

HP NonStop dba/m database manager

Data sheet



Key features and benefits

- Intuitive GUI for increased efficiency and reduced errors
- Simplified NonStop SQL table partitioning and management
- Automated database object management and monitoring
- Query analysis workbench to help optimize SQL queries
- Automated batch processing

The HP NonStop dba/m database manager is a client/server application for managing NonStop SQL/MP databases from a client workstation. The client is a graphical user interface (GUI) that helps you perform critical database operations. In addition, this product can automate many of the tasks you currently perform manually. With the simplicity and power of this software, your database administrators can enjoy greater productivity and a heightened ability to monitor vital information resources.

This product has been evaluated and proved by companies in the financial, retail, telecommunications, and service industries. It greatly enhances the speed and accuracy of managing complex databases.

Installation of the NonStop dba/m database manager is simple, straightforward, and unobtrusive, often requiring only a few minutes. Once installed, the software continuously monitors critical system conditions in real time.

Everyone in your organization relies on you to deliver data with a high degree of integrity 24 x 7. With the complexity of databases and the number of requests for information growing, you cannot afford breakdowns in maintenance and administration.



The comprehensive features of this software enable you to change existing database objects or create new ones in minutes, not hours. But the NonStop dba/m database manager is much more than the sum of its features: It transforms your workstation into a database command center. With its continuous monitoring function, you always know the status of your NonStop SQL database, from the largest node to the smallest program, in real time. By automating so many database management tasks, this product drastically reduces the amount of rework and redundancy, and it optimizes your entire database infrastructure for increased efficiency (see figure 1).

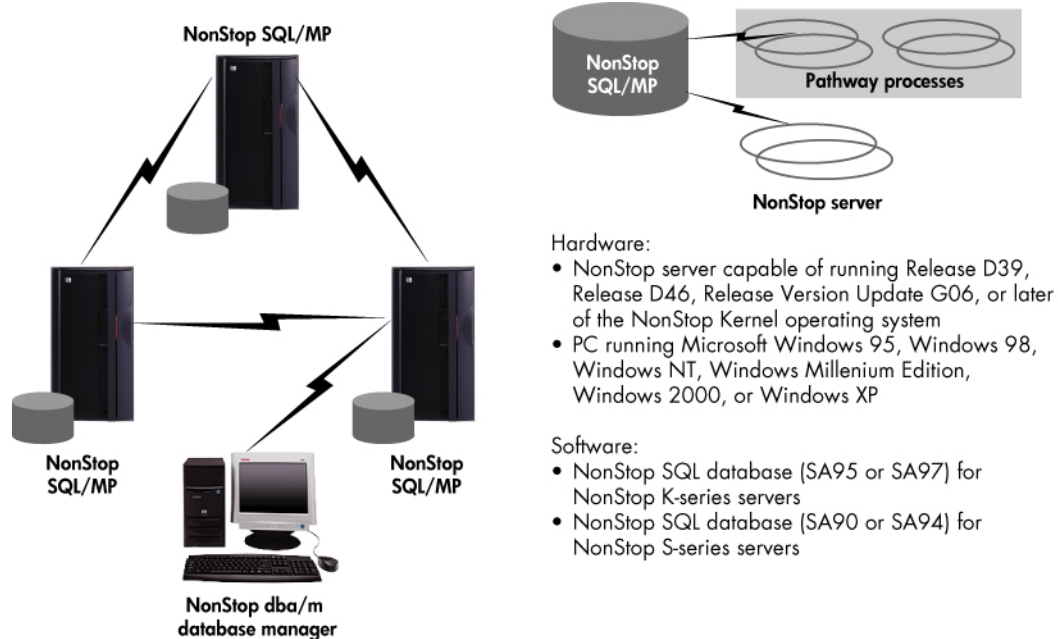


Figure 1. The NonStop dba/m database manager allows you to view and manage SQL objects on multiple NonStop servers via a single-window interface.

