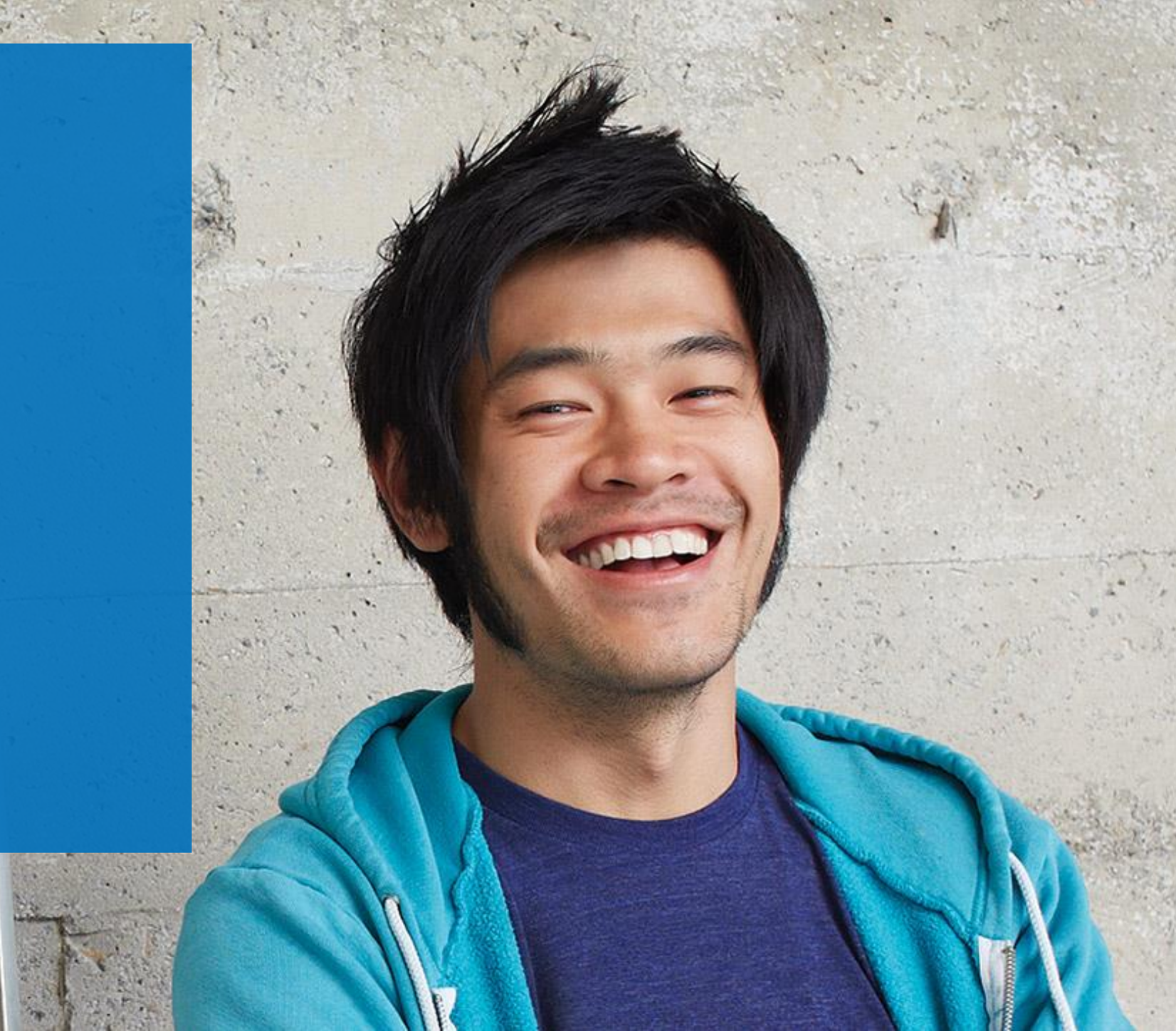
Microsoft

Windows Azure Pack



Agenda

The Cloud OS vision

Needs and opportunities

Windows Azure technology in your datacenter

Capability drill-down

Why choose the Windows Azure Pack?

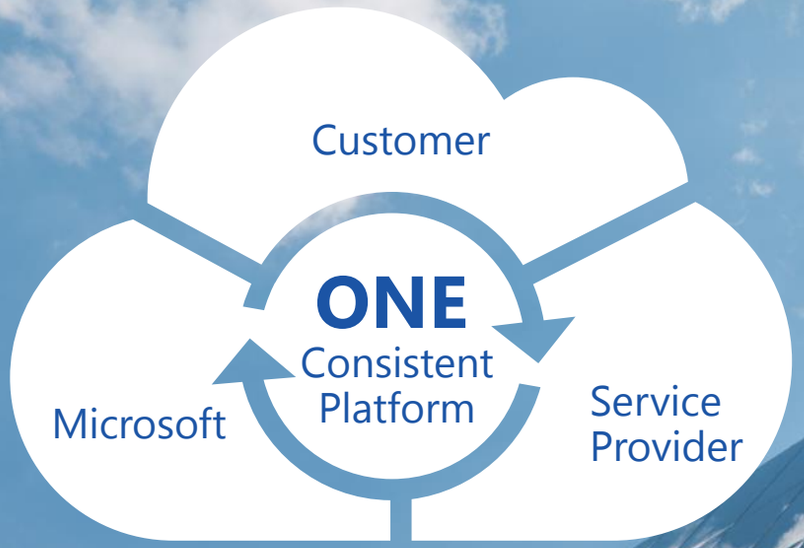
Next steps

Transforming IT to address new questions

Mobility	Great user experience from anywhere
Apps	Modern, agile apps for new scenarios
Big data	Easy access to any data, any size, anywhere Powerful analytics in familiar tools
Cloud	On-demand scale, real-time performance Infrastructure designed to withstand failure Resources managed at datacenter scale

Microsoft's answer:

With Microsoft's Cloud OS vision, customers can…



Enable modern business apps

Empower people-centric IT

Unlock insights on any data

Transform the datacenter

Enterprises want….

- Flexible cloud choice, familiar technology, no lock-in.
- Their own multi-tenant cloud, that's as easy as Azure.
- Chargeback.
- Simple, automated operations.
- More effective utilization of existing hardware assets.
- Tenant choice and dynamic control.
- Commodity and custom cloud offerings.
- Integration with LOB systems.

Service providers want….

To win more enterprise customers' business.

Multi-tenant, self-service IaaS and PaaS offerings.

Usage billing.

Extreme automation.

Optimized hardware monetization.

Opportunities to upsell and increase customer usage.

