



# Making Data Work for Everyone

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# Making data work for **everyone**

Breakthrough  
mission critical  
performance

Real-time  
insights on  
any data

Transformational  
hybrid cloud  
scenarios



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# Mission critical performance

## Breakthrough in-memory performance

Average 10x faster for new and existing SQL Server apps

## Security and scalability

Enhanced security with enterprise scale using Windows Server

## High availability

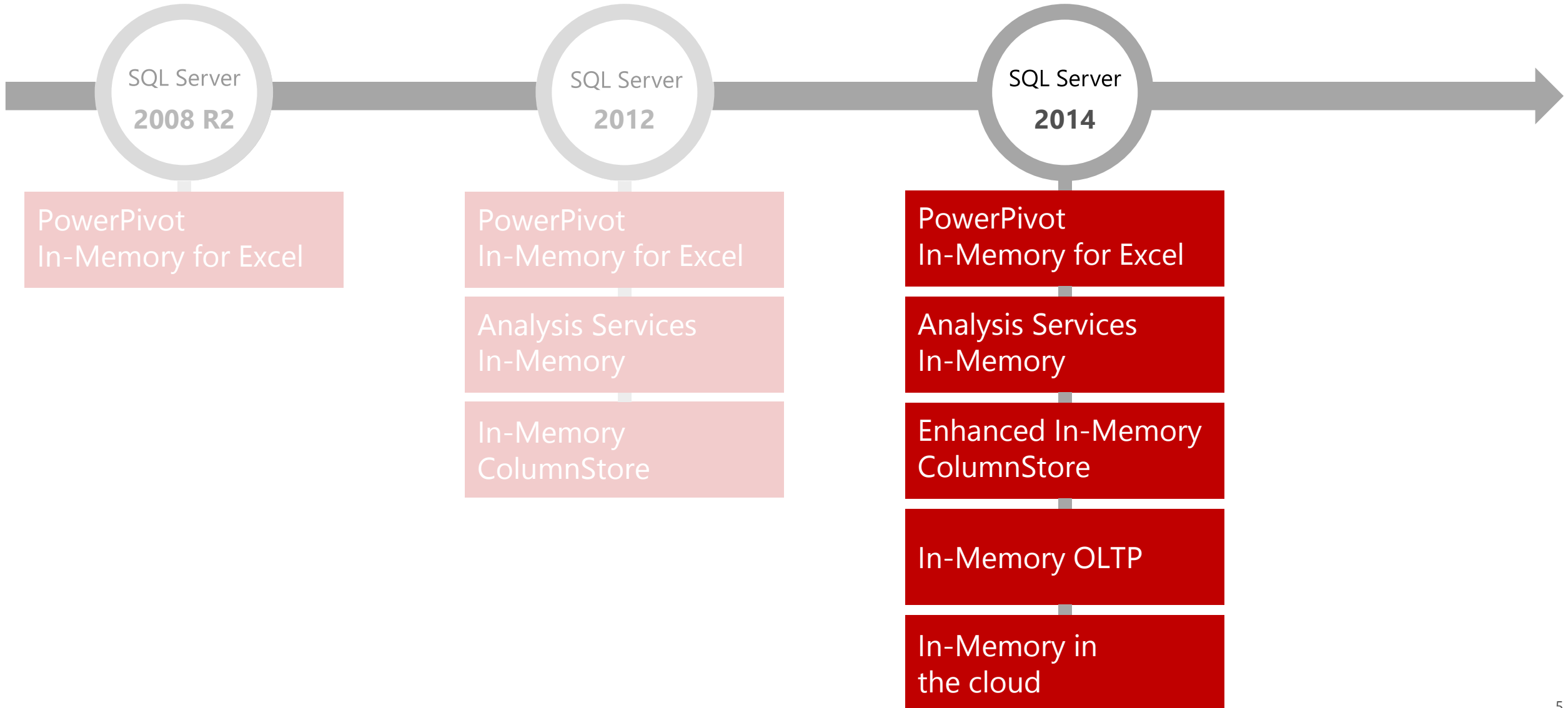
The 9's you need, with AlwaysOn

## Mission critical support

Live support designed for mission critical solutions



# The Journey to Complete In-Memory



# Breakthrough in-memory performance

## SQL Server 2014

In-memory 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

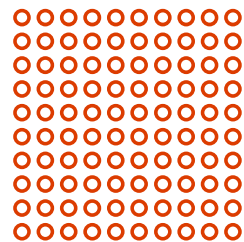
Across all workloads



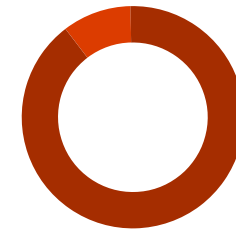
In-memory performance across OLTP, DW & BI  
All in a single SKU



