Microsoft
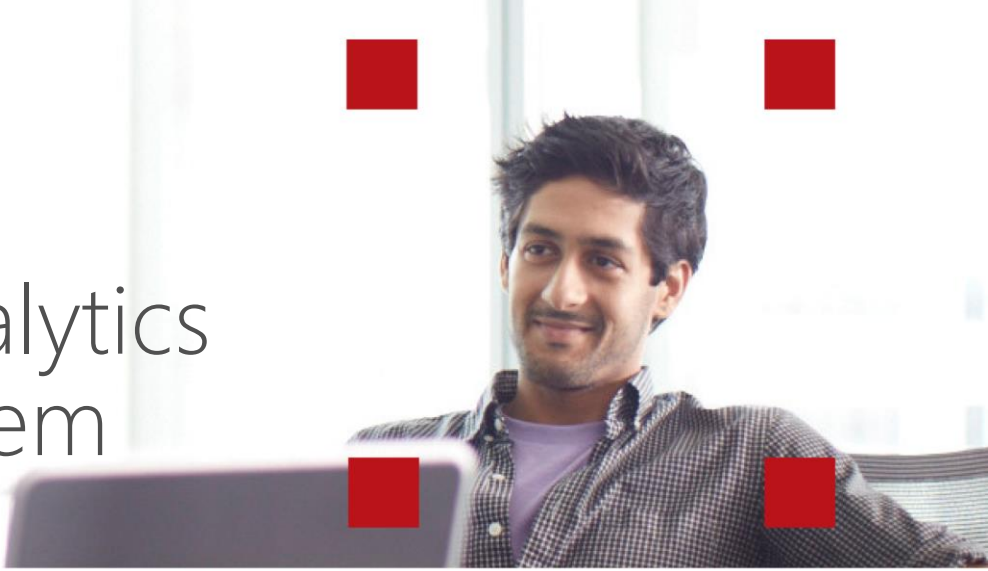
Microsoft Analytics Platform System

Scale-out Massively Parallel Processing (MPP) fully integrated system for data warehouse specific workloads

Enterprise-ready Big Data

- Analyze all data types with Microsoft PolyBase technology
- Seamless querying across relational and non-relational data using simple T-SQL
- Get fast information to insight with familiar tools through native business intelligence

Next-generation performance at scale

- Linear scale-out architecture of up to 6 petabytes of data
- Leverages the power of MPP architecture to enhance query execution performance
- Drive up to 100x query performance and 15x more data compression than traditional data warehouses with In-memory Columnstore

Engineered for optimal value

- Lowest price per terabyte for a data warehouse appliance in the industry
- Fully intergrated system with Microsoft as single vendor point of contact for support

For decades, the data warehouse has been at the center of the enterprise's decision support infrastructure, acting as the system of record for data analysis. Now the traditional data warehouse has reached a critical point, requiring major business-driven changes to the systems in place today. Key contributing factors include:

- **Data growth:** Databases designed with traditional symmetric multiprocessing (SMP) architecture cannot scale to keep up with the amount of data that is expected to grow tenfold over the next five years without major investments in hardware, tuning, support, and maintenance.
- **Non-relational data:** Organizations are using Apache Hadoop to store existing data and process new data types from sources like blogs, sensors, social media, and devices. This data can end up isolated from users because it is not integrated with data in the traditional data warehouse.
- **End-user expectations:** End users need results in near real time, and they expect their internal systems to match the speed of an Internet search engine.

The modern data warehouse needs to enable users to collect and analyze virtually all data, regardless of its size or type. It also needs to deliver performance, scale, and user demand for real-time data analytics.

Microsoft Analytics Platform System

Microsoft can meet the demands of your growing and evolving data warehouse environments with the Microsoft Analytics Platform System (APS), a scale-out Massively Parallel Processing (MPP) fully integrated system for data warehouse specific workloads. APS provides industry leading price and performance, connectivity to predictive analytics in Azure Machine Learning, and can dramatically reduce time to production and administration.

Microsoft

Solution advantages

Enterprise-ready Big Data: PolyBase enables users to easily query non-relational and relational data using T-SQL, without investing in Hadoop-based skills or training. With PolyBase, organizations can take advantage of flexible hybrid Hadoop solutions and query across Hortonworks, Cloudera, and even into the cloud with Microsoft Azure HDInsight.

Next-generation performance at scale: With true scale-out architecture, APS is one of the most powerful distributed computing and scale-out systems on the market. As an organization's need for compute or storage grows, they can simply add more resources to scale up to 6 petabytes. Additionally, they can eliminate common data warehouse bottlenecks with the MPP capabilities and parallel execution. The In-Memory Columnstore feature changes how data is stored and can help organizations gain up to 15 times more compression than is typically possible and up to 100 times the performance in I/O and query processing over traditional rowstore processing. This is ideal for high-concurrency and complex queries.

Engineered for optimal value: Microsoft streamlines the hardware footprint and optimizes value for the modern data warehouse investment. Windows Server reduces cost through Storage Spaces by allowing SAN levels of performance with commodity storage drives. In-Memory Columnstore helps organizations reduce storage usage by up to 70 percent. As a result of these innovations, APS offers the lowest price per terabyte in the industry for a relational data warehouse appliance. This fully Integrated System dramatically reduces time to production and administration and is supported by Microsoft Premier Support as single point of contact.

Customer success stories

The Royal Bank of Scotland—the leading UK provider of corporate banking services—needed a powerful analytics platform to improve performance and customer services. To handle multiple terabytes of data and an unprecedented level of query complexity more efficiently, the bank implemented with Analytics Platform. As a result, it gained near-real-time insight into customers' business needs as well as emerging economic trends, cut a typical four-hour query to less than 15 seconds, and simplified deployment.

As an arm of the second-largest faith-based healthcare organization in the United States, **Catholic Health Initiatives Institute for Research and Innovation** knew a centralized data repository could streamline the research process. But to justify building this repository, CIRI first needed to address the challenge of allowing researchers to access all this information firsthand. They decided that the solution is to invest in a proven data warehouse like APS and data exploration tool Qiagram by APS partner Biofortis to open up data to researchers.

> *"The Microsoft Analytics Platform System's huge parallel environment allows us to not just process but also comprehend large numbers of healthcare records. There is a huge amount of transformation required to integrate and bring this data together at the database level."*
>
> - Lela McFarland, National Director for Clinical Data Research Management

Choice of hardware vendors

APS offers the flexibility to choose hardware from Dell, Hewlett Packard Enterprise, or Quanta Cloud Technology.

Microsoft Analytics Platform System by Dell	HPE Converged System 300 for Microsoft Analytics Platform	Microsoft Analytics Platform System by Quanta Cloud Technology

Call to action

For more information on APS, go to www.microsoft.com/aps, or contact your Microsoft enterprise sales representative.

Microsoft

PolyBase technology is powered by Java

Java Java is a registered trademark of Oracle and/or its affiliates.