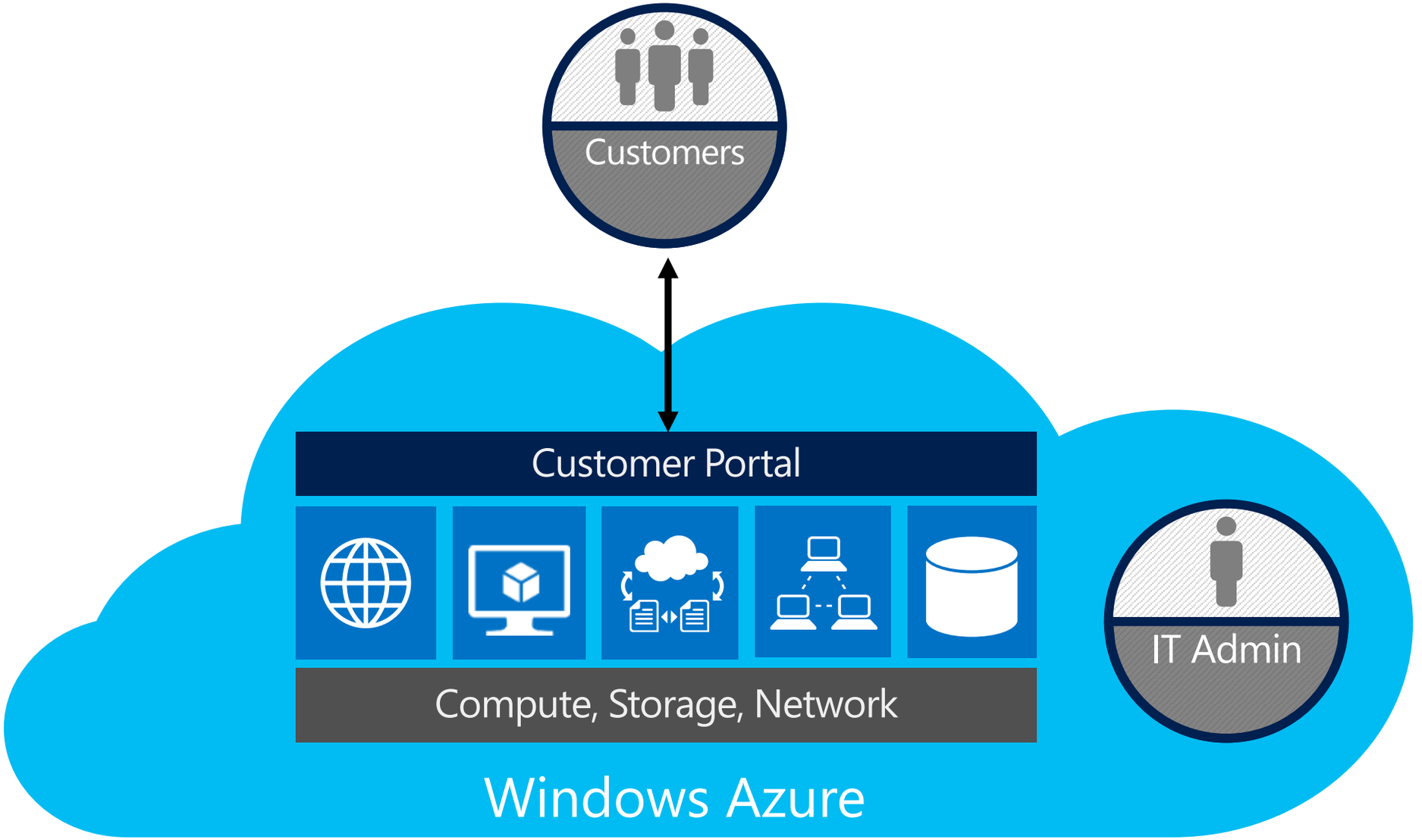
Customized offerings, public cloud differentiation.

Portal integration and branding.

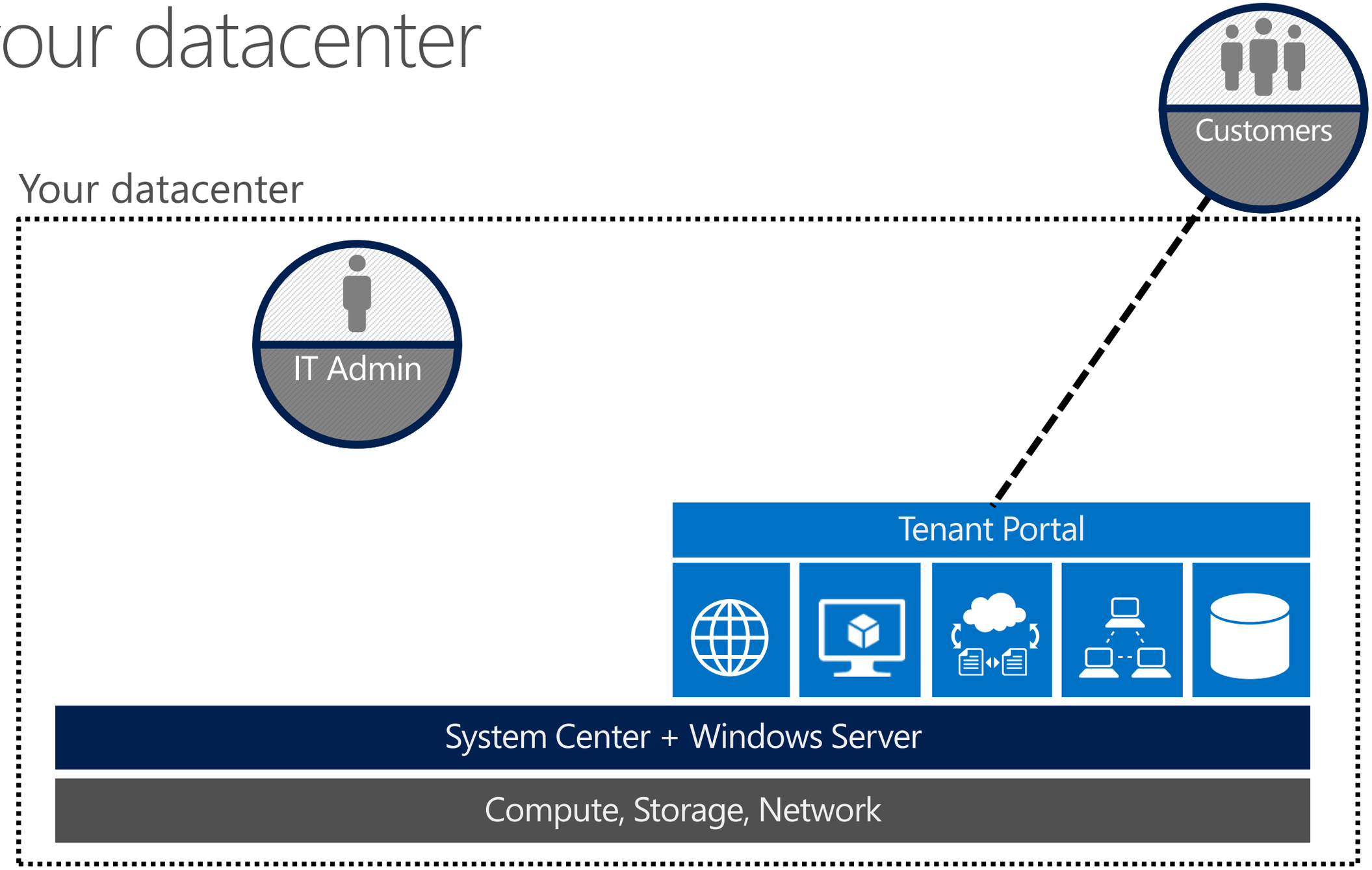
Common requirements

- Enterprise friendly frictionless cloud.
- Multi-tenant IaaS based on Windows Azure.
- Usage billing.
- Automation.
- Maximized hardware utilization.
- Tenant choice.
- Offer management.
- Portal integration and branding.

