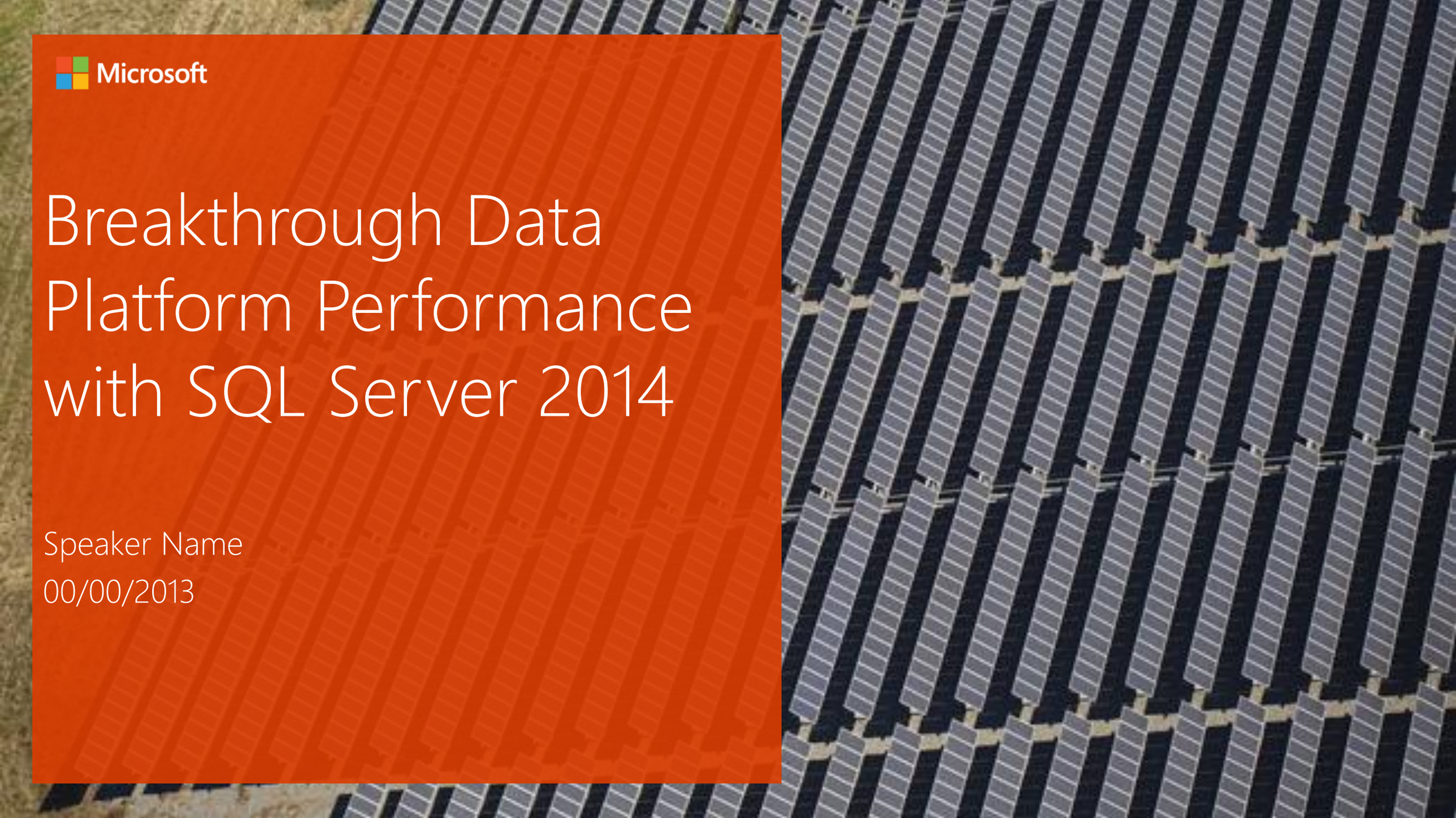
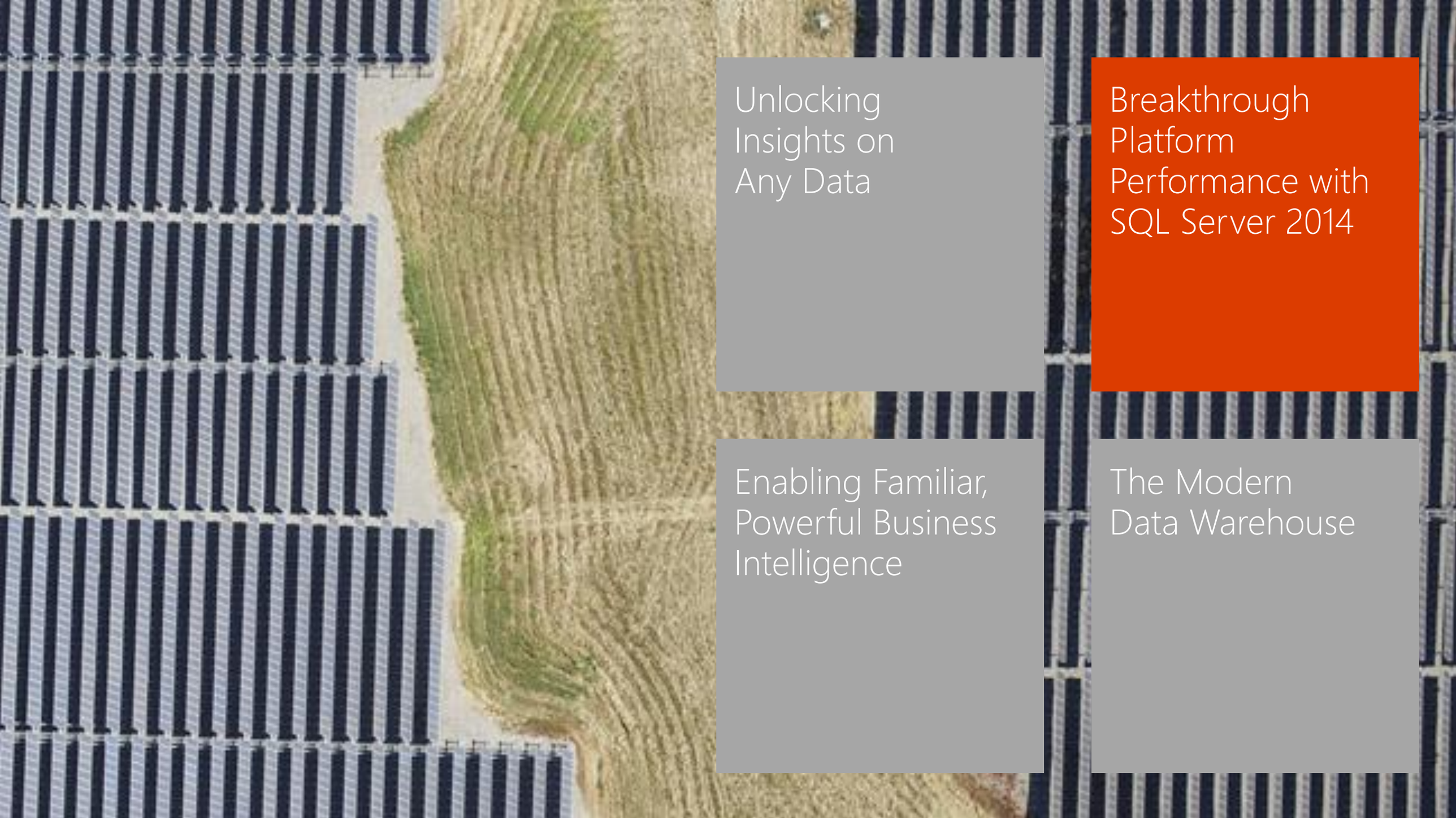


Microsoft

Breakthrough Data Platform Performance with SQL Server 2014

Speaker Name

00/00/2013



Unlocking Insights on Any Data

Breakthrough Platform Performance with SQL Server 2014

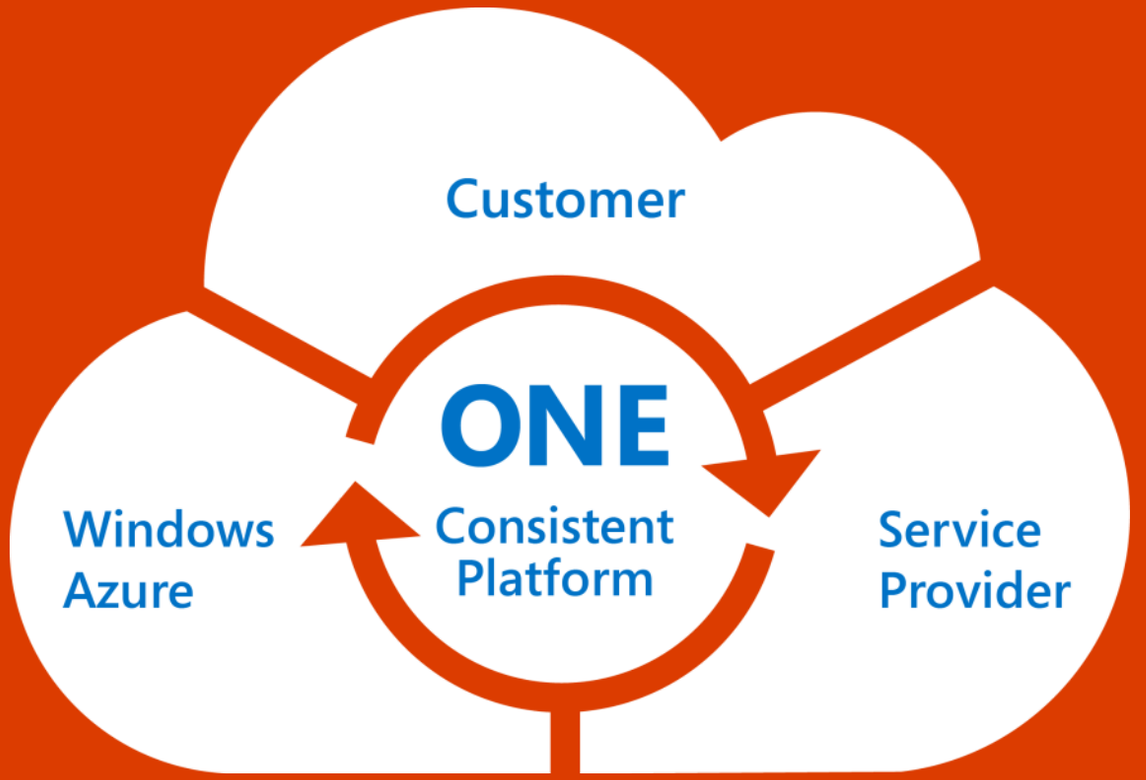
Enabling Familiar, Powerful Business Intelligence

