

Revised information: IBM Db2 11.5 delivers enhancements to help automate data management, eliminate ETL, and support artificial intelligence data workloads

Table of contents

1 Overview	9 Technical information
2 Key requirements	10 Ordering information
2 Planned availability date	10 Terms and conditions
2 Description	10 Prices
8 Program number	11 Announcement countries
9 Publications	

At a glance

IBM^(R) Db2^(R) 11.5 offers database efficiency, simplicity, and reliability in the form of new features and enhancements that address a variety of business requirements, offering robust enterprise security features, simplified installation and deployment, improved usability and adoption, a streamlined upgrade process, enhancements to large databases, and improvements to BLU Acceleration^(R):

- Three editions are now available: IBM Db2 Community Edition, IBM Db2 Standard Edition, and IBM Db2 Advanced Edition. All three editions provide unrestricted access to the full feature set of IBM Db2.
- IBM Db2 Advanced Recovery Feature is available with all three editions (Db2 Community Edition, Db2 Standard Edition, and Db2 Advanced Edition). This feature consists of advanced database backup, recovery, and data extraction tools that can help you improve data availability, mitigate risk, and accelerate crucial administrative tasks when time is limited.

Overview

This announcement supersedes the previous Software Announcement [ZP19-0261](#), dated June 4, 2019.

The IBM Db2 family of hybrid data management solutions is built on an intelligent Common SQL Engine that is designed for scalability and flexibility and to run on premises, and any private and public cloud. IBM Db2 11.5 is available through three editions:

- Db2 Community Edition
- Db2 Standard Edition
- Db2 Advanced Edition

All three editions provide unrestricted access to the full feature set of IBM Db2.

Highlights of Db2 11.5 include:

- Db2 pureScale^(R) support for host-based firewalls
- Db2 pureScale cluster wide free space management

- Faster pureScale LOAD utility for range-partitioned tables
- Support for storage devices using 4K sector size
- Columnar insert, update, and delete operations performance
- Automatic recompression for columnar table
- Large objects in columnar tables
- Automatic collection of column group statistics
- External tables

Db2 11.5 also includes the following enhancements and new capabilities for the CLI driver:

- Data movement using CLI LOAD with an external table
- db2dsdriver.cfg support in Microsoft™ ODBC Administrator
- Enhanced workload balancing/automatic client reroute algorithm including server side enablement

Other enhancements to the IBM Hybrid Data Management Platform include:

- Application compatibility
- Standardized API
- Flexible licensing
- Operational compatibility with the Db2 Common SQL Engine family (now part of the same Common SQL Engine capabilities)

Db2 11.5 has an Advanced Recovery Feature that helps with advanced database backup, recovery, and data extraction. This feature is available with all of the editions (Db2 Community Edition, Db2 Standard Edition, Db2 Advanced Edition) and includes the current versions of:

- IBM Db2 Recovery Expert V5.5
- IBM Db2 Merge Backup V3.5
- IBM InfoSphere^(R) Optim^(TM) High Performance Unload for Db2, V6.5

Key requirements

For details, see the [Software requirements](#) section.

Planned availability date

October 29, 2019

Description

Db2 11.5 enhancements and improvements

Db2 11.5 offers:

- Improved security features through host-based firewall enablement. In a multi-node environment, Db2 needs to run commands on remote nodes for certain operations. The registry variable DB2_FIREWALL_PORT_RANGE ensures that this cross-node communication is performed through the use of ports in the range specified. This registry variable is supported for single-node, DPF, and pureScale Db2 configurations.
- Improved cluster caching facility (CF) recovery time. On Db2 pureScale configurations, CF recovery is faster in public Ethernet failure scenarios.

