SILVERRUN Enterprise Installation and Configuration of the Repository on SQL Server

Grandite

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Installation Guide

SILVERRUN Enterprise Series 2.8 / 2.9
Repository Installation and Setup Under Microsoft SQL Server

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Introduction

This *SILVERRUN Enterprise Series Installation Guide* describes the procedures to install the SILVERRUN Enterprise Series Repository in a Microsoft SQL Server environment. It also shows how to upgrade an existing Repository to version 2.8 / 2.9. The installation guide applies both to SILVERRUN-RDM Enterprise Series and SILVERRUN-BPM Enterprise Series.

Installation of SILVERRUN Enterprise Series comprises two separate parts: first, the SILVERRUN Repository is created on Microsoft SQL Server, then the application is installed on each of the workstations. The installation of the Repository on the server is conducted by the SILVERRUN Administrator, assisted by a user with the System Administrator (SA) role, while the installation of the application on workstations can be done by users.

This manual focuses on the installation of the Repository. For information on other aspects of SILVERRUN Enterprise Series (e.g. the instructions how to install the SILVERRUN applications), see the other guides provided with your application.

SILVERRUN Enterprise Series has modeling features for development workgroups. Although users have the option of working in stand-alone mode, the application offers a dynamic way of designing, building and managing an enterprise information architecture:

- Users work online with the SILVERRUN Repository
- Users have concurrent access to the SILVERRUN Repository.

The SILVERRUN Repository resides on a database server. The server provides shared services to all workstations ("clients") connected on the network. Client workstations run the SILVERRUN Enterprise application and share the SILVERRUN Repository located on the server.

The SILVERRUN Administrator is the person responsible for creating and maintaining the SILVERRUN Repository, as well as controlling access to it by the different users.

By using SQL Server as RDBMS support for the Repository, SILVERRUN Enterprise allows you to benefit from multi-platform support, various networking possibilities and an extensive range of products and services.

Installation

Server Configuration

When working with SILVERRUN Enterprise, the first step is to have SQL Server properly installed. For information on the installation of SQL Server, please refer to the SQL Server documentation.

Then, the SILVERRUN Repository is to be created as a SQL Server database. The Repository can reside:

- On an RDBMS server (dedicated server): generally, it is one of the best ways to get the most performance from your system, although performance depends on the number of tasks executed by the server and the number of applications running under SQL Server,
- On a network server: this configuration is suitable if the server has to execute few tasks like printing, communications, etc.

Database Software

The SILVERRUN Repository can be installed on Microsoft SQL Server 2005 (v. 9.0) and 2008 (v. 10). (For the installation on previous versions of SQL Server please request a separate installation package through Grandite's Technical Support.)

Communication Software

The SILVERRUN Enterprise application connects to the Repository via ODBC driver as provided within the SQL Server installer package.

Hardware

The SILVERRUN Enterprise Repository can be installed on any platform supporting SQL Server. Please refer to the SQL Server documentation for a list of supported hardware.

Disk Space

The disk space required to install the Repository depends on the size of your models. However, a minimum of 7 MB is necessary for the Repository itself.

Note that a model on the Repository requires approximately 3 times more disk space than in binary file format. For example, a 2MB SILVERRUN-RDM file would use about 6MB when transferred to the Repository.

The size of the transaction log depends on the number of occurrences in the transaction. As a rule of thumb, allocate to the log 1/3 of the disk space you allocate to the data itself.

