



Space Manager with LiveReorg™ 8.2

Release Notes

Friday, September 02, 2016

Contents

- [About Space Manager](#)
- [New Features](#)
- [Resolved Issues](#)
- [Known Issues](#)
- [System Requirements](#)
- [Product Licensing](#)
- [Getting Started](#)
- [Upgrade and Compatibility](#)
- [Globalization](#)
- [For More Information](#)

About Space Manager with LiveReorg

Dell™ Space Manager with LiveReorg™ is Dell Software's solution for optimizing space use and performance in Oracle® databases. It provides DBAs with a comprehensive set of tools for making the most of storage resources. These tools allow you to collect statistics, visualize space use, detect space-use problems, reorganize and resize objects to reclaim wasted space, create tablespaces, partition objects, and resize datafiles. Space Manager's powerful reorganization functionality makes it possible to reorganize and restructure large, volatile databases while tables are online.

As you manage capacity with Space Manager, you can monitor it with Capacity Manager for Oracle. Capacity Manager is Dell Software's solution for tracking and planning capacity across multiple Oracle databases. Designed to report on collective space use in databases, Capacity Manager lets you evaluate current allocation, forecast future growth, and identify emerging issues. To resolve these issues, you can run Space Manager from Capacity Manager. Launch points are provided throughout the Capacity Manager interface.

Together, Space Manager and Capacity Manager provide the information and control you need to efficiently maintain and plan your database resources. Capacity Manager uses the Space Manager license and can be installed when you install Space Manager.

[Back to Top](#)

New Features

Space Manager with LiveReorg includes the following new features and enhancements.

Oracle 12c Support

Multitenant Architecture

- This release of Space Manager now supports Oracle 12c multitenant architecture (container database holding many pluggable databases).
- The Space Manager Server Agent can be installed in an Oracle 12c pluggable database.

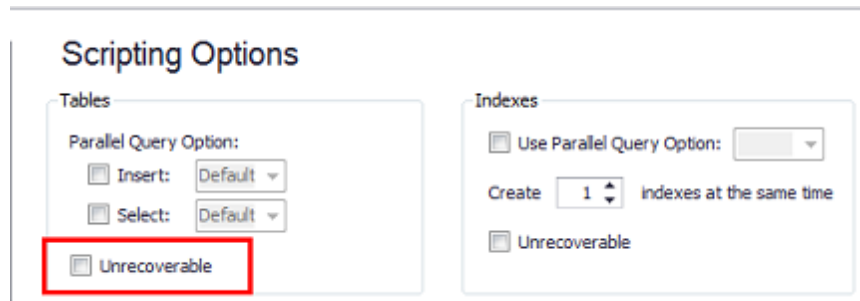
Note: In an Oracle 12c database, the Server objects and Server Agent must be installed by a common user with DBA privileges on all containers. After creating the common user account, grant it DBA privileges across all containers by using a grant statement similar to the following:

```
grant dba to c##<user> container = all;
```

Reorg Manager

Specify NOLOGGING for Tables

- You can now speed up reorganization for Tables by using Oracle's NOLOGGING mode. To use this method, in the Reorg Manager or Partitioning Wizard, select the **Unrecoverable** option for Tables in the Scripting Options page. This action turns off writing to redo logs as the tables are recreated. Immediately after a NOLOGGING reorganization, you should back up reorganized tables.



Data Movement Method

- When Space Manager performs a Live Reorg or Standard Reorg, DBMS_DATAPUMP is now used as the data movement method instead of FastCopy in Oracle database 12c or later.

SQL Editor

Collapse and Expand Code Blocks

- When you open a script in the Editor window, Space Manager organizes multi-line SQL statements and PL/SQL blocks inside collapsible code blocks for easy viewing. Click +/- to expand or collapse

