



Mit Azure Daten & Applikationen schützen und verwalten

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> 90,000

New Azure customer
subscriptions/month

> 1.5 Million

SQL Databases
running on Azure

> 500 Million

Users in
Azure Active Directory

Azure Usage Momentum

1.5 Trillion

Messages per month
processed by Azure IoT

777 Trillion

Storage Transactions
per day

> 40%

Revenue from
Start-ups and ISVs



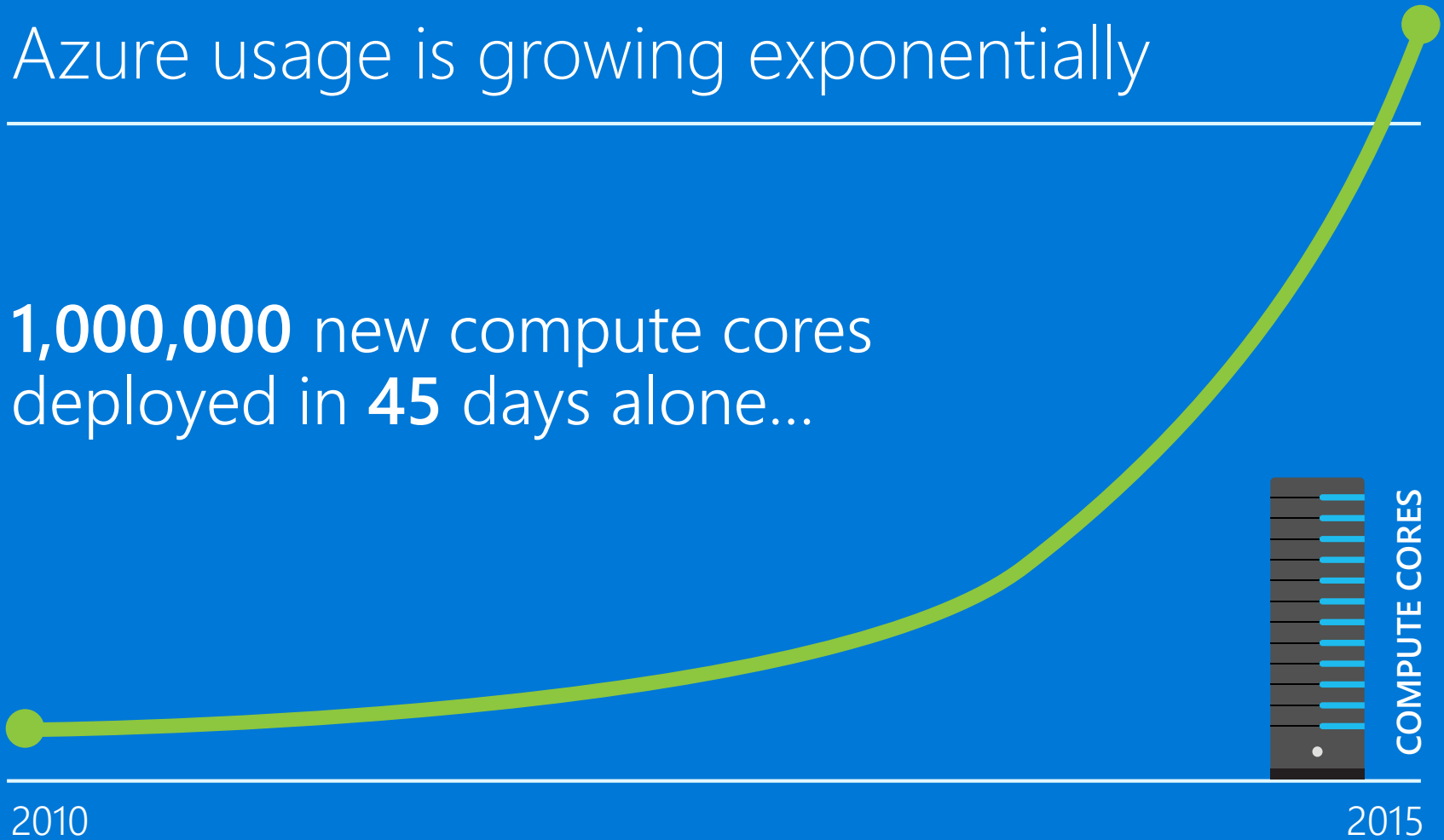
24

Azure regions
Hyper-scale
around the world

Announcing
India – Central, India – South, India – West
NOW GENERALLY AVAILABLE

Azure usage is growing exponentially

1,000,000 new compute cores
deployed in **45** days alone...