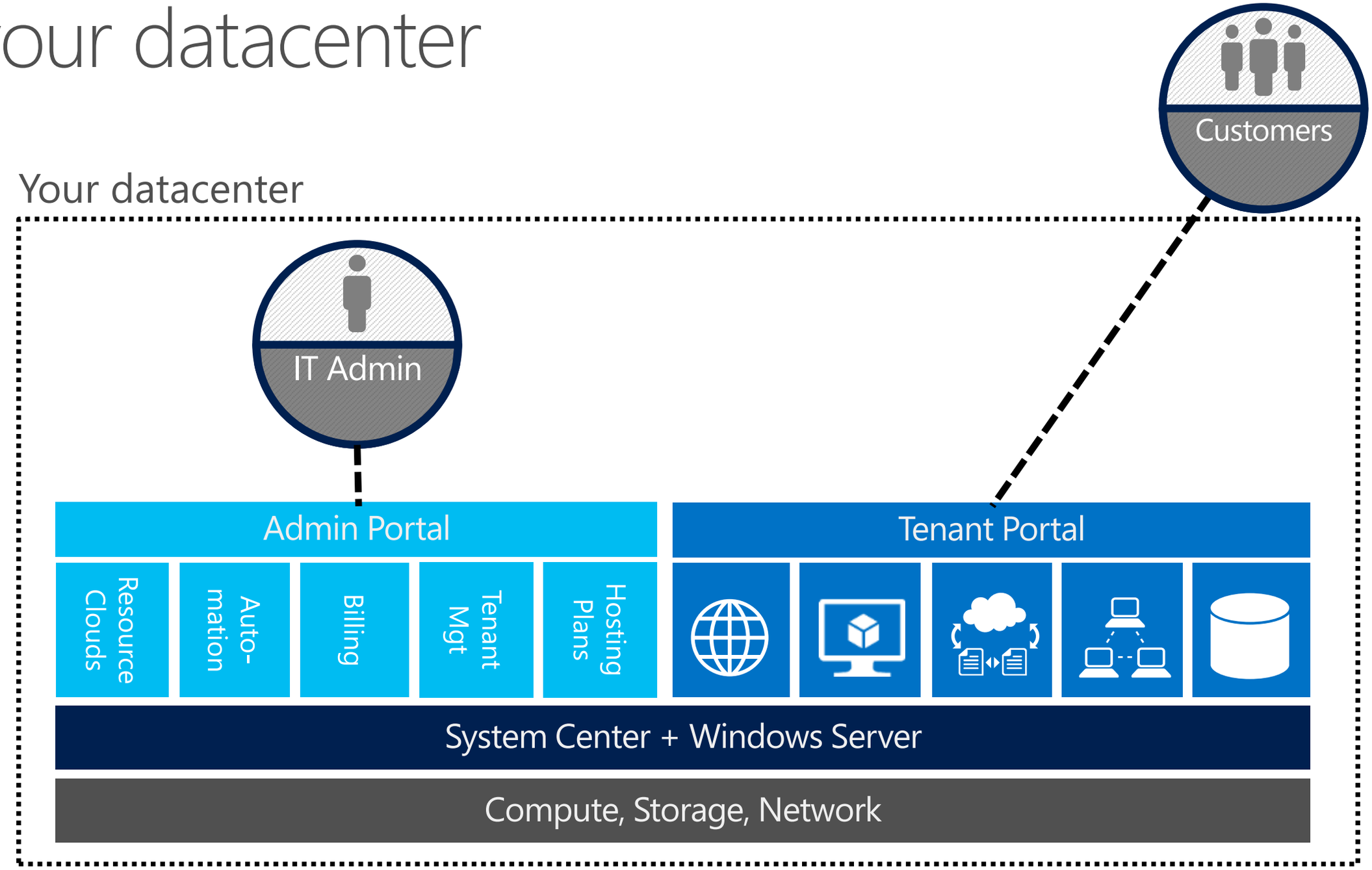
Windows Azure technology



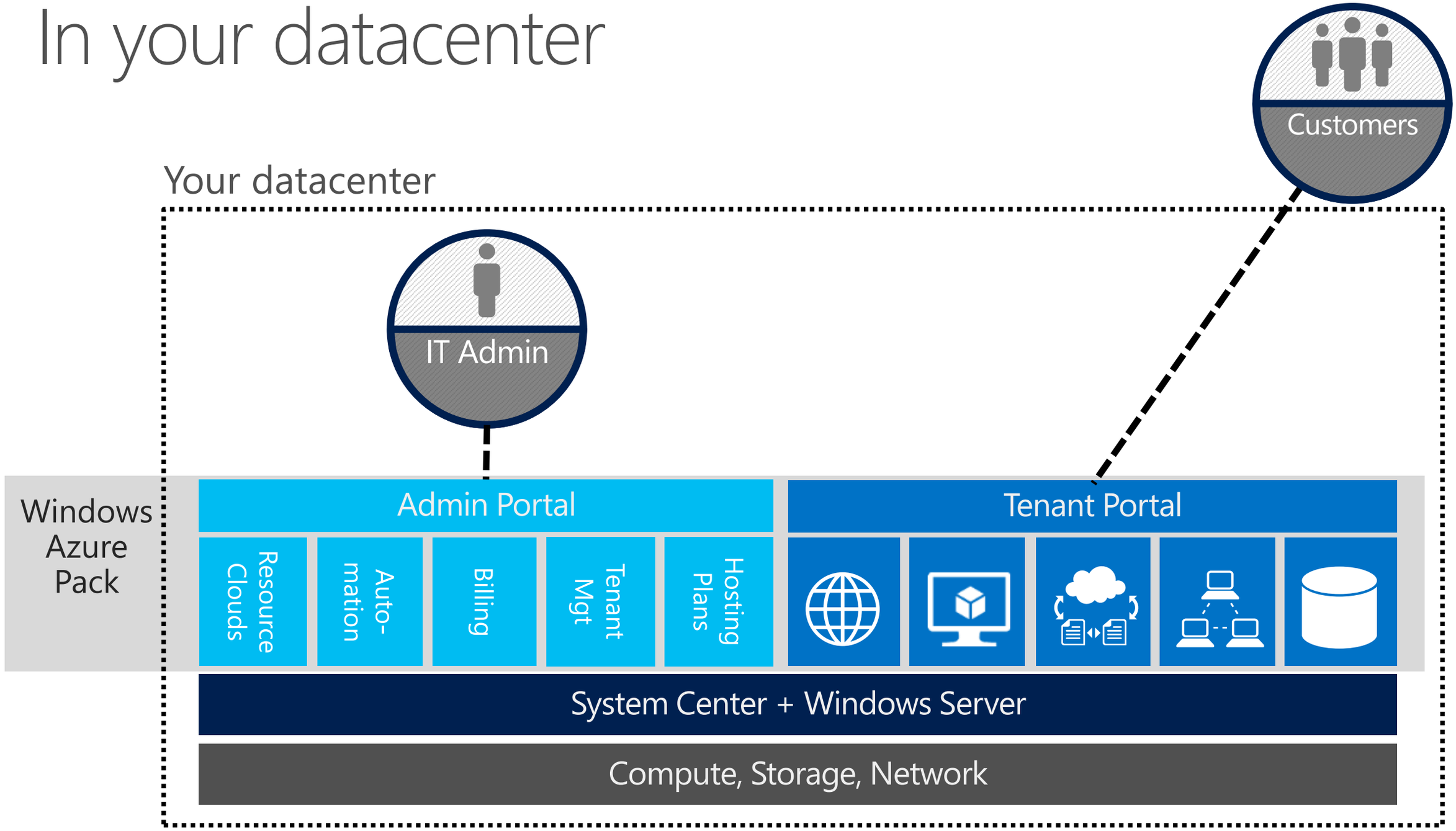
In your datacenter



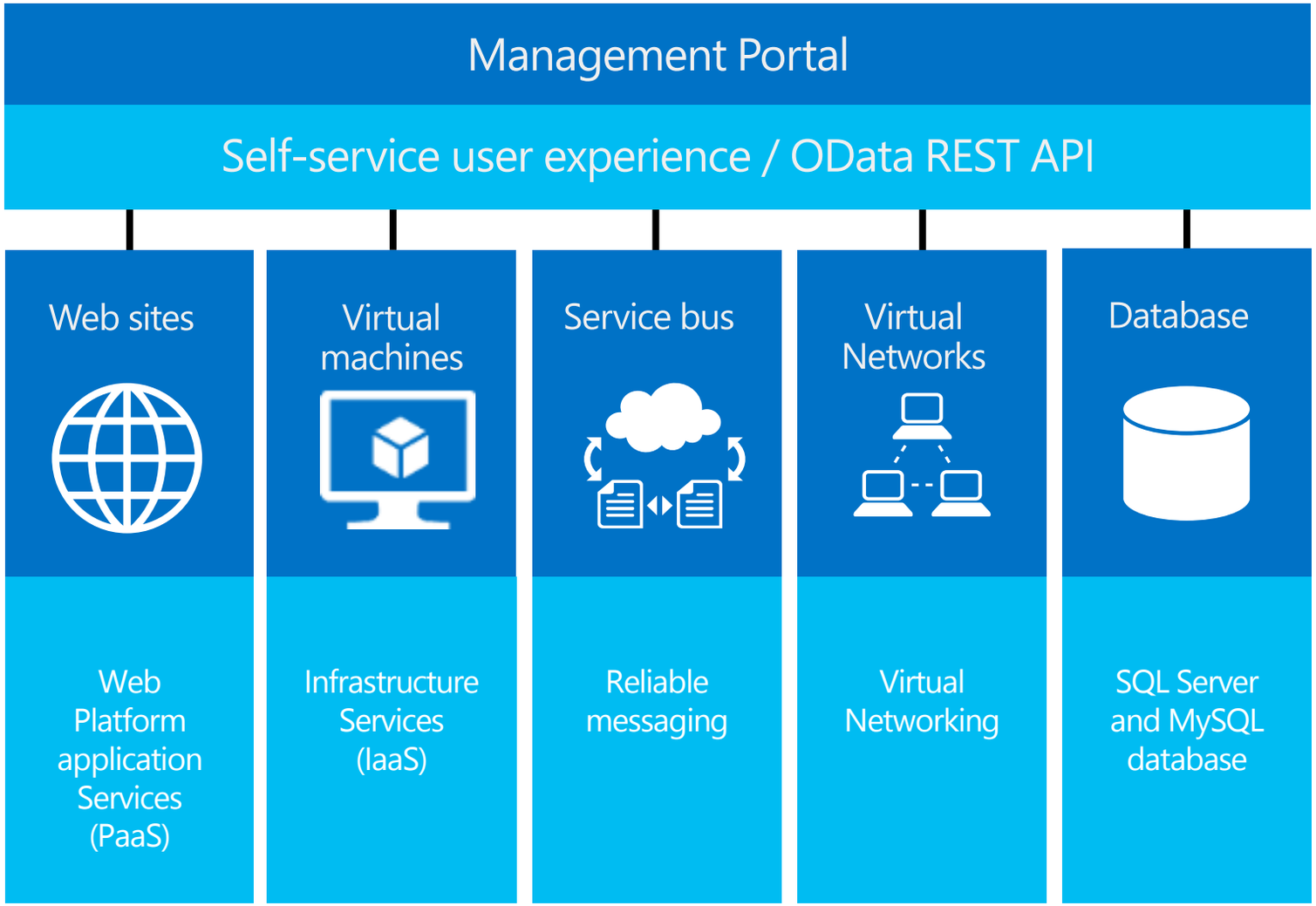
In your datacenter



In your datacenter



Customer-ready services



For service providers and enterprises