Up to 30X  
OLTP performance gains



Over 100X  
Faster star join queries



90%  
Disk space savings

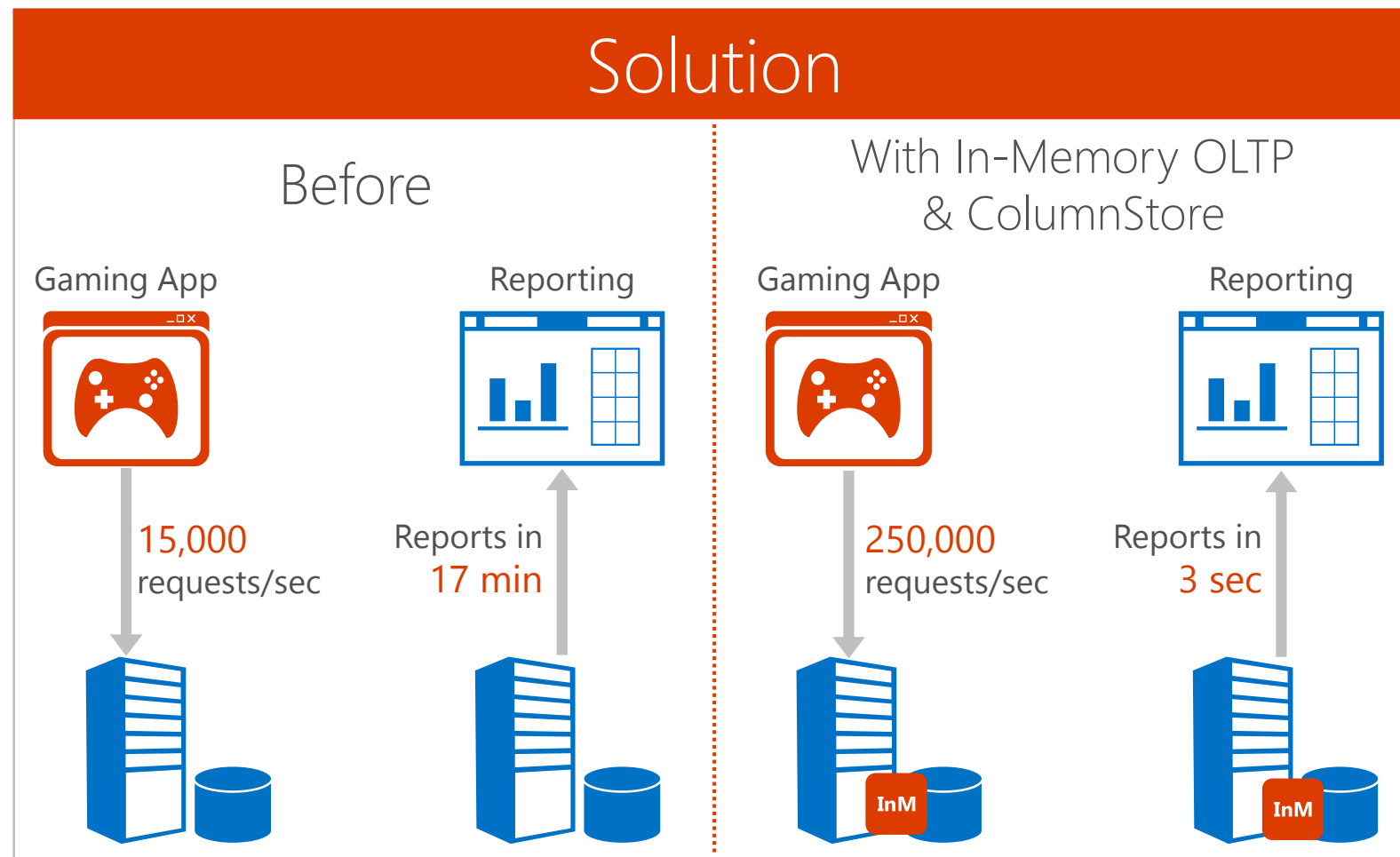
# 17x more transactions per second & 340x reduction in reporting times with In-Memory

## Business challenge

Online gaming company needed to support rapid growth by providing a faster, smoother gaming experience for more users, and speeding time to insights.

## Key benefits

- ✓ Scales to handle 250,000 player requests per second—up from 15,000
- ✓ Reduced reporting time from 17 minutes to 3 seconds





# In-Memory DEMO

## SQL Server 2014

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Technical Product Specialist



