
Microsoft
Welcome to
Azure Meetup
Hamburg

Azure Meetups

www.aka.ms/azure-meetups

Microsoft

A look at Microsoft Azure and how we use it ourselves

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Technical Evangelist, Microsoft Deutschland

- Focus on Cloud Computing / Web Development
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Microsoft since 2010

- Worked with Microsoft Azure in different roles (Product / Audience Marketing, Technical Evangelism)
- Speaker and trainer

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- Focus on DevOps
- Automation, Monitoring & Mobility
- Passion for the internal Microsoft IT infrastructure

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Microsoft
Getting started with Microsoft Azure – from Virtual Machines to Serverless Services

Microsoft Azure


38
Azure regions around the world
AZURE REGIONS
enable worldwide presence


An Azure Datacenter from the outside.


An Azure Datacenter from the inside.


Azure Datacenter scale

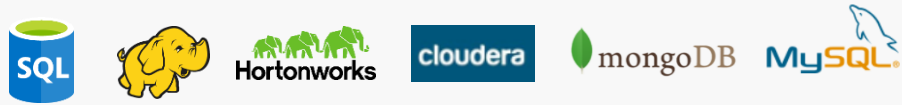
Choice

Management

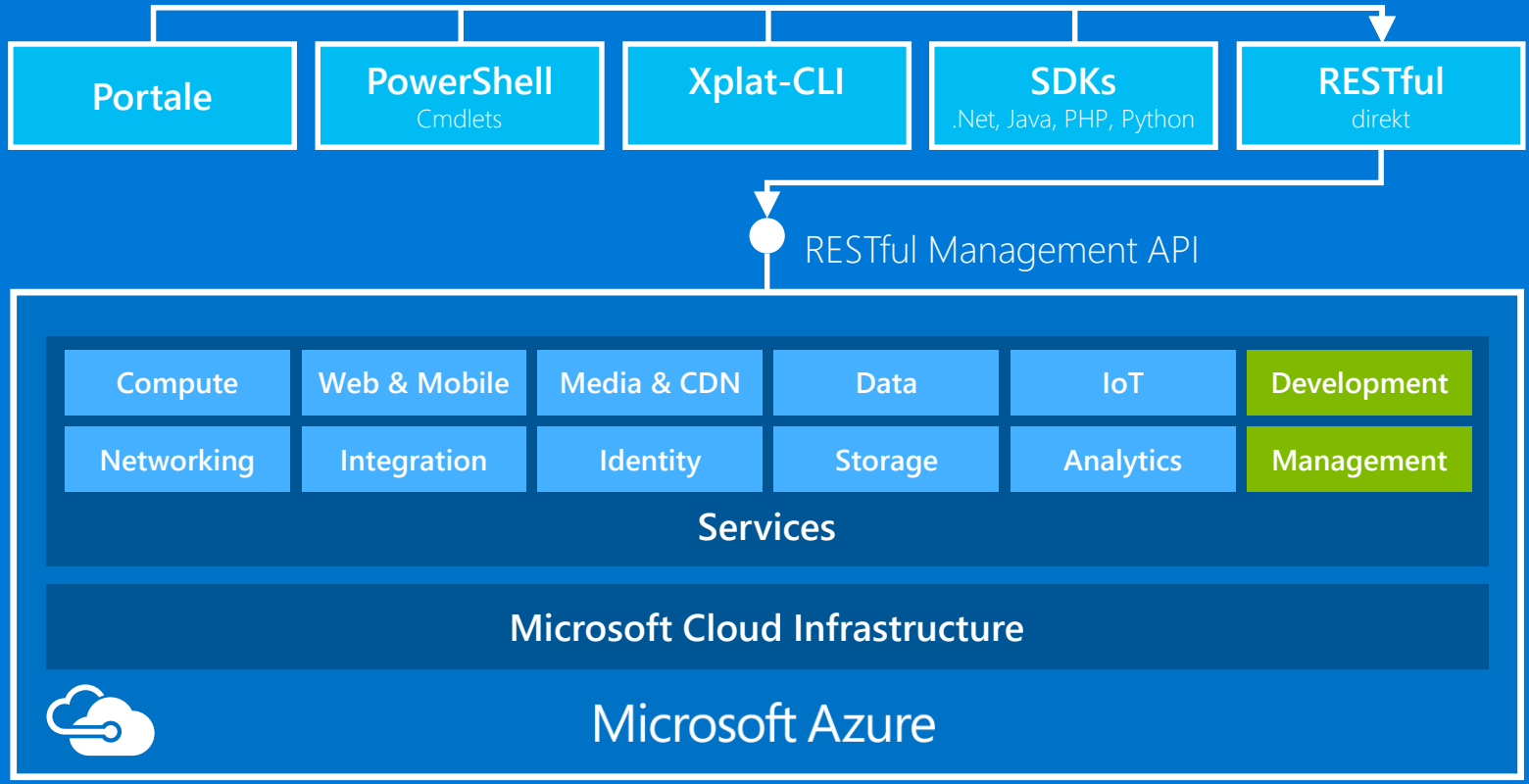
Applications

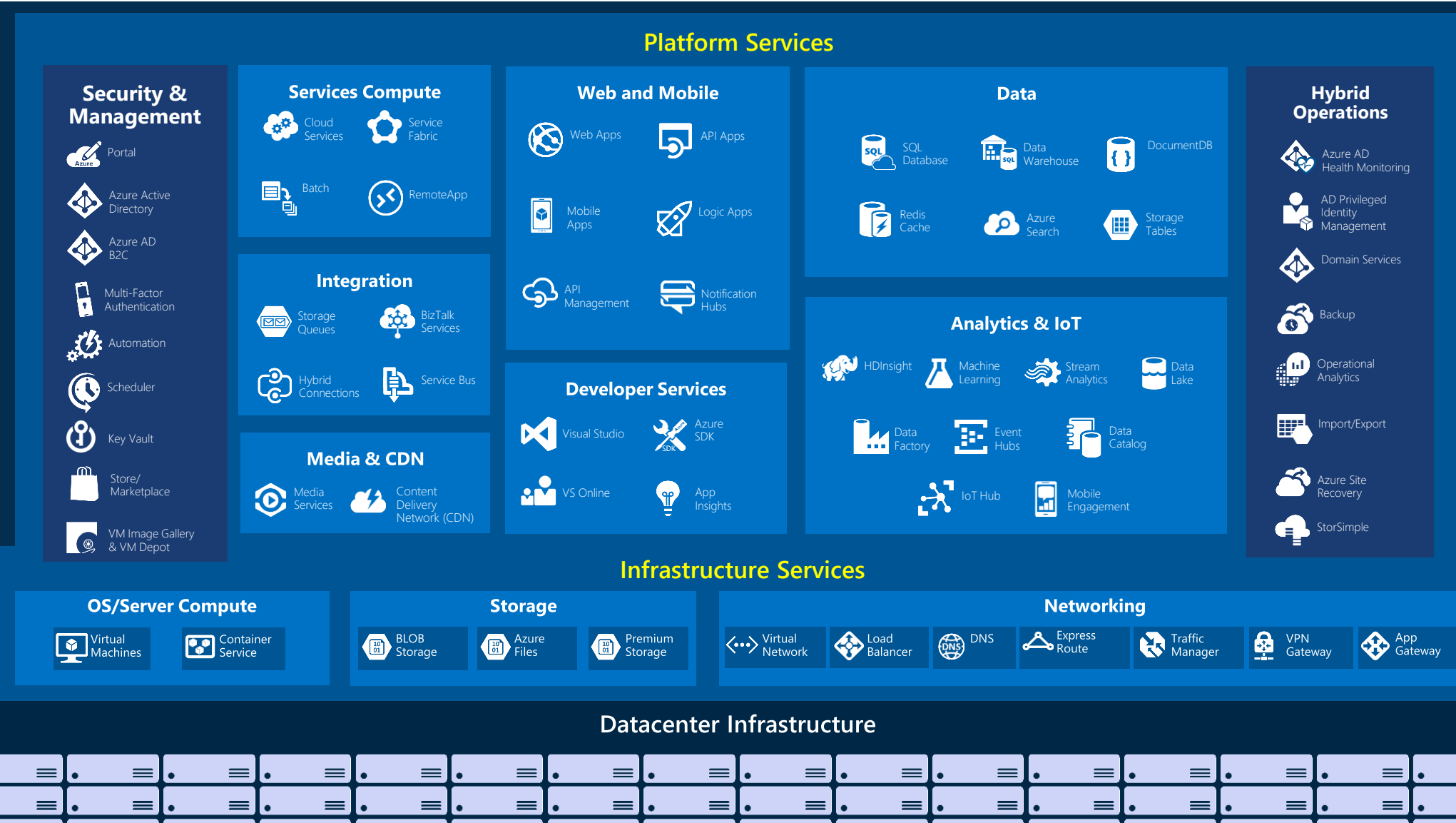
App Frameworks

Databases & Middleware



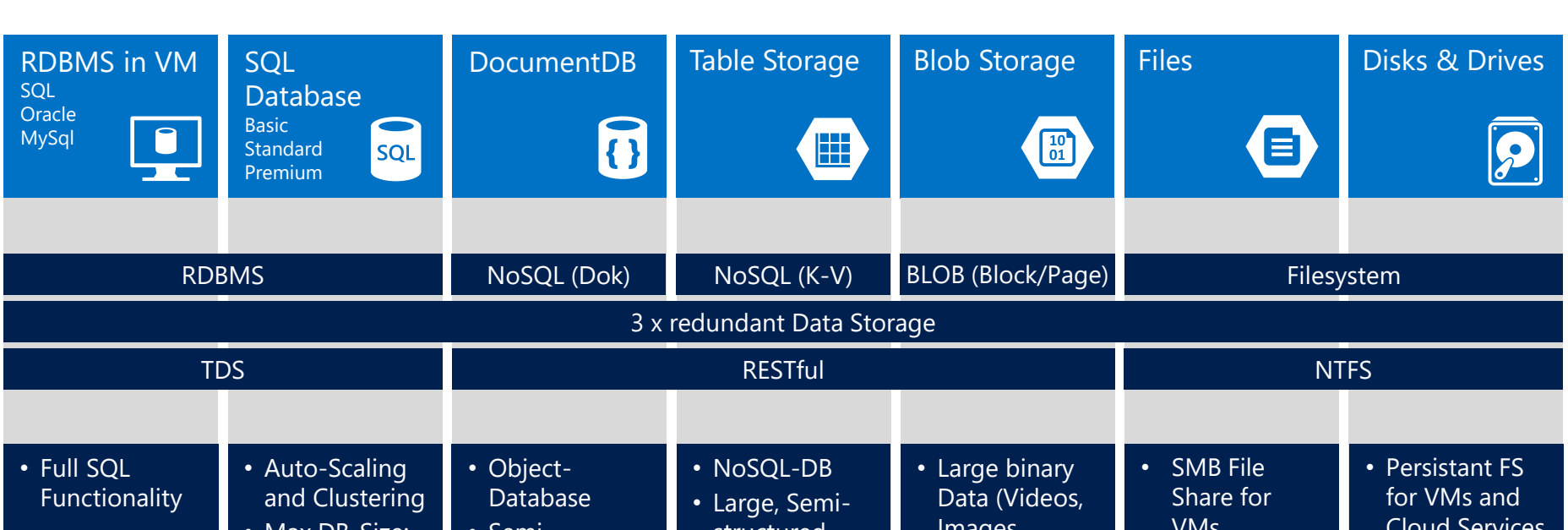
Infrastructure


Portale
PowerShell
Cmdlets
Xplat-CLI
SDKs
.Net, Java, PHP, Python
RESTful
direkt
RESTful Management API
Compute
Web & Mobile
Media & CDN
Data
IoT
Development
Networking
Integration
Identity
Storage
Analytics
Management
Services
Microsoft Cloud Infrastructure
Microsoft Azure


Platform Services
Security & Management
Portal
Azure Active Directory
Azure AD B2C
Multi-Factor Authentication
Automation
Scheduler
Key Vault
Store/ Marketplace
VM Image Gallery & VM Depot
Services Compute
Cloud Services
Service Fabric
Batch
RemoteApp
Integration
Storage Queues
BizTalk Services
Hybrid Connections
Service Bus
Media & CDN
Media Services
Content Delivery Network (CDN)
Web and Mobile
Web Apps
API Apps
Mobile Apps
Logic Apps
API Management
Notification Hubs
Developer Services
Visual Studio
Azure SDK
VS Online
App Insights
Data
SQL Database
Data Warehouse
DocumentDB
Redis Cache
Azure Search
Storage Tables
Analytics & IoT
HDInsight
Machine Learning
Stream Analytics
Data Lake
Data Factory
Event Hubs
Data Catalog
IoT Hub
Mobile Engagement
Hybrid Operations
Azure AD Health Monitoring
AD Privileged Identity Management
Domain Services
Backup
Operational Analytics
Import/Export
Azure Site Recovery
StorSimple
Infrastructure Services
OS/Server Compute
Virtual Machines
Container Service
Storage
BLOB Storage
Azure Files
Premium Storage
Networking
Virtual Network
Load Balancer
DNS
Express Route
Traffic Manager
VPN Gateway
App Gateway
Datacenter Infrastructure