Easy-to-use GUI for increased efficiency and reduced errors

NonStop dba/m software greatly simplifies management of the NonStop SQL database through its GUI. Rather than typing SQL statements into a command interface, you use a mouse to select the operation you want to perform; the software generates the necessary SQL statements for you (see figure 2). Once your activity is saved, you can instruct the software to execute the same statements at any time without entering them again.

Creating or modifying database objects such as tables or indexes requires complex SQL syntax; as a result, errors often occur. With the NonStop dba/m database manager, you make a few selections with the mouse and the task is done.

The user interface for the NonStop dba/m database manager is organized into eight functional workbenches. Each one focuses on a particular aspect of database administration. To perform a set of tasks, you simply click the button corresponding to the appropriate workbench. The eight workbenches are

- Partition management
- Query analysis and tuning
- Space monitoring and disk analysis

- Object management
- Data management
- Batch management
- Historical command analysis
- SQL object migration

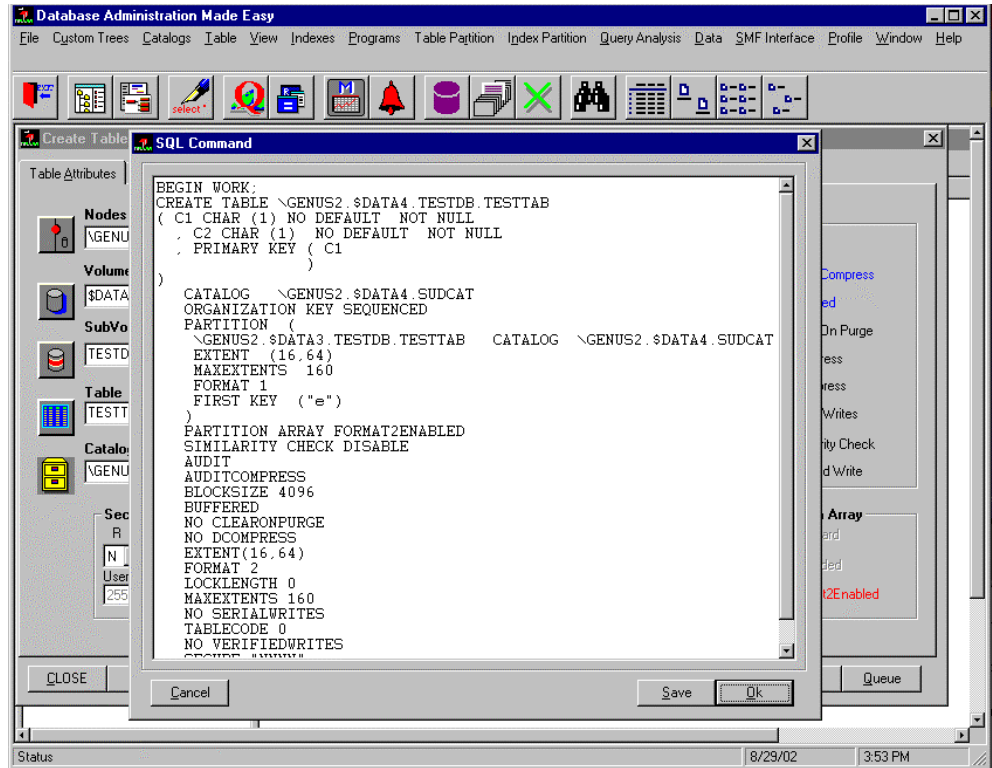


Figure 2. The NonStop dba/m database manager automatically generates the NonStop SQL command syntax that the user needs. The syntax may be saved, changed, executed, or ignored.

Object tree view

When you log on to the NonStop dba/m database manager for the first time, all SQL objects in your environment are retrieved from the NonStop SQL database and stored on the client in the form of an object tree. The object tree provides a graphical display of objects registered in each SQL catalog.

