

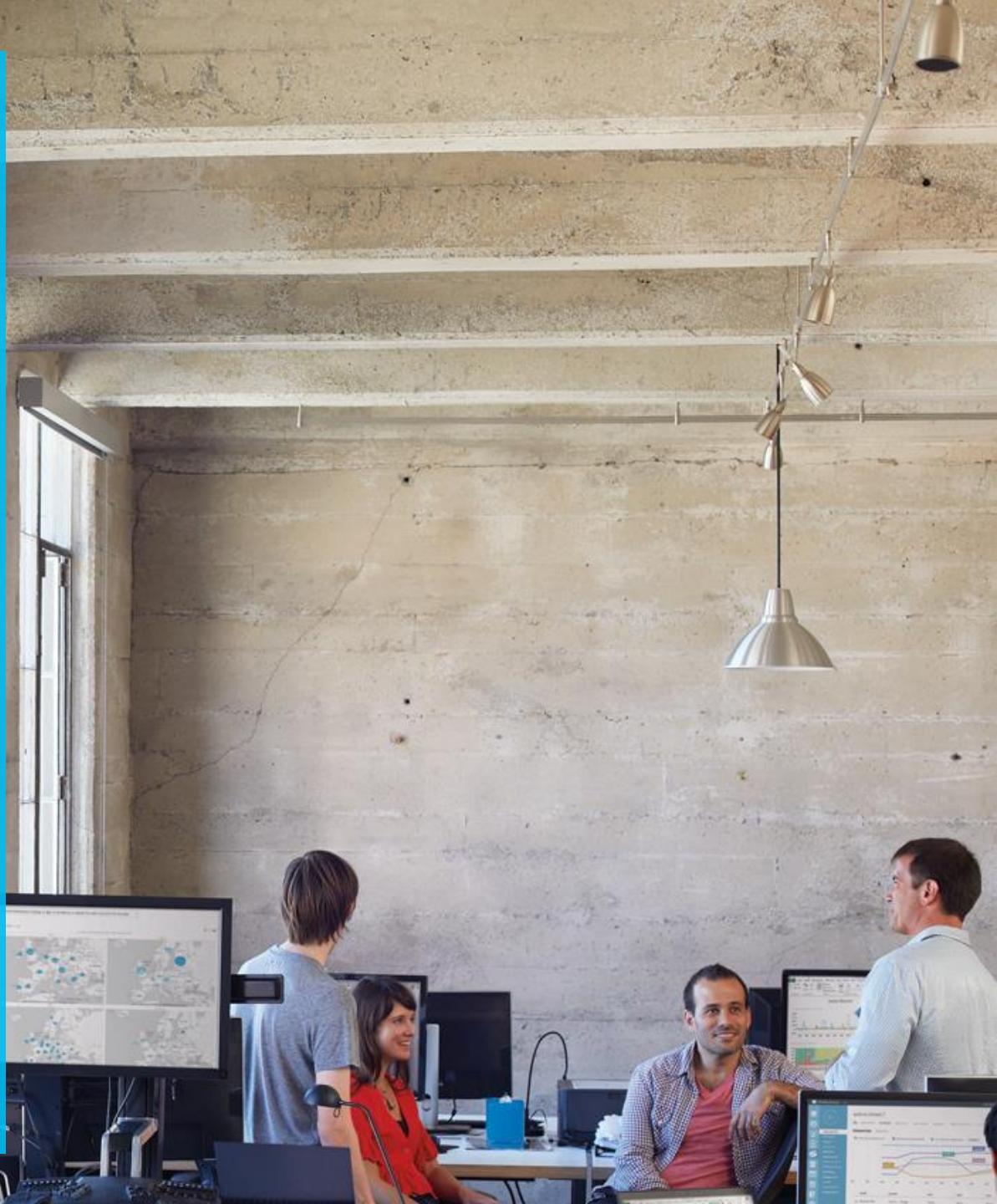


# Microsoft Azure

## Accelerate Amsterdam

## Open Source

Robert Bakker  
31-05-2016



# Learning goals for today

- ✓ Learn background & try hands-on
- ✓ Microsoft Strategy & Azure Datacenters
- ✓ Learn about possibilities
- ✓ Learn about ARM and the x-plat CLI
- ✓ Deploy Open Source services and solutions in Microsoft Azure
- ✓ Use GitHub and Visual studio code to author JSON templates
- ✓ Start with Docker containers on Azure
- ✓ Ask questions & help each other

# Some other points of attention

- ✓ 30 minutes presentations, 1 hour hands on labs
- ✓ Try & Feel free to experiment with technologies, the Azure Portal, the Azure CLI etc.
- ✓ Use inprivate mode in your browser for the right identity
- ✓ Assumes clean Azure subscription

# Stel je vragen online!

Heb je een vraag tijdens of na het lab, stel je vraag online, er zijn speciaal voor jullie nu collega's online:

- Door je vraag online te stellen vergeet je het antwoord niet
- Je helpt niet alleen jezelf maar ook andere die wellicht dezelfde vraag hebben
- Mocht je thuis of op het werk een vraag hebben, stel hem gewoon online, wij helpen graag\*

<https://social.msdn.microsoft.com/Forums/>

\* elke maandag en donderdag van 14.00 tot 15.00 uur zitten onze Nederlandse experts voor u klaar!

