



## **Rapid SQL® 7.6 New Features Guide**

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# New Features Summary

## Oracle Graphical Query Plan support

Graphical Query Plan support, previously provided for other DBMS platforms, is now available for Oracle. With the ISQL editor in Show Plan mode, executing a script now displays a graphical representation of the query plan for the script. You can drill down to view details on individual steps, toggle between graphical and tree-based views, and make use of a number of viewing options.

## Expanded Unicode/XML Support

Support for XML has been expanded for release 7.6. XML parameters can now be passed to stored procedures. DBMS-specific upgrades include:

- Results grid and Data editor support on Oracle
- Optional inclusion/exclusion of XML columns when collecting statistics against DB2

Similarly, support for Unicode has been expanded for release 7.6. Previously only supported in the Text editor, now the Results grid and Data editor support Unicode characters. Datatypes that can be displayed or entered differ according to the DBMS platform.

## SQL Pre-processor

Rapid SQL 7.6 offers SQL preprocessing similar to C language compiler directives. The ISQL Editor supports simplified versions of the `#define` and `#include` directives.

## Expanded DBMS support

Rapid SQL functionality available for Microsoft SQL Server 2000 and Microsoft SQL Server 2005 is now available for Microsoft SQL Server 2008. Rapid SQL 7.6 also introduces support for Sybase 15 Cluster Edition. To account for Sybase clustered servers, 7.6 features updates to the data source registration process.

## Additional currency features

As with other releases of Rapid SQL, Embarcadero has responded to customer requests for additional or improved feature support. General improvements include Vista support upgrades and improved text editor performance.

# Top New Features

Top new features for this release fall into the following functional categories:

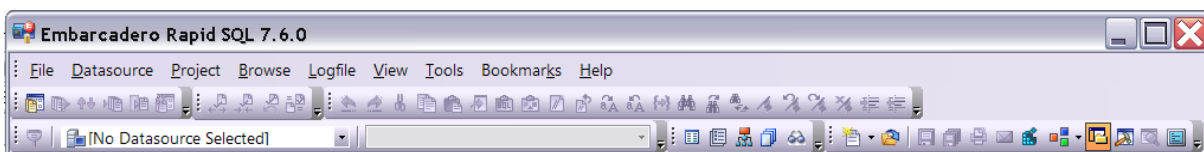
- [User Interface Improvements](#)
- [Sybase Cluster Edition](#)
- [Explain plan](#)
- [SQL Execution](#)
- [Data editor](#)
- [Database Object Management](#)

## User Interface Improvements

Rapid SQL 7.6 continues the reworking of object editors and wizards. Aimed at improving workflow and the user interface experience, the new editors and wizards are being reworked for consistency.

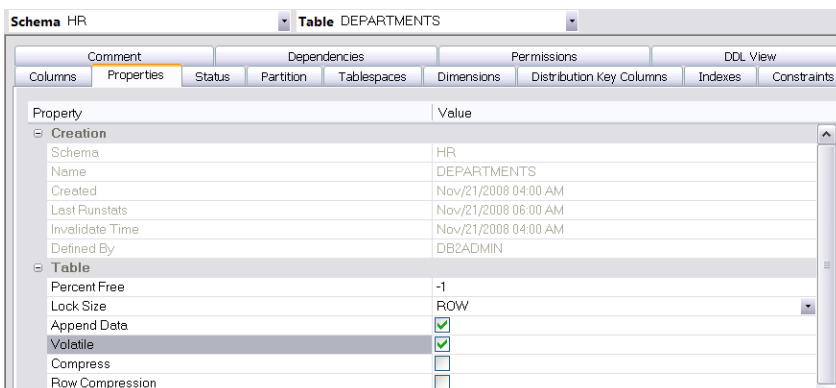
### Toolbar

Rapid SQL now provides greater control over the toolbars displayed in the application. Freeing up real estate by eliminating infrequently used commands, default display now includes a minimal set of toolbars. Additional toolbars can be added as needed.