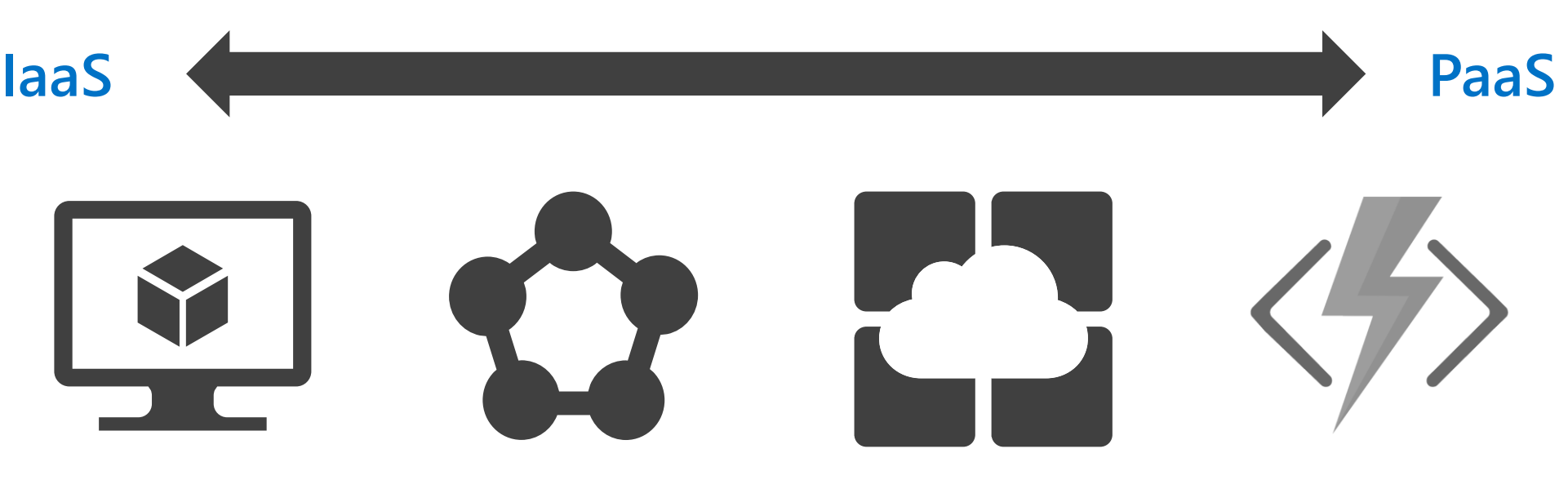
Storage in Microsoft Azure

Storage in the Cloud



Compute in the Cloud

Azure Services for your applications



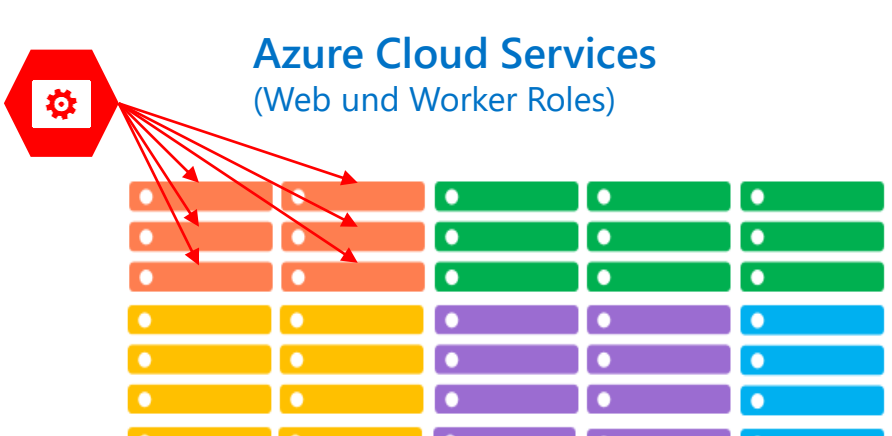
Virtual Machines

Windows, Linux, …

Service Fabric

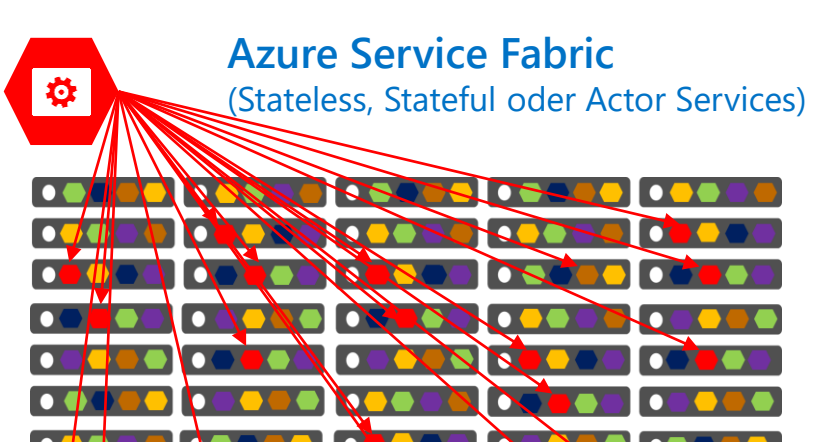
A scalable Microservice Platform

