SQL Server 2014 Overview with Data Insights

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The Cloud OS

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

In-Memory now a viable solution

$1.1 \text{ 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 Microsoft Data Platform

- Modern DB platform
  - XML ● KPIs
  - Management Studio ● Mirroring
  - Compression ● Policy-Based Mgmt ● Programmability
  - PowerPivot ● SharePoint Integration ● Master Data Services

- Mission Critical
  - SQL Server 2000

- Performance & Productivity
  - SQL Server 2005

- Self-Service BI
  - SQL Server 2008

- Cloud-Ready
  - SQL Server 2008 R2

- Mission Critical & Cloud Performance

- In-Memory Across Workloads ● Performance & Scale ● Hybrid Cloud Optimized ● HDInsight ● Cloud BI

- SQL Server 2012

- SQL Server 2014
## SQL Server 2014 Editions

### Enterprise

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<th>Mission Critical Performance</th>
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<td>Mission critical &amp; Tier 1 applications</td>
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<td>Data Warehousing</td>
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<td>Private cloud &amp; highly virtualized environments</td>
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<td>Large, centralized or external-facing BI</td>
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### Business Intelligence

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<td>(Inclusive of Standard edition)</td>
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<tr>
<td>Corporate Business Intelligence</td>
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<tr>
<td>Large-scale self-service reporting &amp; analytics</td>
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### Standard

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<th>Basic Database &amp; Reporting</th>
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<tr>
<td>Non-critical databases and workloads</td>
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<tr>
<td>Basic reporting and analytics</td>
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## SQL Server 2014 Editions

### SQL Server Capabilities

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<th>Business Intelligence</th>
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<tr>
<td><strong>Maximum Number of Cores</strong></td>
<td>16 cores</td>
<td>16 cores – DB OS Max – BI</td>
<td>OS Max*</td>
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<tr>
<td><strong>Windows Server Core Edition Support</strong></td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td><strong>Basic OLTP</strong></td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td><strong>Basic Reporting &amp; Analytics</strong></td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td><strong>Programmability &amp; Developer Tools (T-SQL, CLR, data types, FileTable)</strong></td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td><strong>Manageability (Management studio, policy based management)</strong></td>
<td>●</td>
<td>●</td>
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<tr>
<td><strong>Enterprise Data Management (Data quality, master data services)</strong></td>
<td></td>
<td>●</td>
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<td><strong>Self-service Business Intelligence (Power View, Power Pivot)</strong></td>
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<tr>
<td><strong>Corporate Business Intelligence (Semantic model, advanced analytics)</strong></td>
<td></td>
<td>●</td>
<td>●</td>
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<tr>
<td><strong>Advanced Security (Advanced auditing, transparent data encryption)</strong></td>
<td></td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td><strong>In-memory ColumnStore</strong></td>
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<td>●</td>
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<td><strong>In-memory OLTP</strong></td>
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<td>Standard</td>
<td>Standard</td>
<td>Premium</td>
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<tr>
<td><strong>AlwaysOn High Availability</strong></td>
<td>Basic</td>
<td>Basic</td>
<td>Advanced</td>
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</table>

*Enterprises legacy servers licensed under Server/CAL licensing are subject to a 20-core per server limit.

**Basic includes 2 node Failover Clustering
SQL Server 2014 Editions – Feature Comparison

**Enterprise Edition: Mission Critical Performance**

Includes all of the features in Business Intelligence Edition, plus the following:
- **In-Memory Built-in**
- In-Memory OLTP
- Enhanced In-Memory Columnstore for DW
- In-Memory BI with Power Pivot
- Enhanced Query Processing
- **Enhanced Security & Scalability**
- 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
- Resource Governor adds IO governance
- SysPrep at cluster level
- Predictable performance with tiering of compute, network, and storage with Windows Server 2012 R2
- **High Availability**
- Enhanced AlwaysOn, 8 secondaries, Replica Wizard
- Simplified cloud Disaster Recovery with AlwaysOn replicas in Windows Azure VMs
- Clustered Shared Volume support, VHDX support (Windows Server 2012 R2)
- Manage on-premises and cloud apps (System Center 2012 R2)
- **Mission Critical Support**
- Premier: 24x7 support, access to tech training, PMC. Solution validation, On-site expertise, fastest response times

**Business Intelligence: Faster Insights from any Data**

Includes all of the features in Standard Edition, plus the following:
- **Easy Access to Data, Big & Small**
- Easy Access to Data, Big & Small
- Power BI in Office 365
- Power Map for Excel
- Mobile interfaces for Power BI
- **Complete BI Solution**
- Data Quality Services
- Master Data Services, including Excel add-in