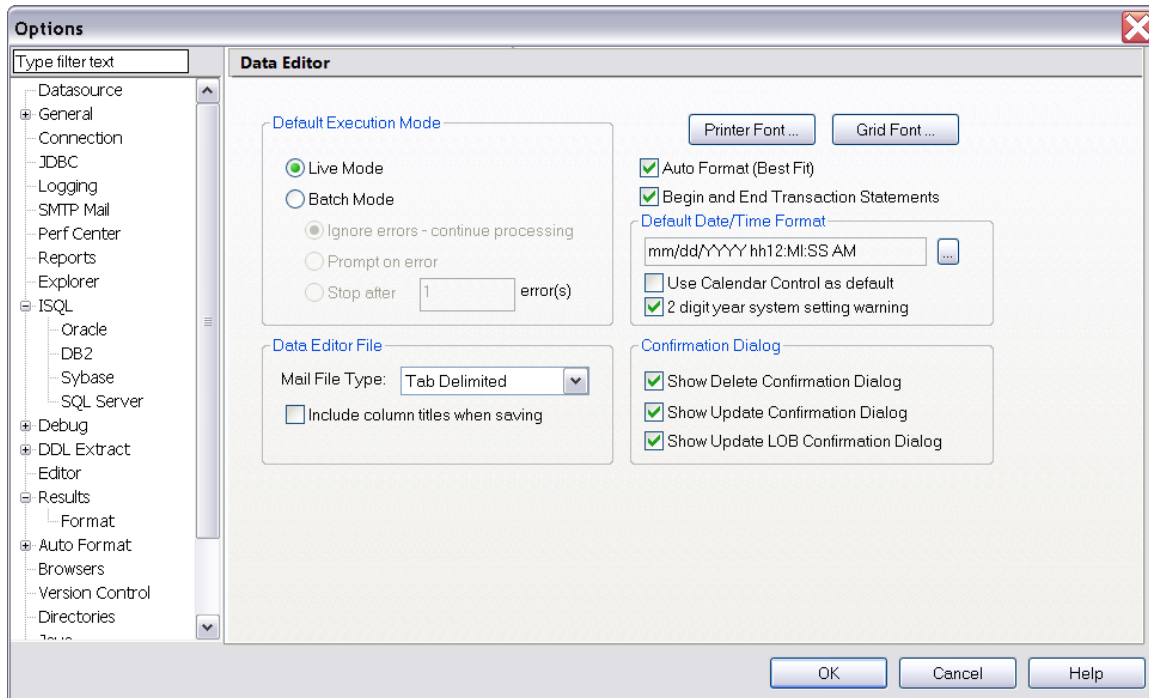
### Object and Wizard Updates

General improvements to the Rapid SQL object editors and wizards include replacement of TRUE/FALSE combo boxes with check box controls.



## Improved Options Dialog

The Options editor has been substantially reworked.



Key improvements include:

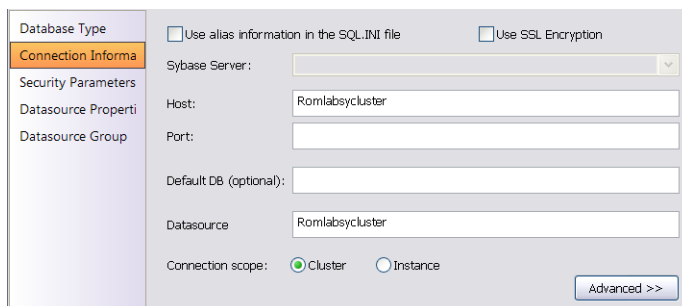
- Page navigation is now tree-based. Expand/collapse icons provide access to tabbed pages.
- A text filter lets you type search text and have only those pages with the specified content displayed in the page navigation tree

## Sybase Cluster Edition

This release introduces support for Sybase Cluster edition.

### Instance/Cluster Connection

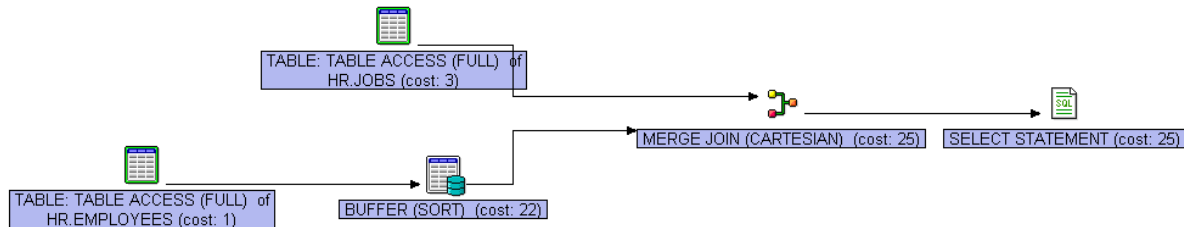
Data source registration lets you specify connection to an instance or to the entire cluster.



