

ArcGIS® 9

Installation Guide: ArcSDE® for Microsoft® SQL Server



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Introduction

This installation guide includes information on installing ArcSDE[®] for Microsoft[®] SQL[™] Server, setting up your database, and creating an ArcSDE service.

For guidelines on optimizing both your Microsoft SQL Server and ArcSDE server configurations, see the topics in the section Geodatabases and ArcSDE/Administering ArcSDE geodatabases in the ArcGIS Server help prior to installing ArcSDE. These topics can be accessed by navigating to the help folder and double clicking index.htm. The help is also available online from <http://webhelp.esri.com/arcgisdesktop/9.2/index.cfm>.

Each ArcSDE media contains the following:

- An installation guide—This is the file you are reading now. It contains instructions for installation and setup on Windows[®].
- Folders named after the database—Contain the installation files for that database
- documentation_server and documentation_sdk—Folders containing the ArcSDE Developer Help and the command references documentation for administration commands (SDEHELP.chm for Internet Explorer 5.0 and higher browsers and sdehelp.htm for all other browsers). The Windows setup program will install the documentation.

The installation of ArcSDE for SQL Server is a two step process. All steps are provided during the setup procedure.

1. Install ArcSDE for SQL Server.
2. Perform the postinstallation setup, which defines the ArcSDE administrator user environment, sets up the geodatabase repository, authorizes ArcSDE, and creates the ArcSDE service.

On Windows, the ArcSDE setup program will install the Microsoft Windows Installer if required before continuing with the ArcSDE for SQL Server installation. After ArcSDE for SQL Server is installed, you will have the option to run the Post Installation wizard.

System requirements

For the latest in supported system environments, see <http://support.esri.com>, and navigate to Software > ArcSDE > System Requirements.

Your computer is required to meet these minimum system requirements to install ArcSDE for SQL Server.

Minimum system requirements

The following lists the minimum system requirements for ArcSDE for SQL Server.

Operating system

- Microsoft Windows Server 2003®
- Microsoft Windows 2000® service pack 3 or later

Free disk space

The server environment on Windows requires approximately 100 MB.

Microsoft Data Access Components (MDAC)

ESRI recommends you have the most up to date version of MDAC installed on your server. Beyond MDAC 2.8, updates can only be obtained when you apply the latest service pack from Microsoft for your operating system.

MDAC 2.6 or later is required for ArcSDE 9.2 for SQL Server. If MDAC version 2.6 or later is not detected, the setup will install MDAC 2.6 for you.

Microsoft SQL Server requirements

For the latest in supported Microsoft SQL Server environments, see <http://support.esri.com>, and navigate to Software > ArcSDE > System Requirements.

To obtain an authorization file

Each ArcSDE server machine requires an authorization file. Each new version of ArcSDE requires a new authorization file.

There are several ways to obtain an authorization file and register ArcSDE. You can visit <https://service.esri.com> to obtain an authorization file (by email, fax, phone, or mail) before installing ArcSDE. You can also obtain an authorization file and register ArcSDE using the Post Installation wizard after installing. (This is the recommended method.) See [ArcSDE authorization](#) for registration methods using the Post Installation wizard.

Installation overview

The installation requires system administrator privileges.

The installation procedure includes the following steps:

- 1. Obtain an authorization file.**
Each ArcSDE server machine requires an authorization file. See the topic [To obtain an authorization file](#).
- 2. Start the setup program.**
Insert the ArcSDE media into the appropriate drive, browse to the setup.exe in the Windows folder, and follow the installation instructions on the screen to install the ArcSDE software. For detailed installation instructions, see the topic [Installing the ArcSDE software](#).
- 3. Complete the postinstallation setup.**
The postinstallation requires a valid database to be installed and a database set up and available for connections. The postinstallation setup will set up the ArcSDE repository in the database, authorize ArcSDE, and create and start the ArcSDE service. The Post Installation wizard will automatically launch after installation is complete. The postinstallation must be completed to successfully set up ArcSDE in the database. For detailed instructions, see the topic [Post installation overview](#).

Installing the software

Follow the steps below to install the software on Windows.

How to prepare to install the ArcSDE software

1. Obtain an authorization file for the machine on which you will be installing ArcSDE. This is not required to install the ArcSDE component of the ArcGIS Server software but is required to complete the postinstallation setup. See the topic [To obtain an authorization file](#).
2. Log in as a user with administrative privileges.
3. Close all applications on your computer.
4. Insert the ArcSDE media into the appropriate drive and follow the directions on How to install the ArcSDE component.

How to install the ArcSDE component

1. Navigate to the ArcSDESqlServer folder on the ArcSDE for Windows media and launch setup.exe to begin the installation. During the installation, you will be asked to read the license agreement and accept it or exit if you don't agree with the terms. The license agreement dialog box contains a link to view the license agreement in another language.
2. To complete the installation, follow the directions in the installation wizard.
3. After the ArcSDE installation completes, the setup program will provide the opportunity to begin the postinstallation setup. The Post Installation wizard will provide the options to configure the sde environment, set up the geodatabase repository in the database, authorize the software, and create and start the ArcSDE service. See the [Postinstallation overview](#) for more information.

Accessing geodatabase documentation

The full set of geodatabase documentation is available in the Geodatabases and ArcSDE/Administering ArcSDE geodatabases section of the ArcGIS Server help. These topics can be accessed by navigating to the help folder in the software install location and double clicking index.htm. The help is also available online from <http://webhelp.esri.com/arcgisdesktop/9.2/index.cfm>.

Postinstallation overview

Once ArcSDE for Microsoft SQL Server is installed, you must set up your database and geodatabase repository, authorize ArcSDE for use, and create an ArcSDE service. The Post Installation wizard provides an easy way to set up your geodatabase, authorize ArcSDE, and create and start the ArcSDE service. These steps can also be performed manually, but the Post Installation wizard will guide you through the following options:

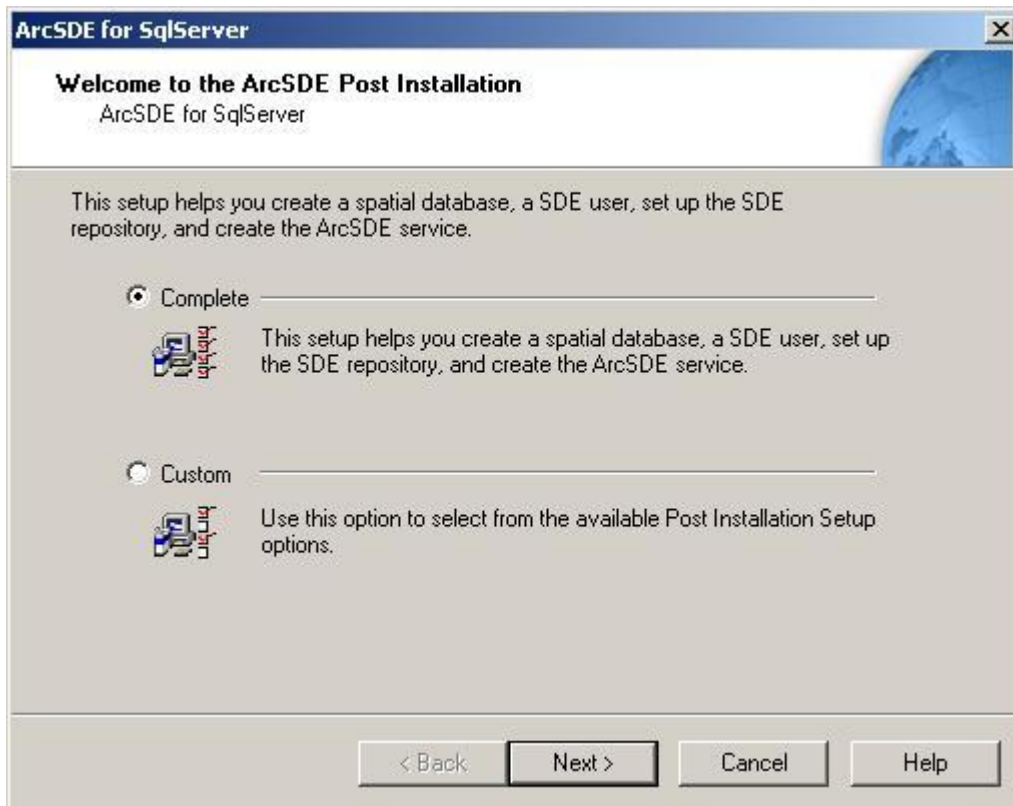
- **Setting up the ArcSDE administrator user environment**—If you don't already have an sde user and a spatial database, the Post Installation wizard will set up the user environment by connecting to Microsoft SQL Server with Windows Authentication or SQL Server Authentication. If you are using a DBO-schema geodatabase, a spatial database only will be created. If you are using an SDE-schema geodatabase, the sde user and spatial database must exist before the rest of the postinstallation setup will succeed. Security at your site may dictate you skip this part of the setup and allow your Microsoft SQL Server database administrator to create the sde user and spatial database manually. To skip this step, use a custom postinstallation setup.
- **Setting up the geodatabase repository**—This is a crucial step in the postinstallation setup. This part of the Post Installation wizard will allow you to define the configuration files to be used. If you modified a dbtune.sde, dbinit.sde, or giomgr.defs file and want to use one or all of those, you'll have a chance to include them here. Accept the defaults if you don't have any custom files to use.