From the Object Tree view, you can graphically manage and administer database objects (see figure 3). The Object Tree view hierarchically displays the nodes, volumes, catalogs, tables, views, indexes, partitions, and programs on the server. Clicking any of the displayed database objects provides further detail. You can update and refresh the entire object tree, or you can selectively refresh individual objects. Right-clicking an object yields further options.

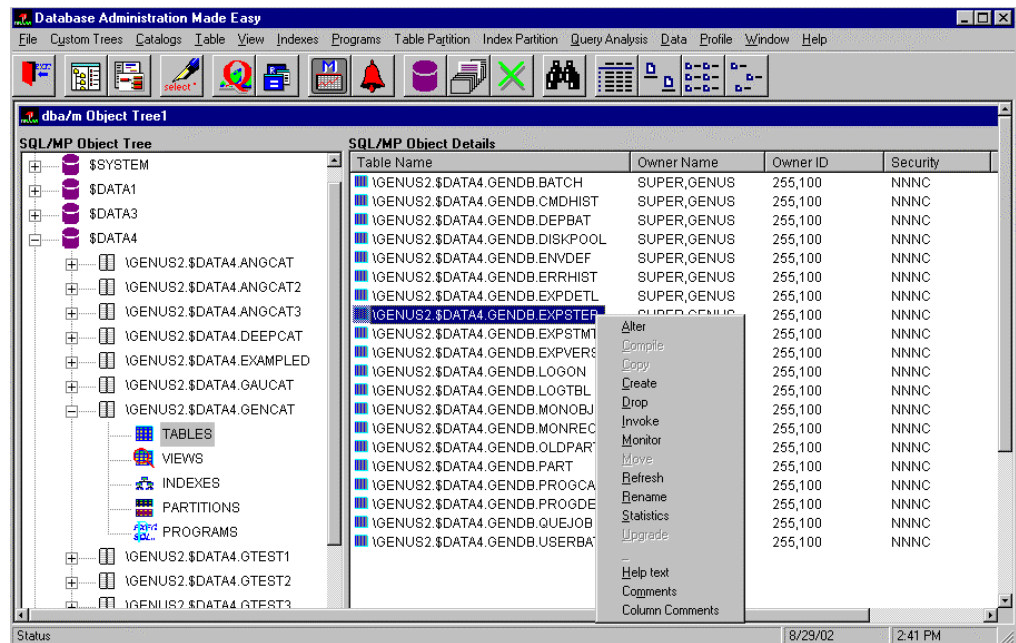


Figure 3. The Object Tree view provides a hierarchical snapshot of the entire system or multiple systems from which database objects can be managed and monitored.

Table management

The NonStop dba/m database manager features a robust and powerful set of graphical tools to automate table management (see figure 4). You can manage tables from the Object Tree view, the Custom Tree view, or the main menu. Graphical table operations enable you to

- Create, drop, or rename a table
- Assign a primary key and alter table attributes
- Display and/or update table statistics
- Invoke a table definition
- Add, change, or delete table constraints
- Add, change, or delete help text
- Add, change, or delete comments and constraint comments
- Partition or repartition a table

