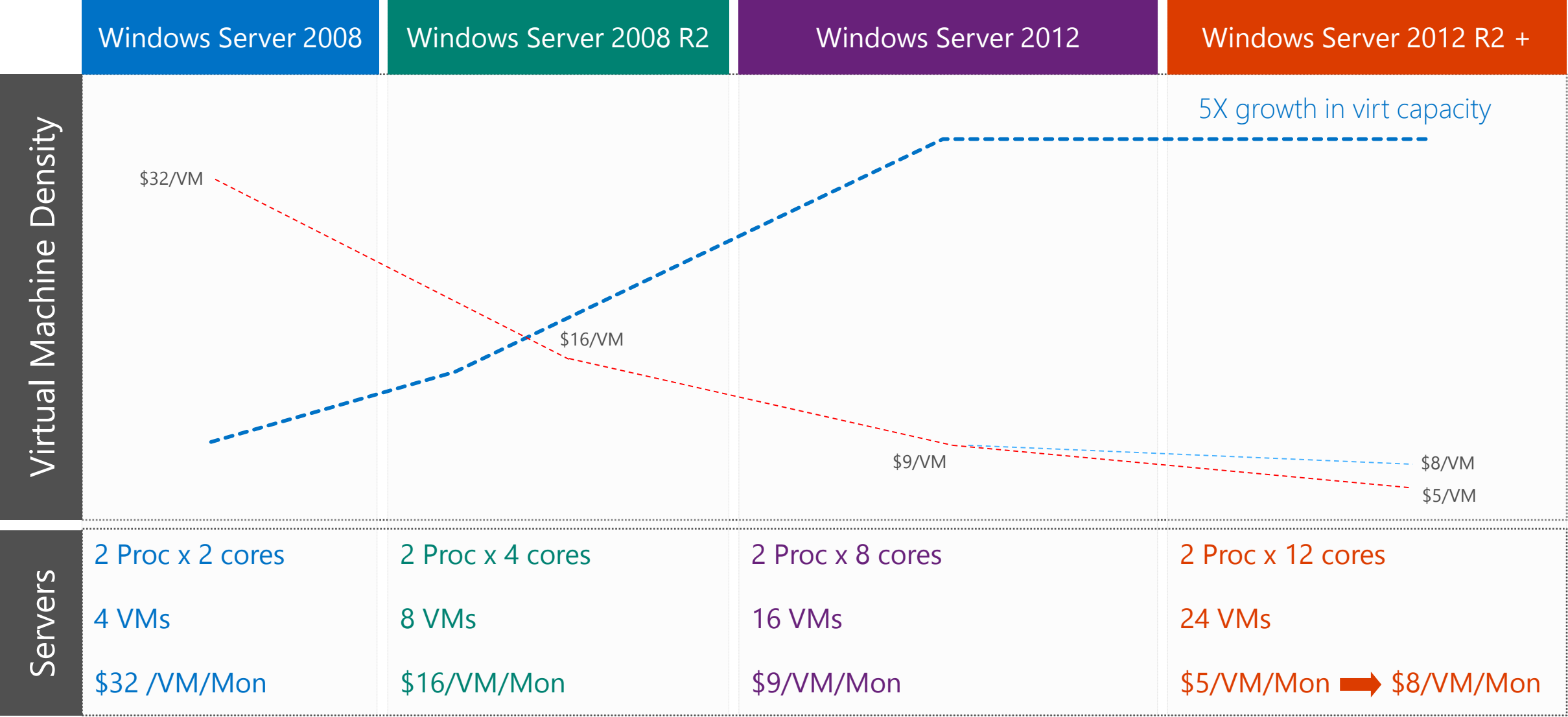
Windows Azure Pack

Service Management API for HSPs	Web Hosting Automation
Hybrid Cloud API Support	Reserved VM & Website Instances

R2 Features:

Improved Portal	Expanded Service Management API
IaaS Automation	Service Bus for Developers
Web Hosting & PaaS Application Deploy.	

Growth in Virtualization Power Over Time



Hosting Hyper-V Momentum



Cloud on Your Terms

VL for Dedicated Apps

On Premises



Outsourced

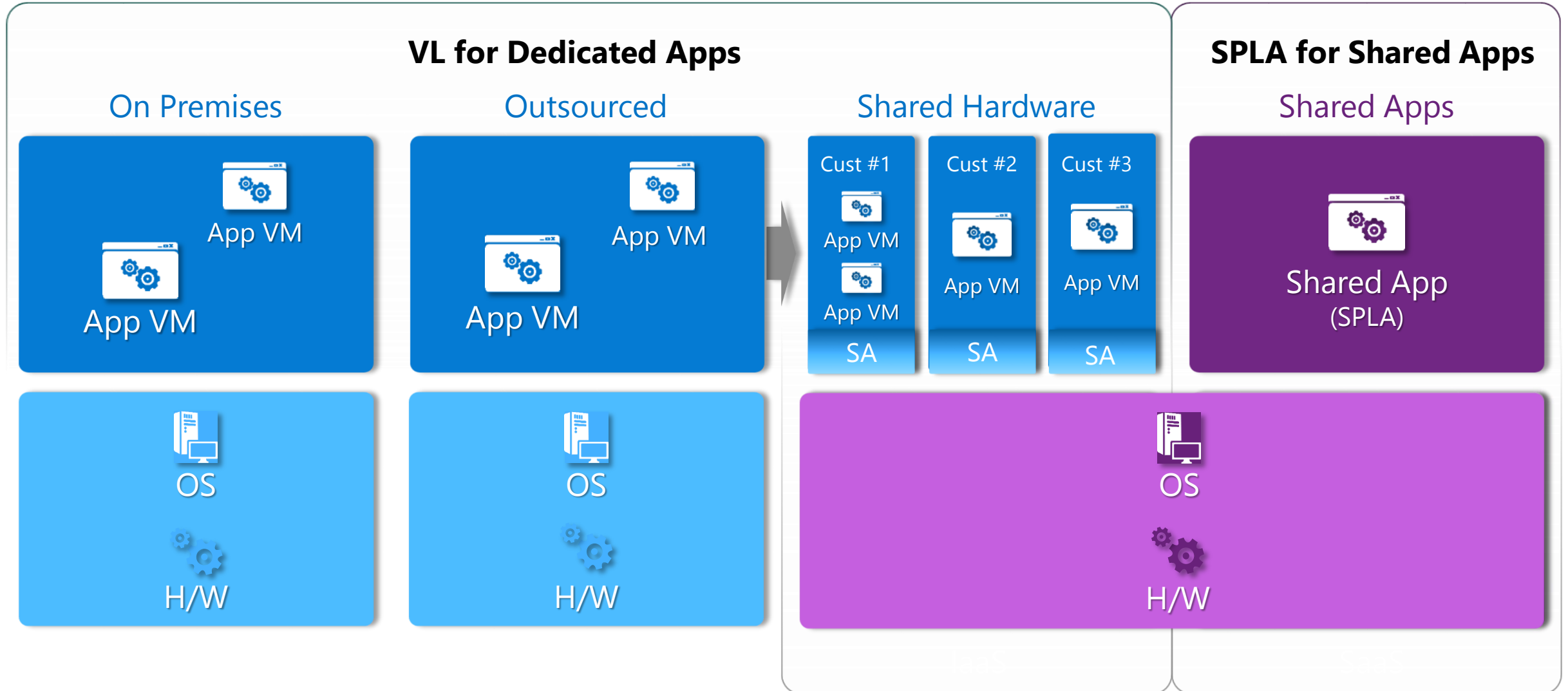


SPLA for Shared Apps

Shared Apps



License Mobility through Software Assurance



Head in the Clouds, Feet on the Ground

License Mobility

Assign Open server licenses (on Software Assurance) to run instances on shared hardware at a Service Provider