This step is what actually "creates" the geodatabase in the database. The ArcSDE system tables, geodatabase system tables, stored procedures, and locators are all created when setting up the geodatabase repository. If this step does not run successfully, your ArcSDE service will not start and you won't be able to connect to the geodatabase through the ArcSDE service or a direct connection. This step can be performed manually with the sdesetup command. See [To manually set up the ArcSDE repository](#) for details.

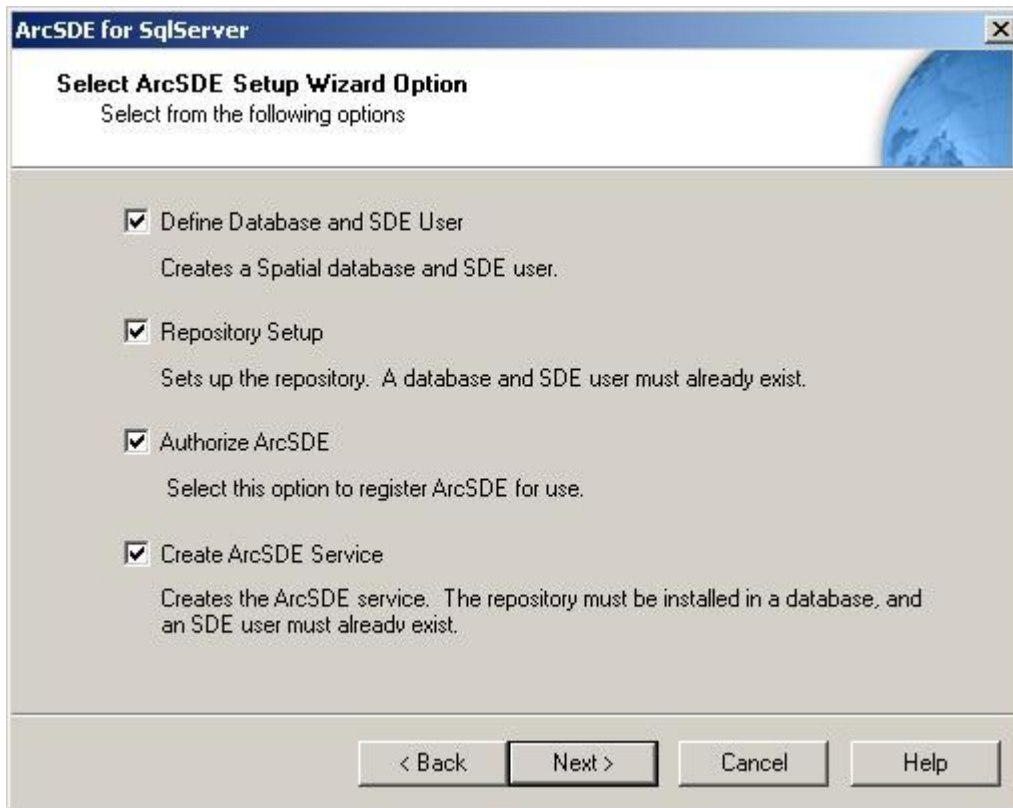
- **Authorizing ArcSDE**—Each ArcSDE server requires a unique authorization file. This portion of the Post Installation wizard authorizes your geodatabase repository using the authorization file. The ArcSDE service will not start and connections will be refused unless your geodatabase repository has been configured using a valid authorization file. You can reconfigure your repository with an updated authorization file by running through this part of the Post Installation wizard again at a later time or by using the sdesetup command with the update_key operation. (See the ArcSDE Command Reference for details.)
- **Creating the ArcSDE service**—Once an authorization file has been specified, the ArcSDE service can be created. If the information provided

is complete, the Post Installation wizard will start the ArcSDE service for you.

Choose a complete or a custom postinstallation setup.



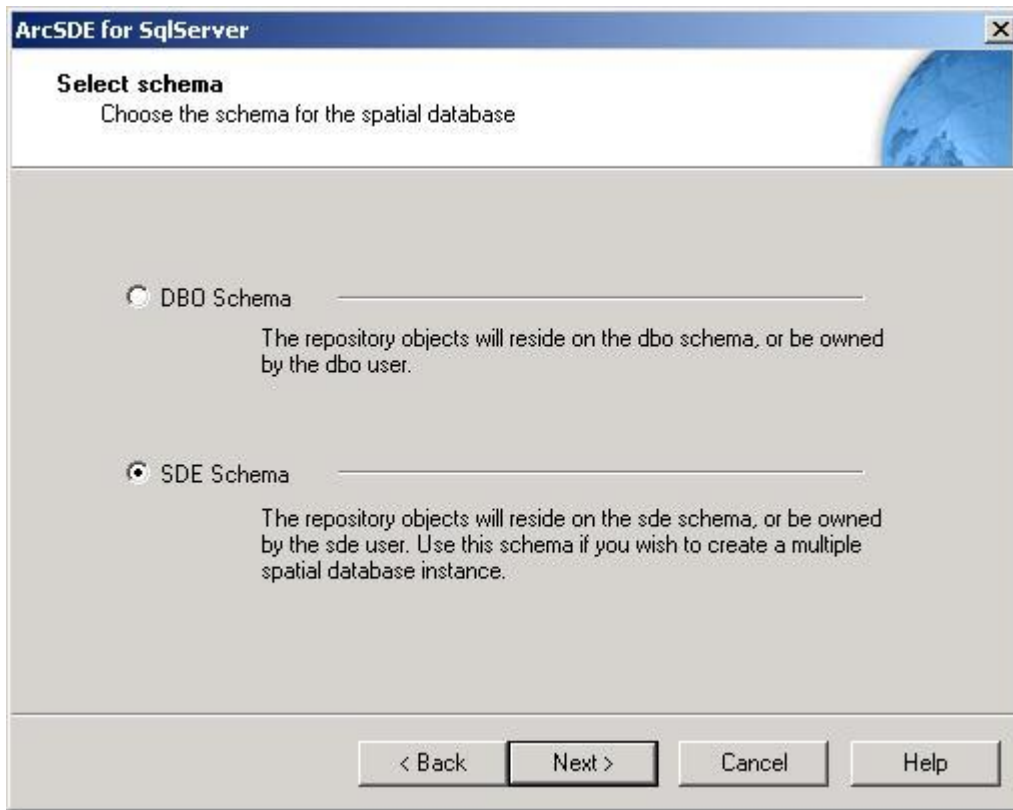
A Complete installation will guide you through all of the postinstallation options. Selecting a custom installation will allow you to choose from any of the available postinstallation options. (The following dialog box only appears if you choose a custom installation.)



The Custom installation is recommended for advanced users or users upgrading an existing ArcSDE geodatabase. See the [Upgrade information](#) topic for details.

If you do a custom postinstallation setup and choose to complete, for example, the first two steps, you can come back later to perform the other steps. To open the Post Installation wizard at a later time, go to Start > Programs > ArcGIS > ArcSDE > ArcSDE for Microsoft SQL Server Post Installation.

Each postinstallation option will require you to select your schema for the spatial database. The schema that you choose will determine your available repository setup and ArcSDE service creation options.



If you use a DBO schema, the geodatabase repository is owned by the DBO user. The ArcSDE service is then also owned by the DBO user. To use a DBO schema, the user performing the postinstallation setup must be a member of the sysadmin fixed server role in the database.

If you use an SDE schema, the geodatabase repository is owned by the sde user. The ArcSDE service is then also owned by the sde user.

Note: If you plan to use the single spatial database model for your geodatabase, you can use either the SDE or DBO schema. If you are going to use the multiple spatial database model, you must use an SDE-schema geodatabase.

