

The Fantastic 12 of 2012

The next wave of SQL Server investments will help extend organizations beyond the database with a cloud-ready information platform that delivers mission critical confidence, breakthrough insight, and cloud on your terms.

Mission Critical Confidence

SQL Server 2012 helps meet industry requirements for high availability with the new SQL Server AlwaysOn for mission critical availability while ColumnStore Index helps enable blazing-fast data warehouse query performance.

Breakthrough Insight

SQL Server 2012 helps customers unlock new insights with pervasive data discovery across the organization while providing tools for IT to provide credible, consistent data and large-scale data warehousing and analytic solutions.

Cloud On Your Terms

Customers can enjoy built-in support for complex data types, greater interoperability with varied platforms, and common tools, like Management Studio and SQL Server Data Tools, to quickly create and scale innovative Hybrid IT solutions across server, private or public cloud. Meanwhile, connection points across SQL Server 2012 help make it easy to take advantage of the many benefits offered by the Windows Azure Platform, including SQL Azure.

Required 9s and Data Protection

**DELIVER REQUIRED UPTIME AND DATA PROTECTION,
SERVER TO CLOUD WITHOUT WASTING TIME AND MONEY**

2x faster failover, reduced downtime by half¹

Greater Uptime → Hardware UTILIZATION & Productivity

*"Our business has to be online all the time...
we were able to enable AlwaysOn in a
matter of minutes."*

Mediterranean Shipping Company

**New High
Availability Solution
AlwaysOn**

Greater Uptime

- **SQL Server AlwaysOn:** Help reduce planned and unplanned downtime with the new integrated high availability and disaster recovery solution. Achieve maximum application availability and data protection with options to configure multiple secondaries and the ability to quickly failover and recover applications.
- **Windows Server Core:** Help reduce OS patching by as much as 50-60%† with new support for Windows Server Core.
- Maintain uptime during maintenance operations using enhanced online operations and eliminate planned downtime on Hyper-V environment using Live Migration.

Improved Productivity

- **Common Tools:** Configuration Wizard, Windows PowerShell support, dashboard, system views and System Center alignment simplifies deploying and managing of Availability Groups within AlwaysOn.

Greater Hardware Utilization

- Help reduce idle hardware and improve IT cost efficiency and performance using Active Secondaries which enables offloading of various workloads to the secondary instances.

¹Source: Internal Microsoft CTP TAP testing results. 2x faster than Database Mirroring in SQL Server 2008 R2

† The percentage reduction in patching varies and can be less based on the server roles that are enabled and the type of patches that are applied.

Blazing-Fast Performance

GAIN BREAKTHROUGH & PREDICTABLE PERFORMANCE BACKED BY INDUSTRY-LEADING BENCHMARKS

"400 percent
improvement in
performance."

First American Title
Insurance Company

57,000
transactions per second¹

100,000,000
transactions per day²

Now, up to **10x Faster**³

New ColumnStore Index

Accelerated Query Performance

- **ColumnStore Index:** Significantly boost data warehouse query performance, by up to 10x for star join and similar queries, using the new ColumnStore Index—built-in.
- **Full Text Search:** Support blazing fast queries with dramatic improvements to Full-Text Search that offer serious performance and scale advances.
- **Compression:** Accelerate the performance of I/O intensive workloads by cutting growing volumes of data 50-60%¹ with back up and data compression capabilities.

Proactive Performance Management

- **Resource Governor:** Gain consistent performance for concurrent and mixed workloads by defining resource usage across different applications.
- **Management Tools:** Analyze query execution plans, capture database activity, optimize indexes and structures, and help ensure consistent query performance within Management Studio.

Industry-Verified

- **Benchmarks:** SQL Server continuously leads in industry-relevant TPC-E and TPC-H performance benchmarks.
- **SAP-Certified:** Release over release SQL Server is SAP-certified to run some of the industry's most demanding workloads.