- 4K sector support. Db2 11.5 offers support for storage devices that use a 4 KB sector size in production environments.
- SQL insert and update statement optimizations. SQL-based insert and update statements for columnar tables are optimized to support large data sets efficiently. Encoding dictionary creation for such operations is optimized.
- New monitoring metrics. For determining failure rate of SQL statements, it is possible to monitor the failure rate of an SQL statement by using the MON_GET_PKG_CACHE_STMT table function. For workloads at the service superclass level, it is possible to examine monitor data and manually aggregate data across all service subclasses within a service superclass.
- Automatic recompress feature for tables. This design ensures that an adequately large sample of rows exists to build dictionaries that yield an adequate compression ratio. In addition to improving space utilization, automatic recompress can also improve query performance, which is more efficient for processing encoded data. This efficiency enables queries to process faster on a table where the front part of the table has been recompressed with the dictionary. The automatic recompress feature requires no user intervention and uses the REORG TABLE command with a new RECOMPRESS option to recompress the rows.
- CLI driver enhancements. Db2 11.5 brings the following advancements and capabilities for the CLI driver:
 - Data movement using CLI LOAD with an external table
 - db2dsdriver.cfg support in Microsoft ODBC Administrator
 - Enhanced workload balancing/automatic client reroute algorithm including server side enablement

Db2 editions for production and non-production deployment

Db2 11.5 for Linux^(R), UNIX^(R), and WindowsTM brings a simplified set of three editions with one charge metric. The three editions are:

- Db2 Community Edition
- Db2 Standard Edition
- Db2 Advanced Edition

All three editions have the full feature capabilities of the Db2, making it easier to choose the right edition with the capabilities and tools that are required to meet your organization's data management needs. Moreover, switching between editions is easier than ever, with the capability to purchase and exchange the license file without any additional installation.

The **Db2 Community Edition** is available as free for production and nonproduction use for up to four processor cores, 16 GB RAM, and 100 GB storage per database with community support. No paid support is available for this edition.

The Db2 Lite Edition, which was introduced as a part of Db2 11.5, is no longer available and clients need to purchase the Db2 Standard Edition if they want to buy a supported offering.

The **Db2 Standard Edition** is available as a perpetual software license for production and nonproduction use for up to 16 processor cores and 128 GB RAM with IBM support. For production use, Db2 Standard Edition can be licensed based on a Virtual Processor Core metric. For nonproduction use, Db2 Standard Edition can be licensed based on the Authorized User metric.

The **Db2 Advanced Edition** is available as a perpetual software license for production and nonproduction use with no limitations enforced on core, memory, or storage resources. For production use, Db2 Advanced Edition can be licensed based on a Virtual Processor Core metric. Db2 Advanced Edition is also available as a component in the Hybrid Data Management Platform, which provides clients with the capability to mix and match deployments of any database offering across the entire Db2 family.

Hybrid Data Management Platform is the strategic delivery vehicle for all Db2 family software products and DBaaS offerings. Hybrid Data Management Platform is available in two different licensing models: perpetual and subscription. Each licensing model consists of several components.

Perpetual (Part number D1WR8LL)

- Db2 Advanced Edition (Production)
- Db2 Advanced Edition (Nonproduction)
- Db2 Warehouse
- Db2 Event Store
- Db2 Big SQL

Subscription (Part number D1YE3LL)

- Db2 Advanced Edition (Production)
- Db2 Warehouse
- Db2 Event Store
- Db2 Big SQL
- Db2 Hosted
- Db2 on Cloud
- Db2 Warehouse on Cloud

Entitlement to the Hybrid Data Management Platform provides a single license that can be used to deploy any capability across the IBM Db2 Common SQL Engine. The subscription license also provides a cost-effective upgrade path to incrementally migrate workloads from on-premises data centers to the cloud. Entitlements to both licensing models can be purchased by Flex points. For example, generic licensing credits can be used to entitle and deploy instances of each technology bundled within the platform.