**Standard: Basic Database & Reporting**

Reliable, cost-effective availability
- Buffer Pool Extension to SSDs
- Delayed Durability
- Database Mirroring
- Log Shipping
- Two-node Failover Clustering
- Windows Server Core
- Live Migration with shared/non-shared storage, clustered/non-clustered environment (with Windows Server 2012 R2)
- Hyper-V Replica (with Windows Server 2012 R2)

Robust administration capabilities
- SQL Server Management Studio (SSMS)
- PowerShell scripting support
- Backup Compression
- Database Recovery Advisor
- Distributed Replay
- Maintenance Plan Wizard
- SQL Server Management Pack for Microsoft Systems Center Operations Manager
- System Center Virtual Machine Manager
- System Center App Controller
- SQL Server Configuration Manager

Corporate security & compliance
- Least vulnerable database five years running [NIST Database, 2013]
- Enhanced separation of duty
- Backup encryption
- Basic auditing
- Configuration Manager
- User-Defined Server Roles
- Active Directory authentication
- Default Schema for Groups
- Contained Database Authentication

Cloud-Ready Information Platform
- Simplified backup to Windows Azure
- Support for backup of previous versions of SQL Server to Windows Azure
- Cloud back-up encryption support
- New Windows Azure Deployment UI for SQL Server
- Larger SQL Server VMs and memory sizes now available in Windows Azure

Developer Ready
- SQL Server Data Tools
- Support for diverse data types, including XML and FILESTREAM as well as spatial and planar indexing
- Performance improvements to Full-Text Search and FILESTREAM
- SQL query, edit, and design tools
- Query optimization enhancements

Operational reporting visibility
- SQL Server Reporting Services (SSRS)
- Report Designer in SQL Server Data Tools
- Report Builder BI client, standalone or through Report Manager

Powerful analytical insight
- SQL Server Analysis Services (SSAS)
- BI Semantic Model
- Data Mining Add-ins for Excel and Visio 2010

Integrated, consistent data
- SQL Server Integration Services (SSIS)
- Support for structured, unstructured and complex data types.
- StreamInsight™
- Support for industry standard APIs (ADO.NET, ODBC, JDBC, PDO, and ADO) across varied platforms including .NET, C/C++, Java, and PHP
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<th>Faster Insights from Any Data</th>
<th>Platform for Hybrid Cloud</th>
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| HIGH AVAILABILITY           |                               |                          |
| Enhanced AlwaysOn, with 8 secondaries and Replica Wizard |                                |                          |
| Delayed Durability          |                                |                          |
| Clustered Shared Volume support, VHDX support (Windows Server 2012 R2) |                                |                          |
| Manage on-premises and cloud apps (System Center 2012 R2) |                                |                          |

| SECURITY                     |                               |                          |
| Enhanced separation of duty  |                                |                          |
| CC certification at High Assurance Level for 2014 |                                |                          |
| Backup encryption support    |                                |                          |

| PROGRAMMABILITY              |                               |                          |
| Query optimization enhancements |                                |                          |
### What’s New in SQL Server 2014 since SQL Server 2008 R2

#### Mission Critical Performance

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#### HIGH AVAILABILITY

- SQL Server AlwaysOn
- Delayed Durability
- Recovery Advisor
- Windows Server Core
- Live Migration

#### T-SQL enhancements

- Enhanced support for ANSI SQL standards
- Transact-SQL Static Code Analysis tools
- Transact-SQL code snippets
- Intellisense

#### UNSTRUCTURED & COMPLEX DATA SUPPORT

- FileTable built on FILESTREAM
- Remote Blob Storage with SharePoint 2010
- Statistical Semantic Search
- Spatial features, including Full Globe & arcs
- Large user-defined data types

#### MANAGEABILITY

- Distributed Replay
- Contained Database Authentication
- System Center Management Pack for SQL Server 2012
- Windows PowerShell 2.0 support
- Multi-server Management with SQL Server Utility Control Point
- Data-Tier Application Component

### ACCESS ANY DATA

**Power Query**

- Windows Azure HDInsight Service

**Analytics Platform System**

- PDW V2
- Mash up data from different sources, such as Oracle & Hadoop

### INSIGHTS WITH FAMILIAR TOOLS

- Power BI in Office 365
- Power Map for Excel
- Mobile interfaces for Power BI

### COMPLETE BI SOLUTION

- SQL Server BI Edition
- HA for StreamInsight, complex event processing
- BI Semantic Model
- SQL Server Data Tools support for BI
- Change Data Capture for Oracle