Availability since July 2011

SQL Server, Exchange Server, Lync, SharePoint Server, Dynamics CRM, System Center Servers

Customer Value

Extend the value of existing license investments for application server software: on-premises or in the cloud

Service Provider Value

Lower datacenter costs by using a single infrastructure at a single low price

Not covered by License Mobility

Windows Server

Windows Client (XP, Vista, 7, 8)

Microsoft Office and other desktop applications

"SaaS" SPLA on "IaaS" SPLA : SPLA on SPLA

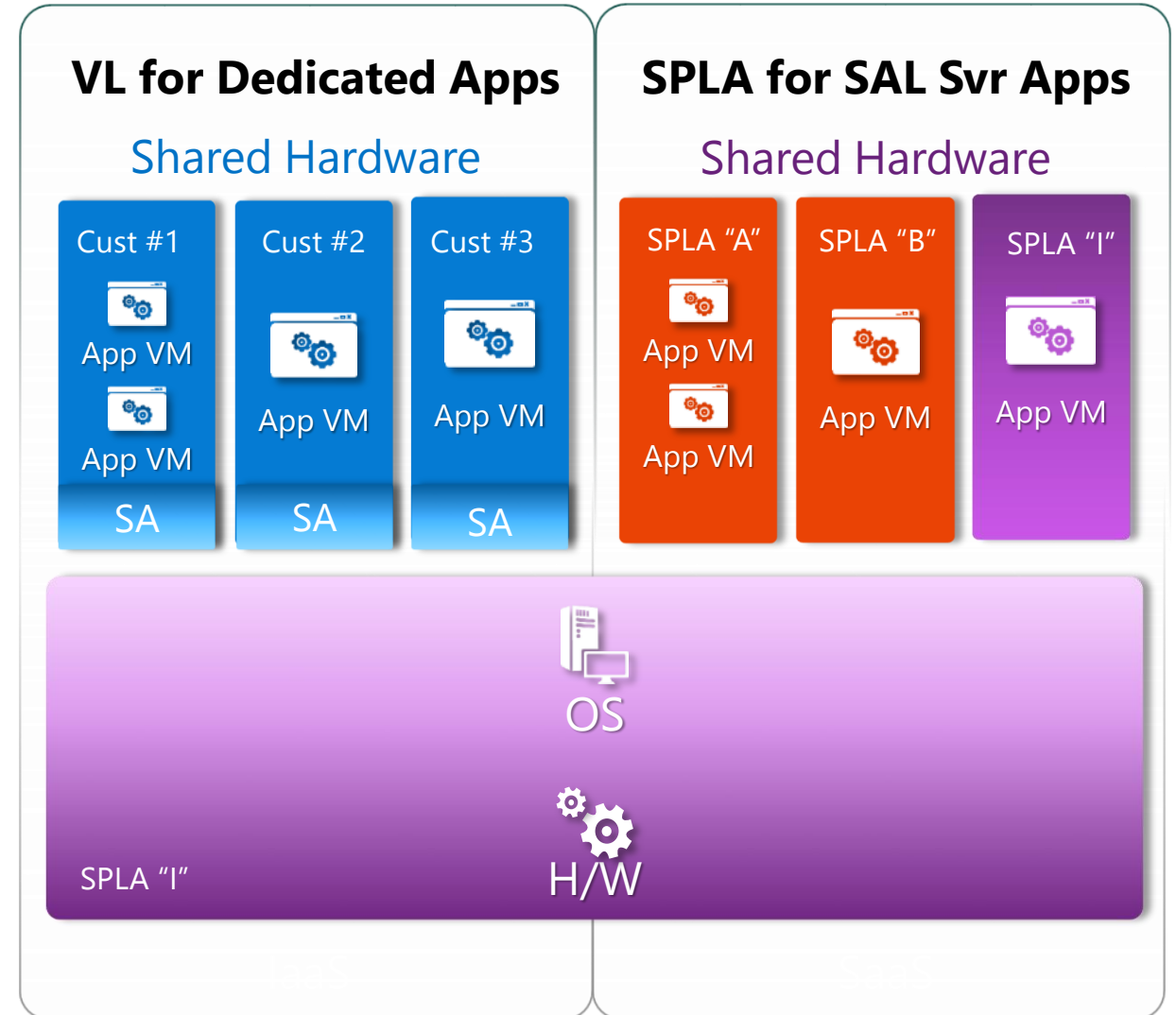
SALs via one SPLA and PLs from another

"SPLA on SPLA" is when one SPLA Partner places SAL based Server Applications on another Service Providers shared (SPLA) infrastructure.

Examples:

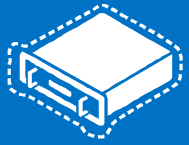
Dynamics ERP and CRM SALs via a Certified Dynamics SPA partner with SPLA using a third party Data Centre operator also with SPLA for shared infrastructure (VMs on demand)

Exchange and Lync via a Messaging Specialist on 3rd party shared platform



Windows Server 2012 R2 Product Updates

Designed for Service Providers



VM hosting



Web hosting



Database
hosting



Desktop
hosting



App
hosting

Multi-
tenancy

Windows
Azure pack

Service
provider
foundation
API

Enterprise
scale
hypervisor

Network
virtualization

Linux
support

Resource
metering

Service
templates

RemoteFx
over WAN

Break
through
storage

Resource
throttling

Hyper-V
replica

SQL
always-on

In memory

Windows Server 2012 Lowers Infrastructure Costs for Hosting

Scalability

More scalability per server

- More VMs per server
- 32x increase in virtual disk size per VM
- 2.5X increase to 160 logical processor support

Flexible Storage

SAN-like performance on commodity HW

- Lower-cost storage via Storage Spaces & Pools
- SMB & Fibre Channel improvements
- De-duplication
- Improved SAN support



Dynamic Network

New functionality and reduced management overhead

- Extensible Switch
- IP mobility
- Security
- New QoS features



Improved Web Server

More websites per server

- NUMA Aware Scalability
- Simplified SSL management
- Designed for scale-out

Multi-Tenancy

Reduced management costs

- Tenant isolation
- More easily move VMs across premises
- Resource Metering



Automated Management

Management savings through automation

- 2000 new Windows PowerShell cmdlets
- Cluster update management
- Integration with System Center



