

- **More than 100 million Windows 8 licenses have been sold to date. (Source: Microsoft)**
- The **Windows Phone Store** features more than 170,000 apps and games. (Source: Microsoft)
- **Over 250 million people have a SkyDrive. (Source: Microsoft)**
- More than 76 million **Xbox 360** consoles have been sold worldwide. (Source: Microsoft)
- **Bing** holds 17.86 percent of the U.S. search market share. (Source: comScore Explicit Core Search, June 2013)
- **Skype** users spend up to 2 billion minutes per day using the service. (Source: Microsoft)
- Microsoft's employee **Giving campaign** has donated \$1 billion to over 31,000 charities. (Source: Microsoft)
- **Xbox Live** has over 48 million members in 41 countries. (Source: Microsoft)
- The **Windows Store** has seen 250 million app downloads from users. (Source: Microsoft)
- Enterprise social network **Yammer** now has over 7 million registered users. (Source: Microsoft)
- **Outlook.com** has over 400 million active users and is the world's fastest-growing email service. (Source: Microsoft)
- Microsoft **YouthSpark** has helped 80 million young people. (Source: Microsoft)
- **Office 365 Home Premium has 1 million subscribers and growing. (Source: Microsoft)**
- More than 24 million **Kinect** sensors have been sold worldwide. (Source: Microsoft)
- **Xbox 360** has spent 30 straight months as the best-selling game console in the U.S. (Source: NPD Group)
- The **Microsoft Art Collection** includes 4,728 pieces, including a chandelier by Dale Chihuly and a piece of the Berlin Wall. It's one of the largest corporate art collections in the world. (Source: Microsoft)
- **MSN** received 5.8 billion page views worldwide in June 2013. (Source: comScore, June 2013)
- **50 percent of Fortune 500 companies use Windows Azure. On average, over 1,000 new customers sign up for Windows Azure every day. (Source: Microsoft)**
- Within **Microsoft** there are 16 different \$1 billion-plus businesses. (Source: Microsoft)
- '**Halo 4**' earned over \$220 million in global sales in the 24 hours after its release. More than 50 million copies of 'Halo' games have been sold worldwide. (Source: Microsoft)
- **About 2,600,000 gallons of free beverages are consumed every year by employees on our campus. The most popular soda selection is Coke Zero – 1 million cans are consumed annually. (Source: Microsoft)**
- **Over 1 billion people use Office. That's 1 in 7 people on the planet. (Source: Microsoft)**
- **Xbox** delivered 18 billion hours of entertainment in 2012. (Source: Microsoft)
- **Office 365 is on track to become a \$1.5 billion business – one of the fastest-growing in Microsoft history. (Source: Microsoft)**
- **Internet Explorer's usage share was over 56 percent worldwide in July 2013. (Source: Net Market Share.)**
- **The Microsoft Partner Network includes over 430,000 organizations with more than 160 million mutual customers worldwide. (Source: Microsoft)**
- Over 1.65 million students from more than 190 countries have participated in **Imagine Cup**, the world's premier student technology competition. (Source: Microsoft)
- **To date, 11 billion photos have been stored on SkyDrive, along with over 1 billion Office documents. (Source: Microsoft)**
- **About 554,000 pizza slices and an additional 250,000 personal-sized pizzas are consumed each year by hungry employees in Microsoft cafeterias. (Source: Microsoft)**
- **Microsoft Research** scientists have won more than 320 major awards, including the Turing Award, MacArthur Foundation Fellowship, *MIT Technology Review*'s TR35 Award, the Draper Prize, IEEE John von Neumann Medal, IEEE Piore Award, the Kyoto Prize, multiple Oscars and a British knighthood.

Microsoft by the numbers

<http://www.microsoft.com/en-us/news/bythenumbers/index.html>

Agenda

(Full) IaaS



Windows Azure



Global datacenters



Global CDN



Global support



Local account teams



Local currencies

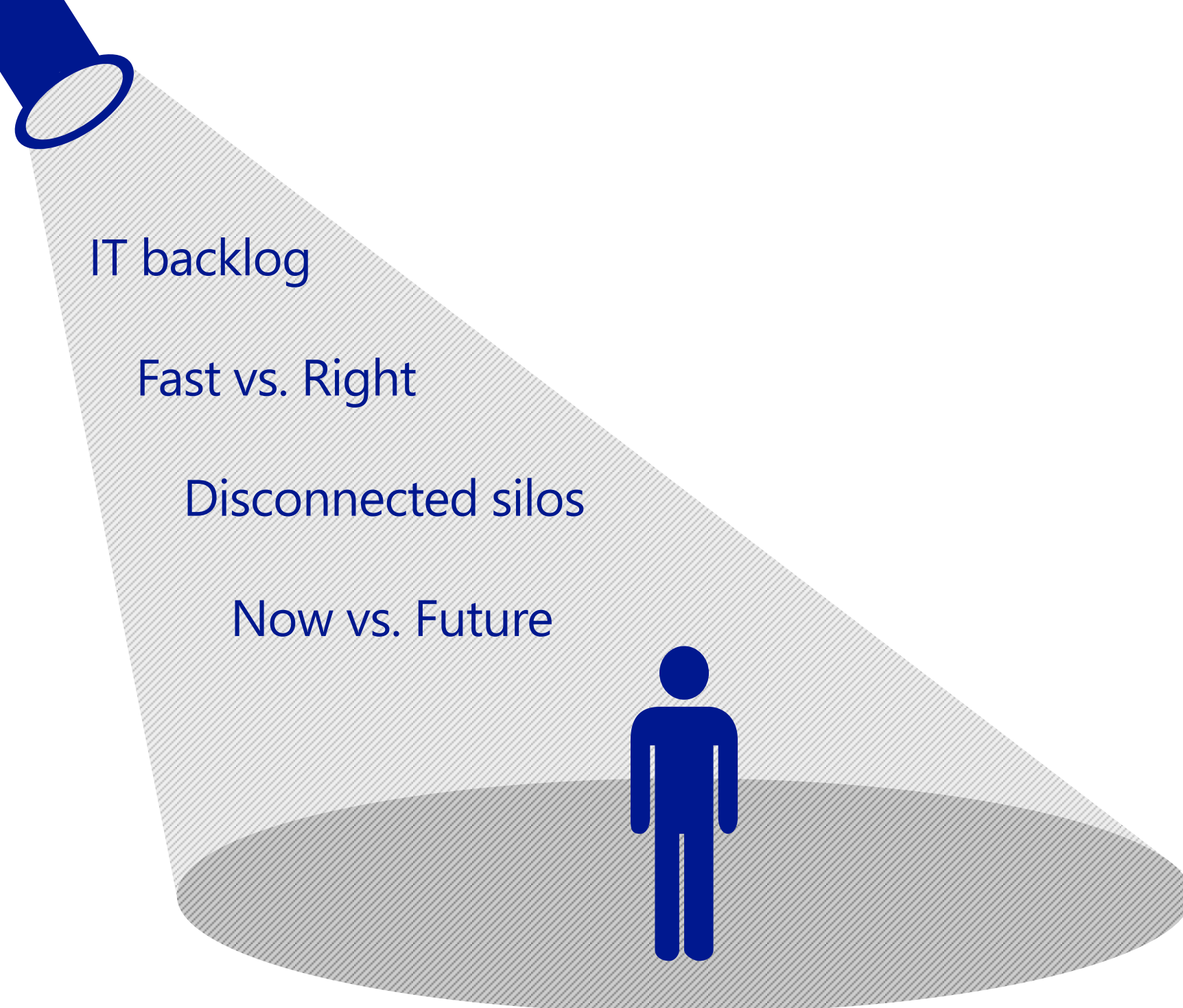


24 x 7 x 365 support

Over 1 billion customers, 20 million businesses

76 markets worldwide

280 years of combined industry experience in infrastructure, security, product dev, and global ops



*"We cannot solve
our problems with
the same thinking
we used when we
created them"*

Albert Einstein



Peugeot Type 6 Phaeton met Capote
1894 "Horseless Carriage"

Windows Azure

Scalable on-demand infrastructure in the cloud

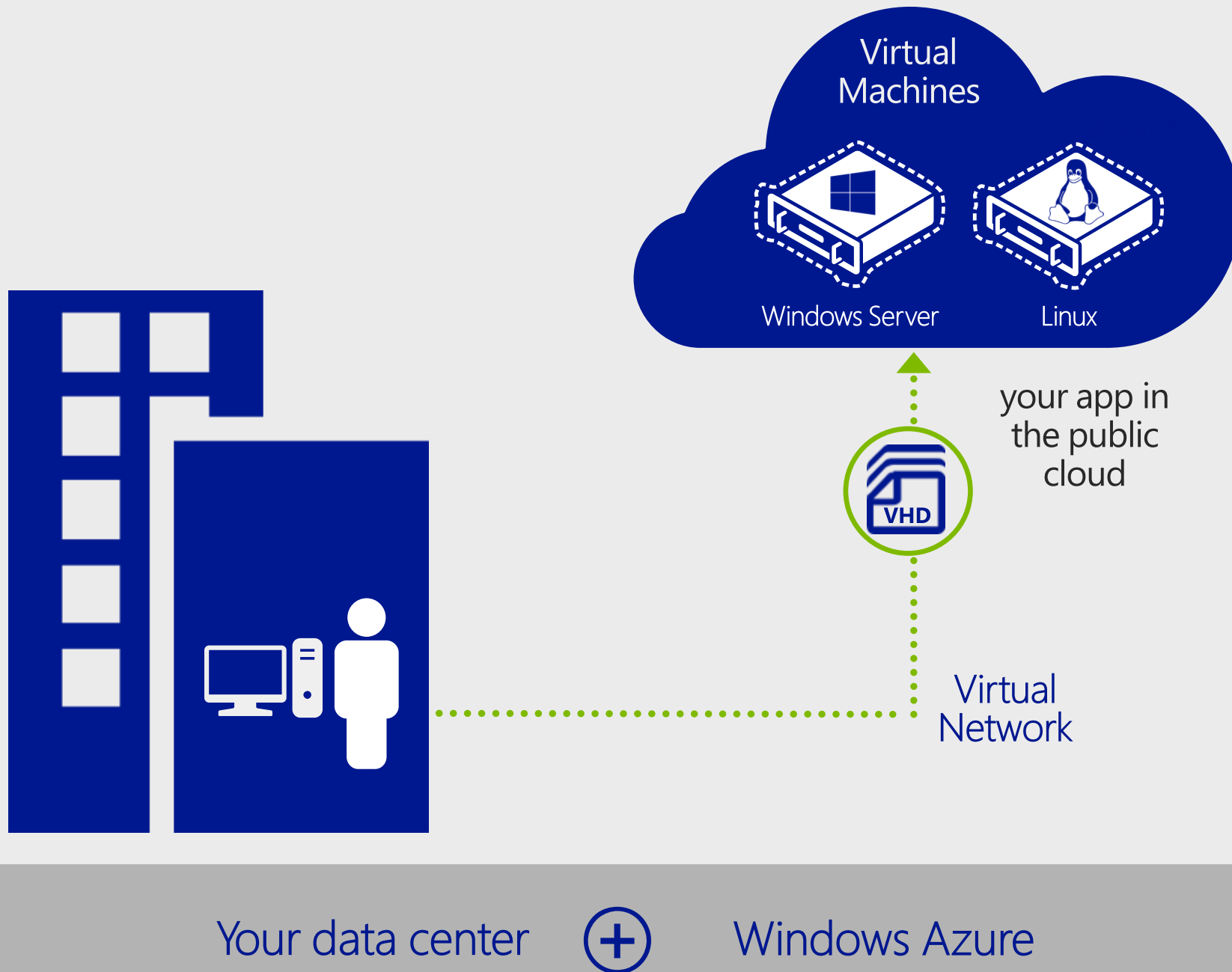
Growing list of validated & Microsoft supported [workloads](#)

Secure private network connection to on-premises

Connect with on-premises Active Directory and domains

Use what you know, manage with System Center

Integrates with Windows Azure app, data and storage services



Getting Started with Virtual Machines

Multiple options to get started...