# Today's setup

- ✓ Azure Passes are available (100 \$ credit)
- ✓ The labs can be made using your own laptops
- ✓ Cross platform CLI

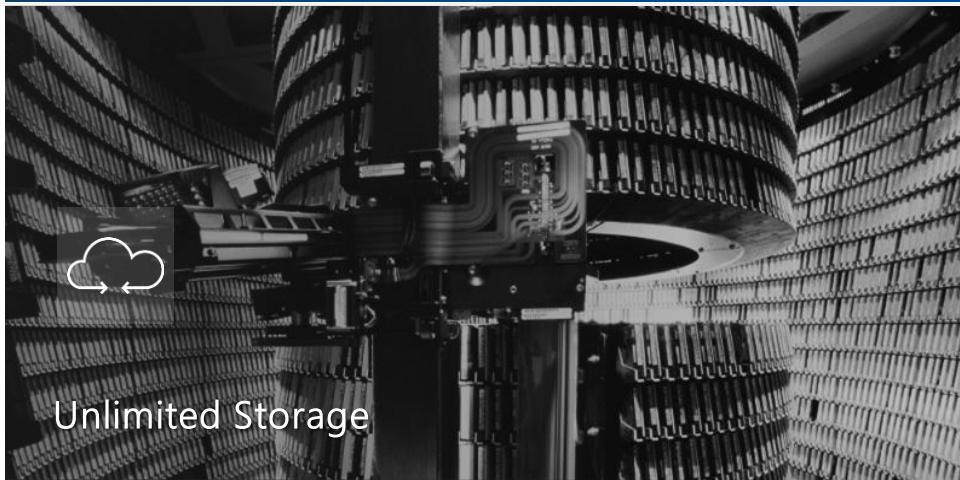
10:00 – 11:00	Microsoft en Open Source : overzicht en lab set-up
11:00 – 12:30	OSS Deployment met ARM templates hands-on lab
12:30 - 13:30	LUNCH
13:30 – 15:00	Custom Suse Linux image maken en uitrollen met Suse Studio en Azure
15:00 - 15:15	PAUZE
15:15 – 16:50	Docker on Linux Hands on Lab
16:50 – 17:00	Wrap-Up
17:00	Netwerkborrel

# The Cloud Components

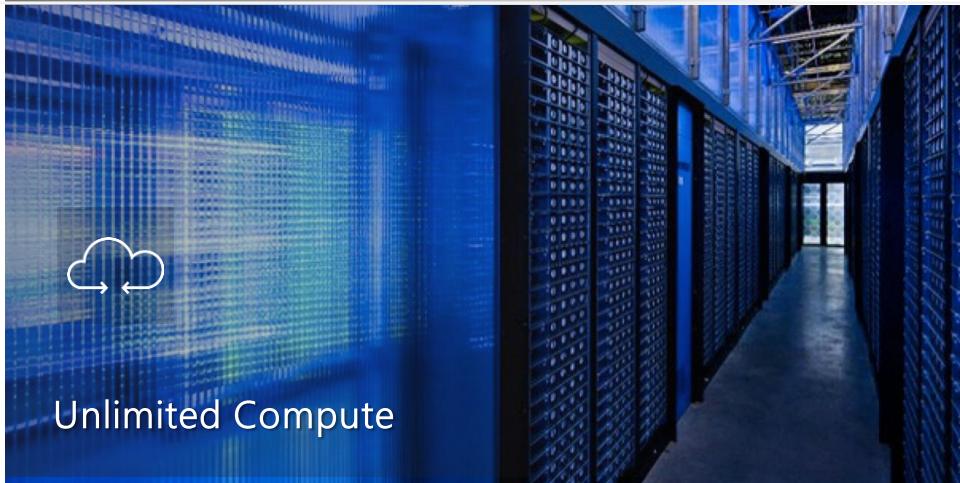
“What”