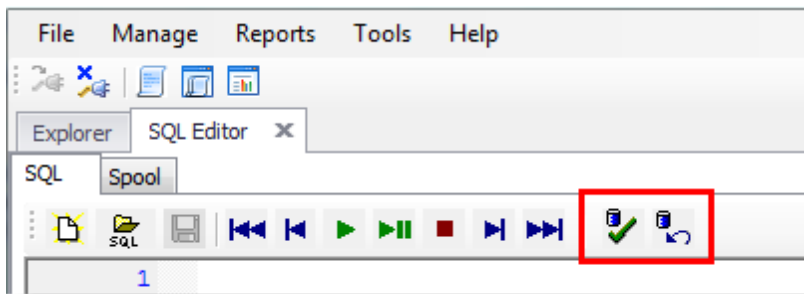
each code block.

```

113 begin
114     quest_spc_reorg_pkg.update_object_timing('<New Script Group>', 'start_create',
115 end;
116 /
117
118 CREATE TABLE QUEST_SPC_DEMO_USER.QUEST_SPC_TMP_23983_TAB (
119     DISTRIBUTOR_ID    NUMBER(6,0)                NOT NULL,
120     "NAME"           VARCHAR2(50 BYTE)           NOT NULL,
121     ADDRESS          VARCHAR2(200 BYTE)          NULL,
122     CITY             VARCHAR2(60 BYTE)           NULL,
123     STATE            VARCHAR2(2 BYTE)            default 'ca'
124
125     ZIP              VARCHAR2(10 BYTE)           NULL,
126     NOTES            VARCHAR2(2000 BYTE)         NULL)
127
  
```

Commit and Rollback Buttons

- The Editor toolbar now includes Commit and Rollback buttons.



[Back to Top](#)

Resolved Issues

The following is a list of issues addressed in this release.

Feature	Enhancement / Resolved Issue	Defect ID
Object Properties	Read-only fields in the Object Properties window no longer appear as though they are editable.	SPC-33
Reorg Manager	Enhancement: You can now specify "Unrecoverable" for Tables in the Reorg Manager and Partitioning Wizard (Scripting Options page) to speed up reorganization by using Oracle's NOLOGGING mode.	SPC-17

[Back to Top](#)

Known Issues and Considerations

Known Issues

The following is a list of issues known to exist at the time of this release.

Feature	Known Issue and Workaround (if applicable)	Defect ID
General	<p>Some wizard screens do not display correctly on Windows 7 if your text size setting is greater than 100%.</p> <p>Workaround:</p> <p>Set text size to 100%.</p> <ol style="list-style-type: none">1. Select Start Control Panel Appearance and Personalization.2. Select Make text and other items larger or smaller in the Display section.3. Select Smaller - 100% (default).4. Click Apply.	N/A
Oracle 12c Support	<p>The following Oracle 12c features are not supported:</p> <ul style="list-style-type: none">• Attribute clustering (attribute-clustered tables)• Tables with in-memory column store• Temporal validity for tables <p>Space Manager does not support Oracle database releases later than 12.1.0.2.0.</p>	N/A
Oracle 9i Support	<p>Tablespaces using Oracle-managed files. When you add datafiles to tablespaces with Oracle-managed files, be aware that Tablespace Properties will automatically put ORA_ at the beginning of each new file name. However, tablespaces using Oracle-managed files can only have one datafile named ORA_%. If you leave ORA_ in place for a new file, the following error will occur when you run the script to add it.</p> <p>“ORA-01276. Cannot add a file with an Oracle Managed Files file name.”</p> <p>To avoid the error, remove ORA_ from the beginning of a new file name before you run the script.</p>	N/A
Domain Indexes	<p>Reorganizing tables with Domain indexes. Space Manager provides limited support for Domain indexes when performing reorganizations and warns that you might encounter a problem because of the Domain index. Space Manager scripts the reorganization of the domain index correctly. However, the underlying implementation of the index type may be very complex, and some unforeseen dependencies may cause runtime errors.</p> <p>Important: It is recommended that you test the reorganization of a table with a Domain index on a non-production version of the table to make sure Space Manager reorganizes both the table and index correctly before you reorganize your production table.</p>	ST48257

Considerations

Review the following considerations.

Be aware of tables without physical segments before dropping a tablespace

In Oracle database 11g, before dropping a tablespace after a reorganization, be certain that you know whether or not the tablespace contains tables without physical segments. This consideration is based on the following Space Manager and Oracle behaviors:

- Space Manager will only reorganize tables that have physical segments. Tables without physical segments are ignored by Space Manager.
- When Space Manager recreates an empty table that was originally created using “segment creation deferred,” the new table will have no segments and will not be recognized by Space Manager.
- When dropping a tablespace containing “tables without physical segments,” Oracle might not warn you.