The Modern Data Warehouse

Cloud OS Vision

Microsoft's vision of the unified platform for modern business

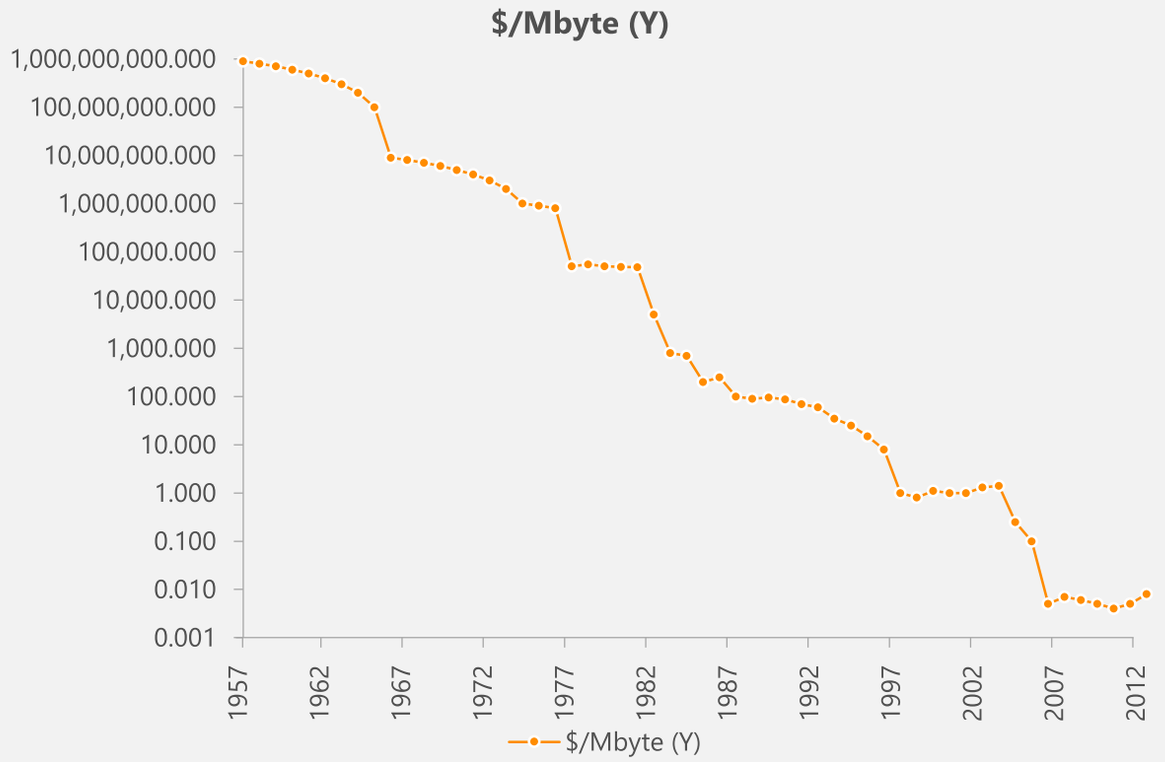
Transforms the datacenter
Unlocks insights on any data
Empowers people-centric IT
Enables modern business apps



Development Management Identity Data Virtualization

Key trends

In-memory now a viable solution



$1.1 trillion

Enabled by cloud innovation

"By 2015, business revenues from IT innovation enabled by the cloud could reach US$1.1 trillion a year." *IDC*