Setting up the sde user environment

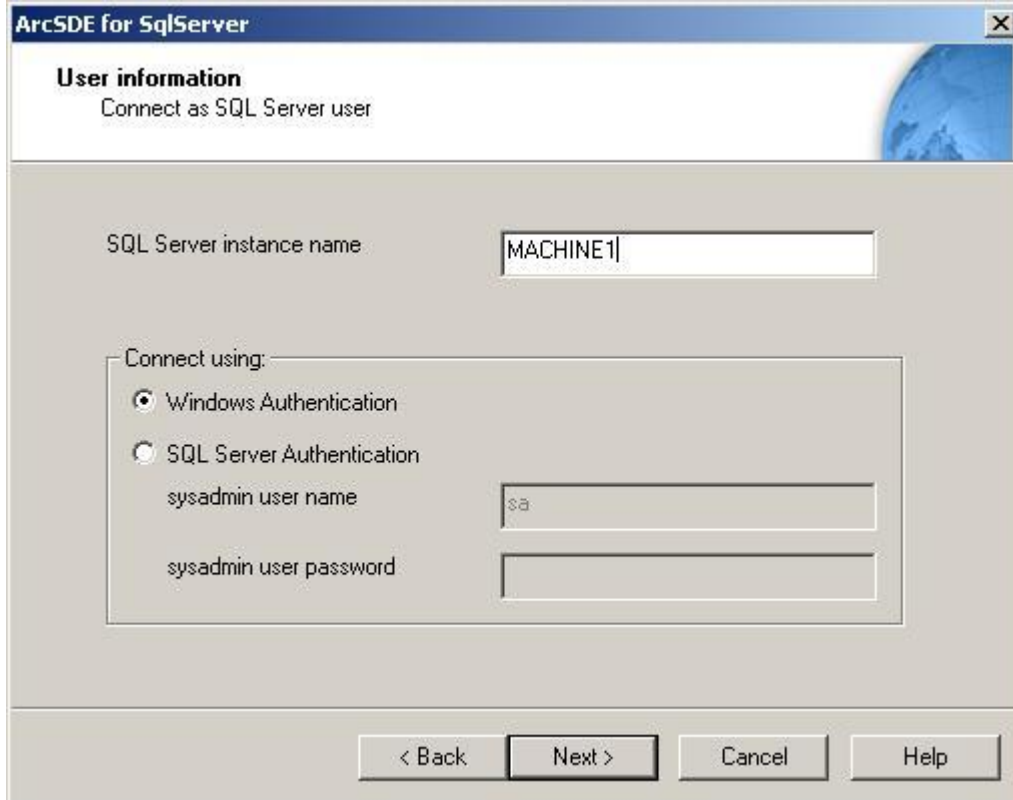
This portion of the Post Installation wizard will do the following:

- Create the sde user if you are using an sde schema and if the sde user does not already exist.
- Create the default spatial database and add the sde or DBO user to that spatial database.
- Grant the sde user the required CREATE permissions.

To set up the sde user and spatial database, the Post Installation wizard connects to Microsoft SQL Server with Windows Authentication or SQL Server Authentication.

At the User information dialog box, you must provide the following:

- The name of the SQL Server instance to which the Post Installation wizard will be connecting
- Whether you will connect to that instance with Windows Authentication or SQL Server Authentication; Windows Authentication uses your current Windows user name and password to connect to SQL Server. SQL Server Authentication connects as a sysadmin (for example, "sa" user), and requires you to provide the sysadmin user name and password.



ArcSDE for SqlServer

User information
Connect as SQL Server user

SQL Server instance name: MACHINE1

Connect using:

- Windows Authentication
- SQL Server Authentication

sysadmin user name: sa

sysadmin user password:

< Back Next > Cancel Help

Once connected to Microsoft SQL Server with either Windows Authentication or SQL Server Authentication, you will be required to provide information to create an ArcSDE spatial database. If using an SDE-schema geodatabase, an sde user password is the only information you are required to provide; for all other information, the default values have been provided. For a DBO schema, you will not provide an sde user password. The following information is used to create the spatial database:

- Sde user password—This is required for an SDE-schema geodatabase. You must provide a password for the sde user that will be created. For a DBO schema, you will not provide an sde user password.
- Database name—You may accept the default database name of sde or you may enter a different database name. (Unless you are using the multiple spatial database model for your geodatabase; in that case, your database must be named sde.)
- Data file size—You may accept the default data file size of 40 or you may enter a different data file size.
- Log file size—You may accept the default data file size of 30 or you may enter a different data file size.

You can also provide different locations to create the data file and log file or accept the defaults. By default, the SQL Server data directory is provided.

The screenshot shows a Windows-style dialog box titled "ArcSDE for SqlServer". The main heading is "Create Spatial database" with a sub-instruction: "Enter the required information to create a spatial database." The dialog contains several input fields: "SDE user password" (with a masked password), "Database name" (containing "sde"), "Data file size" (containing "40"), and "Logfile size" (containing "30"). Below these is a "Create in folder" section with two rows: "Data file" and "Log file", each with a text box containing "C:\Program Files\Microsoft SQL Server\MSSQL\data\" and a "Browse" button. At the bottom, there are four buttons: "< Back", "Next >", "Cancel", and "Help".

The ArcSDE spatial database and (if you are using an SDE-schema geodatabase) the sde user will be created and the required permissions will be granted to the sde user to manage the geodatabase repository.

Additional sde user information

The sde account created by the Post Installation wizard is a Microsoft SQL Server account. You may prefer to use a Windows account for the sde user. The sde user must have the following permissions in the geodatabase:

CREATE TABLE

CREATE VIEW

CREATE PROCEDURE

CREATE FUNCTION

If you will be using ArcSDE to serve spatial data from another database, the sde login must be added as a user to that database.

Add all logins that will access spatial data as users to the sde database. These users must be able to select against the geodatabase system tables.

Note: If you alter your geodatabase to use shared ArcSDE log file tables (rather than use the default type of session-based ArcSDE log files created in the SQL Server temporary database), you will need to grant CREATE TABLE permission in the database for the users you add. That is because these users must be able to write their log files into the geodatabase. The CREATE TABLE permission in the geodatabase can be revoked once users' log file tables are created. For details, see the topic "Log file configuration options" in the ArcGIS Server or ArcGIS Desktop help.

Related concepts found in the help

You can get more information related to the ArcSDE administrative user and permissions in the ArcGIS Desktop online help (<http://webhelp.esri.com/arcgisdesktop/9.2>) or the help system installed with ArcGIS Server or ArcGIS Desktop. Use the links below to open the online topics, or open the help and search for the following titles:

[The ArcSDE administrative account](#)

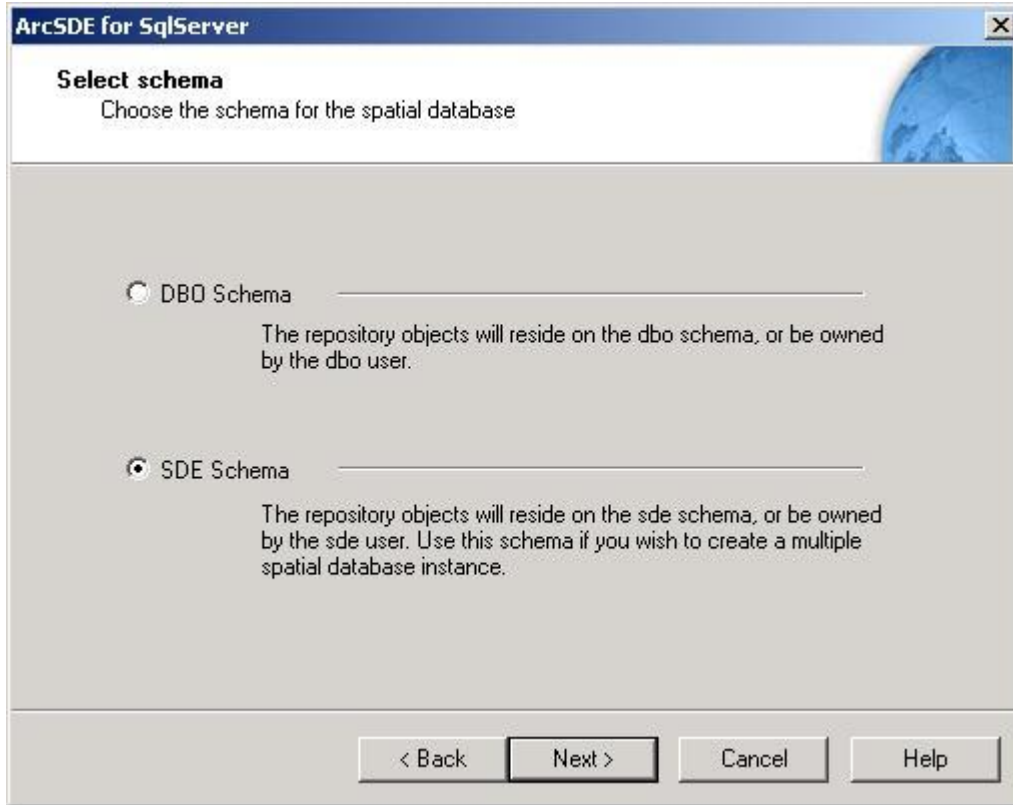
[User permissions](#)

