Safety Designer

Installation Guide

V5R20 - BPA SD9 Delivery 8

Contents

Copyright Notice.....3
Installation Roadmap.....4
Key Concepts.....5
System requirements.....5
Supported operating systems.....5
Software requirements.....5
Hardware requirements.....5
Database used by Safety Designer.....5
Installation on an Oracle database.....6
Installation on an Access database.....6
Installation.....8
Installation Overview.....8
Licensing.....8
Licensing.....9
Requesting a license.....9
Starting LUM services.....10
Stopping LUM services.....11
Configuring for a nodelock license.....12
Configuring for a concurrent license.....12
Installing Safety Designer.....19
Launching Safety Designer.....31
Uninstalling Safety Designer.....34
Modifying Safety Designer.....37
Appendix.....42
Data migration kit for database version 4.3.....42
Creating an ODBC datasource.....42

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Installation Roadmap

This guide describes the installation procedure for Safety Designer.

The *Key Concepts* on page 5 section of this manual describes the fundamental terminology that is used throughout the manual.

Safety Designer is protected by the LUM software (License Use Management) owned by IBM.To know more about licensing, see *Licensing* on page 8.

The following table outlines the tasks required to install and configure Safety Designer:

Chapter	Task	Contents
Installation on page 8	*Installation Overview* on page 8	This section describes all of the steps necessary to complete an installation.
	Licensing on page 8	This section describes how to request a license and configure nodelock or concurrent licenses for Safety Designer.
	Installing Safety Designer on page 19	This section describes how to install the application.
	Launching Safety Designer on page 31	This section desribes how to launch the application.
	Uninstalling Safety Designer on page 34	This section describes how to uninstall the application.
	Modifying Safety Designer on page 37	This section describes how to modify the installation.
Appendix on page 42	*Data migration kit for database version 4.3* on page 42	This section describes how to migrate data from previous format to the current.
	Creating an ODBC datasource on page 42	This section describes how to create an ODBC datasource.

Key Concepts

This section describes key concepts used for the successful installation of the application.

System requirements on page 5

Database used by Safety Designer on page 5

System requirements

Supported operating systems

BPA-SD9 Safety Designer V5R20SP6 runs on the following operating systems:

- Microsoft Windows XP Professional SP3 or higher (32 bits),
- Microsoft Windows 7 (32 bits).

Software requirements

- Safety Designer is protected by LUM (License Use Management) owned by IBM. LUM version 4.6.8 is required.
- JDK 1.6 has to be installed.
- In case of use of an Oracle database instance, you need to install the Oracle JDBC Drivers package on client workstation with Oracle Universal Installer.

Hardware requirements

Minimal configuration:

- Pentium IV 1.4 Ghz (or equivalent),
- Hard disk: 50 Mo available,
- RAM: 1 GB,
- Screen resolution: 1024 x 768 pixels, 65536 colors.

Recommended configuration:

- Pentium IV 3 Ghz (or equivalent),
- Hard disk: 2 GB available,
- RAM: 2 GB,
- Screen resolution: 1280 x 1024 pixels, 65536 colors.

Database used by Safety Designer

The installation of Safety Designer requires an access to a database.

Safety Designer manages in the current version :

- a native access to Oracle database.
- a native access to Access database.

• an access via an ODBC source (currently, Dassault only offers an ODBC support through Access database).

Creation or update process of these databases, and process of connection to these databases are specific to the database installed.

The connection is done during the launching of Safety Designer. For more details, see *Launching Safety Designer* on page 31.

Installation on an Oracle database

The installation of Safety Designer requires the availability for the user of an open base authority on which one can connect and install the database. You should refer to the Oracle documentation for more information on the creation of an Oracle database instance.

Instance name must begin with a letter and must contain only alphanumeric and underscore characters ([A-Za-z][A-Za-z0-9_]*). The number of characters must not be greater than 20.

The database instance may come from:

• a previous version of Safety Designer

The database schema has been fully modified from the 4.3 (delivery 6) version of Safety Designer.

In order to retrieve data from an old version, you can:

• Use Safety Designer XML import/export functionnalities:

From a previous version of Safety Designer export elements of previous database with export function. Then import the exported data in the new database from the new version of Safety Designer.

• Or use the data migration kit between the 4.2 and 4.3 versions. For more information, please, see *Data migration kit for database version 4.3* on page 42.

• or from a new instance creation

The database installation must be done before the Safety Designer installation by a database administrator.

SQL scripts allowing database creation are available in database directory (CD-ROM or Zip).

Note: Oracle user account used during the installation must own the CREATE PROCEDURE rights.

Installation on an Access database

In case of Access installation, database update is not provided. The only way to recover data from a previous version is to export elements of previous database with export function. Then you have to import data in the new database.

Connection using an Access file

In case of a connection via an Access file, there is nothing to configure before the installation and the launching of the application.

Connection using an ODBC source

ODBC Data Source Administrator is a system component providing a simple access to a database. Its principle is to associate a name of data source with a data "container". In Safety Designer environment, "container" is an Access database.

In order to create an ODBC link for a new Access database, you have to:

- Copy `Base.mdb` file in a user directory (a backuped directory if possible). The file is in `database/MSAccess` directory of the installation medium.
- Create an ODBC data source, type must be Microsoft Access Driver (*.mdb) and name can be SD9; (for example), it must be linked to the previous file. For more information, see *Creating an ODBC datasource* on page 42.

Installation

This section describes all the steps and procedures required to install the BPA SD9 Safety Designer product.

Installation Overview on page 8

Licensing on page 8

Installing Safety Designer on page 19

Launching Safety Designer on page 31

Uninstalling Safety Designer on page 34

Modifying Safety Designer on page 37

Installation Overview

This section describes all of the steps required to successfully install Safety Designer.

1. Install LUM version 4.6.8 on your client workstations if you are using nodelock licenses and on the server if you are using concurrent licenses.

   For more information, please refer to the IBM documentation on this product.