# Security

Least vulnerable  
database

6 years  
in a row

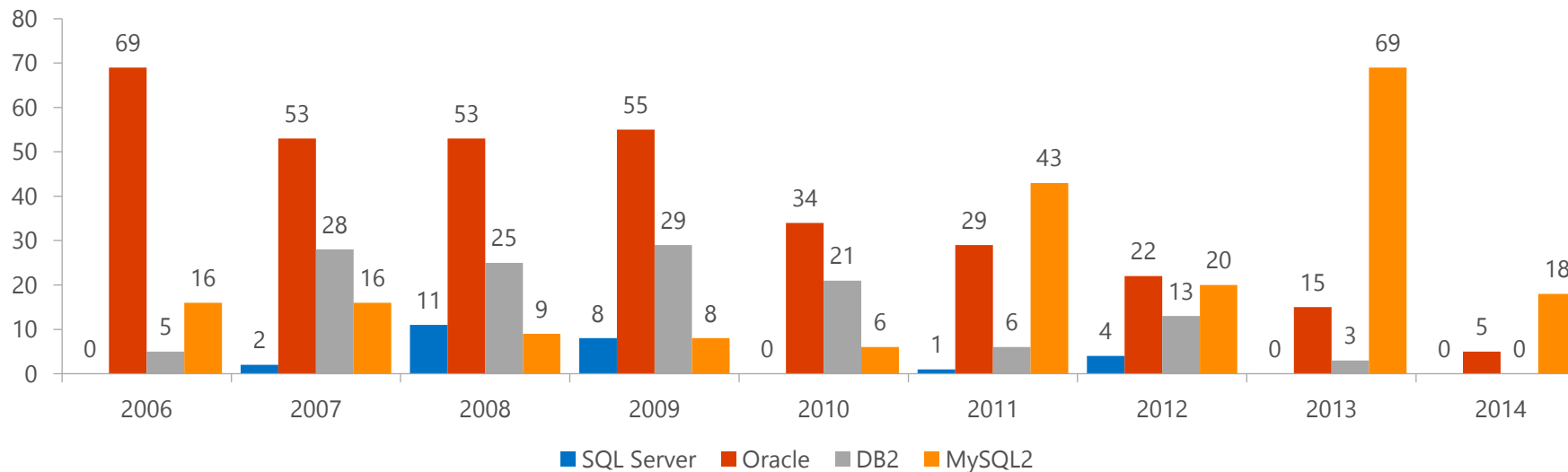
Most utilized  
database in  
the world

45%  
market share

## 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

## Database vulnerabilities



\*National Institute of Standards and Technology Comprehensive Vulnerability Database 4/2014, Market share from IDC 2014

# Scalability

## Scale compute

Up 640 logical processors  
64 vCPUs/VM  
1TB memory/VM  
64 nodes/cluster

## Scale networking

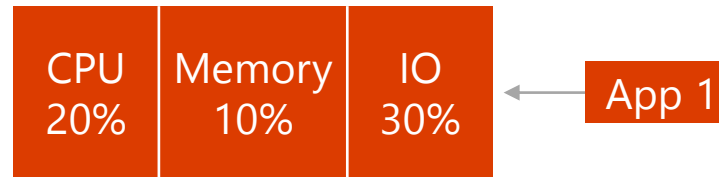
Network virtualization provides flexibility and isolation  
Assign minimum and maximum bandwidth

## Scale storage

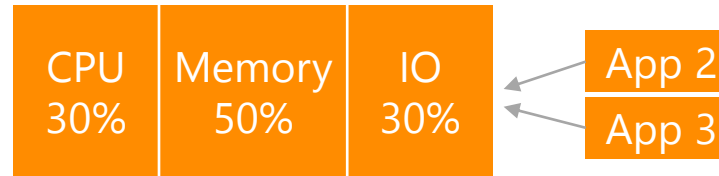
Storage virtualization  
Enterprise-class network storage on standard hardware  
Storage tiering for higher performance

## SQL Server 2014 resource governance

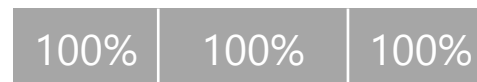
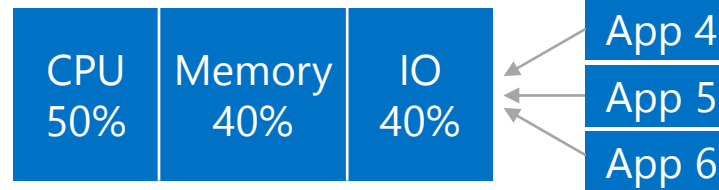
### Pool 1