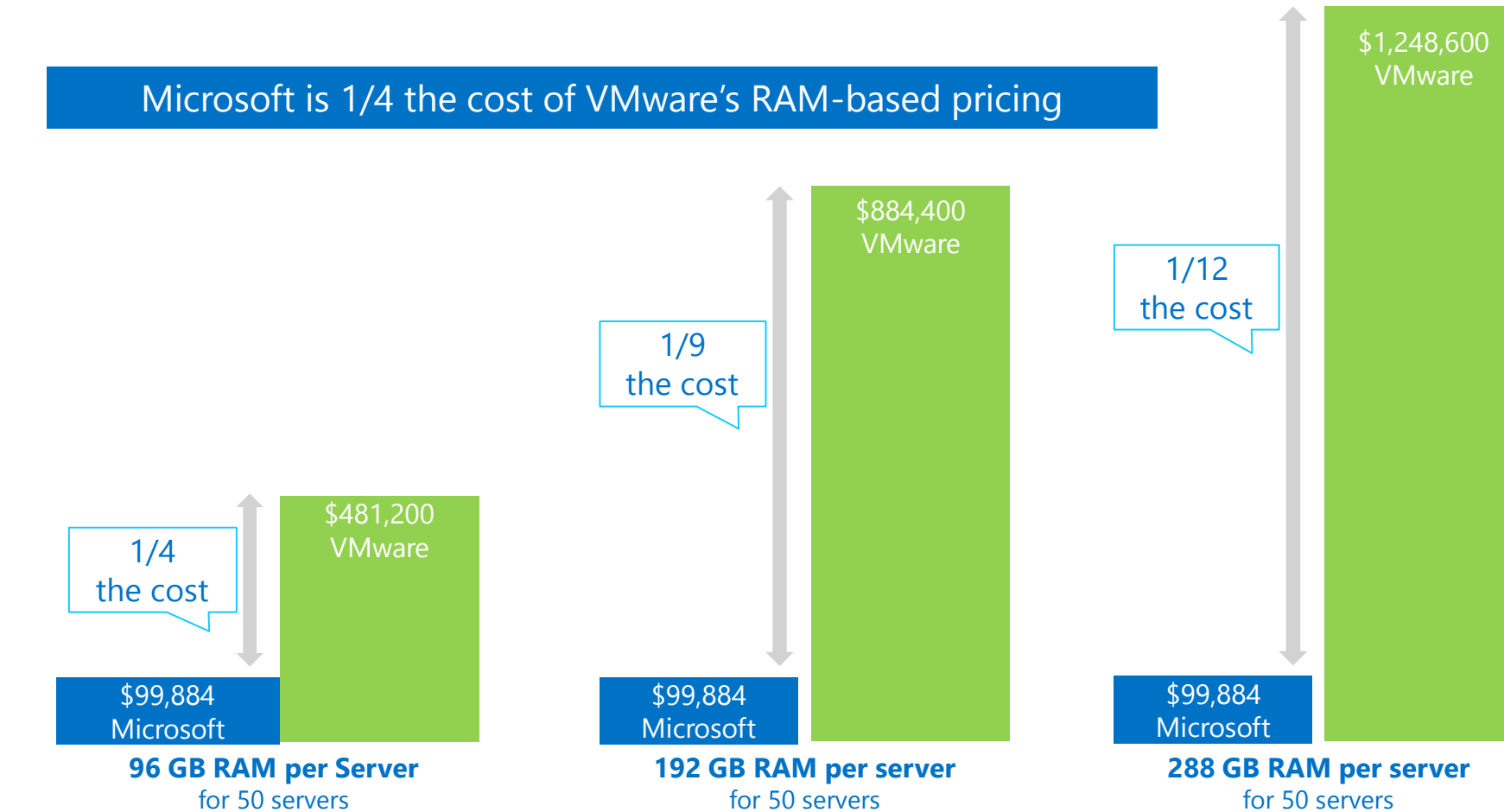
Windows Server 2012 Advantage


for Hosting Service Providers


Category		Resource	Microsoft		VMware	Advantage
			Windows Server 2008 R2	Windows Server 2012	vSphere 5.0 Enterprise Plus	
Scalability/ Performance/ Density	VM	Active VMs per Host	384	1,024	512	Microsoft
		Memory per VM	64 GB	1 TB	1 TB	-
		Virtual Processors per VM	4	32	32	-
	Cluster	Maximum Nodes	16	64	32	Microsoft
		Maximum VMs	1,000	4,000	3,000	Microsoft
	Network	High performance with SR-IOV	No	Yes	No	Microsoft
Storage		Native 4-KB Disk Support	No	Yes	No	Microsoft
		Maximum Virtual Disk Size	2 TB	64 TB	2 TB	Microsoft
		Encrypted Cluster Storage	No	Yes	No	Microsoft
Secure Multi-tenancy		Open Extensible Switch	No	Yes	No	Microsoft
		Confirmed Partner Extensions	-	4	2	Microsoft
		Trunk Mode to Virtual Machines	Yes	Yes	No	Microsoft
		Resource Metering	No	Yes	Partner	Microsoft
Flexible Infrastructure		1GB Simultaneous Live Migrations	1	Unlimited	4	Microsoft
		10GB Simultaneous Live Migrations	1	Unlimited	8	Microsoft
		Shared Nothing Live Migration	No	Yes	No	Microsoft
		Network Virtualization	No	Yes	Partner	Microsoft
High Availability		Guest OS Application Monitoring	Yes	Yes	Partner	Microsoft
		Guest Clustering with Live Migration	No	Yes	No	Microsoft

Better Margins than VMware, Especially as You Grow

Order of magnitude price advantage with Core Infrastructure Suite



 SPLA Core Infrastructure Suite Cost

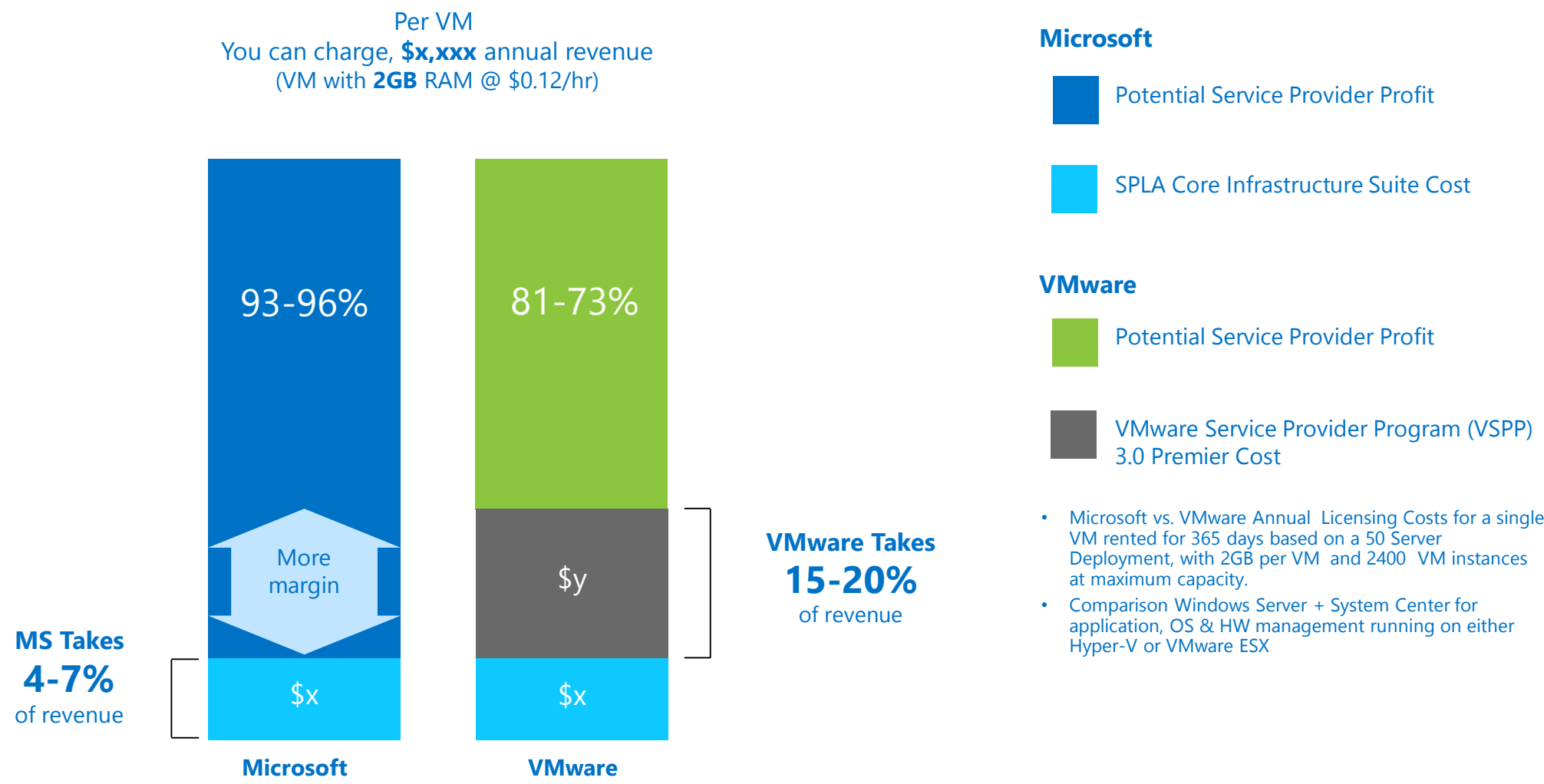
 VMware Service Provider Program (VSPP) 3.0 Premier cost

