

# IBM Db2 Warehouse on Cloud

*An elastic, fully managed, enterprise-grade cloud data warehouse that enables hybrid data warehousing*



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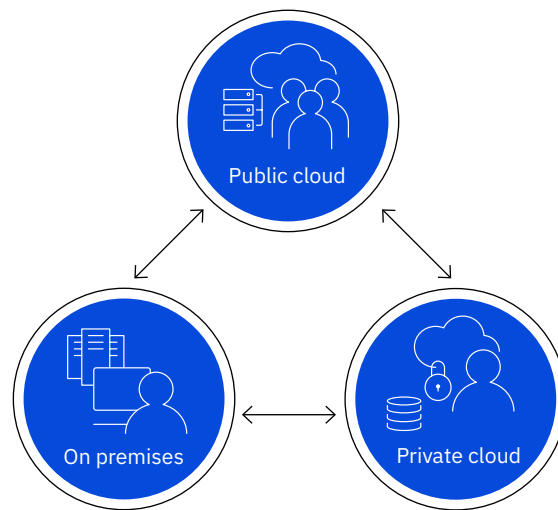
## Highlights

- Elastic scaling of compute and storage resources
  - Built using the common SQL engine shared across the Db2 family of offerings
  - Provides a fully managed and security-rich platform supported by IBM
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## The essentials of IBM Db2 Warehouse on Cloud

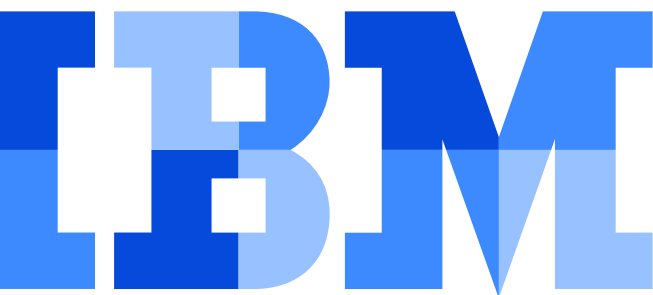
IBM® Db2® Warehouse on Cloud is a fully managed and highly elastic cloud data warehouse. It uses in-database analytics tools and revolutionary technology, such as IBM BLU Acceleration® technology to provide higher levels of performance and greater levels of flexibility as clients deploy on the cloud. The same common SQL engine is used in the Db2 family of offerings. Db2 Warehouse on Cloud can be deployed alone or integrated with on-premises data warehouse environments across a broader hybrid data management environment.

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*Figure 1: A hybrid architecture allows workloads to move between different types of data warehouses.*



**High-performance with BLU Acceleration**

To deliver high performance, parallel query processing Db2 Warehouse on Cloud uses IBM BLU Acceleration, a technology pioneered by IBM Research to significantly accelerate the processing of analytics workloads. BLU Acceleration technology excels at:

- High-speed, in-memory processing of large data sets
- Querying of compressed data without the need to decompress
- Intelligently pulling into memory only the data required for query execution

**A common SQL engine used across the Db2 family of solutions**

Clients with different needs can use multiple deployment options and form factors, including IBM Db2 Warehouse on Cloud, that are all based on a standard common SQL engine. Clients can deploy analytics and transactional workloads on IBM Cloud, on premises with commodity hardware, or on a purpose-built appliance. For example, with built-in data virtualization, applications built with Db2 and one form factor can be easily deployed to any other – no matter where the database is located. This capability allows clients to write their SQL query once and run it virtually anywhere.

**Fully-managed 24x7x365 by a world-class IBM operations team**

The IBM Cloud operations team is composed of experts that manage Db2 and cloud-based data services. The team takes care of operating system updates and patches, maintenance, new feature rollout, and unexpected software and hardware glitches. Team experts are on-call 24x7x365 so you can focus on more important things.

**Integrations with Netezza analytics models**

Users can run myriad predictive modeling algorithms built directly into the database. Examples of the algorithms provided with Db2 Warehouse on Cloud include:

- Linear regression
- Decision tree clustering
- K-means clustering
- Esri-compatible geospatial extensions

**Integration with IBM Cloud solutions**

Db2 Warehouse on Cloud integrates with a wide range of IBM and third-party offerings supported by the Db2 family including:

- IBM Data Science Experience, Watson Studio
- IBM DataStage® platform for extract, transform, load (ETL)
- IBM Cognos® business intelligence software
- IBM Watson® Analytics for data visualization, reporting and business analytics.