Global Network



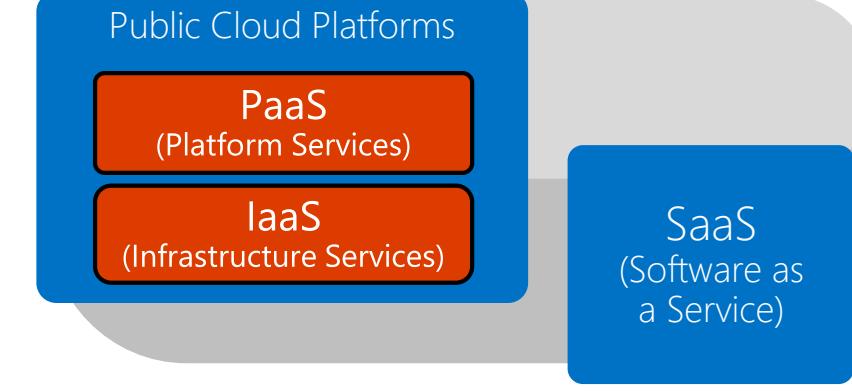
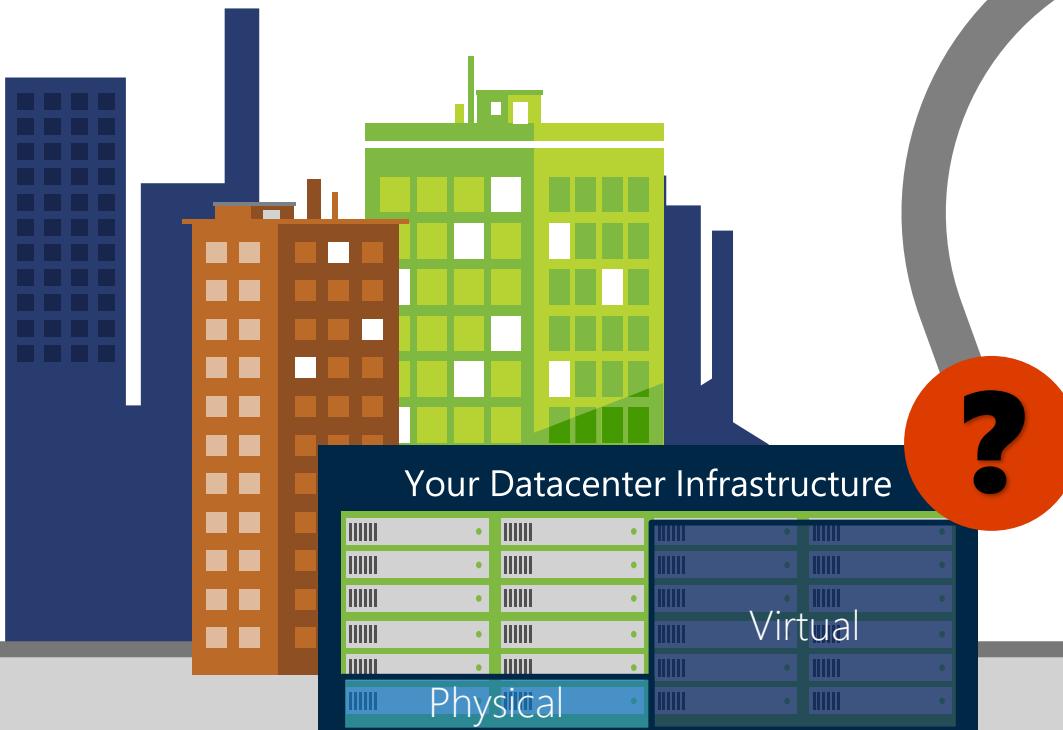
Unlimited Storage



Unlimited Compute

# Cloud & IT Strategy

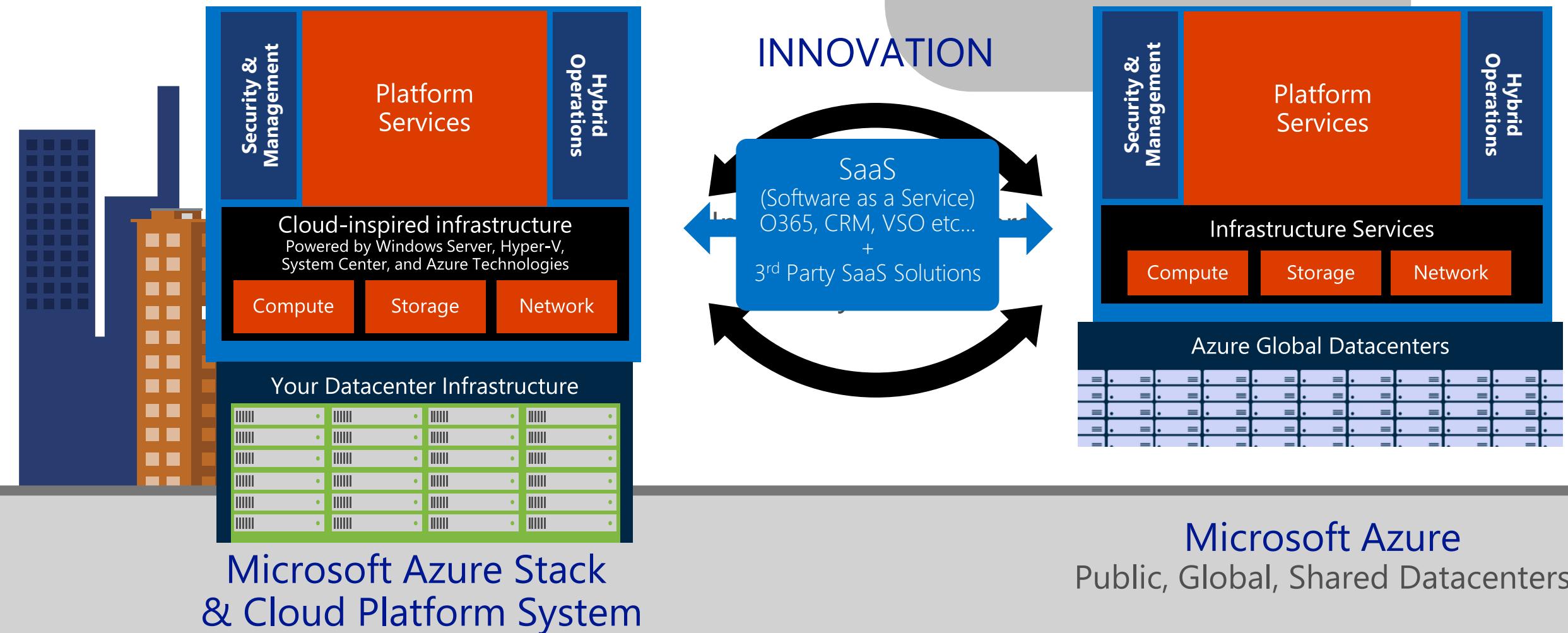
- Virtualization – there must be more..?
- It's cheaper – isn't it..?
- My DC is "constrained"..!
- My Business Groups are using it..!