- Microsoft vs. VMware Annual Costs for a 50 Server Deployment, 2GB per VM with either 2400, 4800 or 7200 2 GB VM instances at maximum capacity
- Comparison Windows Server + System Center for application, OS & HW management running on either Hyper-V or VMware ESX

Better Margins with Microsoft vs. VMware

VMware takes 15-20% of revenue per VM from you

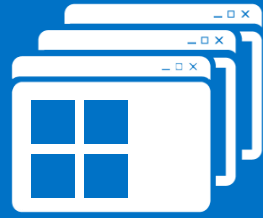
Hosting Revenue and Margins for a Single VM Rented for 365 Days



System Center 2012 Capabilities and Components

Comprehensive Management Platform

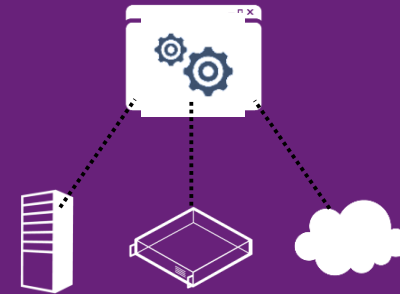
Application & OS Management



Service Delivery & Automation



Infrastructure Management



Operations
Manager



Over 300+
Management Packs



App Controller



Orchestrator



Service Manager



Virtual Machine
Manager



Operations
Manager



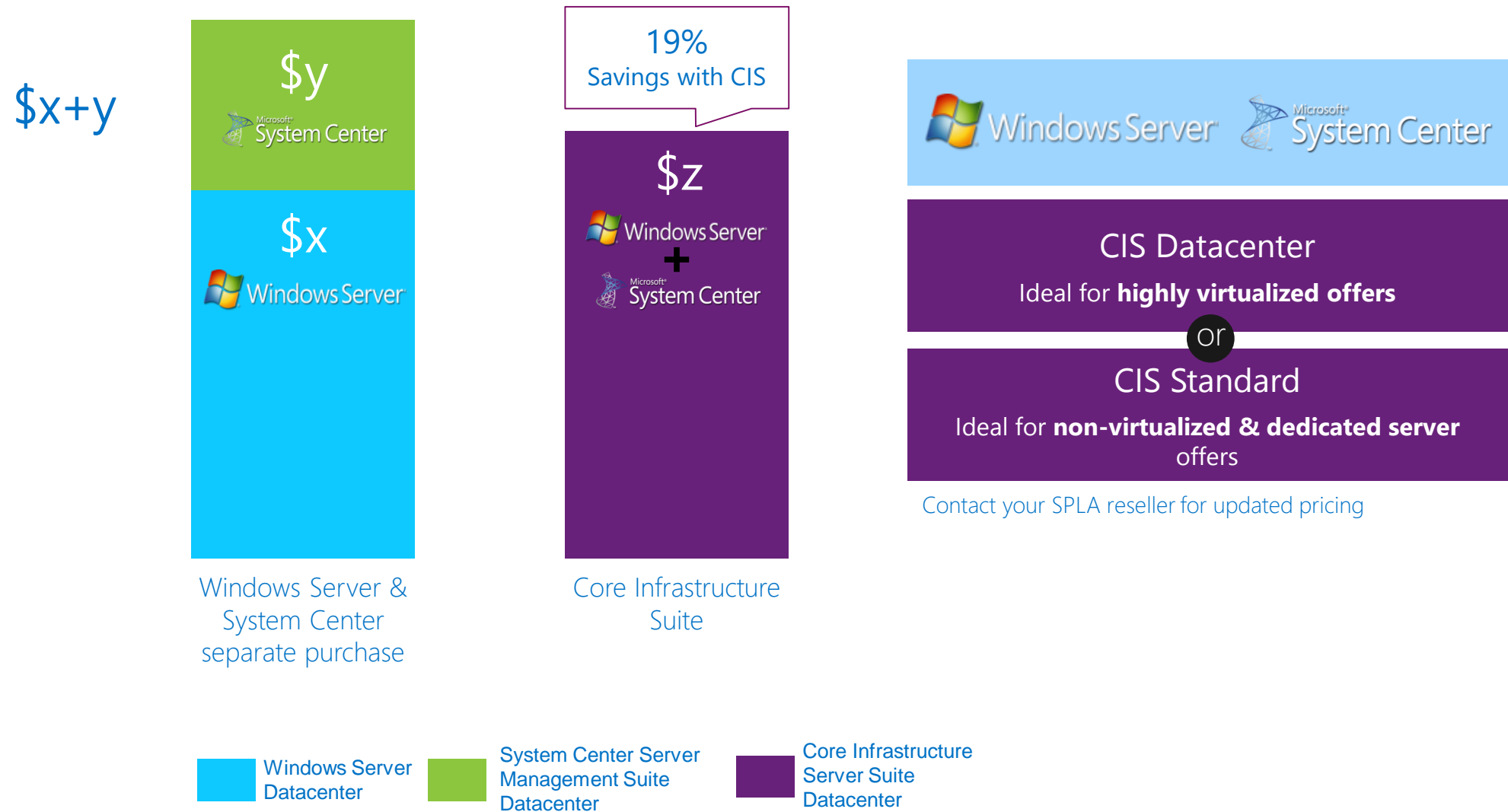
Configuration
Manager



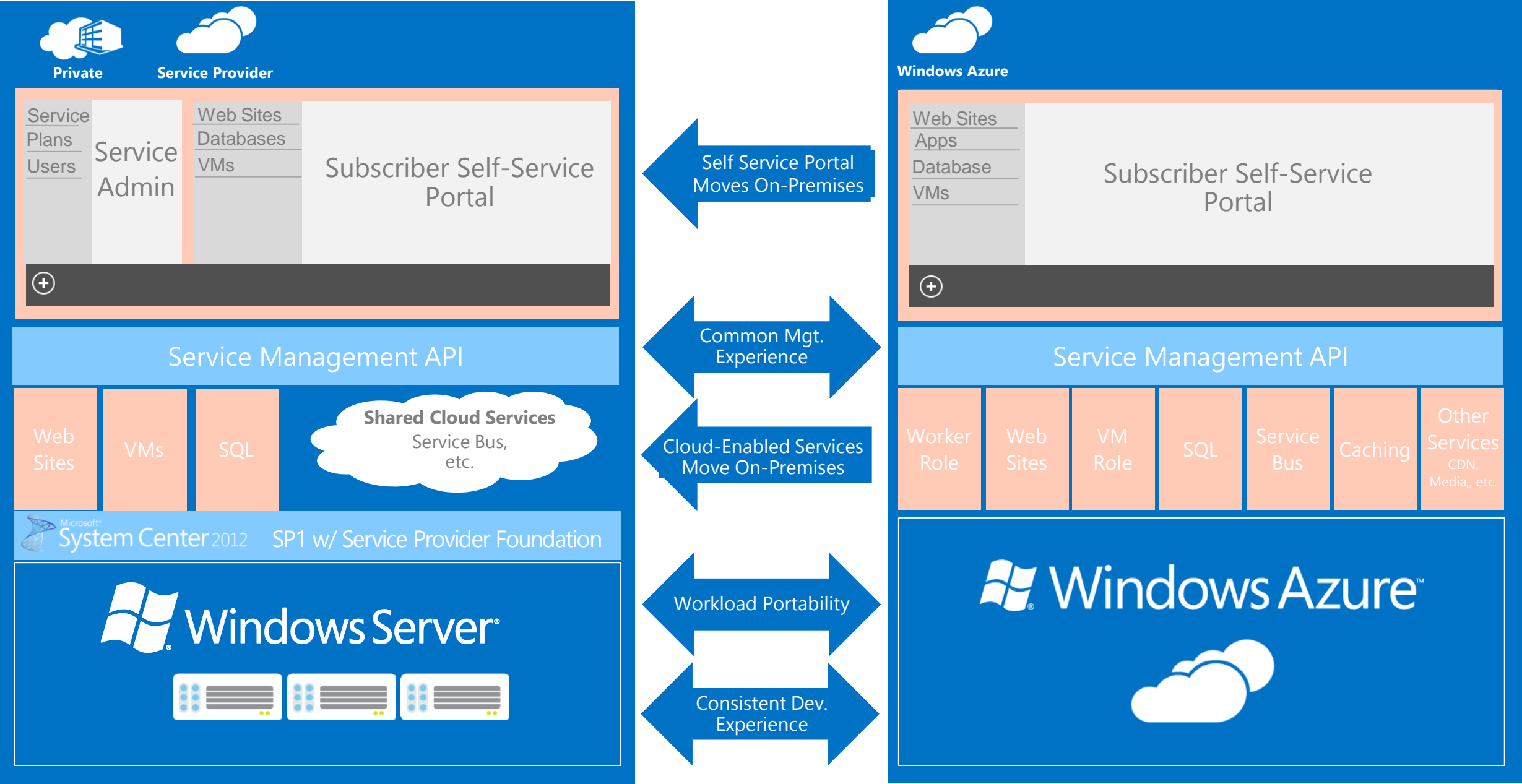
Data Protection
Manager

Core Infrastructure Suite (CIS) Saves You Money

One license for your entire service provider cloud infrastructure



Bringing Windows Azure Services on Windows Server



←

→

https://manage.windowsazure.com/#Workspaces/All/dashboard

🔍

🔒

↺

Hosting Partner Update - ...

000000 Monthly Hosting ...

Windows Azure

🏠

★

⚙️

Windows Azure

philme@outlook.com

ALL ITEMS

WEB SITES1

VIRTUAL MACHINES2

MOBILE SERVICES0

CLOUD SERVICES0

SQL DATABASES0

STORAGE1

SQL REPORTING0

MEDIA SERVICES0

SERVICE BUS0

ACTIVE DIRECTORY0

NETWORKS0

ADD-ONS0

SETTINGS

all items

NAME	TYPE	STATUS	SUBSCRIPTION	LOCATION
auphilme	Web Site	Running	Azpad047LNO7961	East Asia
portalvhds014t04q1w6xc2	Storage Account	Online	Azpad047LNO7961	Southeast Asia
HostedLog01	Virtual machine	Running	Azpad047LNO7961	Southeast Asia
philme-ws12-01	Virtual machine	Running	Azpad047LNO7961	Southeast Asia