[Back to Top](#)

System Requirements

Before installing Space Manager and Capacity Manager, ensure that your system meets the following minimum hardware and software requirements.

Requirements for the Client Computer

The Space Manager and Capacity Manager clients must be installed on the same computer, and their requirements are the same unless otherwise specified. The computer must meet the following requirements:

Item	Requirement
Oracle® Client	Supported by both Space Manager and Capacity Manager: <ul style="list-style-type: none">• Oracle Net version 9.2, 10g, 11g, 12c (32-bit) Note: Space Manager and Capacity Manager do not support the 64-bit version of the Oracle Client.
Operating System	Supported by both Space Manager and Capacity Manager: <ul style="list-style-type: none">• Windows Vista® (FDCC compliant)• Windows® 7• Windows Server® 2008• Citrix® Metaframe XP• Windows® 8• Windows Server® 2012
Processor	1 GHz Processor (recommended minimum)
Memory	2 GB of RAM
Display Settings	A resolution of 1024 x 768; true color or high color; small fonts
Disk Space	Space Manager: Approximately 800 MB Capacity Manager: Approximately 13 MB
.NET Framework	Microsoft® .NET Framework 4 (including update 4.0.3) Note: The .NET Framework 4 Full Profile is required. The Client Profile is not sufficient.

Requirements for Databases

Each database being managed with Space Manager must meet the following requirements:

Item	Requirement
Oracle Database	Supported by both Capacity and Space Manager: <ul style="list-style-type: none">• Oracle 9.2• Oracle 10.2• Oracle 11g• Oracle 11g R2• Oracle 12.1.0.2.0. See Known Issues for a list of Oracle 12c features not supported by Space Manager.

Item	Requirement
	Note: Space Manager supports Oracle Enterprise Edition and Standard Edition databases.
Database Server Operating System	<p>Space Manager supports the following operating systems:</p> <ul style="list-style-type: none"> • HP-UX 11 and 11i on PA_RISC • HP-UX 11i on Itanium • Sun Solaris 2.8, 2.9, 10, and 11 • IBM® AIX 5.1, 5.2, 5.3, 6.1, and 7.1 • Red Hat® Linux Advanced Server 3.0, 4.0, 5.1, 5.5, 6.1, and 6.4 • Oracle® Linux® 4, 5, and 6 • Oracle Linux 5 with Unbreakable Enterprise Kernel • SuSE Linux Enterprise Server 9, 10, and 11 SP2 • Windows Server 2008 • Windows Server 2012 <p>Note: When using Oracle 11.1 or earlier on 64-bit systems, the installing user must be configured to use the Oracle 32-bit client libraries. For Oracle 11.2 or later on 64-bit systems, the installing user can use the Oracle 64-bit client libraries.</p>
Disk Space	<p>Disk-space requirements are:</p> <ul style="list-style-type: none"> • 80 MB for statistics tables • 20 MB for scripts tables • 20 MB contiguous free space for LiveReorg objects in the LiveReorg tablespace (set with QSA's LW_TABLESPACE parameter) • 40 MB in the filesystem for QSA executables and logs
Oracle Packages	<p>Space Manager: DBMS_SQL, DBMS_PIPE, DBMS_LOCK, DBMS_SPACE_ADMIN QSA: DBMS_SQL, DBMS_PIPE, DBMS_OUTPUT, DBMS_APPLICATION_INFO Find Long LONGs feature: UTL_RAW Email notifications: UTL_SMTP</p>
Oracle's Partitioning Option	Required for the Online Switch (a feature available for live reorganizations) and the Partitioning Wizard; Partitioning Option must be installed and licensed.
XDB Schema	Required for XMLType datatypes.

