

1 Introduction

This document lists the features available in SQLXPress version 3.40.

The features are grouped in several categories, and each feature indicates whether it is available for NonStop SQL/MX, SQL/MP, or both.

2 Database Administration

Feature	MX	MP
Create, alter and drop SQL objects, including catalogs, schemas, tables, views, indexes, etc.	Y	Y
Display and print detailed object properties, including file attributes.	Y	Y
Partition management including Add, Drop, Reuse, Split, Merge, Move, Repartition, and Rename.	Y	Y
Fast partition key analysis for calculation of first key values for split, merge, and repartition operations.	Y	Y
Statistics management including Update, Copy, Backup and Restore.	Y	Y
Display and edit SQL/MX histogram data.	Y	na
ANSI security management including Display Privileges, Grant, Revoke, bulk-more Grant / Revoke, Managing Security Administrators, Create Catalog and Schema privileges, and give ownership.	Y	na
Display and alter Guardian security settings	na	Y
Display object relationships including "uses" and "used by" relationships, indirect relationships, and program to table relationships.	Y	Y
Show DDL, includes ability to clone tables with name mapping and extent size scaling.	Y	Y
Show DDL for objects defined in one schema / catalog, but not in another.	Y	Y
Compare table DDL, including logical structure, physical structure, and security settings.	Y	Y
Update System Defaults.	Y	na
Control Query Defaults	Y	na
List File Locks in a Catalog / schema	Y	Y
List File Opens in a Catalog / Schema	Y	Y
Detect Deadlocked transactions	Y	Y

Feature	MX	MP
List DDL locks in a schema	Y	na
Database metadata reports	Y	Y
Table DUP command wizard	Y	Y
Partition RELOAD wizard	Y	Y
Parallel index load (PIL) support including GUI editor for PIL configuration file	na	Y

3 Performance Monitoring

Feature
Monitor key resource usage levels (CPU Busy, Memory Usage, Page Faults, Disk IO rates, Transactions / Sec., Disk Capacity etc.).
Monitor busiest SQL-related processes.
Monitor TMF Transaction status.
Collect and display Measure statistics for SQL statements in selected processes.
Stop or suspend processes that host "runaway" queries.
Abort Transactions.
Run PSTATE on a process.
Detect deadlocked transactions.

4 MXCS Subsystem Management

Feature
Manage MXCS services including create, start, stop, and delete.
Display service configuration and status information.
Configure MXCS data sources.
Display data source status.
Manage MXCS users.
Extract MXCS statistics from EMS logs.
Display MXCS Statistics.
Manage execution plans for MFC modules.

5 Workin With Data

Feature	MX	MP
Browse rows in tables, views and queries	Y	Y
Filter and sort rows	Y	Y
Find row for quick access to rows in very large tables	Y	Y
Simulate bi-directional cursor for goto first, goto next, goto previous, and goto last row	Y	Y
Insert, update, and delete row	Y	Y
Set numeric data value to next value from an MX sequence generator	Y	Y
Bulk-insert mode for faster data entry	Y	Y
Automatic and manual transaction support	Y	Y
Configurable character sets for the display and editing of character data, including ISO character sets and Windows code pages	Y	Y
Customize data display format. For example display LARGEINT values as datetime or timestamp, display integers in HEX, display character data in upper case etc.	Y	Y
Export data to PC text file in CSV or XML format	Y	Y
Export data to other databases including Oracle, DB2, SQL Server, and MySQL	Y	Y
Move data between MP and MX tables	Y	Y
Import Data from PC text file in CSV or XML format	Y	Y
Import data from other databases	Y	Y
Import data from an Enscribe file.	Y	Y
Compare data between SQL tables (includes MX to MP table comparison)	Y	Y
Visual query builder for building queries using drag and drop, picklists etc.	Y	Y

Feature	MX	MP
XPressView PC client provides read only access to tables, views and queries	Y	Y
Inhibit the display of sensitive business data for selected catalogs / schemas / tables	Y	Y

6 Executing SQL Statements

Feature	MX	MP
SQL "whiteboard" allows user to enter and execute SQL statements (DML DDL, utility and control statements).	Y	Y
Execute more than one statement at a time.	Y	Y
Display execution plans.	Y	Y
Display execution statistics.	Y	Y
Persistent command history.	Y	Y
Automatic or manual transaction control.	Y	Y
SQL-aware editor with syntax highlighting, auto-completion, function parameter hints etc.	Y	Y
Character set mapping support (allows user to select ISO or Windows character sets, including support for CJK and UTF-16).	Y	Y
Print query results.	Y	Y
Export query results to PDF or Excel.	Y	Y
Abort long-running queries.	Y	Y