### HYBRID CLOUD SOLUTIONS

- Simplified backup to Windows Azure
- Support for backup of previous versions of SQL Server to Windows Azure
- Cloud back-up encryption support
- Simplified cloud Disaster Recovery with AlwaysOn replicas in Windows Azure VMs

### PROGRAMMABILITY

- SQL Server Data Tools
- Local DB runtime (Express)
- Data-tier Application Component project template
- Data-Tier Application Framework (DAC Fx)
- Query optimization enhancements
- Interoperability support (ADO.NET, ODBC, JDBC, PDO, ADO APIs and .NET C/C++, Java, Linux, and PHP platforms)

### PLATFORM FOR HYBRID CLOUD

- SQL Server Data Tools
- License Mobility (with SA)
- Resource Governor enhancements
- Snapshot backups to Windows Azure via SQL Server Management Studio
What’s New in SQL Server 2014 since SQL Server 2008

Mission Critical Performance

**PERFORMANCE & SCALE**

- In-Memory OLTP
- Enhanced In-Memory ColumnStore for DW
- Support for 640 logical proc. & 4 TB memory
- Support to 15,000 partitions
- Resource Governor IO governance
- Buffer Pool Extension to SSDs
- Query optimization enhancements
- SysPrep at cluster level
- Predictable performance with tiering of compute, network, and storage with Windows Server 2012 R2
- Data Compression with USC-2 Unicode support
- Backup Compression

**HIGH AVAILABILITY**

- SQL Server AlwaysOn
- Delayed Durability
- Recovery Advisor
- Windows Server Core
- Live Migration
- Online Operations enhancements
- Clumped Shared Volume support, VHDX support (Windows Server 2012 R2)
- Manage on-premises and cloud apps (System Center 2012 R2)

**SECURITY**

- User-Defined Server Roles
- Default Schema for Groups
- SQL Server Audit
- SQL Server Fine-grained Auditing
- Enhanced separation of duty
- CC certification at High Assurance Level
- Backup encryption support

**PROGRAMMABILITY**

- SQL Server Data Tools
- Local DB runtime (Express)
- Data-tier Application Component project template
- Data-Tier Application Framework (DAC Fx)
- Query optimization enhancements
- Interoperability support (ADO.NET, ODBC, JDBC, PDO, ADO APIs and .NET C/C++, Java, Linux, and PHP platforms)

**T-SQL enhancements**

- Enhanced support for ANSI SQL standards
- Transact-SQL Static Code Analysis tools
- Transact-SQL code snippets
- Intellisense

**Unstructured & Complex Data Support**

- FileTable built on FILESTREAM
- Remote Blob Storage with SharePoint 2010
- Statistical Semantic Search
- Spatial features, including Full Globe & arcs
- Large user-defined data types

**MANAGEABILITY**

- Distributed Replay
- Contained Database Authentication
- System Center Management Pack for SQL Server 2012
- Windows PowerShell 2.0 support
- Multi-server Management with SQL Server Utility Control Point
- Data-Tier Application Component

**ACCESS ANY DATA**

- Power Query
- Windows Azure HDInsight
- SQL Server BI Edition
- HA for StreamInsight
- complex event processing
- BI Semantic Model
- SQL Server Data Tools support for BI
- Change Data Capture for Oracle

**Analysis Services**

- Import PowerPivot models into Analysis Services
- Enhancements on productivity, performance

**REPORTING SERVICES**

- Power View
- Configurable reporting alerts
- Reporting as SharePoint
- Shared Service
- Report Builder 3.0

**Data Quality Services**

- Build organizational knowledge base
- Connect to 3rd party data cleansing providers

**COMPLETE BI SOLUTION**

- SQL Server BI Edition
- HA for StreamInsight
- complex event processing
- BI Semantic Model
- SQL Server Data Tools support for BI
- Change Data Capture for Oracle

**Analytic Services**

- Import PowerPivot models into Analysis Services
- Enhancements on productivity, performance

**HYBRID CLOUD SOLUTIONS**

- Backup to Windows Azure
- Cloud Disaster Recovery
- Extend on-premises apps to the cloud

**EASY ON-RAMP TO THE CLOUD**

- New Windows Azure Deployment UI for SQL Server
- Larger SQL Server VMs and memory sizes now available in Windows Azure
- DAC enhancements: Import/export with Windows Azure SQL Database

**COMPLETE AND CONSISTENT FROM ON-PREM TO CLOUD**

- SQL Server Data Tools
- License Mobility (with SA)
- Resource Governor enhancements
- Snapshot backups to Windows Azure via SQL Server Management Studio

Platform for Hybrid Cloud

- Distributed Replay
- Contained Database Authentication
- System Center Management Pack for SQL Server 2012
- Windows PowerShell 2.0 support
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- Data-Tier Application Component

