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Compare the Informix 12 editions

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Introduction

Informix is IBM's premier database for high-volume online transaction processing (OLTP), embedded database, edge processing, integrated applications, and breathtakingly fast data warehouse/analytical workloads. Informix has built an incredible reputation over time as the database server that "just works!" Informix has kept pace with its customers as they've grown and expanded without costing them a fortune for ongoing maintenance and administration. In most cases, these companies have grown without requiring significant infrastructure upgrades or additional personnel because Informix is so efficient.

In 2015, Informix extended its footprint beyond the traditional on-premise or cloud deployment model to include edge-of-the-network capabilities. Informix version 12 is the first enterprise-class database ported to ARM V6 (and above) and most popular O/S's that run there. This ARM port of Informix is not limited in terms of functionality; it includes all the advanced features such as Sensor Data support, JSON/BSON integration, data replication, dynamic scalability and more. This range of feature and platform support is why Informix is IBM's Internet-of-Things database engine.

In April 2017, IBM made a significant and positive announcement regarding the Informix product family -a 15 year <u>IP Partnership</u> with <u>HCL</u> to jointly develop, sell, support and market Informix products. It is important to understand this was <u>NOT</u> a sale of Informix, rather HCL will assume responsibility for the development and advanced support of Informix products. Nothing changes for existing IBM customers. HCL will expand how and where Informix is sold, moving it into new markets, territories and platforms. IBM will continue to sell Informix and handle all current IBM Informix customer interactions. IBM will provide continued input and guidance on product direction and development for the needs of its customers. In short, this is very good news about the continued enhancement and investment in the Informix family of products. A <u>revised product roadmap</u> has been published covering the next 12 – 18 months and as the development organization expands, look for new and exciting features to appear more quickly than in the past. As these and other changes occur, this page will be updated to reflect the latest information available.

Customers choose Informix because of its reliability, flexibility, ease of use, and low total cost of ownership. Informix works without a problem or major administrative issues regardless of the operating system it is running on. As a result, applications can be managed as the business dictates, not by technological limitations. Informix is "Simply Powerful!" Informix is available across a broad range platforms and operating systems, including AIX®, HP-UX, Sun Solaris, macOS, Linux® System i®, System p®, System x®, System z®, Windows®, and ARM V6 and later.

Not all customers need the same database features and functionality. In some cases, this is a technological decision. For example, a customer may require advanced data replication, or support for special data types such as spatial, time series, or unstructured data in JavaScript Object Notation

(JSON)/Binary JSON (BSON). In other cases, licensing requirements and budgets drive these decisions. The Informix licensing model was designed to address technology, licensing, and budget needs.

IBM continues to enhance and evolve the Informix licensing model to meet market and customer demands. Informix has "no-cost" editions that can be downloaded and used for development, test, and limited production workloads, and enterprise-class "for-purchase" editions. All editions are tailored from a price and functionality perspective to a specific market segment. As with a lot of IBM software, Informix provides subcapacity license options to help clients control costs. All editions may be deployed in "virtual" or public/private cloud environments, giving customers additional deployment flexibility. Finally, for the ultimate in flexibility and pricing convenience, customers can take advantage of "pay-as-you-go," ready-to-use public cloud computing technologies featuring Informix through IBM Bluemix, and other providers.

In addition to being a high-performance operational or OLTP database engine, Informix has the built-in functionality to serve as a high-performance data warehouse or data analysis server. Called the Informix Warehouse Accelerator (IWA), this technology uses compression and a columnar approach to storing and accessing data in-memory as opposed to row-oriented, disk-based system like most database engines. In-memory columnar processing enables Informix to provide virtually unlimited data warehouse growth while providing data response times that are hundreds of times faster than many conventional data-warehouse systems. This technology is available in two editions: Informix Advanced Enterprise Edition for "no-limits" implementations as well as the Informix Advanced Workgroup Edition, targeted for small to midsize businesses or partners looking to provide best-of-breed turnkey solutions. It is also included as part of the Advanced Developer Edition.

Informix 12 Key enhancements

With the release of Informix 12.1 in March 2013, Informix continued building on its "Simply Powerful" foundation. To highlight just a few things, in this release Informix enhanced its Sensor Data (also known as TimeSeries) functionality with a new data load API, scalability and usability enhancements, and replication capabilities. Informix also added exciting functionality to its Warehouse Accelerator offering, including trickle feeds, automatic mart refreshes, expanded join capabilities, and more. Included in Informix 12.1 is the ability to incorporate and use unstructured data as a fully supported data type.