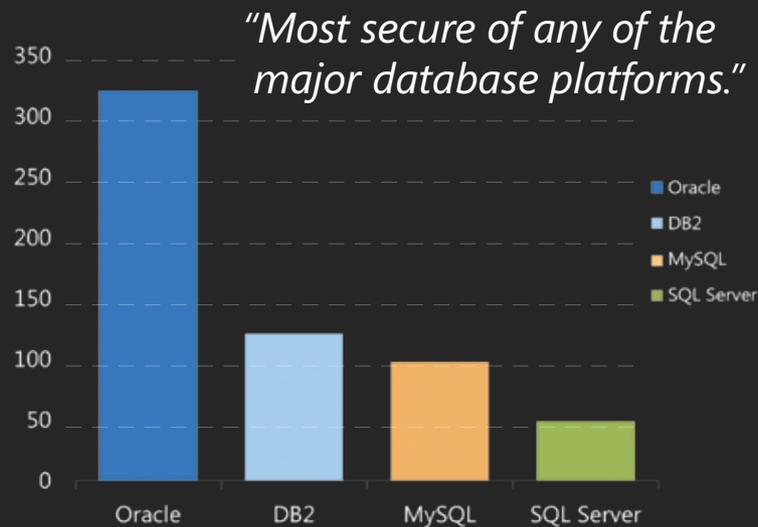
¹Source: Microsoft customer evidence, Choice Hotels International

²Source: Microsoft customer evidence, KAS Bank

³Source: Microsoft customer testing; common data warehousing queries

¹Source: TechNet Books Online

Organizational Security and Compliance



NIST Reported Common Vulnerabilities and Exposures
Jan 2002 – Jun 2010

**Better
separation
of duties** &

**Expanded
AUDIT**

New in
Microsoft
SQL Server 2012

HELP ENABLE SECURITY AND COMPLIANCE WITH BUILT-IN SECURITY AND IT CONTROLS

Data Protection

- **Encryption:** Protect data with built-in encryption capabilities that help protect confidential information including Transparent Data Encryption that adds advanced protection without requiring changes to the application.
- **Certifications:** Maintain confidence with third-party verifications; release over release, SQL Server pursues and achieves globally recognized Common Criteria Certifications.

Control Access

- **User-Defined Server Roles:** Easily manage permissions around data access to support separation of duties.
- **Default Schema for Groups:** Help increase manageability and decrease complexity of database schema by allowing a default database schema for Windows group user accounts.
- **Contained Database Authentication:** Help control database access to deployed applications while improving manageability with self-contained access to information without the need for server logins.
- **Active Directory:** Help secure end user data analytics with new SharePoint and ActiveDirectory security models for end user reports published and shared in SharePoint.

Ensure Compliance

- **SQL Server Audit:** Help ensure compliance related to auditing with audit resilience, filtering, user-defined audit, and enablement across all SQL Server editions.
- **Policy-Based Management:** Define configuration policies and apply them to servers, databases, tables, and other targets across a server environment to help ensure policy compliance across the environment.

Peace of Mind

HELP ENSURE PEACE OF MIND WITH THE RIGHT PRODUCT TOOLS, PREMIER SERVICES AND SUPPORT, A TRUSTED PARTNER ECOSYSTEM, AND A WEALTH OF NO-FEE TOOLS.



PRODUCTION-LIKE
application testing



Free tools,
migrate & upgrade



Ecosystem of partners
70,000



PREMIER SUPPORT



Predictability & savings
through licensing programs

Product Enhancements

- **Distributed Replay:** Simplify application testing and help minimize errors with application changes, configuration changes, and upgrades.
- **System Center Alignment:** Up-to-date Management Packs enable centralized monitoring across SQL Server versions including SQL Server 2012.
- **System Center Advisor:** Help reduce overall downtime with ongoing assessments of SQL Server configurations and changes over time.
- **No-fee Service Packs:** Unlike many software companies, Microsoft offers free access to software service packs.

Free Planning Tools

- Quickly plan for an upgrade or migration with a wealth of no-fee tools like Migration Assistant, Upgrade Advisor, and MAPS developed by Microsoft engineers and available for download online.

Tailored Support and Licensing Programs

- **Mission Critical Support:** Microsoft's Premier Mission Critical Support and the Microsoft Critical Advantage Program, provide the services and support needed for companies to establish the proactive IT environment and operations necessary to deliver maximum availability and performance to their Mission Critical Applications.
- **Enrollment for Application Platform:** Microsoft delivers piece of mind with the licensing program EAP which offers unlimited support to customers with specific software assurance plans and up to 40% savings on license costs for new deployments.