Setting up the geodatabase repository

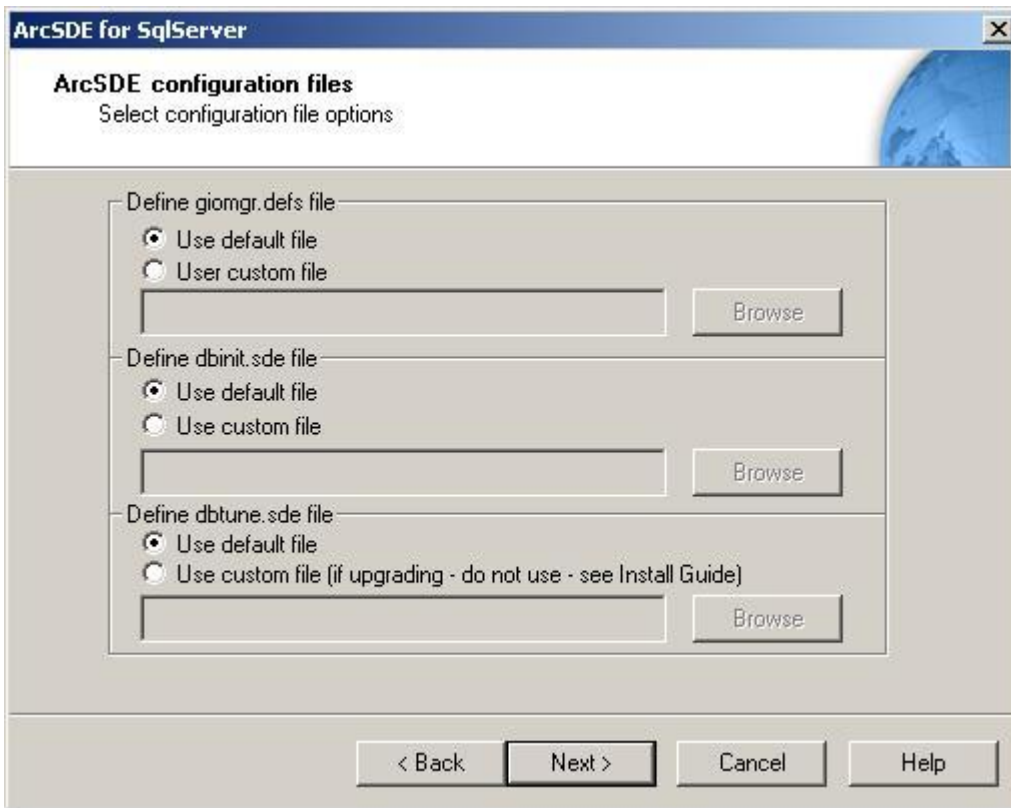
Once the ArcSDE spatial database and sde user are created, you can set up the geodatabase repository.

If you have not done so already, you will need to select the schema for the spatial database.

Note: If you use a DBO-schema geodatabase, you won't need an sde user.



Options are provided to specify custom `giomgr.defs`, `dbinit.sde`, and/or `dbtune.sde` files.



If you do not have custom files, accept the default configuration files.

If you are upgrading ArcSDE: The Post Installation wizard will not import a custom dbtune.sde file. In the Define dbtune.sde file section as shown in the above dialog box, do not choose to use a custom dbtune.sde file when upgrading ArcSDE. If you want to use a custom dbtune.sde file, you must manually import the custom file using the `sdedbtune -o import` command. For more information on the `sdedbtune` command, see the ArcSDE Administration Command References help available from Start > Programs > ArcGIS > ArcSDE > Command References, on the ArcSDE media at `\documentation_server\Admin_Cmd_Ref`, or in `%SDEHOME%\Documentation\Admin_Cmd_Ref`.

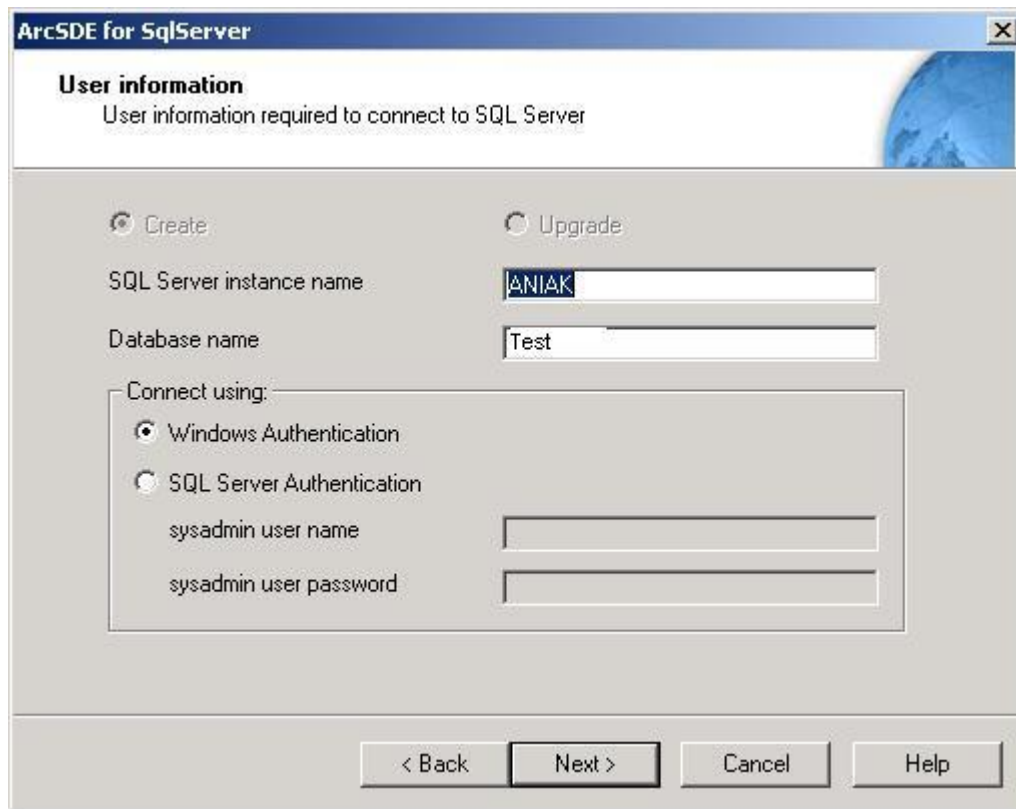
After the configuration files are defined, you can connect to Microsoft SQL Server to set up the ArcSDE repository. Setting up the ArcSDE repository is a crucial step in the postinstallation setup. If you do not select this postinstallation option, you must manually execute the `%SDEHOME%\bin\sdesetup.exe` command at the DOS prompt.

The repository contains all the ArcSDE and geodatabase system tables and information for administering the ArcSDE geodatabase. Refer to the `sdesetup` command reference in the ArcSDE Administration Commands Reference (`%SDEHOME%\Documentation\Admin_Cmd_Ref`) for specifics on what is occurring with this operation.

DBO schema

If DBO schema was selected as the schema for the spatial database, the options at the top of the User information dialog box—Create and Upgrade—remain inactive. That is because whether you are creating or upgrading the repository of a DBO-

schema geodatabase, you connect as the same user and the wizard runs the same command behind the scenes.



Provide the following information for the Post Installation wizard to connect to SQL Server and create the repository:

- The SQL Server instance name—Your machine name is provided by default.
- The database name for your ArcSDE spatial database—You would have used the Post Installation wizard to create this, or done this manually. If using the DBO schema, sde cannot be used for the database name.
- Specify whether you would like to connect using Windows Authentication or SQL Server Authentication. Windows Authentication uses your current Windows user name and password to connect to SQL Server. SQL Server Authentication connects as a sysadmin (for example, "sa" user), and requires you to provide the sysadmin user name and password.