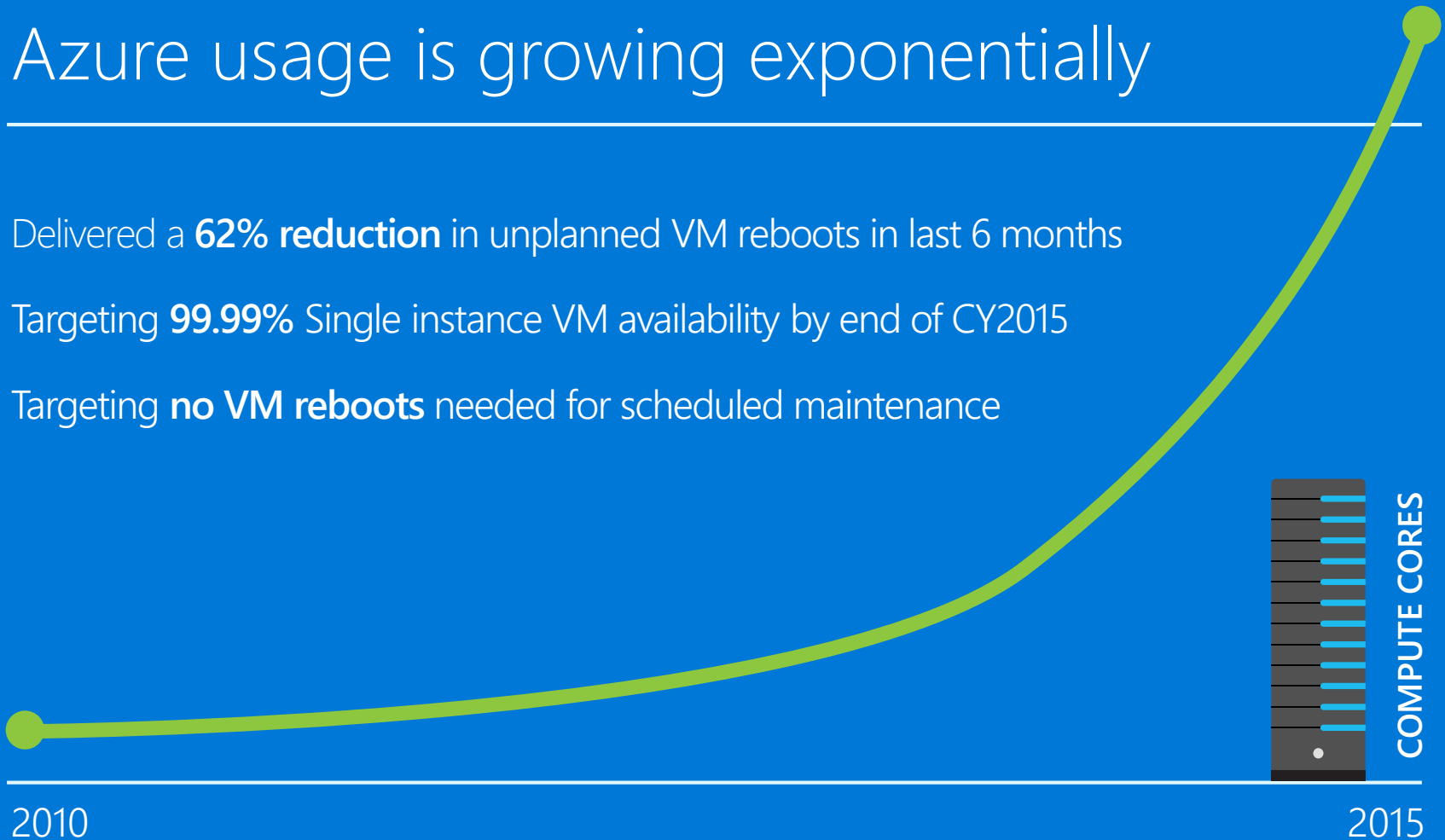


Azure usage is growing exponentially

Delivered a **62% reduction** in unplanned VM reboots in last 6 months

Targeting **99.99%** Single instance VM availability by end of CY2015

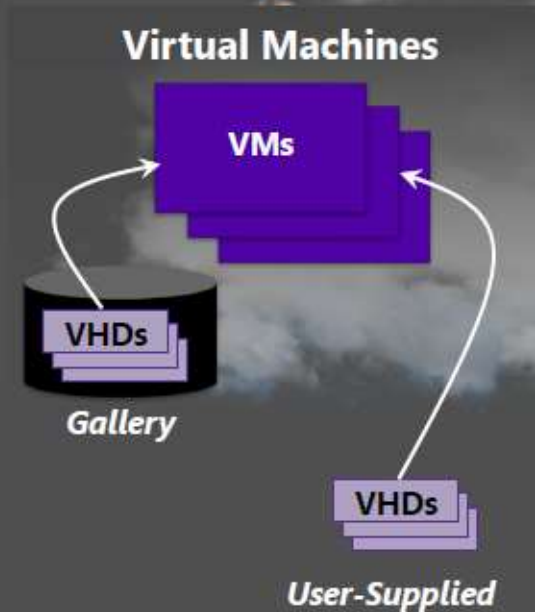
Targeting **no VM reboots** needed for scheduled maintenance



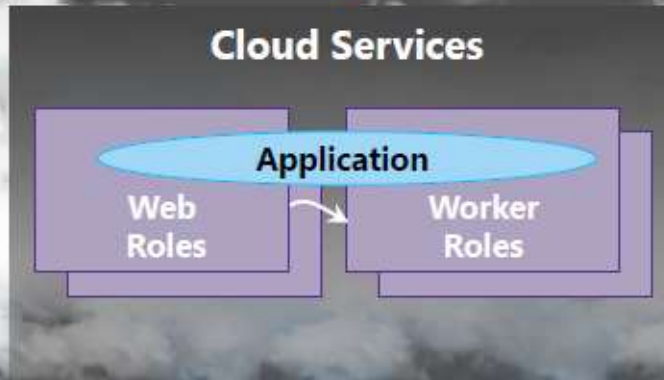
Microsoft Azure Technologies

Compute

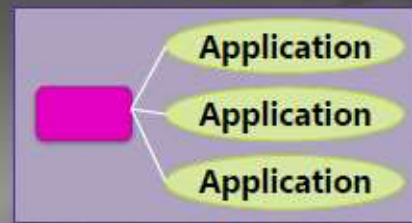
Infrastructure as a Service (IaaS)



Platform as a Service (PaaS)



Web Sites



Becoming part of Azure App Services

Microsoft Azure Technologies

Data management

Binary storage

Blob Storage

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0111110110

IaaS relational storage

DBMS in a VM

SQL Server,
MySQL, ...

VM

PaaS relational storage

SQL Database



Microsoft Azure

Pricing examples (in US dollars))

*Enterprise agreements, etc.
commonly discount these prices*

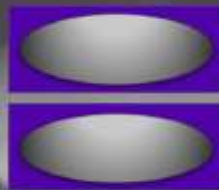


User

Bandwidth

Inbound:
Free

Outbound:
\$0.05 to \$0.087/GB
US and Europe,
\$0.12 to \$0.138/GB
Asia/Pacific,
\$0.16 to \$0.181/GB
Brazil



Compute

Virtual Machines: \$0.02 to \$1.32/instance
per hour *depending on instance size and
capabilities*



Data

Blob Storage: \$0.022 to \$0.061/GB per month,
depending on size and capabilities

SQL Database: \$4.99 to \$3,720 per month,
depending on database size and throughput

Microsoft Azure Technologies

Data management

Binary storage

Blob Storage

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IaaS relational storage

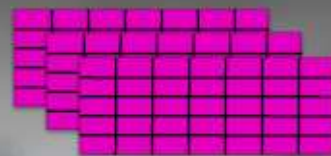
DBMS in a VM

SQL Server,
MySQL, ...