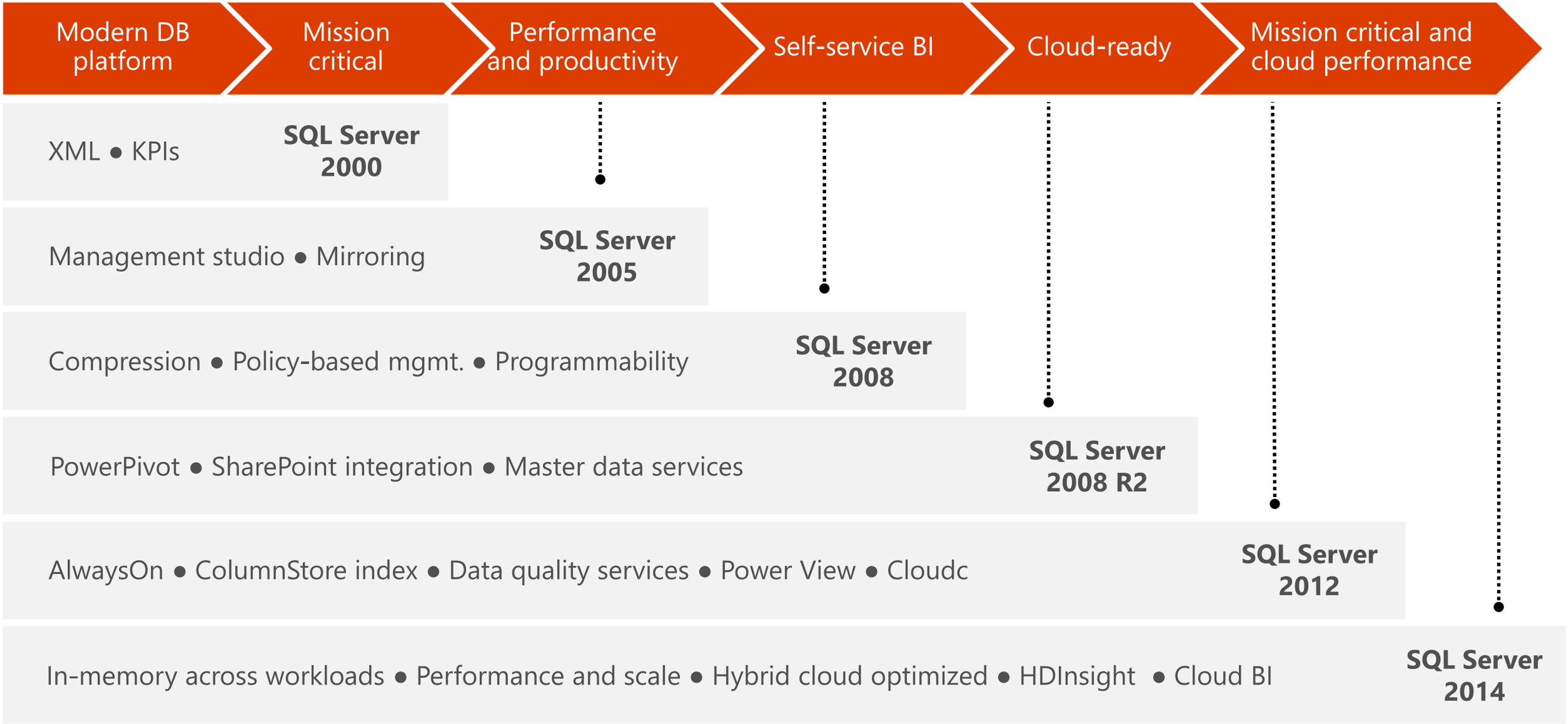
Data explosion

10x
increase every five years

85%
from new data types

Volume
Velocity
Variety

The evolution of the Microsoft data platform



Breakthrough Data Platform Performance

Mission critical performance

Faster insights from data

Platform for hybrid cloud

Breakthrough Data Platform Performance

Mission critical performance

Faster insights from data

Platform for hybrid cloud

Mission critical performance

In-memory built-in

Average 10x faster for new and existing SQL Server apps

Secure and scalable

Most secure with enterprise scale using Windows Server

High availability

The 9’s you need, with AlwaysOn

Mission critical support

Live support designed for mission critical solutions

7x faster performance

Enables real-time updates

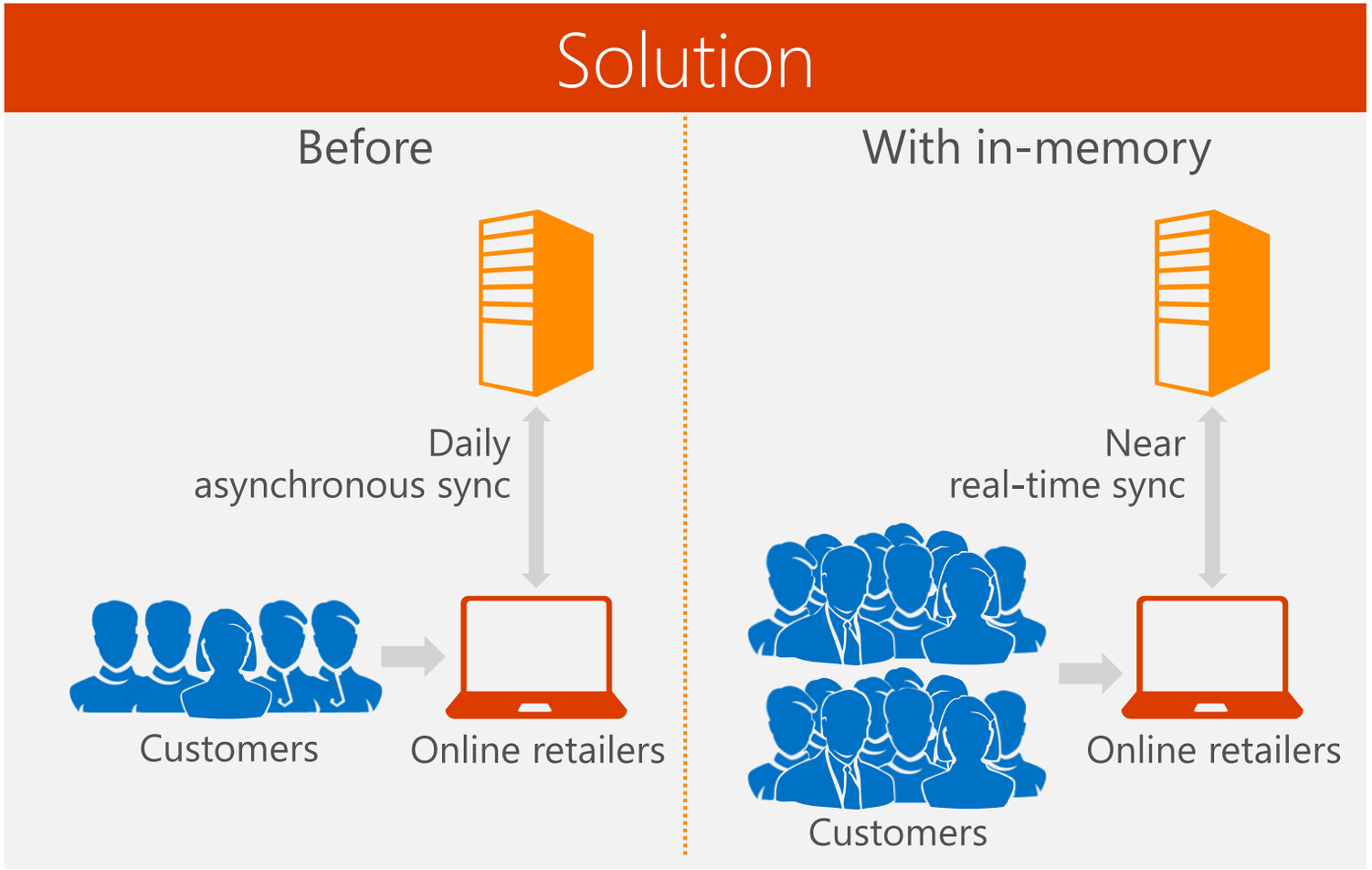
edgenet®
Sell Easier | Sell More

Business challenge

SAAS provider to large retailers wanted to increase inventory availability refresh speed to improve customer satisfaction

Key benefits

- ✓ Increased sales with greater throughput and improved customer satisfaction
- ✓ 7x faster performance enables near real time inventory updates



In-memory built-in

Built-in

On average 10x faster, without having rewrite entire app

Leverage full SQL Server capabilities

Flexible

Select only highly utilized tables to be in-memory

Optimize in-memory to fit existing hardware

Spans all workloads

In-memory performance across OLTP, DW, and BI

All in a single SKU

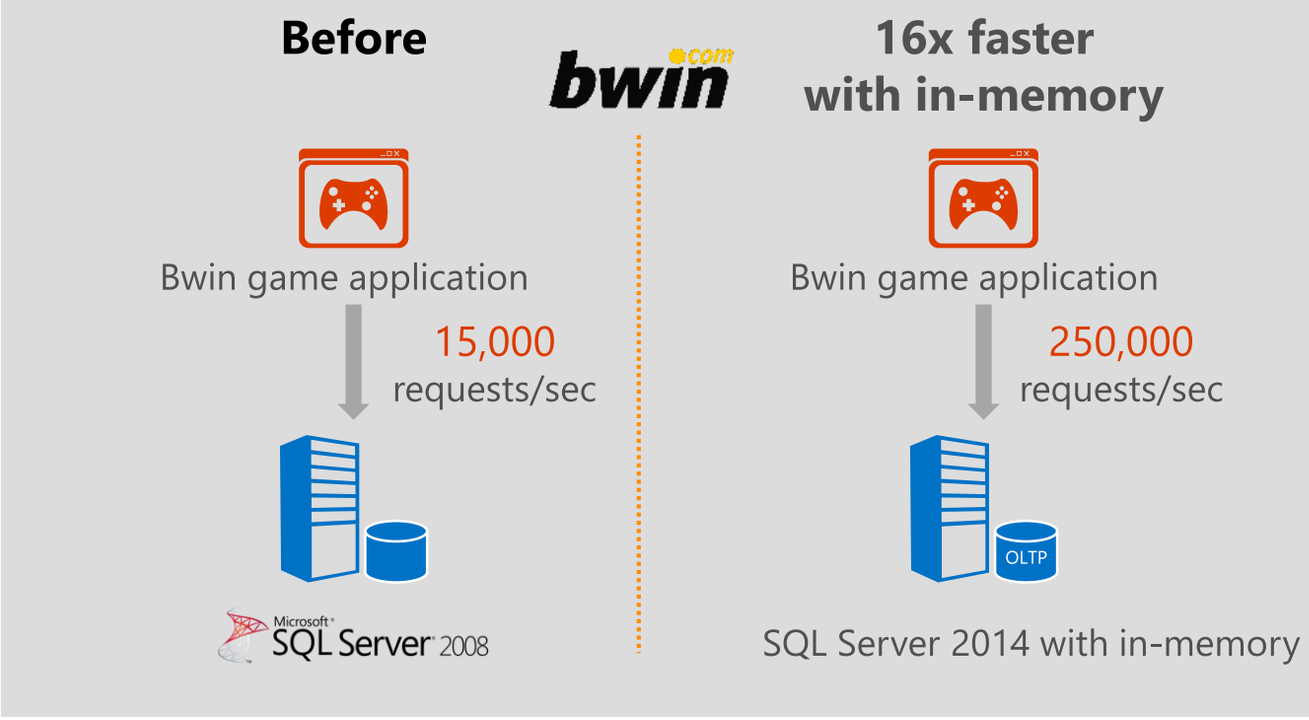
Key features

New in-memory OLTP

Enhanced in-memory ColumnStore for DW

In-memory BI with PowerPivot

Buffer pool extension to SSDs and enhanced query processing



Secure

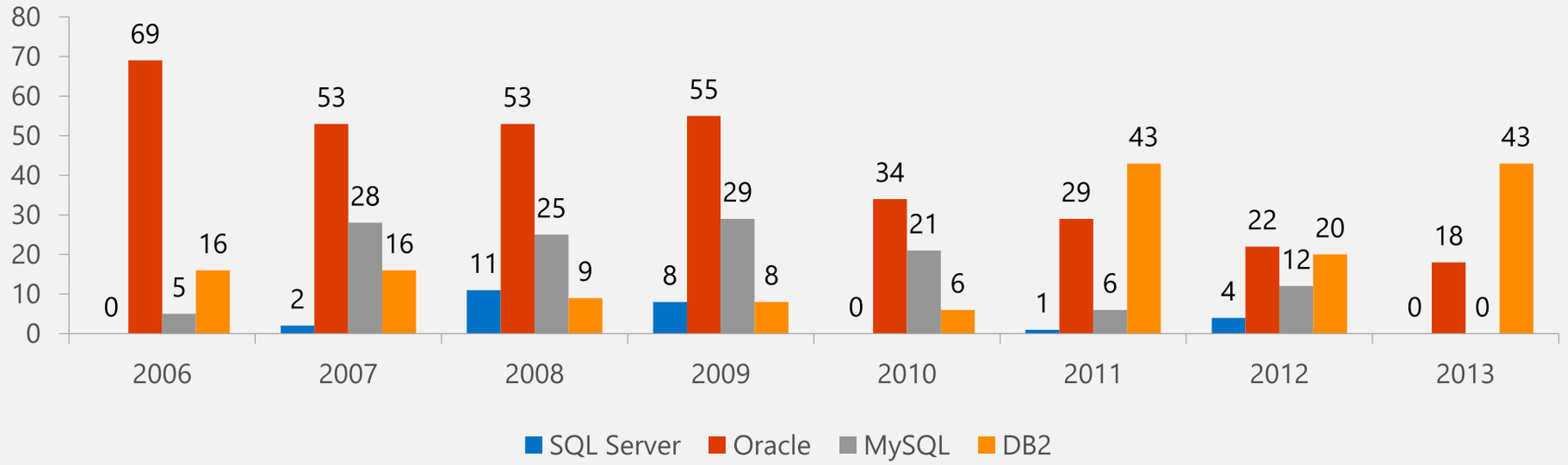
Least vulnerable database

5 years in a row

Most utilized database in the world

46% market share

Database vulnerabilities



Key features

- Redefined engineering security processes
- CC certification at high assurance level
- Enhanced separation of duty
- Transparent data encryption
- Encryption key management
- Support for Windows Server core

*National Institute of Standards and Technology Comprehensive Vulnerability Database 4/17/2013, Market share from IDC 2013