- Can we STOP doing some things?

Your Data Center

# The Azure Platform Strategy



# Data Centers – in allerlei maten en vormen



# Microsoft Boydton Data Center



Outdoor Modular Data Center



Open Air Electrical Breezeway

Resilient Software Evolves, Data Center Evolves,  
Operations Evolves

# Hyper scale Infrastructure is the enabler

100+ Datacenters across 30 Regions (22 Generally Available) Worldwide



## Platform Services

### Security & Management

- Service Creation & Configuration
- User/Group Directory Store
- Identity Sign-Up and sign-in
- Multi-Factor Authentication
- Scheduled Service Management
- Task Scheduler
- Encryption Key Store
- Software/Solution Marketplace
- Pre-Build VM Images

### Services Compute

- Stateless Compute
- Distributed Compute
- Scheduled Compute Jobs
- Virtual App Streaming

### Web and Mobile

- Web Apps Infrastructure
- API App Infrastructure
- Mobile Backends
- Business Process Automation

### Integration

- Simple Queuing
- B2B Integration
- Hybrid Connections
- Pub/Sub Queuing

### Developer Services

- Development Tools
- Software Development Kits
- Software Lifecycle Management
- Application Instrumentation

### Media & CDN

- Live & OD Media Streaming
- Content Delivery Network (CDN)

### Data

- Relational SQL Database
- Data Warehouse
- Document Database Service
- Distributed In-Memory Cache
- Search
- Simple Key/Value Store

### Analytics & IoT

- Big Data Analytics
- Predictive Analytics
- Data Stream Analytics
- Big Data Storage
- Data Pipelines
- Device Data Collection
- Data Source Management
- IoT Device Management
- Mobile Analytics

### Hybrid Operations

- Directory Health Monitoring
- Privileged Identity Management
- Domain Join & Policy Management
- Server Data Backup
- Operational Analytics
- Bulk Data Import And Export
- Disaster Recovery
- Hybrid/Intelligent Data Backup

## Infrastructure Services

### OS/Server Compute

- Virtual Servers
- Containers

### Storage

- Disk based Object/File Storage
- Shared Storage
- SSD based Object/File Storage

### Networking

- Virtual Network
- VM Load Balancer
- DNS
- Direct Network Connections
- Traffic Distribution
- VPN Gateway
- HTTP Load Balancer

## Datacenter Infrastructure (30 Regions, 22 Online)

# Azure Compliance

## The largest compliance portfolio in the industry



ISO 27001



SOC 1 Type 2



SOC 2 Type 2



PCI DSS Level 1



Cloud Controls Matrix



ISO 27018



Content Delivery and Security Association



Shared Assessments



FedRAMP JAB P-ATO



HIPAA / HITECH



FIPS 140-2



21 CFR Part 11



FERPA



DISA Level 2



CJIS



IRS 1075



ITAR-ready



Section 508 VPAT



European Union Model Clauses



EU Safe Harbor



United Kingdom G-Cloud



China Multi Layer Protection Scheme



China GB 18030



China CCCPPF



Singapore MTCS Level 3



Australian Signals Directorate



New Zealand GCIO



Japan Financial Services



ENISA IAF

Vianen, 15 april 2016

## SOGETI LANCEERT EERSTE NEDERLANDSE HETEROGENE CLOUDAPPLICATIEPLATFORMDIENSTEN OP BASIS VAN DEVOPS

Einde van het tijdperk van twee gescheiden Open Source en Microsoft werelden nabij

In samenwerking met Microsoft en Red Hat introduceert Sogeti Platform-as-a-Service diensten waarmee zowel op Microsoft als op Open Source technologie gebaseerde applicaties ontwikkeld en beheerd kunnen worden op één cloudplatform. Met deze 'OpenShift on Azure' dienstverlening te zijn organisaties in staat sneller software te ontwikkelen in een hybride cloudomgeving volgens het DevOps\* principe. Voor dit heterogene

Posted on Tuesday, April 19, 2016



Ross Gardler, Senior Program Manager, Azure



Posted on Tuesday, April 19, 2016

Gossman, Architect, Azure

source DC/OS project. Microsoft joined Mesosphere and Enterprise to announce modern distribution operating System, the Apache Kafka, Ap-

SQL Server ❤ Linux

Announcing SQL Server on Linux



Accenture, Cisco, and  
Apache  
ere's  
for container  
including HDFS,



*"Our industry respects innovation, not tradition"*

Satya Nadella, CEO Microsoft

# Diverse and Open

DevOps



Clients



Management



Applications



PaaS & DevOps



App Frameworks & Tools



Databases & Middleware



Infrastructure



redhat



FreeBSD



# Investments in Open Source knowledge

LAKE TAHOE, Calif. - While at the [Linux Collaboration](#), Coekaerts, formerly Oracle's Senior VP of Linux and Oracle for Microsoft.