   We assume that you have LUM 4.6.8 installed on your client workstations and/or server.
2. Request licenses. For details on license request, see *Requesting a license* on page 9.
   When you receive licenses (`.lic` files), you can continue the installation.
3. Configure your license.
   - If you have requested a nodelock license, see *Configuring for a nodelock license* on page 12.
   - If you have requested a concurrent license, see *Configuring for a concurrent license* on page 12.
4. Install the application. For details on the installation, see *Installing Safety Designer* on page 19.
5. Launch the application. For details, see *Launching Safety Designer* on page 31.
6. To uninstall the application, see *Uninstalling Safety Designer* on page 34.
7. To modify the installation, see *Modifying Safety Designer* on page 37.

Licensing

This section shows you how to request a license and to configure your nodelock or concurrent licenses using LUM (License User Management).

Licensing on page 9

Requesting a license on page 9

Starting LUM services on page 10

Stopping LUM services on page 11

Configuring for a nodelock license on page 12

Configuring for a concurrent license on page 12

Licensing

The licenses for Safety Designer are managed by the LUM software (License Use Management) owned by IBM. In order to use the application you should have LUM version 4.6.8.

For more information, please refer to the IBM documentation on this product.

Safety Designer can be used with two types of license:

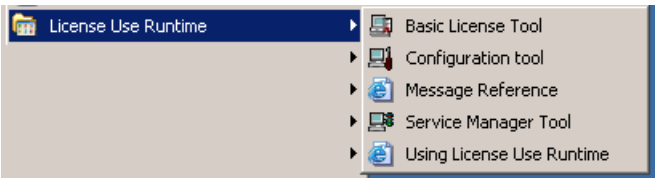
- nodelock: the license is attached to a workstation.
- concurrent: the license is attached to a LUM license server and can be used by several client workstations in concurrent access mode. On a given server, there can be several licenses (or tokens) for the same product.

The license installation is carried out differently depending on its type.

- For more details on how to request a license, see *Requesting a license* on page 9.
- If you have a nodelock license, see *Configuring for a nodelock license* on page 12.
- If you have requested concurrent licenses, first you need to configure your network license server (for more details, see *Setting up a network license server* on page 13), then you need to configure client workstations (for more details, see *Setting up network license clients* on page 16).

LUM tools

The LUM (version 4.6.8) installation provides three different tools to configure the software. These tools are available through windows command shortcuts:



- Basic License Tool: to enroll licenses.
- Configuration Tool: to configure LUM Server or LUM Client.
- Service Manager Tool: to start or stop LUM services.

You will use these tools to configure licenses.

Requesting a license

This task shows you how to request a license for your BPA products.

LUM (License Use Management) version 4.6.8 should be installed on your workstation and/or the server.

- Stop LUM services before any modification of the LUM configuration.

1. Go to **Start** > **run** and type `cmd.exe` to open the command window.

2. Run the following command: `i4target` to know the targetID of your workstation.
   The following window appears:

3. Note the targetID and click **OK** to close the window.
4. Provide the following information to your provider/retailer:
   - Product name;
   - License type: nodelock or concurrent;
   - Number of licenses: 1 for nodelock, > 0 for concurrent;
   - LUM targetID.

   Note:

   - If you request a nodelock license, provide the LUM targetID of your client workstation.
   - If you request concurrent licenses, prodvide the LUM targetID of the server.

   Your provider/retailer will be able to generate a license file (.lic) for your product.

Starting LUM services

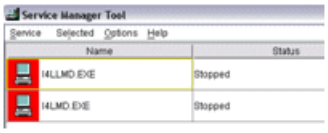
This task shows you how to start LUM services.

LUM (License Use Management) version 4.6.8 should be installed on your workstation.

1. Go to **Start** > **License Use Runtime** and select **Service Manager Tool**.

   Important: For Windows 7 use **Run as administrator** to execute the application.

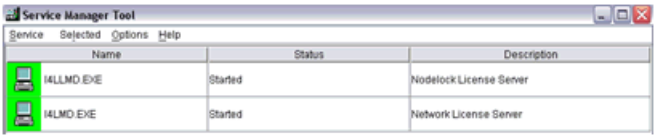
   The following window appears:



2. Select the service to start and then select **Start** from the menu **Service**.
   You can also execute the following command in the **Command** window: `i4cfg -start`.

   Important: For Windows 7 use **Run as administrator** to open the **Command** window.

The service is started:



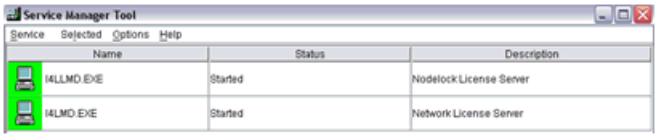
Stopping LUM services

This task shows you how to stop LUM services.

LUM (License Use Management) version 4.6.8 should be installed on your workstation.

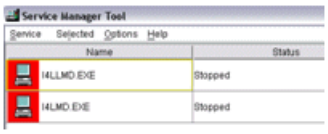
1. Got to **Start** > **All Programs** > **License Use Runtime** and select **Service Manager**.

   Important: For Windows 7 use **Run as administrator** to execute the application.



2. Select all services.
3. Select the commant **Stop** from the menu **Service**.

All LUM services are stopped:



Note: You can also execute the following command in the **Command** window: `i4cfg -stop`. For Windows 7 use **Run as administrator** to open the **Command** window.

Configuring for a nodelock license

This task shows you how to configure your BPA software using a nodelock license.

- LUM version 4.6.8 should be installed on your workstation.
- You should have a license file for the product.

1. Create or edit the nodelock file.

   Note: In nodelock mode BPAs use a `nodelock` file. You have to create or update this file with the license information.

   Important: For

Windows XP and Windows Professional 2000	the nodelock file is located in `C:\Documents and Settings\All Users\Application Data\IBM\LUM\`
Windows 7	the nodelock file is located in `C:\ProgramData\IBM\LUM\`

   Note: These folders may be hidden.