Windows Azure technology in your datacenter

Enterprise class	Easy and cost effective	Open and interoperable

Windows Azure Pack

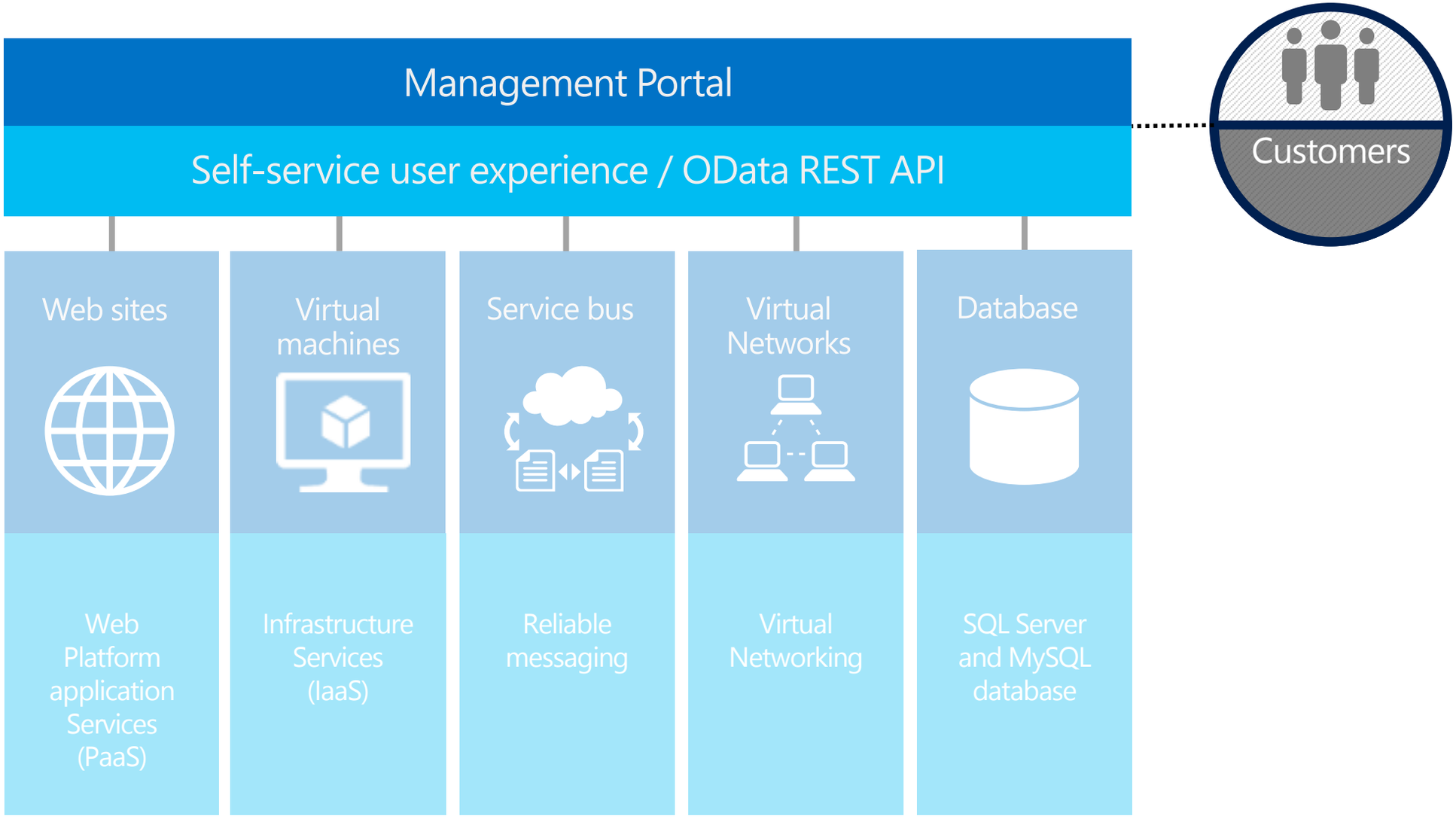
Windows Server + System Center

- Familiar technology
- On-prem connect
- Azure consistent
- Virtualization
- Management