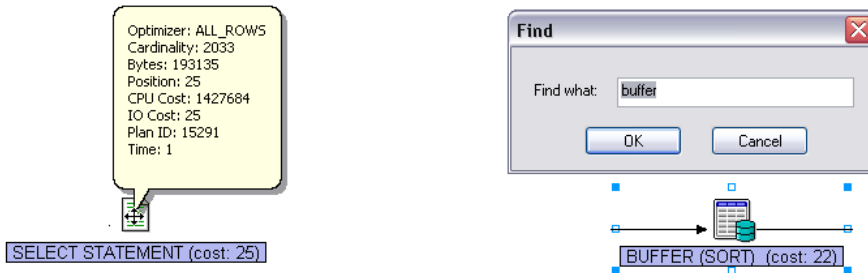
## Explain plan

### Graphical Query Plan Support for Oracle

With the ISQL window set to Query Plan mode, clicking the Execute button now opens a window showing a graphical representation of the generated query plan.



Rapid SQL provides a full range of functions for working with the graphical query plan. You can obtain detailed information on each node in the plan by hovering the mouse over the node. Rapid SQL also provides a facility for searching nodes in particularly large plans:



Viewing options include zoom functions and the ability to change the orientation. You can also save a .GIF representation of the Query Plan.

### Updated Look for the Traditional Tree-based View

The standard tree-based view for query plans is still available. Icons displayed in the traditional tree view have been updated for a more graphical look. Rapid SQL lets you toggle between the two views.

Operation	Options	Cost	Optimizer	Cardinality	Bytes	Position	Object Instance
Query Plan							
SELECT STATEMENT		25	ALL_ROWS	2033	193135	25	
MERGE JOIN	CARTESIAN	25		2033	193135	1	
TABLE ACCESS--HR.JOBS (TABLE)	FULL	3	ANALYZED	19	627	1	2
BUFFER	SORT	22		107	6634	2	
TABLE ACCESS--HR.EMPLOYEES (TABLE)	FULL	1	ANALYZED	107	6634	1	1

### DB2 Shared Explain Plan

Explain Plan tables can now be stored in either SYSTOOLS or in the default schema. You specify your choice on the Options dialog.

## SQL Execution

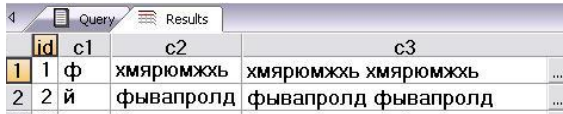
### SQL Server 2008 Date/Time support

Procedure execution has been updated to support datatypes newly available with SQL Server.

Name	Type	NULL	Default	Value
@indate	date	<input type="checkbox"/>	<input type="checkbox"/>	01/11/1999 12:00 AM
@intime	time	<input type="checkbox"/>	<input type="checkbox"/>	12:00:00 AM

### Double Byte Character Display and Unicode Support

Support for Unicode data types, including character, varchar and clob on SQL Server, Sybase, Oracle and DB2, has been added to the SQL Results view. If the Regional code page selected in the OS supports the characters used in the Unicode fields, the data will be displayed correctly in the results view. This is also true of fields containing double byte data reflective of the Regional code page.



id	c1	c2	c3
1	ф	хмярюмжжъ	хмярюмжжъ хмярюмжжъ
2	й	фывапролд	фывапролд фывапролд

### SQL Pre-processor

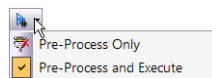
Rapid SQL 7.6 provides SQL preprocessing similar to C language compiler directives. The ISQL Editor supports a simplified version of the following

- `#define` - provides a simple, global search and replace function within a script. This is useful, for example, with variable substitution at execution time (`#define &&owner dbo`).

**Note:** Variables must be prefixed with “&&”.

- `#include` – provides a means to include the contents of a file in a script at the location of the directive, during execution. File locations, specified globally or by data source, are selected in the Options editor.

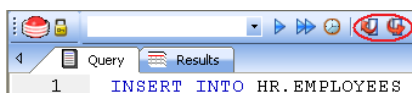
Preprocessing execution options are controlled by the Preprocess button on the ISQL toolbar. It lets you set the mode for subsequent executions:



Directives can be preprocessed only or can be both preprocessed and immediately executed.