   The format of the nodelock file is as follows:

   # comment

   vendorID productPassword productAnnotation productVersion

2. In the first line type full product name, version, and expiration date.

   Note: The first line is a comment. Because there may be other nodelocked tools on the same computer, it is recommended to give here the full product name, version, and expiration date.

3. In the second line enter your license information extracted from `.lic` file.

   The following information should be provided:

   - vendorID: looks like UUID;
   - productPassword: long alphanumeric password for the nodelock license;
   - productAnnotation: this optional field should be set to null ("");
   - productVersion: should be set to "1".

The `nodelock` file should look like this:

nodelock example for the licensed product expires 10/14/2009

c6c8ef44bcb7.4a.74.95.13.1f.00.00.00 zw53h8e5nkavu489usidbkq95aaa "" "1"

Configuring for a concurrent license

This section describes how to configure network license server and network license clients.

Setting up a network license server on page 13

Setting up network license clients on page 16

Setting up a network license server

This task shows you how to configure your network license server and how to enroll concurrent licenses for BPA products.

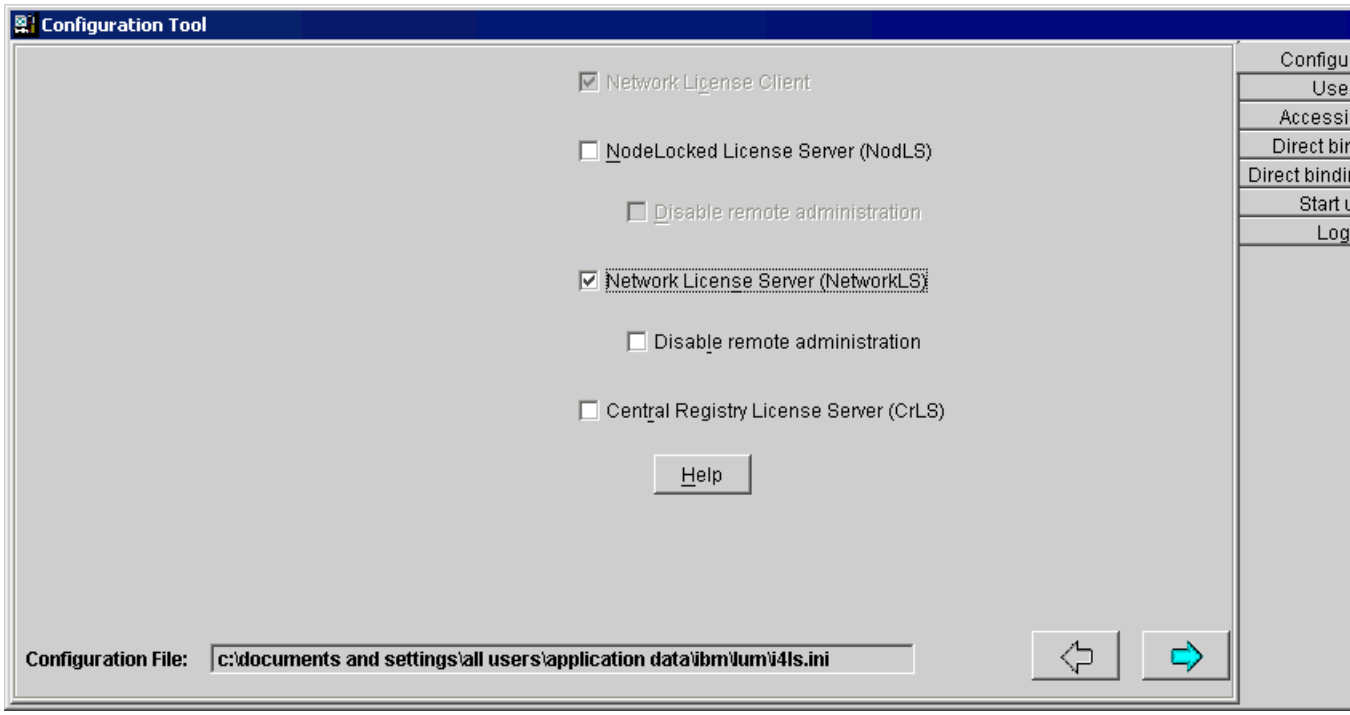
For concurrent licenses you should have a LUM Server and client workstations. The same workstation may be used as LUM server and as a client.

- Install LUM version 4.6.8 on your server.
- Request BPA licenses.
- All LUM services should be stopped before any modification of LUM configuration.

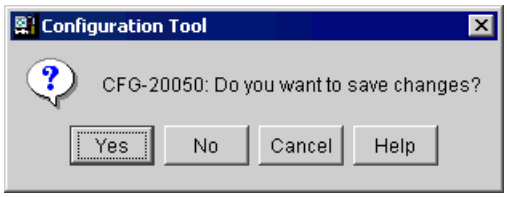
1. Configure the LUM server.

   Note: If the server is also a client workstation it must be configured first as a server and second as a client workstation.

   a) Go to **Start** > **All Programs** > **License Use Runtime** and select **Configuration tools**
   The following window appears:



   b) Select the option **Network License Server (Network LS)**.
   c) Close the **Configuration tool** window.
   The following window appears:



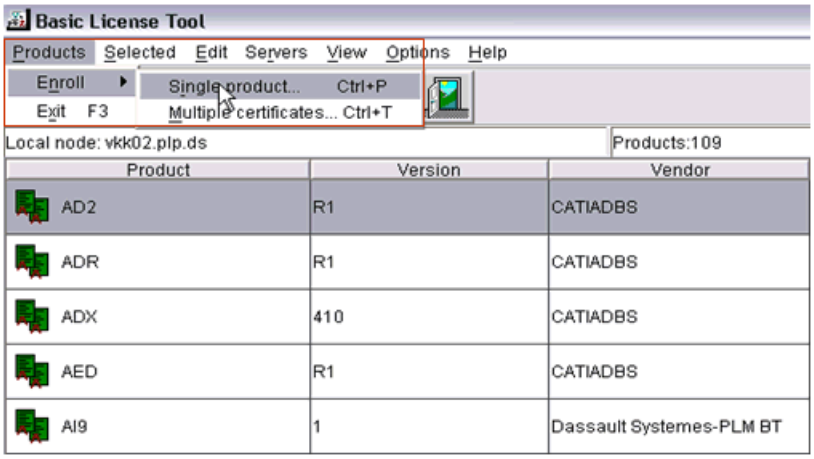
d) Click **Yes** to save changes.
If the service was previously stopped the following window appears:

e) Click **OK** to restart the service.

