

Setting up SQL Server 2005 for ArcSDE 9.1, SP1

ArcSDE 9.1, Service Pack 1 is the first release of ArcSDE that will support Microsoft SQL Server 2005. The behavior of ArcSDE on SQL Server 2005 is identical to that of ArcSDE on SQL Server 2000. However, the Post-Installer has not been updated to fully support configuring a geodatabase on SQL Server 2005. Therefore, there are some setup steps you must perform manually. This document provides instructions on how to perform these steps and will describe support for new SQL Server 2005 functionality.

In SQL Server 2005, the Enterprise Manager has been replaced with the SQL Server Management Studio. This is an integrated environment for accessing, configuring, managing, administering, and developing all components of SQL Server. All illustrations used in this document are shown using SQL Server Management Studio. SQL Server Management Studio can be used to manage and administer both SQL Server 2005 and SQL Server 2000 instances.

ArcSDE post installation

After the ArcSDE software has been installed on your machine, the Post-Installer (PI) wizard will launch. The PI performs four separate operations:

1. Defines database and sde user—Creates a database and an sde login if one does not exist. The sde login is added to the database and granted CREATE TABLE, CREATE PROCEDURE, CREATE VIEW, and CREATE FUNCTION permissions.
2. Repository setup—The database created in the previous step is populated with SDE_ and GDB_ tables as well as stored procedures, views, and functions to support ArcSDE.
3. Software authorization—The geodatabase created in the first two steps is licensed.
4. Creates an ArcSDE service—This service will connect to the geodatabase you have just created. Optionally, the PI will start the new service for you.

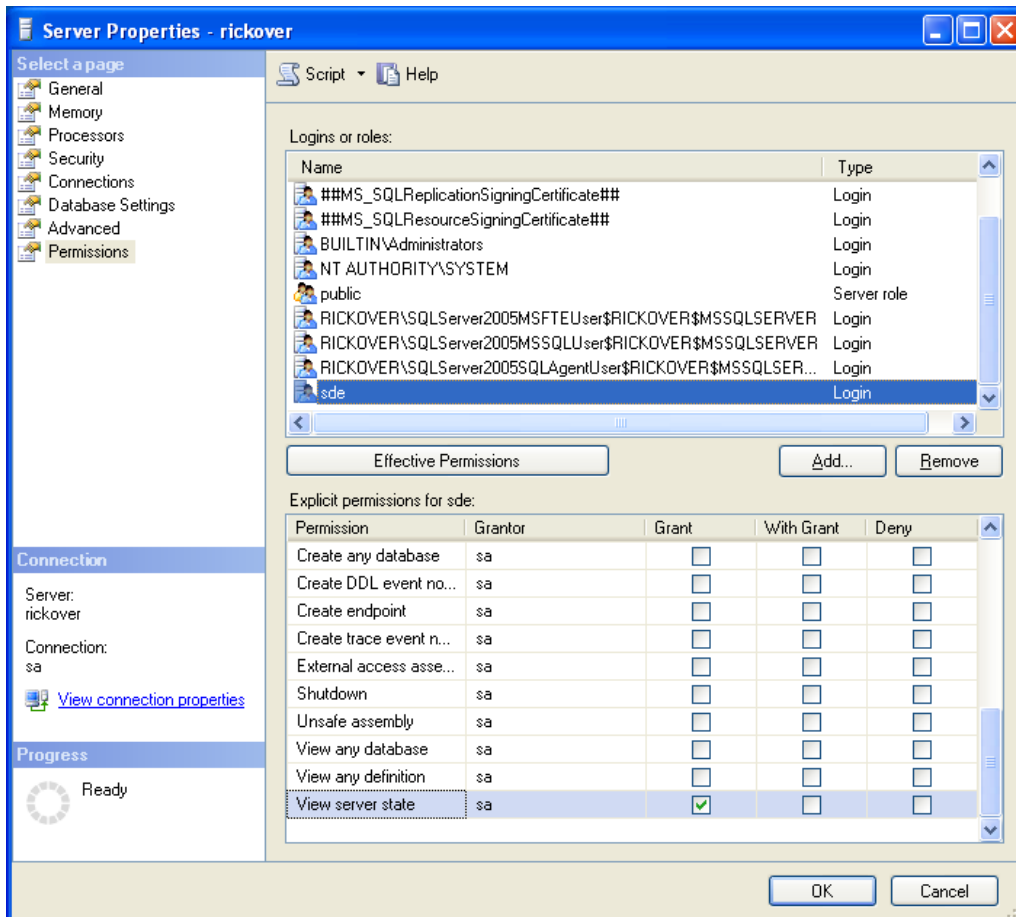
In SQL Server 2005, the sde user and any other user who will connect to ArcSDE require a new permission: VIEW SERVER STATE. This permission allows users to correctly execute ArcSDE stored procedures that query system information. This permission is not granted by the PI for ArcSDE 9.1 SP1; therefore, you must perform this step manually before attempting to start the ArcSDE service. (It will be part of the PI at ArcSDE 9.2.)

The simplest way to manually grant this permission on new geodatabases and upgraded geodatabases is as follows:

New geodatabases

1. Choose Custom on the PI Welcome screen.
2. Create a database and sde user. Popup message boxes will appear to inform you that the user has been created and the permissions correctly set.
3. Open SQL Server Management Studio and open a connection to your SQL Server 2005 instance.
4. Right-click the server connection and click Properties. Click Permissions.

- In the Logins or roles list, locate and select the sde login. Under the list of Explicit permissions for sde, scroll down to the last permission—View server state—and click the Grant checkbox.