+

NEW

↺

BROWSE

■

STOP

↺

RESTART

@

MANAGE DOMAINS

🗑️

DELETE

📁

WEB MATRIX

?

ALL ITEMS

VIRTUAL MACHINES
3

NETWORKS
0

MY ACCOUNT

all items

NAME	TYPE	STATUS	SUBSCRIPTION
philmews12_01	Virtual Machine	Stopped	ITBYTHEMONTH VM Hosting 1
HostedLog01	Virtual Machine	Creating...	ITBYTHEMONTH VM Hosting 1
HostedLog02	Virtual Machine	Creating...	ITBYTHEMONTH VM Hosting 1



NEW



CONNECT



START



ATTACH



DETACH



DELETE

2



Overview

Clouds

Services

Virtual Machines

Library

Jobs

Settings

Connections

Subscriptions

User Roles

Clouds (7)

Enter keyword

Connect

Deploy

VMM Server

Manage Run As accounts



Last refresh: 5:59:00 PM

Name	Connection Name	Description	Subscription ID	Virtual Machines	CPU	Memory	Storage
Connection Name: Contoso Private Cloud							
Contoso Development	Contoso Private Cloud	Contoso Development		0 / Unlimited	0 / Unlimited	0 MB / Unlimited	0 GB / Unlimit
Contoso Production	Contoso Private Cloud	Contoso Production		0 / Unlimited	0 / Unlimited	0 MB / Unlimited	0 GB / Unlimit
Contoso Staging	Contoso Private Cloud	Contoso Staging		0 / Unlimited	0 / Unlimited	0 MB / Unlimited	0 GB / Unlimit
Connection Name: Fabrikam Hosting							
Hosted Contoso Production	Fabrikam Hosting	Hosted Contoso Production		0 / Unlimited	0 / Unlimited	0 MB / Unlimited	0 GB / Unlimit
Connection Name: Windows Azure							
Windows Azure Development	Windows Azure	Windows Azure Development	f4e6ecbc-a14f-467d-82...				
Windows Azure Production	Windows Azure	Windows Azure Production	a0916f12-a415-478a-b7...				
Windows Azure Staging	Windows Azure	Windows Azure Staging	06f5e2b8-24cc-41e2-a0...				

Overview

Clouds

Services

Virtual Machines

Library

Jobs

Settings

Connections

Subscriptions

User Roles

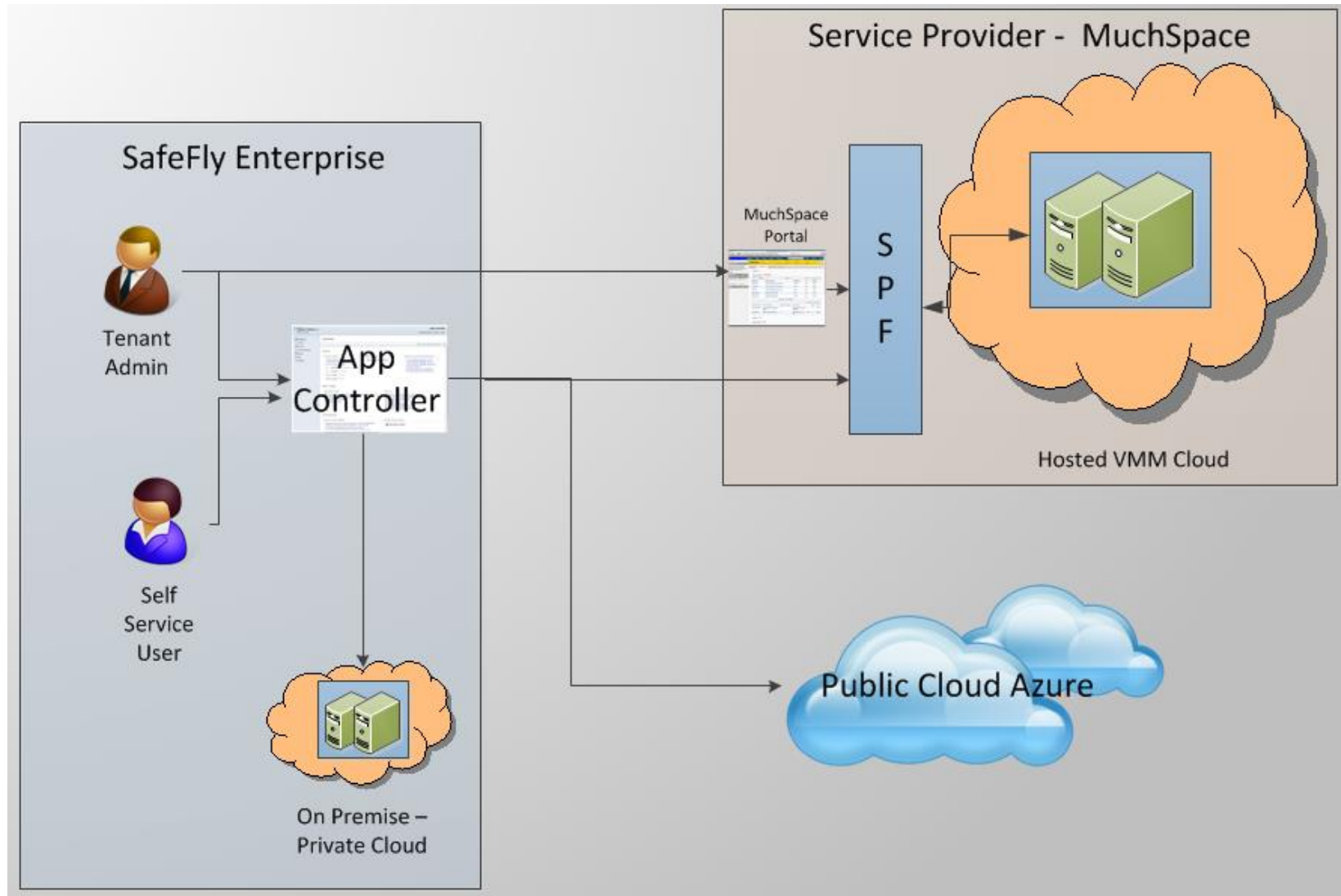
Virtual Machines (10)