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- SQL Server Data Tools
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- Resource Governor enhancements
- Snapshot backups to Windows Azure via SQL Server Management Studio
## What’s New in SQL Server 2014 since SQL Server 2005

### Mission Critical Performance

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<td>Cube design tools, block</td>
<td>Extend on-premises apps to the cloud</td>
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<td>Resource Governor IO governance</td>
<td>Data-Tier Application Framework (DAC Fx)</td>
<td>Mash up data from different sources, such as</td>
<td>computations, and write-</td>
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<td>Buffer Pool Extension to SSDs</td>
<td>Query optimization enhancements</td>
<td>Oracle &amp; Hadoop</td>
<td>back to MOLAP</td>
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<td>Query optimization enhancements</td>
<td>Interoperability support (ADO.NET, ODBC, JDBC, PDO, ADO APIs and .NET C/C++, Java, Linux, and PHP platforms)</td>
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<td>Backup encryption support</td>
<td></td>
<td></td>
<td></td>
<td>COMPLETE AND CONSISTENT FROM ON-PREM TO CLOUD</td>
</tr>
</tbody>
</table>

### Platform for Hybrid Cloud

- Backup to Windows Azure
- Cloud Disaster Recovery
- Extend on-premises apps to the cloud
- Larger SQL Server VMs and memory sizes now available in Windows Azure
- DAC enhancements: Import/export with Windows Azure SQL Database

### ACCESS ANY DATA
- Power Query
- Windows Azure HDInsight Service
- Analytics Platform System (PDW V2)
- Mash up data from different sources, such as Oracle & Hadoop

### COMPLETE BI SOLUTION
- SQL Server BI Edition
- StreamInsight
- BI Semantic Model
- SQL Server Data Tools
- BI Development Studio
- Microsoft Visual Studio-based report dev tools
- Change Data Capture for Oracle
- Analysis Services
- Import PowerPivot models into Analysis Services
- Enhancements on productivity, performance
- Cube design tools, block computations, and write-back to MOLAP

### REPORTING SERVICES
- Power View
- Configurable reporting alerts
- Reporting as SharePoint Shared Service
- Report Builder 3.0
- Report Designer
- Report Manager

### DATA QUALITY SERVICES
- Build organizational knowledge base
- Connect to 3rd party data cleansing providers

### MASTER DATA SERVICES
- Master Data Services
- Master Data Hub
- Master Data Services
- Add-in for Microsoft Excel

### INTEGRATION SERVICES
- Graphical tools in SSIS
- Extensible object model
- SSIS as a Server
- Broader data integration with more sources; DB vendors, cloud, Hadoop
- Pipeline improvements
- Persistent lookups
- High-performance connectors
- Data profiling tool
SQL Server 2014 and the Data Platform

Mission Critical Performance

Faster Insights from Any Data

Platform for Hybrid Cloud
Mission Critical Performance

In-Memory Built-In
Average 10x faster for new and existing SQL Server apps

Secure & 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
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 & Enhanced Query Processing

**Before**
- Bwin Game Application
- 15,000 requests/sec

**16x Faster With In-Memory**
- Bwin Game Application
- 250,000 requests/sec

- SQL Server 2008
- SQL Server 2014 with In-Memory
Scalable

**Scale Compute**
- Up 640 logical processors
- 64 vCPUs/VM
- 1 TB 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**

<table>
<thead>
<tr>
<th>Pool 1</th>
<th>Pool 2</th>
<th>Pool 3</th>
</tr>
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<tbody>
<tr>
<td>CPU 20%</td>
<td>Memory 10%</td>
<td>IO 30%</td>
</tr>
<tr>
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</tr>
<tr>
<td>CPU 50%</td>
<td>Memory 40%</td>
<td>IO 40%</td>
</tr>
</tbody>
</table>

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 & 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 & backups to secondaries

Easy to Deploy & Manage
- Deployment & management wizards
- Monitoring dashboard within SSMS & System Center

Unified HA/DR Solution
- **Secondary 1**
  - Running Back-ups
- **Secondary 2**
  - Running BI Workloads

Asynchronous data movement

Key Features
- **SQL Server 2014**
  - Enhanced AlwaysOn
  - Replica Wizard
- **Windows Server 2012 R2**
  - Clustered Shared Volume support
  - VHD support
- **System Center 2012 R2**
  - Manage on-premises and cloud apps
SQL Server 2014 and the Data Platform

Mission Critical Performance

Faster Insights from Any Data

Platform for Hybrid Cloud
Faster Insights from Any Data

Easy access to data, big & 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 2013