Cloud Services vs. Service Fabric



Azure Cloud Services
(Web und Worker Roles)

- One service per VM
- Slow updates and scaling



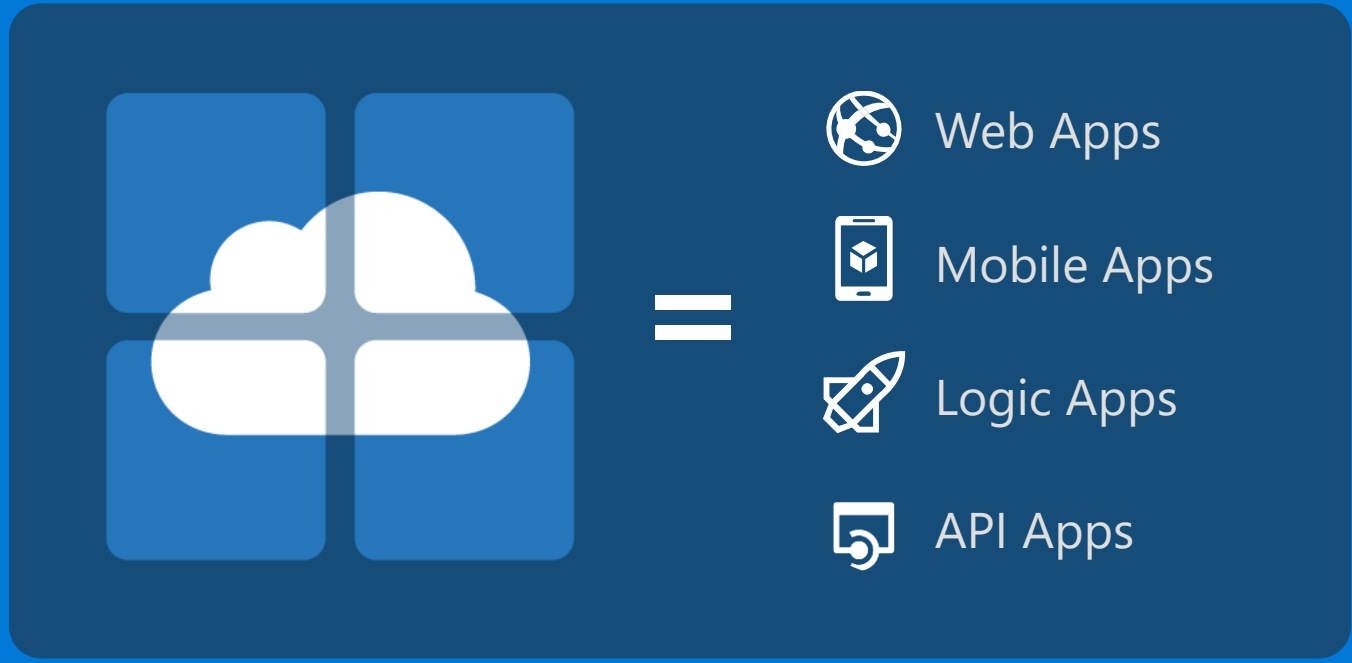
Azure Service Fabric
(Stateless, Stateful oder Actor Services)

- Many micro services per VM
- High density
- Fast deployment of updates
- Scale micro services fast