Management Portal



Scripting
(Windows, Linux and Mac)



REST API

CREATE A VIRTUAL MACHINE

Select the virtual machine operating system

ALL

PLATFORM IMAGES

MY IMAGES

MY DISKS



SharePoint Server 2013



Windows Server 2012 Datacenter



Windows Server 2008 R2 SP1



SQL Server 2012 SP1



BizTalk-Server-2013



openSUSE 12.3



SUSE Linux Enterprise Server 11 SP2



Ubuntu 12.04



Ubuntu 12.10



OpenLogic CentOS 6.3



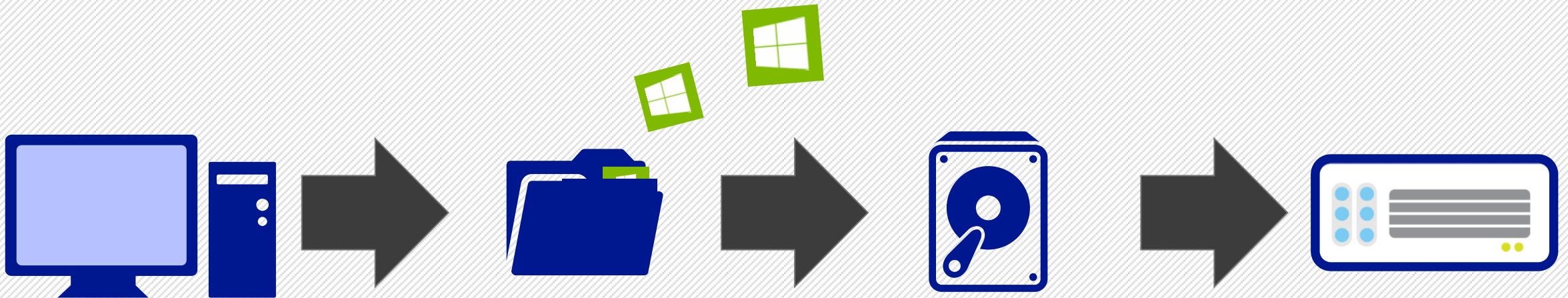
Windows Server 2012...

Windows Server 2012 incorporates Microsoft's experience building and operating public clouds, resulting in a dynamic, highly available server platform. It offers a scalable, dynamic and multi-tenant-aware infrastructure that helps securely connect across premises.