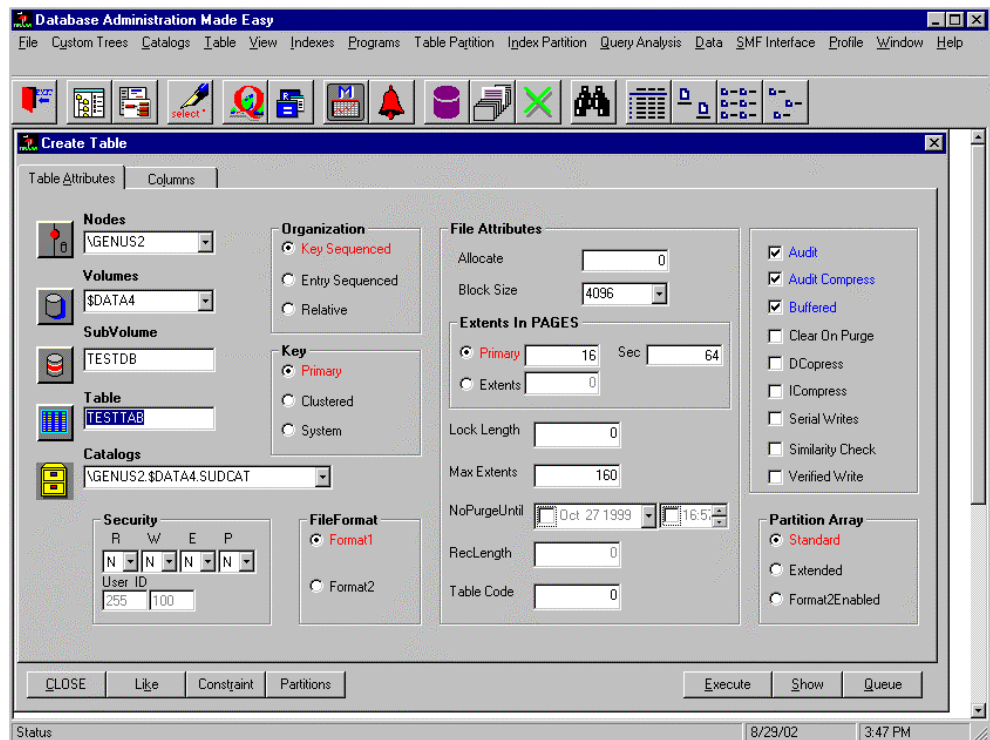


Figure 4. The NonStop dba/m database manager lets users create and modify tables intuitively with complete control over table attributes and constraints.

Table partitioning

The NonStop dba/m database manager eliminates the guesswork of manual table partitioning by automating the entire partitioning process. The software computes the actual distribution of records in all partitions, enabling you to analyze the status of table partitions. It automatically generates the primary key values of new partitions at the click of a button. This valuable feature, which can save hours of manual computing and subsequent repartitioning, lets you automatically generate optimally balanced partitions every time (see figure 5). Graphical table partitioning enables you to

- Design, view, add, alter, or drop table partitions
- Perform a simple move on a partition
- Perform a one-way split on a partition
- Perform a two-way split on a partition

The NonStop dba/m database manager also enables users to replicate SQL tables in different systems. Replication is based on all tables found in a user-specified catalog. It generates template scripts, which the user can alter to use a new system name. The user runs part or all of the scripts in a Dynamic SQL window to create new objects.