Coekaerts is a very well-known Linux leader. In Oracle tenure, he became known as "Mr. Linux." In his Oracle tenure, he helped company its first Linux products; moved Oracle's programming staff from Windows to Linux; turned Oracle into a Linux distributor with [Red Hat Enterprise Linux \(RHEL\) clone, Oracle Linux](#).

Microsoft confirmed that it had enticed Wim Coekaerts to Oracle for Microsoft. Mike Neil, Microsoft's President of the Enterprise Cloud, told me, "Wim Coek-

The screenshot shows the Microsoft Open Technologies website. The header features the Microsoft logo and the text "Microsoft Open Technologies". Below the header is a navigation bar with links for Home, Blog, What We Do, Projects, and About. A sub-navigation menu for "What We Do" includes items like "Apache", "Open Data", "Open Cloud", and "Open Container". To the right of the navigation is a section titled "A Proclamation for the Apache Software Foundation" posted on April 20, 2015, by Ross Gardler. The proclamation text discusses the 15th anniversary of the Apache Software Foundation and the 20th anniversary of the Apache Web Server project. It mentions the proclamation of April 13-16 as Apache Software Days and the reading of a proclamation during the "State of the Feather" plenary. The footer contains links for "English | 简体中文" and social media icons for Twitter, Facebook, and RSS.

A Proclamation for the Apache Software Foundation  
Posted on [April 20, 2015](#) by [Ross Gardler](#)

Last week was ApacheCon, the official conference of the Apache Software Foundation. Here are my takeaways from the event.

First off, we should all sing happy birthday, twice. It is the 15th anniversary of the foundation itself and 20th anniversary of the Apache Web Server project, which started it all. In celebration of these anniversaries, the City of Austin Mayor Steve Adler proclaimed April 13-16 as Apache Software Days. I had the honor of reading this proclamation (pictured right) during my "State of the Feather" plenary.