Scalable

Scale compute

Up 640 logical processors

64 vCPUs/VM

1TB memory/VM

64 nodes/cluster

Scale networking

Network virtualization provides flexibility and isolation

Assign minimum and maximum bandwidth

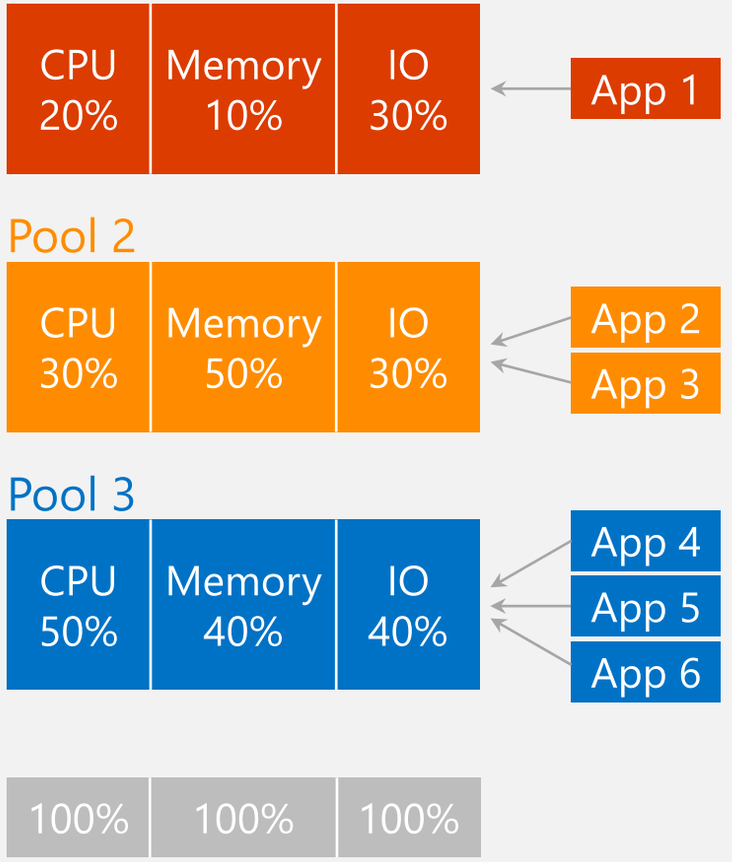
Scale storage

Storage virtualization

Enterprise-class network storage on standard hardware

Storage tiering for higher performance

SQL Server 2014
resource governance



Key features

SQL Server 2014

Resource Governor adds IO governance

SysPrep at cluster level

Windows Server 2012 R2

Hyper-V

Storage spaces

NIC teaming

Online VHDX resize

Network and storage QoS

High availability

Increased availability

Multi-DB failover, manual or automatic

Up to 8 secondary replicas

100% availability during all online operations

Efficient

HA without expensive SANs

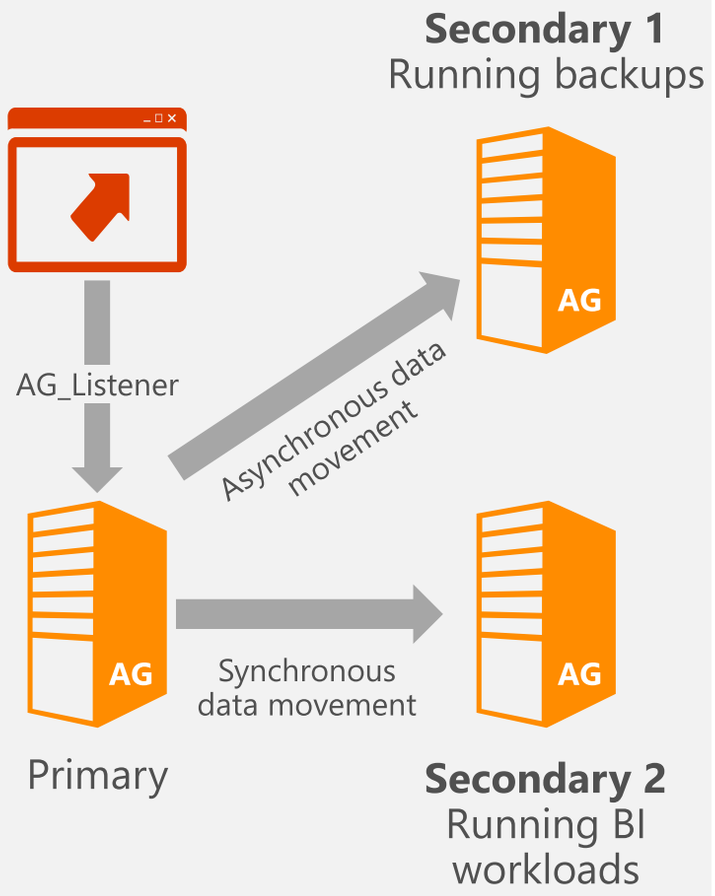
Offload reads and backups to secondaries

Easy to deploy and manage

Deployment and management wizards

Monitoring dashboard within SSMS and System Center

Unified HA/DR solution



Key features

SQL Server 2014

Enhanced AlwaysOn

Replica Wizard

Windows Server 2012 R2

Clustered shared volume support

Online VHDX support

System Center 2012 R2

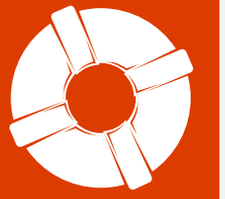
Manage on-premises and cloud apps

Mission critical support

Premier support

Prioritized 24x7 problem resolution

Access to advanced technical training

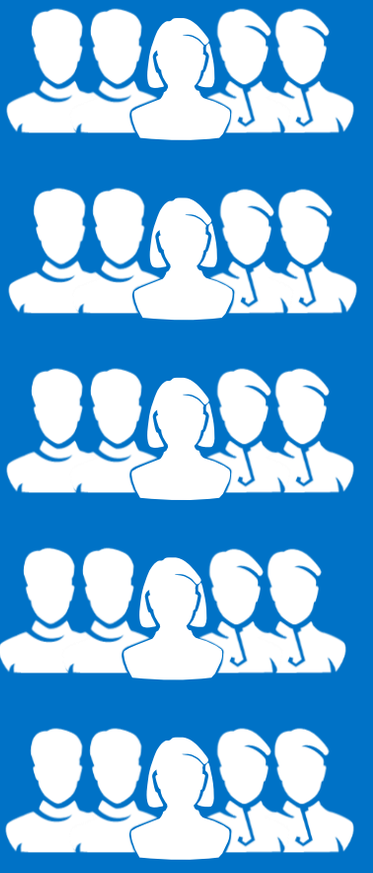


With premier mission critical

Solution validation and architectural reviews

On-site solution engineering expertise

Fastest response times available from Microsoft



Ecosystem of

70,000+

SQL Server Partners

Over 600 businesses migrated from Oracle to SQL Server in 2012

Migrations by industry	
Financial services	96
Discrete manufacturing	78
Retail and consumer goods	70
Professional services	62
Government	57
Health	55
Process manufacturing	41
Power and utilities	25
Telecommunications	25
Hospitality and travel	23
Other industries	99
TOTAL	**631**

Breakthrough Data Platform Performance

Mission critical performance

Faster insights from data

Platform for hybrid cloud

Faster insights from any data

Easy access to data, big and small

Search, access, and shape internal and external data, and combine with unstructured data

Powerful insights with familiar tools

Speed up analysis and time to insight with the familiarity of Excel in Office and Office 365 and access via mobile devices

Complete BI platform

Scale your BI models and enrich and secure your data with a complete platform spanning cloud and on-premises

Identify outbreaks in minutes

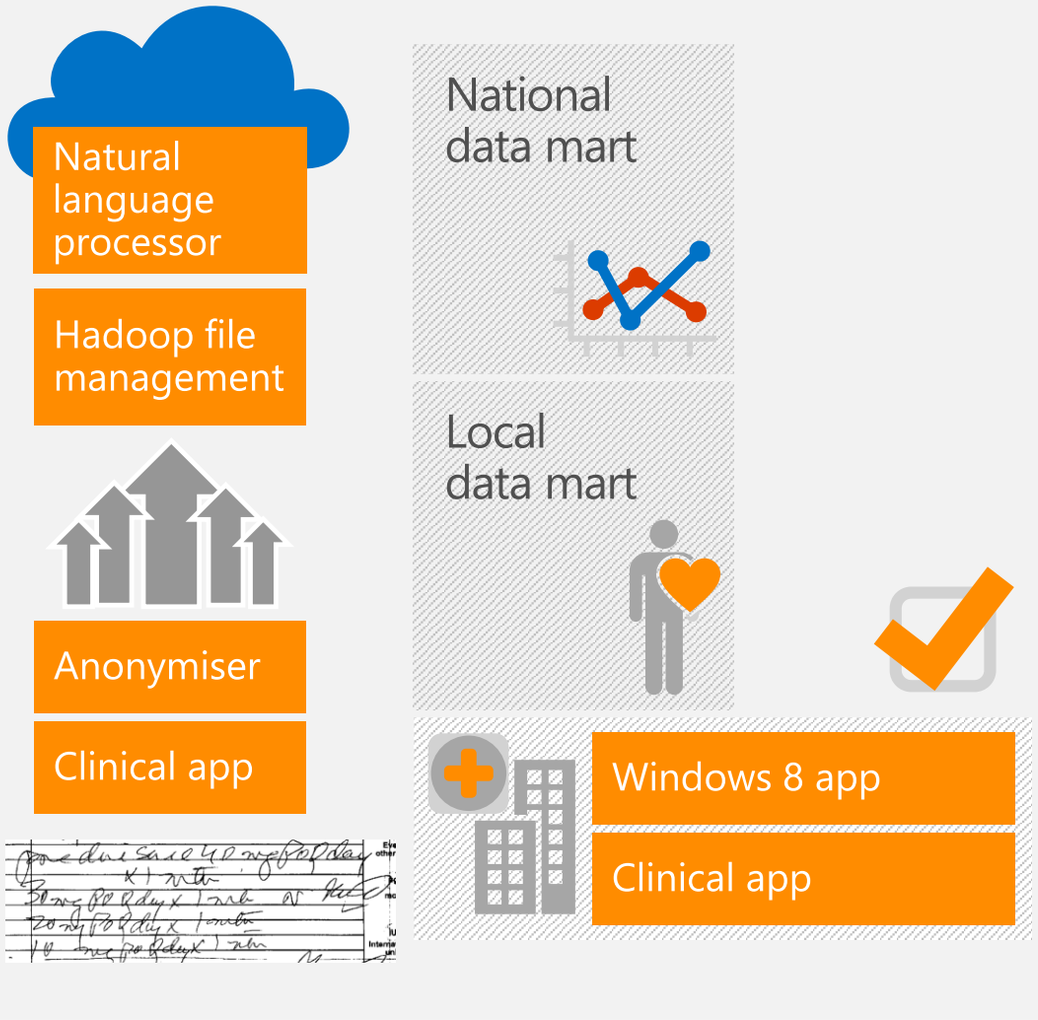
ASCRIBE

Business challenge

Healthcare software vendor sought a solution to combine different data types to help identify disease outbreaks earlier

Key benefits

- ✓ Spot outbreaks in near real-time
- ✓ Combine on-prem structured data with hand written notes and social media feeds



"This will reinvent the way we work with medical records in the future."