7 Query Performance Tuning

Feature	MX	MP
Execution plan database records plan history for queries.	Y	Y
Automatically detect changes in programs with embedded static SQL statements and add new execution plan snapshots to database.	Y	Y
On-demand generation of execution plans for embedded static SQL.	Y	Y
Extract execution plans from MFC module files and add execution plan snapshots to database.	Y	na
Extract ODBC / JDBC queries from EMS logs and add execution plan snapshots to database.	Y	na
Visual Query Tuner support for query performance tuning. Includes visual execution plan diagrams, query performance charts, auto-tuner etc.	Y	Y
Display execution plan snapshots from database.	Y	Y
Configurable execution plan reporter that finds queries with specified properties like high cost, table locks, operator type, join type etc.	Y	Y
Version label support that associates a label with queries belonging to a particular application version.	Y	Y
Compare execution plan with previous version.	Y	Y
Query Advisor recommends changes to improve query performance including update statistics, access path changes, or query re-write.	Y	Y

8 Background Task Management

Feature
Integration with NetBatch to schedule background tasks
Built-in batch monitor for use when NetBatch is not available
Client submits potentially long-running tasks to run in background
Schedule tasks for immediate or future execution
Tasks can be configured to run once, or on recurring basis
Task Manager GUI to monitor and control background tasks
Users can submit custom TACL and MSL scripts
DBA can create scripts to be run by operations staff

9 Environments Support

Feature	MX	MP
Create one or more named environments, e.g. Development, Testing, Production	Y	Y
Environment consists of a set of SQL tables, views, and the programs that reference them	Y	Y
Tables, Views, and programs are registered in an environment	Y	Y
Define names are used to reference tables and views	Y	Y
Related objects like partitions, constraints and indexes are automatically included in the environment	Y	Y
User can only work with objects within the environment	Y	Y
Queries can be shared across environments - define names are resolved within the open environment	Y	Y
More than one environment can be open at the same time	Y	Y
A single environment can contain both MX and MP objects	Y	Y

10 XPressView

Feature	MX	MP
Stand-alone Windows client providing read-only access to the database	Y	Y
Display data from tables, views, and queries built using the Visual Query Builder	Y	Y
Parameterized queries supported, user enters parameter values each time a query is run	Y	Y
Browse multiple data sources at once	Y	Y
Filter rows	Y	Y
Select Columns	Y	Y
Export data to CSV file	Y	Y
Print rows	Y	Y
Find command to search by primary / clustering key	Y	Y
Order by Primary key, clustering key, or index	Y	Y

11 Merlon Scripting Language (MSL)

Feature	MX	MP
Scripting language that supports embedded SQL statements	Y	Y
Run scripts interactively from TACL, or via Task Manager	Y	Y
Supports SQL cursors and host variables	Y	Y
Supports DDL and DML statements	Y	Y
Supports program control statements including IF, CASE, WHILE, LOOP etc.	Y	Y
Supports procedures and functions	Y	Y
Include MX and MP statements in the same script	Y	Y
Supports condition handling for SQL errors and warnings	Y	Y
Script can issue MXCI commands	Y	na
Script can issue SQLCI commands	na	Y
Extensive set of built-in functions support terminal IO, file IO, run external program, etc.	Y	Y
Define and Param support	Y	Y
Symbolic debugger	Y	Y
Optionally compile scripts into executable (code 100) programs	Y	Y
Does not require explicit SQL compilation - simply run the script	Y	Y

12 XPressEdit

Feature
Stand-alone text editor with syntax highlighting for multiple languages including MSL, SQL, C/C++, Cobol, Java, TAL, etc.
Supports PC files, Guardian files, and OSS files.
Supports multiple character set encodings, including ASCII, UTF8, UTF-16, ISO 8859-x, and Windows code pages.
Open multiple files at the same same
Split-window editing
Auto-completion for table names, column names, and SQL built-in functions
SQL function parameter hints
Supports embedded SQL in C/C++, and Cobol
Synchronized editing between files
Configurable code templates
Macro record and playback
Find and replace text
Configurable keyboard commands
Bookmarks
Code folding
Staples

13 Auditing

Feature
Records SQLXPress user activities.
Configurable audit level.
Configurable audit retention.
Audits interactive and background activities.
Comprehensive audit reports.
Supports separation of duties, audit administrator cannot use non-auditing SQLXPress features.
Optionally supports XYPro merged audit.