# Our Open Source Approach



## Openness & Collaboration

On a day-to-day basis with

- Industry Partners
- Open Source Communities

## Transparency

High-quality devices  
and cloud services that  
customers can trust

## Opening up Opportunity

For others to drive  
innovation and break  
barriers

# 6 reasons to choose Microsoft Azure

## For your Open Source Solutions

Great UX, open source tools & APIs that don't get in your way



Hybrid cloud, ready for big enterprise and for any device



Succeed faster in your target markets with solutions



Grow beyond IaaS on your own terms and with the skills you love



Effortless scalability and geo-replication

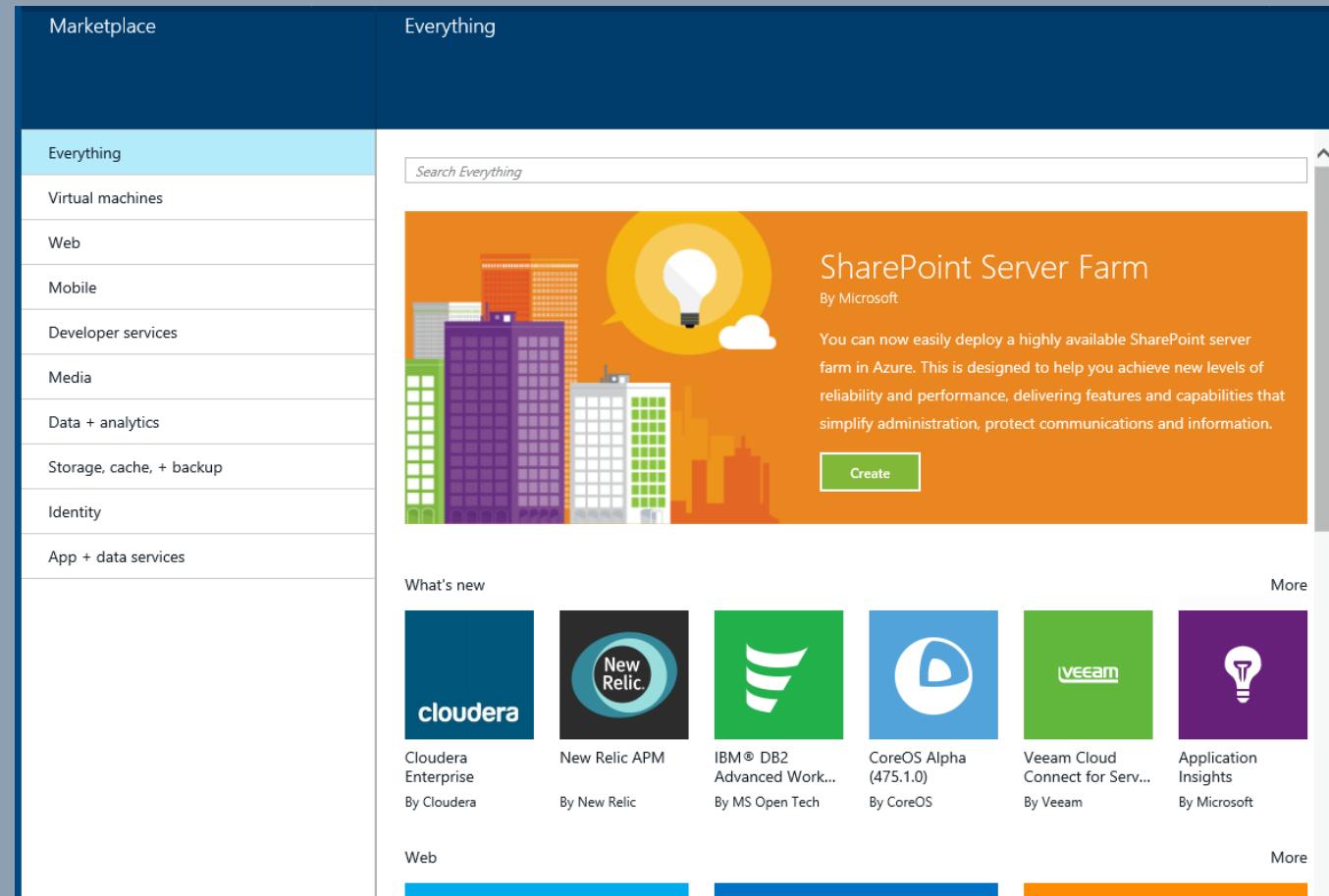


Competitive price to performance ratio vs. AWS



# Azure Marketplace

- Growing collection of first and third party images in the curated Azure gallery for easy and fast virtual machine deployment of key applications
- BYOL and hourly-billed images
- 39 partners; 50+ unique workloads; 75+ total images



# Manage resources in Microsoft Azure



# Azure Classic Portal

- <http://manage.windowsazure.com>

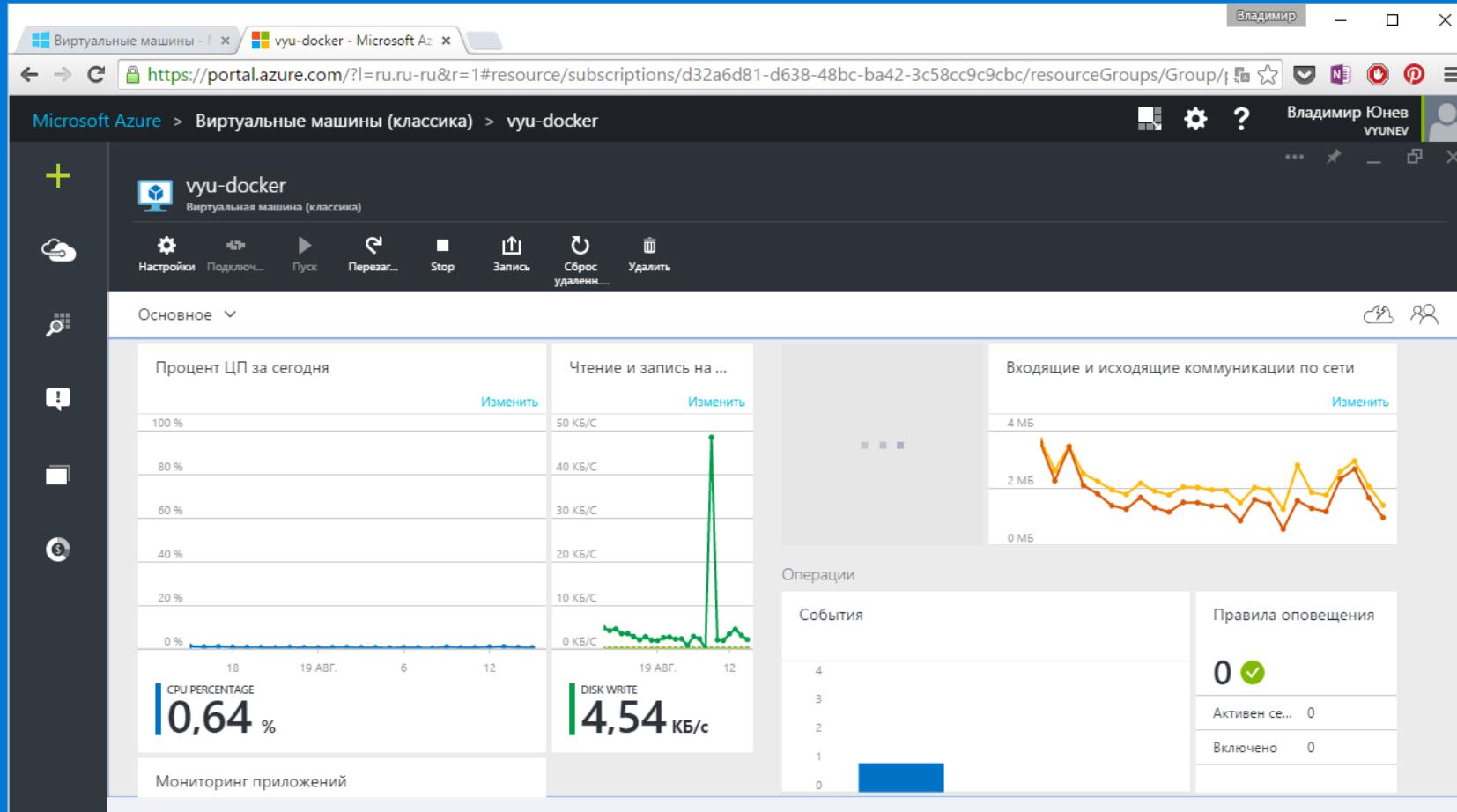
The screenshot shows the Microsoft Azure Classic Portal interface. The left sidebar lists various service categories: ALL ITEMS, WEB APPS (0), VIRTUAL MACHINES (1), MOBILE SERVICES (0), CLOUD SERVICES (1), BATCH SERVICES (0), SQL DATABASES (0), STORAGE (2), HDINSIGHT (0), MEDIA SERVICES (0), SERVICE BUS (0), MOBILE ENGAGEMENT (0), VISUAL STUDIO TEAM SE... (1), and CACHE (0). The main content area is titled 'all items' and displays a table of resources. The columns are NAME, TYPE, STATUS, SUBSCRIPTION, and LOCATION. The table contains the following data:

NAME	TYPE	STATUS	SUBSCRIPTION	LOCATION
rbsusestorage	Storage Account	✓ Online	Internal	West Europe
teststoragerb	Storage Account	✓ Online	Internal	West Europe
rbbackup	Backup Vault	✓ Active	Internal	West Europe
clt-10a8acdf-7719-45df-9f51-47f626e901c7	Visual Studio Team Se...	✓ Active	Internal	South Central US
Azure Pro	Directory	✓ Active	Shared by all Azure Pro s...	United States
bakkernet	Directory	✓ Active	Shared by all bakkernet s...	Europe, United States
slesaccelerate	Virtual machine	✓ Running	Internal	West Europe
slesaccelerate	Cloud service	✓ Running	Internal	West Europe

At the bottom of the screen, there are buttons for '+ NEW', 'MANAGE ACCESS KEYS', 'MANAGE DOMAIN', 'DELETE', and a help icon. The URL in the address bar is 'http://manage.windowsazure.com#Workspaces/All'.

# Azure Modern Portal (preview)

- <http://portal.azure.com>



# Azure Command-line tools

<http://azure.microsoft.com/en-us/downloads/>

- Windows PowerShell
- Azure CLI
  - Windows, Linux, OSX
- AzCopy
  - CLI Storage Utility

The screenshot shows the Microsoft Azure Downloads page. At the top, there's a navigation bar with links for Why Azure, Products, Documentation, Pricing, Downloads, Partners, Blog, Community, and Support. A 'FREE TRIAL' button is also visible. Below the navigation, there are two main sections: 'Command-line tools' and 'Migration Tools'. The 'Command-line tools' section contains links for Windows PowerShell (Install, Documentation, Browse script center), Azure command-line interface (Windows install, Mac install, Linux install, Documentation), and AzCopy Command-Line Tool for Azure Storage (Install Preview version, Install Release version, Documentation). The 'Migration Tools' section contains links for Virtual Machine Assessment Tools (Virtual Machine Readiness Assessment) and Azure Websites Migration Assistant (Install).

Microsoft Azure

Why Azure Products Documentation Pricing Downloads Partners Blog Community Support FREE TRIAL

## Command-line tools

Manage your Azure services and apps using scripts from the command line.

<b>Windows PowerShell</b>	<b>Azure command-line interface</b>	<b>AzCopy Command-Line Tool for Azure Storage</b>
<a href="#">Install</a>	<a href="#">Windows install</a>	<a href="#">Install Preview version</a>
<a href="#">Documentation</a>	<a href="#">Mac install</a>	<a href="#">Install Release version</a>
<a href="#">Browse script center</a>	<a href="#">Linux install</a>	<a href="#">Documentation</a>