PUBLISHER	Microsoft
OS FAMILY	Windows
LOCATION	West Europe;East US;West US

How it Works

Select from Image Gallery



Log in to
Windows Azure
Management Portal

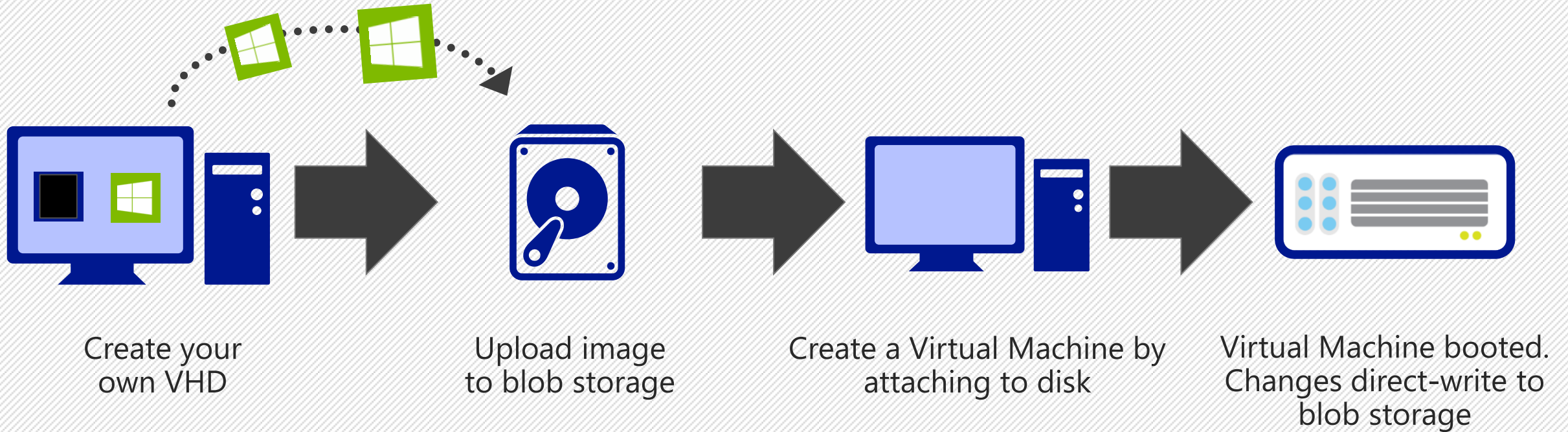
Create new VM
from image gallery

The image is copied to
your blob storage account

Virtual Machine booted.
Changes direct-write
to blob storage

How it Works

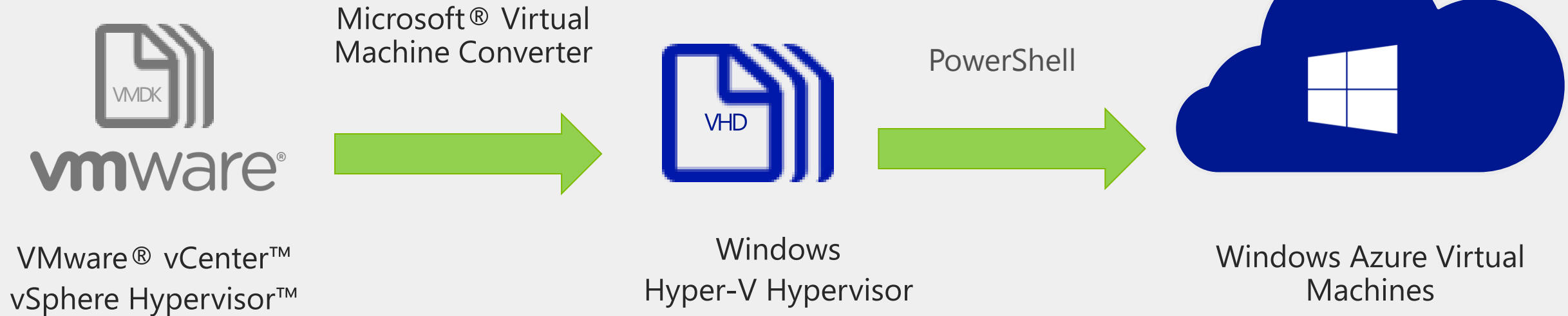
Bring your own custom VHD



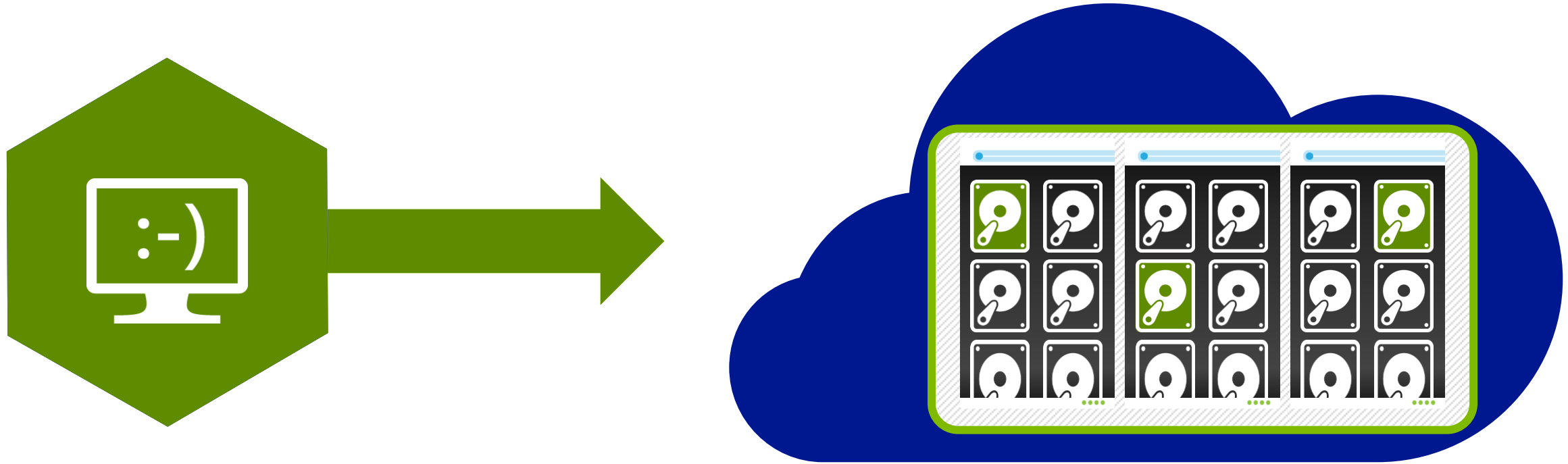
DEMO

Create Virtual Machine from template
Create Virtual Machine from custom VHDX

Convert your workloads

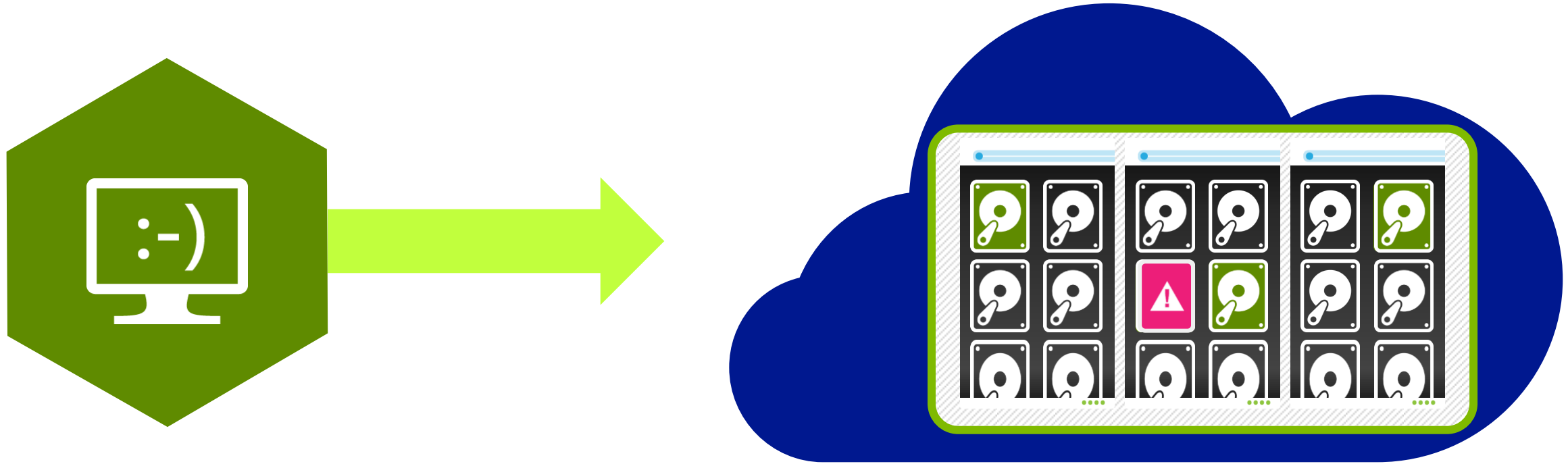


Persistent Virtual Machines with Geo-Replication



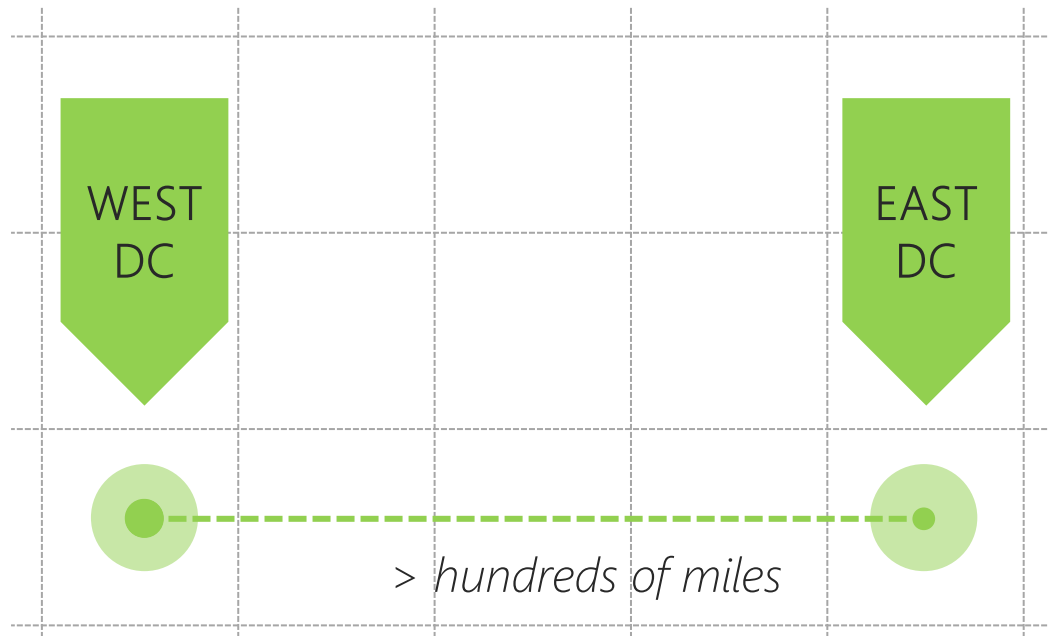
Windows Azure Storage

Persistent Virtual Machines with Geo-Replication

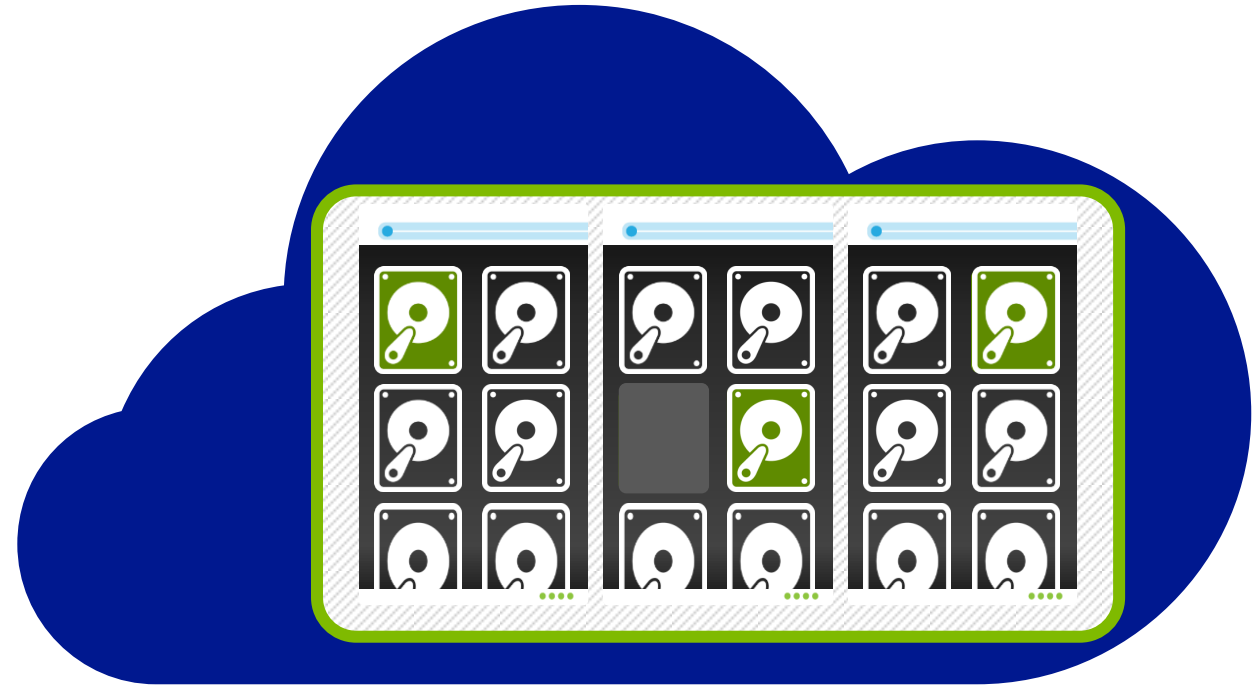


Windows Azure Storage

Persistent Virtual Machines with Geo-Replication

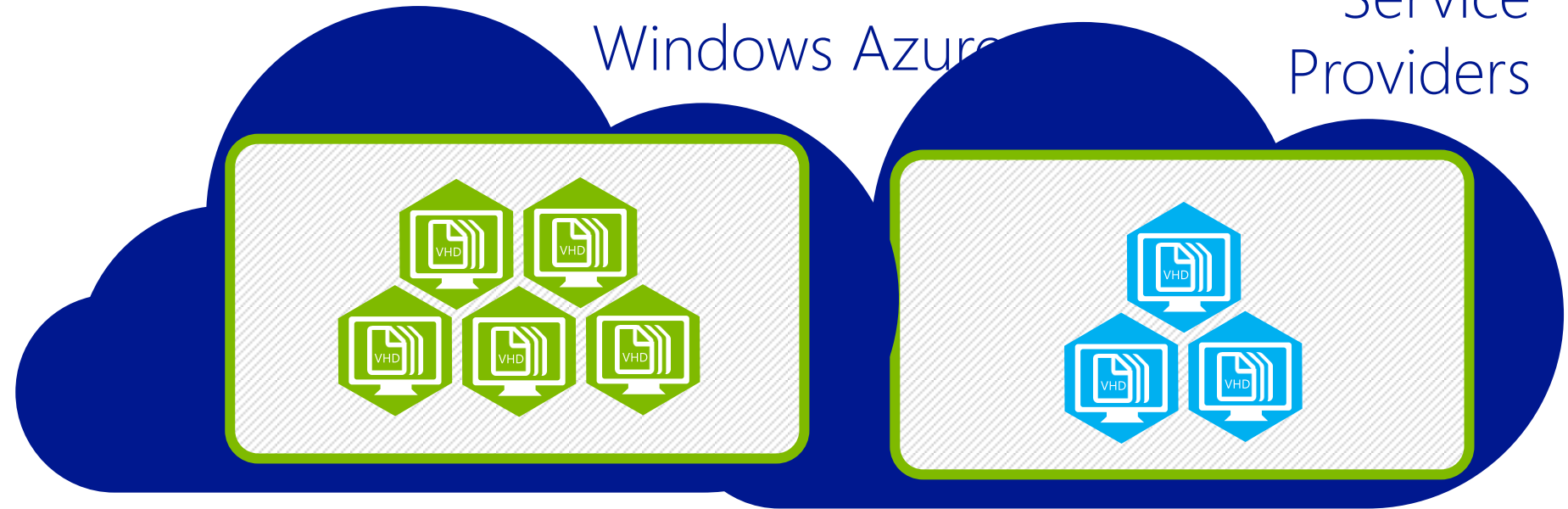


continuous storage
geo-replication



