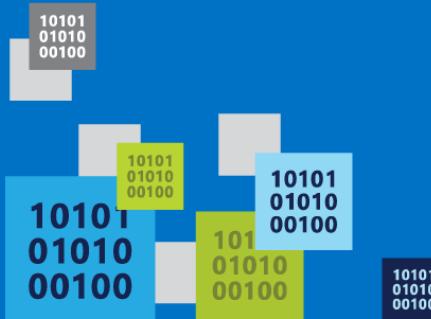


The Cloud for Modern Business

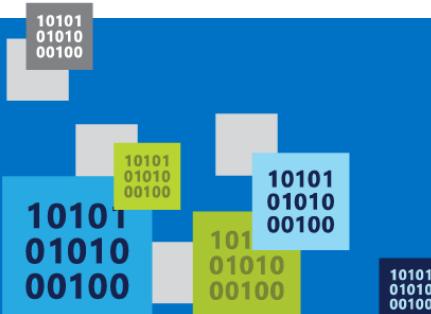
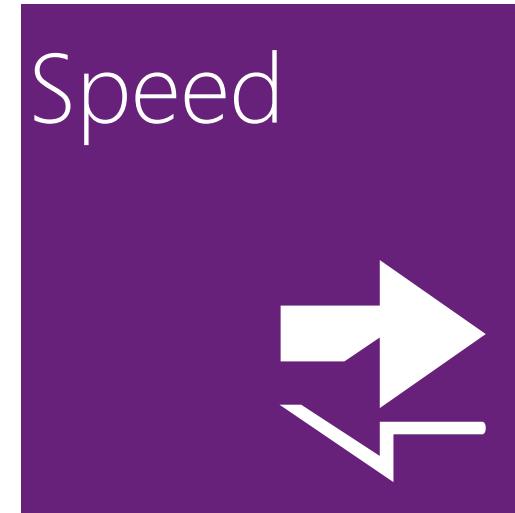
Esteban Garcia

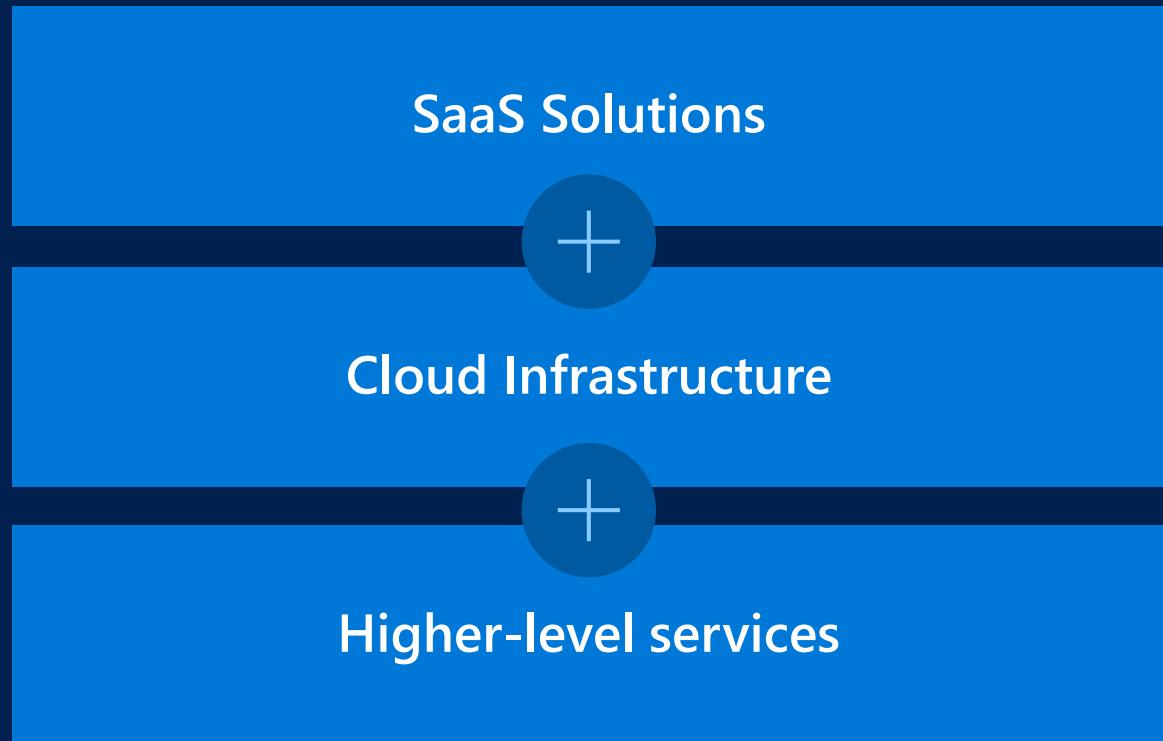


Why the cloud?

- Rapidly setup environments to drive business priorities
- Scale to meet peak demands
- Increase daily activities, efficiency and reduced cost.

Why the cloud?





DIFFERENTIATION
AGILITY
COST

Leading the journey to the Cloud



Microsoft
Dynamics



Microsoft Enterprise Mobility Suite

Leading the journey to the Cloud

SAAS SOLUTIONS



Microsoft Dynamics



ENTERPRISE MOBILITY

Microsoft Enterprise Mobility Suite

Microsoft Azure

DEVELOPER + APP PLATFORM

Visual Studio Family + Azure App Service

DATA + ANALYTICS

Cortana Analytics Suite

INTERNET OF THINGS

Azure IoT Suite

CLOUD INFRASTRUCTURE

Azure + Azure Stack + Operations Management Suite

28

Azure regions
HyperScale
around the world



Latest launch was in October 2015-
India – Central, India – South, India – West

GENERALLY AVAILABLE

6 new regions announced: Canada Central, Canada East, Germany Central,
Germany North East, United Kingdom (2 – regions TBD)