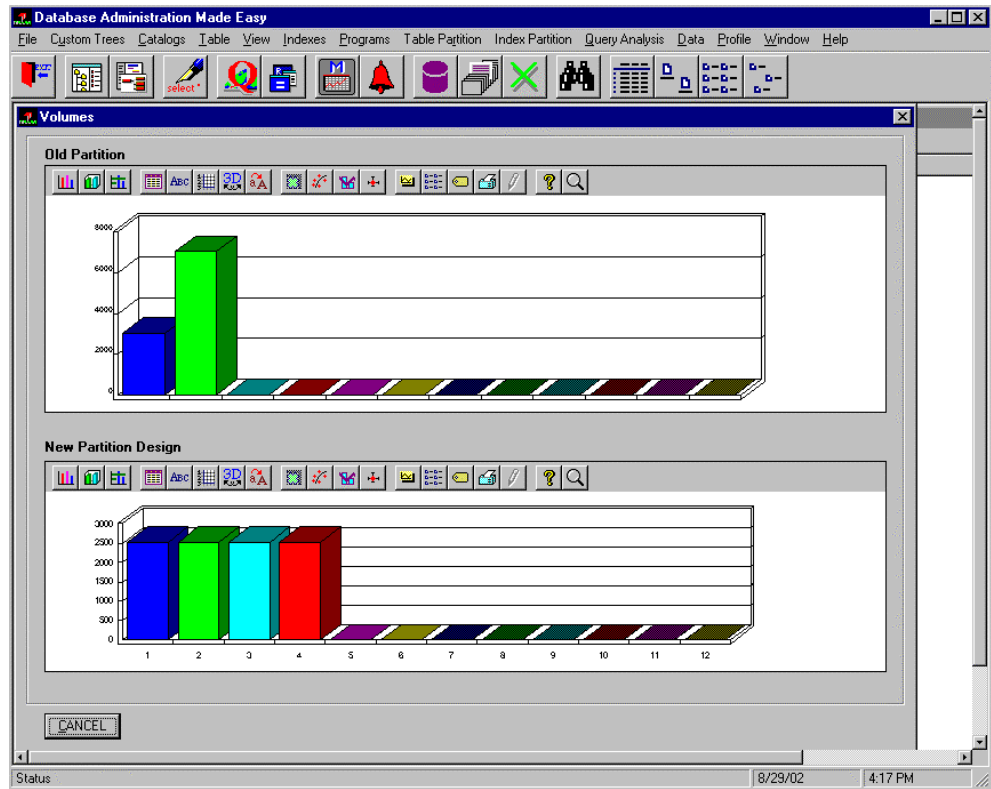


Figure 5. Data distribution before and after an automatic partitioning operation.

Index management

The NonStop dba/m database manager features a robust and powerful set of graphical tools to automate index management. You can manage an index from the Object Tree view, the Custom Tree view, or the main menu. Graphical index management enables you to

- Create or rename an index
- Alter index attributes
- Drop an index
- Display and/or update index statistics
- Add comments to an index
- Update statistics

The software also automates the entire index partitioning process. It computes a starting primary key value for each index partition and generates the SQL commands to create the partitions. Graphical index partitioning enables you to

- Design, view, add, alter, or drop index partitions
- Perform a simple move on a partition
- Perform a one-way split on a partition
- Perform a two-way split on a partition

View management and replication

The NonStop dba/m database manager automates view management so that you can manage views from the Object Tree view, the Custom Tree view, or the main menu. Graphical view operations enable you to

- Create or rename a view
- Alter view attributes
- Drop a view
- Invoke a view definition
- Re-create a view
- Build a "Create-Like" view
- Add, change, or delete help text
- Add, change, or delete view comments
- Add, change, or delete column comments in a view

Automated database object management and monitoring

The NonStop dba/m database manager lets you monitor and manage volumes and disk space usage. You can set alarm thresholds to warn you when disk space usage exceeds safe levels. The software monitors disk space usage by volumes, tables, indexes, or partitions. It monitors and displays a volume's total disk space, the amount of space used, the amount of free space available, and the percentage of free space available.

Monitoring disk space usage

You can set the NonStop dba/m database manager to monitor disk space usage of any database object by setting thresholds on volumes, tables, indexes, or partitions (see figure 6). If disk space usage exceeds the specified thresholds, the software can generate audible and visual alarms and e-mails to notify you. You can even use the HP iPAQ Pocket PC to remotely view the detail about triggered alarms.