### Pool 2



### Pool 3



## 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

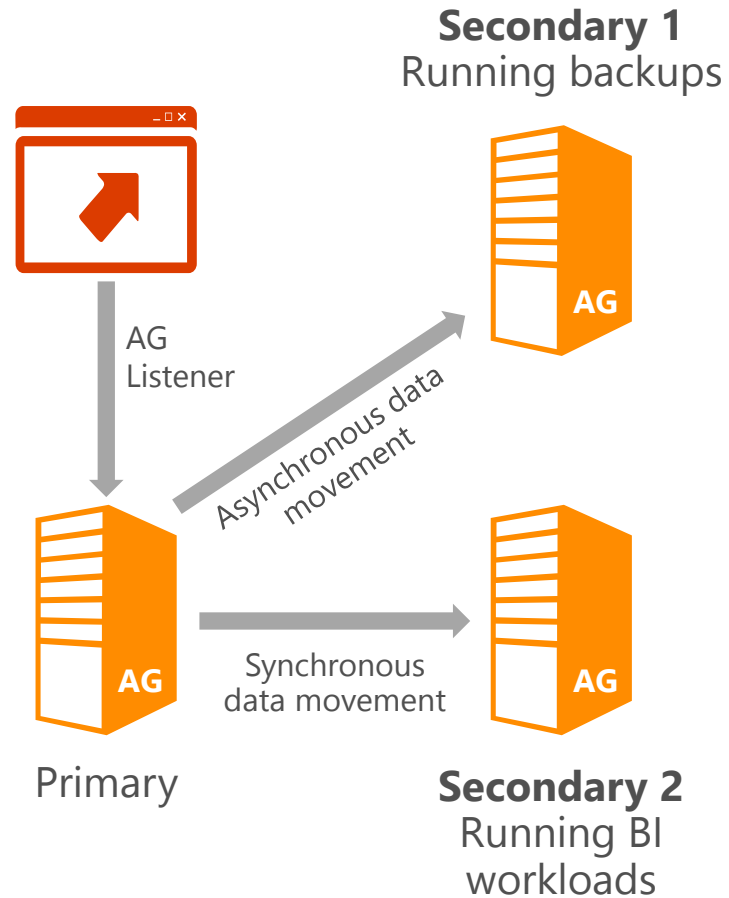
## Efficient

HA without expensive SANs  
Offload reads and backups to secondaries

## Easy to deploy & 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

BMW



Over 900 businesses  
migrated from  
Oracle to SQL Server  
since 2012

## Migrations by Industry

Financial Services	139
Discrete Manufacturing	122
Retail & Consumer Goods	113
Government	105
Health	94
Professional Services	93
Process Manufacturing & Resources	59
Hospitality & Travel	44
Telecommunications	36
Power & Utilities	31
Other Industries	119
TOTAL	955

**InformationWeek**

“Move over Hana. The new leader.”

**CIO**

“(SQL Server 2014) might give those who are considering SAP HANA... a reason to pause and look at Microsoft’s new release.”

**ENTERPRISE TECH**  
INSIDE EXTREME SCALE CHALLENGES

“Hekaton in-memory a game changer for @Microsoft @SQLServer 2014.”

**CMS WIRE**

“Microsoft SQL 2014 just may be the most complete in-memory solution on the market.”

The reviewers have spoken.

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# Real-time insights on any data

## Access any data at all volumes

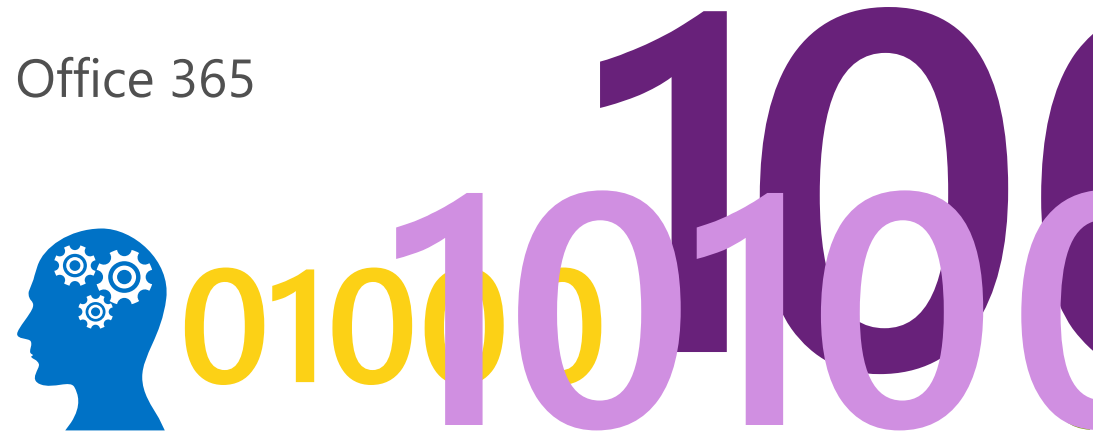
Search, access, and shape internal and external data, and combine with unstructured data

## Manage data across the enterprise

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

## Powerful insights with familiar tools

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





# Access any data at all volumes

Any Data	➔ Relational or Non-relational, on premises & cloud Integrated relational & non-relational query with T-SQL
All Volumes	➔ Scale out relational data to multi-petabytes with APS Scale out non-relational data with HDInsight
Real-time	➔ In-memory query performance (up to 100x) Near real-time insights on streaming data



## Key Features

- ➔ In-memory ColumnStore
- ➔ Massive parallel processing architecture
- ➔ PolyBase
- ➔ Hadoop distribution
- ➔ StreamInsight

