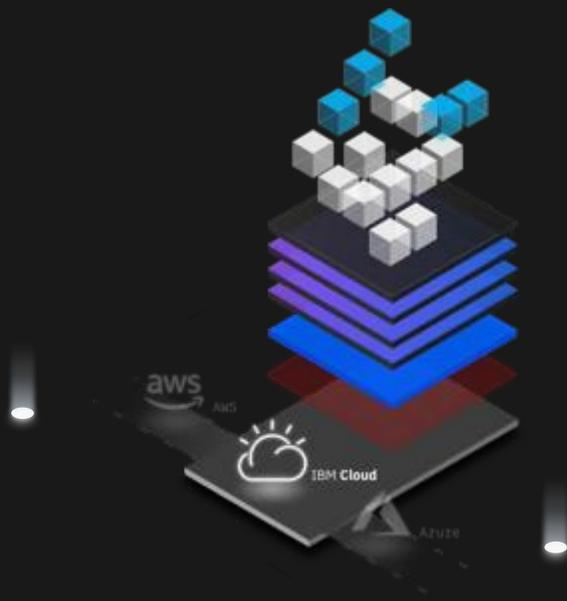


IBM Db2

Empowering you to run everywhere

Welcome Video →



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01 Offer Introduction

Reinvention is fueled by modernization. As a proud partner of yours, we’ve enjoyed providing you with tools to execute critical business workloads. Today’s data driven world demands business deliver outcomes fast and cost efficiently, and we’re excited today to invite you to take the next step in our partnership to ensure your Data and AI initiatives are agile, cost effective and successful.

This offer will outline how the Db2 Cartridge gives you access to run the traditional Db2 software plus the flexibility to run Db2 on Cloud Pak for Data, our data and AI platform built on RedHat OpenShift.

Aspects of this offer

(A) Dual Entitlement to run Db2 standalone or on Cloud Pak for Data

The Db2 Cartridge gives you flexibility to run Db2 standalone or containerized on Cloud Pak for Data. Its your choice.

(B) Free Access to Db2 Containerization Tool

To further our dedication to this partnership, this offer comes with free access to IBM’s Db2 Containerization Tool, which is a rapid way to containerize a Db2 database.

Why Db2

Modern

Db2 is infused with AI and machine learning to make data processing and management more intelligent, faster and simpler. It uses a ML-based optimizer that uses neural networks to learn from experience. Memory and workload management are customized to your specific workload needs.

Developer - Inclusive

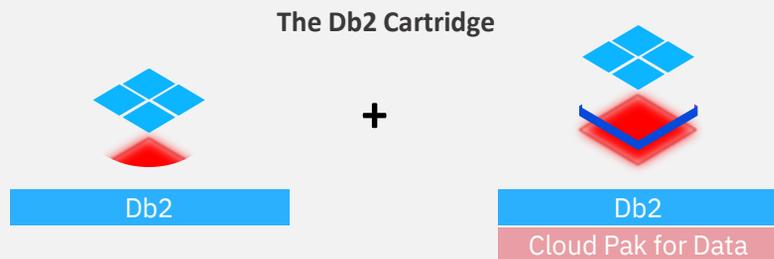
Db2 is a multi-modal database platform that supports different languages and development tools so you can build robust and powerful applications. Create hybrid applications that access SQL, JSON, XML, and Graph data with a unified data management, and no data migration or duplication.

Enterprise Ready

Db2 is secure and scalable, built to handle complex enterprise workloads with industry leading performance. It supports traditional OLTP and OLAP workloads as well as new workloads including mixed operational and mix analytics. You can also choose between different platforms for deployment, depending on what's important to you.

Breakdown of your Licenses

You will have **dual entitlement** to run Db2 standalone or containerized on Cloud Pak for Data. Its your choice.



Db2 By the Numbers

30%

Improvement in transactional response time

43%

Reduction in backup time

10

Modern programming languages

47%

Reduction in storage requirements

39%

Increase in compression rates

15

Seconds or less for failover



Db2 for SAP

Better Together

With the announcement in February 2020 that SAP is extending support for SAP Business Suite and other database support until 2030, there is no longer an urgency to move to S/4HANA. Now instead of spending money and time to move to SAP S/4HANA, you can continue to use SAP Business Suite for the next 10 years or more.