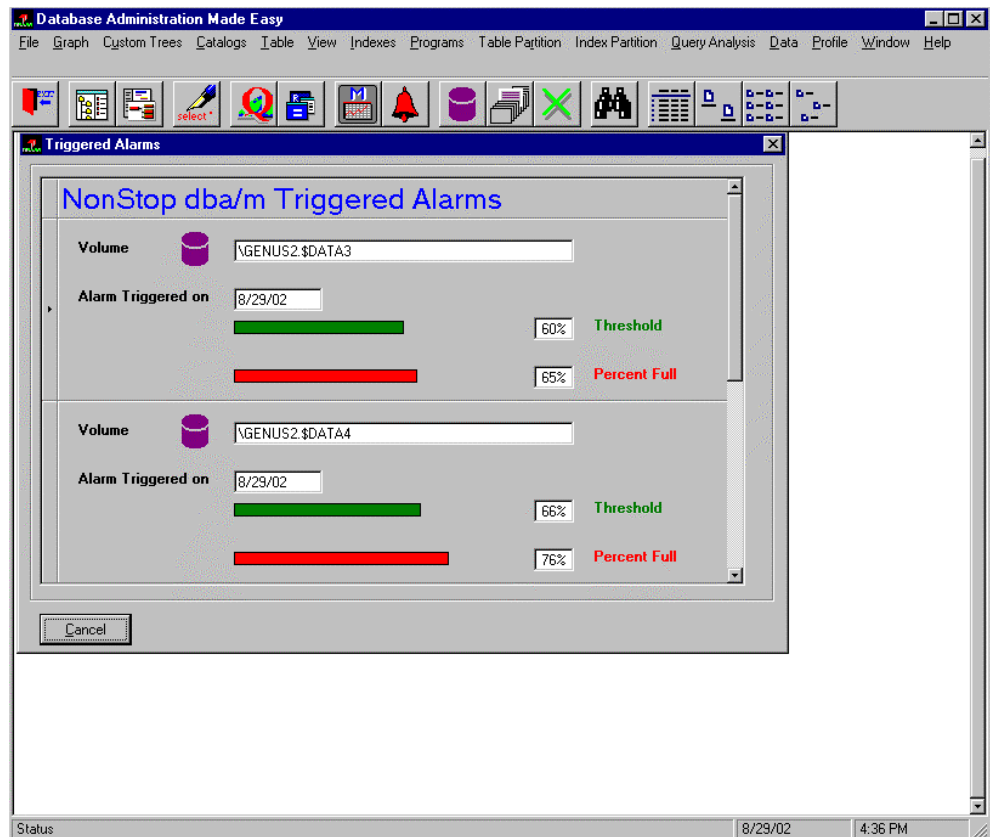


Figure 6. From the Monitor screen, users can monitor and manage disk space usage graphically.

Managing volumes

The Volumes screen displays all volumes in the environment. Users can select any volume and access its vital statistics. You can customize the display attributes and order to your own preferences. In addition, the graphical views may be exported to programs such as Microsoft Word, Excel, and PowerPoint for reporting and presentation purposes.

Query analysis workbench to help optimize SQL queries

The query analysis and tuning workbench helps to optimize dynamic SQL queries or SQL queries embedded in programs (see figure 7). The software displays all of the attributes related to query performance including control and query statements, explain plans, underlying tables, column and index statistics, and index columns. It correlates the query to the statistics of tables stored in the NonStop SQL database catalogs. You can also use the workbench to extract queries embedded in programs and evaluate their performance. And you can evaluate the impact of the query and see the cost consequences of proposed modifications before executing the statements. The NonStop dba/m database manager maintains multiple versions of the explain plans for historical analysis. It also simulates production statistics in the development environment.

Query performance depends on two major factors: the structure of the queries and the statistics of the tables referred to in the queries. Using the NonStop dba/m database manager, you can correlate the query to the statistics of tables that are stored in NonStop SQL catalogs. You can also study the impact of the structure of the query using the methods

identified by the NonStop SQL database's explain function to retrieve data. The NonStop dba/m database manager provides an easy-to-use facility to fine-tune queries by iteratively modifying queries and analyzing the performance of the modified queries using the explain functions. With the appropriate permission, you can use the software to simulate production statistics in a test or development environment, predict performance in a production environment, and analyze queries embedded in programs or ad hoc queries.