# Manage data across the enterprise

## Dashboards

Performance management dashboards & scorecards with **SharePoint**



## Reporting

Pixel perfect operational & embedded reporting with **Reporting Services**



## Analysis

Single semantic model & scalable analytics engine with **Analysis Services**



## Master Data

Accurate & trustworthy data with **Master Data Services**



## Data Quality

Data cleansing & matching with **Data Quality Services**



## Data Integration

Integrated deployment & management with **Integration Services**



# Powerful Insights with familiar tools

**Excel** as the BI tool  
for everyone



1 Billion  
Microsoft Office users

Discover



Analyze



Visualize



**Power BI** for collaboration  
& new experiences



1 in 4 enterprise  
customers on Office 365

Share



Ask



Access



← Scalable, Manageable, Trusted →

# 4 Advantages of Microsoft BI

## Speed:

Get employees using BI quickly with familiar tools in Excel

1

## Scale:

Deploy BI across enterprise with scalable, complete solution

2

## Access:

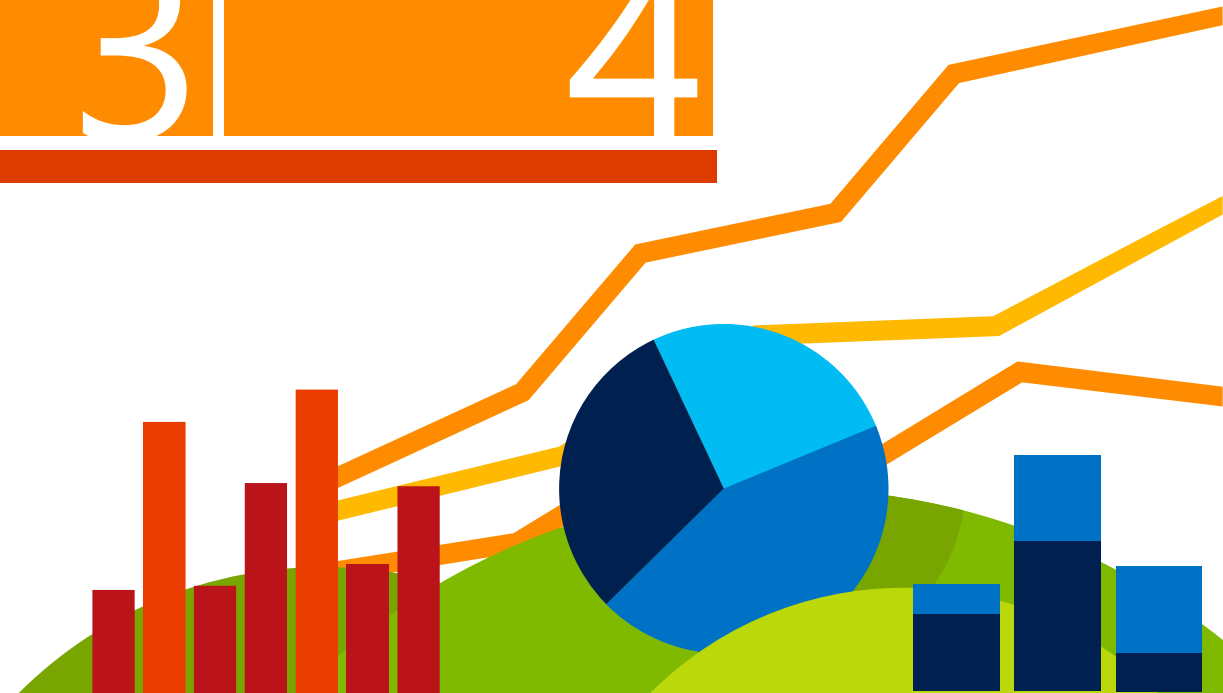
Discover & combine both structured & unstructured data

3

## Savings:

Won't cost thousands per user for specialized BI tools

4





# DEMO

## Business Intelligence

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# Transformational hybrid cloud scenarios