Program charges

Db2 Standard Edition and Db2 Advanced Edition are both available on the Virtual Processor Core metric:

Virtual Processor Core is a unit of measure by which the Program can be licensed. A Server is a physical computer that is comprised of processing units, memory, and input/output capabilities and that executes requested procedures, commands, or applications for one or more users or client devices. Where racks, blade enclosures, or other similar equipment is being employed, each separable physical device (for example, a blade or a rack-mounted device) that has the required components is considered itself a separate Server. A Virtual Server is either a virtual computer created by partitioning the resources available to a physical Server or an unpartitioned physical Server. A Processor Core is a functional unit within a computing device that interprets and executes instructions. A Processor Core consists of at least an instruction control unit and one or more arithmetic or logic unit. A Virtual Processor Core is a Processor Core on a Virtual Server created by partitioning the resources available to a physical Server or an unpartitioned physical Server. Licensee must obtain entitlement for each Virtual Processor Core made available to the Program.

Entitlements and movement of previous editions to Db2 11.5

Effective September 2, 2019, all Db2 Workgroup Server Edition parts were withdrawn. The replacement program for Db2 Workgroup Server Edition is the new Db2 Standard Edition offering. On the effective withdrawal date, all existing Db2 Workgroup Server Edition license holders were automatically migrated to Db2 Standard Edition by using a set of conversion ratios. Note that the only license metric available for production use is Virtual Processor Core. If existing clients feel

they are under entitled based on automatic migration, reach out to the IBM account representative to request details.

All other editions of Db2 will remain eligible for renewal through the end of support. Db2 11.5 is only available for purchase through the new Db2 Standard Edition and Db2 Advanced Edition offerings.

Supporting program update

Db2 Advanced Recovery Feature for Linux, UNIX, and Windows

With Db2 11.5, Advanced Recovery Feature is available with all the editions (Db2 Community Edition, Db2 Standard Edition, Db2 Advanced Edition). This feature consists of advanced database backup, recovery, and data extraction tools that can help you improve data availability, mitigate risk, and accelerate crucial administrative tasks when time is limited. New features of the tools include support for Db2 11.5, including the capability to use the tools with Db2 native encryption. The Advanced Recovery Feature bundle contains the following new releases of the included tools:

- Db2 Merge Backup for Linux, UNIX, and Windows, V3.5
- Db2 Recovery Expert for Linux, UNIX, and Windows, V5.5
- Optim High Performance Unload for Db2 for Linux, UNIX, and Windows, V6.5

Q Replication and change data capture functionality

While Q Replication technology is embedded in the Db2 product, there is no license entitlement to this supporting program in Db2 11.5 and future releases. Similarly, Change Data Capture (CDC) functionality in Db2 11.5 is prohibited except for supporting shadow table functionality within a single Db2 instance to replicate from row organized tables into column organized tables. A distinct license of an IBM Data Replication offering is required to use these capabilities. A manual entitlement to an IBM Data Replication offering will be available for a limited time for clients that are currently using the Q Replication or CDC features entitled by previous versions of Db2 Advanced Enterprise Server Edition or Advanced Workgroup Server Edition. Support charges associated with the IBM Data Replication offering will be required. Please contact your account representative to request details.

IBM Data Server Manager V2.1.5

Data Server Manager V2.1.5.3 and higher supports all editions of Db2 11.5. Full Data Server Manager Enterprise capabilities are supported for all Db2 11.5 Editions.

IBM Db2 Data Management Console V3.1

The IBM Db2 Data Management Consoles are the next step in the evolution of IBM Data Server Manager. The consoles are a single experience, built on a common codebase, across multiple on premises and cloud environments, for the whole Db2 family of offerings.

To highlight these changes, IBM Data Server Manager is renamed to IBM Db2 Data Management Console.

Starting with Db2 Big SQL, IBM delivered a better, more powerful user experience. IBM provided a simpler, easier to use approach to monitoring, a faster redesigned SQL Editor, and an easier way to navigate and manage database objects. It is followed up with new Db2 Data Management Consoles across multiple public and private cloud offerings.