SDE schema

If SDE schema was selected as the schema for the spatial database, you will be provided with the opportunity to create or upgrade the geodatabase repository.

The screenshot shows a dialog box titled "ArcSDE for SQL Server" with a close button (X) in the top right corner. The main heading is "User information" with the subtitle "User information required to connect to SQL Server". There are two radio buttons: "Create" (selected) and "Upgrade". Below these are two text input fields: "SQL Server instance name" containing "ANI\AK" and "Database name" containing "sde". A section titled "Connect using:" contains two radio buttons: "Windows Authentication" and "SQL Server Authentication" (selected). Under "SQL Server Authentication", there are two text input fields: "sde user name" containing "sde" and "sde user password" which is empty. At the bottom, there are four buttons: "< Back", "Next >", "Cancel", and "Help".

When you create the repository in an SDE-schema geodatabase, the create operation is performed by the sde user; therefore, the Post Installation wizard will prompt you for the sde user's password. To upgrade the repository, you must be a sysadmin user. If you choose upgrade, the Post Installation wizard will use your Windows login to connect.

Provide the following information for the Post Installation wizard to connect to SQL Server and create the repository:

- The SQL Server instance name—Your machine name is provided by default.
- The database name for your ArcSDE spatial database—You would have used the Post Installation wizard to create this or done this manually. The default database name for an ArcSDE spatial database is sde. **Note:** If you use the multiple spatial database model for your geodatabase, the database name must be sde.
- Specify whether you would like to connect using Windows Authentication or SQL Server Authentication. Windows Authentication uses your current Windows user name and password to connect to SQL Server. SQL Server Authentication connects as a sysadmin (for example, "sa" user) and requires you to provide the sysadmin user name and password.

To manually set up the geodatabase repository

If you do not use the Post Installation wizard to set up the repository, you must manually execute the sdesetup command at the DOS prompt.

Refer to the sdesetup command in the ArcSDE Administration Commands Reference (%SDEHOME%\Documentation\Admin_Cmd_Ref) for specifics on what is occurring with this operation.

Related concepts found in the help

You can get more information related to setting up the repository in the ArcGIS Desktop online help (<http://webhelp.esri.com/arcgisdesktop/9.2>) or the help system installed with ArcGIS Server or ArcGIS Desktop. Use the links below to open the online topics, or open the help and search for the following titles:

ArcSDE for SQL Server DBO-schema geodatabase

The dbtune file and the DBTUNE table

DBTUNE configuration keywords

DBTUNE configuration parameter name-configuration string pairs

About geometry storage types

ArcSDE Compressed Binary storage

The OGC Well-Known Binary representation for geometry

The giomgr.defs file and the SERVER_CONFIG table

The dbinit.sde file

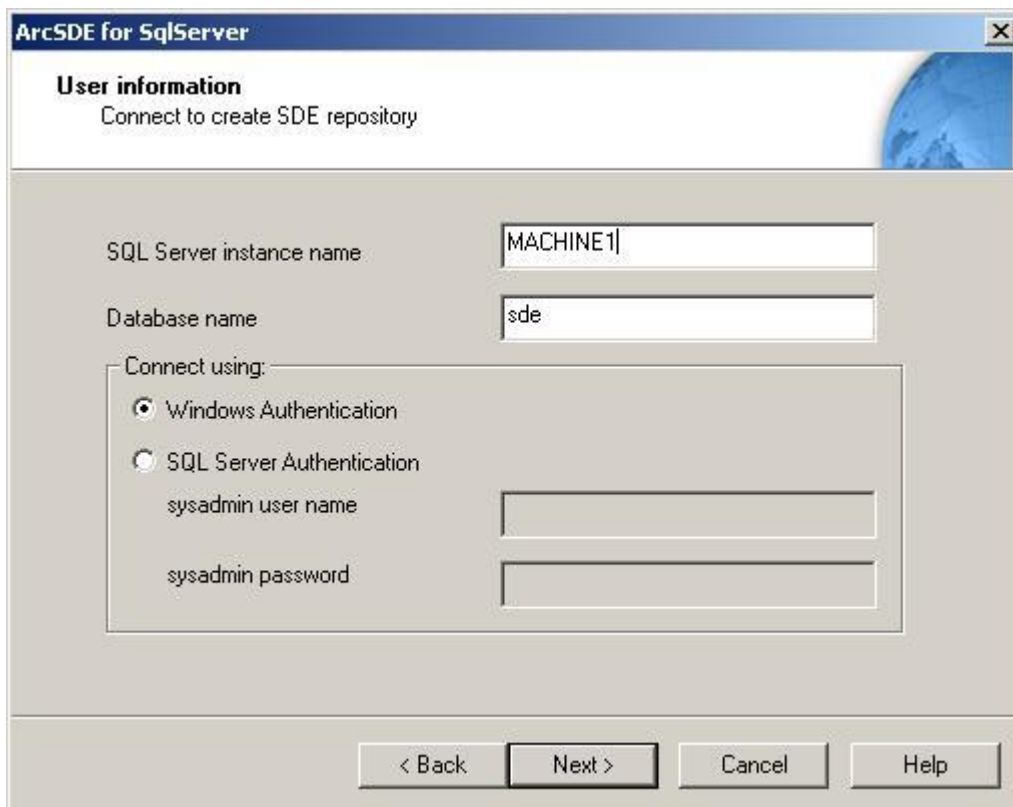
System tables of a geodatabase in SQL Server

ArcSDE authorization

Each ArcSDE server requires a unique authorization file. You can obtain an authorization file using the Post Installation wizard. If you have already obtained your authorization file, this postinstallation option will configure your geodatabase repository using your authorization file.

The ArcSDE service will not start unless your repository has been configured using the valid authorization file.

To reconfigure your machine with an updated authorization file, run through the Post Installation wizard again. To launch the Post Installation wizard at a later time, go to Start > Program Files > ArcGIS > ArcSDE > ArcSDE for SQL Server Post Installation. If the software authorization option is not selected with the repository set up option, you will also be required to provide the following information to connect to the spatial database:



- The SQL Server instance name—By default, your machine name is provided.
- The database name for your ArcSDE spatial database—You would have used the Post Installation wizard to create this, or done this manually.
- Specify whether you would like to connect using Windows Authentication or SQL Server Authentication. Windows Authentication uses your current

Windows user name and password to connect to SQL Server. SQL Server Authentication connects as a sysadmin (for example, "sa" user), and requires you to provide the sysadmin user name and password.

To successfully configure your machine using your authorization file:

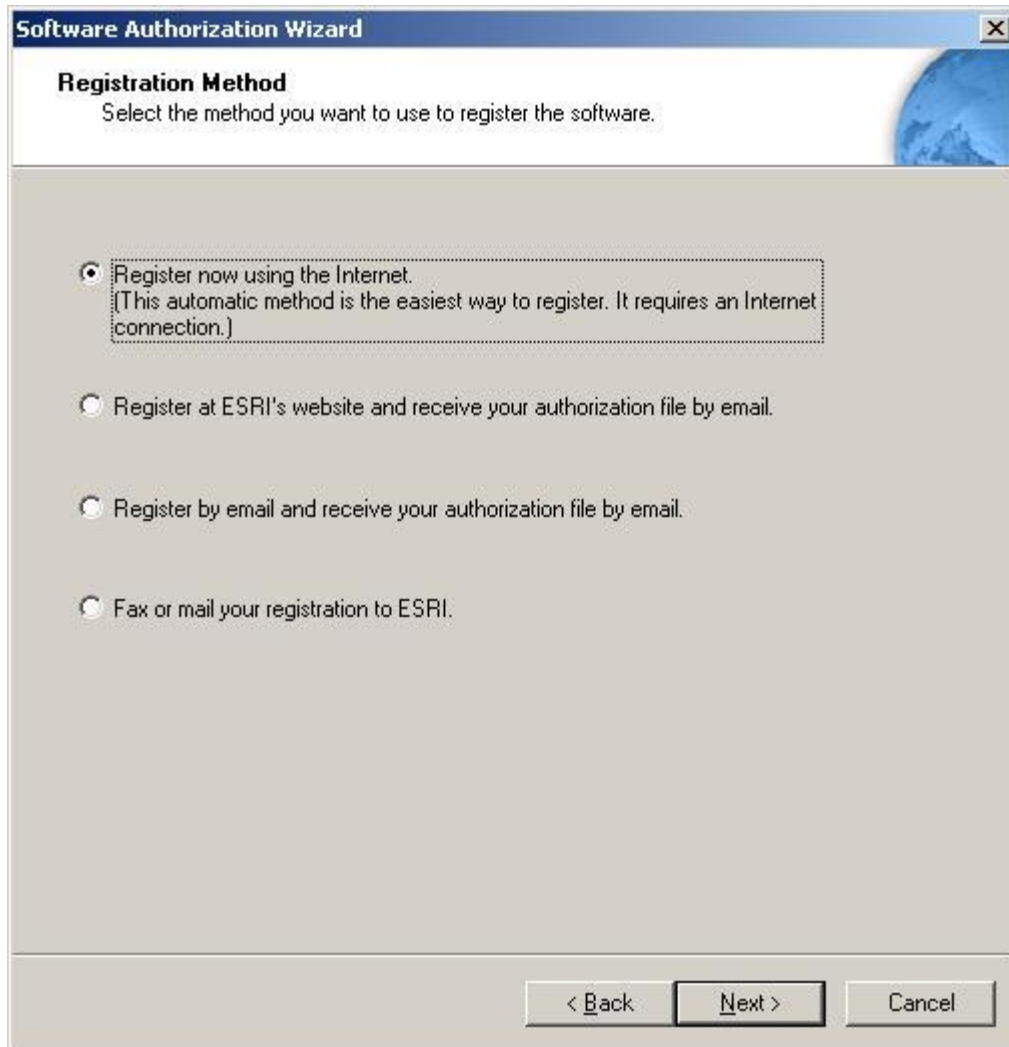
Choose your registration option



You can register and authorize your software using two methods:

- 1. I have installed my software and need to register it.**

Select this option if you do not have an authorization file already. There are several methods to provide your registration information.



Select the registration method you would like to use. This is the method in which you will provide your registration information. After providing your registration information, including the registration number you received when you purchased the software, your authorization file will be emailed (or mailed) to you.

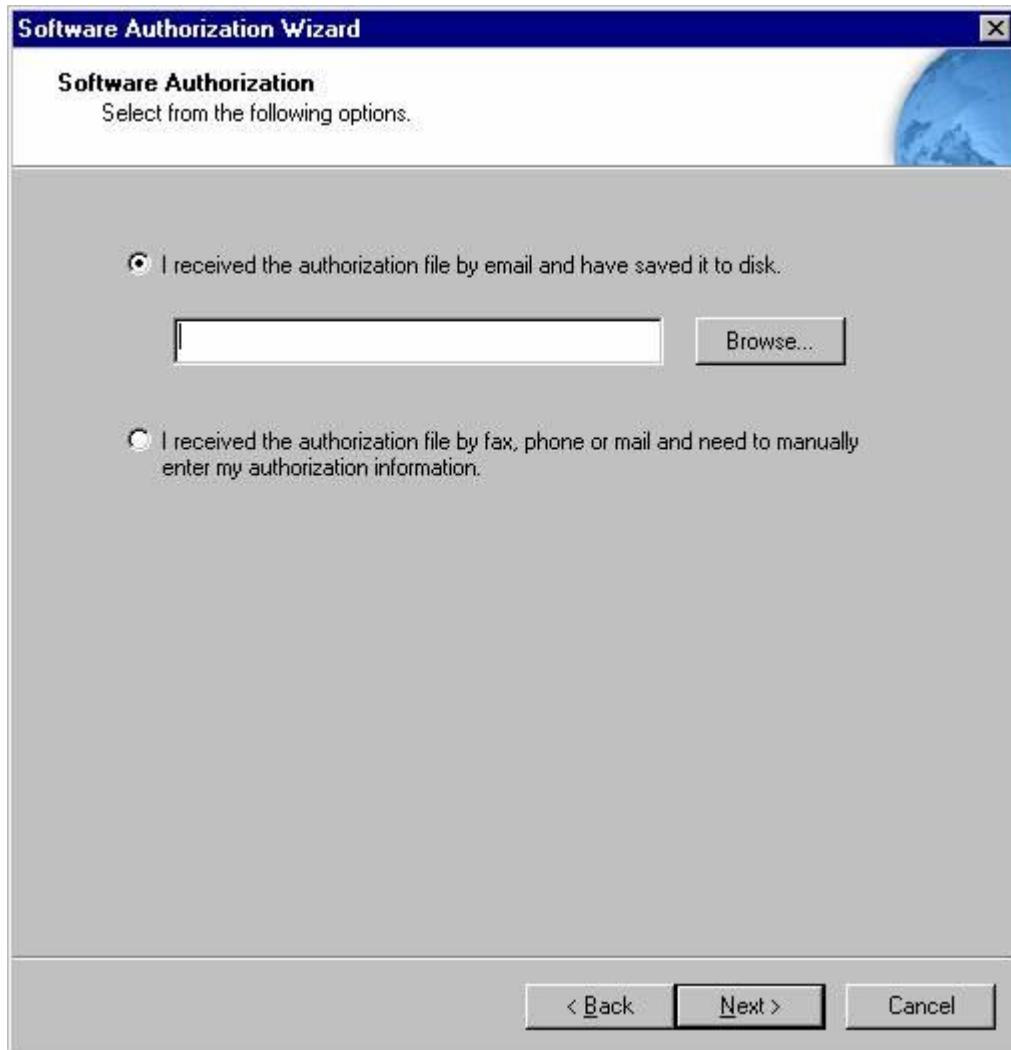
Tip

- Register now using the Internet immediately authorizes your software. It requires an Internet connection.

2. I have received an authorization file from ESRI and am now ready to finish the registration process.

Select this option if you have already received your authorization file from ESRI Customer Service. If you select this option, you can either browse to the

location of the file (if you received the file by email), or you can manually enter the authorization information. These two options are shown below.



If you choose the option to browse to an authorization file on disk, you are required to Choose or enter the location of your authorization file that you received from Customer Service.

If you choose the option to manually enter the authorization information, you are required to provide the following information: (This information can be obtained from the authorization file you received by mail, email, telephone, or fax.)

- Feature name
- Version number
- Time-out date
- Registration number
- Authorization code

To manually authorize ArcSDE

If you do not use the Post Installation wizard to authorize your software, you must manually authorize ArcSDE for use by running the `sdesetup` command.

You can manually register ArcSDE with an authorization file in two ways:

- If you already have your authorization file from ESRI, run the `sdesetup` command with the `install` or `upgrade` operation and specify the location of your authorization file using the `-l` option. See [To manually set up the geodatabase repository](#).
- If you don't have an authorization file from ESRI yet, you can run `sdesetup` with the `install` or `upgrade` operation (but don't use the `-l` option). Then, when you do get the authorization file from ESRI, you can rerun the `sdesetup` command using the `update_key` operation and the `-l` option.

The following is the syntax for using the `update_key` operation with the `sdesetup` command:

```
sdesetup -o update_key -d
<ORACLE9I|ORACLE10G|SQLSERVER|DB2|INFORMIX>
-l <key> [-u <DB_Admin_user>] [-p <DB_Admin_password>]
[-H <sde_directory>] [-D <database>] [-s datasource] [-i <service>]
[-N] [-q]
```

Where `<key>` is the location of your authorization file

For example:

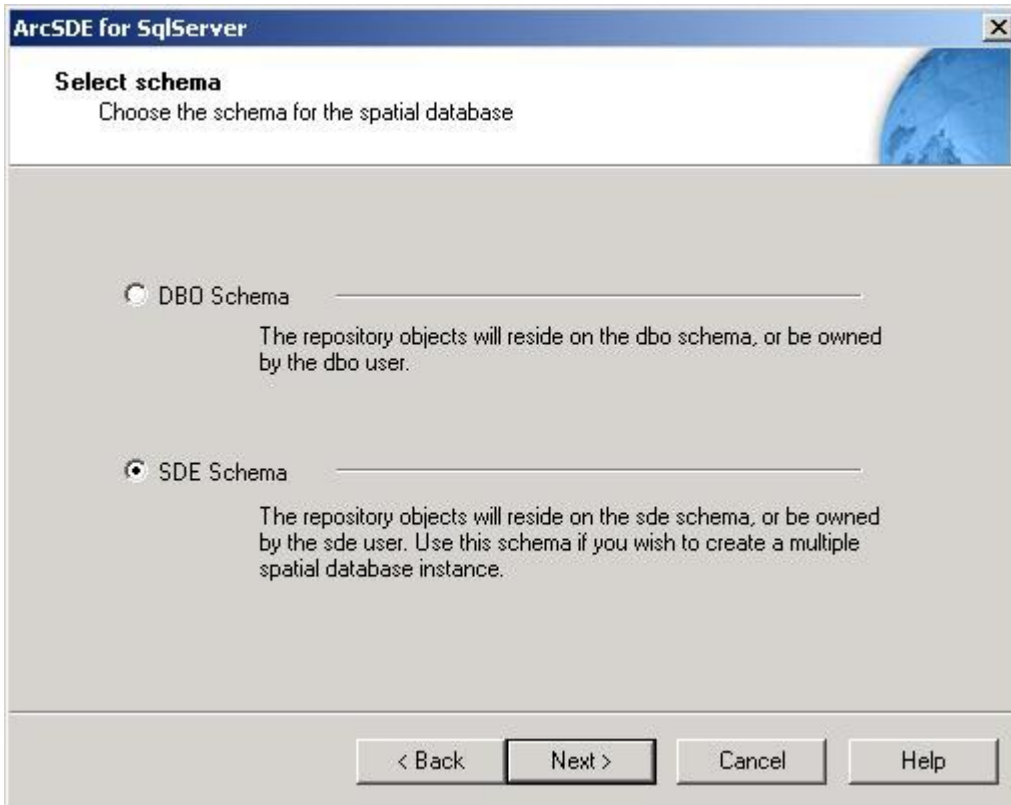
```
sdesetup -o update_key -d SQLSERVER -l c:\license\keycode.txt -u sde
-p sde
```

Refer to the `sdesetup` command in the ArcSDE Administration Command Reference (`%SDEHOME%\Documentation\Admin_Cmd_Ref`) for specifics on what is occurring with this operation.

Creating the ArcSDE service

This postinstallation setup option creates an ArcSDE service. If you have not done so already, you will need to select the schema for the spatial database.

Note: If you plan to use the single spatial database model for your geodatabase, you can use either an SDE- or DBO-schema geodatabase. However, if you use the multiple spatial database model, you must use an SDE schema geodatabase.



DBO schema

If DBO schema was selected as the schema for the spatial database, you must provide the following information to create and start an ArcSDE service. **Note:** The Post Installation wizard may provide some of this information for you. Verify this information is correct.

- Service name—This is the name of your ArcSDE service. It must be a unique name. The default is `esri_sde`.
- Service port number—You must enter a unique TCP/IP port number. The default is `5151/tcp`.
- ArcSDE database administrator (DBA) login—Your DBA user name, which has `sysadmin` privileges in the database; if you are using Windows authentication, you need to provide the domain or machine name as part of the login, separated from the user name with a backslash. (for example, `wired\jackson`)

Installation Guide: ArcSDE for SQL Server

- ArcSDE DBA password—Your DBA password
- Database name—The name of your ArcSDE spatial database. You created this using the Post Installation wizard or manually.
- SQL Server instance name—Provide the name of your SQL Server instance. Your machine name is provided by default. If you are unsure of your instance name, contact your database administrator.
- Server name—Provide the name of your server. Your machine name is provided by default. If you are unsure of your server name, contact your database administrator.

ArcSDE for SqlServer

ArcSDE service information
Creates the ArcSDE service

If the repository setup failed in any way, this may not be successful as a result.

Service name: esri_sde

Service port number: 5151/tcp

ArcSDE DBA Login:

ArcSDE DBA Password:

Database name:

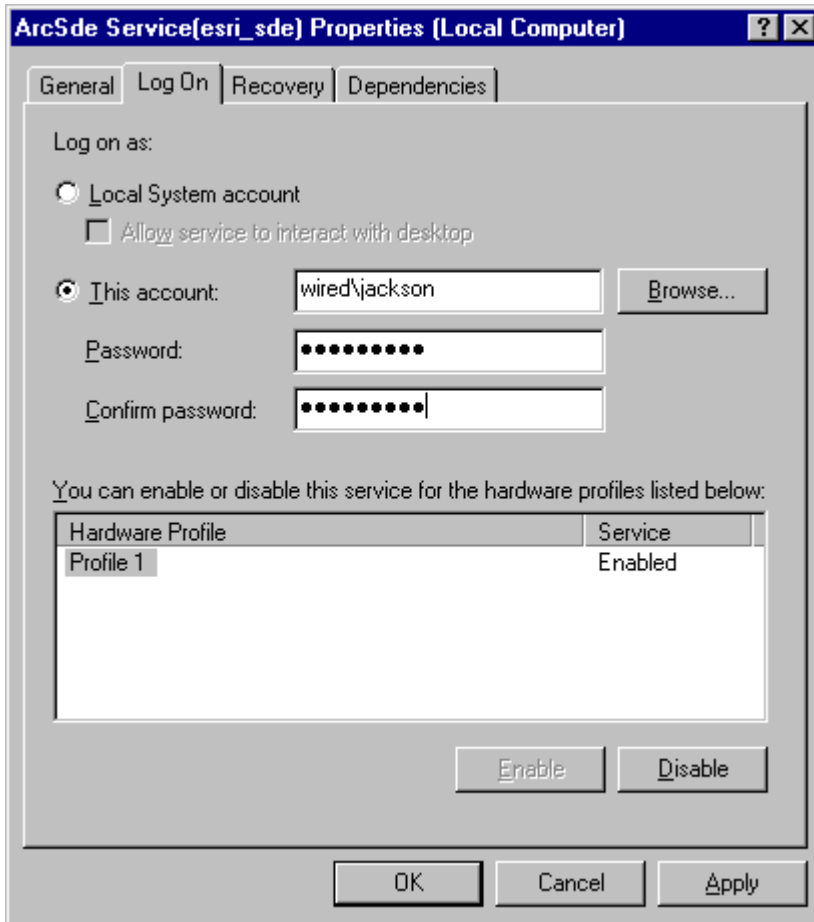
SQL Server instance name: ANIAK

Server name: ANIAK

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By default, when using a DBO-schema geodatabase, the ArcSDE service runs under the local system account. If the ArcSDE database administrator login you provided above is a Windows-authenticated login, you must alter the service to run using your Windows-authenticated account. To do this:

1. Open the Windows Services dialog box from the Windows Control Panel.
2. Right-click your ArcSDE service in the Services list (ArcSde Service<service_name>) and click Properties.
3. Click the Log On tab and click This account. You can browse to the account by clicking the Browse button or type the account name. Next, type the password for this account in the Password field and retype the same password in the Confirm password field.



4. Click OK to close the service Properties dialog box then close the Services dialog box.

When you add your user account to the service, it is automatically granted Log On As A Service permission. If the Windows-authenticated user is not in the Windows Administrator Group on the server, you must also grant the user Replace a process level token permission to run the ArcSDE service. (If the login is in the Windows Administrator group, it will already have this permission.) To grant this to a nonadministrator login:

1. Open Local Security Settings from the Administration Tools.
2. Navigate to Local Policies > User Rights Assignment.
3. In the policy list, double-click Replace a process level token.

This opens the Local Security Setting dialog box. Click Add User or Group and add the dbo user.

4. Click OK on the Select Users or Groups dialog box, then click OK on the Local Security Setting dialog box.

SDE schema

Installation Guide: ArcSDE for SQL Server

If SDE schema was selected as the schema for the spatial database, you must provide the following information to create and start an ArcSDE service. **Note:** The Post Installation wizard may provide some of this information for you. Verify this information is correct.

- Service name—This is the name of your ArcSDE service. It must be a unique name. The default is esri_sde
- Service port number—You must enter a unique TCP/IP port number. The default is 5151/tcp.
- ArcSDE login—Your sde user name; this is already provided for you and cannot be changed.
- ArcSDE password—The password of your sde user; you created this using the Post Installation wizard or manually.
- Database name—The name of your ArcSDE spatial database; you created this using the Post Installation wizard or manually. The default spatial database name is sde. **Note:** If you are using the multiple spatial database model for your geodatabase, the database must be named sde.
- SQL Server instance name—Provide the name of your SQL Server instance. Your machine name is provided by default. If you are unsure of your instance name, contact your database administrator.
- Server name—Provide the name of your server. Your machine name is provided by default. If you are unsure of your server name, contact your database administrator.

ArcSDE for SqlServer

ArcSDE service information
Creates the ArcSDE service

If the repository setup failed in any way, this may not be successful as a result.