- Service bus

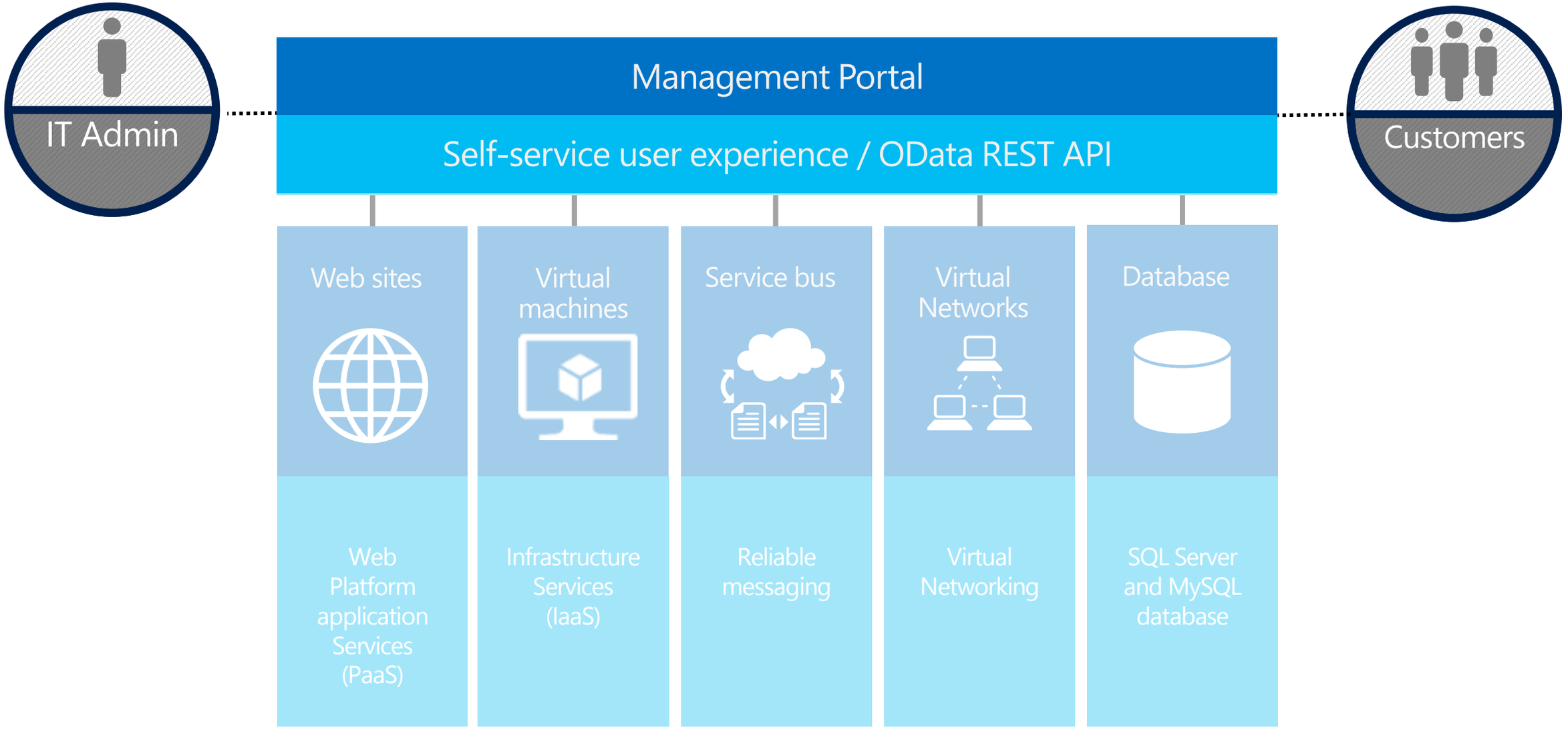
- Multi-tenant cloud
- Web PaaS, and IaaS
- Templated services
- Standard hardware
- Automation

- VM portability
- Web App Portability
- OData Integration API
- Node.js, PHP, ASP.NET
- GitHub, BitBucket etc
- Linux support