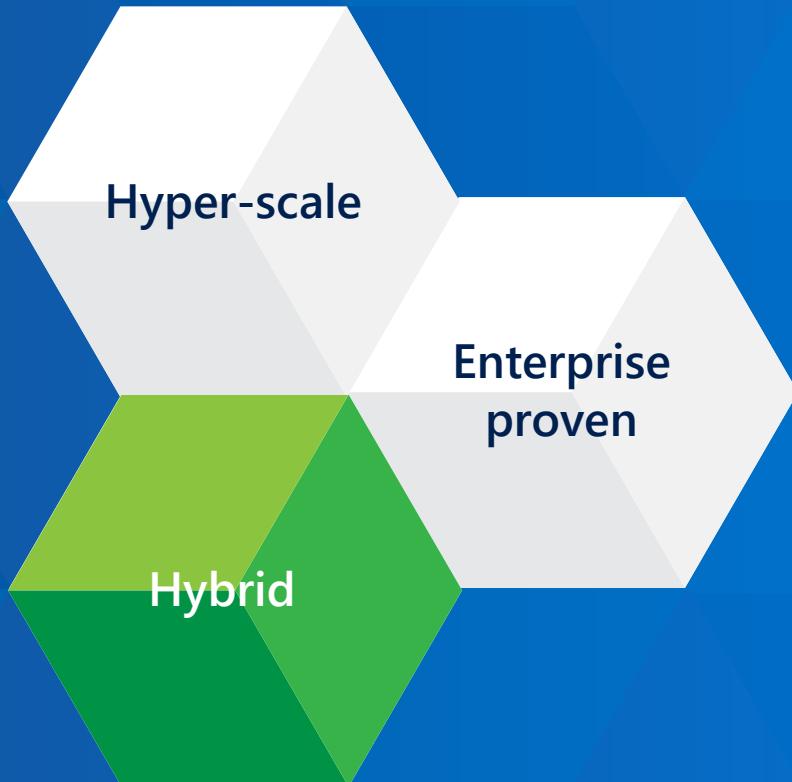


Hyper-scale

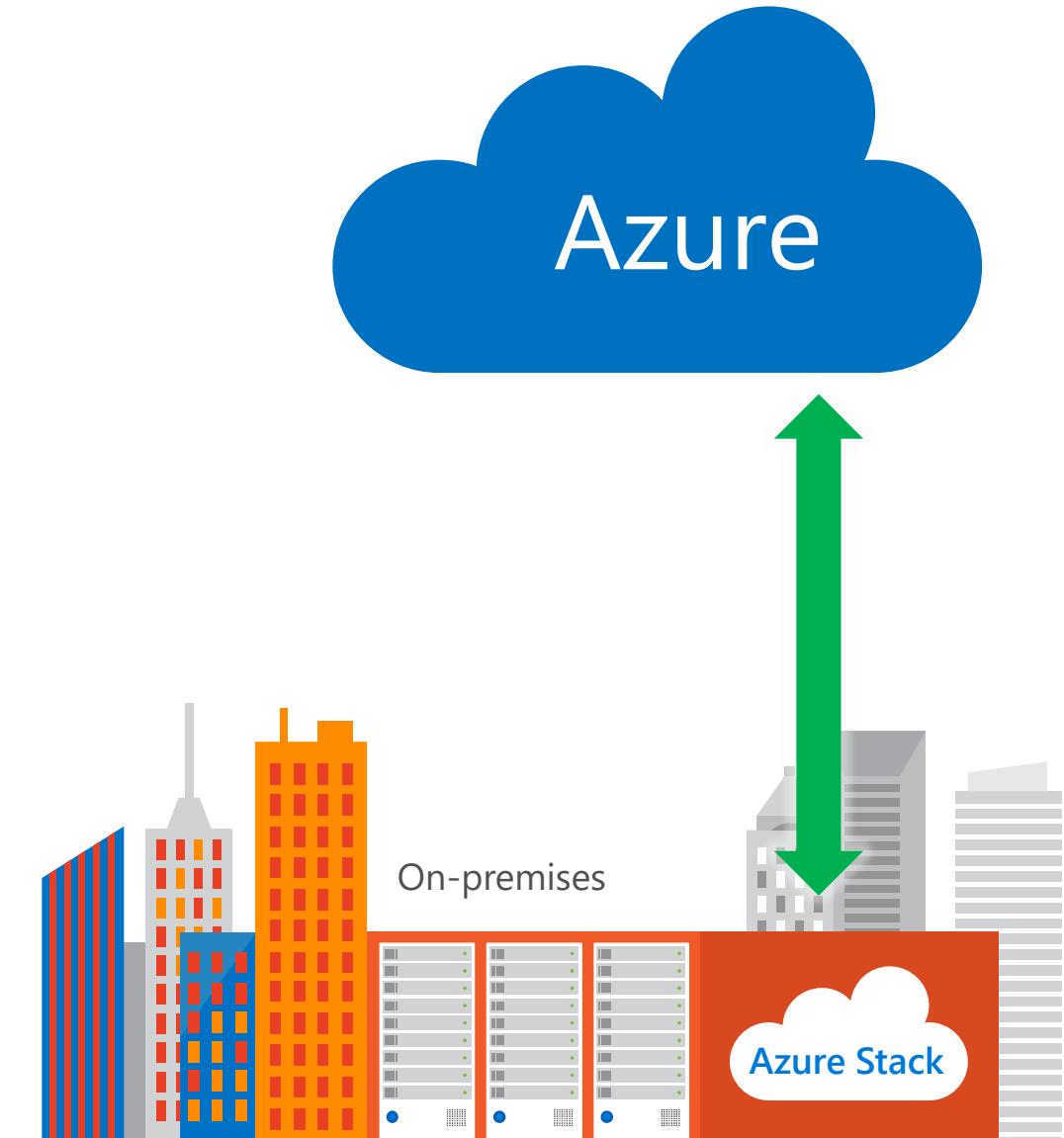
Enterprise
proven

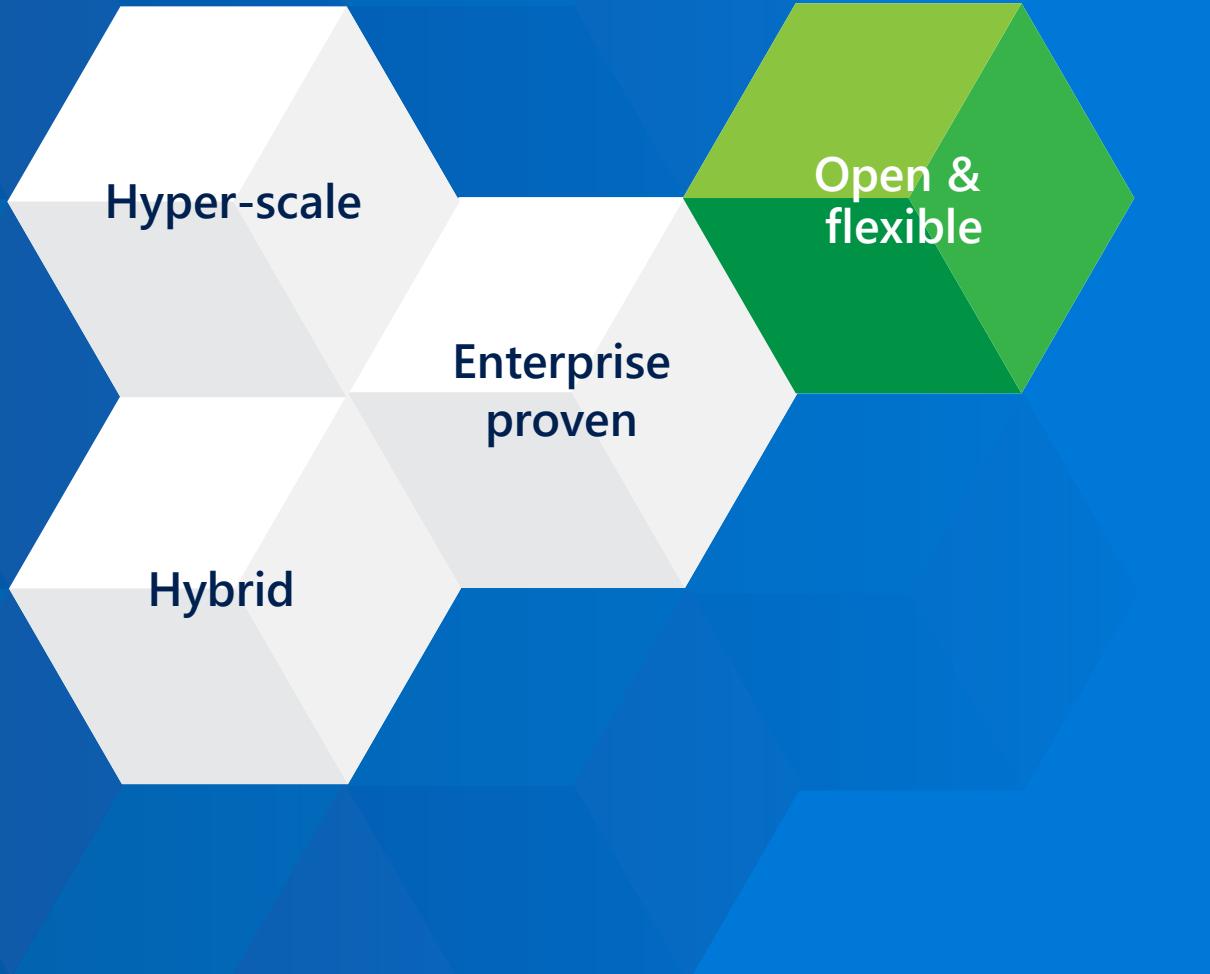
Hybrid

Azure



Hybrid





Open + Flexible

Management



Applications



App Frameworks



Databases & Middleware



Infrastructure



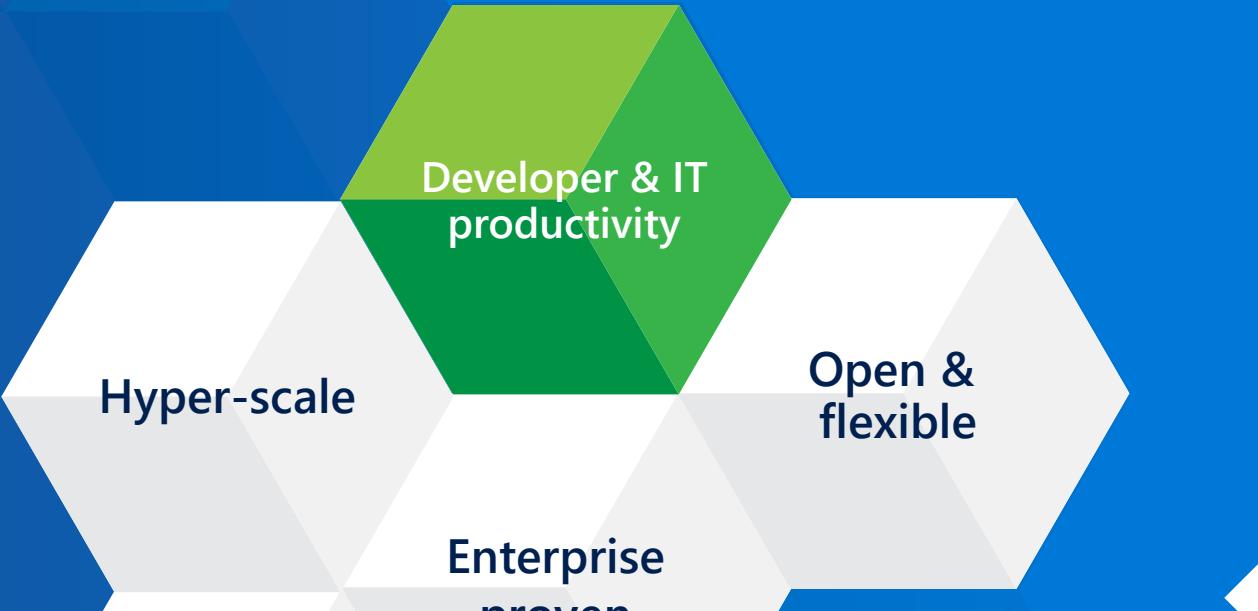
FreeBSD.



Linux

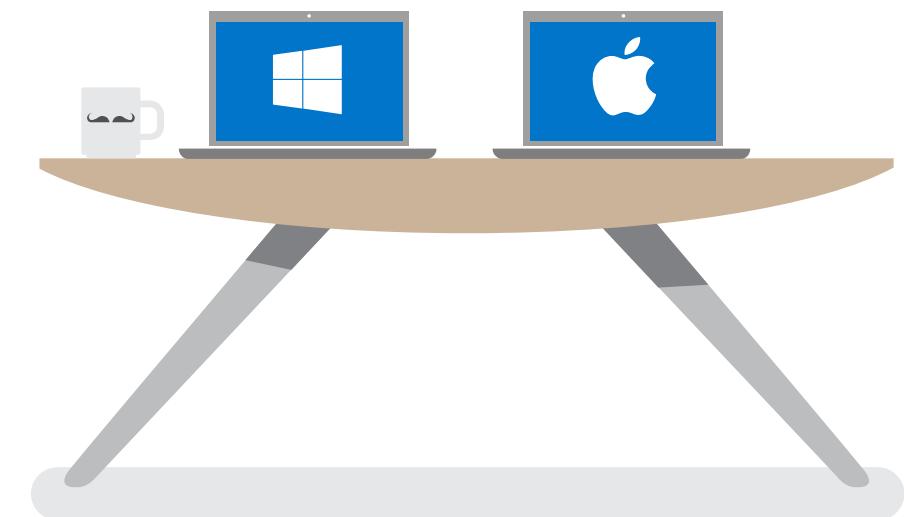


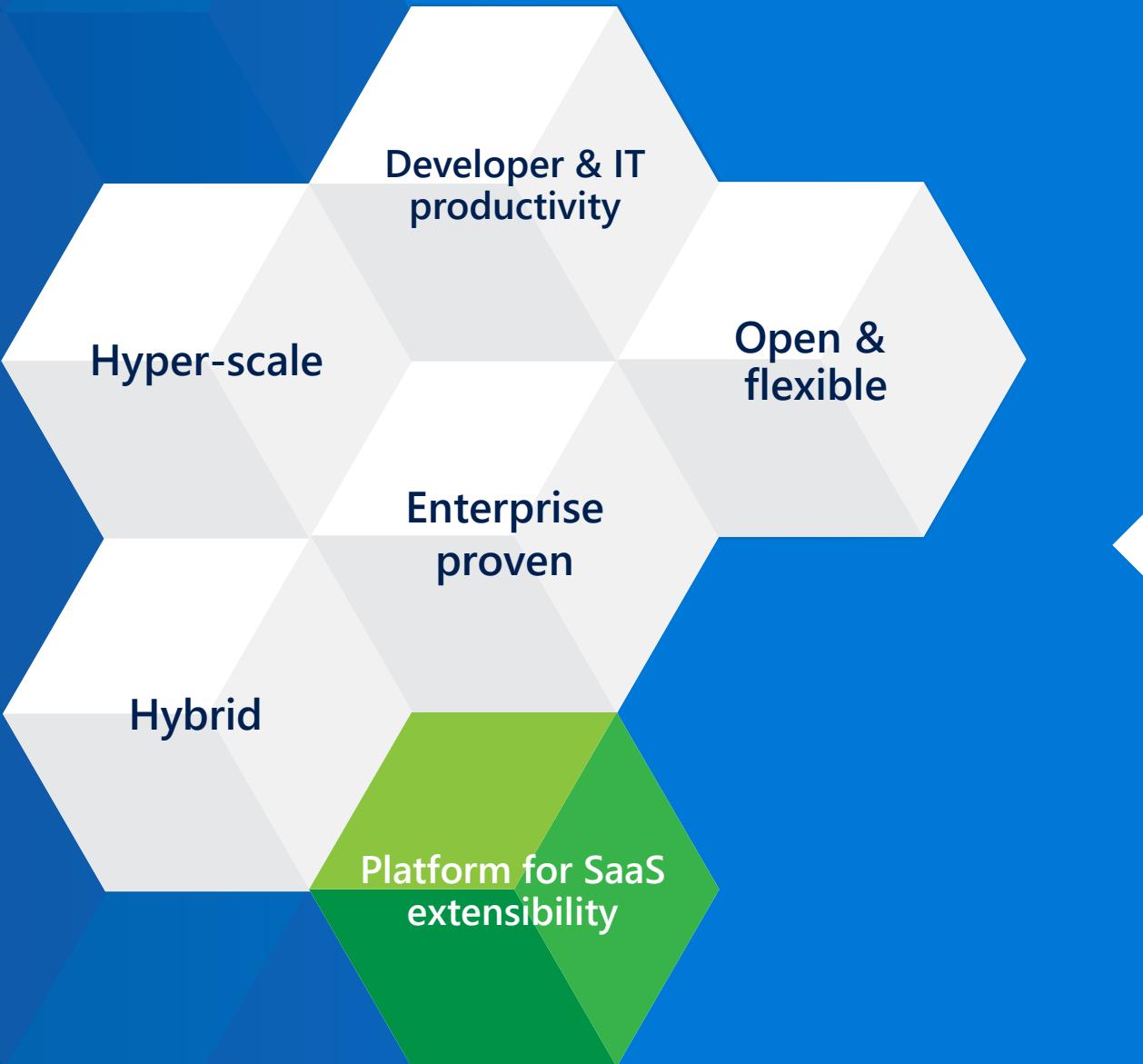
docker



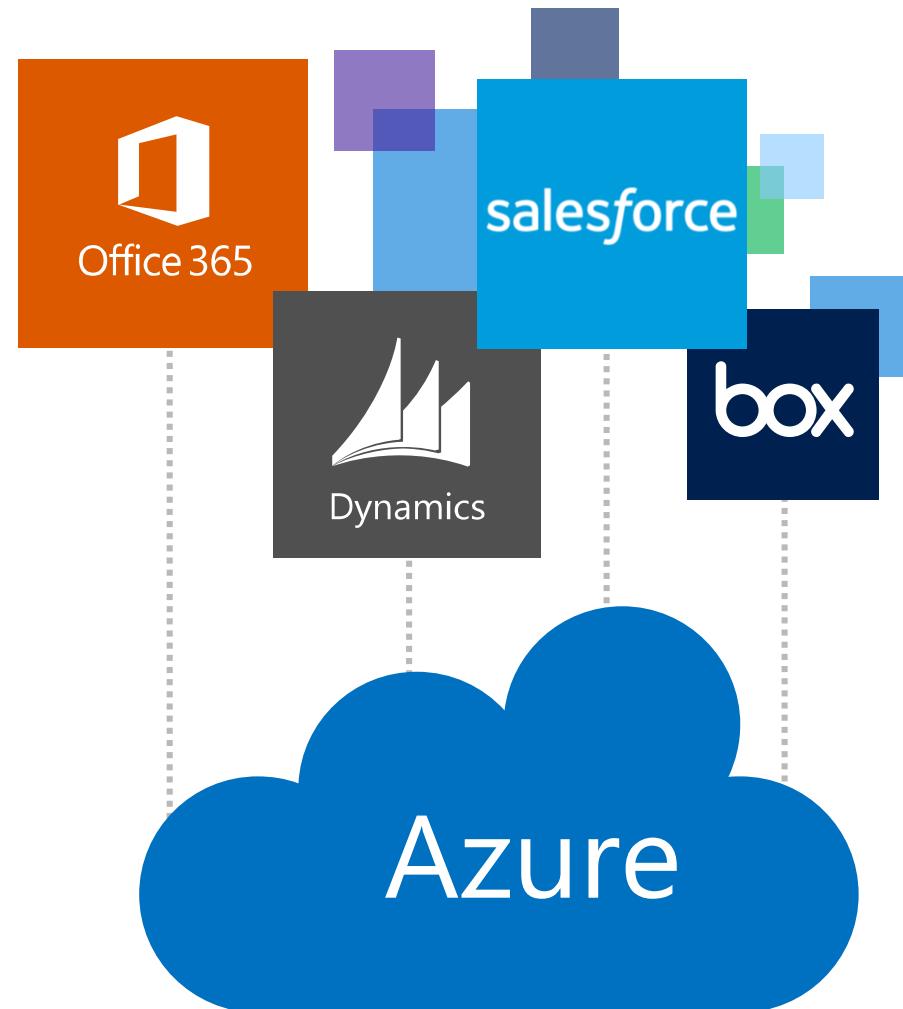
Dev + IT productivity

- Visual Studio
- GitHub
- Eclipse
- Chef + Puppet
- Powershell





SaaS extensibility





Trustworthy

More compliance certifications than any other cloud



>90,000

New Azure customer
subscriptions/month

>1.5 Million

SQL Databases
running on Azure

>500 Million

Users in
Azure Active Directory

Azure momentum

1.5 Trillion

Messages per month
processed by Azure IoT

777 Trillion

Storage Transactions
per day

>40%

Revenue from
Start-ups and ISVs

>80%
of Fortune 500 use
the Microsoft Cloud



Leading the journey to the Cloud

Microsoft Azure

DEVELOPER + APP PLATFORM

Visual Studio Family + Azure App Service

DATA + ANALYTICS

Cortana Analytics Suite

INTERNET OF THINGS

Azure IoT Suite

CLOUD INFRASTRUCTURE

Azure + Azure Stack + Operations Management Suite

Microsoft Azure

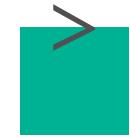
CLOUD INFRASTRUCTURE

Compute	Security + Management		
 Virtual Machines	 Active Directory	 Express Route	 Azure AD Connect Health
 Containers	 Multi-Factor Auth	 Virtual Network	 AD Privileged Identity Mgmt
 Remote App	 Automation	 Load Balancer	 Backup
 Batch	 Key Vault	 DNS	 Operational Insights
Storage			
 Blob Storage	 Azure Files	 Premium Storage	 Traffic Manager
			 VPN Gateway
			 Application Gateway
			 StorSimple
			 Site Recovery