Service name	esri_sde
Service port number	5151/tcp
ArcSDE Login	sde
ArcSDE Password	
Database name	
SQL Server instance name	ANIAK
Server name	ANIAK

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This dialog box will add an entry to the services file of your server machine (usually, this is c:\WINNT\system32\drivers\etc\services). If you need to modify your service later, you can run through the postinstallation setup again, or use the sdeservice command at the DOS prompt. Information on the sdeservice command can be found in the ArcSDE Administration Commands Reference (%SDEHOME%\Documentation\Admin_Cmd_Ref).

Note: By default, the ArcSDE Post Installation wizard creates a SQL Server authenticated sde user. If you want to use a Windows authenticated sde user, see the topic "Using Windows-authenticated users or groups on ArcSDE Enterprise for SQL Server" in the ArcGIS Server help for instructions.

To manually create the ArcSDE service

You can use the sdeservice command at the DOS prompt to manually create or modify the ArcSDE service. Information on the sdeservice command can be found in the ArcSDE Administration Command Reference (%SDEHOME%\Documentation\Admin_Cmd_Ref).

Related concepts found in the help

You can get more information related to the ArcSDE service in the ArcGIS Desktop online help (<http://webhelp.esri.com/arcgisdesktop/9.2>) or the help system installed with ArcGIS Server or ArcGIS Desktop. Use the links below to open the online topics, or open the help and search for the following titles:

[An overview of ArcSDE geodatabase connections](#)

[Starting an ArcSDE service](#)

[Stopping an ArcSDE service](#)

[Pausing and resuming an ArcSDE service](#)

[Accessing an ArcSDE service through a firewall](#)

[Troubleshooting the ArcSDE service](#)

Multiple installs on the same machine

It is possible to install more than one ArcSDE service for different DBMSs on the same machine. Some ESRI products share the same administrator commands (for example, sdeservice or sdemon). To successfully run more than one ArcSDE service on the same machine, you must do the following:

1. Before running the Post Installation wizard, make sure the ArcSDE service that you want to administer is the ESRI product listed first in your System PATH.
2. Make sure that SDEHOME in your PATH is set to your current ArcSDE installation location.

Steps 1 and 2 above apply whenever administrator commands for ESRI products are run. If you do not change your System PATH, the administrator commands for the wrong product may be run.

3. Run the ArcSDE postinstallation setup for the chosen DBMS.
4. You can now manage the multiple ArcSDE services/installations by switching back and forth between ArcSDE environments through the System Control Panel or by using the ArcSDE administrative commands with the -H option set to the appropriate SDEHOME location.

The next steps

After you finish the postinstallation setup, you're ready to add other users, set up client connections, and add data to your geodatabase. The following is a list of help topics to assist you in these tasks. Topics can be found in the ArcGIS Desktop online help (<http://webhelp.esri.com/arcgisdesktop/9.2>) or the help system installed with ArcGIS Server or ArcGIS Desktop. Use the links below to open the online topics, or open the help and search for the titles.

TASK	RELATED TOPICS
Geodatabase users	Adding users to an ArcSDE geodatabase User permissions Grouping users by access needs Using Windows-authenticated users or groups on ArcSDE Enterprise for SQL Server
Client connections	An overview of ArcSDE geodatabase connections Setting up clients for a direct connection Creating spatial database connections
Adding data	An overview of adding datasets to the geodatabase

Upgrade information

IMPORTANT information for users upgrading:

- **Direct upgrades are only supported from ArcSDE 8.3, ArcSDE 9.0, and ArcSDE 9.1. Upgrading directly from ArcSDE 8.2.x, 8.0.x, or 3.x is not supported.** Moving from any of these unsupported released versions of ArcSDE to the current ArcSDE release will require the server to first be upgraded to ArcSDE 8.3, 9.0, or 9.1 and then upgraded to ArcSDE 9.2. It is also possible to export all your data using the `sdeexport` command and then import it into an ArcSDE 9.2 geodatabase.
- Other upgrade processes are supported. See below for more information.
- **Upgrades from Beta or Prerelease are NOT supported.**

It is recommended that you create a backup of your existing geodatabase before upgrading. Contact your database administrator for correct protocol.

General upgrade information

See Microsoft SQL Server's documentation for information on how to migrate your existing SQL Server install and database to a new release of SQL Server database.

For details on exact SQL Server versions and patch levels supported by each ArcSDE for SQL Server installation, see the ArcSDE System Requirements online at <http://support.esri.com>, and navigate to Software > ArcSDE > System Requirements. See the DBMS notes section under each System Requirements entry for any additional setup information.

Before installing the latest version of ArcSDE, you must uninstall your previous version of ArcSDE. The setup will prompt you to remove your existing installation if you do not uninstall before starting the latest ArcSDE setup.

When upgrading from a supported release of ArcSDE, there are two possible upgrade paths:

- [Upgrading without keeping the existing service for transition purposes](#)
- [Upgrading while keeping the existing service for transition purposes](#)

Upgrading without keeping the existing service

As a precaution, it is strongly recommended that you create a backup of your database including all previous ArcSDE system tables and layer data before upgrading your ArcSDE installation.

Upgrading without keeping the older service includes steps that are similar to a new installation and have the same prerequisites.

1. Follow the instructions in the topic, [Installing the ArcSDE software](#) to install the software. If you have not done so already, you will need to uninstall any earlier versions of ArcSDE. The ArcSDE setup program will prompt you to uninstall earlier versions of ArcSDE and to delete any ArcSDE services associated with the earlier version.
2. Complete the postinstallation setup by following the steps in the topic, [ArcSDE postinstallation overview](#).

Note that if your existing geodatabase is an SDE schema geodatabase, choosing DBO schema during the upgrade will not change it to a DBO schema geodatabase. The Post Installation wizard will detect which type of schema you have and upgrade it accordingly.

If you do not use the Post Installation wizard to perform these steps, you must manually complete them using:

- The `sdesetup` command with the upgrade operation to upgrade the geodatabase repository in the database
- The `sdeservice` command to create the ArcSDE service
- The `sdemon` or Windows services to start the ArcSDE service

Upgrading while keeping the existing service

Upgrading ArcSDE while keeping the existing service for transition purposes is a more involved upgrade scenario. Follow these steps to maintain both a previous version of the ArcSDE service and this new version of the ArcSDE service on the same machine:

1. Before installing the new version of ArcSDE, shut down the previous version of the ArcSDE service by executing the `sdemon -o shutdown` command. See the command syntax in the ArcSDE Administration Command Reference for more information on the `sdemon` command. Go to Start > Programs > ArcGIS > ArcSDE > Command References.
2. Remove SDEHOME from the Windows environment variables. This will be necessary because multiple SDEHOME variables cannot be set.
3. Backup the spatial databases in the original SQL Server instance and confirm that these backups are correct.
4. Restore the backups of the original spatial databases to another SQL Server instance on the same machine. If necessary, install another SQL Server instance on the machine.
5. Install the new version of ArcSDE on another machine. This is necessary because the installation of ArcSDE will remove your previous installation of ArcSDE.
6. Copy over the new ArcSDE directory from the second machine to a unique directory on the original server.
7. Open a DOS prompt and change directories to the `%SDEHOME%\bin` folder of the new ArcSDE installation. From this directory, run the `sdesetup -o upgrade` and `sdeservice -o create` commands at the command prompt. See the command syntax in the ArcSDE Administration Command Reference for more information on these commands. (Go to Start > Programs > ArcGIS > ArcSDE > Command References.) The new version of the ArcSDE service and the previous version of the ArcSDE service cannot use the same SQL Server instance. Create a new SQL Server instance giving it a unique instance name. This is the instance you will use for the new version of the ArcSDE service.

Note that in this scenario, each service has its own SDEHOME. If you put `%SDEHOME%\bin` in your path, remember that the system- or user-level environment variable can contain only one path for SDEHOME. Also note that each service has its own SQL Server instance; the previous version of the ArcSDE service points to the old SQL Server instance and the new ArcSDE service points to the new SQL Server instance.

8. Start one or both ArcSDE services. **Note:** You must have the appropriate licensing to perform this. You can run both instances to test your data under the new ArcSDE configuration. You can move data from the previous versions of the ArcSDE instance by copying and pasting with ArcCatalog, or

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exporting/importing with the administration commands `sdeexport/sdeimport`, `sde2shp/shp2sde`, etc.

Uninstalling ArcSDE

To uninstall ArcSDE:

1. Before uninstalling ArcSDE, make a copy of any custom files (such as the dbtune.sde file) you want to keep for future use.
2. From the Start button, click Settings, then Control Panel. Double-click the Add/Remove Programs icon.
3. Select ArcGIS ArcSDE for SQL Server from the program list, and click the Remove button.