VM

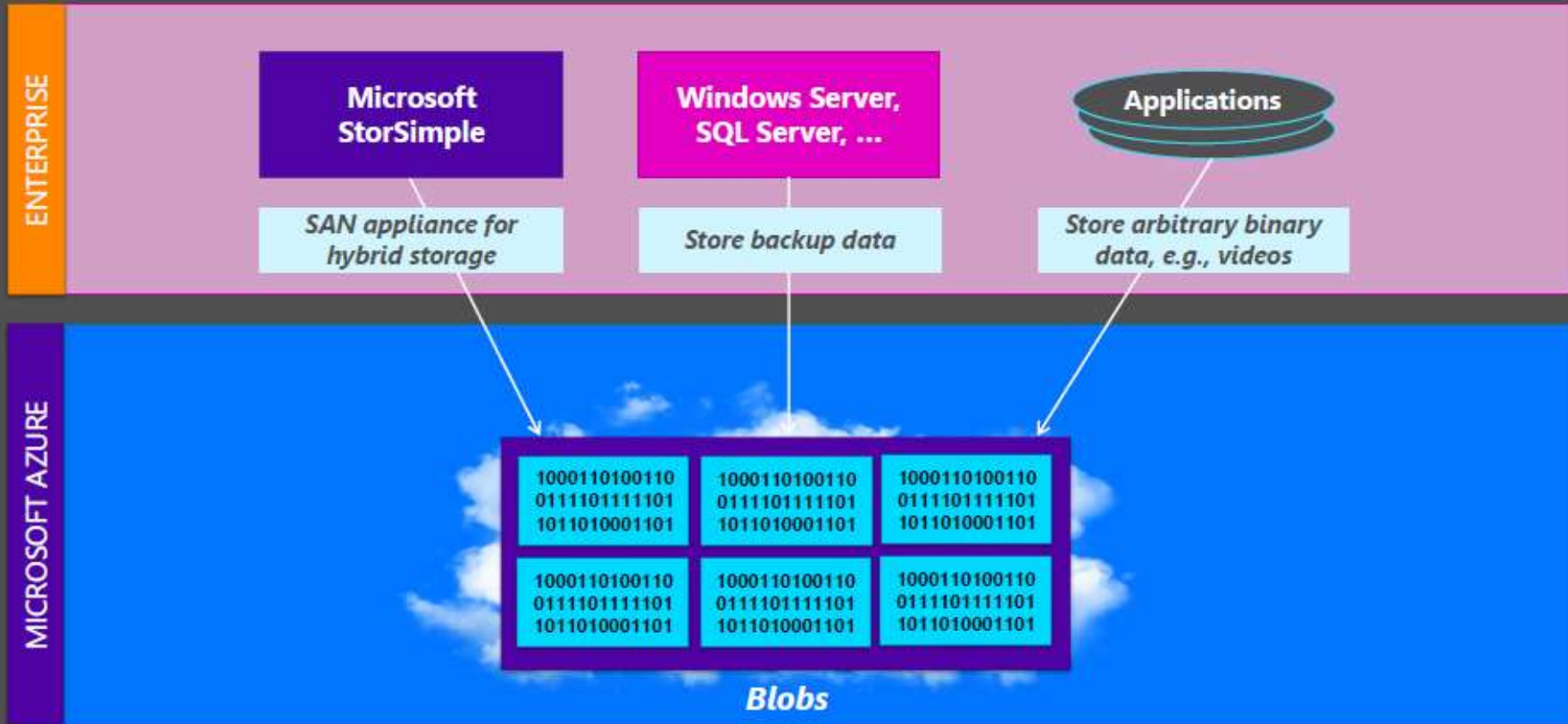
PaaS relational storage

SQL Database



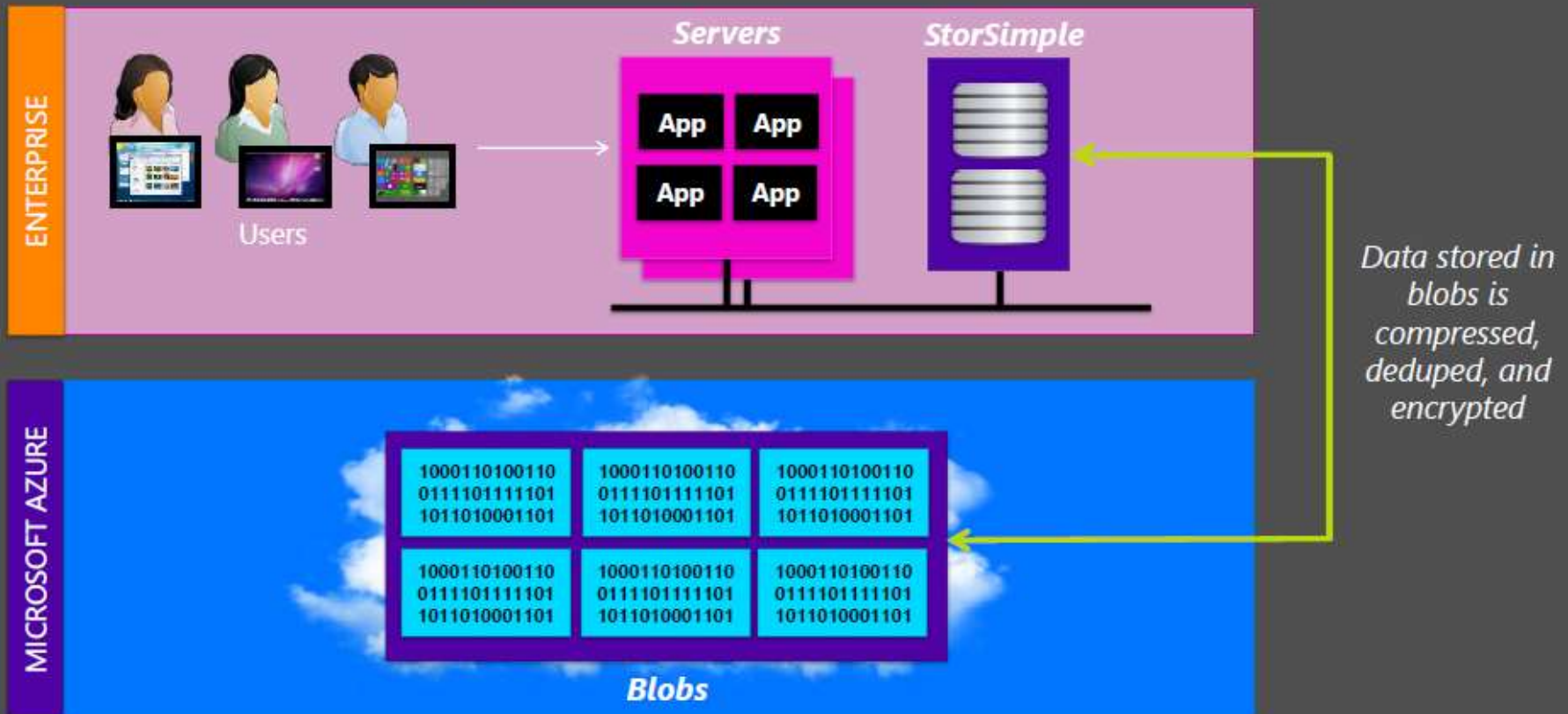
Data Storage

Example Using Azure Blobs



Data Storage

Example: Extending on-premises storage with StorSimple



Data Storage

Why do this?



Lower cost

EXAMPLE

One terabyte stored in geo-redundant blobs

- **Operations on the data:**
10,000,000/month
- **Data transfer out:** 500 gigabytes/month