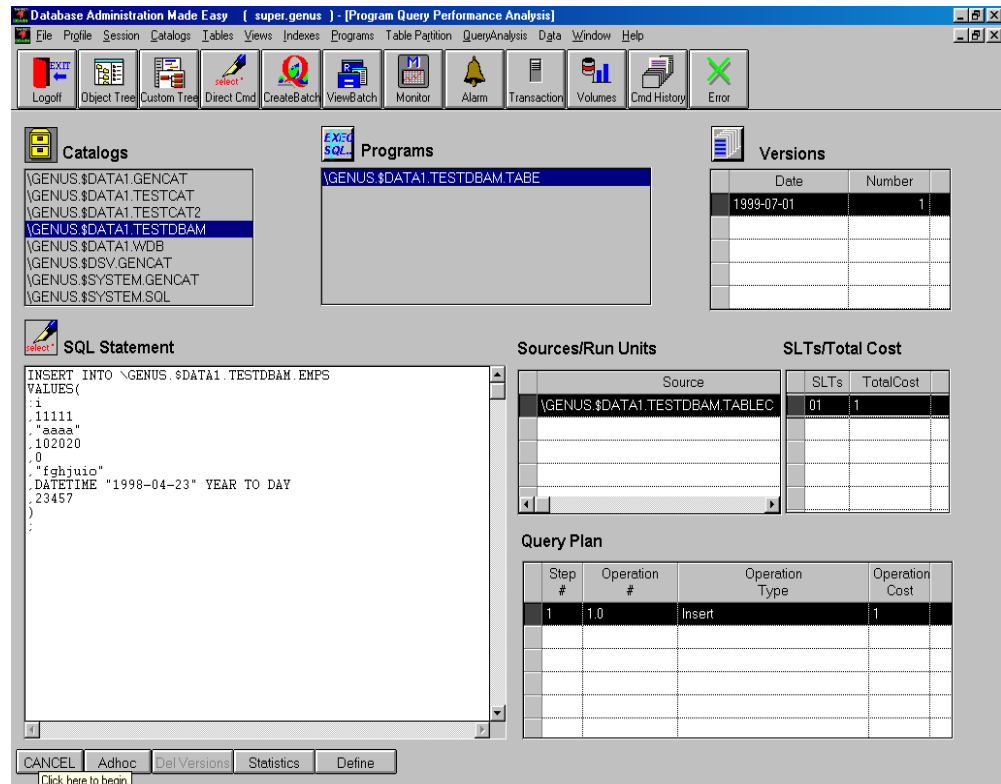


Figure 7. The Query Analysis Workbench screen provides a single view of a NonStop SQL/MP query, generations of its explain plans, and comparative performance costs.

Automated batch processing

The NonStop dba/m database manager offers a time- and calendar-based batch scheduler to manage SQL commands and operations (see figure 8). A batch is defined as a collection of one or more SQL commands executed in a user-defined sequence in a single transaction. Users can create, edit, and submit commands in batch mode, monitor the status of batch execution, and view the results. Batches can be saved, modified, and scheduled to execute on a periodic basis (weekly or monthly). A batch may also be triggered for execution when an object (such as a table or partition) exceeds a preset threshold value. You can refresh the status of a batch at any time with the click of a button.