NoSQL capability: The key reasons clients choose enterprise-class databases like Informix are because of the need for data integrity, table and index structure, and atomicity, consistency, isolation, durability (ACID) rules. A new class of applications is being written using a data type that historically didn't depend or couldn't provide these constructs within their silo'ed, single-use databases. In the past, the actual "useful life" or business value of a data element in these databases was usually very short, measured in minutes or less, sometimes in just a mouse click or two. This data type and the applications that use it are referred to as NoSQL because they use a language other than industry-standard SQL to communicate back and forth with data. Today there is literally an explosion of NoSQL utilization across a broad range of industries to solve a wide range data collection and use cases. In addition, NoSQL data is transforming into being a "first-class" data type in terms of regulatory and other requirements. Because the data behind these applications are typically managed using the JSON and BSON data types, Informix was enhanced to provide and support native NoSQL capability as built-in type. As such, Informix supports a completely hybrid database containing structured SQL data alongside unstructured data stored in JSON/BSON data types. Informix also provides the full range of enterprise-class functionality to this data type including transactions, auditing, high availability, replication, regulatory compliance and much more.

With Informix 12, NoSQL and SQL data can be used together in a single SQL or NoSQL operation. For example, they can be joined together to produce a business result. There is transaction support for both types of data within the NoSQL API, as well as the standard SQL interface. Informix provides type-less indices on NoSQL data, as well as support for advanced NoSQL functionality such as GeoJSON, sharding, and more. NoSQL data can now be used in conjunction with the Informix TimeSeries technology to support fast capture and analysis of any kind of time-oriented data. Finally, since JSON /

BSON is a fully supported data type in Informix, rich analytics of NoSQL can now be executed through Informix Warehouse Accelerator. This ability to create and support hybrid applications enables the rapid deployment of new NoSQL applications with the ability to grow into a more traditional environment as the data requirements or volumes grow. With ARM V6 support, these complex data types along with traditional data can now be captured, stored, manipulated and analyzed at the edge of the network. They can also be replicated into traditional on-premise or cloud database systems using Informix replication technologies for more in-depth analysis.

Informix on cloud: For those interested in cloud deployments, Informix is available on the IBM cloud. Since cloud environments may not be as secure as on-premise deployments, Informix 12.10.xC8 introduced native on-disk encryption or "encryption at rest" (EAR). With EAR, you can encrypt some or all of your flat-file based chunks using cyphers ranging from AES128 to 256. For all major cloud hosted deployments, EAR is on and all dbspaces are encrypted to help protect against brute force attacks on the contents of instance chunks.

With Informix 12.1, Informix renamed and repackaged the editions to more closely map the names to the functionality provided. Some editions have restrictions on the breadth and depth of features and functionality that can be used, and pricing for these editions varies accordingly. Regardless of the edition used, all Informix editions come with the full implementation of the Dynamic Scalable Architecture (DSA) with its unmatched performance, reliability, ease of use, and availability.

Below is a brief comparison of the Informix editions and their feature sets.

No-cost editions

Informix no-cost editions can be downloaded and used for development and test purposes.

- **IBM Informix Developer Edition** For application development and testing only, this edition packs the full suite of Informix functionality into an attractive price point: free! The Developer Edition includes all the functionality available in the Informix Enterprise Edition with scalability constraints including processing, memory, storage, and connection limitations. It is available on a wide range of operating systems in 32- and 64-bit versions where appropriate. Customers can upgrade from the Developer Edition directly to any other edition simply by installing the new database binaries. Since the intent of the Informix Developer Edition is for system development and test only, it cannot be used in a production environment, and there is no optional support package.
- IBM Informix Innovator-C Edition— For customers looking for a robust database environment that can support small production workloads, this edition provides the most widely used data processing functionality. Available on all supported platforms, this edition is limited to one core and a total of 2GB of RAM operating from the same install. The Informix Innovator-C Edition can be used for small end-user production workloads without a license fee. Redistribution requires a separate license. Support is community-based though an optional for-charge service and support package is available for Informix Innovator-C edition. This Elite Software Support provides full support and product updates for the term of the package. For more information about this package, see IBM Elite Support for IBM Informix Innovator-C Edition in <u>Related topics</u>. Community support is available through discussion forums hosted by the International Informix User Group (IIUG), as well as IBM developerWorks Informix technical forums (see <u>Related topics</u>).