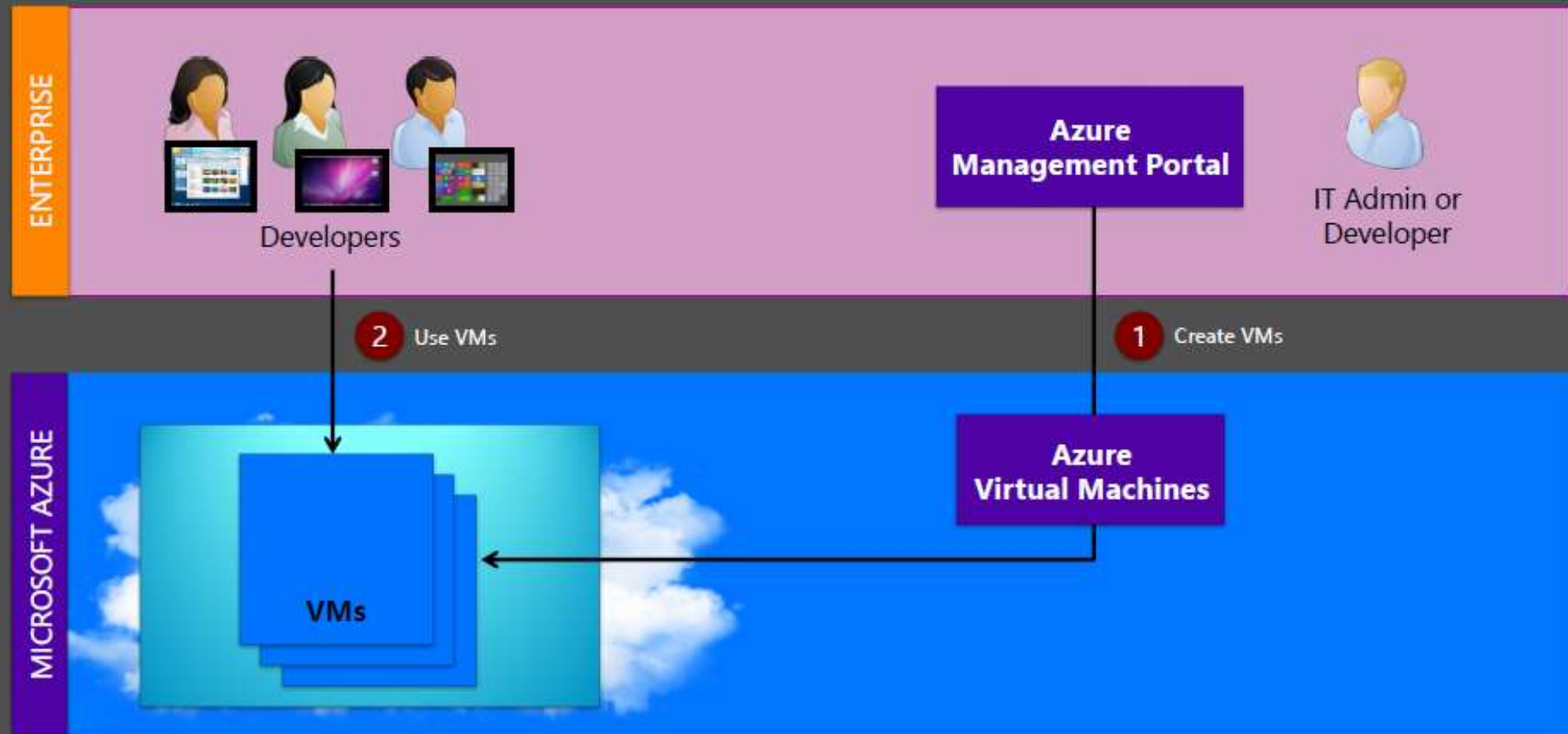
COSTS

Storage: \$61/month
Operations: \$0.36/month
Data transfer: \$43.01/month (US/Europe)
\$68.31/month (Asia/Pacific)
\$89.60/month (Brazil)

Total: **\$104.37/month (US/Europe)**
\$129.67/month (Asia/Pacific)
\$150.96/month (Brazil)

VMs on Demand

Example: A dev/test environment



VMs on Demand

Why do this?

Fast and simple way to get inexpensive VMs

Can use Microsoft Azure-provided VHDs or your own, Windows or Linux

Users can potentially access cloud VMs as if they were local

Useful in many situations

Dev/test environment for cloud or on-premises apps

Useful for custom and packaged apps, e.g., SAP

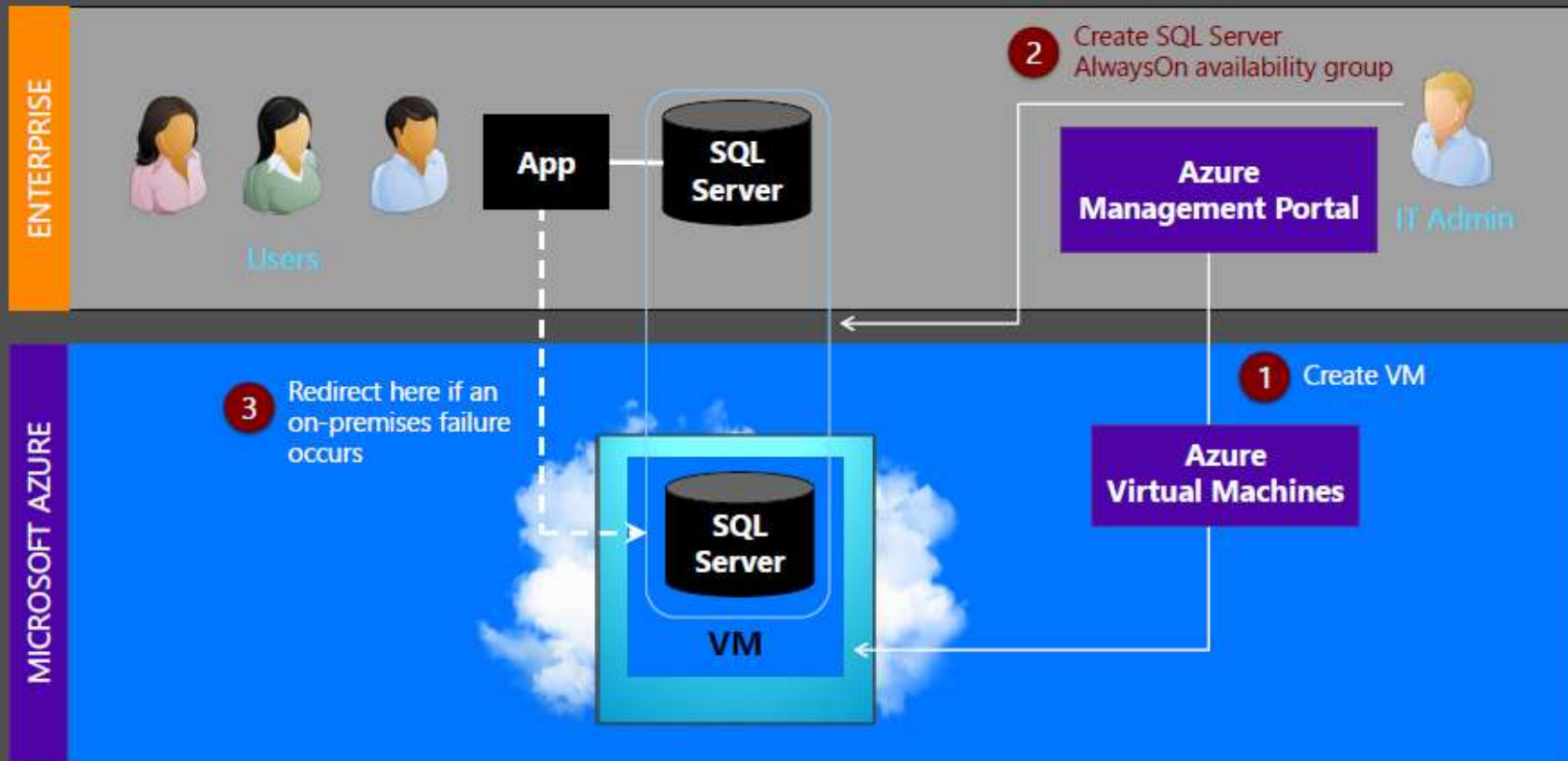
Can shut down VMs when they're not needed