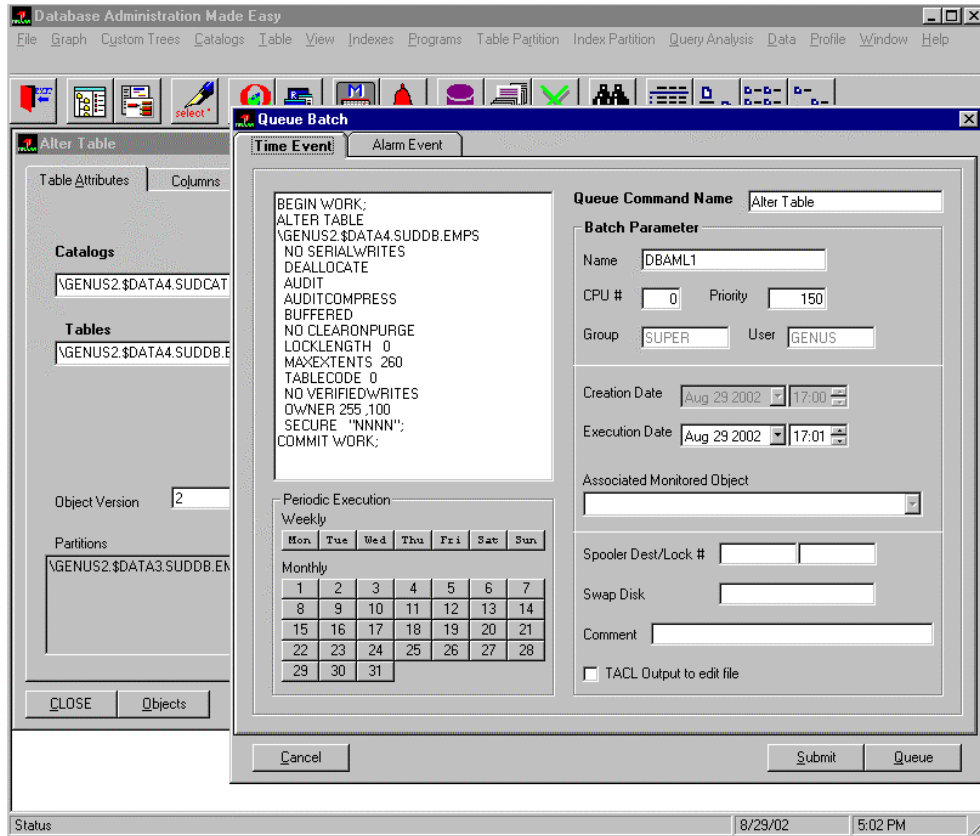


Figure 8. The NonStop dba/m database manager automates SQL operations. SQL commands can be saved, reopened, modified, previewed, and batched for scheduled processing.

Historical command analysis

All operations performed under the control of the NonStop dba/m database manager are automatically logged. (SQL operations performed outside of the NonStop dba/m database manager are not tracked.) The software logs online, batch, and direct (SQLCLI) commands. The authorized user can later display a history of these operations.

Technical specifications

System requirements

Hardware

Server: NonStop server capable of running Release D39, Release D46, Release Version Update G06, or later of the NonStop Kernel operating system.

Client workstation: PC running Microsoft Windows 95, Windows 98, Windows NT, Windows Millennium Edition, Windows 2000, or Windows XP

Software

NonStop Kernel operating system, Release D39, Release D46, Release Version Update G06, or later

For NonStop K-series servers:

- NonStop SQL database (SA95 or SA97)
- NonStop Transaction Services/MP (NonStop TS/MP) software (SA58)
- TCP/IP

For NonStop S-series servers:

- NonStop SQL database (SR90 or SR94)

NonStop TS/MP software (SR50) or Pathway with NonStop TS/MP software (SR53)

Ordering information

Part number	Product name
SM80V1*	NonStop dba/m database manager Version 6.0/6.1
SM81V1	NonStop dba/m database manager Version 6.0/6.1 free 30-day trial copy

* Order one copy of software for each NonStop system with NonStop SQL installed. Server software and client workstation software are shipped on the same CD. Client workstation software may be installed on as many PCs as desired.

Note: NonStop dba/m database manager Version 6.0/6.1 and earlier versions do not manage NonStop SQL/MX objects. It will be necessary to upgrade to Version 7.0, when available, for that purpose.

For more information

For more information about the NonStop dba/m database manager, visit www.hp.com/go/nonstop.

HP Financial Services provides innovative financing and financial asset management programs to help you cost-effectively acquire, manage, and ultimately retire your HP solutions. For more information on these services, contact your HP sales representative or visit www.hp.com/go/hpfinancialservices.

HP Customer Support provides a broad spectrum of services to commercial and enterprise customers with performance and availability services, such as proactive mission-critical services, and services ranging from deployment to support management of the entire IT infrastructure, including HP and multivendor environments. For more information on these services, contact your HP sales representative or visit www.hp.com/hps/support.

© Copyright 2004 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Microsoft, Windows, and Windows NT are U.S. registered trademarks of Microsoft Corporation.

For more information, visit www.hp.com/go/nonstop.
8/2004