Before You Start

- SQL Server must be installed on the Repository server and the database must be operational.
- Since scripts are used for the installation process, SQL Server Management Studio or the equivalent must be installed (or accessible) on the workstation on which the installation scripts will be run.
- The Repository installation scripts are provided as separate package to download from Grandite's Web server.
- Decide whether you want the *simplified* or the *optimized* installation. Both installations create a file in which the log is placed. The *simplified* installation creates another file for both tables and indexes. The *optimized* installation creates two other files and two filegroups. Each filegroup is mapped to a file; tables and clustered indexes will be stored on one of the filegroups and non-clustered indexes on the other.
- Determine the file name and path and/or the partitions on the server for the files, if you do not want to use existing files.
- Decide how much disk space to allocate to the files for tables, indexes and the log, according to the size of your models (see **Disk Space** in the **Server Configuration** section).
- Prepare a list of users and/or groups who will be granted access to the SILVERRUN Repository. Two scripts are supplied for granting privileges: one grants modification privileges, while the other grants only select privileges.
- Some steps of the installation require the cooperation of a user having the System Administrator role: make sure that person is available when needed.
- The SILVERRUN Repository installation procedure creates an **sr_admin** user name (SILVERRUN Administrator) for the database. Designate someone in your organization to be responsible for the SILVERRUN Repository.

On the following pages you will find the complete installation steps.

Step 1: Creating Files, the Database and the sr_admin User

Both the simplified and the optimized script create the logical device **dev_sr_repository_log** for the log, the database **silverrun_db** and the **sr_admin** user for the SILVERRUN Administrator. The SILVERRUN Administrator is given ownership of the database.

Select the script

- INIT_S.SQL if you want the simplified installation. This script creates tables and indexes on the PRIMARY filegroup.
- INIT_O.SQL if you want the optimized installation. This script tables and clustered indexes on the PRIMARY filegroup and non-clustered indexes on a separate filegroup.

To execute the scripts, a user with System Administrator authorization is required.

These scripts contain statements that can be used for the physical preparation of the Repository. You can use them as is, or you can modify them to adapt to your needs. For example, you can change the number of files, the names of objects or their size, etc.

Step 2: Creating the SILVERRUN Metamodel

Depending on the previous step, use

- REPOSI_S.SQL to create the Repository tables and indexes for the simplified installation
- REPOSI_O.SQL to create the Repository tables and indexes for the optimized installation.

To execute the scripts, the user sr_admin is required.

If the installation has been successful, these validation messages display:

```
NUMBER OF TABLES CREATED FOR THE SILVERRUN REPOSITORY
COUNT (*)
- - - - -
150

NUMBER OF INDEXES CREATED INSIDE THE SILVERRUN REPOSITORY
COUNT (*)
- - - - -
513
```

Step 3: Granting Privileges to Users

To create a new user for the Repository (database **silverrun_db**), choose the script NEWUSER.SQL: Modify the script by typing the user name and the password in the respective section, then, run the script with System Administrator role.

To grant modification privileges, i.e. selecting, adding, modifying and deleting occurrences from all data models stored in the Repository, to existing users, choose the script GRTSIUD.SQL: Modify the script by typing the list of users and/or groups to be authorized, then, run the script as sr_admin.

To grant select privileges, i.e. only browsing of occurrences stored in the Repository is allowed, to existing users, choose the script GRTSLECT.SQL: Modify the script by typing the list of users and/or groups to be authorized, then, run the script as sr_admin.

Upgrading the Repository to Version 2.8 / 2.9

You may ignore this upgrade section if your Repository is currently installed for SILVERRUN Enterprise Series 2.8 / 2.9.

Before You Start

- SR_ADMIN privileges are required to upgrade the SILVERRUN Repository.
- Backup the old Repository and keep the backup in a safe place until users have worked with the new version on a regular basis.
- During the upgrade procedure, no user may be connected or attempt to connect to the Repository. Users attempting to connect to the Repository will receive a warning message saying that the version of the Repository is not compatible with the version of their SILVERRUN application.
- Find out if the installation of the previous version was simplified (one filegroup for tables and indexes) or optimized (one filegroup for tables and one for indexes).
- The upgrade scripts are provided with the download package. A complete list of scripts for upgrade can be found in the appendix.

Step 1: Validating

To validate the existing Repository installation, use INIUPGRD.SQL. When executed, this script outputs:

- The version of the current Repository on the server or the last step executed in the upgrade procedure,
- User names currently connected to the Repository, if any.