Rapid Data Exploration & Visualization

*"Only **28%** of potential users are using the standard BI platform of choice in organizations¹"*



**Mashup data,
PowerPivot**

**Stunning, interactive
data visualizations,
Power View**

**Familiar Tools
built on Excel &
SharePoint**

EMPOWER END USERS WITH NEW INSIGHTS THROUGH RAPID DATA EXPLORATION AND VISUALIZATION

Self-Service Analytics

- **PowerPivot:** Empowering users of all levels to access and mash-up data from virtually any source, create compelling reports and analytical applications, and easily collaborate and share insights using familiar tools in Microsoft® Excel® 2010 and Microsoft SharePoint 2010.

Stunning, interactive data visualization

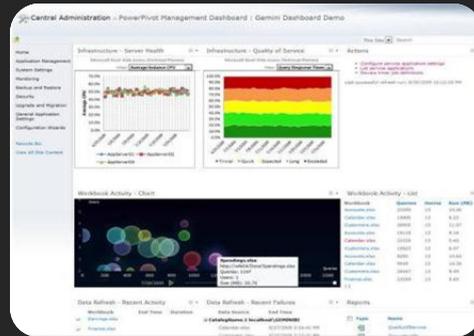
- **Power View:** Discover new insights at the speed of thought with highly interactive, browser-based data exploration, visualization, and presentation experiences for users of all levels. Now anyone can create a report in just seconds, transform the "shape" of data with a single click, add powerful timed animation sequences to quickly identify trends or anomalies, and make a more convincing case through rich presentation of discovered insights.

¹ Gartner, "The Consumerization of BI Drives Greater Adoption," James Richardson, June 3, 2011

Managed Self-Service BI

"We can balance our employees' need for rich information and collaboration with IT's need to manage the safety & confidentiality of information."

CareGroup Healthcare System



Gain
insight
& oversight

End user
created,
IT managed

Single
administration
from SharePoint

ENABLE USERS WITH SELF-SERVICE BI WHILE GAINING BETTER MONITORING AND MANAGEMENT CAPABILITIES FOR IT

Gain insight and oversight

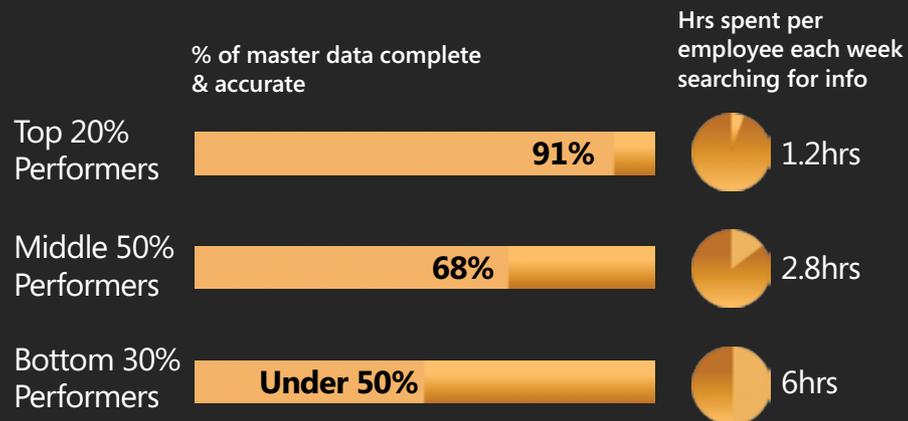
- **PowerPivot for SharePoint:** Balance the need to monitor, manage, and govern the data and analytics end users create with IT dashboards and controls that help IT monitor end user activity, data source usage, and gather performance metrics from servers.

Enable IT Efficiency

- **End user created, IT managed:** SQL Server 2012 bridges the gap between end user created BI applications and IT managed corporate solutions by providing the ability to import PowerPivot models into Analysis Services so that they can be professionally managed and transformed into corporate grade solutions.
- **Ease of administration through SharePoint:** Enable end user alerting from reports published to SharePoint and benefit from the ease of consolidated management through the SharePoint 2010 Central Administration.
- **SQL Azure Reporting:** Extend rich user insights to even more people with SQL Azure Reporting that removes the need for deploying and maintaining a reporting infrastructure.