## Simplify backup & DR

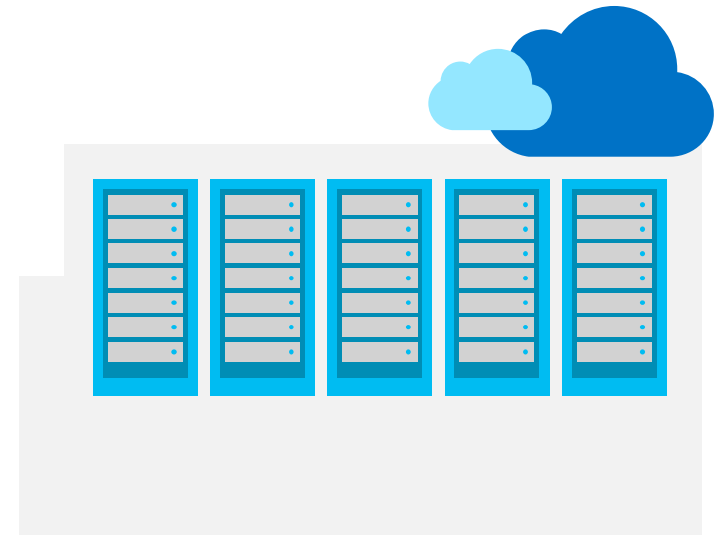
Cost effective, scalable and secure

## Extend on-premises apps

Connect to on-premises applications with ease

## Analytics for on-premises data

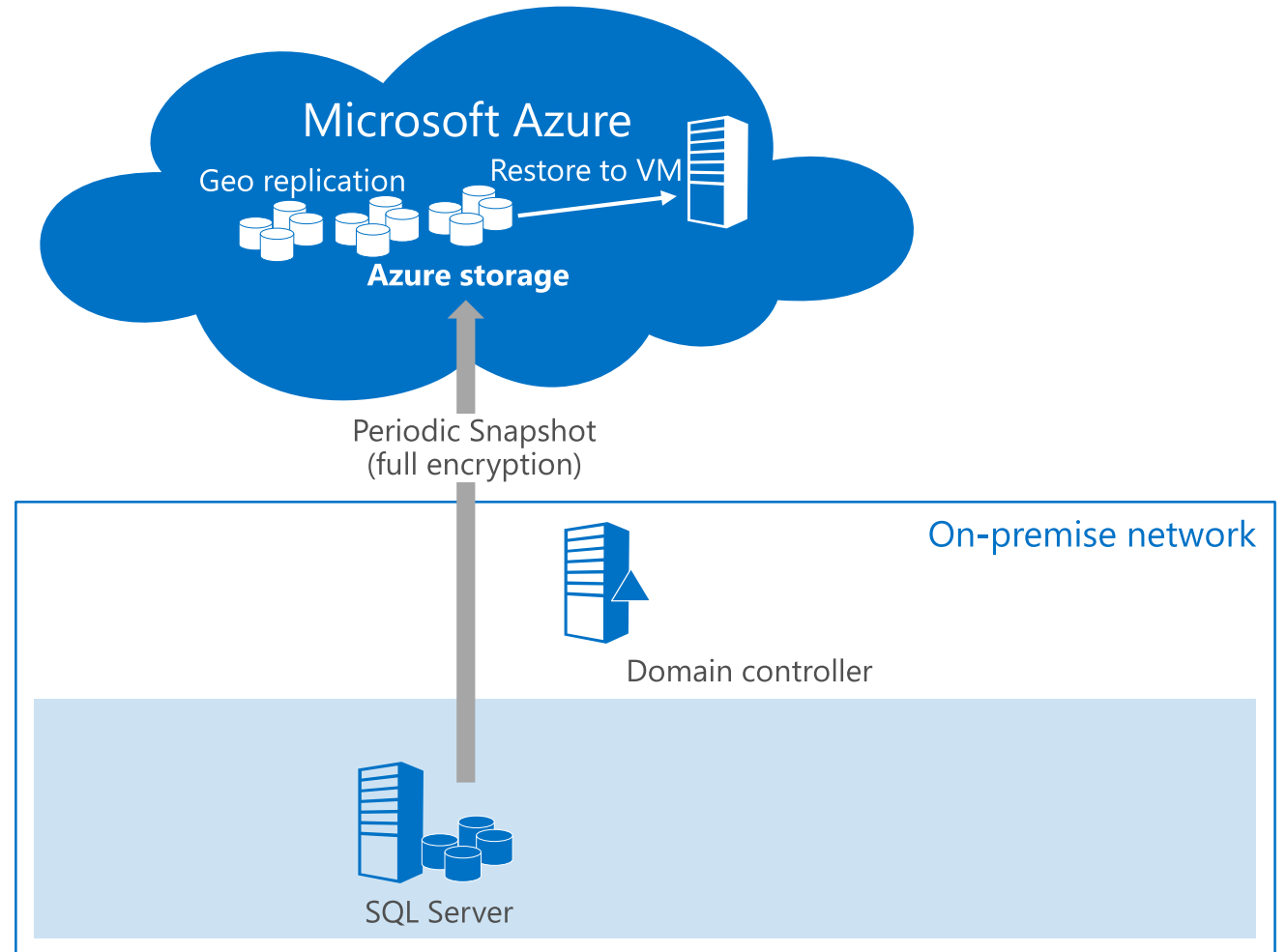
Insights on data where it lives



# Simplified cloud backup

- ◆ Manual or automatic
- ◆ Full SQL Server level backup with point in time restore
- ◆ Encryption
- ◆ Complementary tool for backing up prior version of SQL Server