Such as nights or weekends when developers aren't active

DEMO

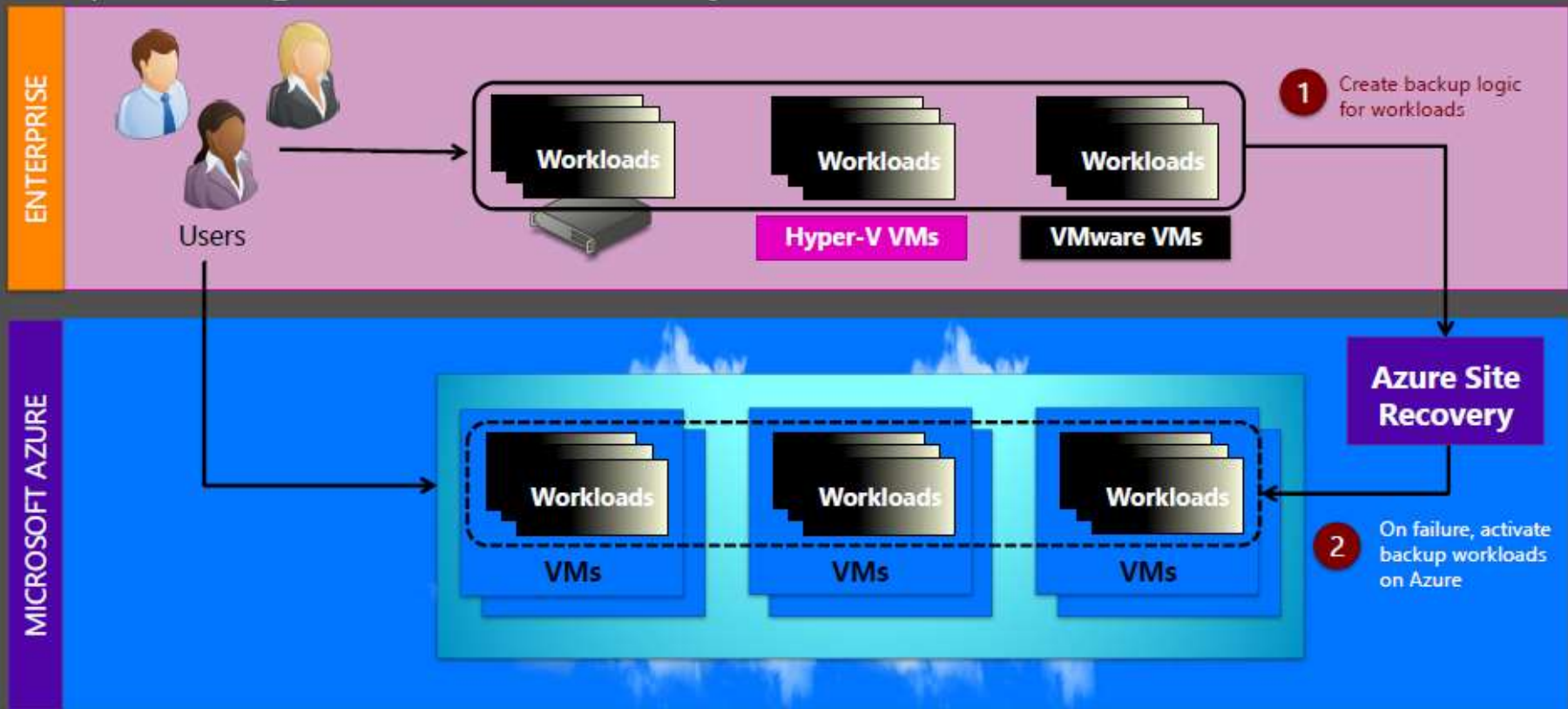
Disaster Recovery

Example: Database failover to Azure



Disaster Recovery

Example: Using Azure Site Recovery



Disaster Recovery

Why do this?

Can cover a range of scenarios

From database DR to full workload DR

Lower cost

No need to maintain a dedicated facility just for DR

Organizations can provide DR for more applications, because it's cheaper

Provides diverse recovery options

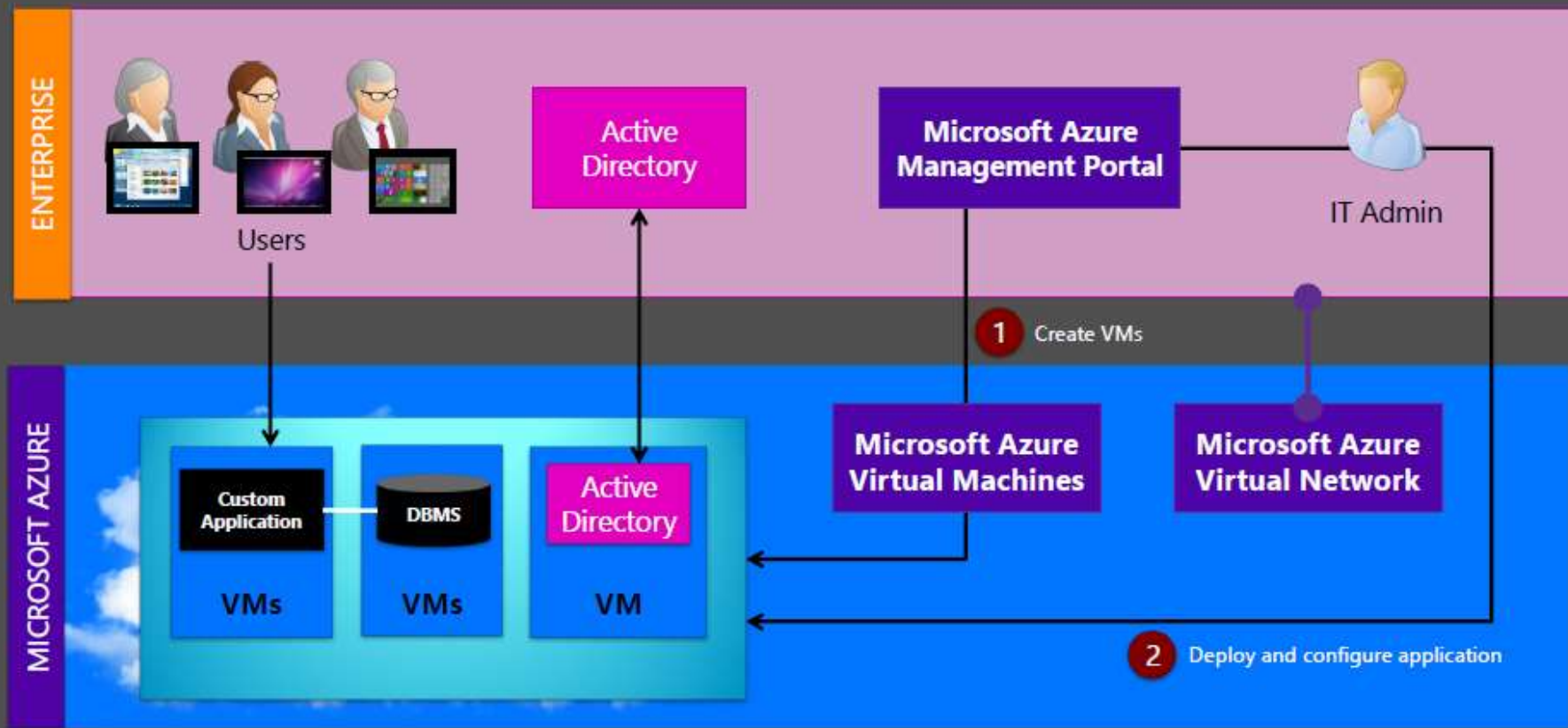
Microsoft Azure has datacenters around the world

Azure Site Recovery supports DR to Azure, to a hoster, and to another enterprise datacenter

DEMO

Moving Existing Applications to the Public Cloud

Example: Moving a custom application to Microsoft Azure



Moving Existing Applications to the Public Cloud

Why do this?