Paul Henderson
BI Division Head

Easy access to data, big and small

Search, access, and shape

Simplify access to public and corporate data

Easily preview, shape, and format your data

Combine with unstructured

Combine and refine data across multiple sources

Gain insight across relational, unstructured, and semi-structured data

Easily manage and Query

Common management of structured and unstructured data

Query across relational DB and Hadoop with single T-SQL Query

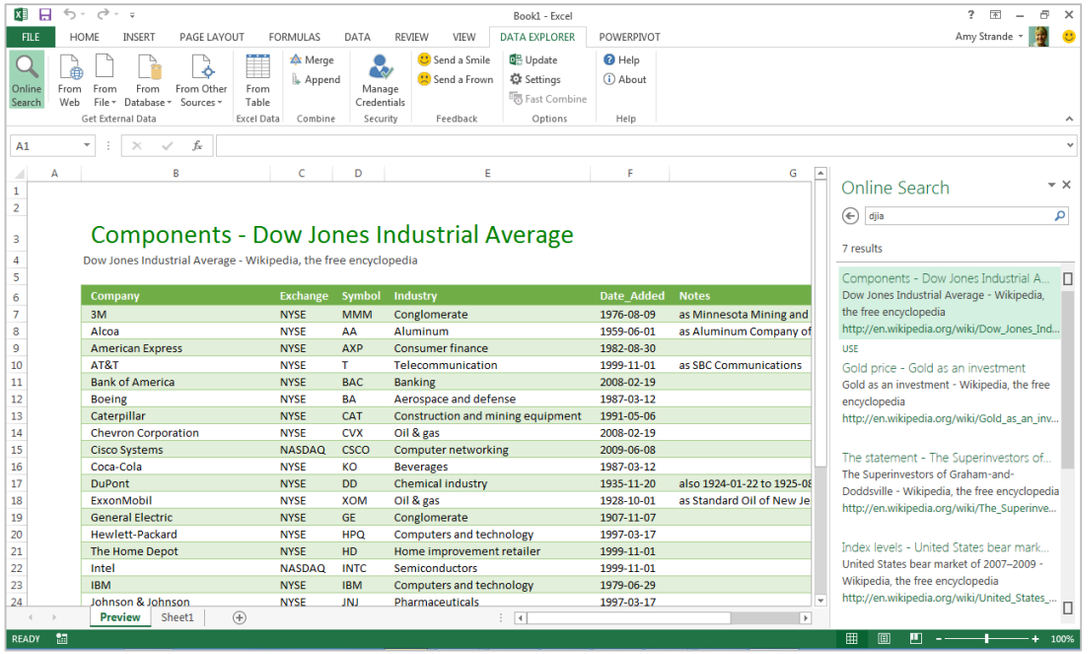
Key features

Power Query

Windows Azure Marketplace

Windows Azure HDInsight service and Microsoft HDInsight server (preview) 100% apache

Parallel data warehouse with Polybase



Powerful insights with familiar tools

Model and mash-up

Access and mash-up data from virtually any source

Model data using familiar tools

Visualize and analyze

Generate insights fast with powerful data visualizations

Quickly analyze up to millions of rows of data in Excel with PowerPivot and Power View

Connect and collaborate

Connect and collaborate around data

Easily share insights for improved decision making

Mobile clients for any device

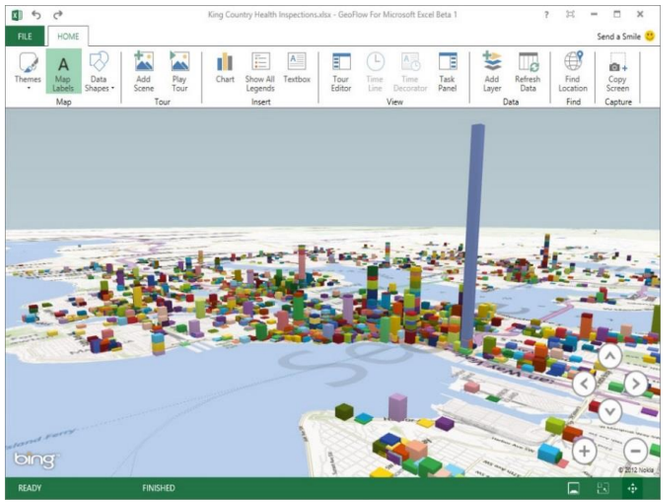
Key features

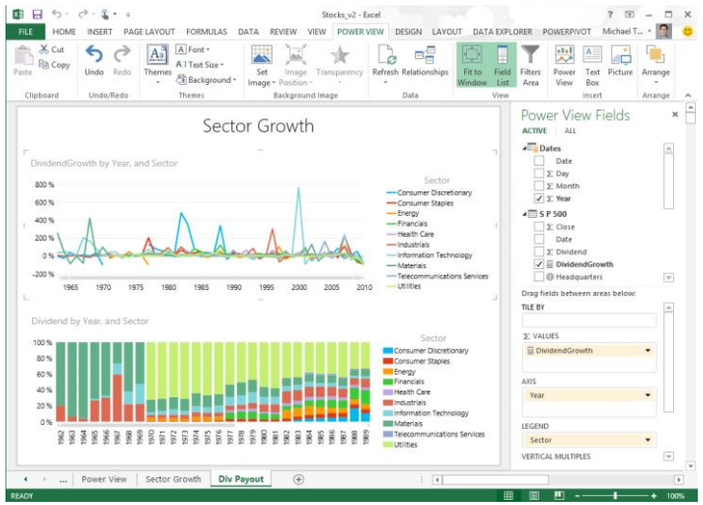
Excel in Office and Power BI in Office 365: Power Pivot and PowerView

Power Maps in Excel

Data mining add-ins for Excel

Mobile BI apps





Microsoft Power BI for Office 365

Self-service BI with the familiarity of Office and the power of the cloud

Insights in Excel

1 Billion Office Users

Discover

Analyze

Visualize

+

Collaborate in Office 365

1 in 4 enterprise customers on Office 365

Share

Find

Q&A

Mobile

Scalable | Manageable | Trusted

Microsoft Power BI for Office 365

Insights in Excel

Discover	Search, access, and transform public and internal data sources with **Power Query**
Analyze	Easy data modeling and lightning fast in-memory analytics with **Power Pivot**
Visualize	Bold new interactive data visualizations with **Power View** and **Power Map**

Collaborate in Office 365

Share	Share data views and workbooks refreshable from on-premises and cloud based data sources, with **Power BI sites**
Find	Ask questions and get immediate answers with natural language query
Mobile	Mobile access through HTML5 and touch optimized apps for Windows 8, RT, and iOS tablets

Scalable | Manageable | Trusted

Complete BI platform

Quality and accuracy

Cleanse data and improve data quality

Seamlessly integrate data from any source

Scale user-driven BI

Complete and enterprise-grade BI platform

Build and deploy secure and scalable BI solutions

Security, governance, and compliance

Empower business users to manage data governance

Deliver credible, consistent data to the right users

Client tools

Analysis, reports, scorecards, dashboards, custom apps

BI semantic model

Data model

Business logic and queries

Data access

Data sources

Databases, LOB applications, big data, Odata feeds, spreadsheets, text files

Key features

Stream insight

Data quality services

Master data services

Analysis services

BI semantic model

Breakthrough Data Platform Performance

Mission critical performance

Faster insights from data

Platform for hybrid cloud

Platform for hybrid cloud

Hybrid cloud solutions

Enable new hybrid scenarios like cloud backup and cloud DR to reduce costs and improve on-premises DR

Easy on-ramp to cloud

Easily migrate and run SQL Server in the cloud to gain benefits of cloud computing

Complete and consistent

Deploy a complete and consistent data platform from on-premises to cloud

SQL database service is a "game changer"