Db2 has been certified as an SAP Business Suite database for over 20 years. During that time there has been a strong development partnership between the SAP Business Suite and Db2. Many Db2 features and capabilities have been implemented at the request of SAP and that partnership continues with the current Db2 11.5 release.

Db2 has tight integration for SAP and this has resulted in both performance and operating cost improvements for SAP Business Suite clients. With Db2's superior data compression technology and database architecture that is exploited by SAP, clients see significant savings in both database operations and storage cost. SAP Clients that migrate to Db2 realize an SAP Business Suite performance gain of 30% for SAP ERP applications and storage savings up to 70%.

The Db2 Cartridge will enable you to run Db2 Advanced Edition (AE) bare metal so that you can start taking advantage of these performance and storage savings.

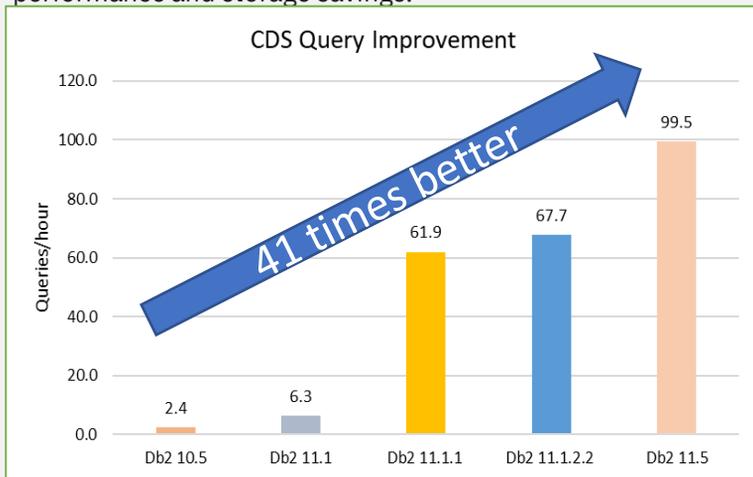


Figure 1 – Continual performance improvement – a benefit of co-development efforts between Db2 and SAP

Highlights

100% Compatibility
SAP was initially built on Db2 and remains the best performing DB today for SAP

4X less
Db2 is 4x less expensive than Oracle for like licenses

55% resources
Db2 requires an average of 55% fewer people resources to run vs Oracle DB

Simplicity
The Db2 cockpit provided by SAP simplifies your employees need to learn Db2

Db2 – The Alternative to Oracle Database

The Benefits of Migrating from Oracle to Db2

[Watch Customer Video](#) →

Lower Cost

All Db2 editions have the same features and capabilities. The only difference between editions are hardware resources supported (Virtual Processor Cores and Memory). Features that Oracle normally charges for, such as partitioning, database in-memory, and advanced compression are included in Db2 at no extra cost. This allows you to select data features based on your application requirements not your IT budget.

Oracle Compatibility

Db2 has built-in Oracle Database SQL and PL/SQL compatibility which allows skill re-use. This compatibility makes an easy migration from Oracle to Db2 compared to any other database vendor.

Storage Optimization (Compression)

Db2 has 45% better compression than an already compressed Oracle Database. Better compression not only saves databases storage, but it improves recovery capabilities, database performance, and results in less outages for unplanned system failures. Compression is available in Db2 at no extra cost.

Database Monitoring

Db2 includes a Data Management Console and all database monitoring instrumentation to ensure your Db2 database is running at optimal performance. No additional licenses are required.

Modern & Cloud-Ready

You have the flexibility to run Db2 bare metal or containerized. Db2 also has built in AI and Machine Learning to make your data processing, data management and application development more intelligent, faster and simpler.

Db2 Has Better Performance

These numbers are based on the analyst Quark & Lepton's in-depth analysis of Db2 11.5 compared to Oracle 19c for OLTP workloads.

40%
Reductions in software and licensing cost

30%
Improvement in transactional response time

43%
Reduction in backup time

47%
Reduction in storage requirements

39%
Increase in compression rates

15
Seconds or less for failover

[Read the Report](#) →

Db2 for Cloud Pak for Data

With the Db2 Cartridge, you will have entitlement to Db2 for Cloud Pak for Data, which provides you with a multitude of benefits.