Getting started



Management portal



Scripting
(Windows, Linux and Mac)



REST API



Comprehensive
Networking

Select image and VM size



Windows Server



Linux

General Purpose

Basic

Standard

Optimized Compute

Performance Optimized

Network Optimized

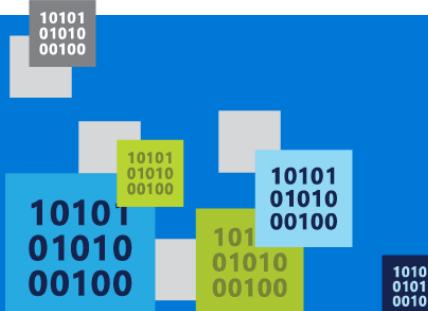
New disk persisted in storage

Boot VM from new disk



Cloud

Virtual Machines



Microsoft Azure Certified

Gallery Virtual machines

Home Virtual machines Web Mobile Developer services Media Data, storage, + backup Identity App + data services

Virtual machines

SharePoint Server Farm By Microsoft

You can now easily deploy a highly available SharePoint server farm in Azure. This is designed to help you achieve new levels of reliability and performance, delivering features and capabilities that simplify administration, protect communications

Create

Recommended

See All

Windows Server 2012 R2... By Microsoft Ubuntu Server 14.04 LTS By Canonical SharePoint Server Farm By Microsoft SQL Server 2014 Enterprise By Microsoft CentOS 6.5 By OpenLogic Oracle Database 12.1.0.1 Standard... By Oracle

Windows based

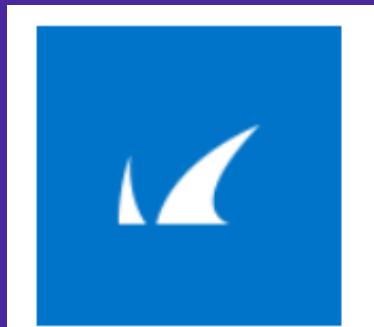
See All

Windows Server 2012 R2... By Microsoft SQL Server 2014 Standard By Microsoft SharePoint Server 2013 Trial By Microsoft BizTalk Server 2013 Enterprise By Microsoft Oracle Database 11g R2 and... By Oracle Oracle Database 11g R2... By Oracle

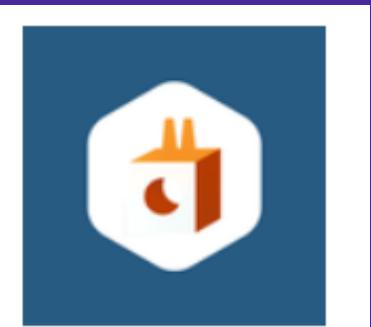
Linux based

See All

Ubuntu Server 14.04 LTS By Canonical Oracle Linux 6.4.0.0.0 By Oracle openSUSE 13.1 By SUSE CentOS 6.5 By OpenLogic Puppet Enterprise 3.2.3 By Puppet Labs Zulu 7 By Azul



Barracuda Web Application
By Barracuda



DreamFactory 1.6
By Bitnami



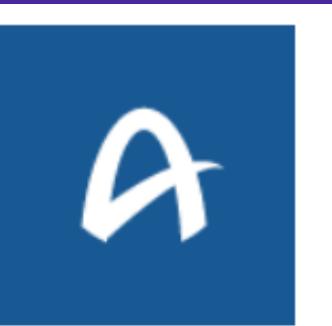
SAP HANA
Developer Edition
By SAP



Riverbed
SteelHead CX 8.6
By Riverbed Techno...

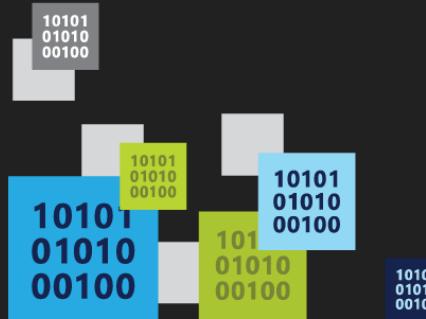


Oracle Database
12.1.0.1 Enterprise
By Oracle

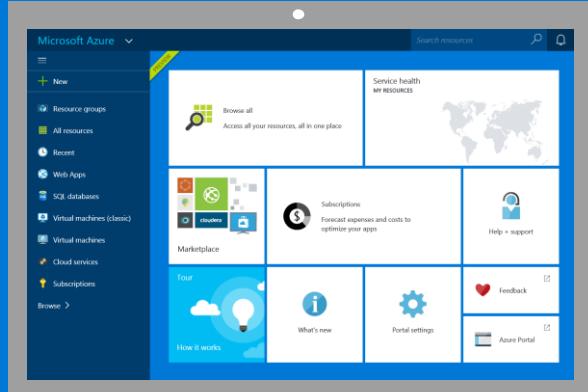


Zulu 7
By Azul

Demo: Azure Portal



Great Infrastructure Enhancements

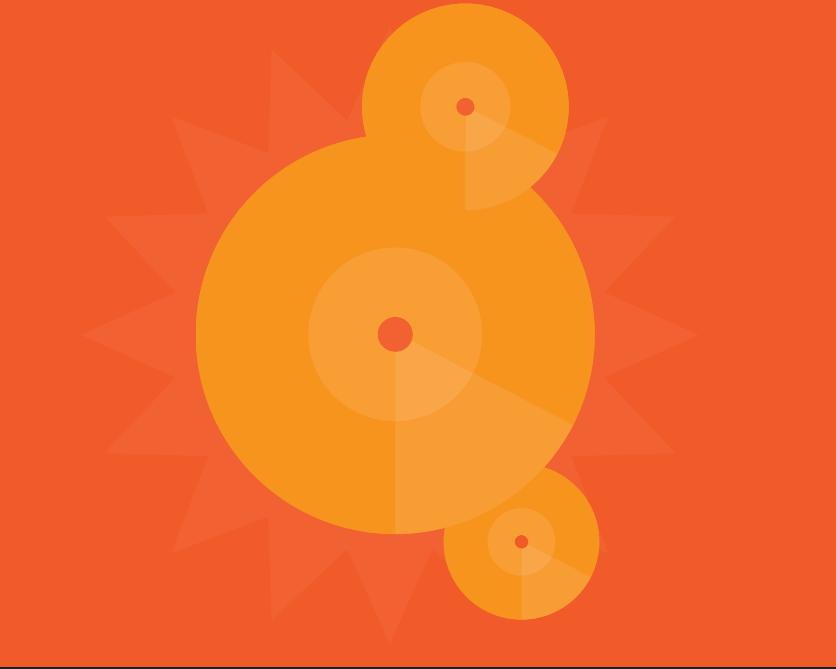


End to End Management

Integrated management portal
Application Templates
Lifecycle Management
Role Based Access Control
Billing API

Premium Storage

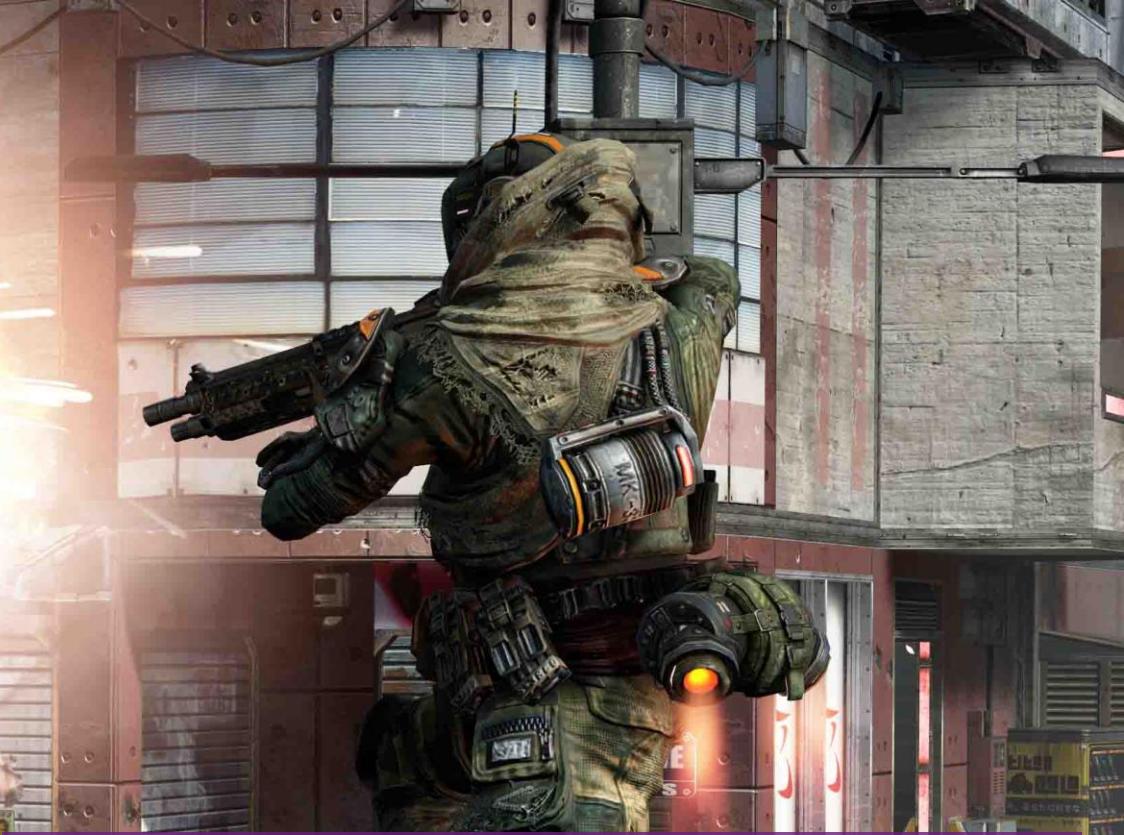
Up to 64 TB of storage per VM
>80,000 IOPS per VM
Less than 1ms read latency



Largest VMs in Public Cloud

Optimized for data workloads
Up to 32 CPU cores, 450 GB RAM,
6.5 TB local SSD
Latest generation Intel processor