Flavorus®

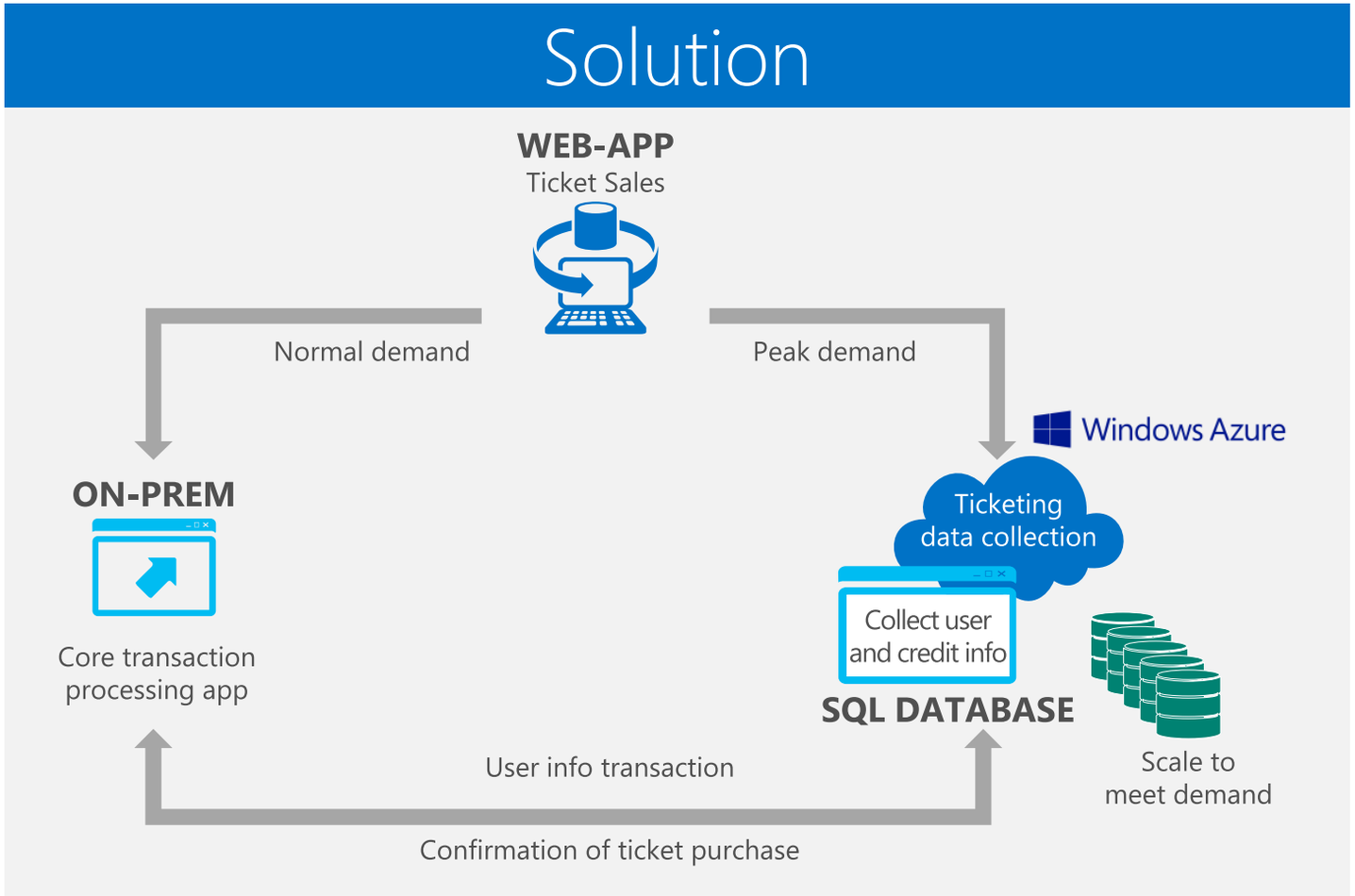
Leads to greater revenue

Business challenge

Cost effective solution to deal with massively variable demand for online ticket sales

Key benefits

- ✓ 150,000 ticket sales in 10 seconds
- ✓ Massive scale out
- ✓ Manage compliance



Hybrid cloud solutions

Simplified cloud backup

Manual or automatic

At an instance level with point in time restore

Measures DB usage patterns to set backup frequency

Cloud disaster recovery

Fast disaster recovery (low RTO)

Easy to deploy and manage

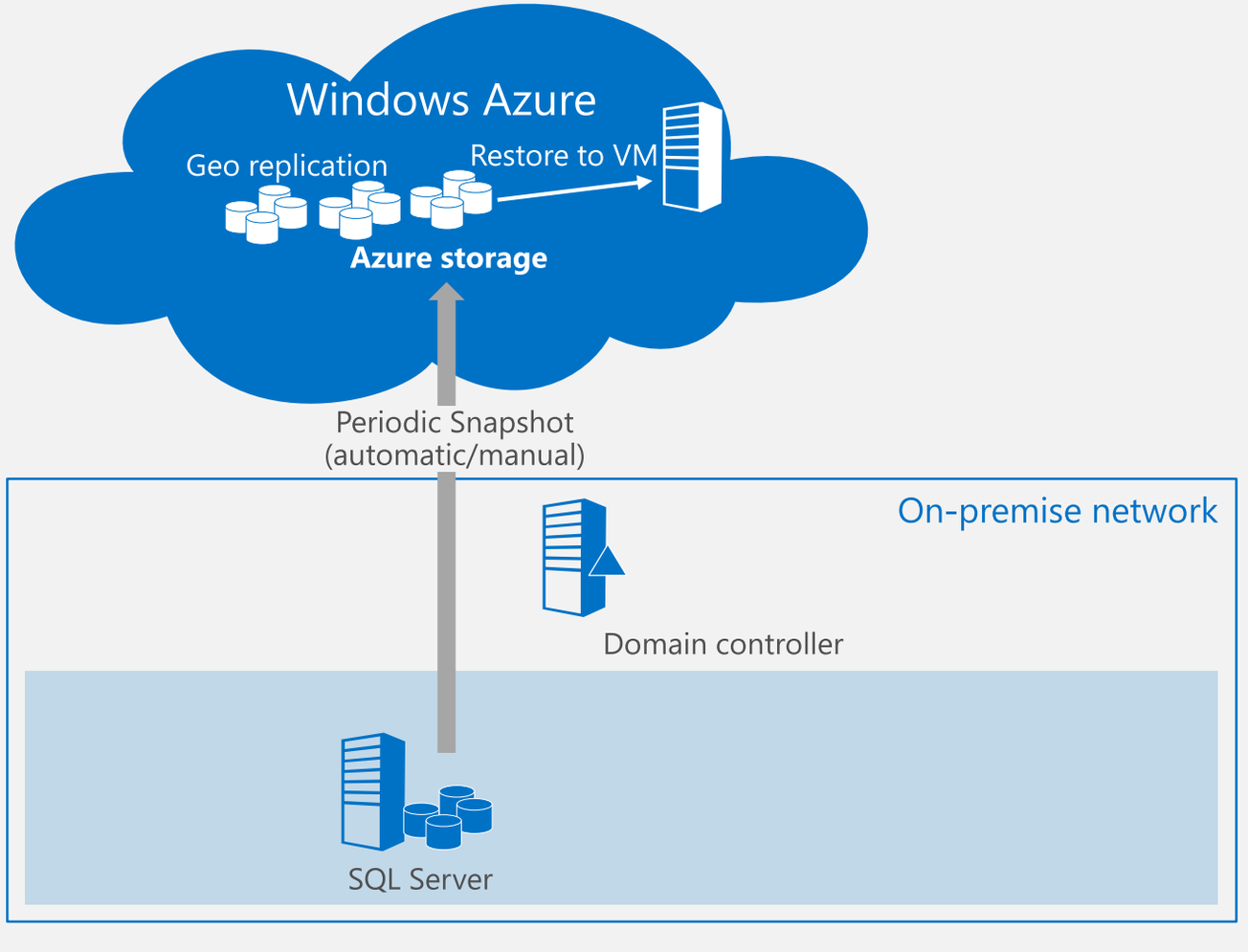
Extend on-prem apps

Cloud bursting

Greater global reach

Better isolation of internal assets

Reduce CAPEX and OPEX with cloud backup



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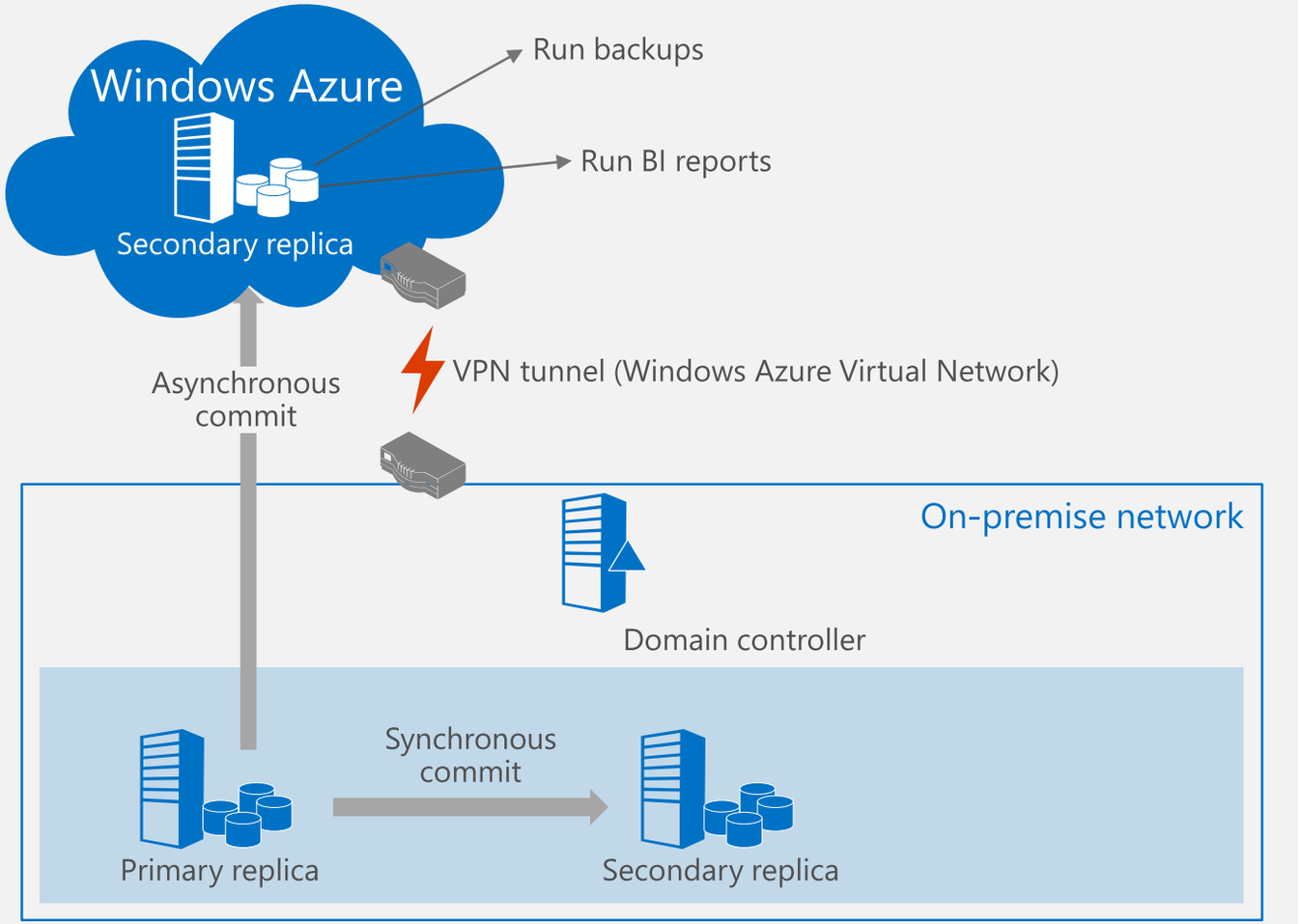