ONE

Modernize the Data Architecture at your own pace with Time to Value < 5mins

Traditional database deployment requires weeks of planning and configuration. Deployment itself takes hours. Extra services like LDAP and replication must be manually provisioned and configured to work with each other.

With OpenShift and containerized Db2, Db2 on Cloud Pak for Data provides a fully integrated plug-and-play environment deployed in less than 5 min. This minimizes time to value, labor expense, and risk of failure.

These easily deployed environments can then be augmented with Cloud Pak for Data services that handle data marts, real-time data for IoT, machine learning, and more.

TWO

Containerized Deployment reduces Operational cost by 26%

Administration and Support contribute to 60% of database cost of ownership. **Automated applying of patches** will save you more than 30 labor-hours per month per 100 VMs.

With **Backup and Restore**, Db2 for Cloud Pak for Data will automatically backup including snapshot backups as well as automated upgrades and updates with Zero downtime fix-pack updates – resulting in **26% savings in operational cost**.

THREE

Cloud-Native Database can reduce infra costs up to 40% or more

Elastic Scalability on demand allows scale up (OLTP) and scale out/in with operators. **Save HW costs up to 40%** by scaling up and down (MPP) only when needed for ephemeral workloads

Support for container-based software defined storage (OpenShift Container Storage, IBM Cloud Storage)



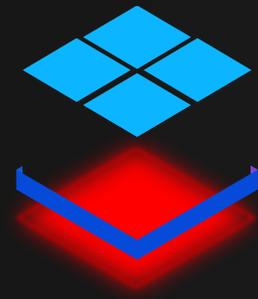
Highlights

50% more OIPS
in a fraction of rack
space with OpenShift
Container Storage

38% lower
IT infrastructure and
development platform
costs on top of Red
Hat OpenShift

03 Seamlessly Containerize Db2

Containerizing your Db2 environment is easier than you think.



Db2 Containerization Tool

Containerizing your existing Db2 environment is made easy through our IBM Db2 Click to Containerize tool. The automated tool evaluates your existing Db2 database to ensure compatibility with containers, extracts the database from an on-premise bare metal installation and inserts it into a Db2 container running on IBM Cloud Pak for Data.

This is not like a traditional database migration. The whole database is containerized, including Logs, Mirror Logs, Storage Paths, External User Defined Functions, the Database configuration, the KeyStore, and all Security Settings. There is no reverse engineering and no backup and restore. Your data stays encrypted and secure during the whole process. As a final step, the database is automatically upgraded to the latest Db2 version and release.

By containerizing Db2, you can easily move between private and public cloud vendors like AWS, Azure, GCP and IBM Cloud. You will also gain the benefits of running Db2 on Cloud Data for Data.

Click to Containerize Automated Process

STEP 1: Compatibility assessment of existing Db2 database.

STEP 3: Replaces Db2 database in target container with your original source database. Automatically upgrades to the latest Db2 version and release.

STEP 2: Copy all files from source Db2 database and ships them to target container

STEP 4: Start leveraging benefits of Db2 Containerized

Day 1 and Day 2: Db2 Containerization Benefits

- ✓ Easy deployment for QA/Dev (~2-4 mins)
- ✓ Scale clusters up-down at will (~2mins)
- ✓ Fully automated HADR & Recovery (no DBA actions needed)
- ✓ Better integration with applications via REST APIs
- ✓ Unified Application Management via certified RedHat operators.

Db2 Modernization Workshop

We want you to be successful in your modernization journey. To ensure your success, we will offer you a free Db2 Modernization Workshop with IBM Expert Labs.

IBM Architects and Db2 Specialists will work with your Data Administrator, ETL SME and Application SME to understand your business goals and get feedback on technical and business details of the current environment. This information will be used to provide you a detailed assessment and a plan for the Db2 modernization strategies and help with the replacement platform architecture.