Enter keyword

Deploy	Open Diagram	Properties	Shutdown	Pause	Turn Off	Save	Store	Mount image		Last refresh: 5:59:12 PM
Name	Status	Cloud Name	Connection Name	Service Name	CPU Usage	Memory	VM Size	Processors		
Expfront01.contoso.com	Running	Contoso Production	Contoso Private...	Expense Manager	100 %	512 MB		1		
Expservices01.contoso.com	Running	Contoso Production	Contoso Private...	Expense Manager	100 %	512 MB		1		
Expfront02.contoso.com	Running	Contoso Production	Contoso Private...	Expense Manager	100 %	512 MB		1		
expcontrol01.contoso.com	Running	Contoso Production	Contoso Private...	Expense Manager...	100 %	1 GB		2		
HostedLog01.contoso.com	Running	Hosted Contoso Production	Fabrikam Hosting		0 %	1 GB		2		
HostedLog02.contoso.com	Running	Hosted Contoso Production	Fabrikam Hosting		0 %	1 GB		2		
IaaSLog01	Running	Windows Azure Production	Windows Azure	IaaSLog01			Small			
PCSERVER01	Running	Windows Azure Production	Windows Azure	PCSERVER01			Medium			
TR2012ROCK	Running	Windows Azure Production	Windows Azure	TR2012ROCK			Small			
SeattleSQLGL	Running	Windows Azure Production	Windows Azure	SeattleSQLGL			ExtraLarge			

Expfront01.contoso.com

Single Pane of Glass Management for End Customer



Windows Server 2012 R2
Remote Desktop Services
Product Updates

Product Enhancements in Windows Server 2012 R2

Remote Desktop Services



Efficient
Management



Best
Economics



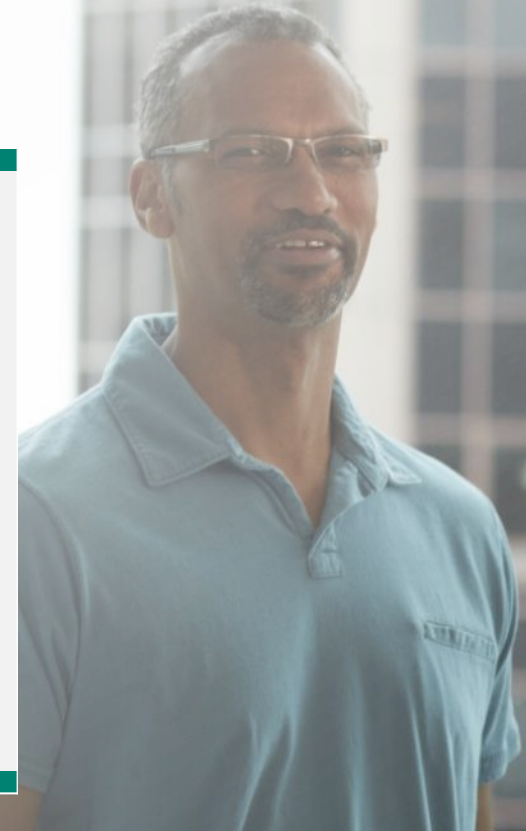
Rich User
Experience

Windows Server 2012 Key Enhancements

- Simplified deployment and management integrated across session host and VMs
- RemoteFX WAN support
- Flexible storage alternatives
- GPU support for both physical and software GPUs
- User profile disks
- Fairshare & seamless user experience with multi-touch support

New in Windows Server 2012 R2

- Storage Tiering
- Online VHD de-duplication
- Improved RemoteApp experience
- Dynamically add/remove monitors
- Quick reconnect

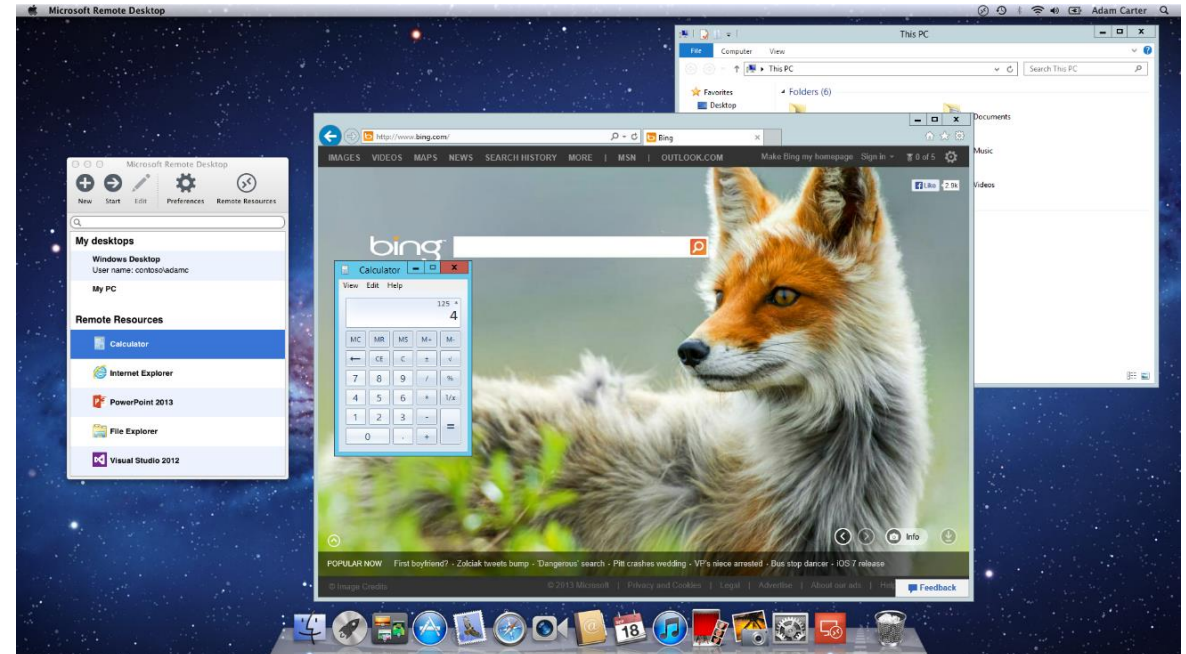


Introducing Microsoft Remote Desktop app: Providing easy access from BYO devices

Provides easy access to a variety of devices and platforms including Windows, Windows RT, iOS, Mac OS X and Android. (Available in application stores in 10/2013)