Lower cost

EXAMPLE

Two medium VMs
(\$0.18/hour each) running
continuously

Stores 100 gigabytes

- **Operations on the data:** 30,000,000/month
- **Data transfer out:** 50 gigabytes/month

COSTS

Compute:	\$268.00/month
Storage:	\$7.18/month
Bandwidth:	\$3.92/month <i>(US and Europe)</i>
	\$6.21/month <i>(Asia/Pacific)</i>
	\$8.15/month <i>(Brazil)</i>

Total:	\$279.10/month <i>(US/Europe)</i>
	\$281.39/month <i>(Asia/Pacific)</i>
	\$283.33/month <i>(Brazil)</i>

Making good decisions here requires apples-to-apples comparisons

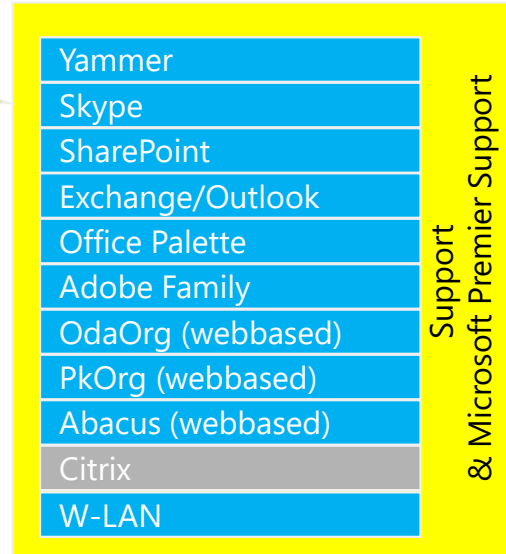
Office 365 & Azure Case Study

System & Support
(old)
per Year:
CHF 107'145.--

System & Support
(new)
per Year:
CHF 43'700.--



Exchange/Outlook
Office Palette
Adobe Family
OdaOrg (webbased)
PkOrg (webbased)
Abacus (webbased)
Citrix
W-LAN



Cloud transformation

PostNL successfully addresses a range of important business issues by moving its costly on premise IT infrastructure to the Microsoft cloud



Objectives

- Had large on-premise IT environment and needed to save costs
- Needed flexibility to accommodate business growth and shrinkage
- Wanted best IT environment possible

Tactics

- Engaged Sogeti as IT partner
- Moved all IT operations to Azure cloud
- Applications sent from the cloud as a service

Results

- Scalable and flexible environment that aligns with shifting business needs
- Significant cost savings
- Reduced TCO
- Higher quality IT service delivery and less failure
- Secure and stable



“Microsoft cloud is giving us a lot of benefits. We have a very positive experience with it. It is secure, stable and delivers the performance we expected. It also expands and shrinks with the business.”

— Marcel Krom, CIO, PostNL

Azure Active Directory Premium



Windows 10



Azure Active
Directory Premium
(AADP)



Azure Remote App



Office 365

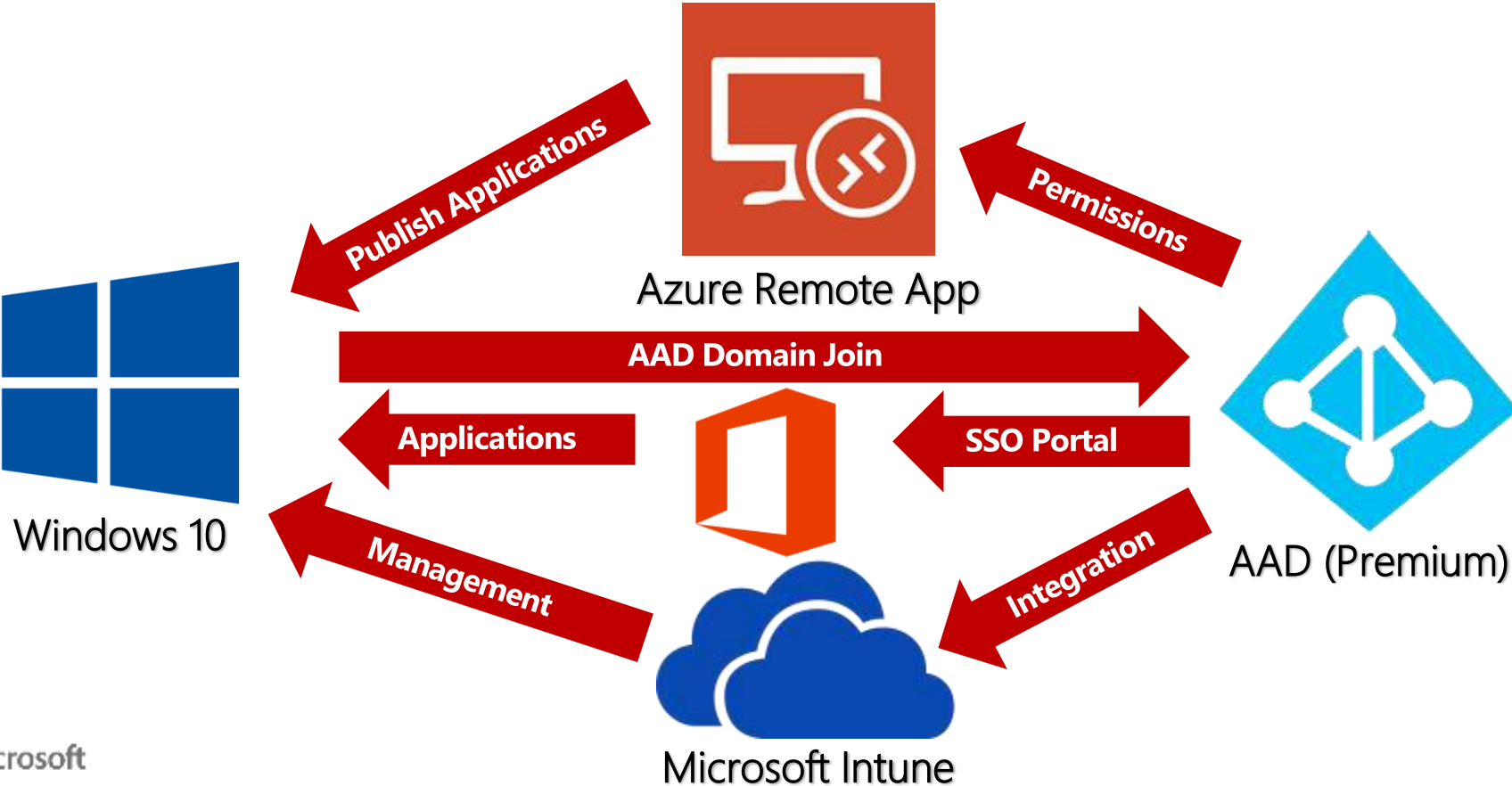


Microsoft Intune

Use Case



Use Case - Tools



Device management feature comparison

Category	Feature	Exchange ActiveSync	MDM for Office 365	Intune
Device configuration	Inventory mobile devices that access corporate applications	●	●	●
	Remote factory reset (full device wipe)	●	●	●
	Mobile device configuration settings (PIN length, PIN required, lock time, etc.)	●	●	●
	Self-service password reset (Office 365 cloud only users)	●	●	●
Office 365	Provides reporting on devices that do not meet IT policy		●	●
	Group-based policies and reporting (ability to use groups for targeted device configuration)		●	●
	Root cert and jailbreak detection		●	●
	Remove Office 365 app data from mobile devices while leaving personal data and apps intact (selective wipe)		●	●
	Prevent access to corporate email and documents based upon device enrollment and compliance policies		●	●
Premium mobile device & app management	Self-service Company Portal for users to enroll their own devices and install corporate apps			●
	Deploy certificates, VPN profiles (including app-specific profiles), and Wi-Fi profiles			●
	Prevent cut/copy/paste/save as of data from corporate apps to personal apps (mobile application management)			●
	Secure content viewing via Managed browser, PDF viewer, Imager viewer, and AV player apps for Intune			●
	Remote device lock via self-service Company Portal and via admin console			●
PC Management	PC management (e.g. inventory, antimalware, patch, policies, etc.)			●
	OS deployment (via System Center ConfigMgr)			●
	PC software management			●
	Single management console for PCs and mobile devices (through integration with System Center ConfigMgr)			●