A message displays at the end of the operation:

- If the version identified is SILVERRUN Enterprise Series 2.8 / 2.9, the latest version is already installed. No upgrade is necessary!
- If the version is
    - 2.6, then perform step 2 and step 3 using the scripts in the folder rdm_26 to upgrade the Repository to the next level,
    - 2.7, then perform step 2 and step 3 using the scripts in the folder rdm_27 to upgrade the Repository to the next level,
    - 2.7.6, then perform step 2 and step 3 using the scripts in the folder rdm_28 to upgrade the Repository to the latest version.

To execute the script, the user sr_admin is required.

Step 2: Upgrading the SQL Server Catalog

To upgrade the Repository version, run

- UPGRD_S.SQL, if you want to perform a simplified upgrade, i.e. one filegroup for data and indexes.
- UPGRD_O.SQL, if you want to perform an optimized upgrade, i.e. one filegroup for data and another one for indexes.

If the upgrade has been successful, this message displays:

```
REPOSITORY SUCCESSFULLY UPGRADED TO 2.8.x.
```

To execute the script, the user sr_admin is required.

Step 3: Granting Privileges to Users

Note: This step is not necessary for SILVERRUN 2.8 / 2.9, since there are no new tables.

To grant modification privileges, i.e. selecting, adding, modifying and deleting occurrences from all data models stored in the Repository, to existing users, choose the script GRTSIUD.SQL: Modify the script by typing the list of users and/or groups to be authorized, then, run the script as sr_admin.

To grant select privileges, i.e. only browsing of occurrences stored in the Repository is allowed, to existing users, choose the script GRTSLECT.SQL: Modify the script by typing the list of users and/or groups to be authorized, then, run the script as sr_admin.

Step 4: Upgrading the Application

To upgrade the SILVERRUN BPM Enterprise and/or SILVERRUN RDM Enterprise application, please follow the instructions provided separately for the installation.

APPENDIX

Installation Scripts

Directory / folder	Script name	Description
INSTALL	INIT_S.SQL	For the simplified installation, the script creates: • one file for the data and one for the log, • the database **silverrun_db**, • the **sr_admin** user for the SILVERRUN Administrator.
	INIT_O.SQL	For the optimized installation, the script creates: • one file and one filegroup for tables and clustered indexes, one file and one filegroup for non-clustered indexes and one file for the log, • the database **silverrun_db**, • the **sr_admin** user for the SILVERRUN Administrator.
	NEWUSER.SQL	Creates a user for the database **silverrun_db**.
	GRTSIUD.SQL	Grants select, insert, update and delete privileges to a list of users and/or groups.
	GRTSLECT.SQL	Grants select privileges to a list of users and/or groups.
	REPOSI_S.SQL	Creates tables and indexes for the simplified installation.
	REPOSI_O.SQL	Creates tables and indexes for the optimized installation.

Upgrade Scripts

Directory / folder	Script name	Description
UPGRADE\RDM_2x	INIUPGRD.SQL	Outputs: • the version of the current Repository on the server or the last step executed in the upgrade procedure, • user names currently connected to the Repository, if any.
	UPGRD_S.SQL	Simplified upgrade, i.e. one filegroup for data and indexes.
	UPGRD_O.SQL	Optimized upgrade, i.e. one filegroup for data and one for indexes.

Utility Scripts

Directory / folder	Script name	Description
UTILITY	DRPINDEX.SQL	Drops all SILVERRUN indexes except those on the zModule table.
	DRPTABLE.SQL	Drops all SILVERRUN tables except the zModule table.
	REPINFO.SQL	Extracts data to check whether the installation of the Repository has been successful.
	TRUNCATE.SQL	Deletes all occurrences of the SILVERRUN Repository tables except those of the zModule table.
	USERINFO.SQL	Shows how many tables a user can select, insert, update or delete.