What's new in IBM Informix 11.7

Highlights

- Informix Flexible Grid
- More autonomics
- Warehousing enhancements
- Embeddability enhancements
- Application development enhancements
- Security enhancements
- Performance enhancements

Discover hassle-free data management with IBM Informix

IBM® Informix® is the database software voted number one in customer satisfaction.[1] Clients choose Informix because it is reliable, low-cost and hassle-free. Solution providers choose Informix for its best-of-breed embeddability. And it's available on Microsoft® Windows®, Linux®, UNIX® and Mac OS X platforms.

Overview

Informix 11.7 ushers in the next decade for Informix to continue delivering smarter solutions as the engine that powers online transaction processing (OLTP) and decision support applications for businesses of all sizes. Informix 11.7 offers unprecedented advantages through advanced levels of performance, availability and efficiency, with minimal complexity and lower computing costs. And with the introduction of IBM Informix Flexible Grid, it is easy to perform routine maintenance and upgrades throughout all your geographic locations from a single site.

Major enhancements in Informix 11.7

Informix Flexible Grid

Informix 11.7 provides linear scale-out beyond a single cluster, spreading workloads across heterogeneous systems worldwide with a single click using classic command lines or the GUI OpenAdmin Tool. This means you can run a single query simultaneously across the entire Grid, allowing it to determine the best use of resources for optimal runtime.

The Grid is easy to set up and allows you to replicate schema changes throughout it. Administrators are able to replicate DDL changes across the Grid, including HDR, RSS and SDS servers. Simple snapshots allow for cloning existing servers and converting RSS servers to ER servers. The Grid allows for rolling upgrade of Informix to later versions, and it supports the upgrade of HDR or RSS nodes without an outage. Connection managers and failover arbitrators are used to manage connections for both workload and failover. In addition, the Grid allows you to back up and restore to and from the cloud using ontape.

More autonomics and ease of administration

Informix 11.7 introduces an expanded suite of autonomic features that reduce outages by providing self-tuning, self-healing and self-maintaining capabilities normally performed by a hands-on administrator. Automatic storage provisioning can be enabled to expand an existing storage space if the space is full. Informix extends the DB scheduler utility with the new capability to terminate sessions with clients that have been idle for a specified period of time.

The database server has a new environment setting to help control session-level memory usage, as well. The dbschema utility can now generate the schema for spaces, chunks and both physical and logical logs.

Significant enhancements to the OpenAdmin Tool allow for monitoring, administering and optimization of storage space. The OpenAdmin Tool can be used to implement several performance improvement features and can serve as a single point of administration for the Informix Flexible Grid. Several other enhancements have also been made to both the replication and schema manager plug-ins to the OpenAdmin Tool.

Warehouse features

IBM Informix Warehouse consists of the following components: Informix 11.7, IBM Design Studio, IBM SQL Warehousing Tool and the Warehouse Admin Console. The client tools, Design Studio and SQL Warehousing Tool, are available on Windows and Linux. Informix 11.7 introduces the star join access method that improves query performance for star and snowflake schema queries. The new multi-index scan can be used to inspect all available B-tree indexes and has tested superior to compound indexes. New table- and index-level scan options are also available, including table-level light scans (sequential reads of big blocks on disk) and table-level skip scans (which skip selective blocks of pages). The warehouse also takes advantage of new abilities to fragment tables by interval or predicate list values.

Embeddability features

The deployment assistant will capture and configure an Informix snapshot more easily and automatically extracts snapshots that are compressed in BZIP2, GZIP, TAR and ZIP formats. There are also new scripts that allow deployment of database instances in an embedded environment. Informix 11.7 is packaged with a limited version of the IBM Mashup Center to facilitate the development of GUI-based composite applications.

Application development enhancements

Informix 11.7 delivers increased options and easier enablement of open source applications through increased support for industry-standard SQL, and through new SQL syntax for easier porting of open source software such as Hibernate, Geronimo, Tomcat, iBATIS, Mediawiki, Xwiki and Drupal. New SQL Syntax allows for both conditional DDL statements and the use of NOT NULL. The database server also enables faster development and testing of SQL

queries, stored procedures and web services using IBM InfoSphere™ Optim™ Development Studio, providing visual analysis of SQL statements, execution and performance.

In addition, extended data types (basic text search, node data types, binary data types, large object locator, MQ messaging and Informix Web Feature Service) are automatically registered with virtual processors created when they are first used. Spatial and time series data types and functions are built in and automatically registered.

Security enhancements

Organizations have greater control over auditing practices with selective row-level auditing. With this more granular control, organizations can minimize the performance impact of auditing while simplifying the management and querying of audit records. Informix 11.7 introduces trusted context to solution providers by creating a trusted connection between the middle-tier and the database, and along with third-party authentication, greatly simplifies administration. Administrators can now configure Informix 11.7 so users authenticated by an external service, such as Kerberos or Microsoft Active Directory, can connect to Informix without having an operating system account on the host computer.

Performance enhancements

Informix is faster than ever. Analytical workloads are significantly faster, thanks to new capabilities for multi-index scans and star and snowflake joint optimization methods. Added support for Forest of Trees (FOT) indexes also boosts average OLTP performance. The database server also extends fragment-level statistics (FLS) to individual fragments, which helps to improve query plans. The update statistics statement can automatically detect stale statistics and can refresh them when 10 percent of the data is stale. Informix now supports multi-index scans, which can be enabled to improve performance by reducing buffer reads. The server will now also check that the number of CPU virtual processors is at least half of the number of CPU processors on the server computer during start-up.

A complete data management solution

While Informix is low-cost and hassle-free, it still offers a comprehensive range of data management capabilities. In addition to those already described, Informix offers many other capabilities, such as:

Warehouse/business analytics—including a powerful extract, load and transform (ELT) tool for users who want to build business intelligence and reporting solutions using data from various sources, including Informix.

Application development options and tools—allowing developers to choose their favorite language or integrated development environment (IDE). Now available are new or updated drivers for PHP, Ruby and .NET, and other compatibility features that make it easy to port applications to Informix.

For more information

To learn more about the capabilities and different editions of Informix 11.7, please refer to the IBM Informix Product Family brochure, contact your IBM marketing representative or IBM Business Partner, or visit the following website:
ibm.com/software/data/informix

To learn more about hassle-free operation with Informix, visit:
ibm.com/software/data/informix/discover-informix/hassle-free.html

To learn more about embedding Informix, visit:
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