Azure App Services

Azure App Service

Build and scale great cloud apps



API Apps

Create, consume and host APIs more easily

Consuming API Apps

API Apps expose HTTP services

Metadata is exposed using Swagger / OpenAPI metadata

- JSON file
- Widely supported

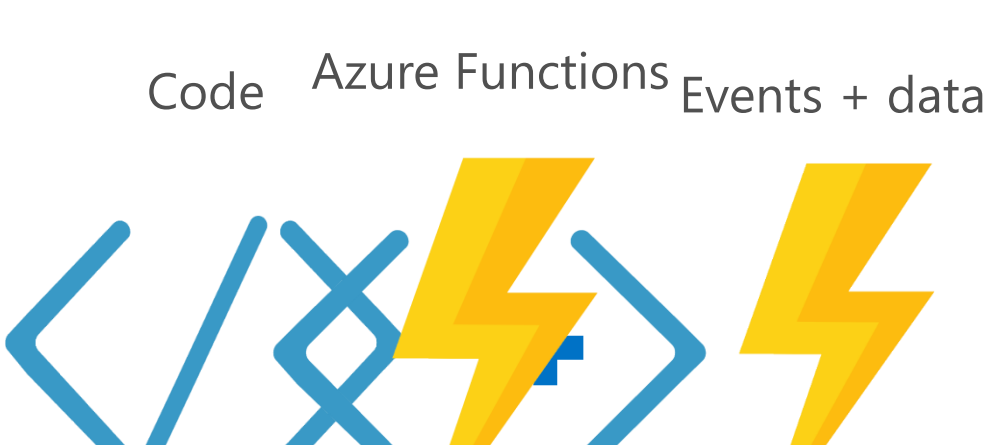
Client applications

Demo: Azure API Apps

Azure Functions

Going serverless

What is Azure Functions?



Supported Languages

1st class support

- Node / JavaScript
- C#

Experimental support

- F#
- Python
- PHP
- Batch
- Bash
- PowerShell

Supported bindings (5/2016)

Type	Service	Trigger	Input	Output
Schedule	Azure Functions	✓		
HTTP (REST or WebHook)	Azure Functions	✓		✓
Blob Storage	Azure Storage	✓	✓	✓
Queues	Azure Storage	✓		✓
Tables	Azure Storage		✓	✓
Tables	Azure Mobile Apps Easy Tables		✓	✓
No-SQL DB	Azure DocumentDB		✓	✓
Streams	Azure Event Hubs	✓		✓
Push Notifications	Azure Notification Hubs			✓

Demo: Function Apps

Go serverless

Servers when you want them…

Servers when you want them…

serverless when you don’t

Internal Microsoft IT Landscape

180K+ end users

120K+

Employees

Simplification efforts reducing app portfolio at 5% per year

1.3K+

Line of Business applications

Servers, user PC's and mobile devices

1.2M

Devices hit the Microsoft network

29K devices with Intune, 400 apps in company portal

150K

Devices enrolled in Exchange Active Sync

Presence in over 119 Countries

513

IT supported Site locations

Migration planned for 73 organizations

80K+

Users on CRM Online over next 24 months

Using big data to secure the company

7B

Security monitoring events recorded daily

All new development + next gen apps in PaaS

22%

LOB apps using IaaS or PaaS, hybrid cloud environment

170K Windows 8.1 managed devices

40K

Managed Windows 10 Systems

65% Virtualized server environment

330K

System Center managed devices

Migration pace of 3K users per month

165K

Users on Office 365 Exchange

40K active in over 700 external networks monthly

90K

Employees participate on Yammer each month

Online sites growing 4% On-Prem declining at 25%

270K

97% SharePoint sites in the cloud

Sales team works 60% mobile

7.9M

Lync calls/month

Microsoft IT Cloud Environment

- 19,000 Azure virtual machines
  Software development, test, monitoring
- 600 Azure platform as a service (PaaS) apps
  Employee applications, e.g. learning platform, travel expenses
  Public Cloud
- More than 5,000 Azure SQL instances
  Data storage for apps, monitoring

What are we using Azure for?

- Employee self-service for IT tasks
- System and application monitoring
- Software development and test
- Infrastructure automation based on templates
- Mobile device and application management

Let's dive in: Demo as a Service (DaaS)

1. Employee self-service with Azure Active Directory
2. Software development & test machines with Azure DevTest Labs
3. Infrastructure automation with Azure Resource Manager templates
4. IoT monitoring with Operations Management Suite

Next Steps

Test	Test Microsoft Azure for free http://azure.microsoft.com/de-de/pricing/free-trial/
First Look	Test App Services without an Azure Account https://tryappservice.azure.com/
Learning	Dive in more deeply https://mva.microsoft.com/