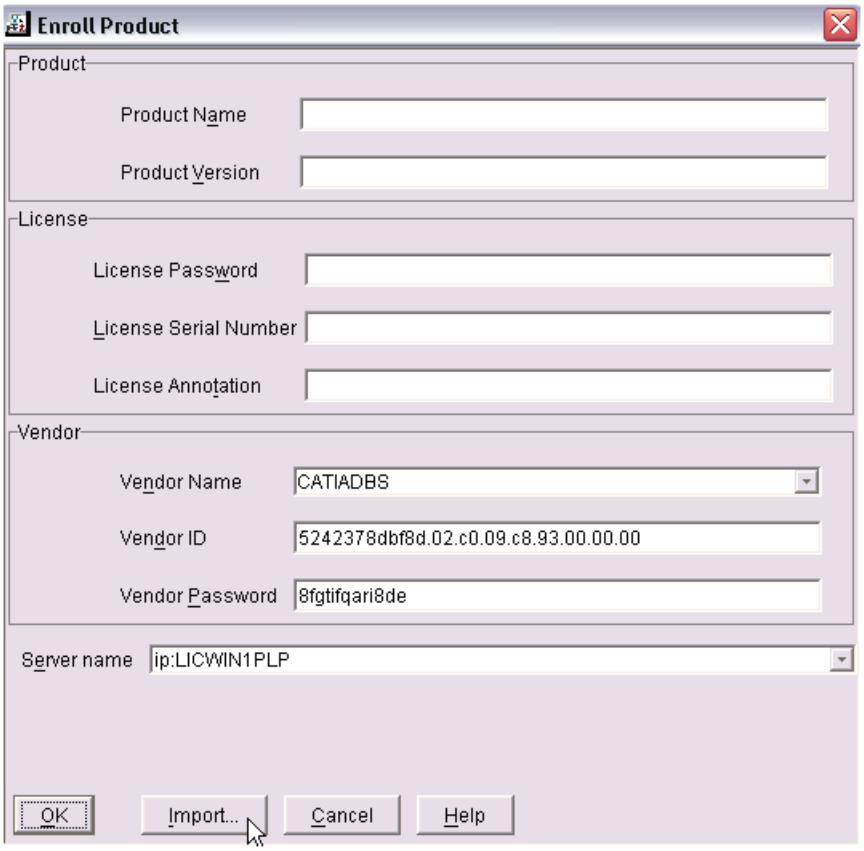
Your network license server is configured and can be used to enroll the licenses.

2. Install the concurrent licenses on the server.

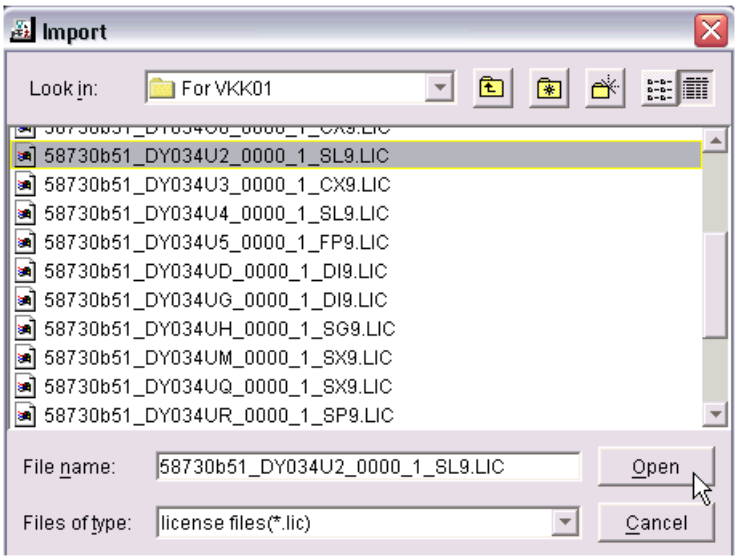
a) Go to **Start** > **All Programs** > **License Use Runtime** and select **Basic License Tool**
The following window appears:



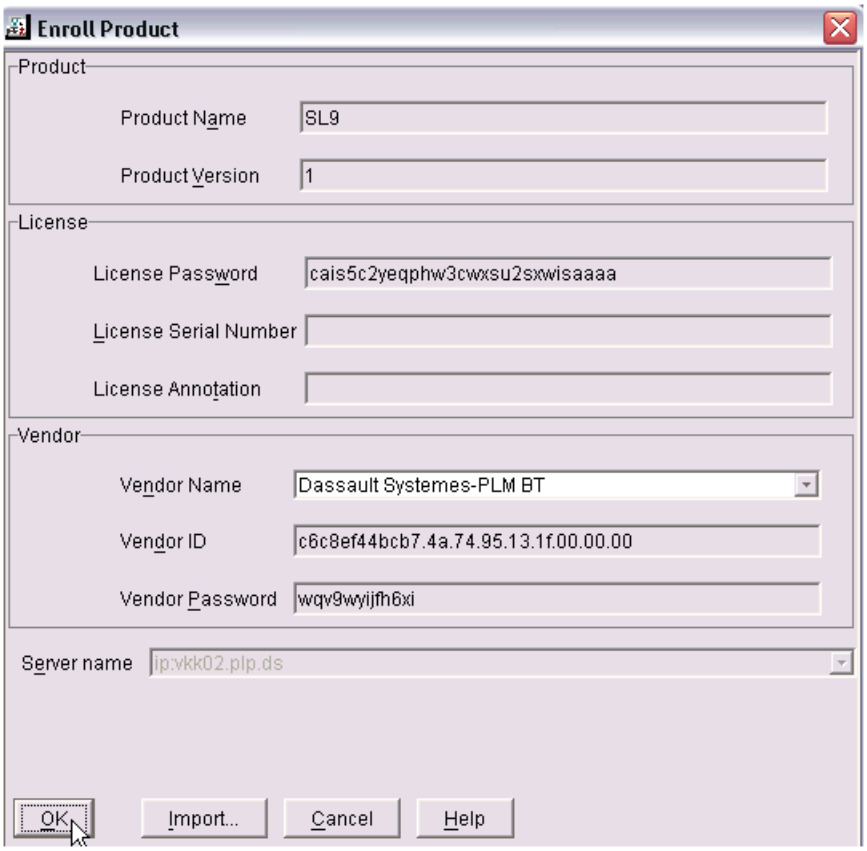
b) From the menu **Products** > **Enroll** select the command **Single product...** if you want to enroll a single license or **Multiple certificates...** if you want to enroll several licenses at a time.
The **Enroll Product** window appears:



c) Select **Import...**.
The **Import** window appears:



d) Select the file with the concurrent license to enroll from the file browser.



e) Click **OK** to enroll the license.

Your licenses are enrolled.

The network license sever is configured. To configure client workstations, see *Setting up network license clients* on page 16.

Setting up network license clients

This task shows you how to set up network license clients on the client workstations, as clients of the network license server you set up previously.

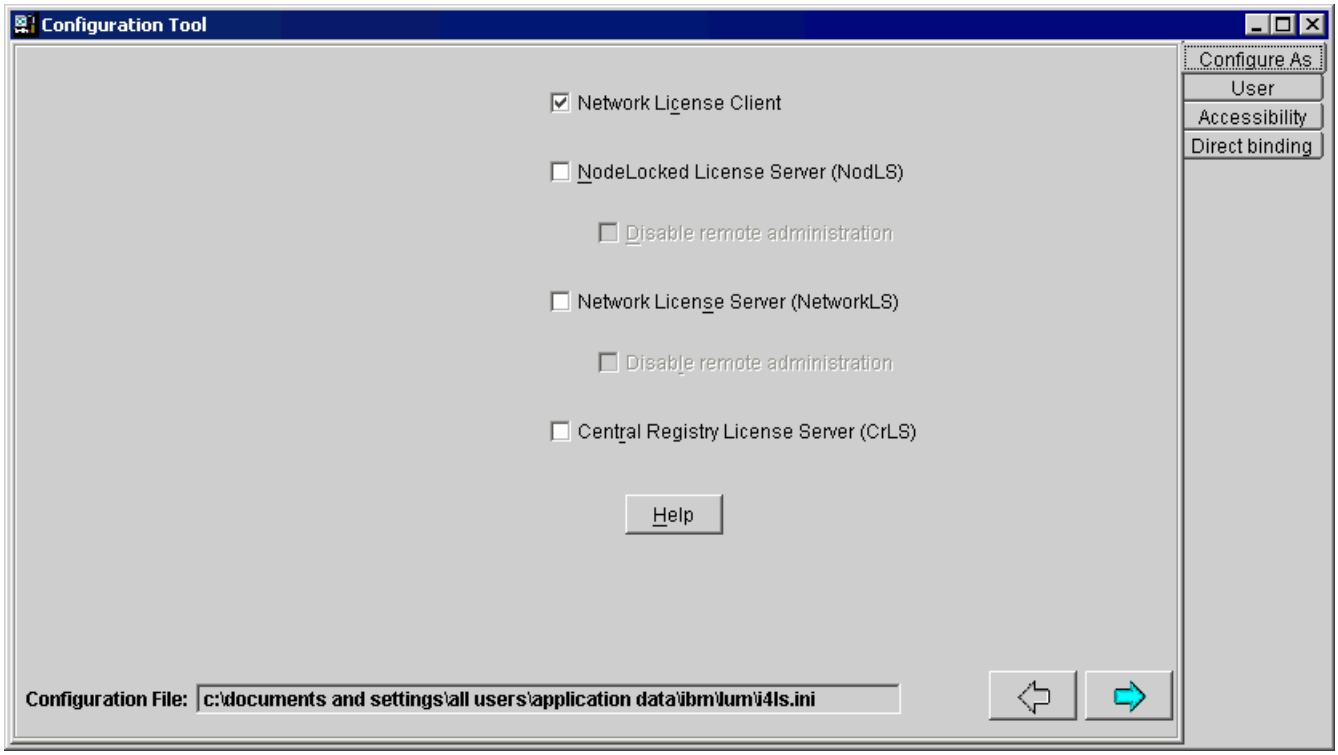
- You need to install LUM version 4.6.8 on at least one client.
- All LUM services should be stopped before any modification of LUM configuration.

1. On the client workstation where you installed LUM, go to **Start** > **All Programs** > **License Use Runtime** and select **Configuration tools**.