Fee (aka for-purchase) editions

IBM Informix Express Edition— The Express Edition is best suited for in-house or independent application developers or other third-party developers looking to embed a database engine within the application itself to support the application's functionality. Available on all supported platforms, this edition is limited to four cores and a total of 8GB of RAM operating from the same Informix install. In addition, there are other functional limitations including limiting ER/grid clusters to two nodes (root nodes only) and restricting an H/A cluster to one secondary (of any type).

Informix Express Edition can be licensed by Authorized User Single Install, PVU, and LU Virtual Server metrics. From a licensing perspective, since ER/grid nodes are stand-alone, each one must be fully licensed. Informix Express Edition supports one H/A cluster secondary node of any type. As long as the secondary node is only functioning as a backup/failover secondary, it can be deployed without an additional Informix license charge. However, if the H/A cluster secondary node is used for SQL or NoSQL operations (read or write), the secondary node must be fully licensed.

IBM Informix Workgroup Edition— Available on all supported platforms, this edition is perfect for midsize companies or departmental servers in an enterprise deployment. This edition can be deployed on up to 16 cores over a maximum of four sockets and 16GB of RAM operating from the same Informix install. Informix Workgroup Edition can be licensed by Authorized User Single Install, PVU, and LU Socket metrics. LU Socket enables licensing by physical processor socket. LU Socket licensing is limited to physical servers with no more than four physical processor sockets. Customers may purchase licenses for up to four physical sockets and use up to 16 processor cores. Customers are not allowed to create a physical or logical partition of up to four processor sockets on a larger server and purchase an LU socket license.

Informix Workgroup Edition provides additional database functionality over Express Edition, including unlimited ER/grid cluster nodes of any type to send or receive data updates within the cluster. From a licensing perspective, since ER/grid nodes are stand-alone, each one must be fully licensed. Informix Workgroup Edition supports up to two H/A cluster secondary nodes of any type. As long as the secondary node is only functioning as a backup/failover secondary, it can be deployed without an additional Informix license charge. However, if any H/A cluster secondary node is used for SQL or NoSQL operations (read or write), the secondary node must be fully licensed.

- IBM Informix Advanced Workgroup Edition— The Informix Advanced Workgroup Edition represents the ultimate in data warehouse performance for small to midsize businesses or partners looking to create a turnkey data warehousing solution. Advanced Workgroup includes entitlements to the base functionality of the Informix Workgroup Edition (including Flexible Grid/ER and well as H/A Cluster entitlements and restrictions), plus all the functionality of the IWA. This edition is available on 64-bit versions of AIX, Solaris, HP-UX, and Linux. The IWA component is only available on 64-bit Linux either on Intel-based or PowerPC LE systems. This edition can only be licensed using the PVU metric. The Advanced Workgroup Edition is limited to 16 cores and 48GB of memory in the IWA component. The core and memory limitations of the Informix Workgroup Edition database engine apply as well for that component. The Advanced Workgroup Edition does not include an entitlement to the storage optimization feature.
- **IBM Informix Advanced Developer Edition** Includes all Informix features and functionality, including Informix Warehouse Accelerator with unlimited scalability. Available on all supported platforms, this edition is licensed by Authorized User only and is intended for pre-production development and testing only. This edition can **NOT** be used for production purposes.

• **IBM Informix Enterprise Edition**— Includes all Informix features and functionality (except those listed as optional add-ons) with unlimited scalability required for the highest OLTP and warehousing performance and full functionality. Available on all supported platforms, this edition can be licensed by PVU and Authorized User Single Install metrics. With this edition, full H/A cluster and ER/grid functionality is available, including unlimited nodes. From a licensing perspective, since ER/grid nodes are stand-alone, each one must be fully licensed. For H/A clusters, as long as the secondary node is only functioning as a backup/failover secondary, it can be deployed without an additional Informix license charge. However, if any H/A cluster secondary node is used for SQL or NoSQL operations (read or write), the secondary node must be fully licensed.

There are only a few optional fee add-ons for this edition such as the storage optimization feature that provides index and data compression on disk to help reduce storage and backup/recovery costs and administration, as well as providing improved performance.