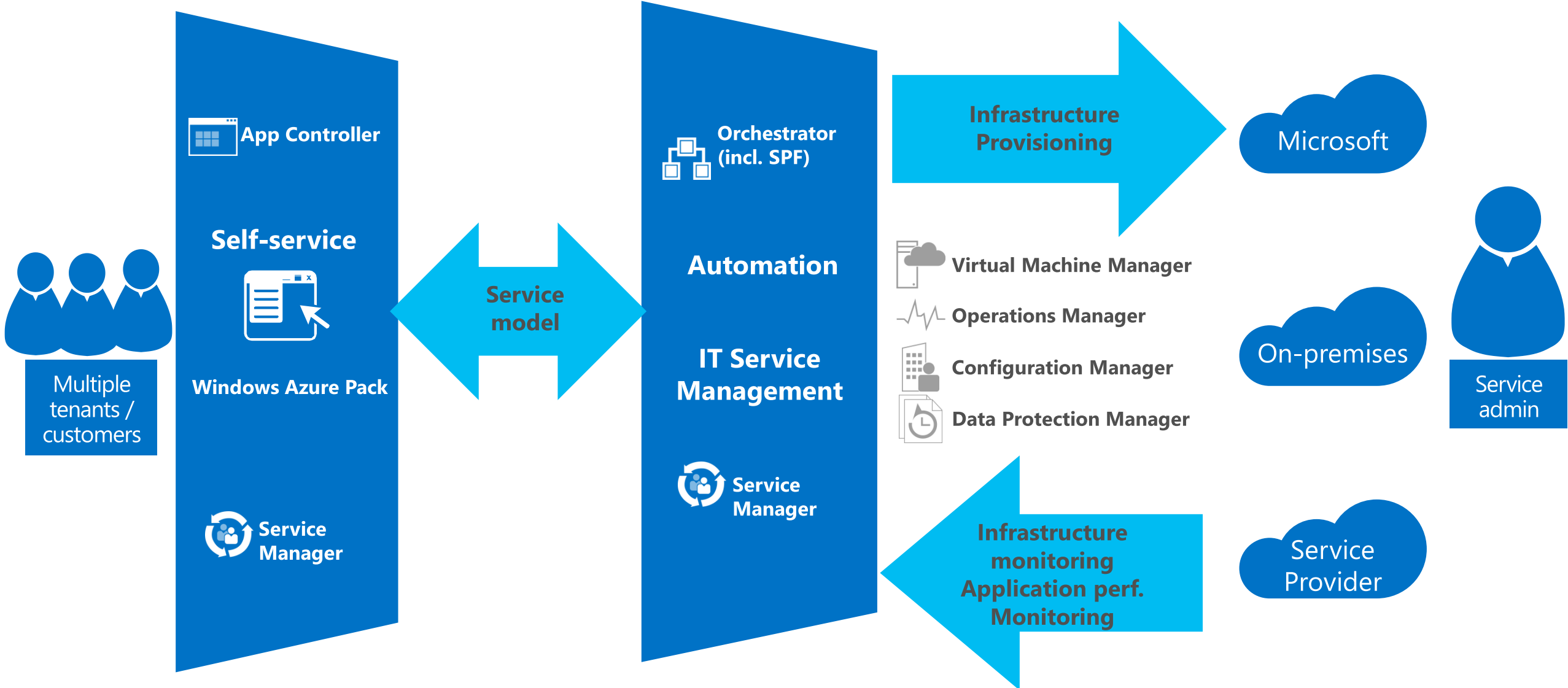
Extends the rich Windows experience to BYO devices and help users be productive without compromising compliance

Provides flexibility by providing access to:
PCs (through an RD Gateway)
Personal and pooled virtual (VM)-based desktops
Session based desktops and
RemoteApp programs



System Center 2012 R2 Product Updates

Unified management for the Cloud OS



System Center 2012 R2 Solution Overview

System Center capabilities



Infrastructure provisioning

Enterprise-class multitenant infrastructure for hybrid environments



Infrastructure monitoring

Comprehensive monitoring of physical, virtual, and cloud infrastructure



Automation and self-service

Application owner agility while IT retains control



Application performance monitoring

Deep insight into application health



IT service management

Flexible service delivery

What's new in System Center 2012 R2

Infrastructure provisioning		Automated Hyper-V cluster upgrades w/o downtime using Live Migration	Tenant-level usage metering and reporting	Storage Spaces support
Snapshot running VMs without downtime	Dynamic Memory resize for running VMs	ODX support for faster VM provisioning from templates	Virtual Fibre channel SAN connectivity support	File-level Linux VM backups, restore full Linux VM
Dynamic VHDX resize	Dynamic Memory support for Linux VMs	Service templates for DPM, Service Manager, SPF and Ops. Mgr.	Runbook based configuration for all System Center components	

Infrastructure monitoring			
Native SNMP monitoring and IPv6 support	VMM integration with Operations Manager for fabric health visualization	System Center Advisor connector for Operations Manager	System Center Management Pack for Windows Azure

Automation and self-service		
Orchestrator Integration Pack for SharePoint (new)	Service management automation with REST APIs & PowerShell	Updated System Center Integration packs

IT Service Management	
SharePoint 2013 support for Service Manager portal	

Application performance monitoring		
System Center Advisor connector for Operations Manager	Java APM	Microsoft Monitoring Agent

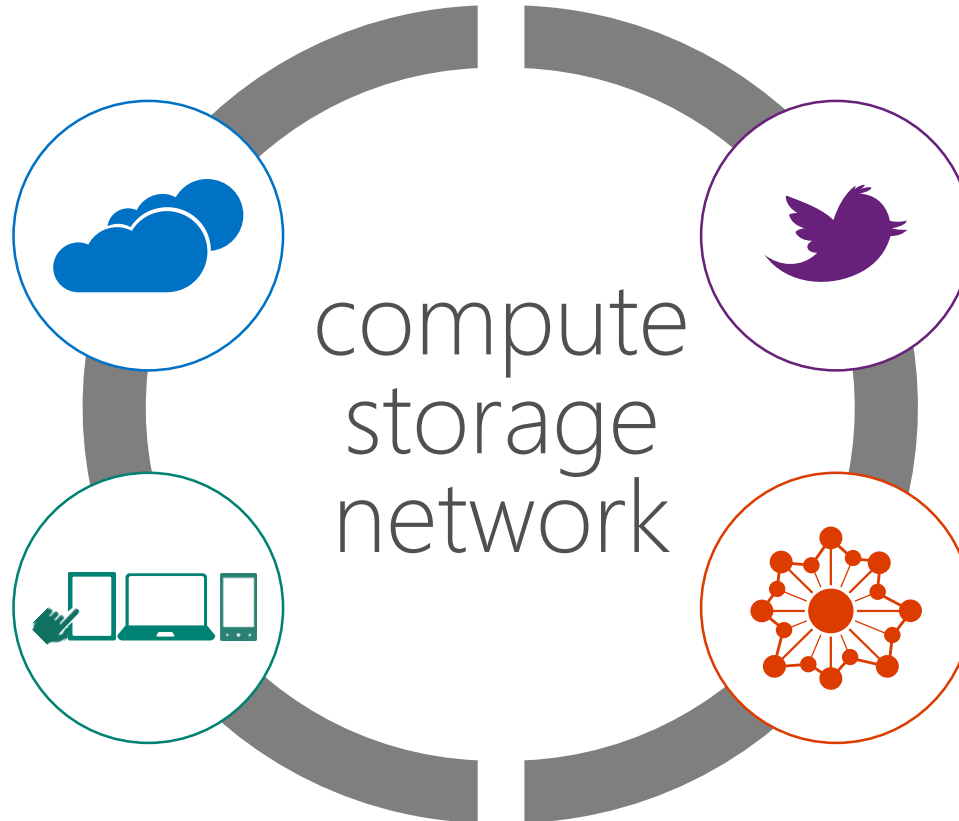
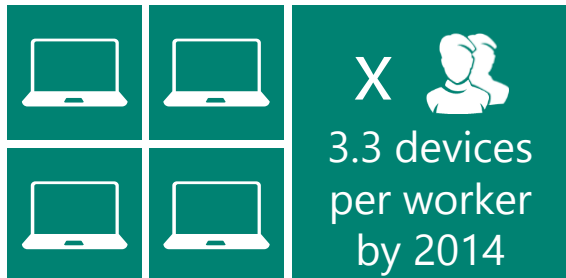
Introducing the New Cloud Platform Suite