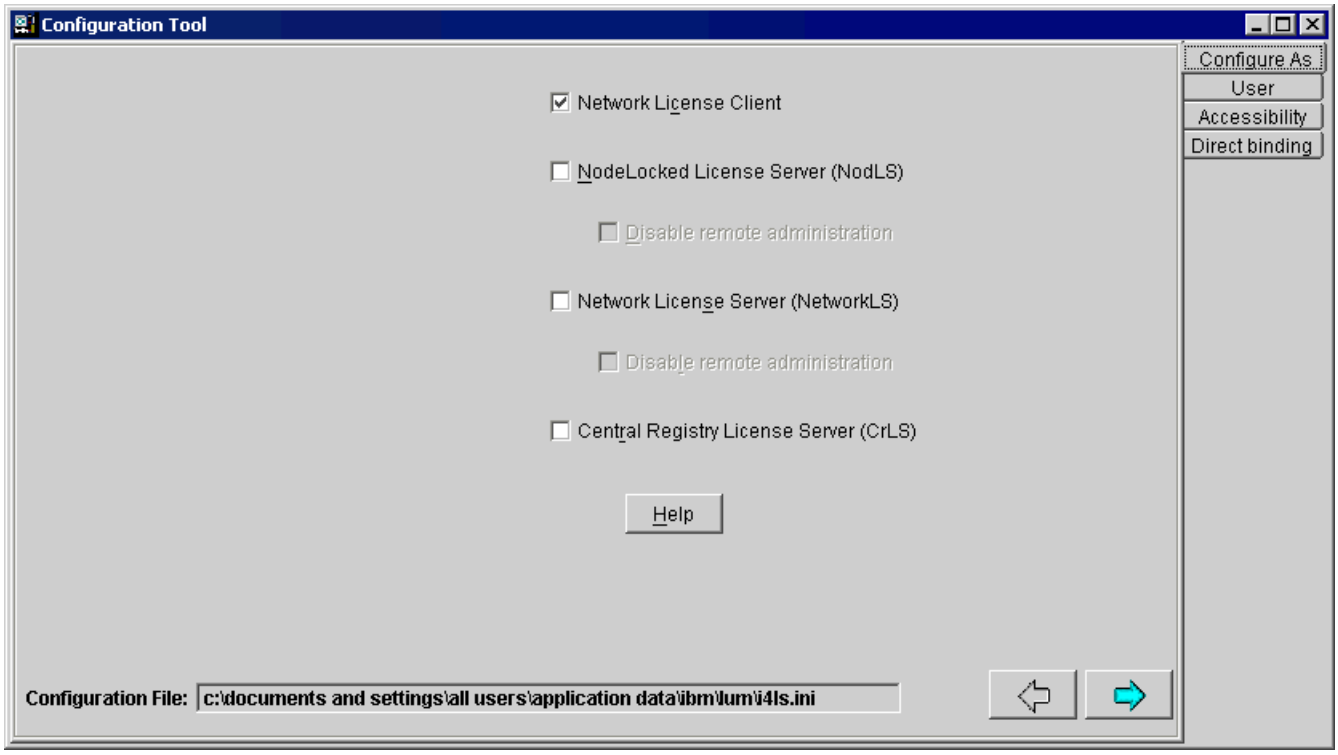
   Note: If your client workstation operating system is

Windows 7	right click **Configuration tools** and select **run as administrator**

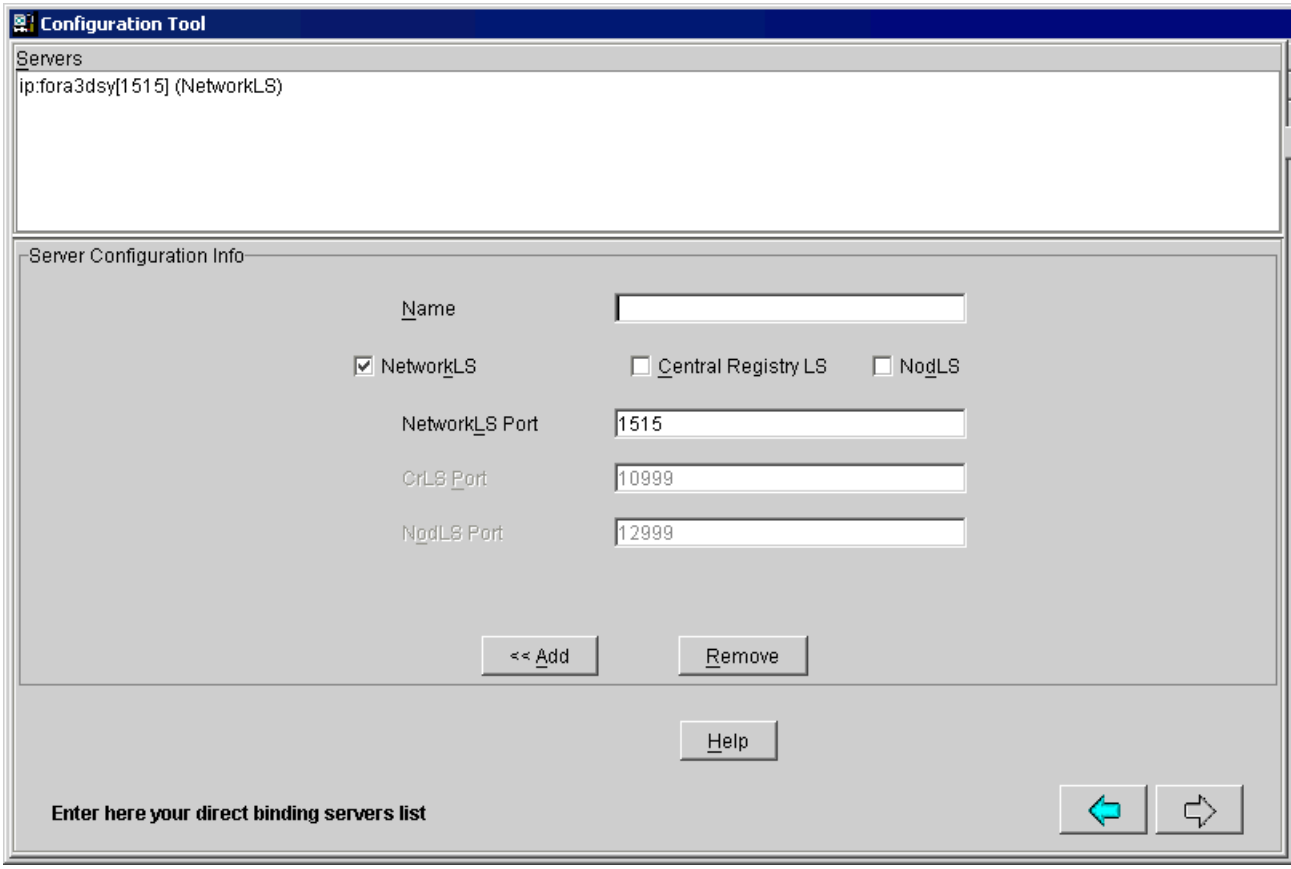
   The **Configuration tools** window appears:



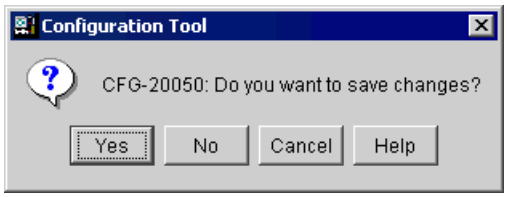
2. Select the option **Network License Client**.