• **IBM Informix Advanced Enterprise Edition**— The Advanced Enterprise edition represents the ultimate in data warehouse performance and scalability as it includes entitlements to Informix Enterprise Edition, the IWA and the storage optimization feature. This edition represents the ultimate in data warehouse performance and scalability. This edition is available on 64-bit versions of AIX, Solaris, HP-UX, and Linux. The IWA component is only available on 64-bit Linux either on Intel-based or PowerPC LE systems. This edition can be licensed by PVU and Authorized User Single Install metrics. With this edition, full H/A cluster and ER/grid functionality is available, including unlimited ER/grid and H/A cluster nodes. From a licensing perspective, since ER/grid nodes are stand-alone, each one must be fully licensed. For H/A clusters, as long as the secondary node is only functioning as a backup/failover secondary, it can be deployed without an additional Informix license charge. However, if any H/A cluster secondary node is used for SQL or NoSQL operations (read or write), the secondary node must be fully licensed. All features and functionality are included with this edition.

The Informix Advanced Enterprise Edition supports the full compliment of Informix technology like H/A clustering, Informix Flexible Grid, spatial analysis, advanced access control as well as the newly integrated NoSQL functionality to build a robust, scalable data store that can answer the most demanding and difficult business questions in almost no time at all. Recently, Informix changed its licensing terms to allow customers using Advanced Enterprise Edition to build accelerator environments using the Advanced Workgroup edition and vice versa. This was done to enhance the vertical and horizontal scalability of the product. Customers with a collection of smaller, Workgroup servers can create a large Advanced Enterprise accelerator environment for their operations. Likewise, customers with extremely large enterprise data environments but only want to accelerate a small portion of it can use the Workgroup-level accelerator. It's a win-win from a technical and cost perspective.

Licensing Informix

Informix can be licensed by one of several pricing metrics depending on your needs. A brief description of each metric is listed below. In 2010, IBM introduced a new definition called an *install* to make sub-capacity licensing conditions (such as logical or physical partitioning of a physical server or virtual machine images) easier to understand and purchase. IBM defines an install as an installed copy of a product (in this case, Informix) on a physical server (or partition thereof) or in a virtual machine image. For example, if a physical server is segmented into partitions, whether logical (LPARs) or physical, each partition containing Informix is considered a separate IBM Informix install for licensing purposes and restrictions. The concept of an install applies to the licensing limits specified for all Informix editions. For more information on authorized sub-capacity technology, see the Limited Use Virtual Server and Limited Use Socket Sub-capacity Licensing Guide, and get more information about eligible virtualization technologies.

Note: The descriptions are only a summary of the licensing definitions. They are not intended to be full and legally binding. For a full and complete description, refer to the <u>Informix license information</u> documents that provide the terms for each edition and version.

- Processor Value Unit (PVU) (also known as processor-based pricing) PVU's are calculated using the number of processor cores in the physical server multiplied by the corresponding value units based on processor architecture as described <u>here</u>. Licensing by PVU's is an unlimited-user or connection license only dependent on the server processors or cores, and is usually the optimal choice when the user or session load cannot be controlled or counted.
- Authorized User Single Install (AUSI)— A single named user or specific individual accessing one installation of Informix on one physical or virtual server on a 1:1 basis. That authorized user can establish multiple connections to a single Informix instance on the server however each connection is for the exclusive use of that one authorized user from a single client device. If a specific user needs access to multiple instances, multiple AUSI's are required. This license type can NOT be used to multiplex connections from multiple clients through a single shared or cached connection to the database.
- Authorized User (AU)— Only for use with the Informix Advanced Developer Edition. Purchasing an Authorized User license allows a single named user or specific individual access to all instances using the Informix Advanced Developer Edition regardless of physical or virtual server where it's installed.
- Limited Use Virtual Server (LUVS)— An LU Virtual Server is a physical server or a virtual server created by partitioning the resources available to a physical server using an <u>eligible</u> <u>virtualization technology</u>. This licensing metric does have specific scalability limitations, specifically no more than four cores may be allocated to the server created through physical or virtual partitioning.
- Limited Use Socket (LU Socket)— Available only for Informix Workgroup Edition, this allows for licensing on a physical socket potentially containing multiple cores. An LU Socket license is required for each active processor socket. This licensing metric can only be used on a physical server with no more than four physical sockets. Customers may purchase licenses for up to four physical sockets and use up to 16 cores.

Not all pricing models are available for all Informix fee editions.

Easy comparison table

Confused about which edition to use? The following table is designed to make it easier to determine the unique characteristics of each Informix edition. If a specific feature is not listed in the table, you can assume, for the most part, that it exists in all Informix editions. Again, this is only a general description of the features and license parameters. For exact definitions, refer to the <u>Software license agreements</u>.