



DBControl™ *for DB2 UDB*

Database Administration and Schema Evolution for the IBM DB2 Universal Database Environment

DBControl™ allows DBAs to manage and control their databases by speeding up and simplifying routine tasks, thereby reducing errors and increasing productivity. **DBControl for DB2 UDB** allows a DBA to easily manipulate the structure of large DB2 tables. For very large tables, options are provided to set commit intervals, or utilize the DB2 Load facility.

For enterprises where sites are geographically dispersed, *DBControl for DB2 UDB* contains an enhanced schema evolution functionality that allows users to propagate schema changes on multiple-objects to many different databases. This very powerful feature facilitates coordination of schema changes from a central location or allows each local administrator to perform the job.

Key Benefits

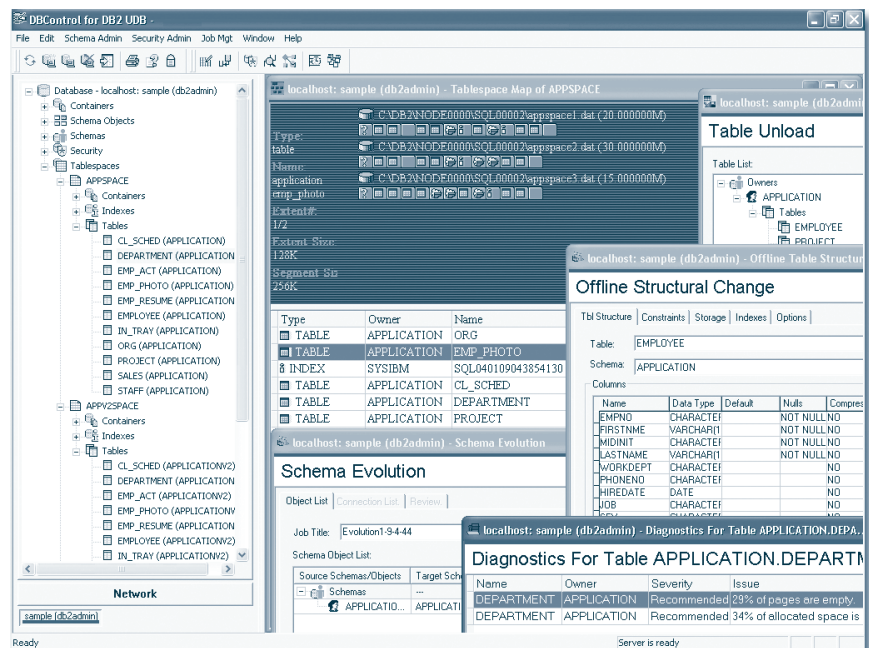
Propagate schema changes on multiple objects to many different databases. Coordinate these changes from a central location or allow each local administrator to perform the job independently.

*Prevent downtime and increase efficiency by managing the allocation of space. **NORAD DBControl** allows you to identify, correct and prevent space allocation problems.*

Reorganize and restructure data to eliminate the underlying causes of poor performance.

Increase availability by pinpointing differences between schema objects inside the databases, which can lead to availability and performance problems.

*Leverage scarce resources – **DBControl** gives DBAs the ability to automate and simplify complex, routine, and error-prone tasks so they can concentrate on more analytical tasks.*



DBControl for DB2 UDB provides DBAs with a better method of managing database servers.

Take complete control of your IBM DB2 Universal Database

NORAD DBControl provides a rich set of database management features that will ease or eliminate error-prone or time-consuming tasks.

Schema Administration

Schema Objects are the basic building blocks of the database and **DBControl** focuses on this aspect of the database with an extensive list of features that facilitate management of these objects. DBControl provides Database Administrators with the power to administer all schema objects within the DB2 UDB environment through a GUI using Bradmark's flexible distributed agent architecture.

Security Administration

Administering DB2 security includes dropping users and groups in addition to granting and revoking database or object privileges and is one of the most tedious tasks faced by DBAs. DBControl provides an easy-to-use method for administering security.