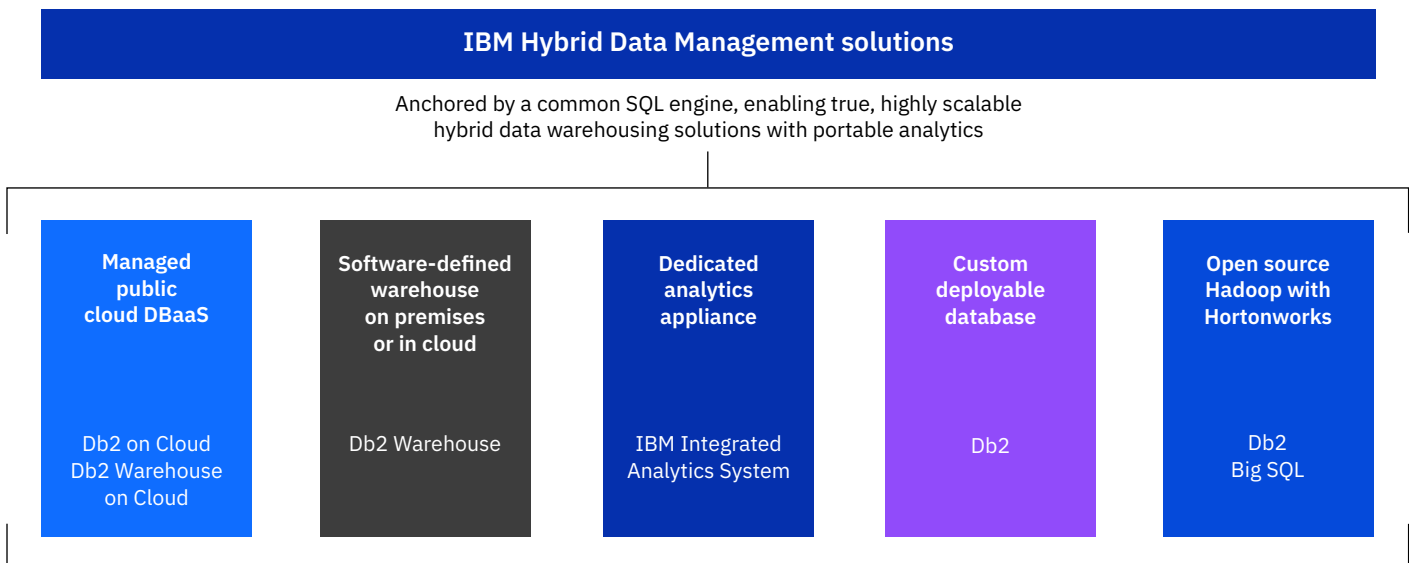


Figure 2: IBM Hybrid Data Management offerings built on the common SQL engine.

## Use cases

A hybrid data warehouse extends the traditional on-premises data warehouse into the cloud, providing key functions required for new combinations of analytics, data types and storage locations. Compared to on-premises data warehouse environments, hybrid environments can ultimately lower the cost of analytics, enable unprecedented flexibility and help deliver deeper insights.

In particular, hybrid warehouses can address the following IT challenges:

- Delivering new analytics services and data sets to meet time-sensitive business initiatives
- Managing escalating costs due to the massive growth in new data sources, analytics capabilities and users
- Achieving data warehouse elasticity and agility for sensitive business data

The following use cases are meant to inspire your thinking about how to get started. You can integrate Db2 Warehouse on Cloud with your existing data warehouse environment for a hybrid data warehouse or deploy it as a stand-alone cloud data warehouse.

### Accelerate time to value on projects

Quickly meet the needs of your organization with a cost-effective, fully managed data warehouse for projects such as dev/test, proof of concept or proof of technology, and so on.

### Cloud data warehouse for analytics

As part of your larger hybrid data and analytics strategy, scale capacity for greater efficiency and payment flexibility over on-premises alternatives.

### Modernization of your data warehouse

Transform your data warehouse with high-performance, in-memory columnar, in-database analytics and simplify technology processes with data virtualization or federation, scalability and workload portability.

### Transform and analyze mobile, web and the Internet of Things (IoT) data

Work with data and applications colocated with your data warehouse.

### Consolidate and integrate data silos and data marts

Minimize the resources required to manage on-premises data marts or silos by moving to a high-performance cloud service.

### Bring cloud data to data science

IBM Data Science Experience integrates directly with Db2 Warehouse on Cloud to train powerful machine learning models.

## Quickly deploy your data to IBM Db2 Warehouse on Cloud

IBM provides clients with a variety of ways to migrate existing, on-premises data sets to IBM Cloud.

For smaller workloads, clients can log directly into the console and upload individual CSV files. For larger workloads, in the tens of terabytes, the IBM Lift tool is provided to clients for rapid and security-rich migration of data. For extremely large petabyte-scale data sets, clients should consider IBM Cloud Mass Data Migration.

### Advanced security and certifications

Db2 Warehouse on Cloud is provided on a security-rich cloud platform with service plans designed to help facilitate compliance with standards, such as HIPAA, ISO and SOC. For a full list of security certifications, visit the [IBM Knowledge Center](#) for this offering.

### Elastic scaling options

To provide greater efficiency and flexibility in deployment of their resources, clients can opt to deploy Db2 Warehouse on Cloud with independent configuration of storage and compute nodes. Clients can be agile and provision to scale up compute nodes, or scale down when demand falls. Or, clients can increase storage if their data needs grow over time. With this deployment option, clients pay for only the resources they need at the moment.

## Service plans

IBM Db2 Warehouse on Cloud offers clients three types of data warehouse configurations to meet their requirements:

- Symmetric multiprocessing (SMP) for the most cost-effective warehouse service
- Massively parallel processing (MPP) for high performance
- Flex for elastic, independent scaling of storage and compute

	Server	Storage	CPUs
SMP Small	Dedicated virtual machine	250 GB (fits up to 1 TB of data*)	16 vCPUs
SMP Medium	Dedicated bare metal	1 TB (fits up to 4 TB of data*)	32 cores
SMP Large	Dedicated bare metal	3 TB (fits up to 12 TB of data*)	32 cores
MPP Small	Dedicated bare metal (minimum of 3 nodes per cluster)	800 GB SSD per node	24 cores per node
Flex	Dedicated bare metal	0.96 - 96 TB	16–160 cores
Flex Performance	Dedicated bare metal	2.4 - 48 TB	48–576 cores

*\*Data is based on typical compression. Estimated compression is based on historical average of observed data compression rates. Actual client data compression rates and temp space requirements, and resulting data storage availability, are not guaranteed and may vary based on client's specific usage and data characteristics.*

## For more information and to start a trial at no charge

To learn more about Db2 Warehouse on Cloud and start a trial at no cost, contact your IBM representative or IBM Business Partner, or visit [ibm.com/cloud/db2-warehouse-on-cloud](http://ibm.com/cloud/db2-warehouse-on-cloud).



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