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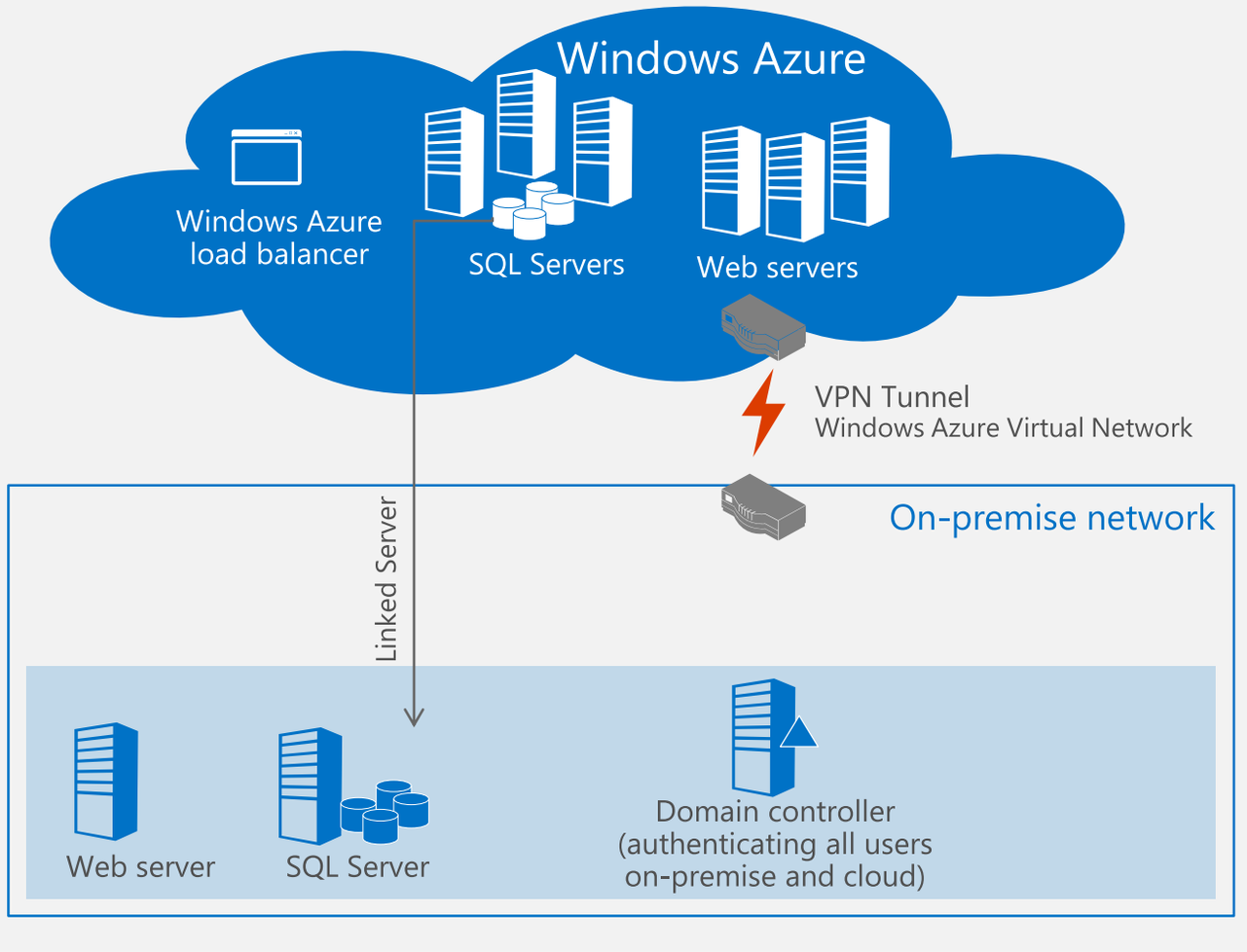
Gain cloud scale by extending on-premise apps



Easy on-ramp to cloud

New Migration Wizard

Easily migrate on-premise SQL Server to a Windows Azure VM

Designed for users unfamiliar with Windows Azure

SQL Server in a Windows Azure VM

Ideal for existing apps and dev/test new apps

Full SQL Server functionality

Full VM control

Windows Azure SQL database service

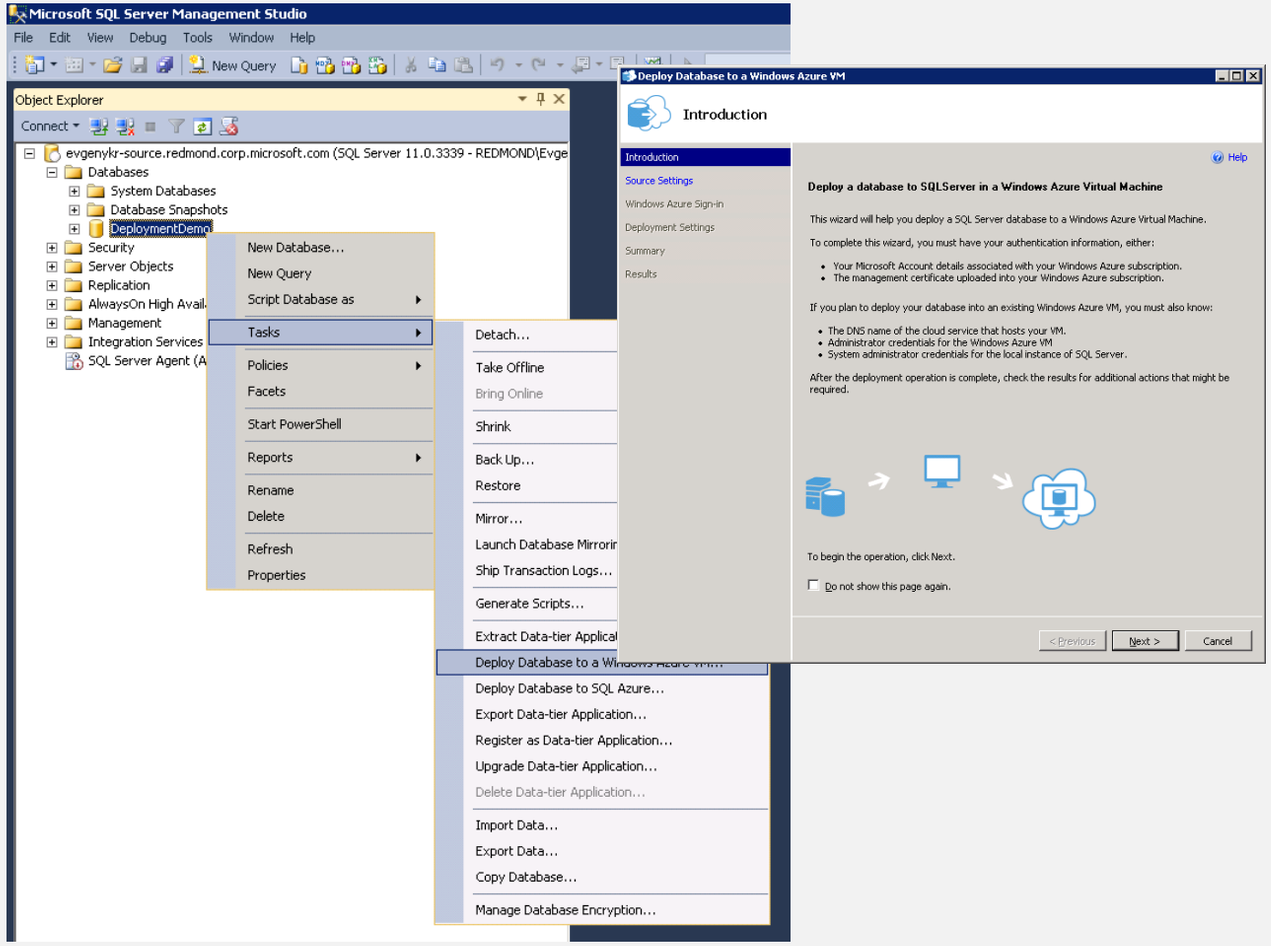
Ideal for new variable-demand apps

Dynamic scale-out of database

No patching of OS or DB

HA built-in with 99.9% SLA

Cloud Migration Wizard



SQL Database premium with reserved capacity

Two classes of cloud apps emerging

Cost-effective and scalable
Web and business editions deliver a managed database service for apps that have low demands or require cost-effective scale-out