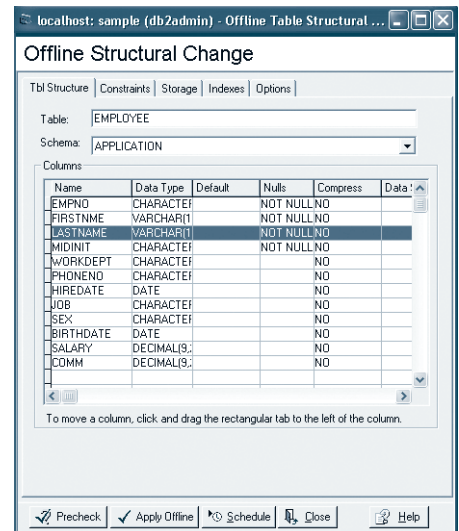
The **Authority Manager** is a separate interface provided specifically for granting and revoking privileges. It is designed to quickly display all the groups/users that have object privileges granted for the selected object(s). Additional privileges can be granted by dragging and dropping the group or user into a grid and clicking on the desired privilege. Authority Manager can also be used to display all of the group or user's current privileges in a hierarchical tree where privileges can be granted/revoked in a drag-and-drop method.

Space Management

As databases grow and the demands for availability increase, it is critical for a DBA to correctly manage the allocation of space in the database. DBControl for DB2 UDB provides Structural Change, Object Reorganization and Tablespace Management features to aid in this area.

Structural Change extends the capabilities of the database's Data Dictionary Language (DDL) for modifying table structure by automating functionality that is not available with standard DDL, for example:

- Modify storage parameters
- Insert columns before or after existing columns in a table
- Rename columns in a table
- Delete columns in a table
- Modify a column including the data type, specifying default values, and specifying the data source for a column
- Add, modify and delete constraints
- Schedule structural changes



The **Tablespace Map** quickly and effortlessly identifies fragmentation of the physical layout of extents in all of the containers that comprise a tablespace. Each rectangle represents one extent and is labeled as table, index or LOB segment. Fragmentation can be identified by touching one rectangle with the mouse pointer, which highlights all the extents for that object. The Tablespace Map can also find the high water mark in DMS tablespace containers.

DBControl's **Object Reorganization** feature can be used to eliminate fragmentation, resulting in a reduction of multiblock reads. DBControl will ensure that all referential integrity, privileges, indexes, and dependant objects are intact upon completion of the reorganization.

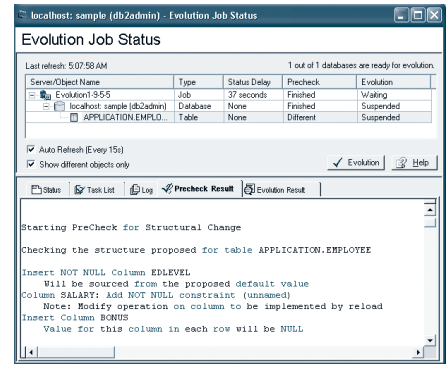
Schema Comparison

The NORAD DBControl *for DB2 UDB Schema Comparison* feature allows DBAs to compare the schema objects of one database to the objects in another database. Pinpointing these differences can avoid availability problems when differences prevent users from accessing or entering data. A comparison of the Schema Object's structure includes identifying missing columns, columns with different data types, missing constraints, and different storage parameters.

Schema Evolution

Schema Evolution allows you to propagate schema changes on multiple objects to many different databases. It allows you to coordinate these changes from a central location or permits each local administrator to perform the job independently.

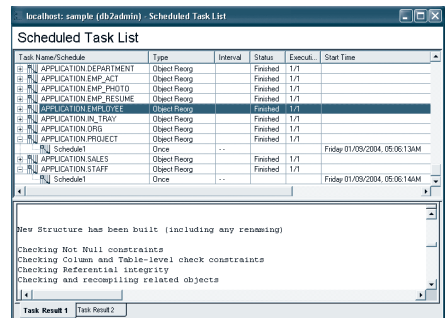
Schema Evolution involves selecting the objects or schemas you want to compare and then selecting the target databases. After performing a PreCheck to ensure that there are no errors that would cause the Evolution to fail, you can either launch the Evolution immediately or schedule it to run at a later time.



Scheduler

Some DBA tasks can be time-consuming so it is preferable to schedule these tasks and run them automatically during off-peak hours, resulting in tremendous gains in DBA and database productivity. The flexible scheduling system allows administrators to submit jobs immediately or on a regular or repeated schedule, such as the day of the month or a specific date. The following tasks can be accomplished through the NORAD DBControl **Scheduler**:

- Schema Comparison
- Object Reorganization
- Schema Evolution
- Compute Statistics
- Structural Change
- Security Administration
- Schema Administration
- Object Comparison



Diagnostics

Is space being used efficiently?