Windows as a Service

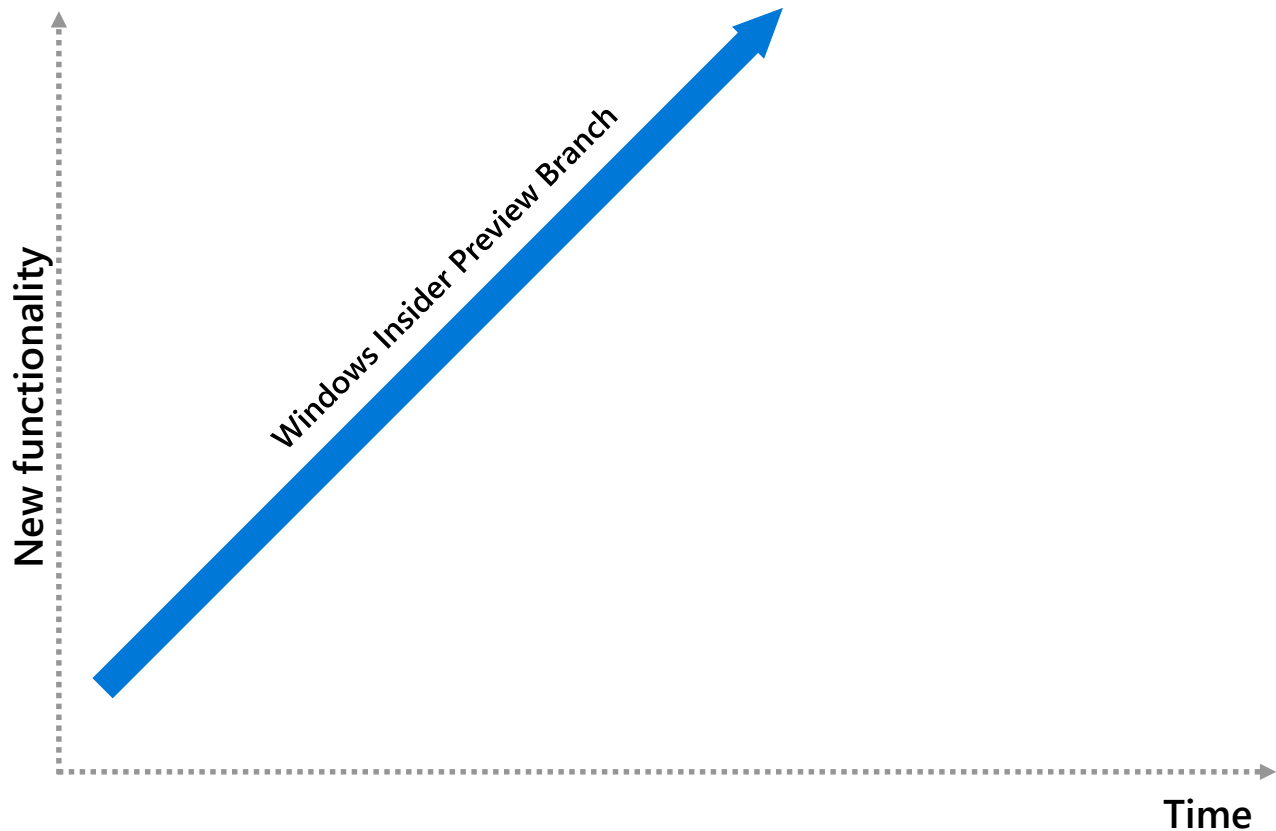


Windows Insider Preview Branch

Windows Insiders stay up to date with preview features as they are released

Opportunity for enterprise customers to preview upcoming features and influence product development

Security updates and fixes are delivered regularly



Current Branch

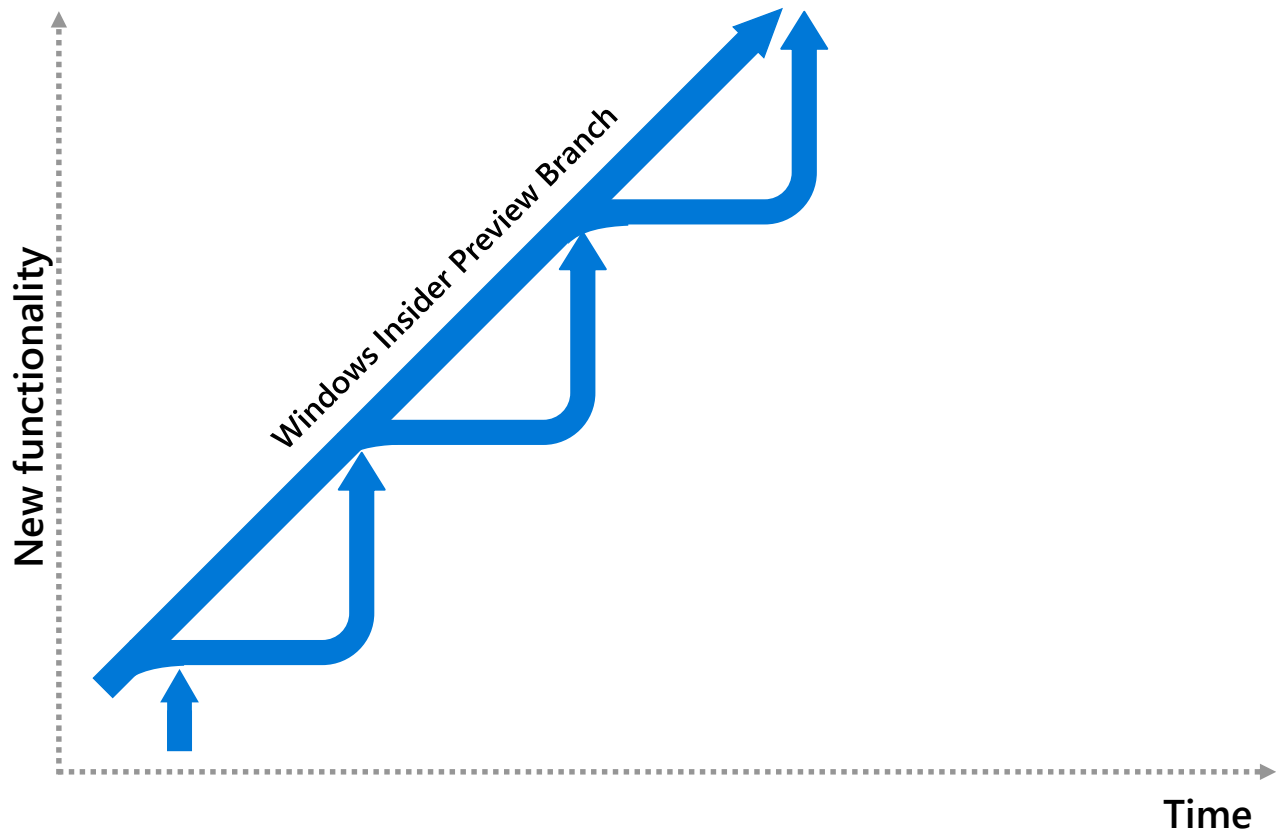
Features are released to broad market

Customers are up to date with features as they are released after broad preview validation