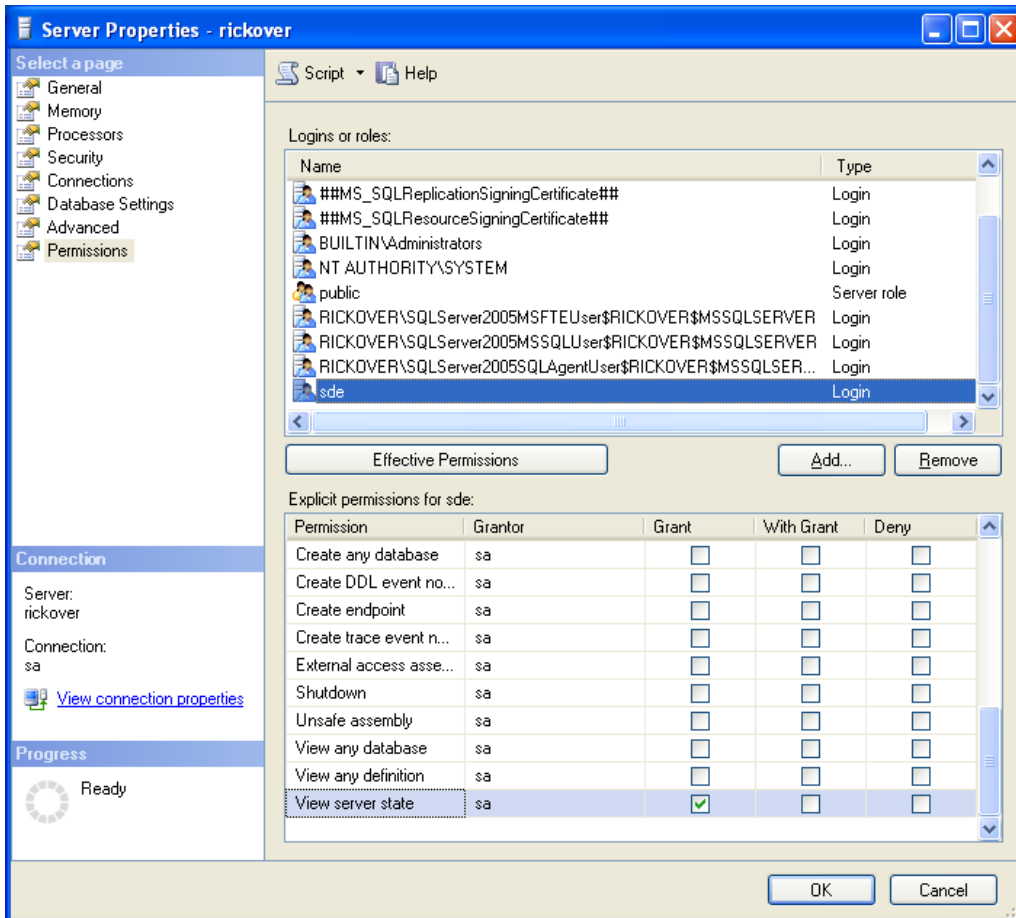
- Click OK.
- Proceed with the rest of the post installation.

Upgrade an existing geodatabase

If you have upgraded your SQL Server instance from 2000 to 2005 and simply want to upgrade existing 9.1 geodatabases to 9.1 SP1, do the following:

- Open SQL Server Management Studio and open a connection to your SQL Server 2005 instance.
- Right-click on the server connection and choose Properties. Select Permissions.

- In the Logins or roles list, locate and select the sde login. Under the list of Explicit permissions for sde, scroll down to the last permission—View server state—and check the Grant checkbox.



- Click OK.
- Upgrade the geodatabase. You can do this with the PI. Choose a custom Post Installation and uncheck all the options except Repository Setup. Or you can do this manually with the sdesetupmssql -o upgrade command issued from a command window.
- Start the ArcSDE service. Do not attempt to start the ArcSDE service until you have performed steps 1 through 5.

NOTE: All logins connecting to ArcSDE will require the VIEW SERVER STATE permission. This permission can be granted to all other logins in the same manner as it was granted to the sde login.

Alternately, you can execute the following statement in a query window:

```
Use master
```

```
Go
```

```
Grant view server state to <login>
```

SQL Server 2005 and ArcSDE

Schemas

If you use ArcSDE with SQL Server 2005, all users who will own data, including shared log files, must have a default schema with the same name as their user name.

Much of the geodatabase security model is based on specific rights conferred on the owner of an object—the owner being the user that created the object. The owner or schema name must match the name of the user performing tasks such as dataset creation, dataset schema changes (such as adding a new field), modifying permission, or deleting a dataset.

If you upgrade your SQL Server 2000 instance to SQL Server 2005, each database user will be assigned a default schema by the same name. If you are creating a new geodatabase with new users, you must be sure that schemas are created for each of the users who will own data and that these schema names match the user names.

If you create database users with the `sp_grantdbaccess` stored procedure (which still works, but has been deprecated at SQL Server 2005), a schema by the same name will automatically be created as the user's default schema. For example:

```
exec sp_grantdbaccess @loginame='JSmith', @name_in_db='JSmith'
```

If you use the new `CREATE LOGIN` and `CREATE SCHEMA` commands, you must create a schema then create the user using the `WITH DEFAULT SCHEMA` argument. For example:

```
CREATE LOGIN [WORLD\gis1] FROM WINDOWS;  
USE GISDB;  
CREATE SCHEMA gis1;  
CREATE USER gis1 FOR LOGIN [WORLD\gis1]  
WITH DEFAULT_SCHEMA = gis1;
```

Snapshot isolation

At this release, snapshot isolation is not supported with ArcSDE. Do **NOT** enable the `READ_COMMITTED_SNAPSHOT` database option.