Credible, Consistent Data

Companies with accurate data perform better¹



Data
Quality
Services

Master
Data
Services

Single BI
Semantic
Model

Delivered with
Microsoft
SQL Server[®] 2012

DELIVER CREDIBLE, CONSISTENT DATA TO THE RIGHT USERS ACROSS THE ORGANIZATION WITH A COMPLETE END-TO- END SOLUTION

One Single Semantic Model

- **BI Semantic Model:** A single, scalable model for Business Intelligence applications, from reporting and analysis to dashboards and scorecards, that helps provide a consistent view across heterogeneous data sources. IT and developers can create a single model to be consumed by front-end tools for their BI Applications across both tabular and multidimensional models.

Seamlessly Integrate Data

- **Integration Services:** Help reduce time-to-solution for innovative, team-based data integration across data sources, including the cloud, by utilizing the industry-leading tools in Integration Services (SSIS) that help deliver credible, consistent data reliably and efficiently. New improvements include significant improvements in the user experience for dramatic efficiencies.

Cleanse Organizational Data

- **Data Quality Services:** Help improve data quality by using organizational knowledge and 3rd party reference data providers, including cloud-based providers, by enabling data managers to reliably profile, cleanse, and match data —run as a standalone tool or leverage within SSIS.

Efficiently Manage Data

- **Master Data Services:** Help create, maintain, store, and access master data structures used for object mapping, reference data, metadata management with Master Data Services (MDS), while a new MDS Add-in for Excel makes it easy for end users to manage and maintain central data.

¹Source: "Turning Pain into Productivity with Master Data Management," Aberdeen Group, Feb 2011

Scalable Analytics & Data Warehousing

“Parallel Data Warehouse runs complex queries about 160 times faster, providing a data load over 1 Tb/Hour and fully integrates into a complete BI Solution”

DirectEdge, US Stock Exchange

>24TB

ANALYTICAL SOLUTIONS²

>600TB

DATA WAREHOUSES W/ TRUE MPP²

**Massive Scale,
Low Cost**

**FLEXIBILITY
& Choice**

**Complete
BI SOLUTION**

ACHIEVE SCALE AND FLEXIBILITY WITH ANALYTIC AND DATA WAREHOUSING SOLUTIONS THAT OFFER MASSIVE SCALE AT LOW COST

Flexibility and Choice

- **Hardware and deployment options:** Suit unique organizational needs with Fast Track configurations from 11 hardware vendors or software only solutions, reference architectures and appliances.
- **Optimized Solutions:** Leverage best practices and drive fast time to market with data warehouse reference architectures and appliances that help deliver faster time to solution.

Massive Scale at Low Cost

- **Built-in Functionality:** Scale data warehouses with built-in database features like Remote Blob Storage and partitioned tables that scale to 15,000 partitions and support large sliding window scenarios.
- **Support for Powerful Hardware:** Gain high scale with support for up to 256 logical cores that helps enable high-performance for very large workloads or consolidation scenarios.
- **Parallel Data Warehouse:** Scale to 600+ TB while maintaining high performance through massively parallel processing (MPP) architecture.

Complete BI Solution

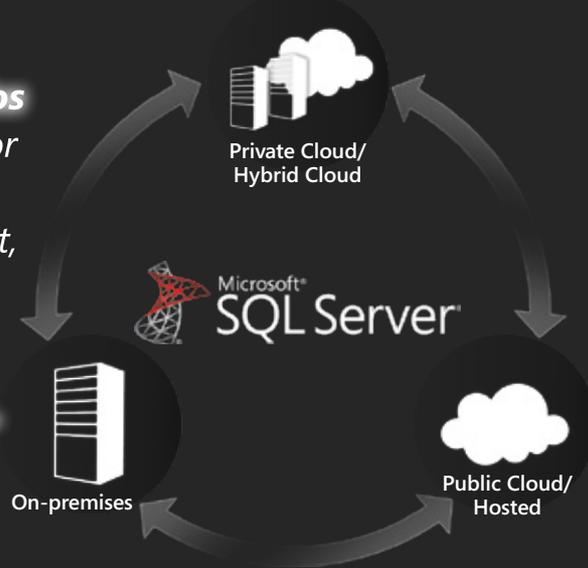
- **Scalable OLAP:** Deploy more than just breathtaking end user analytics tools, SQL Server continues to deliver end-to-end BI through easy to stand up and manage traditional OLAP and reporting cubes that are proven to scale into the 10s of TB.