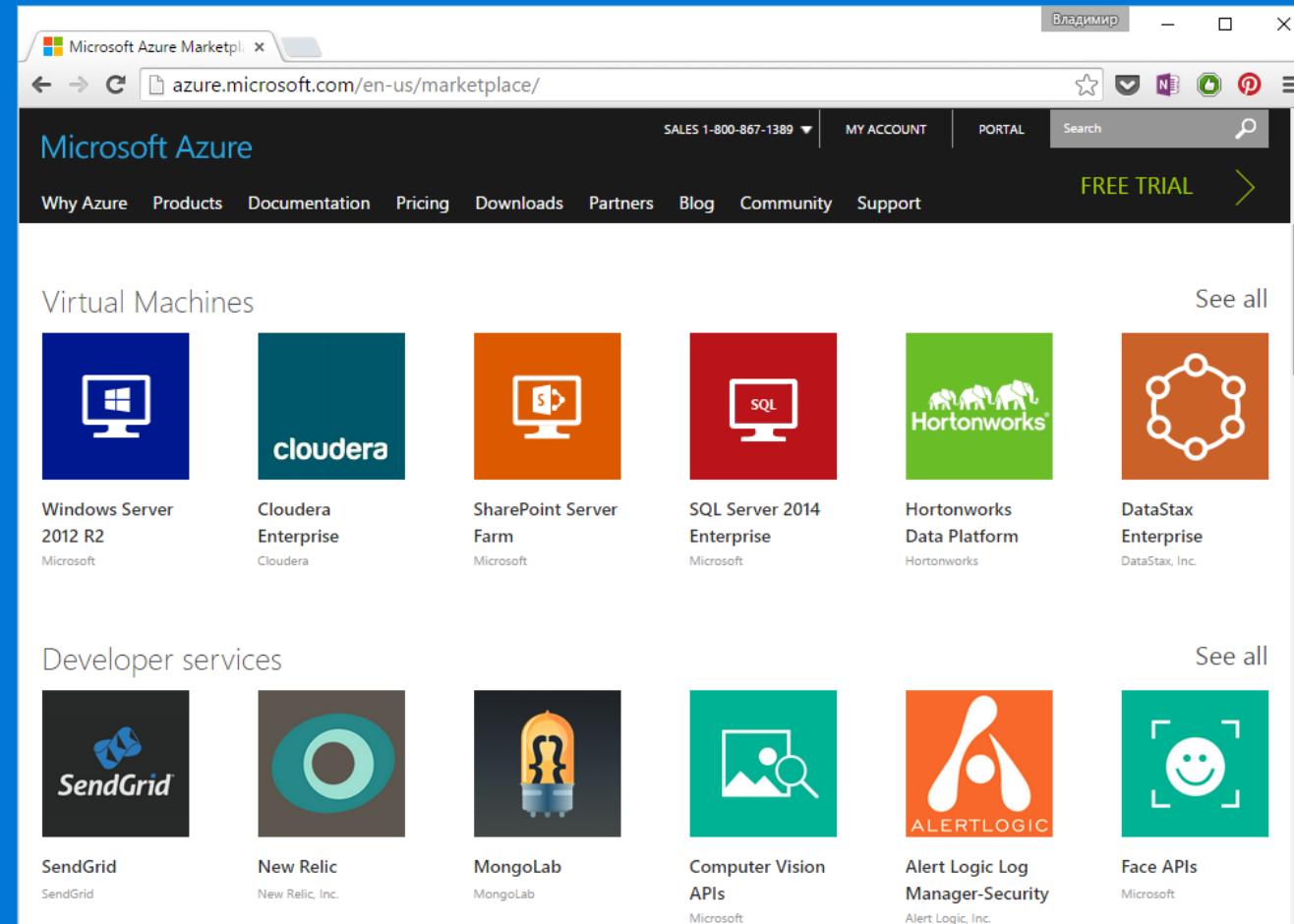
## Migration Tools

Migrate your existing resources onto Azure

<b>Virtual Machine Assessment Tools</b>	<b>Azure Websites Migration Assistant</b>
<a href="#">Virtual Machine Readiness Assessment</a>	<a href="#">Install</a>

# Azure Marketplace

- <http://azure.microsoft.com/en-us/marketplace/>



# Demo Azure Marketplace

Azure Marketplace  
Scalability Azure Container  
Services



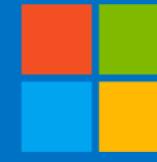
# Lab instructions for today

Tot 12:30 (Lunch)

Lab 1 – Setup omgeving, activeren Azure Pass,  
kennismaking met de CLI & commando's

Presentatie ARM

Lab 2 – Git, GitHub, ARM template en Apache/PHP  
cluster maken

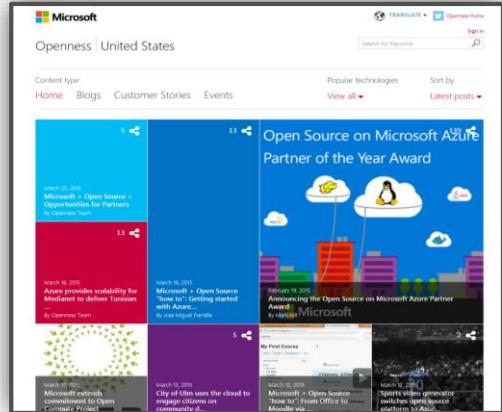


Microsoft

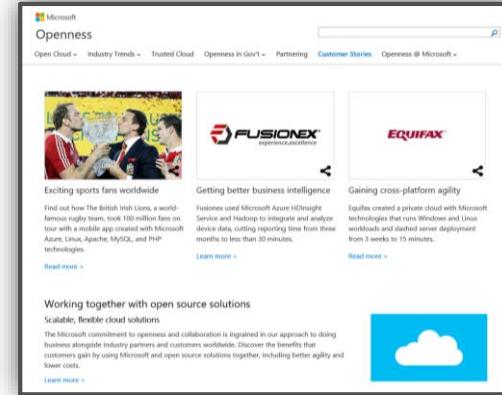
# Want to Learn More?



**Microsoft Openness**  
Learn more about our commitment  
to embracing Open Source  
<http://www.microsoft.com/Openness>



**Openness Blog**  
Read about the latest  
developments and momentum  
<http://openness.microsoft.com/blog>



**Customer Stories**  
Access the latest OSS on Azure  
customer stories  
Found [here](#)

# Try for yourself?

<https://tryazuremarketplace.com>

Docker

HortonWorks Sandbox

Chef

<http://openness.microsoft.com>