### Transactional Support

Auto-commit can be disabled for any platform and transactional management, via the UI or script, can be used instead. Additional isolation level support has been added to DB2.

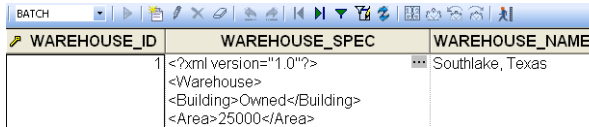




## Data editor

### LOB and XML support

XML data and other LOB data can now be modified and added in the data editor.



WAREHOUSE_ID	WAREHOUSE_SPEC	WAREHOUSE_NAME
1	<?xml version="1.0"?> <Warehouse> <Building>Owned</Building> <Area>25000</Area>	Southlake, Texas

### SQL Server 2008 Date/Time support

Fields of Date or Time data types can be modified in data editor.

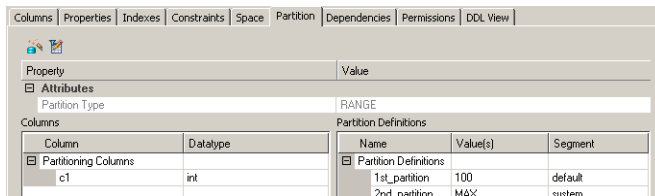
### Double Byte Character Display and Unicode Data Support

Unicode characters or double byte data in a table can be modified in the Data editor.

## Database Object Management

### Sybase Partitions

New in Sybase ASE 15 are three forms of semantic partitioning. In addition to the existing round robin partitioning, range, hash and list variations are now available. The Rapid SQL wizards and editors for tables and indexes have been upgraded to provide support for these options.

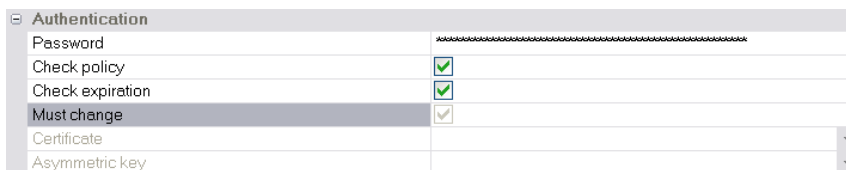


Property	Value			
Attributes	RANGE			
Partition Type				
Columns	Partition Definitions			
Column	Datatype	Name	Value(s)	Segment
Partitioning Columns		Partition Definitions		
c1	int	1st_partition	100	default
		2nd_partition	MAX	system

In addition, support is provided for the following, related Sybase features: Update Statistics, Delete Statistics, Reorganize, Truncate Table, DBCC Check allocation, Check Table, and Check Index.

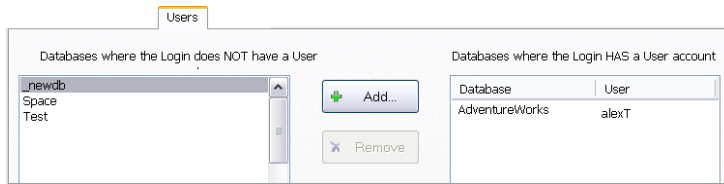
### SQL Server Login Updates

The Login editor has been updated to include support password policy enforcement, password expiry, login encryption using certificates or asymmetric key, and abilities to immediately change the password and enable/disable logins.



Authentication	
Password	.....
Check policy	<input checked="" type="checkbox"/>
Check expiration	<input checked="" type="checkbox"/>
Must change	<input checked="" type="checkbox"/>
Certificate	
Asymmetric key	

In addition, it is now easier to add a login to specific databases.



## Additional Currency Features

In response to customer requests, a number of new or enhanced features are now available. General enhancements include:

- **Vista support upgrades** - New Windows Vista support upgrades include support for Vista scheduling practices, and enhanced support for user types, display technology, and MSXML 3.0 compilation
- **Additional XML support** - Stored procedures can now take XML input, implemented as LOB data, at execution or debugging time
- **Virtualized Text editor content** - The Rapid SQL text editor has been updated to provide better performance when working with large files, such as extracted schema, large CLOB data or other ASCII results.

DBMS-specific updates include the following:

- Against **DB2** data sources, the Update Statistics function now lets you optionally exclude XML columns when collecting statistics for a table

## Additional Resources

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