¹Source: Microsoft evidence: McLaren Electronic Systems

²MS Evidence: Yahoo & Microsoft testing

Scale On Demand

“Hybrid’ portfolios
— with options for
both public and
private deployment,
as well as
combinations of
both models —
will be the rule.¹”



Migrate apps with interoperable
Deployment Options

Connection points to
WINDOWS AZURE

private & public
CLOUD OFFERINGS

Delivered with
Microsoft
SQL Server[®] 2012

SCALE ON DEMAND WITH FLEXIBLE AND HYBRID DEPLOYMENT OPTIONS ON YOUR TERMS SERVER TO CLOUD

Elastic Scale

- **Self-service Deployments:** Gain virtualized, on-demand capacity and self-service provisioning & usage metering with Microsoft private and public cloud offerings across SQL Server 2012 and SQL Azure.
- **SQL Azure Federation:** Support bursting scenarios by deploying all or part of an application to SQL Azure where Auto Scale policies create databases on-the-fly to support elastic demand.

Flexibility and Choice

- **Contained Databases:** Seamlessly migrate databases between or extend apps across different instances of SQL Server and SQL Azure with Contained Databases that define and contain the schemas and objects required to support an application.
- **License Mobility:** Support Hybrid IT, a flexible deployment environment across server and cloud, through unique licensing use rights that allow organizations to move licenses across server, private and public cloud.
- **Data Sync:** Enable new, creative hybrid application scenarios with bi-directional data synchronization between databases across datacenter and cloud.

Fast Time To Solution

»» Pre-packaged appliances and reference architectures

Scenario-OPTIMIZED Business intelligence, consolidation, transaction processing , & data warehousing

COMPLETE Solutions Co-engineered with hardware partners Dell and HP for maximum ROI and agility

Agile Hardware + software + support, reduce time to market from weeks and months to days

"The appliance can be deployed in a matter of days vs. weeks or months for traditional implementations."

Brian Knight
Pragmatic Works

HELP REDUCE COMPLEXITY AND ACCELERATE TIME TO SOLUTION WITH TURN-KEY APPLIANCE AND CLOUD OFFERINGS

Scenario-optimized

- Accelerate top organizational priorities with appliances for data warehousing of varying sizes, business intelligence, consolidation, and transaction processing.
- SQL Server offers Appliances built jointly with HP and Dell:
 - HP Enterprise Database Consolidation Appliance
 - HP Enterprise Data Warehouse Appliance
 - HP Business Decision Appliance
 - HP Business Data Warehouse Appliance
 - Dell Parallel Data Warehouse Appliance

Complete Solutions

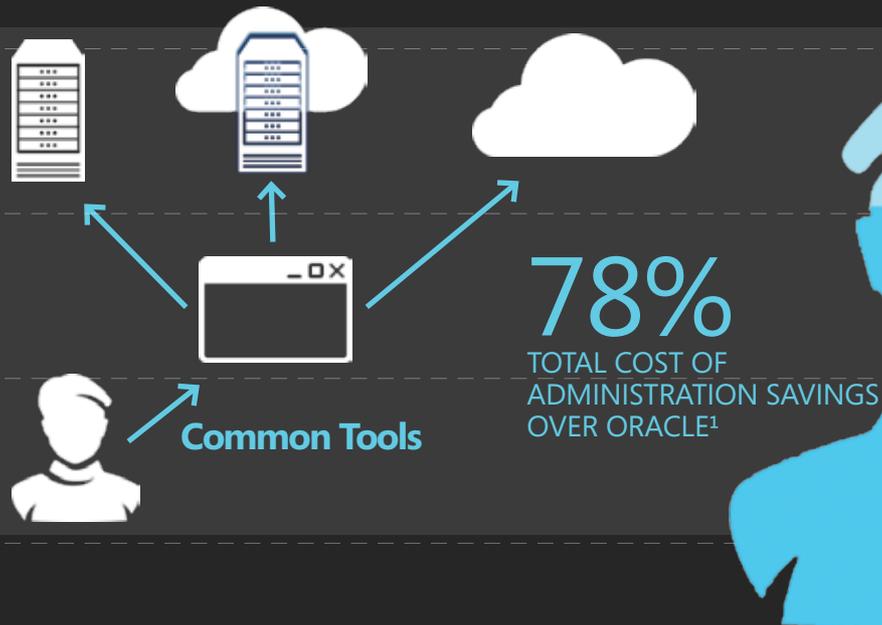
- Microsoft deeply co-engineers the appliances with partners to ensure highly tuned solutions, fully integrated , with single support for all the Hardware and Software, with enhanced appliance-only software, and that deliver great price/performance.