Complete BI platform
Scale your BI models and enrich and secure your data with a complete platform spanning cloud and on-premises
Easy Access to Data, Big & Small

Search, Access & Shape
- Simplify access to public & corporate data
- Easily preview, shape, & format your data

Combine with Unstructured
- Combine and refine data across multiple sources
- Gain insight across relational, unstructured, & semi-structured data

Easily Manage & Query
- Common management of structured & unstructured data
- Query across relational DB & Hadoop with single T-SQL Query

Key Features
- Power Query - Project Codename “Data Explorer”
- Windows Azure Marketplace
- Windows Azure HDInsight Service & Microsoft HDInsight Server (preview) 100% Apache
- Parallel Data Warehouse with Polybase
Powerful Insights with Familiar Tools

Model & Mash-up
- Access and mash-up data from virtually any source
- Model data using familiar tools

Visualize & 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 & Collaborate
- Connect & collaborate around data
- Easily share insights for improved decision making
- Mobile Clients for any device

Key Features
- Excel in Office & Office 365: Power Pivot & PowerView
- Power Map - Project Codename “GeoFlow”
- Data Mining Add-ins for Excel
- Power BI for Office 365
Complete BI Platform

**Quality & Accuracy**
- Cleanse data and improve data quality
- Seamlessly integrate data from any source

**Scale**
- Complete and enterprise-grade BI platform
- Build and deploy secure & scalable BI solutions

**User-driven BI**
- Empower business users to manage data governance
- Deliver credible, consistent data to the right users

**Key Features**
- Stream Insight
- Data Quality Services
- Master Data Services
- Analysis Services
- BI Semantic Model

**Client Tools**
- Analysis, Reports, Scorecards, Dashboards, Custom Apps

**BI Semantic Model**
- Data model
- Business logic & queries
- Data access

**Data Sources**
- Databases, LOB Applications, Big Data, Odata Feeds, Spreadsheets, Text Files
SQL Server 2014 and the Data Platform

Mission Critical Performance

Faster Insights from Any Data

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

Extend On-Prem Apps
- Cloud bursting
- Greater global reach
- Better isolation of internal assets

Reduce CAPEX & OPEX with Cloud Backup

Windows Azure
- Geo Replication
- Restore to VM
- Periodic Snapshot (automatic/manual)

On-Premise Network
- Domain Controller
- SQL Server
Hybrid Cloud Solutions

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- Greater global reach
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Reduce CAPEX & OPEX with Cloud DR

Windows Azure
- Run backups
- Run BI reports
- Asynchronous Commit
- VPN Tunnel (Windows Azure Virtual Network)

On-Premise Network

Primary Replica
- Synchronous Commit

Secondary Replica
Hybrid Cloud Solutions

Simplified Cloud Backup
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Cloud Disaster Recovery
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Extend On-Prem Apps
- Cloud bursting
- Greater global reach
- Better isolation of internal assets

Gain Cloud Scale by Extending On-Prem Apps

- Windows Azure
- Load Balancer
- SQL Servers
- Web Servers
- VPN Tunnel
- Windows Azure Virtual Network

On-Premise Network
- Web Server
- SQL Server
- Domain Controller (authenticating all users on-prem & cloud)
Easy On-Ramp to Cloud

New Migration Wizard
Easily migrate on-prem 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 & 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
Complete & Consistent Data Platform

Microsoft Data Platform

BI & Analytics
Self-service
Collaboration
Corporate apps
Data Search

Data Management
Relational
Non-relational
Analytical
Streaming
Internal & External

Infrastructure
Scalable physical and virtual compute
Virtualized storage
Virtualized networking
SAN like intelligence built into OS
# Complete & Consistent Data Platform

## On-Premises Data Center

<table>
<thead>
<tr>
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<th>Private CLOUD</th>
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<tr>
<td><img src="image" alt="SQL Server on Windows Server" /></td>
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<td><img src="image" alt="Microsoft Cloud" /></td>
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<td><img src="image" alt="SQL Database service" /></td>
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<td><img src="image" alt="Office 365" /></td>
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<td><img src="image" alt="BI features in O365" /></td>
<td><img src="image" alt="3rd Party Service Provider CLOUD" /></td>
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## Microsoft Data Platform

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Complete & Consistent Data Platform

On-Premises Data Center

Traditional
NON-VIRTUALIZED

Private
CLOUD

Off-Premises

Microsoft Cloud

Windows Azure

Office 365

3rd Party
Service Provider
CLOUD

Microsoft Data Platform

Common Tools

Dev Ops Tools
Management Tools
Identity
Virtualization

Single-Vendor Support