Reduce CAPEX and OPEX with cloud backup

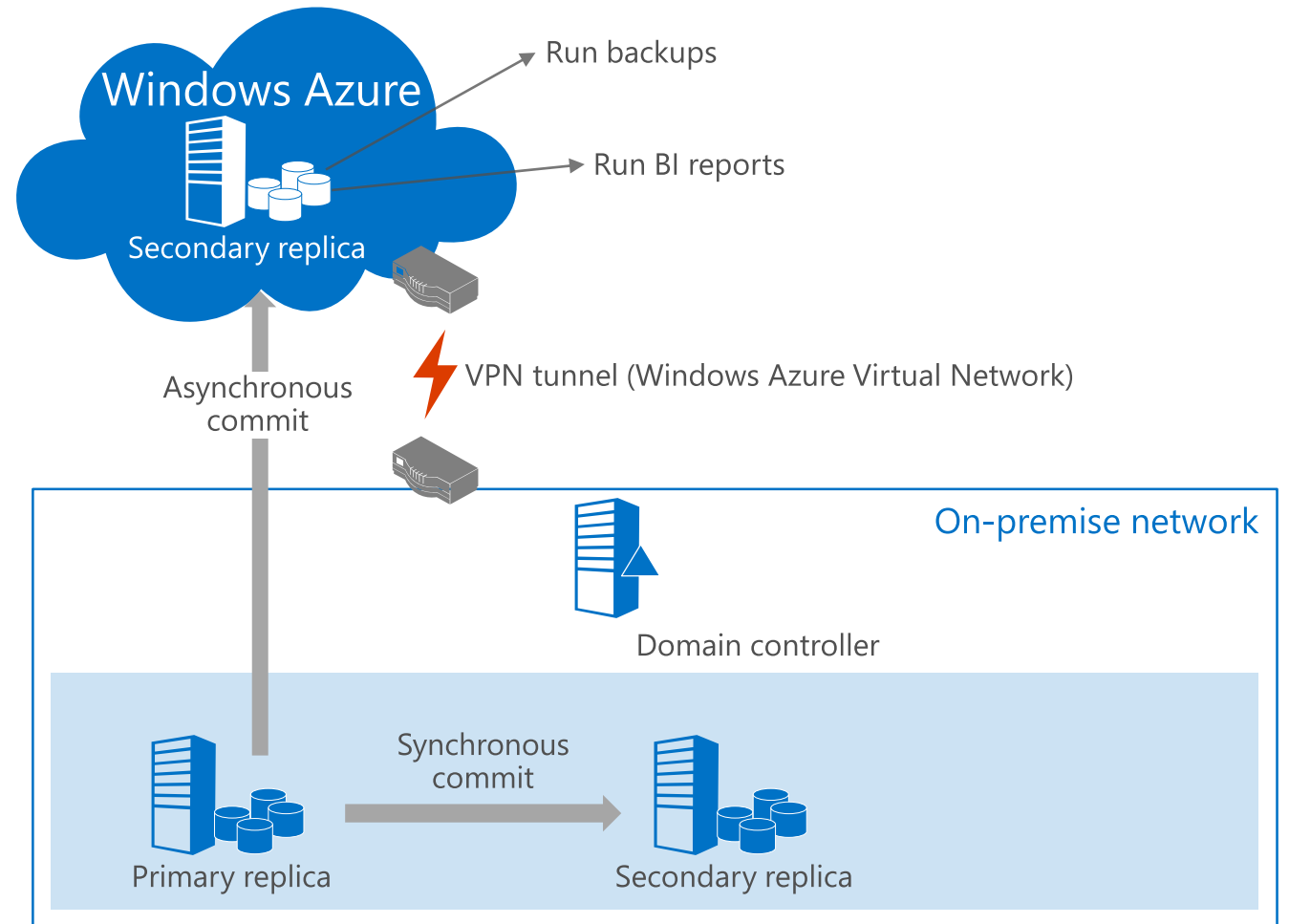




# Cost effective cloud DR

- ◆ Up to 8 readable secondaries
- ◆ Run backups and improve global BI reporting
- ◆ Reduce recovery time objective even further with Express Route
- ◆ UI built into SQL Server for simplified deployment & mgmt

## Reduce CAPEX and OPEX with cloud DR



# Hybrid Solution Cuts Data Recovery Time from Minutes to Seconds



## Business Challenge

IT services organization wanted to improve the speed of its disaster recovery solutions for customers, including its parent company

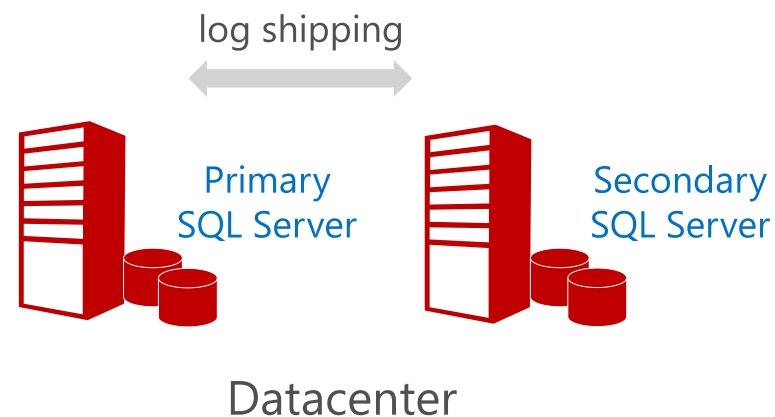
## Key Benefits

- ✓ Data recovery times cut from minutes to seconds
- ✓ Expected cost reduction of 30%
- ✓ Deployment times shortened from months to days