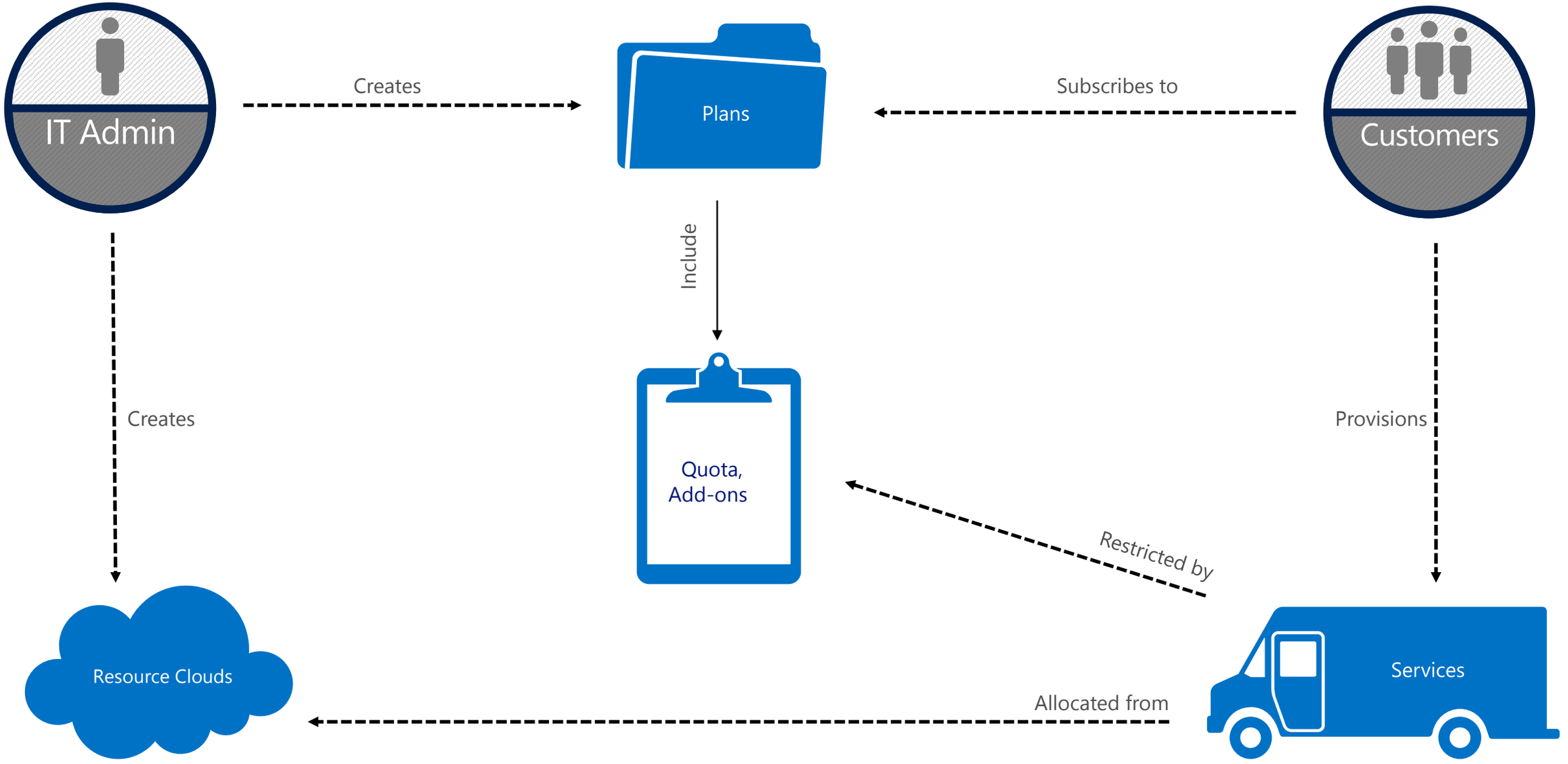
Management Portal



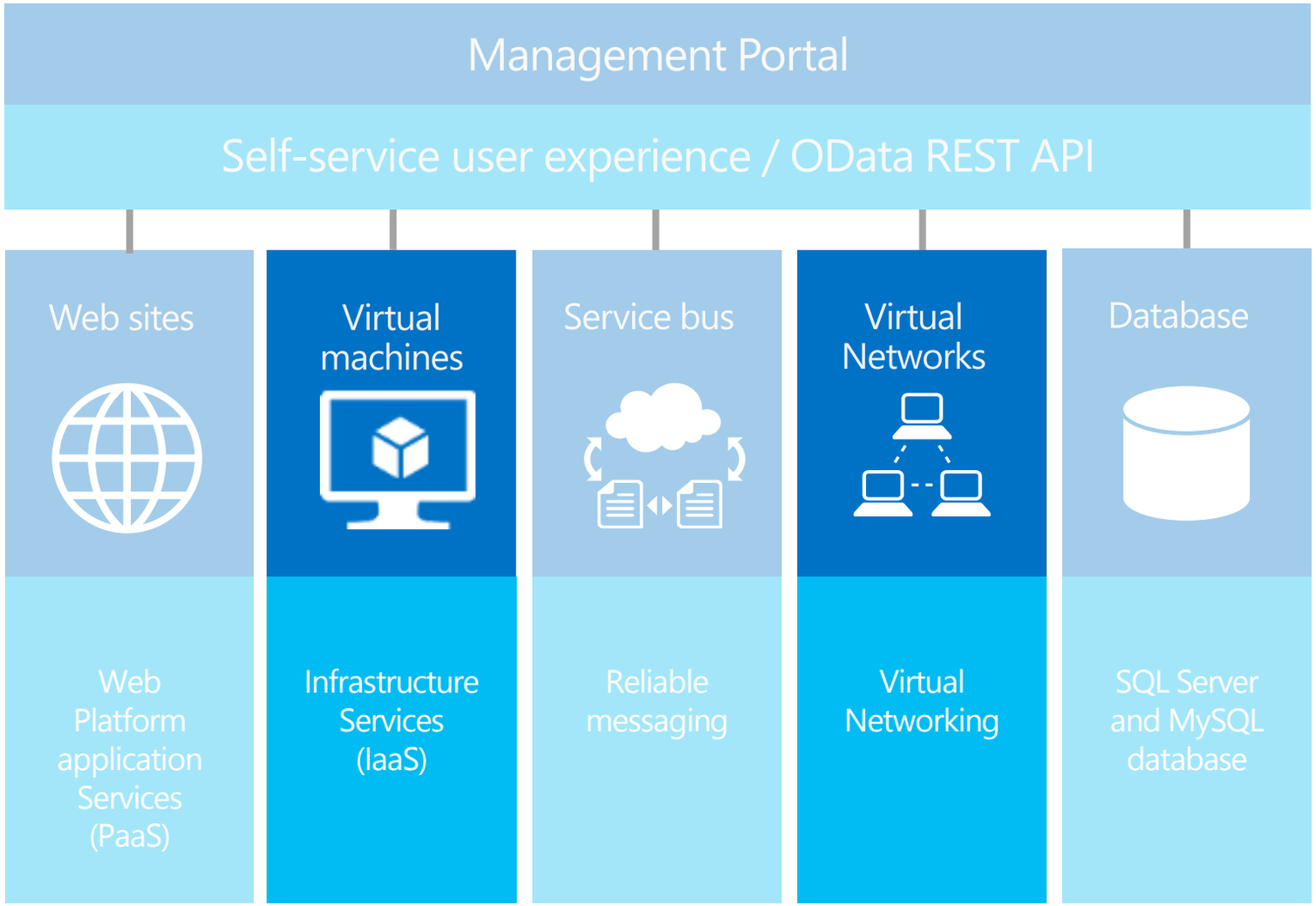
Management Portal



Plans define Admin-Tenant relationship



Infrastructure services

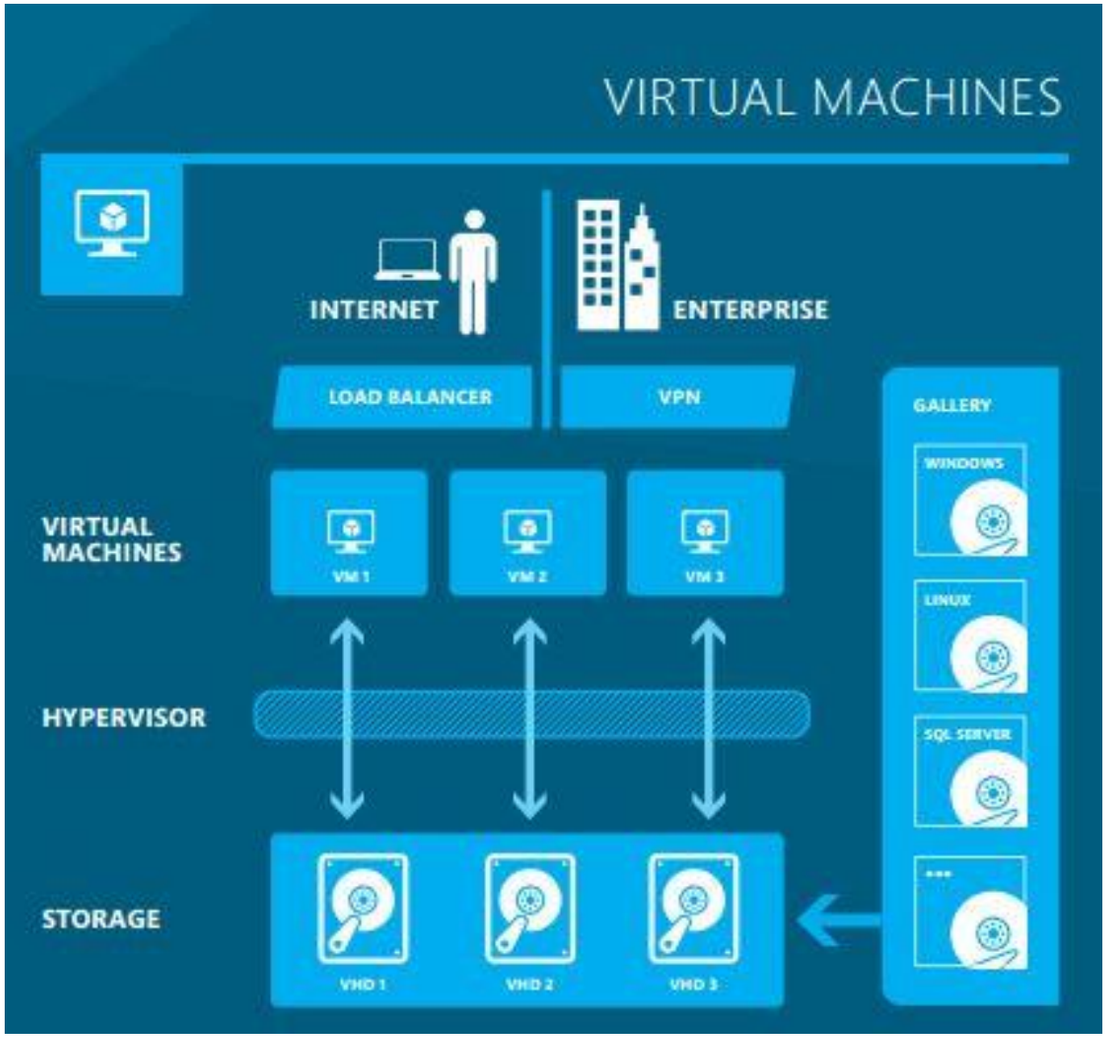


Self-service IaaS

Standalone virtual machines

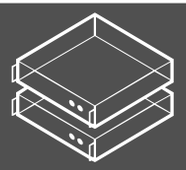
Scalable virtual machine roles

Attached to virtual network(s)

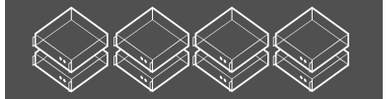


System Center and Windows Server

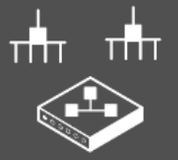
Service Management API / Service Provider Foundation



Virtual Machines
Virtual Machine Manager



Virtual Machine Roles
Virtual Machine Manager



VM networks
Virtual Machine Manager

Automation
Orchestrator