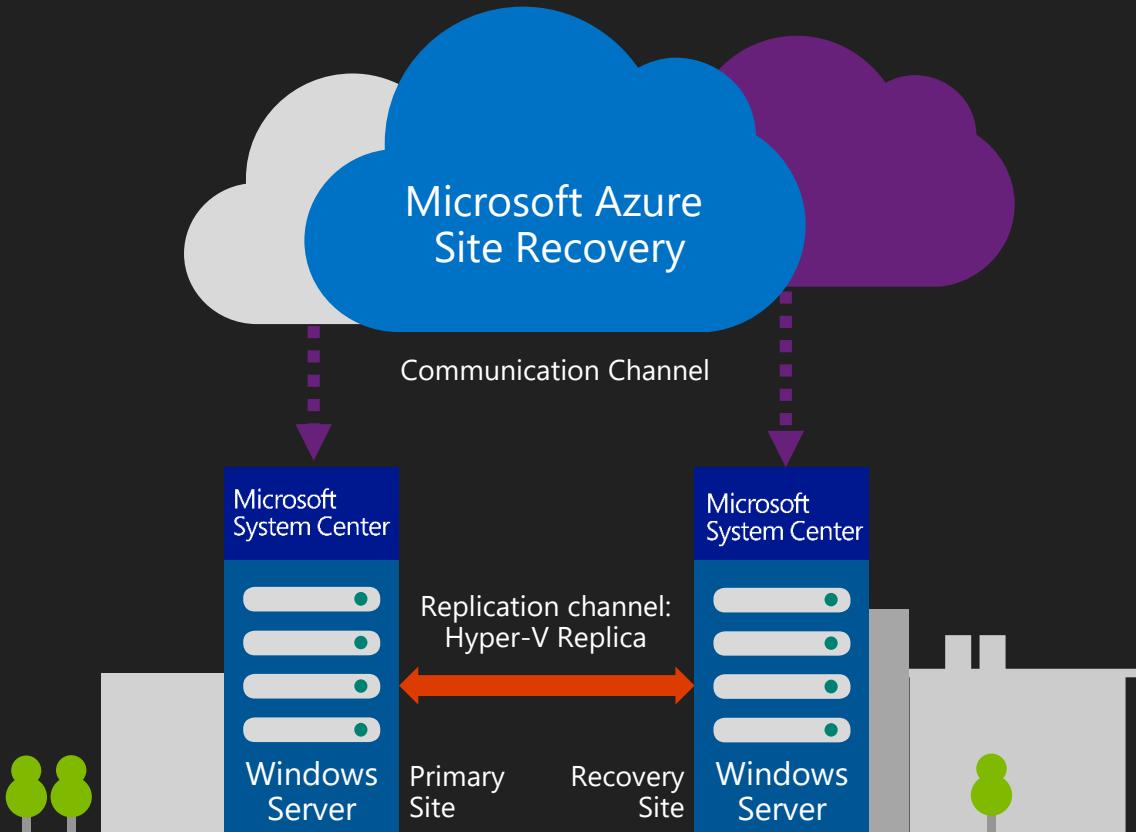




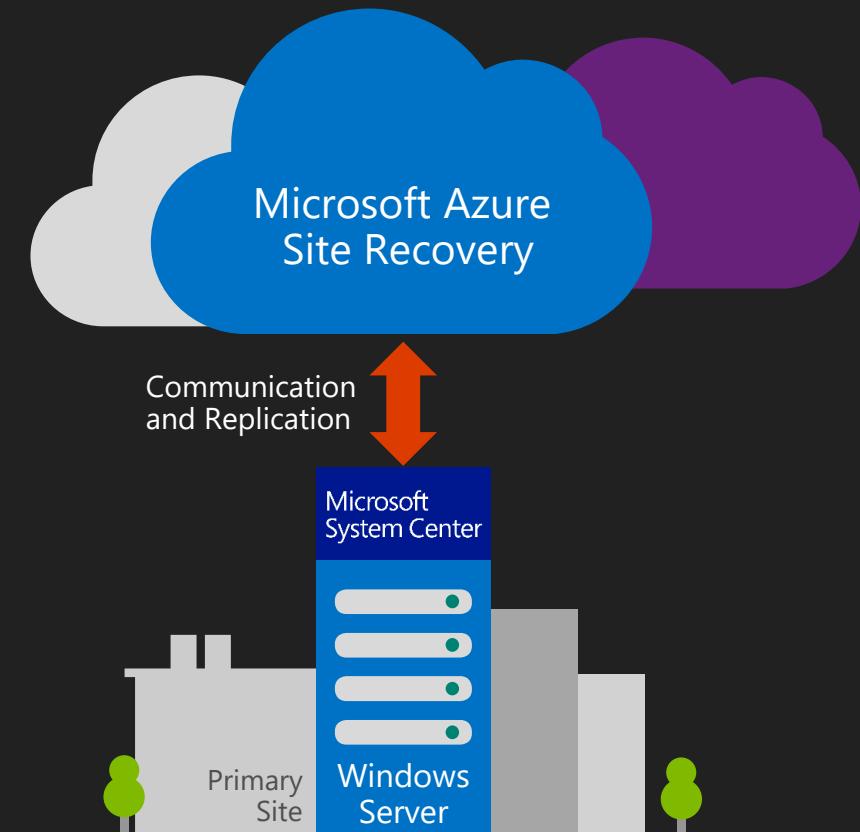
- Game sessions hosted using Azure
- Hosted using >100,000 Azure Virtual Machines

Microsoft Azure Site Recovery

Orchestrated disaster recovery to a second site or to Azure



- Automated VM protection and replication
- Remote health monitoring
- Customizable recovery plans



- No-impact recovery plan testing
- Orchestrated recovery when needed

Microsoft Azure: the journey to the Cloud

DEVELOPER + APP PLATFORM

App Platform Services



App Service



Notification Hubs



API Management



Service Fabric



Cloud Services

Integration



Storage Queues



BizTalk Services



Hybrid Connections



Service Bus

Development Tools



Visual Studio



Visual Studio Online



Application Insights



Azure SDK

Media & CDN



Content Delivery Network



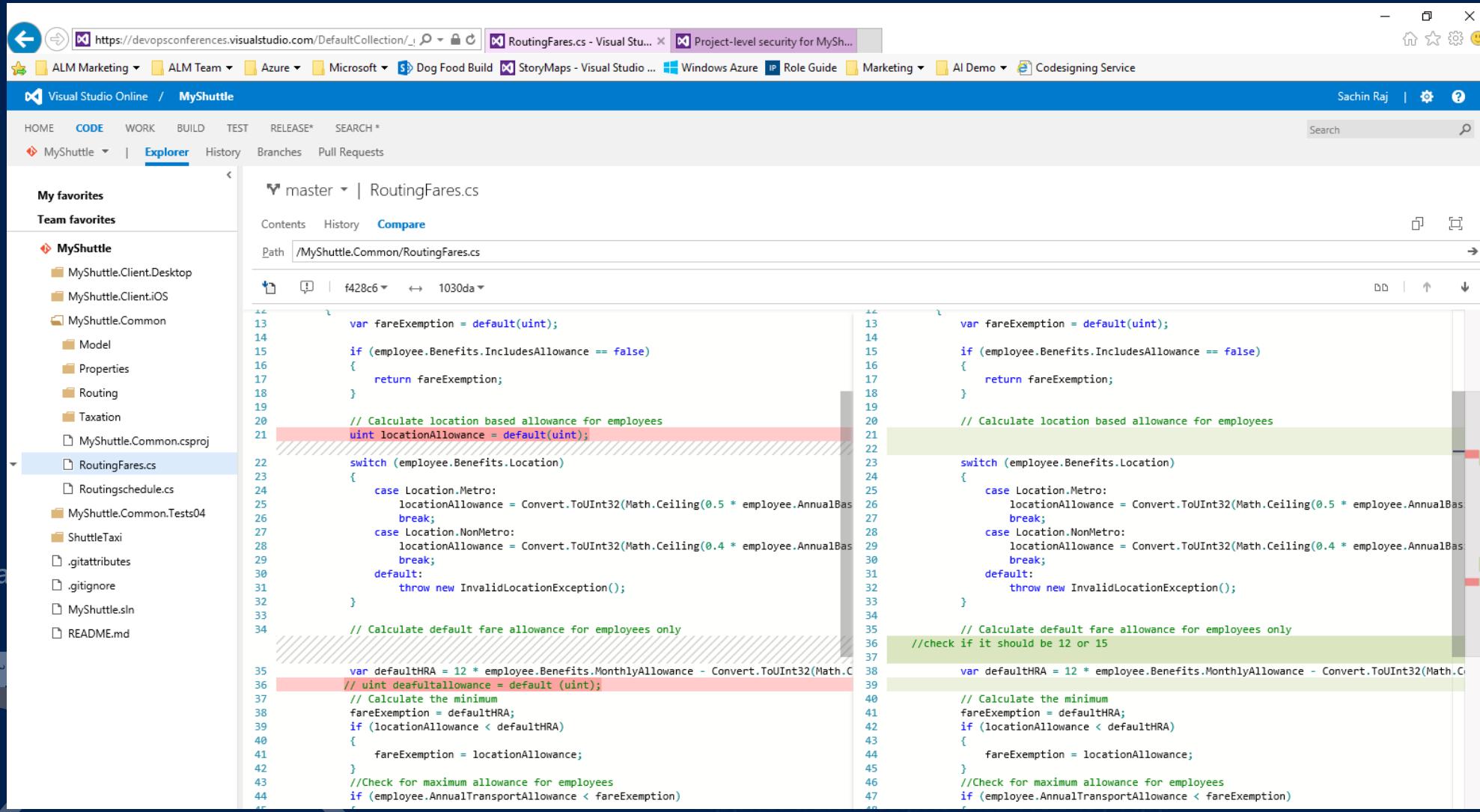
Media Services

CLOUD INFRASTRUCTURE

Azure + Azure Stack + Operations Management Suite

Agility

Visual Studio Team Services: Code Repository



Visual Studio Team Services: Build + Deploy

The screenshot shows the Visual Studio Team Services interface for a build definition named "MyShuttle-Android". The "Build" tab is selected, displaying various build steps and configuration options.

Build Steps:

- Xamarin License (Activate Xamarin license)
- Android Build (Android Build)
- Android Signing** (Signing and aligning APK file(s) \MyShuttle.Android\Myshuttle.apk) - This step is currently selected and highlighted in blue.
- NuGet Installer (NuGet restore ***.sln)
- MSBuild (Build solution ***.sln)
- Xamarin License (Deactivate Xamarin license)
- Xamarin Test Cloud (Test MyShuttle.sln with Xamarin.UITest in Xamarin Test Cloud)
- Publish Build Artifacts (Publish Artifact:j)

Signing and Aligning Options:

APK Files: \MyShuttle.Android\Myshuttle.apk

Jarsigner Options:

- Sign the APK:
- Keystore File: \keystore
- Keystore Password: (redacted)
- Alias: (redacted)
- Key Password: (redacted)
- Jarsigner Arguments: -verbose -sigalg MD5withRSA -digestalg SHA1

Zipalign Options:

- Zipalign:
- Zipalign Location: (redacted)

Control Options:

- Enabled:
- Continue on error:
- Always run:

[More Information](#)

Visual Studio Team Services: Load Testing

The screenshot shows the Microsoft Visual Studio interface for load testing. The title bar reads "WebAndLoadTestProject2 - Microsoft Visual Studio (Administrator)". The menu bar includes File, Edit, View, Project, Build, Debug, Team, Tools, Architecture, Test, Load Test, Analyze, Window, and Help. The toolbar has icons for Save, Undo, Redo, Cut, Copy, Paste, Find, Replace, and others.

The main window is titled "Load Test Manager" and displays the results of a completed load test named "sampleloadtest [11:24 PM]". The status bar indicates "Test Completed" with 40 threshold violations and 1001 errors.

The left sidebar contains the "Server Explorer" and "Toolbox". The "Solution Explorer" pane shows a solution with one project: "WebAndLoadTestProject2" containing "Local.testsettings", "Properties", "References", and "WebTest1.webtest".

The central area contains four graphs:

- Key Indicators:** Shows User Load (red line) starting at 50 and rising to 100; Pages/Sec (orange line) starting at 25 and rising to 1,000; Avg. Page Time (blue line) starting at 0.048 and rising to 1.11; and Errors/Sec (purple line) starting at 0 and rising to 422.
- Page Response Time:** Shows response time starting at 1.00 and dropping sharply to near zero around 01:00.
- System under Test:** Shows Requests (orange line) starting at 100 and rising to 10,000.
- Controller and Agents:** Shows Controller and Agents (green line) starting at 800 and remaining stable.

A detailed table below the graphs lists the counters and their values:

Counter	Instance	Category	Computer	Color	Range	Min	Max	Avg.
Key Indicators								
User Load	_Total	LoadTest:Scenario1	ELSCONTROLLE	Red	100	50	50	50
Pages/Sec	_Total	LoadTest:Page	ELSCONTROLLE	Orange	1,000	33.7	566	431
Avg. Page Time	_Total	LoadTest:Page	ELSCONTROLLE	Blue	10	0.048	1.11	0.073
Errors/Sec	_Total	LoadTest:Errors	ELSCONTROLLE	Purple	1,000	0	566	422
Threshold Violations/Sec	_Total	LoadTest:Errors	ELSCONTROLLE	Yellow	1	0.27	0.27	0.27
Passed Tests	WebTest1	LoadTest:Test	ELSCONTROLLE	Green	10,000	505	2,709	2,451
Page Response Time								
Avg. Page Time	myappreprodu	LoadTest:Page	ELSCONTROLLE	Red	2	0.048	1.11	0.073
System under Test								
Controller and Agents								

Application Insights and Hockey App

Visual Studio Team Services: Release Management

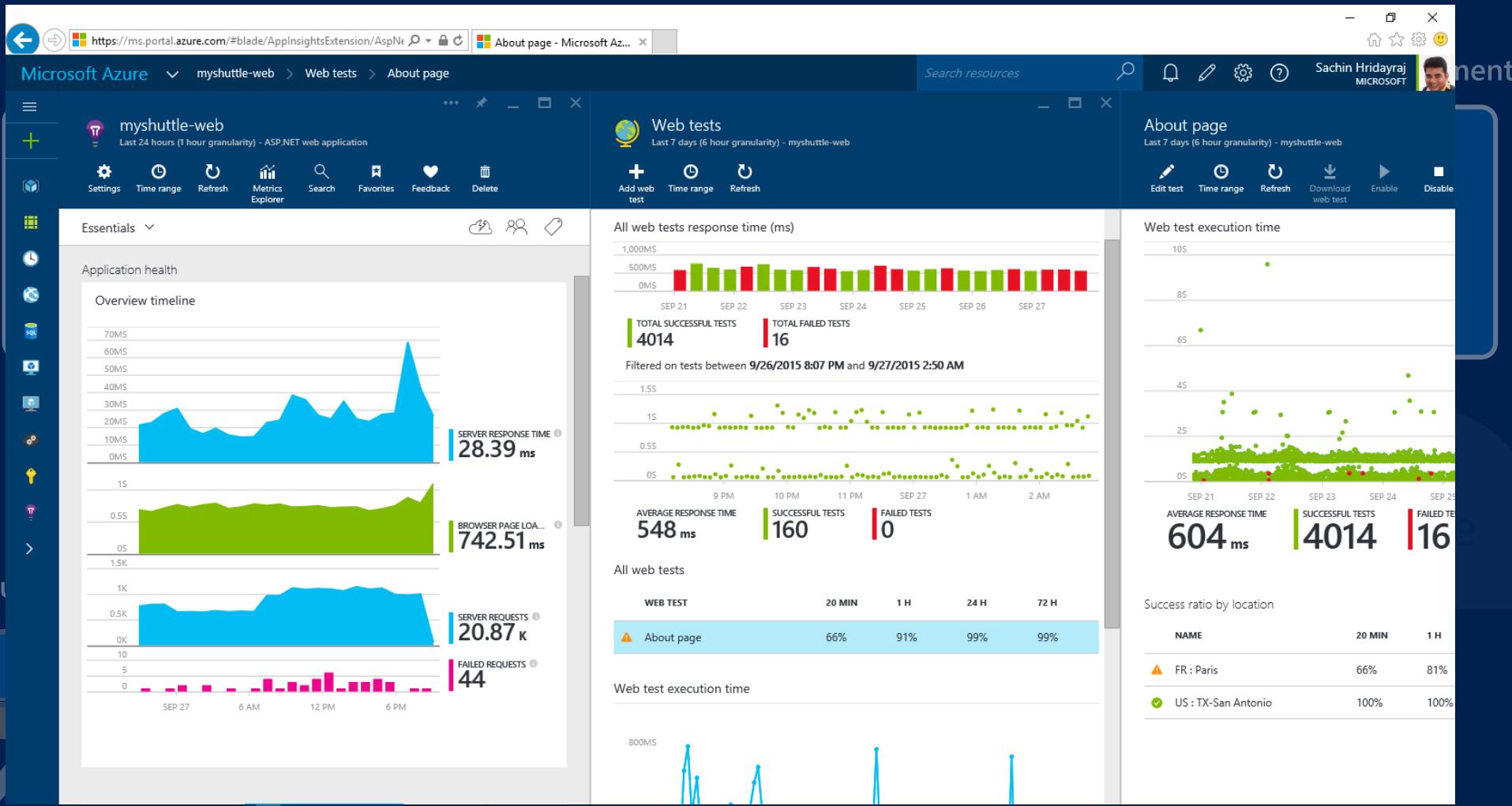
The screenshot shows the Visual Studio Team Services Release Management interface. The top navigation bar includes links for ALM Marketing, ALM Team, Azure, Microsoft, Dog Food Build, StoryMaps - Visual Studio, Windows Azure, Role Guide, Marketing, AI Demo, and Codesigning Service. The main menu has options for HOME, CODE, WORK, BUILD, TEST, RELEASE*, and SEARCH *. A user profile for Sachin Raj is visible on the right.