Windows Azure Storage

Flexibility & Portability



Protocols and Endpoints



UDP & TCP Support for External Communications

- Load-balanced incoming traffic and allows outbound traffic



Load Balanced Endpoints

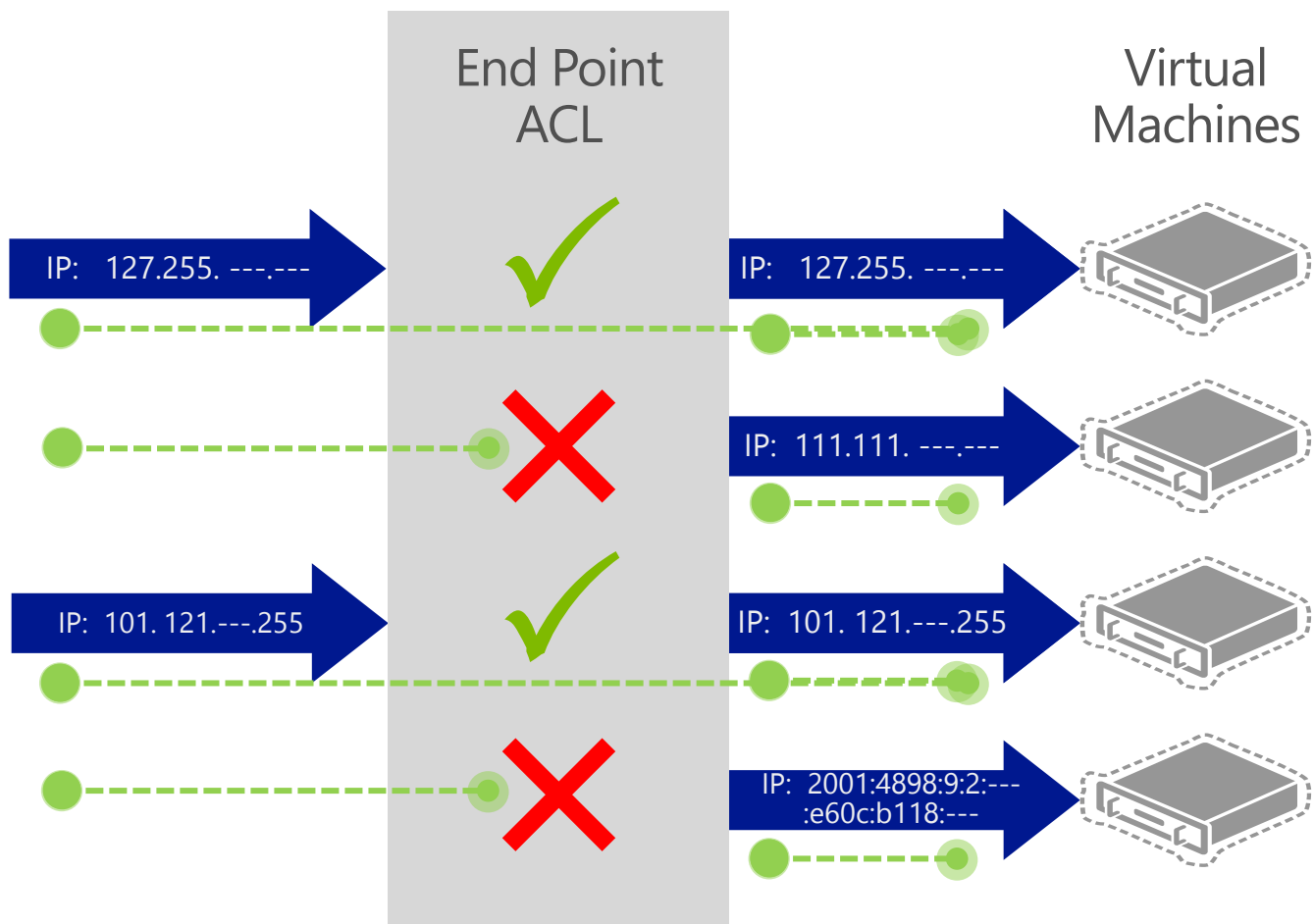
- Direct communication to multiple VMs in the same cloud service
- Health check with probe timeouts
- HTTP based probing, allowing granular control of health checks



Virtual Machine to Virtual Machine Communications

- Instance-to-instance communication
- TCP, UDP and ICMP, dynamic ports

Getting tighter on Security with Public Endpoint Access Control Lists



Lobappvm1

[DASHBOARD](#) [MONITOR](#) [ENDPOINTS](#) [CONFIGURE](#)

NAME	PROTOCOL	PUBLIC PORT	PRIVATE PORT	LOAD BALANCING
VM11	TCP	60690	5986	NO
VM12	TCP	58942	3389	NO

MANAGE ENDPOINT ACL

Specify ACL details for the RemoteDesktop endpoint

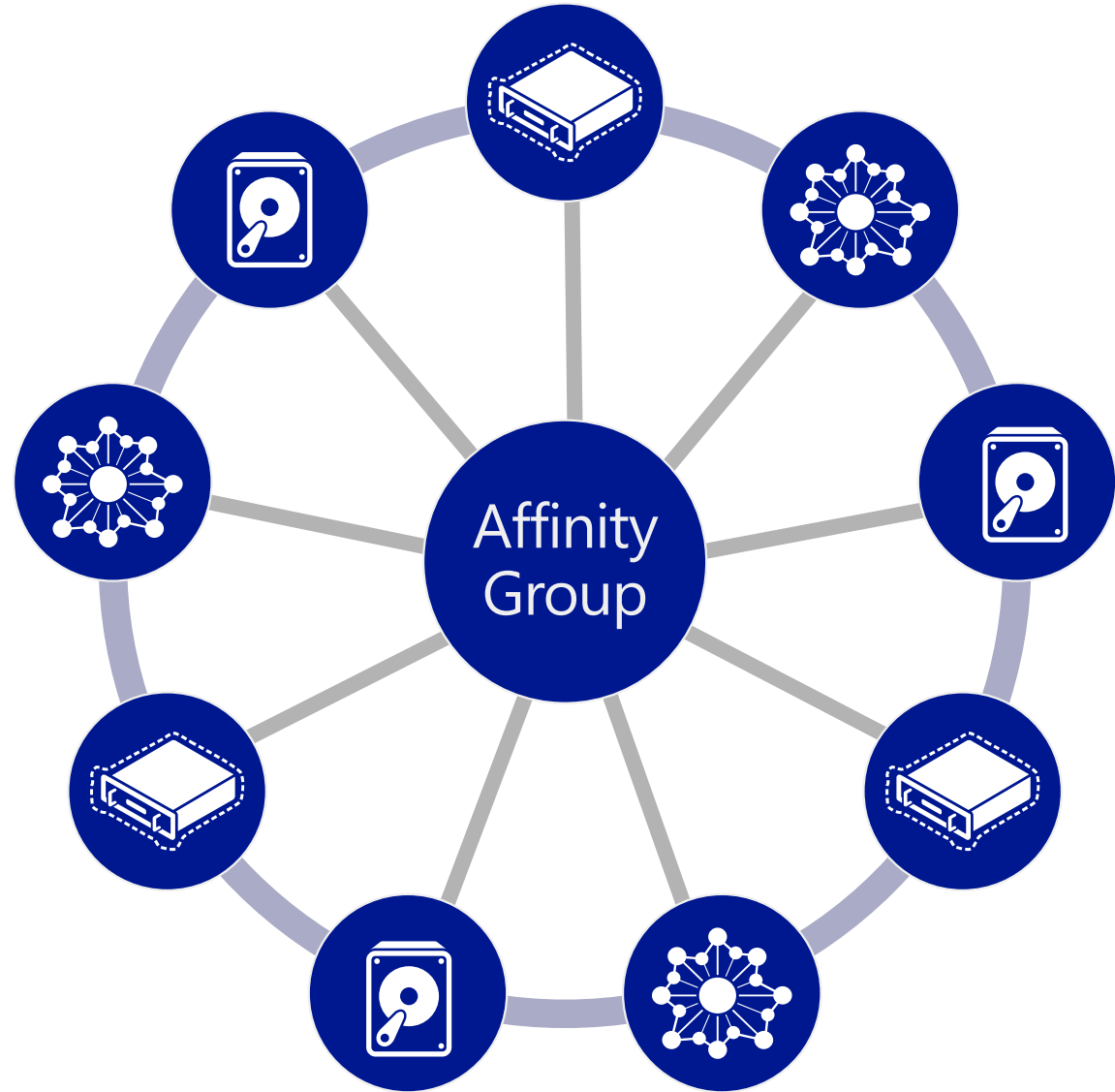
Affinity Groups

Closely locate your compute, network and storage resources in the same datacenter