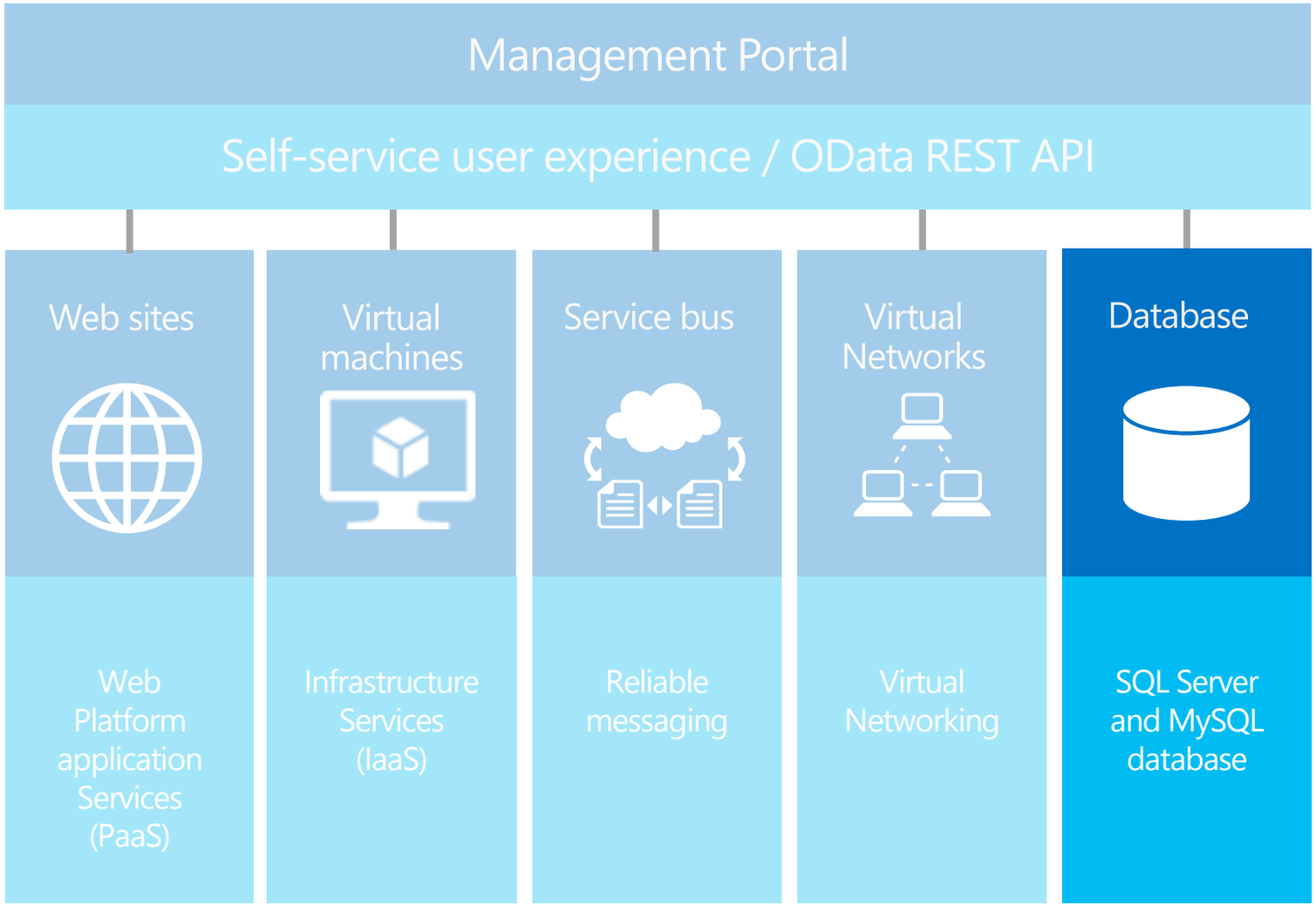
Microsoft System Center 2012 R2

Windows Server 2012 R2

Features

- VM management.
- Virtual Machine Roles.
- Self-service VM networks.
- Self-service tenant administration.
- Extensibility for hosted cloud API.

Database


Management Portal
Self-service user experience / OData REST API
Web sites
Virtual machines
Service bus
Virtual Networks
Database
Web Platform application Services (PaaS)
Infrastructure Services (IaaS)
Reliable messaging
Virtual Networking
SQL Server and MySQL database

What is DB as a Service?

- Database as a Service” (DBaaS) means giving end users - applications owners, developers, etc- the ability to request and provision database engine components in a self-service manner.