Requirements for the Capacity Manager Repository

The database used for the Capacity Manager repository must meet the following requirements:

Item	Requirement
Oracle Database	<p>Supported for the repository:</p> <ul style="list-style-type: none"> • Oracle 9.2 • Oracle 10.2 • Oracle 11g • Oracle 11g R2 • Oracle 12.1.0.2.0

Item	Requirement
Disk Space	8 MB recommended per monitored database assigned to a repository (accommodates one year of growth in repository objects)
Job Scheduler	<p data-bbox="509 333 1406 392">One of the following schedules is needed for snapshot jobs, report scheduling, and Windows scheduling:</p> <ul data-bbox="558 405 1406 541" style="list-style-type: none"> <li data-bbox="558 405 1354 464">• Oracle DBMS_JOBS is used for scheduling snapshot jobs on Oracle8i and Oracle9i. <li data-bbox="558 474 1406 501">• Oracle DBMS_SCHEDULER is used for scheduling snapshot jobs on Oracle10g. <li data-bbox="558 512 1406 541">• A third-party job scheduler can be used instead of an Oracle DBMS package.
Oracle Initialization Parameters	<p data-bbox="509 562 1122 590">Oracle initialization parameters should be set as follows:</p> <ul data-bbox="558 602 1422 848" style="list-style-type: none"> <li data-bbox="558 602 1390 690">• OPEN_LINKS—The value for OPEN_LINKS initialization parameter should be equal to or greater than the number of monitored databases assigned to a repository. The default value for this parameter is 4; the maximum is 255. <li data-bbox="558 701 1422 848">• JOB_QUEUE_PROCESSES—The value for the JOB_QUEUE_PROCESSES initialization parameter should be greater than zero in Oracle 9.2 databases. For optimal performance of snapshot jobs, it should be equal to or greater than the number of monitored databases assigned to a repository. The maximum is 1,000.
Character Set	Must be a superset of the character sets for all monitored databases. A UTF8 character set is recommended.
Activity Level	Light activity level.

[Back to Top](#)

Product Licensing

To activate a trial license

1. In the License Key dialog, enter your Authorization Key.
2. Enter the Site Message included with your Authorization Key.

To activate a purchased commercial license

1. In the License Key dialog, enter your Authorization Key.
2. Enter the Site Message included with your Authorization Key.

Getting Started

Contents of the Release Package

Space Manager with LiveReorg 8.2 and Capacity Manager for Oracle 1.4 include the following documentation:

- Space Manager online help and user guide
- Capacity Manager online help

Note: The *Installation Guide* and Release Notes are not included in the setup executable and need to be downloaded separately. These documents are also available from the Dell Software Support Portal.

Installation Instructions

The clients for Space Manager with LiveReorg 8.2 and Capacity Manager for Oracle 1.4 can be installed together using the Installer. The installer is identified as the Space Manager with LiveReorg 8.2 Installer. The executable for the installer is available at our Support Portal at <https://support.software.dell.com/> and on the installation CD for Space Manager with LiveReorg.

After installing the Space Manager client, you install server components and the QSA Server Agent. Each database you plan to manage with Space Manager must have server components and an agent. Job scheduling and LiveReorg require an agent. After installing the Capacity Manager client, you install the repository and assign monitored databases to the repository. Each database you plan to manage with Capacity Manager must be assigned to the repository.

QSA Server Agent version 8.2 is included in this release of Space Manager with LiveReorg 8.2.

Refer to the *Space Manager with LiveReorg Installation Guide* for more information about installing Space Manager.

[Back to Top](#)

Upgrade and Compatibility

When you upgrade to Space Manager 8.2, you can also install or upgrade to Capacity Manager for Oracle 1.4. The clients for both applications are installed with the Installer. For more information, see [Getting Started](#) in these release notes.

After you upgrade the Space Manager client, when you connect to a database with Space Manager server objects already installed, you are prompted to upgrade server components and the QSA Server Agent.

[Back to Top](#)

Globalization

This section contains information about installing and operating this product in non-English configurations, such as those needed by customers outside of North America. This section does not replace the materials about supported platforms and configurations found elsewhere in the product documentation.

This release supports any single-byte or multi-byte character set. In this release, all product components should be configured to use the same or compatible character encodings and should be installed to use the same locale and regional options. This release is targeted to support operations in the following regions: North America, Western Europe and Latin America, Central and Eastern Europe, Far-East Asia, Japan.

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The site enables you to:

- Create, update, and manage Service Requests (cases)
- View Knowledge Base articles
- Obtain product notifications
- Download software. For trial software, go to [Trial Downloads](#).
- View how-to videos
- Engage in community discussions
- Chat with a support engineer

[Back to Top](#)

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[Back to Top](#)