3. Switch to the **Direct binding** tab.



4. Enter the server name into the field **Name** and click **<< Add**.
5. Close the **Configuration tool** window.
   The following window appears:



6. Click **Yes** to save changes.
   The configuration creates the `i4ls.ini` configuration file in: `COMMON_APPDATA\IBM\LUM` which is typically:
   - for Windows XP `C:\Documents and Settings\All Users\Application Data\IBM\LUM`;
   - for Windows 7 `C:\ProgramData\IBM\LUM`.

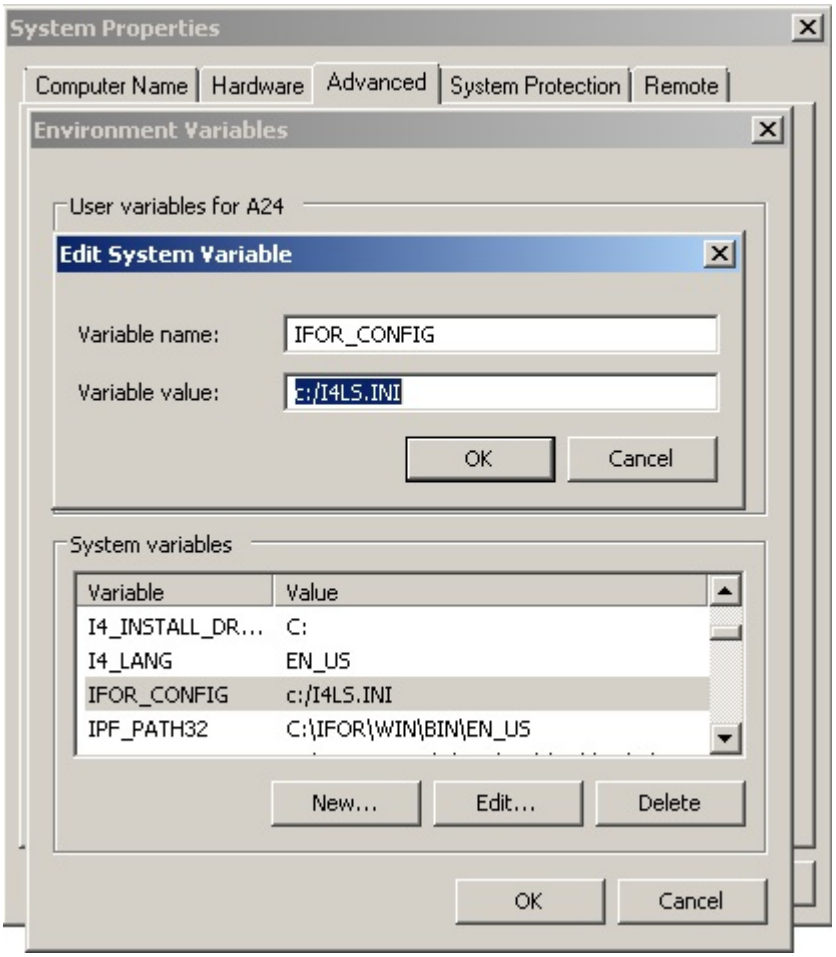
   Note: If the following file: `C:\ifor\Ls\Conf\i4ls.ini` already exists on your workstation, this file will be updated.

   If the `i4ls.ini` file exists in both locations, the file `C:\ifor\Ls\Conf\i4ls.ini` will be used. To avoid problems, we strongly recommend that you use only one file in the following directory: `COMMON_APPDATA\IBM\LUM`.

7. To check if the server is up and running, and that the client can communicate with the server run the following command: `i4rtv`.
8. To configure other clients, simply copy the file `i4ls.ini` to a directory on each client workstation and reference the LUM variable *iFOR_CONFIG* with the full path to the file name.

   Important: You do not need to install LUM on each client.

   For example:



You can now install BPA products on your client workstations and use them.

Note: When a client is launched, a license is attached to this client and the information is registered on the license server (if there is at least one available license). In order to visualize the total number of licenses and the number of licenses in use, refresh the main view of the **Basic License tool** located on the LUM server.