Service Provider Needs are Evolving

Cloud Computing



Consumerization of IT



New Social & App Patterns



Data Explosion



Cloud Platform Suite Licensing

Intended to be run in highly virtualized environments

Host Licensed Separately



The "host" is licensed separately per processor. Includes the Windows Server & System Center 2012 R2 "host" features + Windows Azure Pack (WAP)

Guest Per Instance



The "guest" is licensed per instance and can be run on any processor that is licensed for the Cloud Platform Suite "host"

Instance Rights



The "guest" license will give customers the rights to run 1 instance of Windows Server and for the instance to be managed by System Center 2012 R2

Linux VMs



No "guest" fee is charged for Linux VMs running on the Cloud Platform Suite "host"

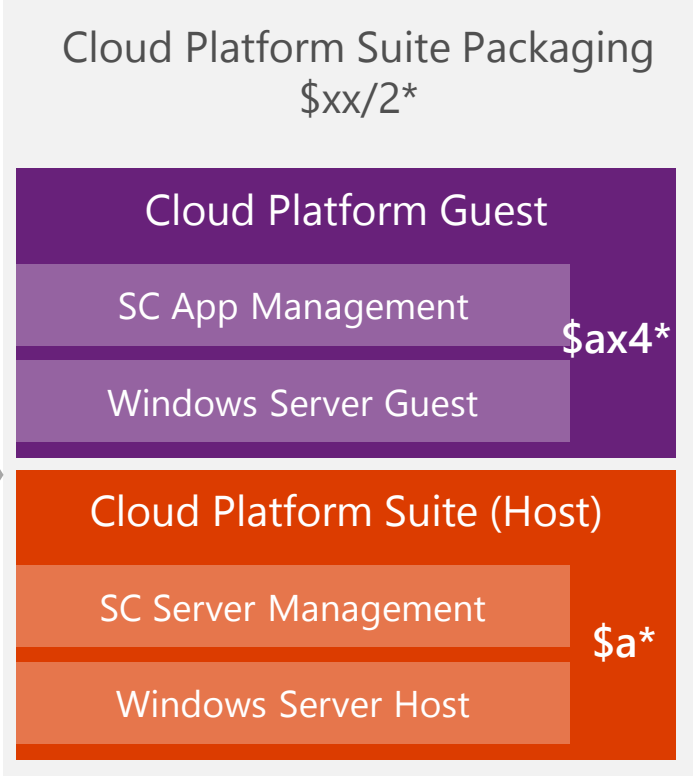
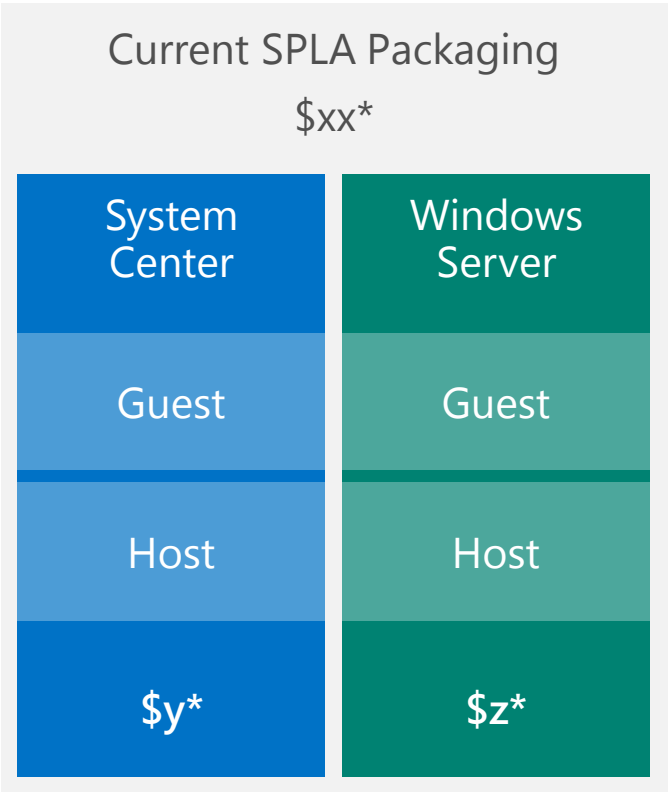
Cloud Platform Suite

Packaging to reduce complexity and simplify management

Service Providers need:





A single host platform on which to standardize all workloads (Windows or Linux)

Management flexibility to run Window Server and Linux workloads anywhere in their infrastructure



*Prices are estimates and for example only, contact your SPLA reseller for final pricing
SPLA prices for 2 Processor servers listed

Product Portfolio Positioning

	Non-Virtualized Server 	Virtualized Server 	
Homogenous workload environment	1 Windows Server and System Center Standard	2 Windows Server and System Center Datacenter	1 The best option for non-virtualized servers
Heterogeneous workload environment	N/A	3 Cloud Platform Suite 	3 The best option for highly virtualized servers running both Windows and Linux applications 

SPLA Pricing Summary

	License Model	Jan 2014 Pricing	Jan 2015 Pricing
Windows Server Datacenter	Proc	+38%	+13%
Windows Server Standard	Proc	No change	+20%
Core Infrastructure Suite Datacenter	Proc	+23%	+9%
Core Infrastructure Suite Standard	Proc	No change	+9%
Remote Desktop Services	SAL	+20%	No change
Cloud Platform Suite (Host)	Proc	\$a	No change
Cloud Platform Guest	Instance	\$a*4	No change

RDS CAL Licensing change: RDS CAL with active SA customers will be able to access applications hosted in a shared-hardware but dedicated virtual instance environment without the requirement for a separate RDS SAL. This SA benefit is not applicable to external users and devices or the underlying Windows Server requirements

*Prices are estimates and for example only, contact your SPLA reseller for final pricing

Opportunity with Microsoft

Growing Revenue



VM Hosting



Web Hosting



Database Hosting



Desktop Hosting



App Hosting



Drive Down Costs

Hypervisor

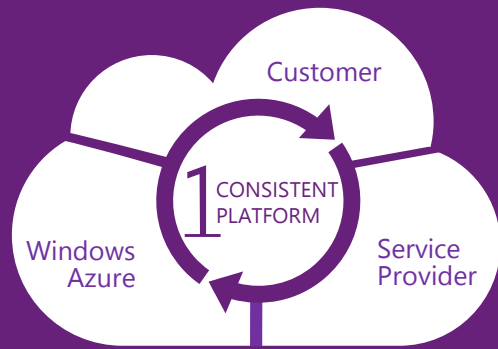
Automation

Networking

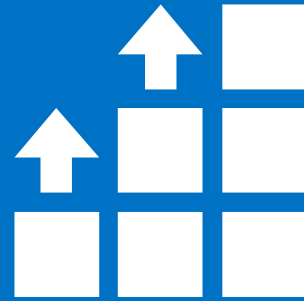
Storage



Changing the Game, Join Us



This is the year
of Cloud OS



Optimize your
operations



Monetize more
solutions

Resources



Learn more and download the
Windows Azure Pack Preview
<http://www.microsoft.com/en-us/server-cloud/windows-azure-pack.aspx>



Download the Windows Server
2012 R2 Preview
<http://technet.microsoft.com/en-us/evalcenter/dn205286.aspx>



Download the System Center 2012
R2 Preview
<http://technet.microsoft.com/en-us/evalcenter/dn205295.aspx>



Call to Actions

Run your own cost comparison

Email philme@microsoft.com to receive invitation to Monthly
Hosting Partner Online Meeting