Opportunity for enterprises to test and validate new features

WSUS, SCCM and WU for Business can be used for managing delivery of updates

Security updates and fixes are delivered regularly



Current Branch for Business

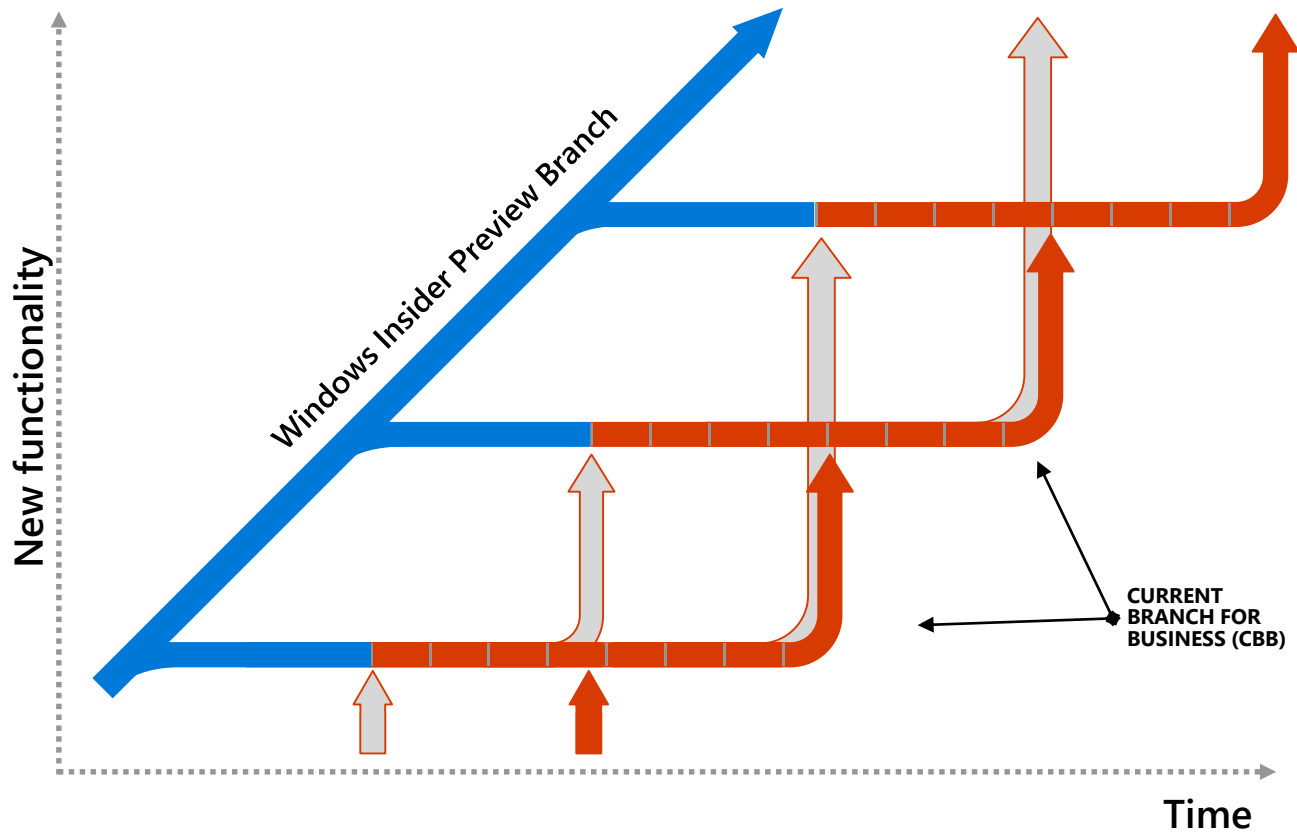
Business customers can start testing as soon as preview features are released via Windows Insider Program

Business customers can wait to receive feature updates for an additional period of time, testing and validating in their environment before broad deployment

Within the deferral period, you can flight these features and updates in your organization and provide feedback

WSUS, SCCM and WU for Business can be used for managing delivery of updates

Security updates and fixes are delivered regularly



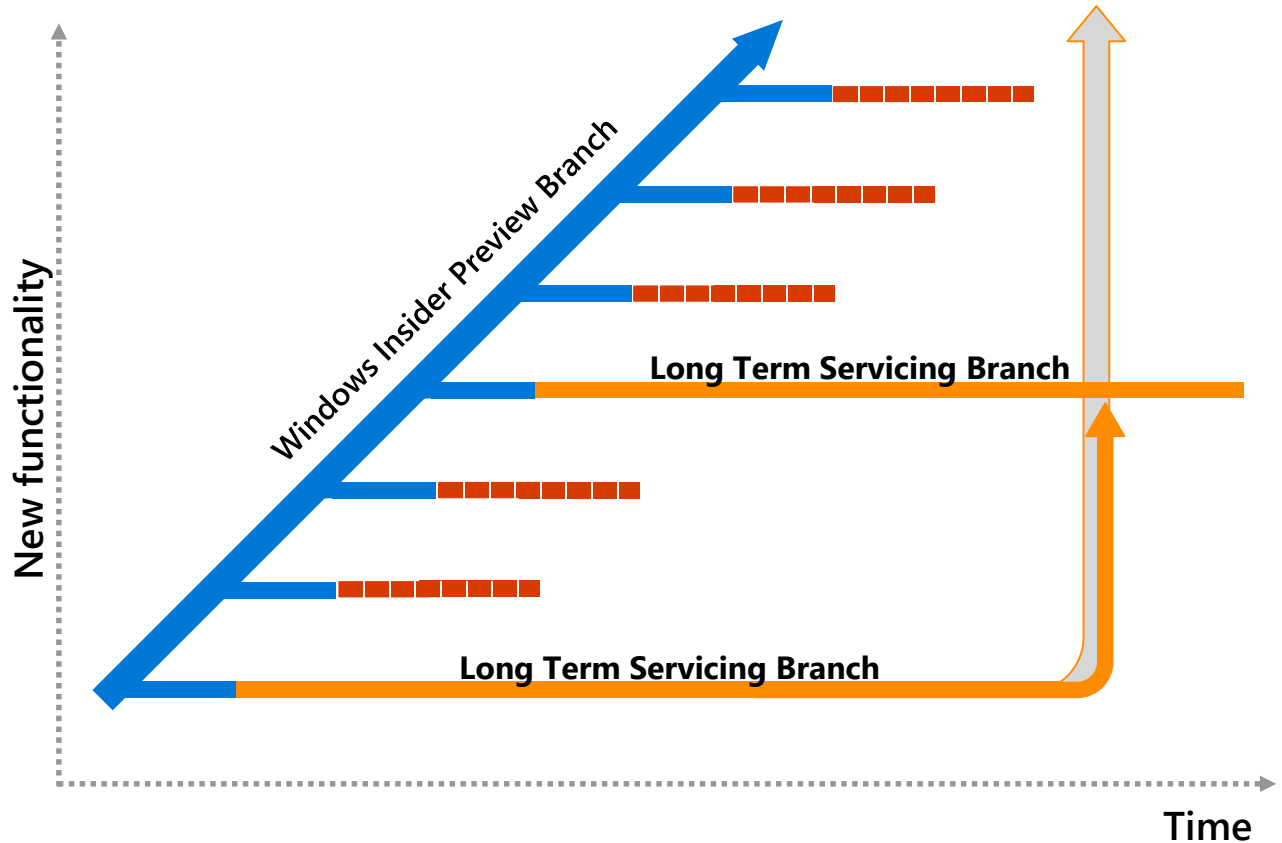
Long Term Servicing Branch

Security updates and fixes are delivered regularly

Customers on Long Term Servicing Branch receive security and critical fixes only for ten years

Customers can move from one LTSB to the next one via in-place upgrade and can skip one LTSB as well

Customers manage updates via WSUS



Thinking through deployment strategy