Get better performance

Get lower latency

Reduce egress costs

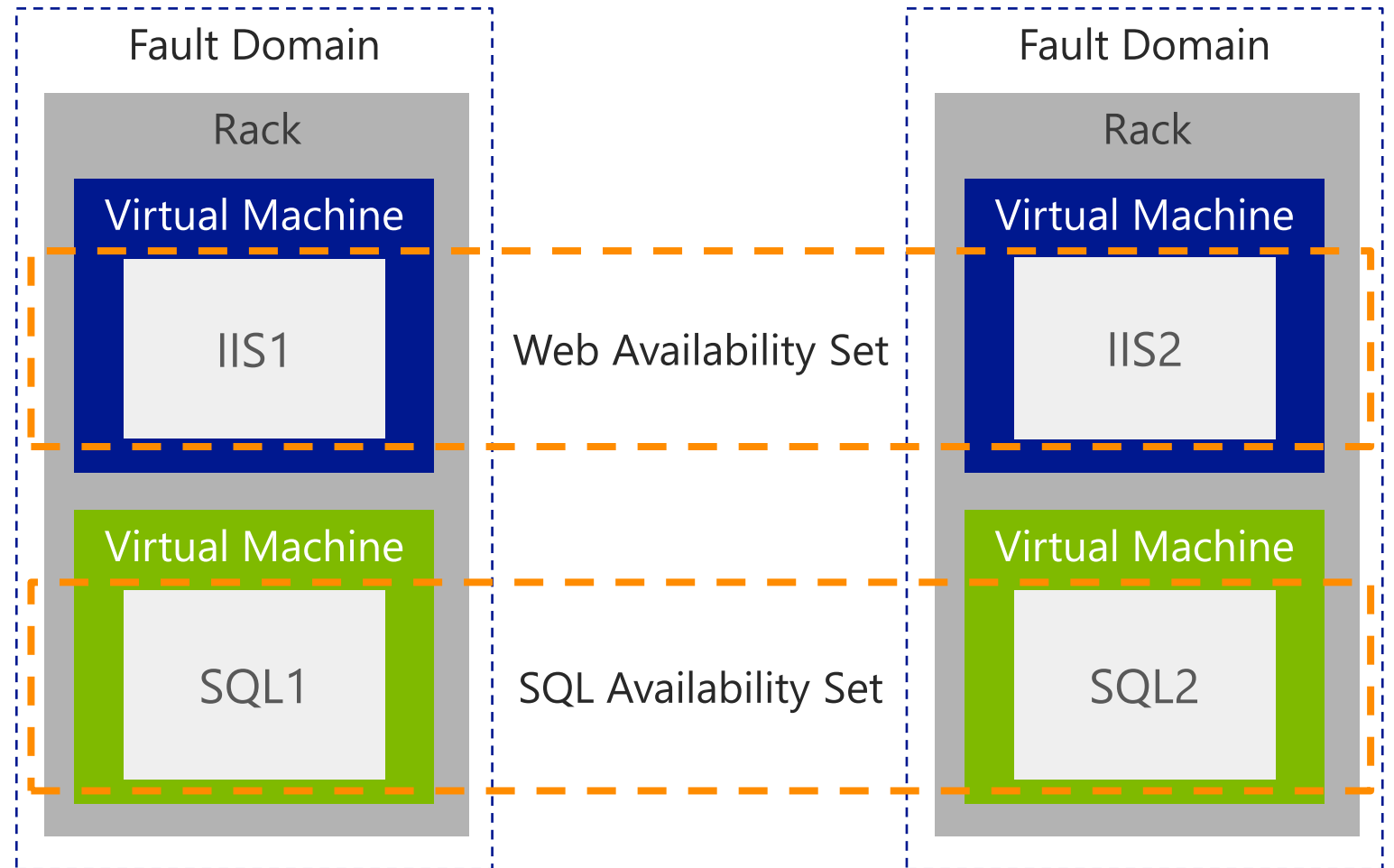


Availability Sets

Get SLA by deploying multiple instances in availability sets

Ensure availability during updates & maintenance

Continue to architecture availability into the application



DEMO

Affinity vs availability

Windows Azure Virtual Network

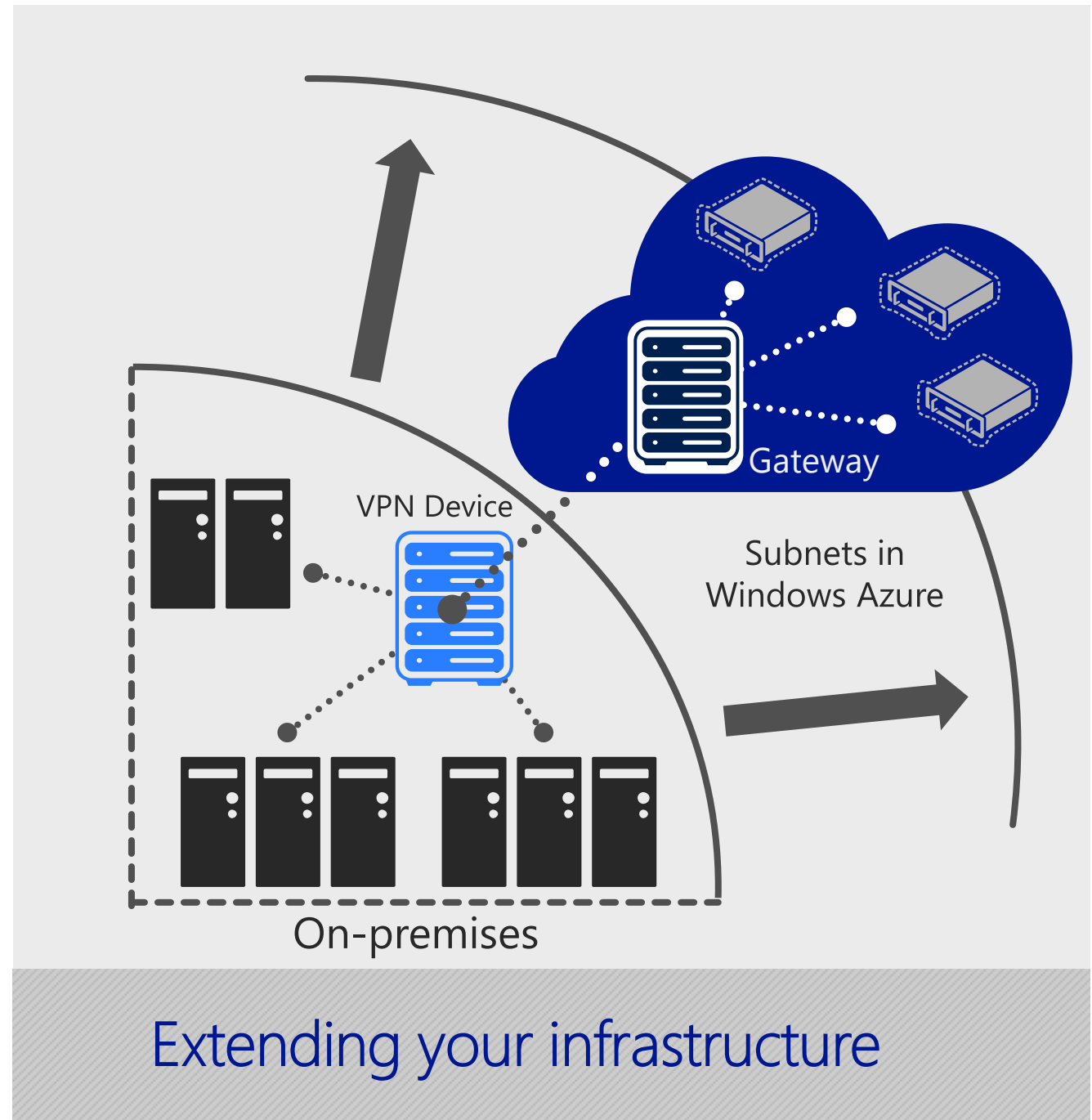
Setup virtual private networks in the cloud

Manage as extensions of on-premises datacenters

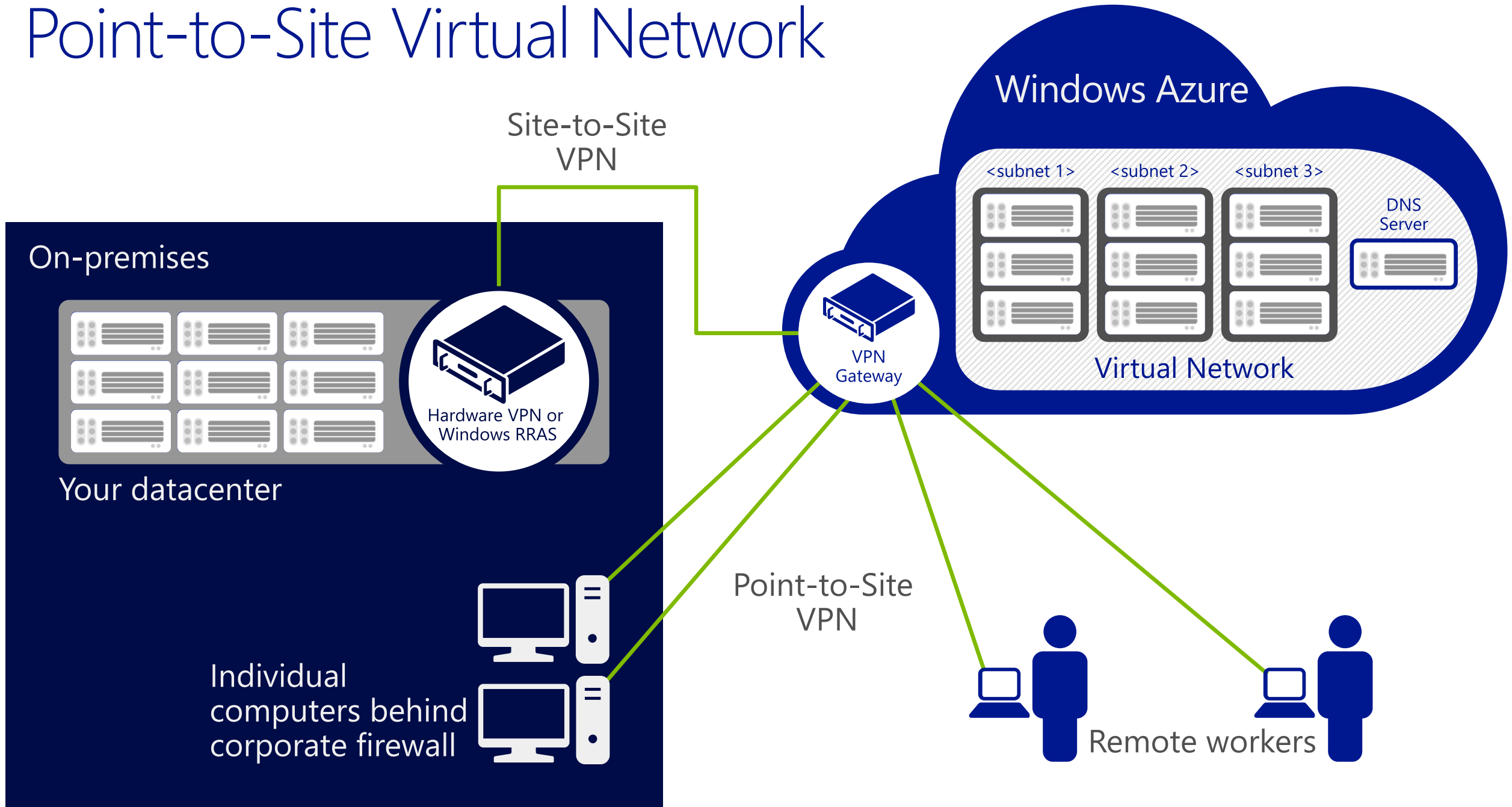
Logical isolation with network configuration options