Workshop Workstreams:

- **Pre-Workshop** - Expert Labs will interview the DBA, ETL SME and Application SME to better understand your business and technical environment.
- **OpenShift, Db2 Cartridge & Cloud Pak for Data Presentations** - Learn about the value of OpenShift, containerized Db2 and the Cloud Pak for Data base services within the context of your business environment.
- **Click to Containerize Lab** - Get hands-on to see how your Db2 instance can be containerized, upgraded and moved to Db2 on Cloud Pak for Data within minutes.
- **Customized Modernization Plan For Your Business** - Walk away with a detailed assessment and customized plan for containerizing Db2 as well as sizing for OpenShift environment and storage recommendations.

Workshop Outcomes:

- Understand the value of modernizing Db2 in the context of your specific environment and use case
- Detailed assessment and customized plan for Db2 Modernization Strategies
- Sizing for OpenShift environment and storage recommendations to gain same or better performance of Db2
- Expert Labs Statement of Work to implement the replacement platform architecture



Key Outcomes

Target Solution
Architecture and
Sizing

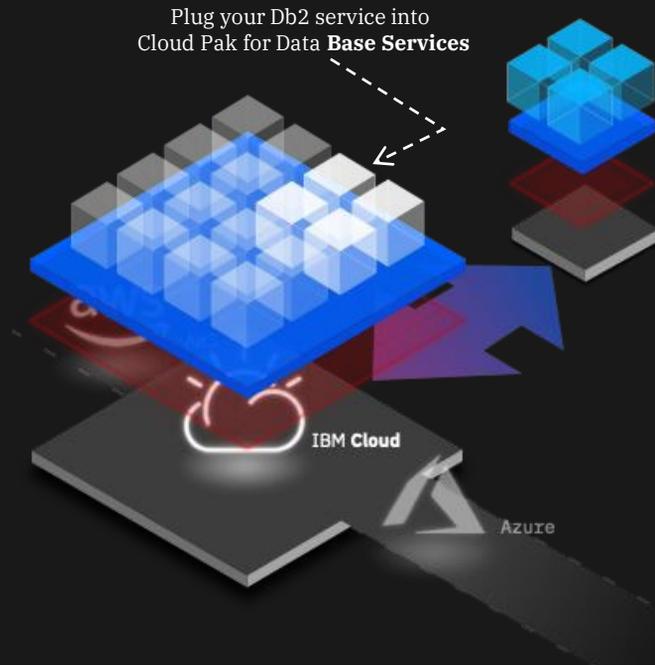
Migration Plan for
each database

Modernized Solution &
Roadmap

04 Value of Cloud Pak for Data

The Db2 Cartridge positions you to leverage **Cloud Pak for Data**, our fully integrated data & AI platform, which provides tools to create an ideal end-to-end data lifecycle.

The Cloud Pak for Data **Base Services** are the embodiment of the **Ladder to AI**. They drive a modern enterprise strategy by providing the connective fabric throughout the end-to-end data lifecycle for every tool and persona in the process. By incorporating 50+ IBM services, connecting to an even greater partner ecosystem of capabilities and leveraging an any-cloud environment model, it delivers a seamless user experience where the whole is greater than the sum of its parts.



Modernize

Make your data ready for an AI and hybrid multi-cloud world.

Collect

Make data simple and accessible.

Organize

Create a business-ready analytics foundation.

Analyze

Build and run AI with trust and transparency.

Base Services fuse the capabilities of previously stand-alone solutions into a single collaborative and unified working environment. They are included in the Enterprise Edition of Cloud Pak for Data. Those capabilities include:

Collect

- Data Virtualization
- Db2 BigSQL
- Db2 Eventstore
- Db2 Warehouse

Organize

- Master Data Connect
- InstaScan
- Watson Knowledge Catalog
- InfoSphere Information Analyzer
- Information Governance Catalog
- Open Source Management
- Regulatory Accelerator

Analyze

- Watson OpenScale
- Watson Studio
- Watson Machine Learning
- Analytics Engine for Apache Spark
- IBM Streams
- Cognos Dashboard
- Guardium (integration only)

Cost Efficiency, Production Proficiency

65-85% decrease

Containers And Container Management Efficiencies

25-65% reduction

Data Virtualization And Governance

~\$3M in savings

Data Science, Machine Learning and Artificial Intelligence Benefits

(All numbers per Forrester TEI study)