The left sidebar features an 'Explorer' section with a message about the preview version of the service. It lists 'Release Definitions' under 'All release definitions', including MyShuttle CRM, MyShuttle IT, MyShuttle Plat, MyShuttle Web, MyShuttle-Temp, PartsUnlimited, and Tracking Service. Each definition has a summary card showing its status (Dev, QA, Prod), name, version, date, and artifact count.

- MyShuttle CRM**: Dev CRM 2.0 (4/27/2015) - Artifacts (1) by Vijay Machiraju
- MyShuttle IT**: QA ITWeb 3.4 (4/25/2015) - Artifacts (0) by Vijay Machiraju
- MyShuttle Plat**: Dev Release.20150915155247 (9/15/2015) - Artifacts (0) by Sachin Raj
- MyShuttle Web**: Dev Release.20150529002320 (5/29/2015) - Artifacts (1) by Vijay Machiraju
- MyShuttle-Temp**: Default Environment Release.20150714142139 - Artifacts (0)

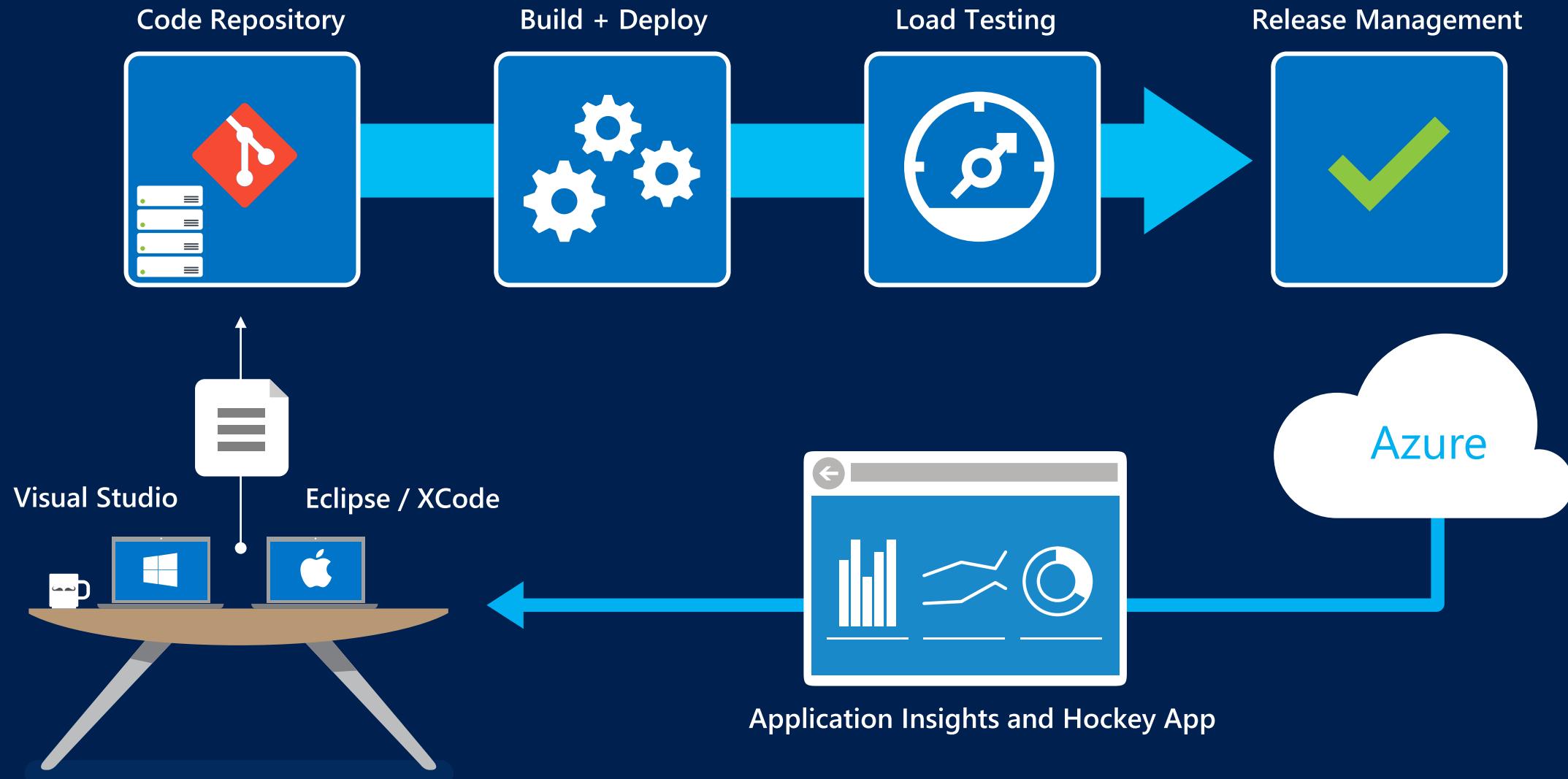
The central area displays the 'Overview' of all release definitions, showing a grid of cards for each environment (Dev, QA, Prod) across different projects. Each card provides a summary of the release status, version, date, and artifact count.

Visual Studio Team Services: Application Insights



Application Insights and Hockey App

Visual Studio Team Services: DevOps



Azure App Service

Build and scale great cloud apps



.NET, Java, Node.js, PHP, Python

Auto patching

Auto scale

Integration with existing apps

Continuous deployment

1) Select your App Service



web app



mobile app



API app



logic app

2) Select a template and create your web app

Change language: Default



ASP.NET
Starter
Site



django



ExpressJS



HTML5 Empty Site



Java Coffee Shop



PHP Starter Site

Create

Try App Service Today

Azure App Service Web Apps



Start simple

Easily create and scale your new sites in seconds

Automatically scale your sites that scale with your business

Quickly improve performance and reduce latency with right resources

Built-in web jobs support

Office Blog



Code smart

Leverage existing skills – Languages and databases you know

Start with open source apps and frameworks

Develop with VS and WebMatrix

Supports X-Plat development

ASP.NET site



Go live

Improve developer productivity through continuous automated deployment

Built-in monitoring of perf and usage data

Built-in diagnostics to assist with debugging

Built for DevOps

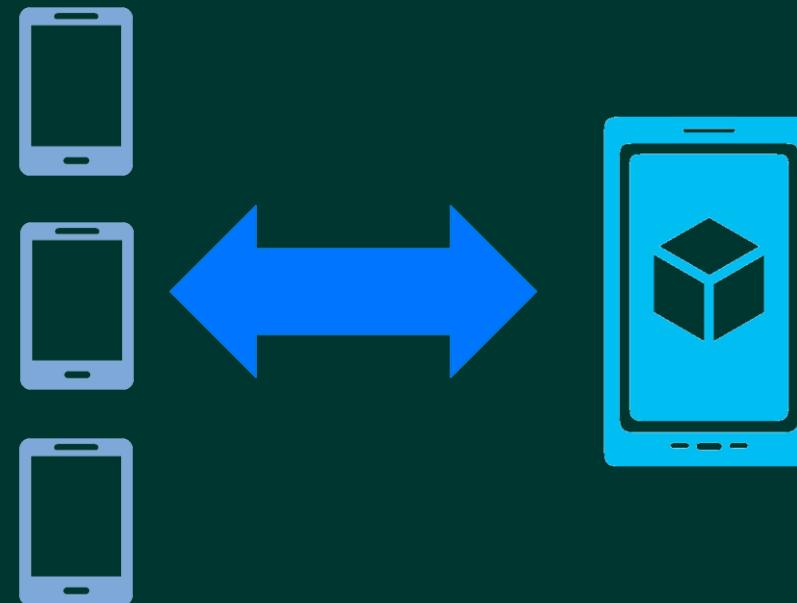
microsoft.com

Azure App Service Mobile Apps

- Provides essential services to support client development

- Client Support

- iOS
- Android
- HTML5/Web
- Xamarin
- Windows
- Windows Phone
- PhoneGap
- Sencha