Agility

- Speed time to solution with SQL Server appliances by eliminating the time to design, tune and test all the related hardware and software components.
- Provision databases in minutes without any physical administration or infrastructure investments with SQL Azure.

Optimized Productivity

OPTIMIZE IT AND DEVELOPER PRODUCTIVITY ACROSS SERVER AND CLOUD WITH COMMON TOOLS



new unified
DEV EXPERIENCE

Build, extend
& manage apps anywhere

Build

- **SQL Server Data Tools:** Take database development to the next level with SQL Server Data Tools, an integrated development experience for developers building next-generation web, enterprise and data-aware mobile applications across on-premises and public cloud.
- **T-SQL Enhancements:** Simplify complex programming tasks with T-SQL enhancements and ease database migrations with improved support for ANSI SQL standards. Additionally, the new Sequence object enables developers to tie unique row identifiers across multiple tables.

Extend

- **Common tools:** Build, extend, and manage database or business intelligence solutions across on-premises and cloud environments using the same development tools, frameworks and T-SQL based model.

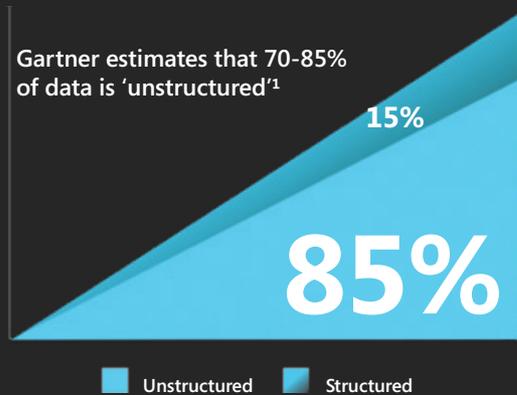
Manage

- **SQL Server Management Studio:** Manage efficiently at scale with a single console to deploy and manage database assets across servers, private cloud and public cloud. Additionally, use SSMS to manage high availability configurations, BI services, and resource utilization.
 - Automate infrastructure maintenance tasks, streamline troubleshooting and diagnostics and optimize hardware resources with built-in easy-to-use manageability tools.
 - Streamline virtualization management with System Center Virtual Machine Manager.
 - Support for Windows PowerShell 2.0 automates management tasks across the Microsoft platform.

¹Source: Microsoft SQL Server and Oracle® Database: A Comparative Study on Total Cost of Administration (TCA), Alinean, Jan 2010

Extend Any Data, Anywhere

"The total worldwide volume of data is growing at 59% per year, with the number of files growing at 88% per year.¹"



More storage
options for
unstructured data

&

Greater
interop

Delivered with
Microsoft®
SQL Server® 2012

EXTEND THE REACH OF DATA MOST ANYWHERE ACROSS SERVER AND/OR CLOUD WITH EXPANSIVE DEVELOPER TECHNOLOGIES

Complete data management

- **Support for Any Data:** Manage and extend relational and non-relational data including XML data, Windows files, and spatial information.

Enhanced search functionality

- **Statistical Semantic Full-Text Search:** Enable T-SQL developers to bring deep insight to the organization within non-structured data files stored in the SQL Server database by uncovering previously undiscovered relationships across stored files.

Seamlessly extend data

- **OData:** Provide a consistent and open data-feed to power multiple user experiences across the web, devices and desktop with OData, an open protocol built on widely used web standards.
- **SQL Azure DataMarket:** Monetize accumulated data by publishing data for purchase and consumption by other entities.
- **Enhanced interop support:** Extend heterogeneous environments by connecting to SQL Server and SQL Azure applications using any industry standard APIs (ADO.NET, ODBC, JDBC, PDO, and ADO) across varied platforms including .NET, C/C++, Java, and PHP.

¹Source: Gartner Symposium Presentation 'Information Management Goes 'Extreme': The Biggest Challenges for 21st-Century CIOs, Mark Beyer, October 2011



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