Db2 Warehouse has a new console for both IBM Cloud™ and AWS IBM Cloud Pak for Data.

Each new release has added capabilities and has improved the interface for the whole family of offerings.

The current Db2 Data Management Console is built for your enterprise and your on-premises Db2 databases. Your entire team can work together across hundreds of Db2 databases. You can manage, monitor, and receive alerts and optimize the performance of all of your Db2 databases from a single screen.

These changes are not just in the user interface. The new consoles are built on a full set of open RESTful APIs. Anything that you can do in the interface, you can do through an open API. More than just a UI, it is a set of microservices for Db2.

Team Collaboration is built in. With a click, you can send a link to your team so that they can see exactly what you are working on.

You can even pick and choose parts of the console to integrate into your own custom web pages. For more information, see the [IBM Db2 Data Management Console Technical Preview](#).

Discontinued features in Db2 11.5

The following features are deprecated in Db2 11.5:

- IBM MQ
- Net Search Extender (NSE)
- Windows Home Server (WHS) Admin Console
- WHS Design Studio
- WHS SQL Warehouse Tools (w/ XML)
- WHS Intelligent Mining Tools
- WHS Unstructured Text Analysis Tools
- WHS Intelligent Miner[®] Visualization
- WHS Documented Samples
- WHS Intelligent Mining Process
- WHS Unstructured Text Analysis Process
- IBM Cognos[®] Analytics
- IBM Data Server Driver for JDBC and SQL 3.x
- Open source products (Ruby, Perl)
- The Resource Description Framework (RDF)

Db2 and hybrid data management

Db2 database is a relational database that delivers advanced data management and analytics capabilities for your transactional and warehousing workloads. Db2 is purpose-built to provide high performance, actionable insights, data availability, and reliability.

The Db2 database includes advanced features such as in-memory technology (BLU Acceleration), advanced management and development tools, storage optimization, workload management, actionable compression, and continuous data availability (Db2pureScale).

Db2 database is now part of the Hybrid Data Management Platform offering. Hybrid data management enables enterprises to drive innovation by seamlessly accessing, sharing, and analyzing data. This is a higher level of data management that enables all structured, semi-structured, or unstructured data to be easily accessed and analyzed, whether it is stored on premises, in a public cloud, in a private cloud, open source, or in any combination of those deployments.

Hybrid Data Management Platform features

Enhancements to the Hybrid Data Management Platform include:

- New version of IBM Db2 Event Store 2.0. This in-memory event store database is optimized for event-driven applications and real-time analytics.
- Integration with the same Common SQL Engine capabilities.
- Application compatibility. Write once, run anywhere.
- Standardized API. Gain efficiency with common engagement for systems of engagement, systems of record, and systems of insight.
- Flexible licensing. Use the Hybrid Data Management Platform bundle for flexible deployment options and shifts.
- Operational compatibility with the Db2 family.
- Capability to reuse operational and administrative procedures.

Use data of all types and sources with hybrid data management

Hybrid data management enables seamless access, sharing, and analysis of all types of data, regardless of its structure or whether it is stored on premises, in a public cloud, in a private cloud, or in any combination of those deployments.

These capabilities are achieved through the integration of advanced technologies that enable you to analyze a range of new data types and sources, including social, mobile, web, and Internet of Things (IoT), alongside your historical customer and operations data to yield new insights.

Seamlessly integrate cloud and on-premises deployments

Deploying workloads in the cloud can reduce costs and accelerate time to market on application development and new products. Because of these benefits, many businesses are integrating cloud into their IT environments but still depend on on-premises infrastructure for certain workloads.

The capability to access and analyze all data, whether in the cloud or on premises, is a key part of effective data management. This enables users to access data from your entire IT environment while keeping that data in the best-suited deployment model.