Storage



Authentication



Logic



Push



Scheduler

Microsoft Azure

DATA + ANALYTICS

Data



SQL Database



SQL Data Warehouse



DocumentDB



Data Lake



Redis Cache



Search

Analytics



HDInsight



Data Factory



Machine Learning



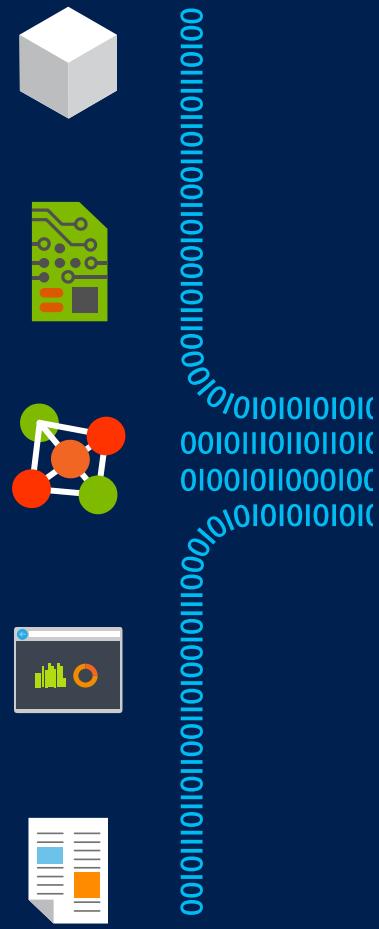
Mobile Engagement

INTERNET OF THINGS

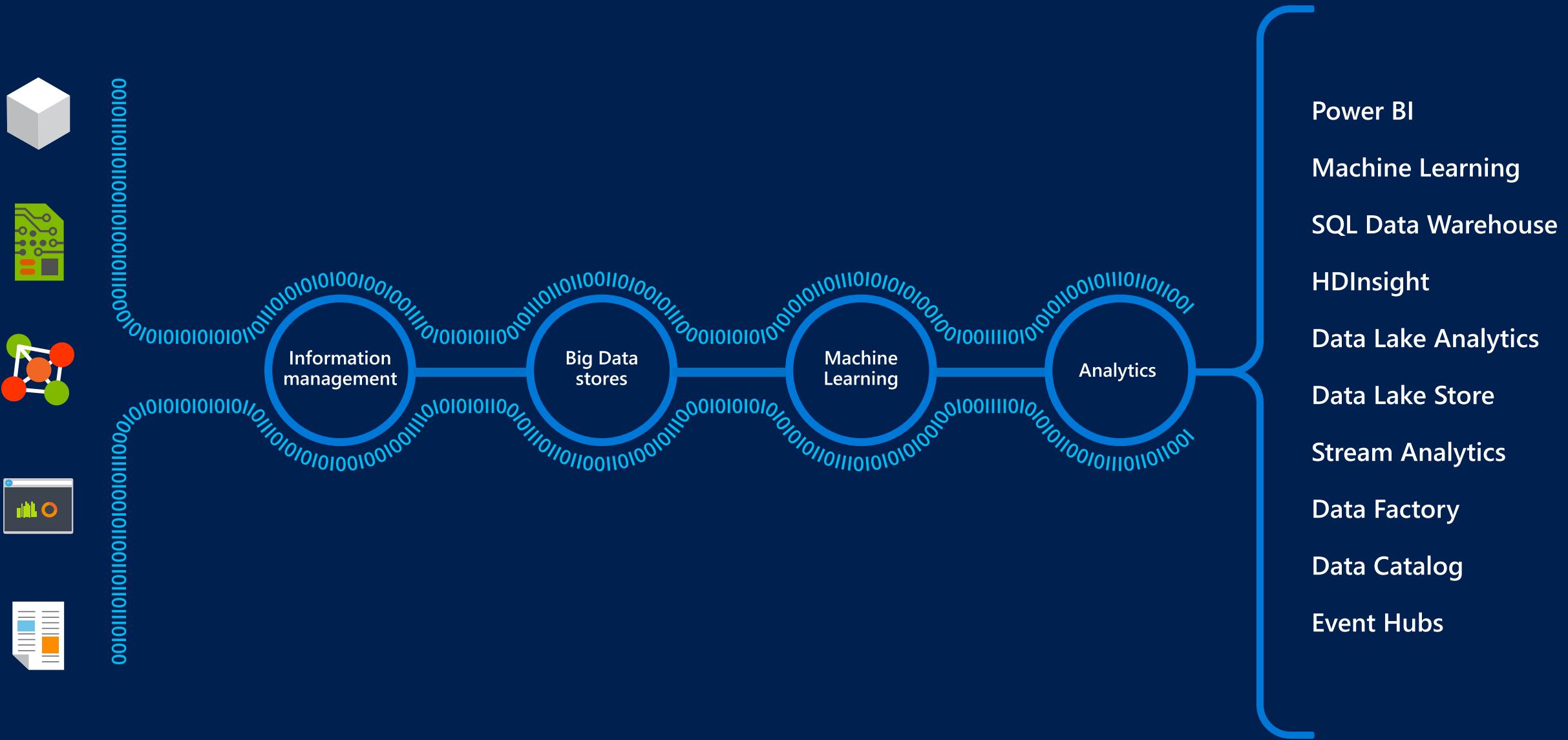
Azure IoT Suite

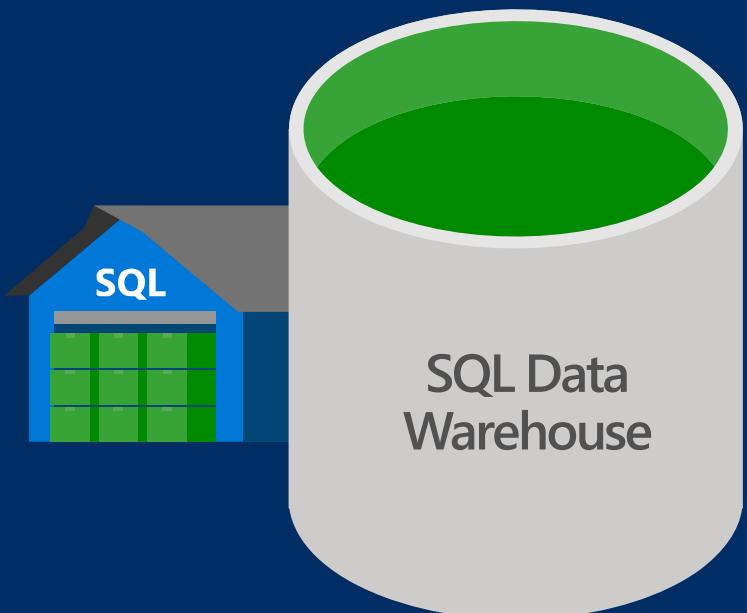
CLOUD INFRASTRUCTURE

Azure + Azure Stack + Operations Management Suite



Intelligent action



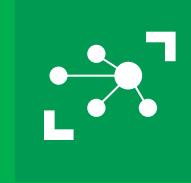


SQL Data Warehouse

Aggregate + store petabytes of data
Interactively query and visualize data
Operationalize machine learning

Microsoft Azure

INTERNET OF THINGS



IoT Hub



Stream
Analytics



Logic Apps

CLOUD INFRASTRUCTURE

Azure + Azure Stack + Operations Management Suite

Now Available to Purchase Azure IoT Suite

Device Connectivity and Security

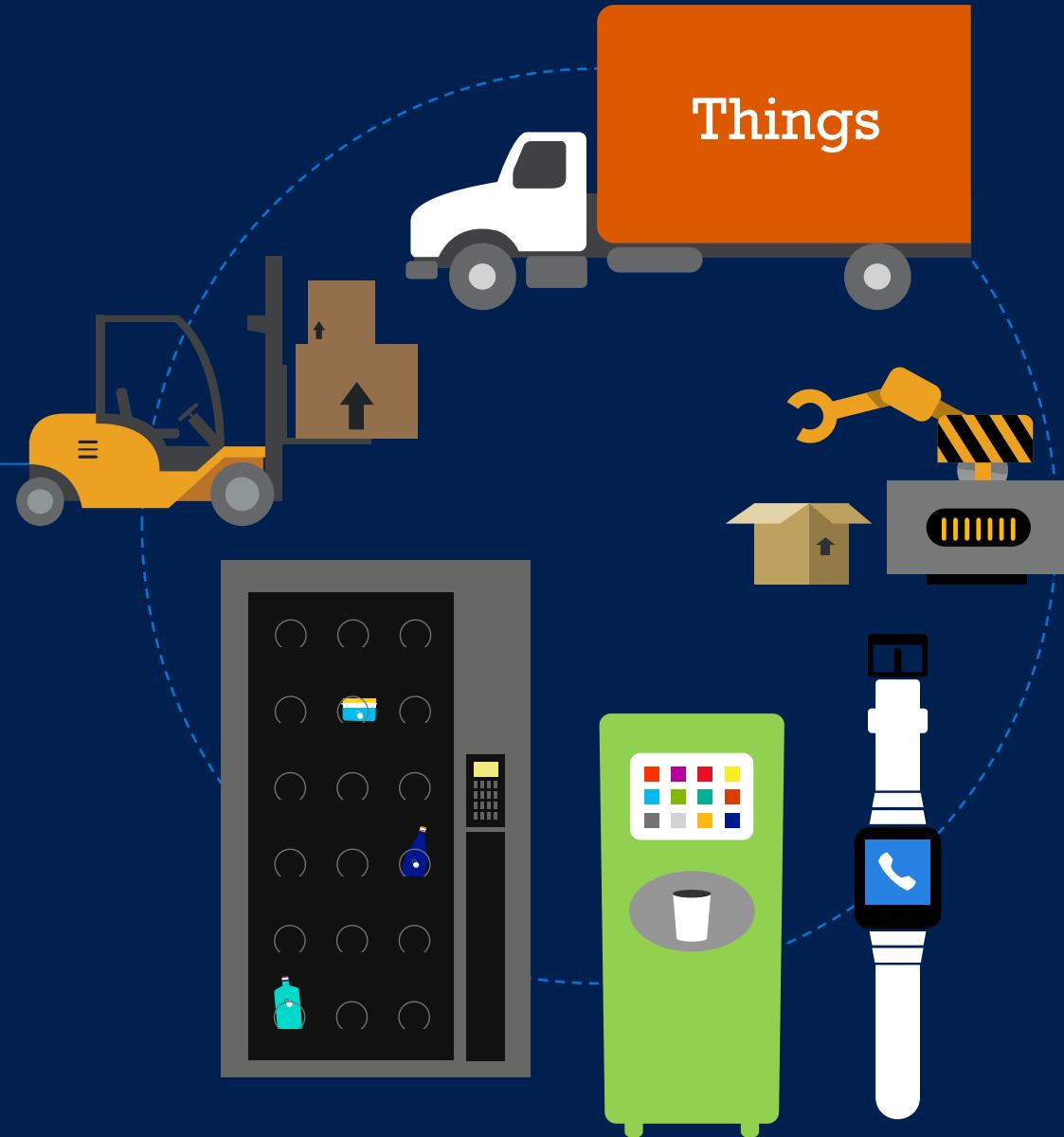
Data Ingestion and Command & Control

Stream Processing & Predictive Analytics

Workflow Automation

Dashboards and Visualization

Preconfigured Solutions



InPrivate IoT Device Portal - Dash +

stevehobiotdemo.azurewebsites.net/Dashboard/Index

Microsoft Azure IoT Suite StevehobTDemo stevehob@iots01.onmicrosoft.com ADMINISTRATOR Sign Out

DASHBOARD

DEVICES

RULES

ACTIONS

ADD A DEVICE

Map showing locations in Seattle and surrounding areas, including Redmond, Kirkland, Bellevue, and Medina.

Device to View: SampleDevice001_967

Telemetry History

Humidity • Temperature

Alarm History

TIME	DEVICE ID	RULE OUTPUT	VALUE
09/26/2015 9:29:01 AM	SampleDevice001_967	AlarmTemp	43.540
09/26/2015 9:29:01 AM	SampleDevice001_967	AlarmHumidity	31.201
09/26/2015 9:27:30 AM	SampleDevice001_967	AlarmTemp	43.848
09/26/2015 9:27:30 AM	SampleDevice001_967	AlarmHumidity	34.283
09/26/2015 9:25:58 AM	SampleDevice001_967	AlarmTemp	43.639
09/26/2015 9:25:58 AM	SampleDevice001_967	AlarmHumidity	32.192
09/26/2015 9:24:26 AM	SampleDevice001_967	AlarmTemp	43.332
09/26/2015 9:24:26 AM	SampleDevice001_967	AlarmHumidity	29.125

Max of device humidity: 41.81

Min of device humidity: 25.88

Average of device humidity: 33.76

Links ▾ 9:30 AM 9/26/2015

IoT Device Portal - Devi X +

stevehobiotdemo.azurewebsites.net/DeviceRules/Index

Microsoft Azure IoT Suite ① StevehobTDemo stevehob@iots01.onmicrosoft.com ADMINISTRATOR Sign Out

DASHBOARD DEVICES RULES ACTIONS ADD A DEVICE

Rules (10)

STATUS	RULE ID	DEVICE ID	DATA FIELD	OPERATOR	THRESHOLD	RULE OUTPUT
Enabled	435a07fd-7897-47ef-abd2-c2d97b83613d	SampleDevice001_750	Temperature	>	42	AlarmTemp
Enabled	c5e59a36-fa2c-4f38-8b2a-a8975e494e6a	SampleDevice001_750	Humidity	>	45	AlarmHumidity
Enabled	444569d9-93b1-4b4f-80b4-92f8c6a1f463	SampleDevice001_967	Humidity	>	48	AlarmHumidity
Enabled	cba47df7-fe4b-4406-ab21-2712279bbf27	SampleDevice001_967	Temperature	>	38	AlarmTemp
Enabled	2870f066-4b2b-40c7-b383-ebd84733d1b5	SampleDevice002_967	Humidity	>	57	AlarmHumidity
Enabled	e3af247f-3111-48d5-9b88-9980749129b2	SampleDevice002_967	Temperature	>	45	AlarmTemp
Enabled	3dfa65c5-6694-4b41-988c-244c2179ab52	SampleDevice003_967	Temperature	>	45	AlarmTemp
Enabled	44c233be-2eb7-420a-b7e8-abafaa5a20e6	SampleDevice003_967	Humidity	>	54	AlarmHumidity
Enabled	5c9ebf03-21b3-48c5-85be-5643ebdf5fbb	SampleDevice004_967	Humidity	>	64	AlarmHumidity
Enabled	d165156b-9068-4df2-84ec-5225795a313b	SampleDevice004_967	Temperature	>	47	AlarmTemp