Create subnets, private IP addresses

Bring your own DNS



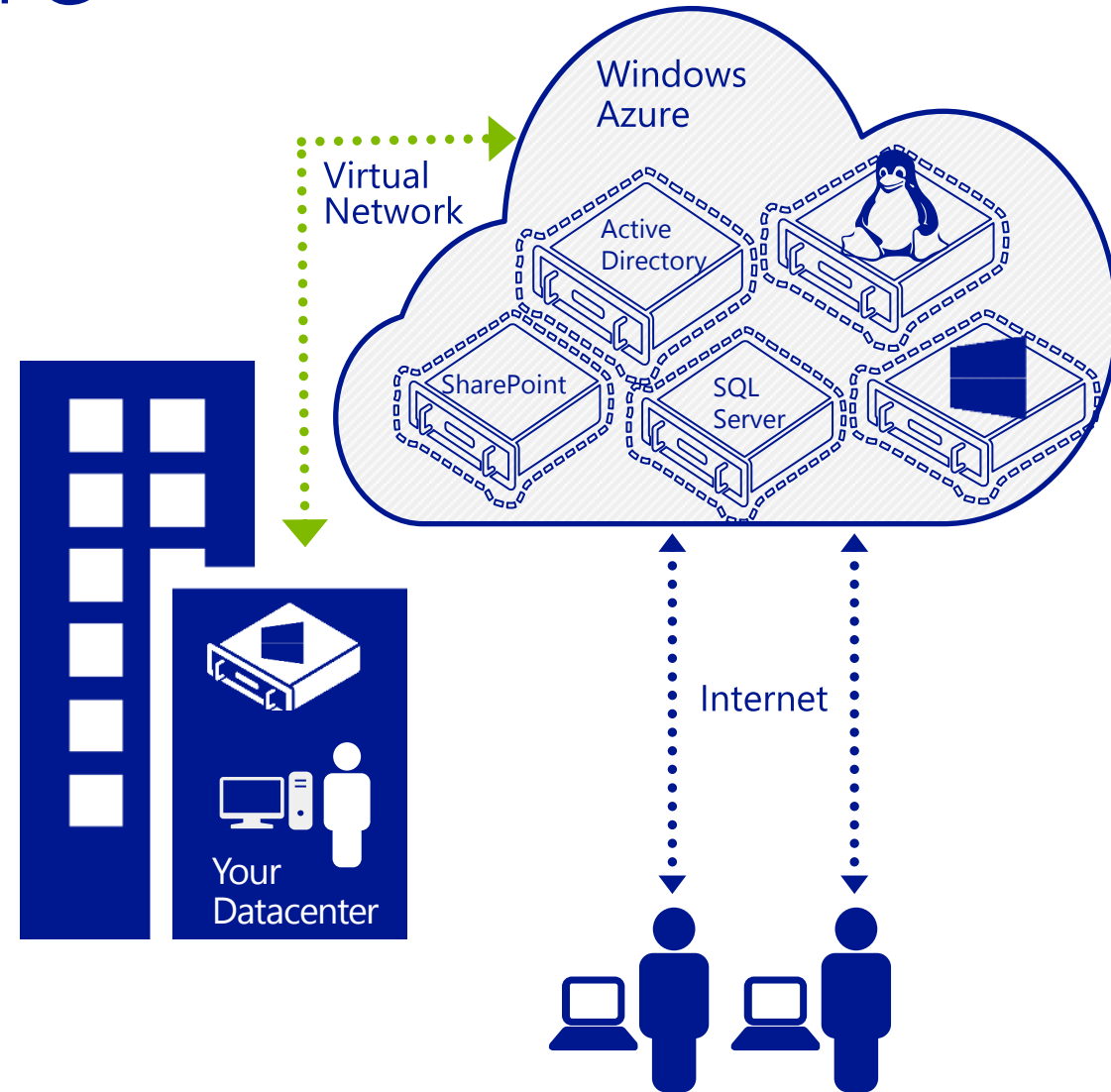
Point-to-Site Virtual Network



Extend your infrastructure

Windows Azure Infrastructure Services

- Virtual Machines with on-demand scale & compute
- Spin up and tear down in minutes, no hardware provisioning
- Connect with on-premises Active Directory and domains
- Integrates Windows Azure Virtual Networks
- Use what you know, manage with System Center
- Integrates with Azure Platform, Apps, and Storage Services



Extend your infrastructure

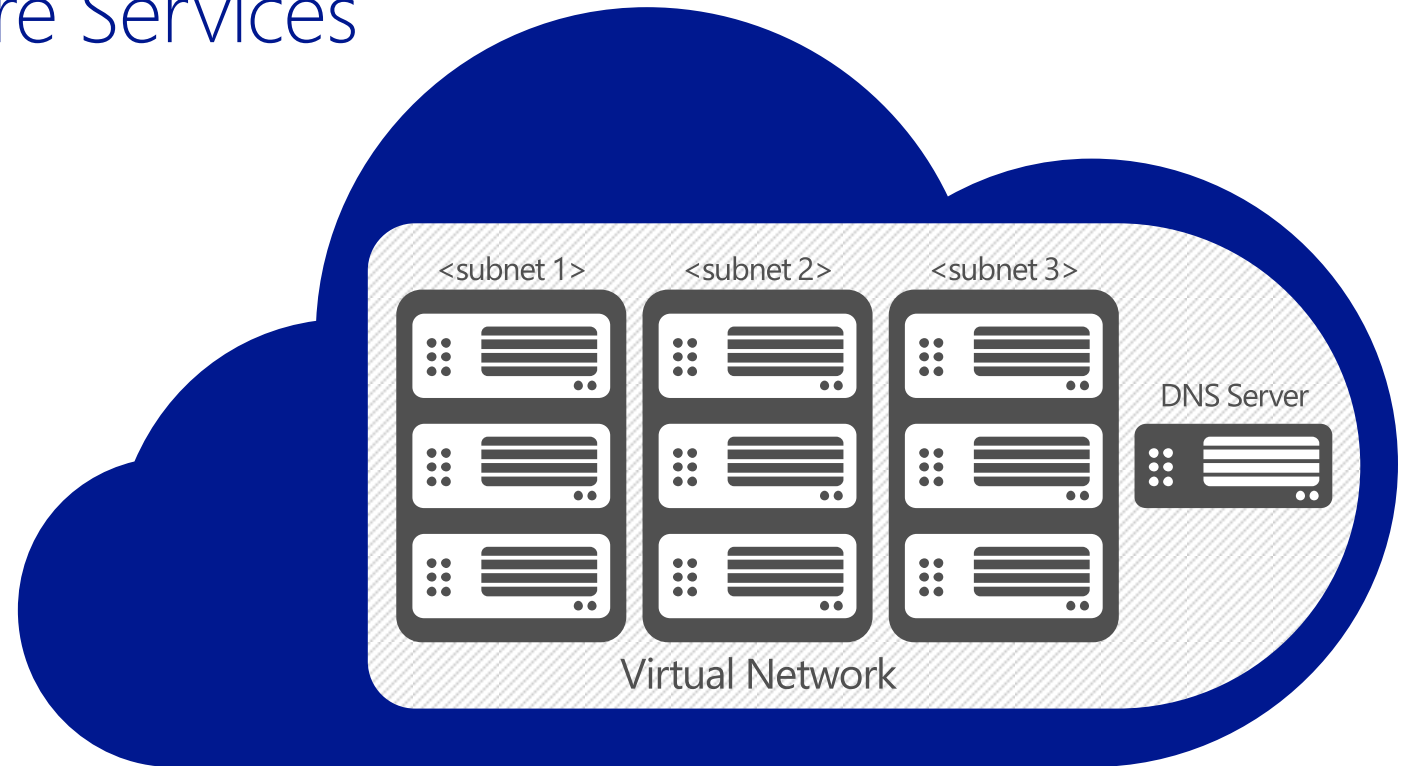
Windows Azure Infrastructure Services

Windows Azure Virtual Network

Logical isolation with control over network

Create Subnets, Private IP addresses

Bring your own DNS



Extend your infrastructure

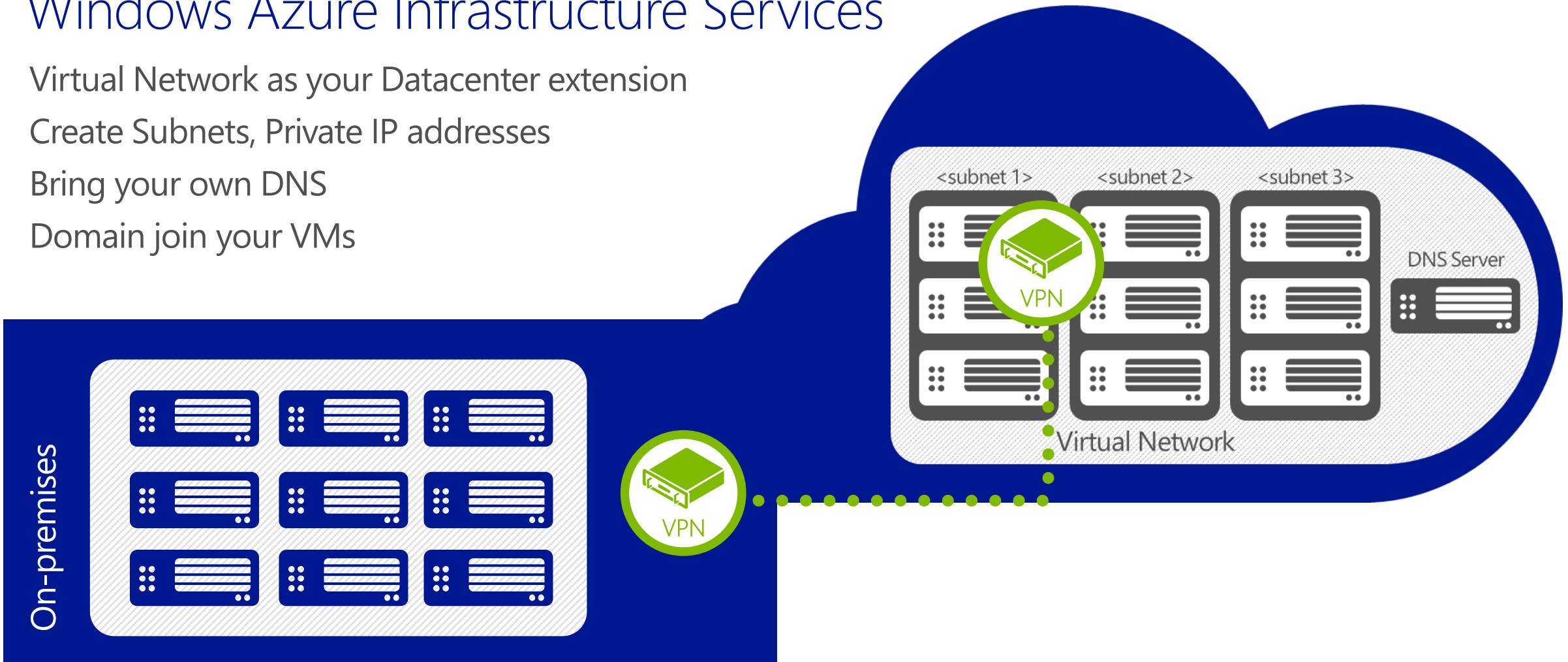
Windows Azure Infrastructure Services

Virtual Network as your Datacenter extension

Create Subnets, Private IP addresses

Bring your own DNS

Domain join your VMs



DEMO

Extend your datacenter into Windows Azure

Build.
Test.
Learn.