Prepare your data management for machine learning

The capability of machine learning to stream, analyze, and learn from data sets without explicit programming can be extremely valuable, enabling data scientists to develop and improve machine learning models on the platform where the data resides.

Effective data management enables data from various sources, including on-premises, cloud, and data lakes, to be input into machine learning models. Workloads such as cross-analyzing unstructured data from external sources with historical structured data to uncover patterns can enable you to predict changes in customer demand, identify potential problems before they occur, and gain additional insights.

Adapt current data management to changing business needs

As new technologies emerge, data is expanding exponentially.

The capability to integrate new cloud-based and open source technologies with existing infrastructure enables you to drive innovation across your business. The flexibility of a hybrid data environment enables IT professionals to evolve with changing technology and business needs.

Empower users across your business with self-service access to data

With hybrid data management, authorized users from various lines of business can more securely access relevant data from practically any location. This democratization of data insight enables users across an organization to respond more quickly to new opportunities and challenges while reducing strain on the IT department.

Overcome the sprawl of data applications and data silos

Storing data on multiple, disconnected platforms can significantly hinder efforts to discover patterns and insights through cross analysis. Manually collecting and analyzing data from various infrastructures can be very labor intensive and inefficient.

Implementing an analytics engine that connects all data in your IT environment, regardless of where it is stored, enables deeper and more efficient analysis. This approach also allows for greater flexibility by supporting and unifying more deployment options.

Get a unified view of your heterogeneous data

Db2 includes data federation and virtualization through a robust SQL interface and a full relational database engine designed for global optimization of data access. This capability offers homogeneous or heterogeneous federation between selected IBM and non-IBM database products. You can prototype and implement solutions involving disparate databases by virtualizing access and optimizing performance. Data can remain in place for both transactional as well as analytical workloads.

Accessibility by people with disabilities

Accessibility Compliance Reports (previously known as a VPAT) containing details on accessibility compliance to standards, including the Worldwide Consortium Web Content Accessibility Guidelines, European Standard EN 301 349, and US Section 508, can be found on the [IBM Accessibility Conformance Report Request](#) website.

Program number

Program number	VRM	Program name
5725-L16	11.5.0	IBM Db2 Advanced Recovery Feature for Linux ^(R) , UNIX ^(R) , and Windows TM
5724-B90	6.5.0	IBM InfoSphere Optim High Performance Unload for Db2 for Linux, UNIX, and Windows
5724-H93	5.5.0	IBM Db2 Recovery Expert for Linux, UNIX, and Windows
5725-B07	3.5.0	IBM Db2 Merge Backup for Linux, UNIX, and Windows
5724-B62	11.5.0	IBM Db2 Connect Unlimited Edition for System z ^(R)
5724-Z19	11.5.0	IBM Db2 Connect Application Server Advanced Edition
5765-F30	11.5.0	IBM Db2 Connect Enterprise Edition
5724-D54	11.5.0	IBM Db2 Connect Application Server Edition
5724-Z18	11.5.0	IBM Db2 Connect Unlimited Advanced Edition for System z
5724-M15	11.5.0	IBM Db2 Connect Unlimited Edition for System i ^(R)
5737-K73	11.5.0	IBM Db2 Advanced Edition
5737-K74	11.5.0	IBM Db2 Standard Edition

Program number	VRM	Program name
5737-K76	11.5.0	IBM Hybrid Data Management Platform On-Premise

Publications

None

Services

Global Technology Services

Contact your IBM representative for the list of selected services available in your country, either as standard or customized offerings for the efficient installation, implementation, or integration of this product.

Technical information

Specified operating environment

Software requirements

Db2

The operating system support level for various Db2 products is frequently updated. To obtain the current information for supported software levels, including recommended maintenance levels, see the [Db2 for Linux, UNIX and Windows](#) website.

Hybrid Data Management Platform

The operating system support level for various Hybrid Data Management Platform products is frequently updated. To obtain the current information for supported software levels, including recommended maintenance levels, see the [Hybrid data management](#) website.