Properties

Device Properties

DEVICE ID
SampleDevice001_967

Rule Status

Disable Rule

Rule Properties Edit

DATA FIELD
Temperature

OPERATOR
>

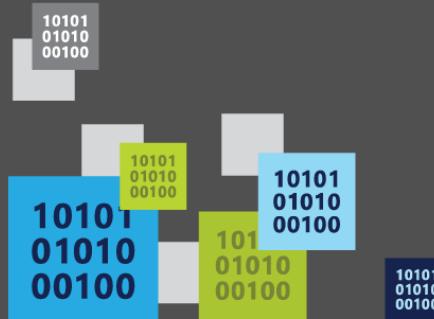
THRESHOLD
38

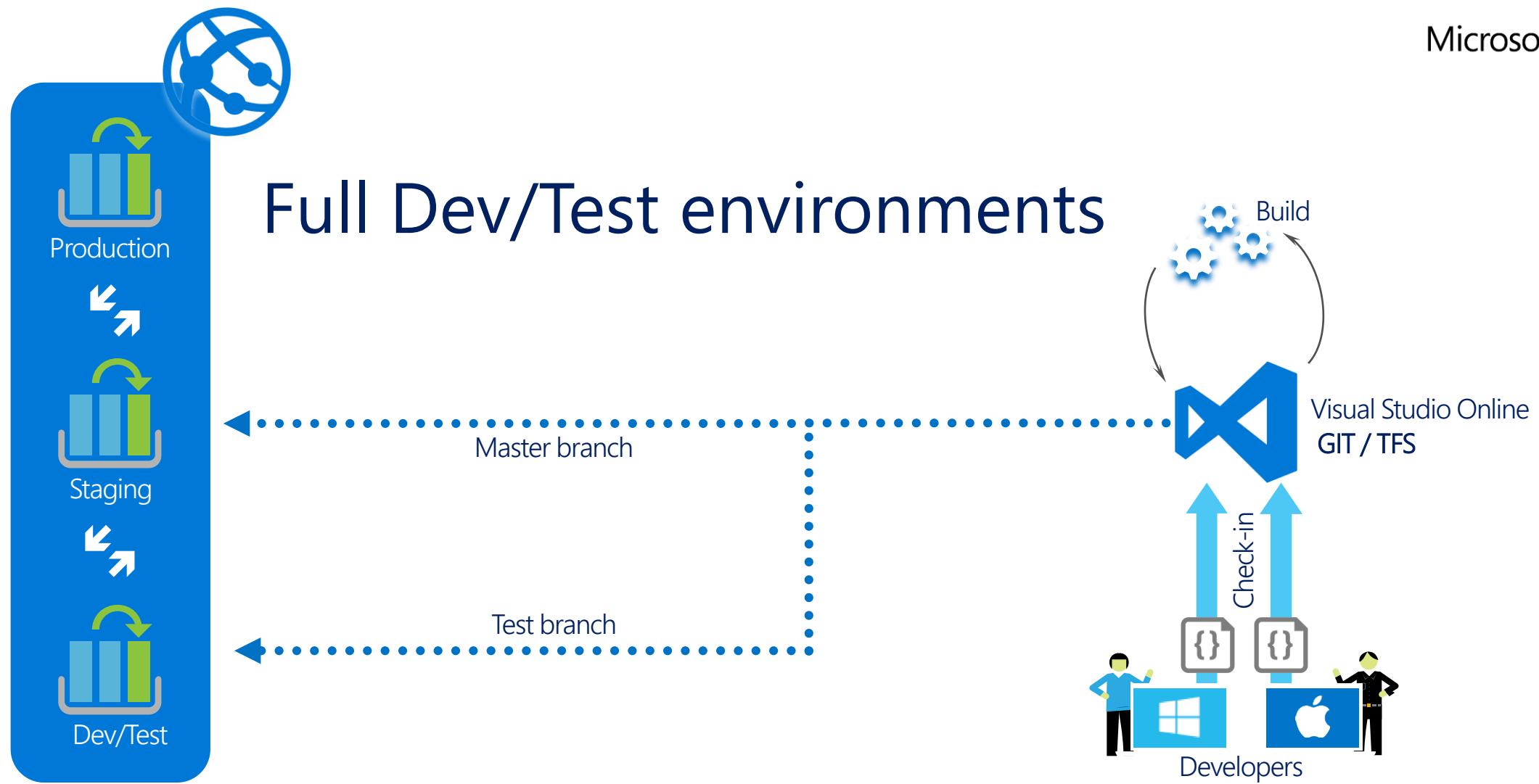
RULE OUTPUT
AlarmTemp

Links ▾ ▷ ⌂ ⌃ ⌄ ⌅ ⌆ ⌇ ⌈ ⌉ 5:22 PM 9/25/2015

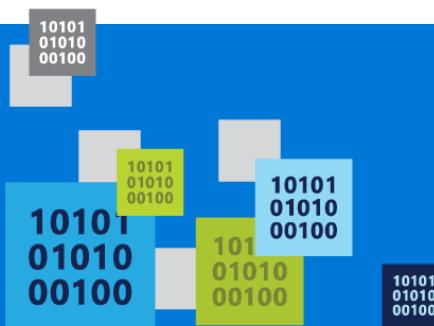
Delivering secure apps

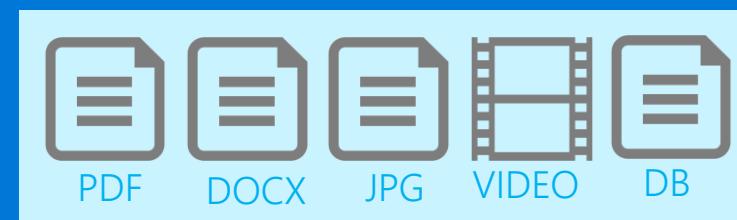
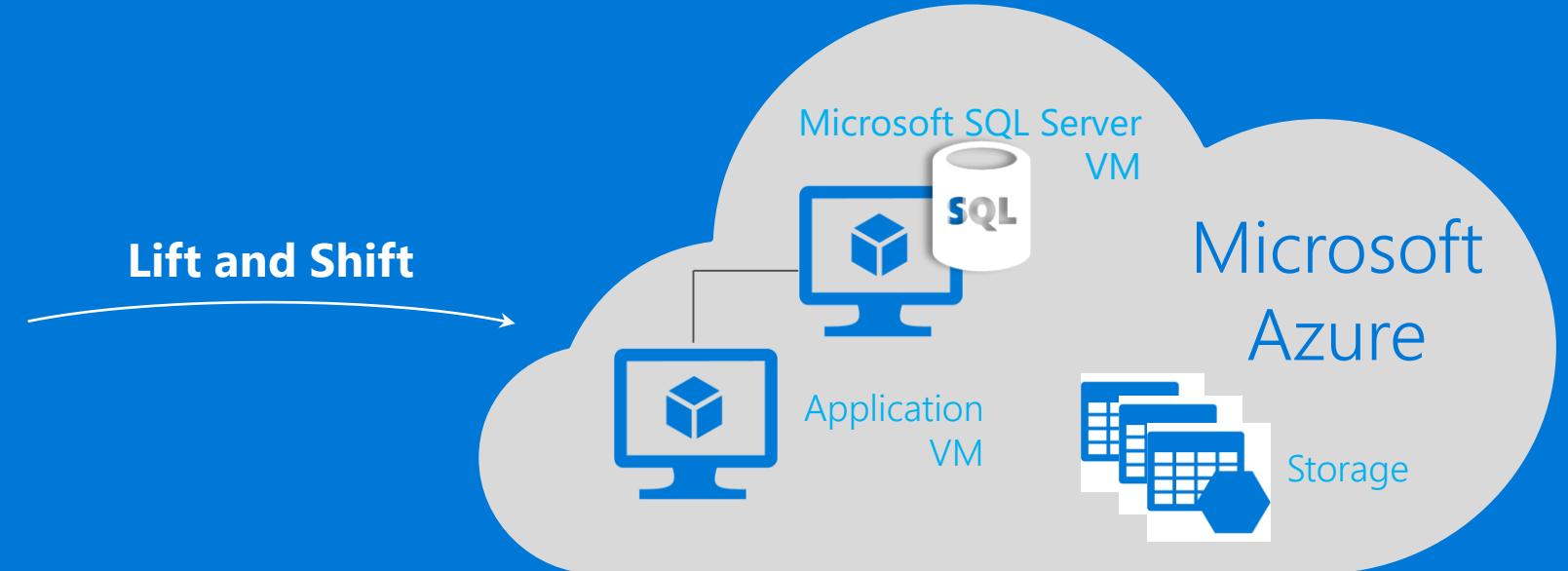
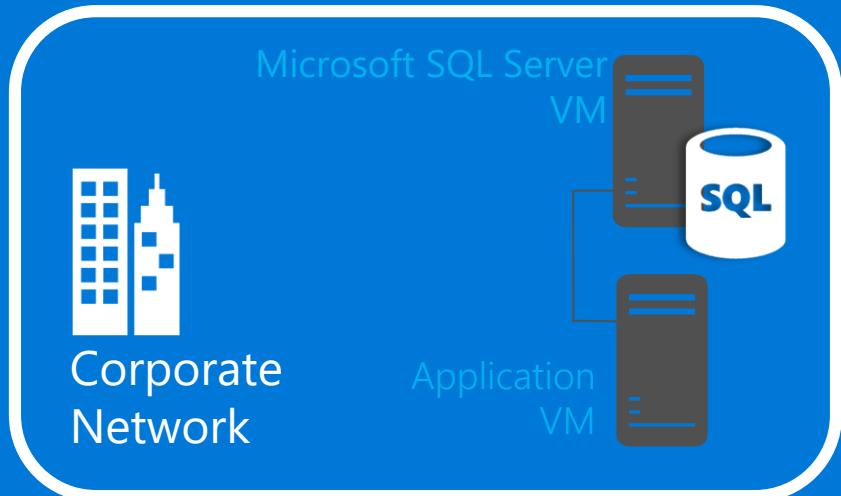
Key Scenarios to Get Started with Microsoft Azure