NORAD DBControl's **Diagnostics** can spot problems such as inefficient indexes, overflow in tables that can cause significant performance degradation, and tables and indexes that have never had the "Analyze Statistics" command run on them, leading to poor query plans with the cost-based optimizer. Diagnostics can be run for a table, index, or entire tablespaces. In addition, NORAD's Diagnostics can be used to find wasted or unused space within table segments.

Diagnostics For Schema APPLICATION					
Name	Severity	Issue	Symptoms	Resolution	Benefit
CL_SCHED	Critical	No statistics collected.	Optimizer is picking ineffi...	Collect statistics usi ...	Faster queries.
EMP_ACT	Critical	No statistics collected.	Optimizer is picking ineffi...	Collect statistics usi ...	Faster queries.
EMP_PHOTO	Critical	No statistics collected.	Optimizer is picking ineffi...	Collect statistics usi ...	Faster queries.
EMP_RESUME	Critical	No statistics collected.	Optimizer is picking ineffi...	Collect statistics usi ...	Faster queries.
EMPLOYEE	Critical	No statistics collected.	Optimizer is picking ineffi...	Collect statistics usi ...	Faster queries.
IN_TRAY	Critical	No statistics collected.	Optimizer is picking ineffi...	Collect statistics usi ...	Faster queries.
ORG	Critical	No statistics collected.	Optimizer is picking ineffi...	Collect statistics usi ...	Faster queries.
PROJECT	Critical	No statistics collected.	Optimizer is picking ineffi...	Collect statistics usi ...	Faster queries.
SALES	Critical	No statistics collected.	Optimizer is picking ineffi...	Collect statistics usi ...	Faster queries.
STAFF	Critical	No statistics collected.	Optimizer is picking ineffi...	Collect statistics usi ...	Faster queries.
DEPARTMENT	Recommended	29% of pages are empty.	None.	Reorganize.	Reclaim about 16 KB of disk
DEPARTMENT	Recommended	34% of allocated space is unused.	None.	Reorganize.	Reclaim about 19 KB of disk

Product Summary

Increase system performance while reducing downtime...

DBControl improves performance, increases data availability, reduces online transaction processing time, maximizes human resource productivity, and provides efficient service to your customers and prospects.

Maintain full read/write capabilities during maintenance...

Ensure complete data availability during database maintenance. While you perform database reorganizations, structural changes or partition management, users can continue making updates, completely unaware that the DBA is maintaining the database.

Reorg when you want to...

You don't have to take your database offline to perform a reorganization. Now, you can reorg any time, day or night – without disrupting your users or staying at the office all weekend.

Related Products

Enterprise Monitoring and Event Management

Surveillance DB for Oracle, Sybase ASE, DB2 UDB and MS SQL Server

Proactive database monitoring solution that quickly identifies problems and alerts DBAs before impacting availability.

Surveillance IQ for Sybase IQ

Provides real-time statistics on memory allocation, buffer and storage utilization, and disk and network I/O.

Surveillance RS for Sybase Replication Server

Allows you to monitor the overall health, performance and configuration of the Sybase Replication Server environment.

Surveillance IP

The monitoring and management solution for Lucent's QIP address management software.

Database Administration and Performance Tuning

DBControl Online for Oracle

Provides uninterrupted 24 x 7 data availability while performing reorgs, structural changes and partition management. DBAs are able to perform critical maintenance during regular hours that saves your holidays, evenings and weekends.

System Requirements

Console Requirements:

- Windows 95/98 or NT/2000/XP/2003
- Pentium Processor
- 32 MB of RAM
- TCP/IP
- 16 MB free hard disk space

Agent Requirements:

- Platforms: Windows NT/2000/XP/2003, HP-UX, AIX, Solaris, Tru64, Reliant UNIX, Linux 2.2, 2.4
- TCP/IP
- 25 MB free hard disk space, more for repositories (Windows)
- 300 MB free hard disk space (UNIX)

RDBMS Requirements:

- DB2 UDB version 7.2.9 or 8.1.3

About Bradmark

Privately-held for more than 20 years, Bradmark Technologies, Inc. develops, markets, sells and supports data management solutions that provide anytime — anywhere access to managing database, application and operating system components.

In addition to a direct sales force, Bradmark has an established worldwide network of channel partners.

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