IBM Support

[IBM Support](#) is your gateway to technical support tools and resources that are designed to help you save time and simplify support. IBM Support can help you find answers to questions, download fixes, troubleshoot, submit and track problem cases, and build skills. Learn and stay informed about the transformation of IBM Support, including new tools, new processes, and new capabilities, by going to the [IBM Support Insider](#).

You can also access the [Service requests and PMRs](#) website for additional support options.

Planning information

Packaging

This offering is delivered through the internet as an electronic download. There is no physical media.

This program, when downloaded from a website, contains the applicable IBM license agreement and License Information, if appropriate, which will be presented for acceptance at the time of installation of the program. For future reference, the license and License Information will be stored in a directory such as LICENSE.TXT.

Ordering information

For ordering information, consult your IBM representative or authorized IBM Business Partner, or go to the [Passport Advantage^{\(R\)}](#) website.

This product is only available through Passport Advantage. It is not available as shrinkwrap.

These products may only be sold directly by IBM or by authorized IBM Business Partners for Channel Value Rewards.

More information can be found on the [IBM Channel Value Rewards](#) website.

To locate IBM Business Partners for Channel Value Rewards in your geography for a specific Channel Value Rewards portfolio, go to the [Find a Business Partner](#) page.

Passport Advantage

Charge metric

The charge metrics for these licensed products can be found in the following License Information documents:

Program identifier	License Information document title	License Information document number
5725-L47	IBM Db2 Advanced Enterprise Server Edition	L-XHUG-B8VM47
5737-K73	IBM Db2 Advanced Edition	L-XHUG-BBASJH
5737-K74	IBM Db2 Standard Edition	L-XHUG-BBASSK

Select your language of choice and scroll down to the Charge Metrics section. Follow-on releases, if any, may have updated terms. See the [License Information documents](#) website for more information.

Terms and conditions

The terms and conditions as previously announced in are unchanged .

Statement of good security practices

IT system security involves protecting systems and information through intrusion prevention, detection, and response to improper access from within and outside your enterprise. Improper access can result in information being altered, destroyed, or misappropriated or can result in misuse of your systems to attack others. Without a comprehensive approach to security, no IT system or product should be considered completely secure and no single product or security measure can be completely effective in preventing improper access. IBM systems and products are designed to be part of a regulatory compliant, comprehensive security approach, which will necessarily involve additional operational procedures, and may require other systems, products, or services to be most effective.

Important: IBM does not warrant that any systems, products, or services are immune from, or will make your enterprise immune from, the malicious or illegal conduct of any party.

Prices

The prices are unchanged by this announcement.

Announcement countries

All European, Middle Eastern, and African countries, except Islamic Republic of Iran, Sudan, and Syrian Arab Republic.

Trademarks

Optim and IBM Cloud are trademarks of IBM Corporation in the United States, other countries, or both.

IBM, Db2, BLU Acceleration, pureScale, InfoSphere, Passport Advantage, Intelligent Miner, Cognos, System z, System i and Global Technology Services are registered trademarks of IBM Corporation in the United States, other countries, or both.

Microsoft and Windows are trademarks of Microsoft Corporation in the United States, other countries, or both.

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

UNIX is a registered trademark of The Open Group in the United States and other countries.

Other company, product, and service names may be trademarks or service marks of others.

Terms of use

IBM products and services which are announced and available in your country can be ordered under the applicable standard agreements, terms, conditions, and prices in effect at the time. IBM reserves the right to modify or withdraw this announcement at any time without notice. This announcement is provided for your information only. Reference to other products in this announcement does not necessarily imply those products are announced, or intend to be announced, in your country. Additional terms of use are located at

[Terms of use](#)

For the most current information regarding IBM products, consult your IBM representative or reseller, or go to the [IBM worldwide contacts page](#)

[IBM Directory of worldwide contacts](#)