Enable innovation
with test and dev
labs in the cloud

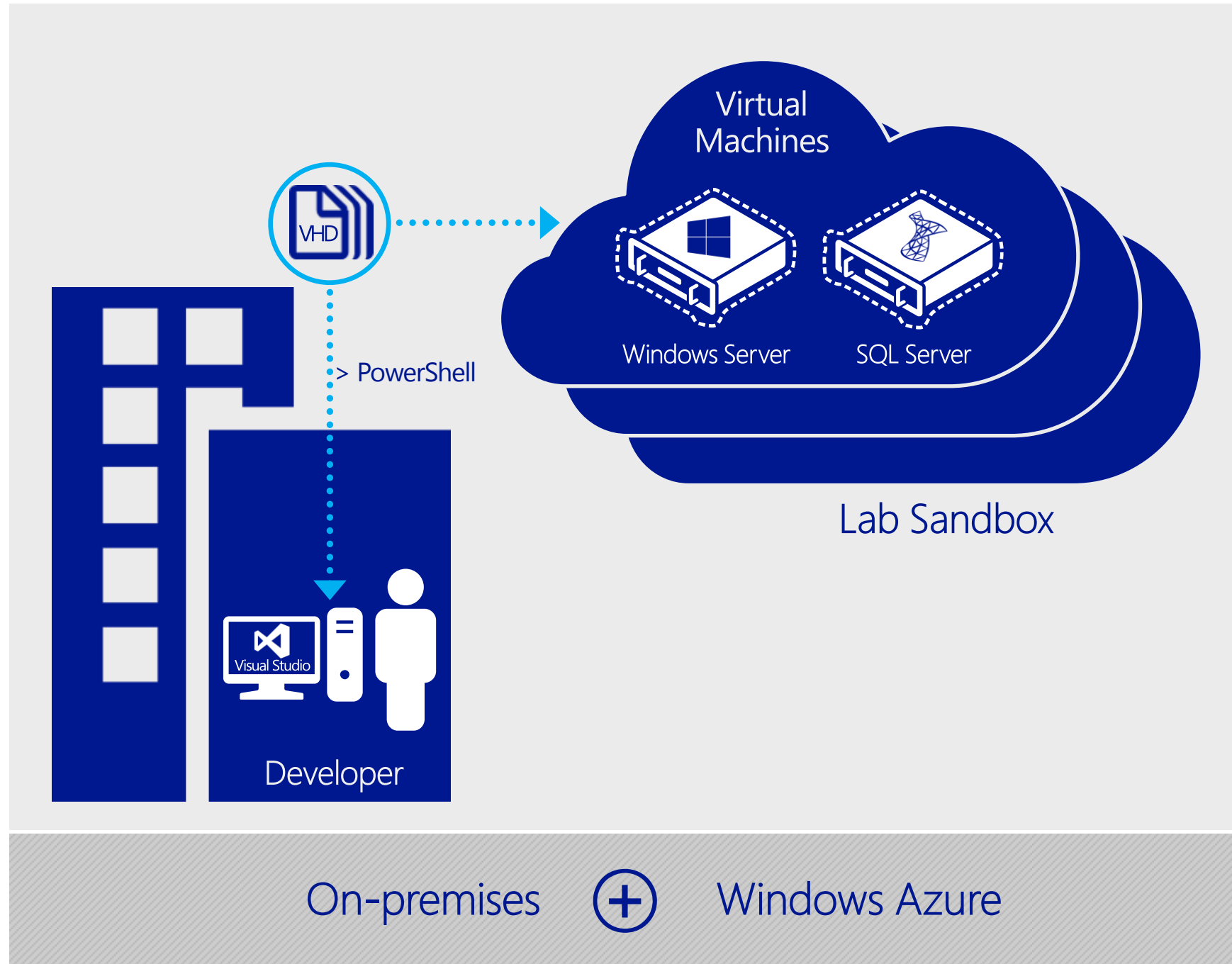
Cost effective

Improved developer agility

Ship tested in realistic scale

Use existing development tools
& languages

Access on-premise resources if
necessary



Develop. Scale. Unlock Hybrid.

Robust infrastructure for SQL Server

Full SQL Server compatibility

Transparent Data Encryption

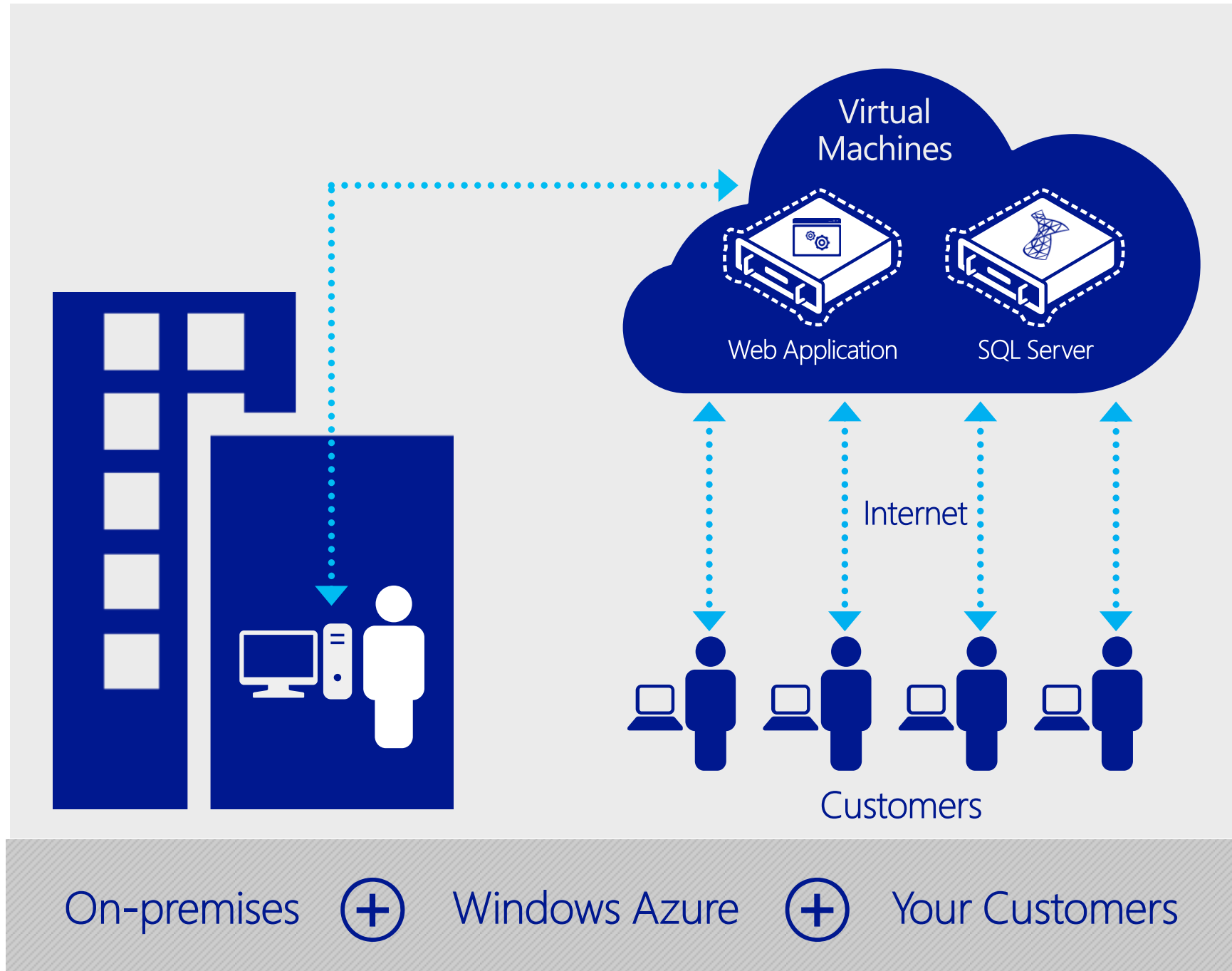
AlwaysOn for high availability

Develop quickly & reduce costs

Move existing SQL Server apps

Backup, restore to Windows Azure

Build hybrid, multi-tiered apps



Bring it. We run it.

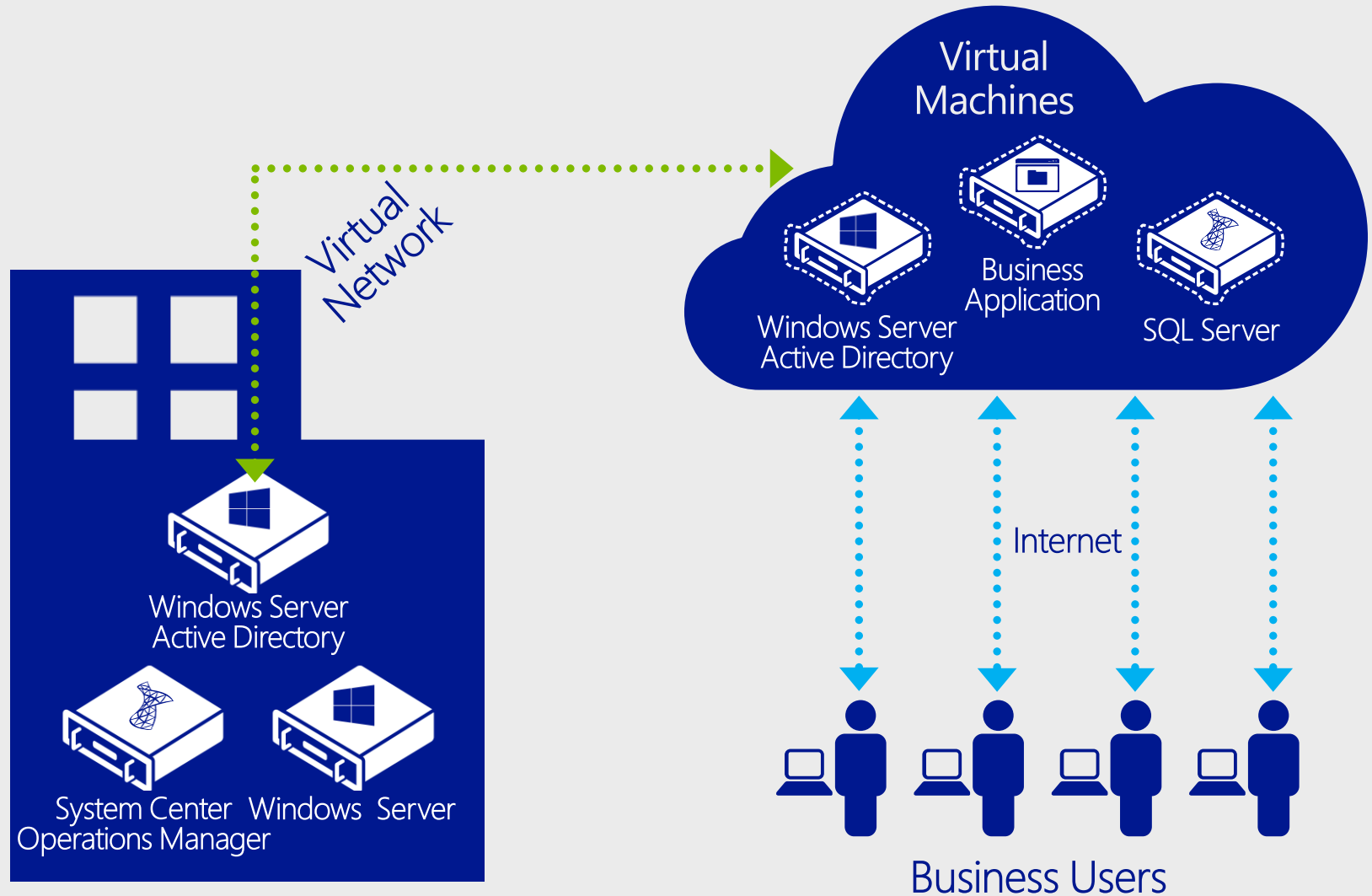
Scalable, on-demand
infrastructure for your
apps