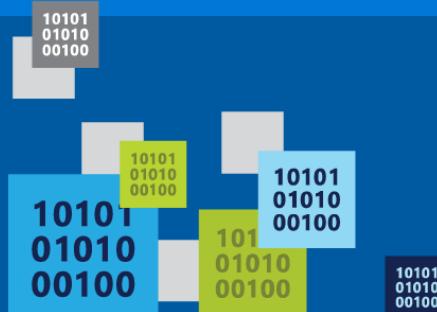


Key Scenarios to get started with
Microsoft Azure

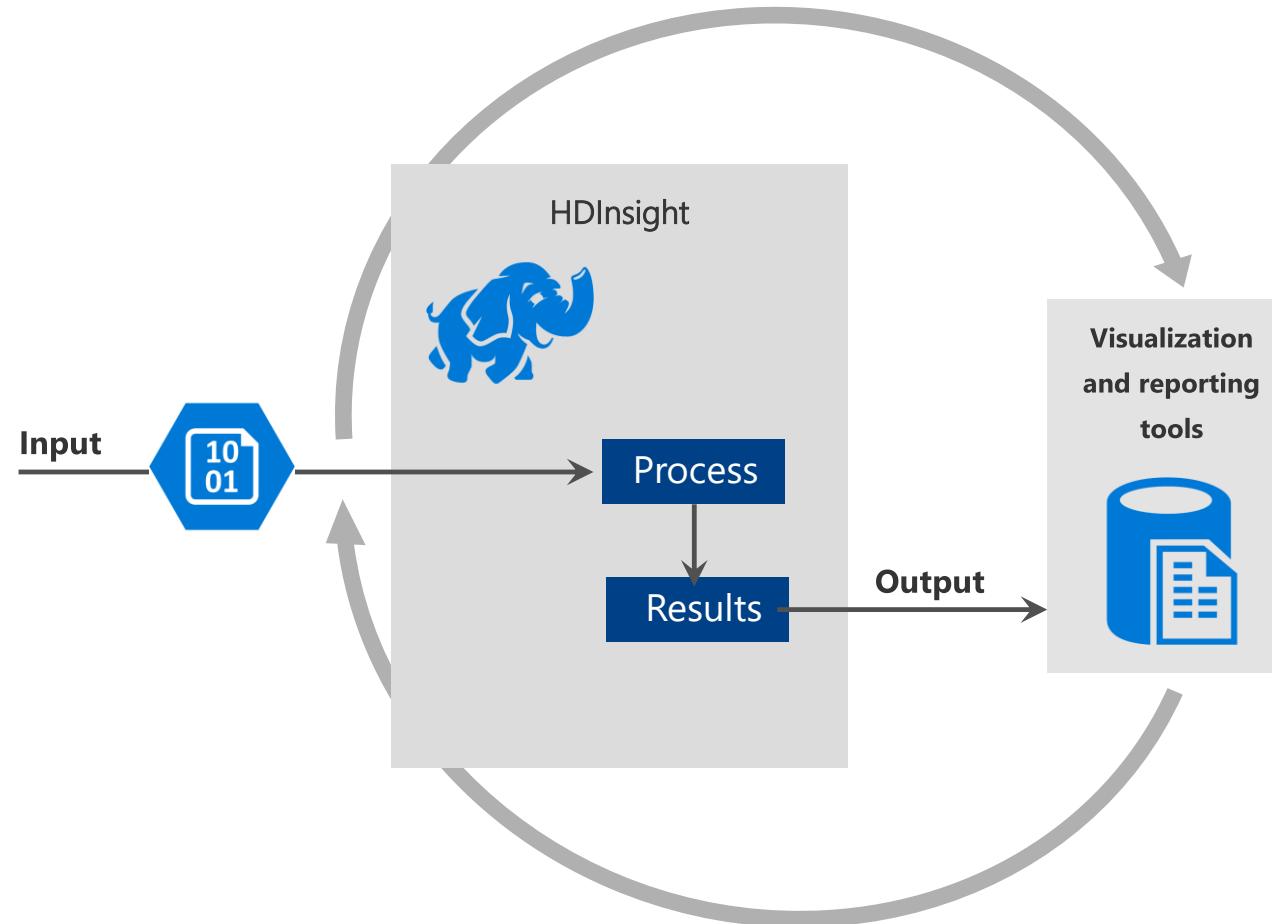




Archive
key data inexpensively

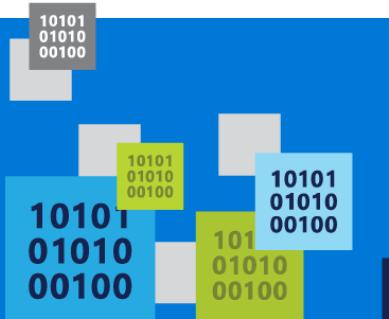


Key Scenarios to get started with Microsoft Azure

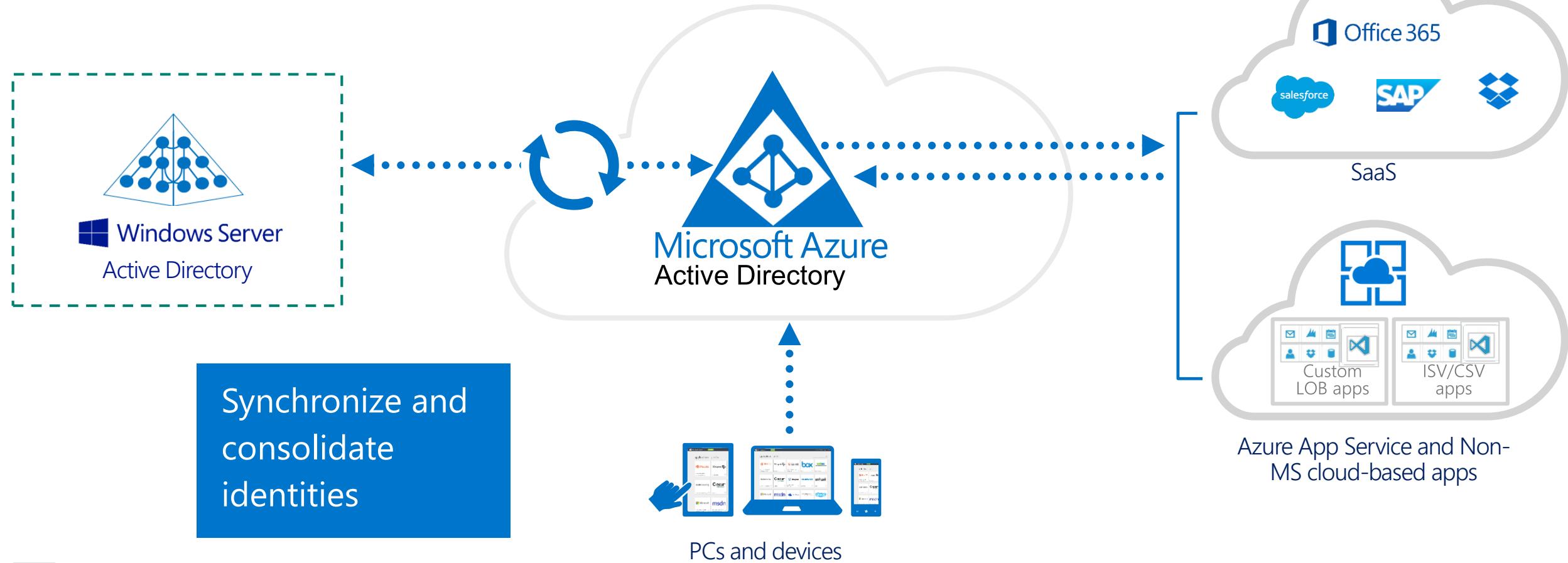


Iterative exploration - Process key data into business intelligence using Hadoop

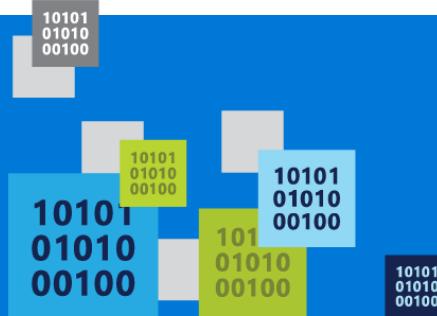
Key Scenarios to get started with
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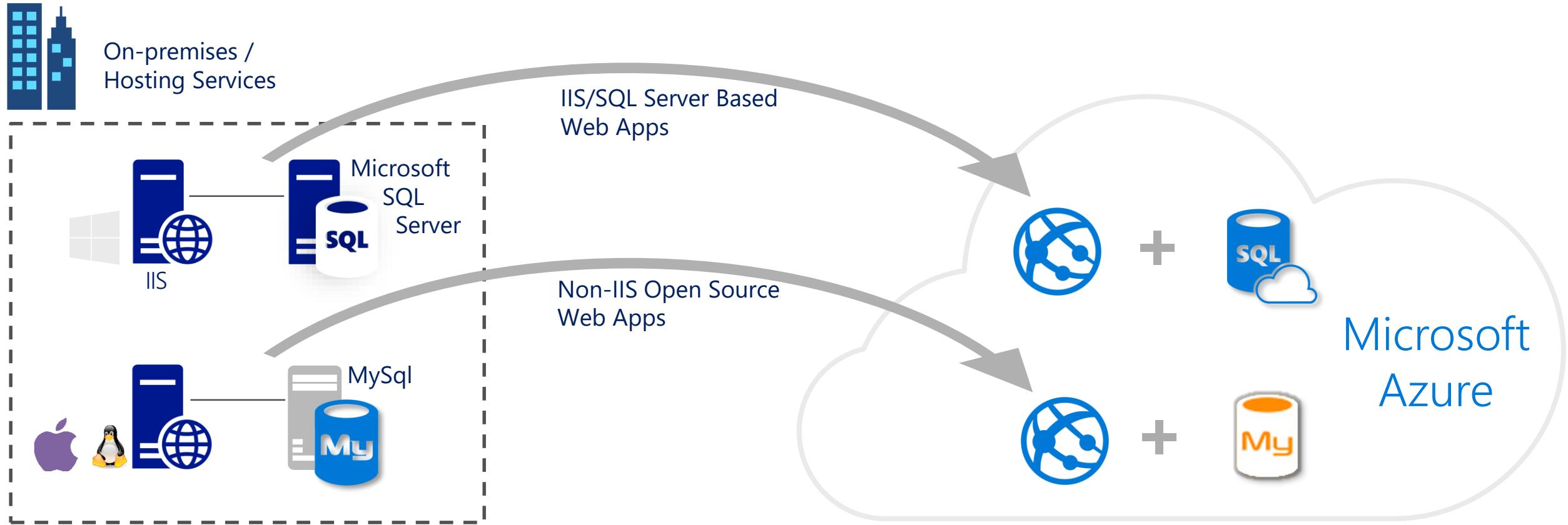


Identity as a Service



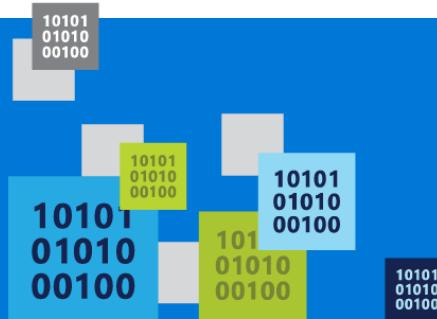
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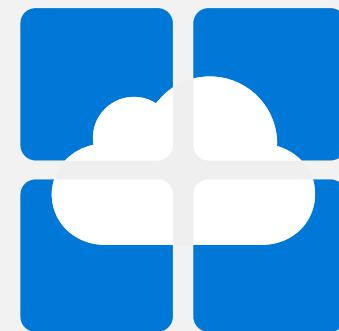
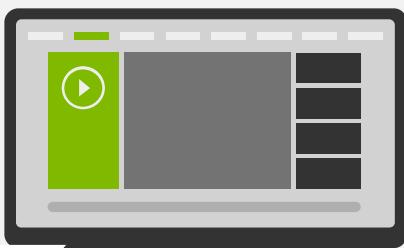


Web Apps - Take your web apps to the cloud using inexpensive App Service Web Apps

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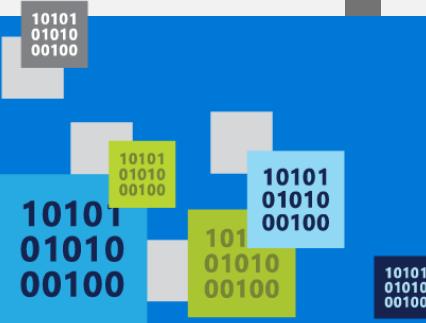


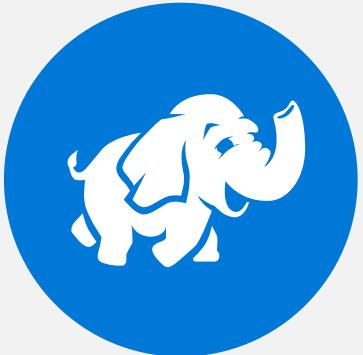
Azure



App Service

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Hadoop



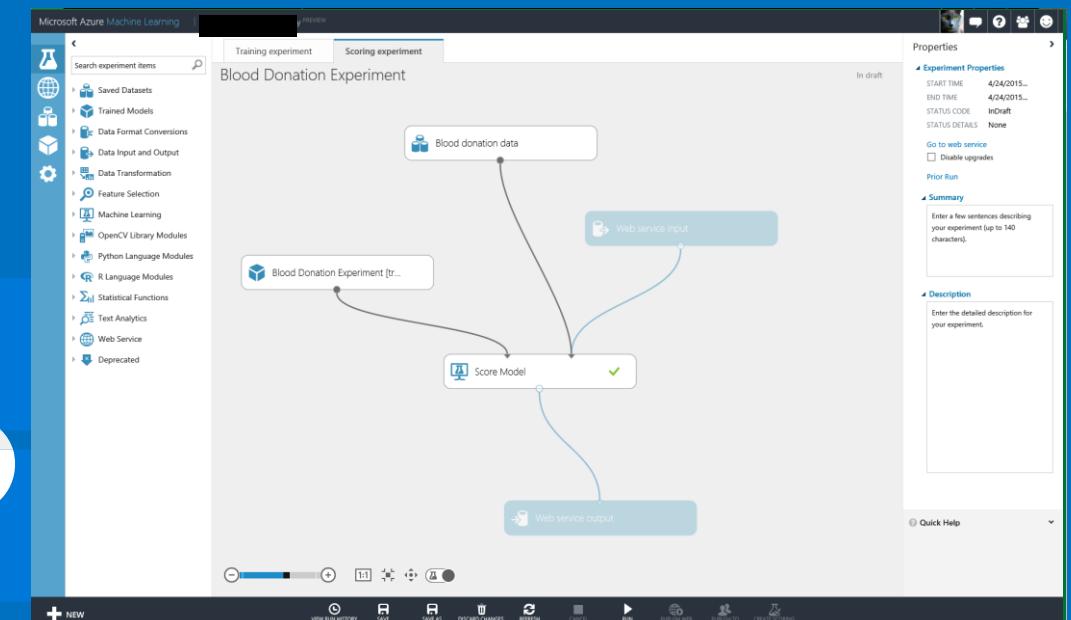
SQL

SQL Data
Warehouse

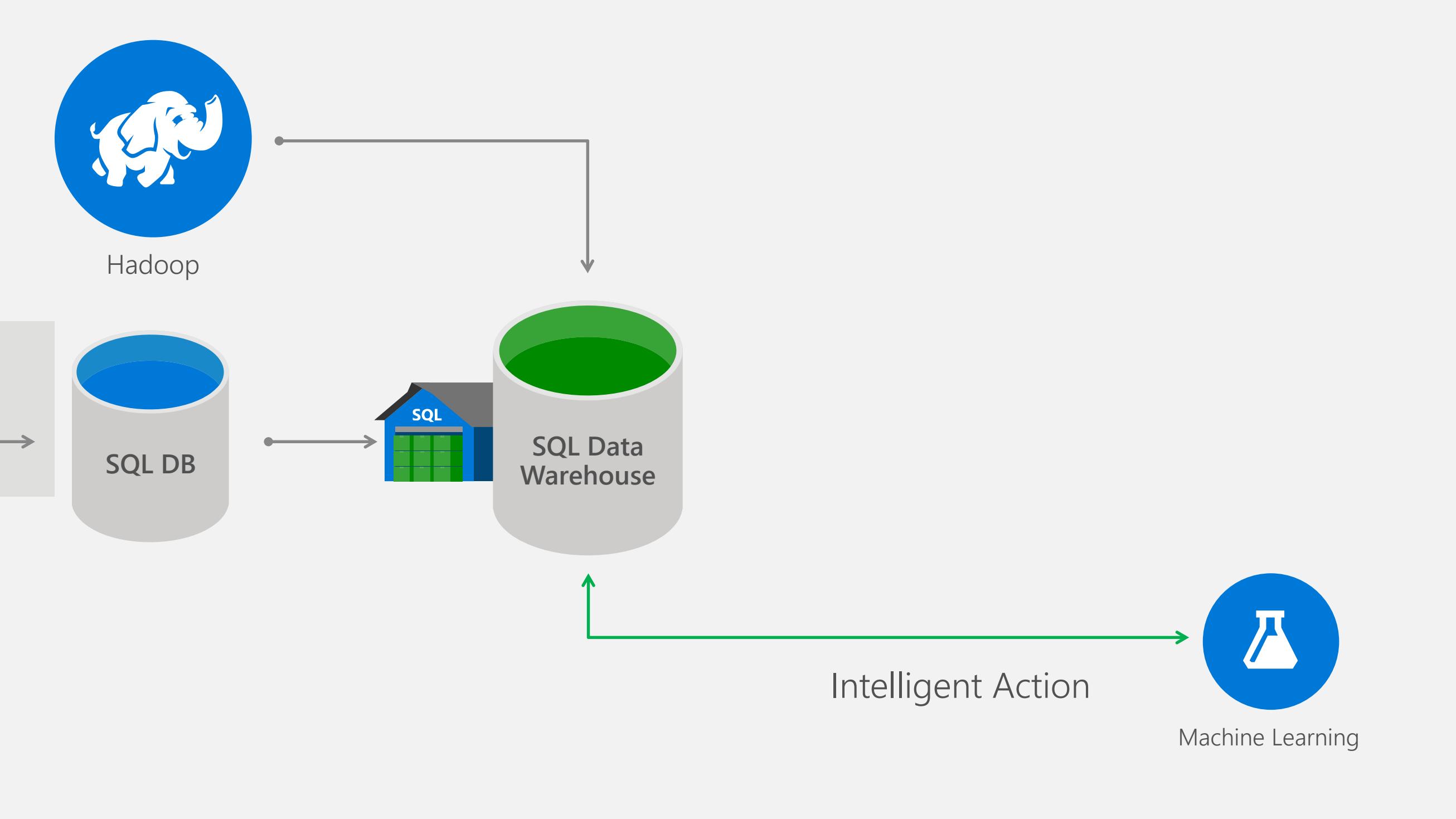


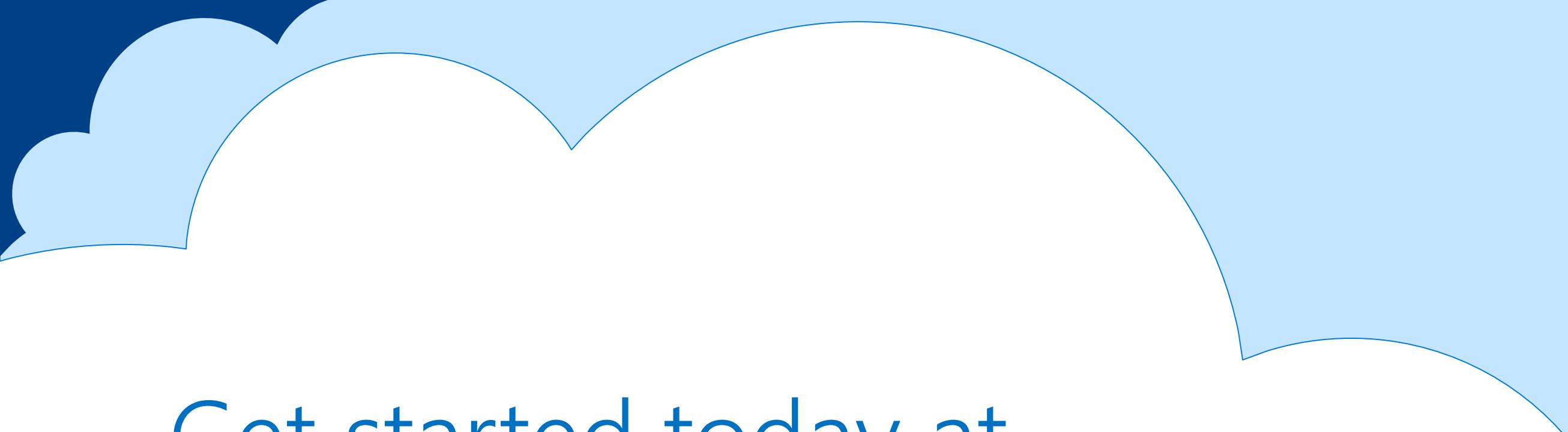
On-Premises
SAP
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Dynamics

Data Ingestion



App Service





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