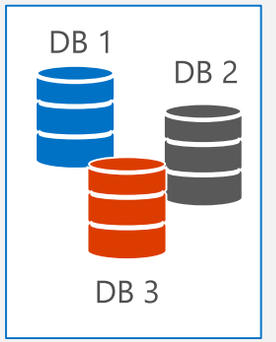
Business-class
Premium edition delivers fixed reserved capacity for apps that need:

- ✔ Sustained resource demands
- ✔ Many concurrent requests
- ✔ Predictable latency

More predictable performance

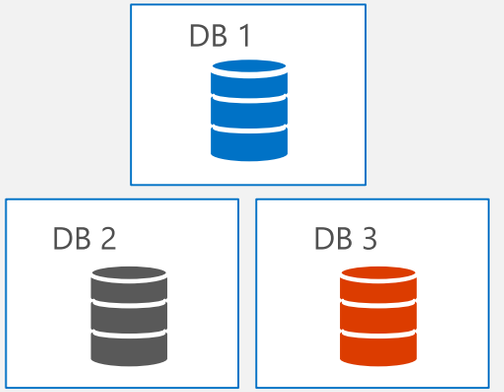
Shared resources

Web and business editions



Reserved resources

Premium edition



The Microsoft Data Platform

Office

Windows Azure

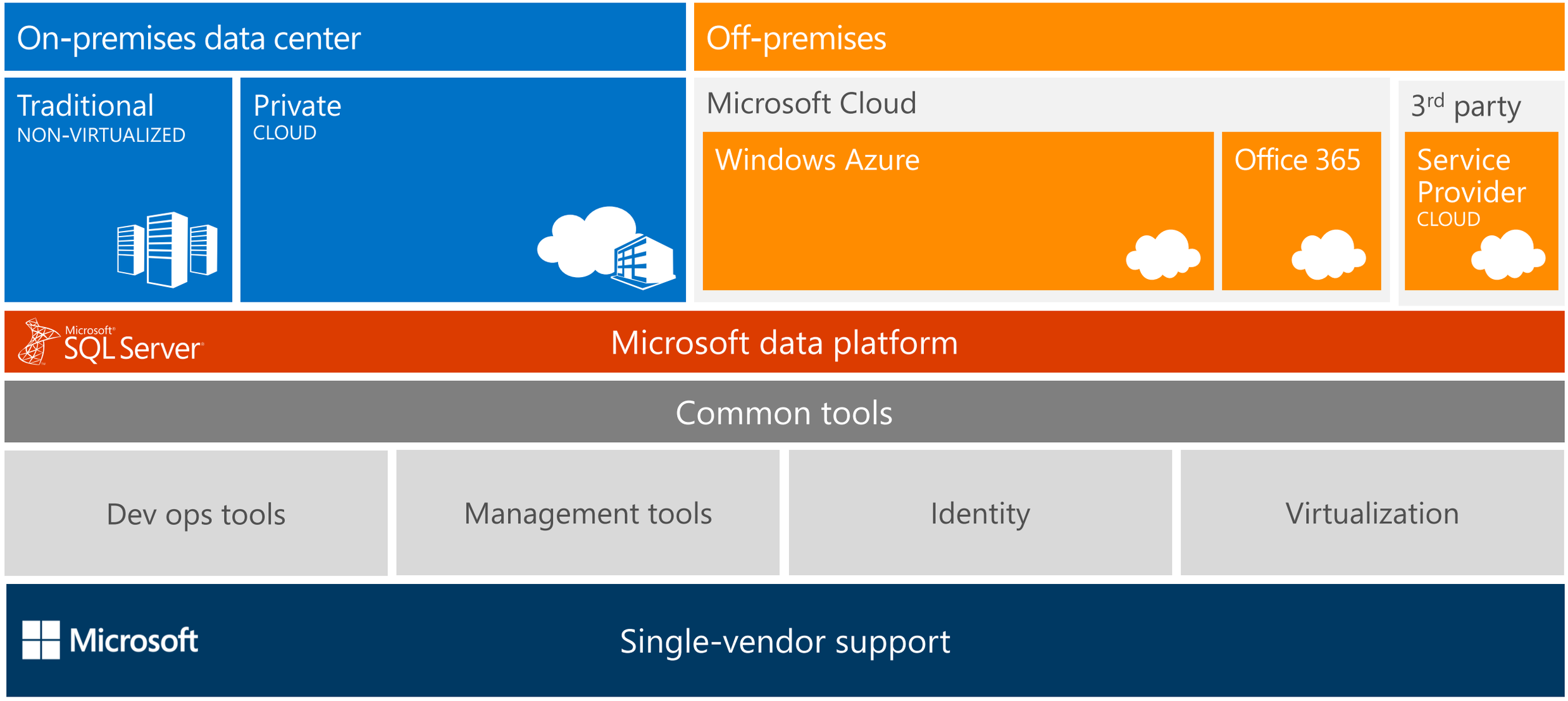
Windows Server

Microsoft SQL Server

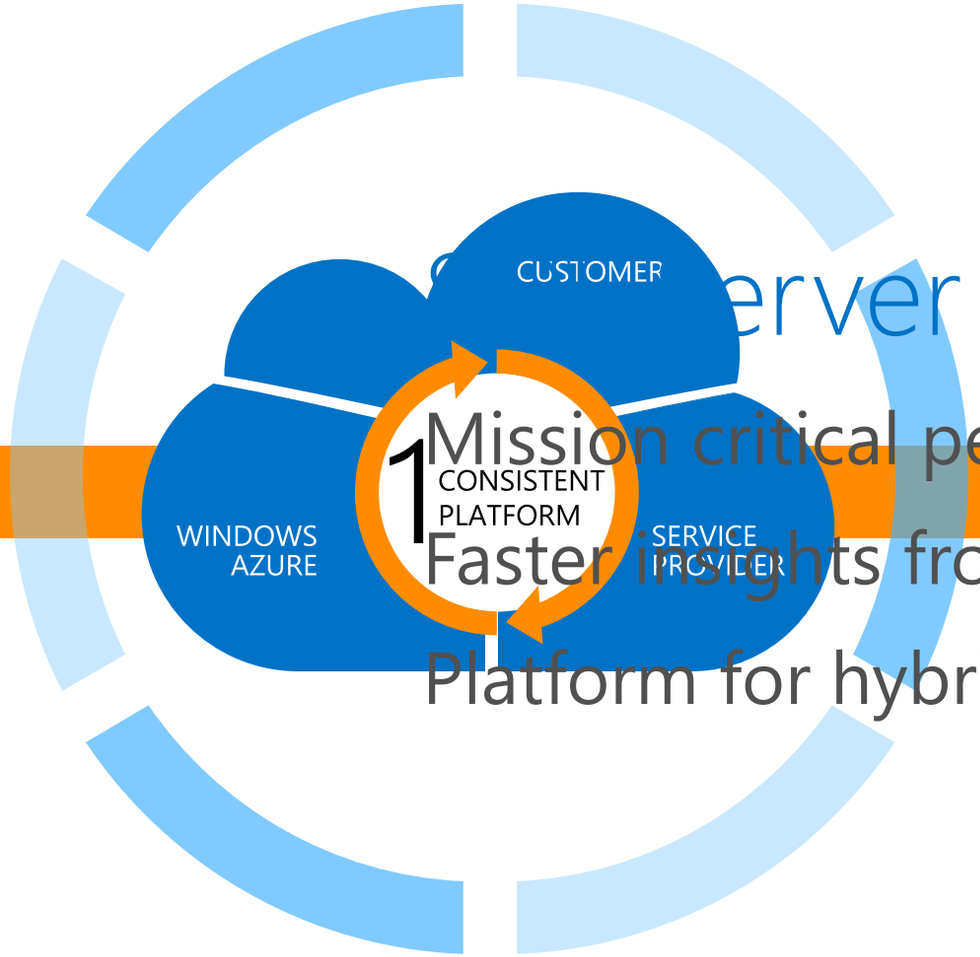
Show All

Close All

Complete and consistent data platform



Complete and consistent data platform



Microsoft SQL Server

erver 2014

Mission critical performance

Faster insights from any data

Platform for hybrid cloud

DEVELOPMENT MANAGEMENT DATA IDENTITY VIRTUALIZATION

SQL Server 2014 editions

Enterprise edition—mission critical
OLTP, DW, and BI

In-memory performance across
- OLTP, DW and BI

AlwaysOn HA on-premise and cloud

Mission critical security

Mission critical scalability

Enterprise data warehouse

Inclusive of business intelligence edition

Business intelligence edition
Premium BI

Rapid data discovery with Power View

Managed self-service analytics

Single BI semantic model

Inclusive of standard edition

Standard edition continues to offer basic DB and BI

Data platform roadmap

▲ Preview
● General availability

	CY2012	CY 2013		CY 2014
	H2	H1	H2	H1
Box	● SQL Server 2012 SP1 ▲ Microsoft HDInsight Server	▲ SQL Server 2014 ● BI in SharePoint and Excel 2013		● SQL Server 2014
Cloud	▲ Windows Azure HDInsight	● SQL Server in Azure VM	● Windows Azure HDInsight ▲ Windows Azure SQL database premium ▲ Power BI in Office 365 ▲ Power BI mobile app	▲ Project Passau ● Windows Azure SQL database premium ● Power BI in Office 365 ● Power BI mobile app
Appliance		● SQL Server 2012 PDW	● SQL Server 2012 PDW AU1	

Dates and capabilities subject to change

Unlocking Insights on Any Data
Breakthrough Platform Performance with SQL Server 2014
Enabling Familiar, Powerful Business Intelligence
The Modern Data Warehouse

Microsoft

Get Started Today!

- Explore the latest in SQL Server at www.microsoft.com/sql

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