## Solution

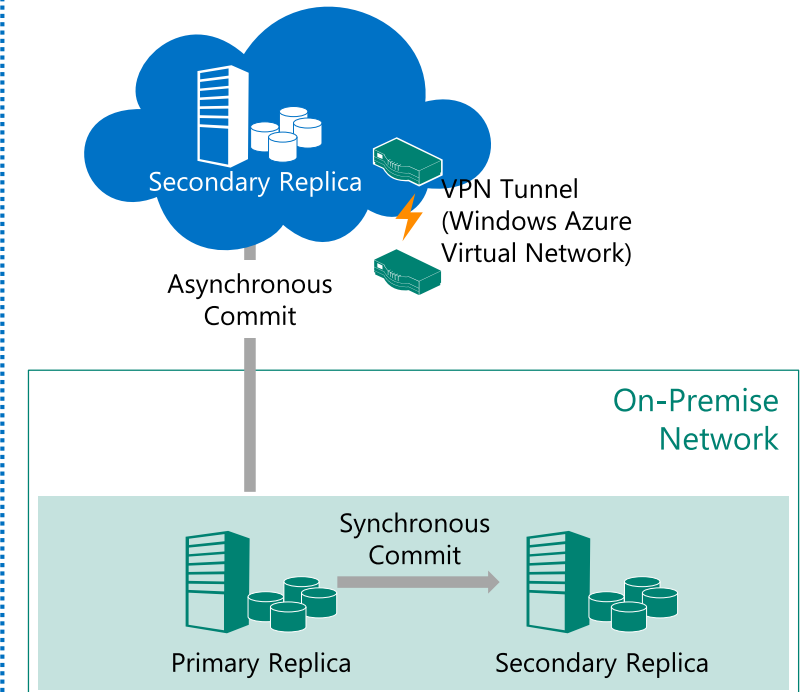
### Before

High availability and disaster recovery using failover clusters and database log shipping took minutes to restore

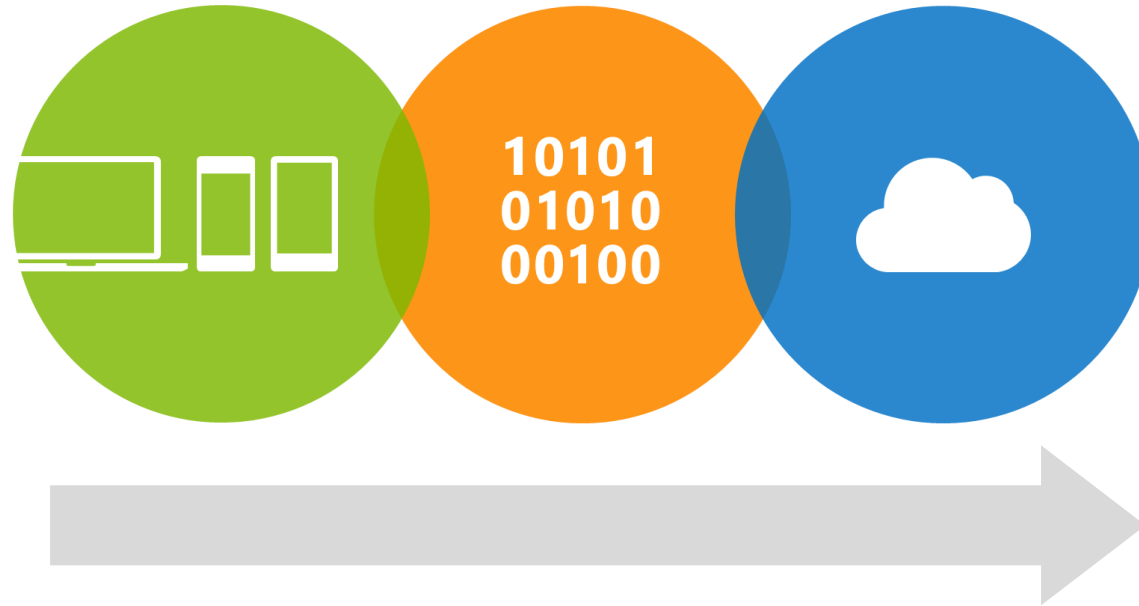


### Hybrid Disaster Recovery

Recovery times reduced to seconds and near-zero RPOs



# Making data work for **everyone**...



**...by unlocking insights on any data**



# Making data work for **everyone**

 <b>Lufthansa Systems</b>	<b>PROGRESSIVE</b>		<b>xerox</b> 	 <b>BOEING</b>		
<b>MEDIACOM</b> People First ► Better Results		<b>FERRANTI</b> computer systems	<b>AMD</b> 	<b>CONDÉ NAST</b>		
 <b>ASCRIBE</b>	<b>edgernet</b> Sell Easier   Sell More	<b>Carnegie Mellon University</b>	<b>Amway</b>	<b>Virginia Tech</b> 	<b>bwin.party</b>	
 <b>TREK</b>		 <b>RBS</b> The Royal Bank of Scotland	<b>NASDAQ OMX</b>	<b>HALO 4</b>	 <b>Itaú</b>	 <b>Harper Collins</b>







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