Apps with public web front ends,
variable traffic sitting in
demilitarized zone

Existing custom apps, specialty
servers with batch processing
patterns

No app changes – same VHD
format

Manage with tools you know



On-premises



Windows Azure



Business Users

Extend. Synch.

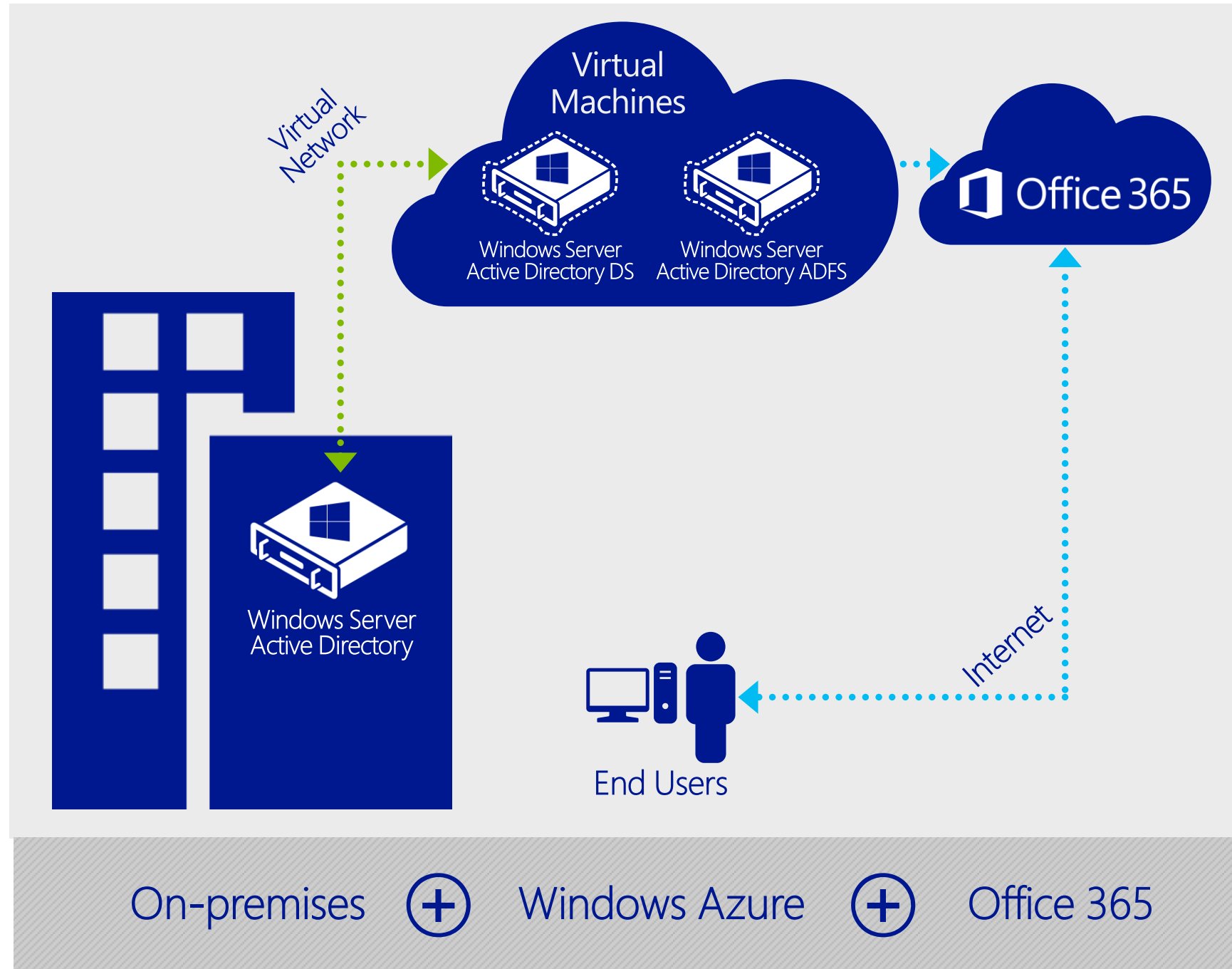
Connect hybrid
infrastructure services
with a single identity

Authenticate apps in virtual
machines using
on-premises identities

Bring mature, enterprise
adopted AD to apps in cloud

Enable hybrid scenarios through
Virtual Network private secure
connection to on-premises

Connect Office 365 to on-
premises identities

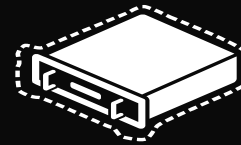


PowerShell for Automation and Advanced Management



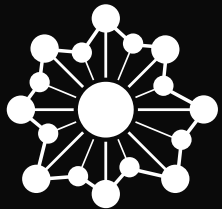
Automation

- ➔ Query, manage and configure – at scale:
 - Virtual Machines
 - Storage across multiple subscriptions and storage accounts
 - Tiered deployment workflows



Virtual Machines

- ➔ Configure storage and networking
- ➔ Domain join to AD on-premises
- ➔ Bring your own machine images or disks
- ➔ Use remote PowerShell



Virtual Network

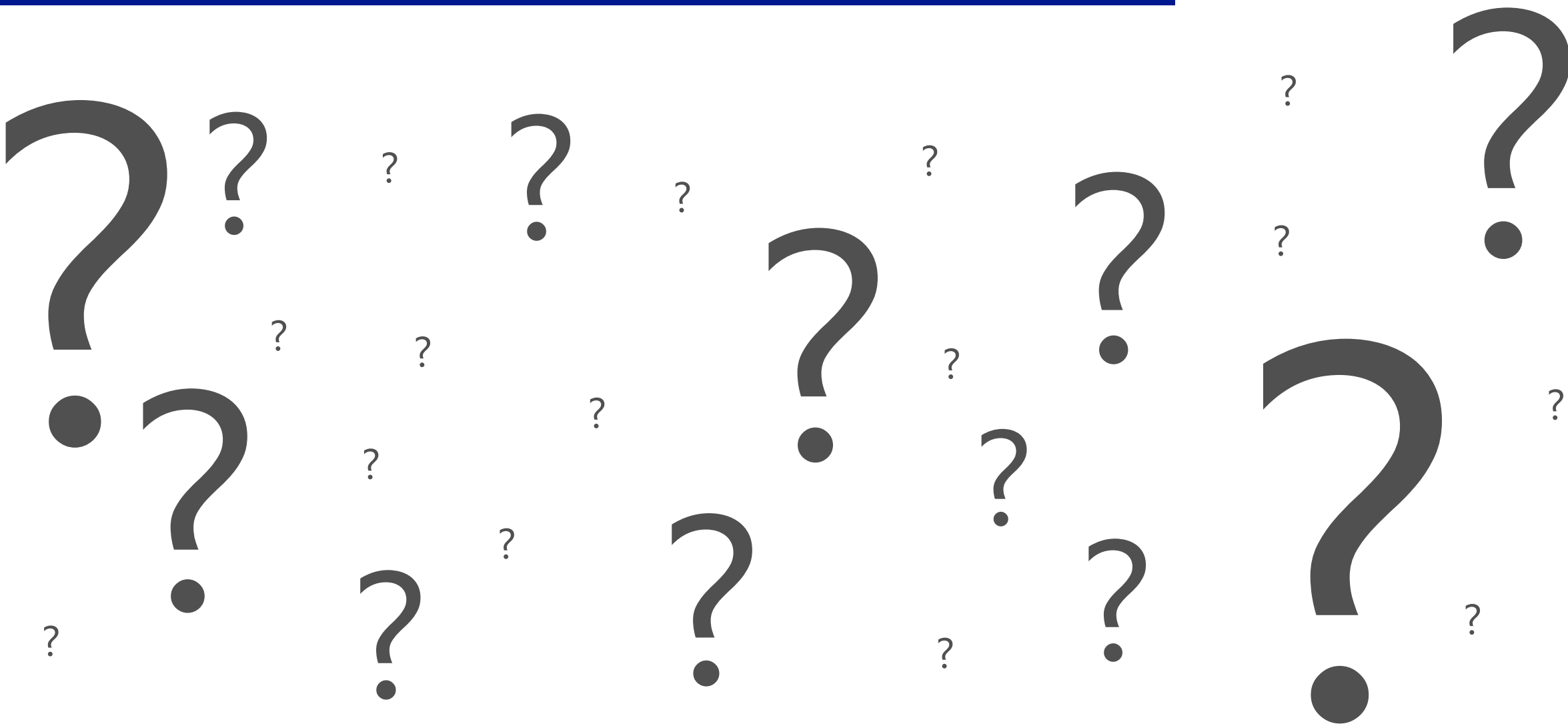
- ➔ Configure Virtual Network
- ➔ Manage configuration and gateway
- ➔ Connect to on-premises networks



Storage

- ➔ Upload & download VHDs from storage accounts to on-premises
- ➔ Copy VHDs between storage accounts and subscriptions

Vragen?



Robbert van der Zwan
robbert.van.der.zwan@interaccess.nl



(Federated) Identity



High Performance Computing

Web services



Virtual Machines

Virtual Networks



Virtual Private Network



Windows Azure



Bert Wolters
bert.wolters@interaccess.nl