What components does that include?

- Deployment of a database,
- an instance,
- a machine with SQL Server installer,
- or a set of machines including SQL Server.

What components should be deployed?

- Deployment of a database,
- an instance,
- a machine with SQL Server installer,
- or a set of machines including SQL Server.

How much of the lifecycle of the database component should be covered:

- Is it “just” about the deployment/delegation of the database components?

or

- Should it cover the full lifecycle (resize, monitoring, database user management, decommissioning, etc.)?

Self-Service (Windows Azure Pack portal)

Web Service / API (Service Management API from Windows Azure Pack)

System Center

VM Clouds Fabric
for VMs with SQL Server, built on
Windows Servers running Hyper-V

SQL Server Fabric
for databases, built on
Windows Servers running SQL Server

Physical resources (compute, network, storage)

My processes are largely based on ITIL today. How can I combine ITIL with Database as a Service?

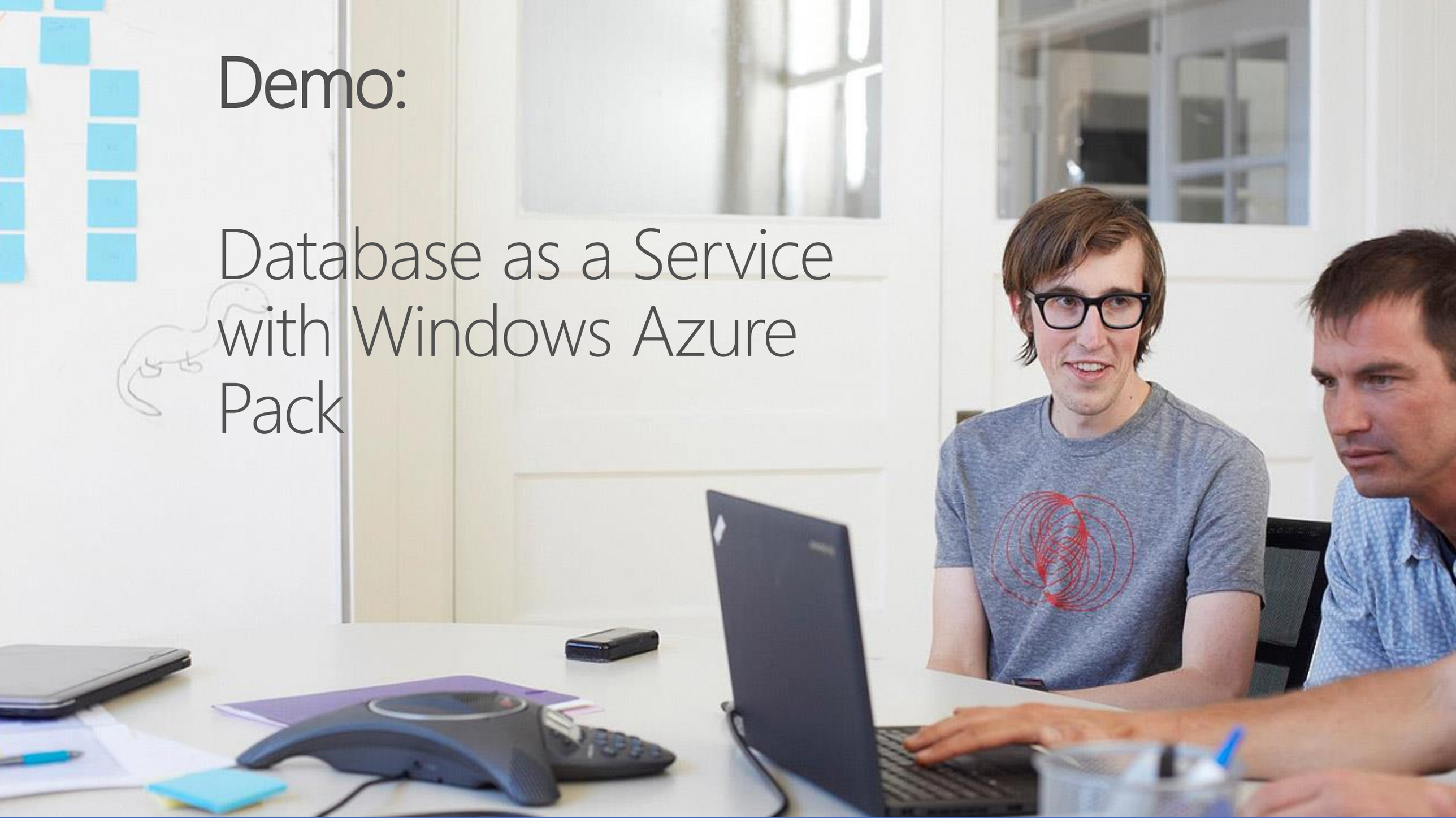
- How can this integrate with our existing ITIL processes – Change – Service Requests – Approvals?
- It is definitely possible to approve requests for new databases or virtual machines in the ITSM solution.
- A balance has to be found, so that traceability and approvals required by ITIL processes do not offset the agility and economics of the cloud.

Can I get data for potential chargeback with my tenants/customers?

- Out of the box, the Service Reporting feature consumes this data for VMs
- Alternatively, you can also leverage partners solution like Cloud Cruiser, should you require more reports out of the box, or working with other types of clouds.
- Cloud Cruiser Express version is included with Windows Server 2012 R2 via Windows Azure Pack (WAP).
  - This version also consumes the usage data collected by the SQL Server Resource Provider.

Demo:

Database as a Service with Windows Azure Pack



Looking beyond DBaaS:

Why Microsoft to virtualize and manage SQL Server

- Scale and Performance of Hyper-V, from an architecture and guest VM standpoint.
- High availability at the host and application level.
- Flexible and cheaper architecture and storage options: Hyper-V provides support for existing investments in storage arrays – PLUS deep integration and partnerships with Enterprise partners like FlexPod.
- VM mobility, backup and Disaster Recovery options

Looking beyond DBaaS:

Why Microsoft to virtualize and manage SQL Server

- Application level monitoring and compliance.
- Integrated automation and advanced patching.
- Integrations with Microsoft Azure can also enable additional hybrid scenarios.
- COST!, licensing costs could also come into play as a benefit too, when virtualizing with Hyper-V and managing with System Center

Why choose the Windows Azure Pack?

Enterprise-class

- Builds on a familiar foundation of Windows Server and System Center.
- Isolated virtual networks for multi-tenant workloads.
- Extensibility and integration.
- Windows Azure code running in your datacenter.
- Highly scalable virtualization and management platform.

Simple and cost-effective

- Simple service delivery for multi-tenant cloud infrastructure.
- Out-of-box infrastructure and application service offerings.
- Standardized service provisioning using service templates.
- Automation platform.
- Advanced Windows Server 2012 features on standard hardware.

Open and interoperable

- Easy VM and Web application portability.
- Private, hosted and public cloud.
- Broad application platform support including .NET, node.js, PHP.
- OData REST API for portal level integration.
- Service Bus for asynchronous distributed application integration.

Next steps

Learn more and download Windows Azure Pack.
http://www.microsoft.com/en-us/server-cloud/products/windows-azure-pack

See additional Windows Azure resources.
http://www.windowsazure.com/en-us/

Read about Windows Azure on TechNet.
http://www.microsoft.com/technet