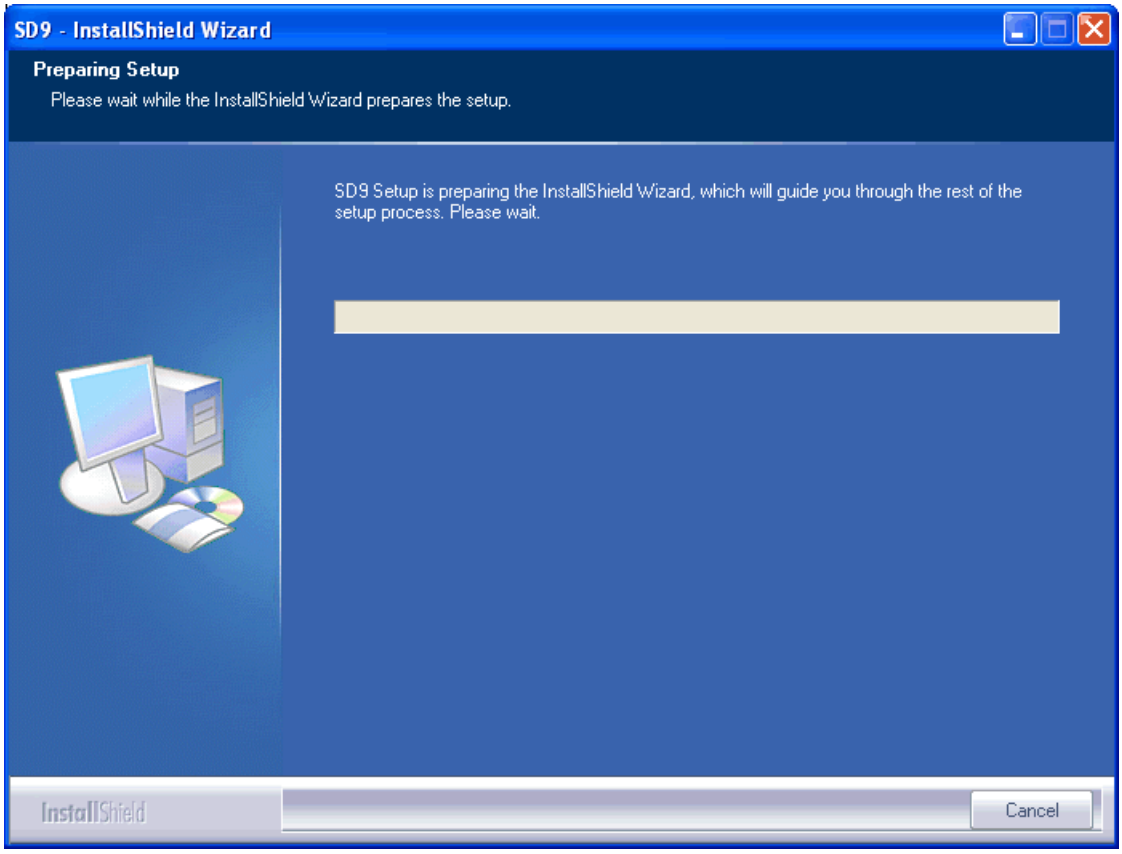
Installing Safety Designer

This task shows you how to install Safety Designer.

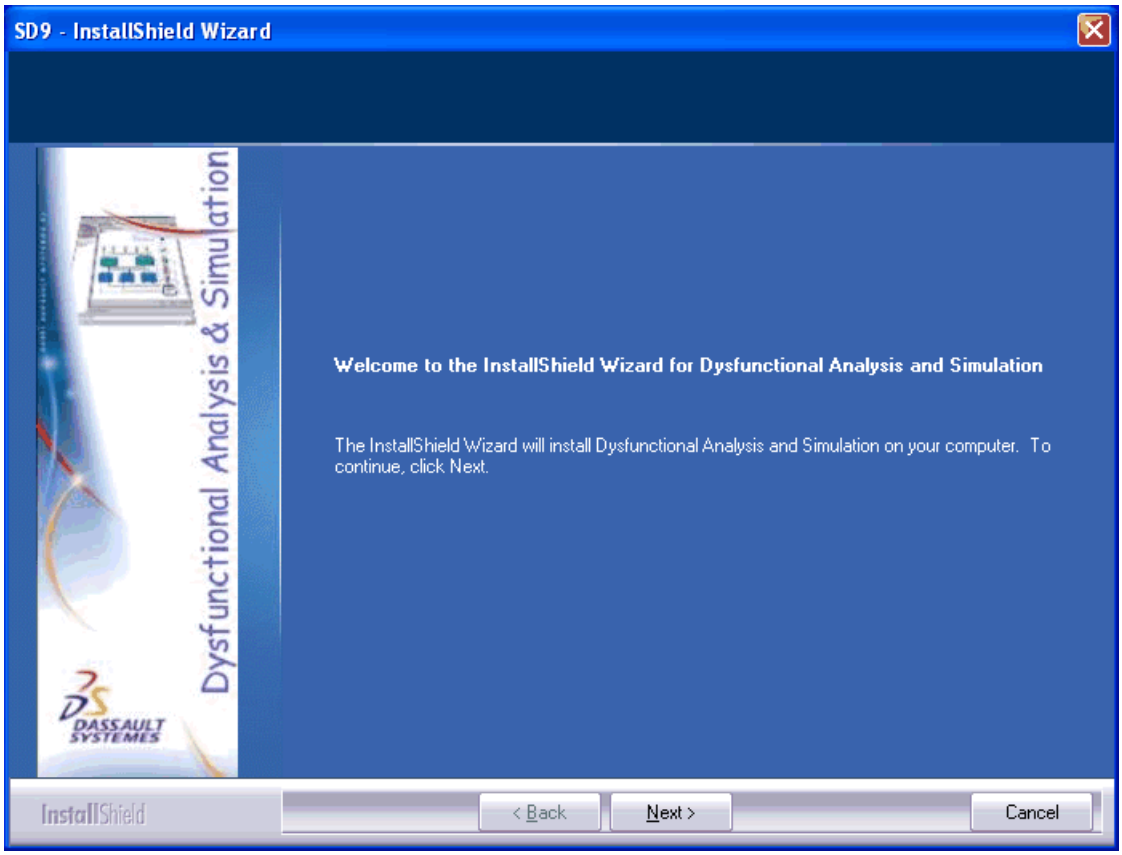
- JDK 1.6 has to be installed.
- In case of use of an Oracle database instance, you need to install the Oracle JDBC Drivers package on client workstations with Oracle Universal Installer. More details about the drivers are available in the section .
- Make sure that you have administrator rights.
- Close all other applications on the computer before proceeding with the installation.

1. To install the Safety Designer software, double click on the file `setup.exe`.

   The following window appears:



   After a few seconds, the following window appears:



2. Click **Next**.

   From the following panel, it is possible to return to the previous panel by using **Back**.

   If a JDK lower than 1.6 is installed on the machine, the application doesn't launch, and the following window appears:

   If a JRE lower than 1.6 is installed on the machine, the application doesn't launch, and the following window appears:

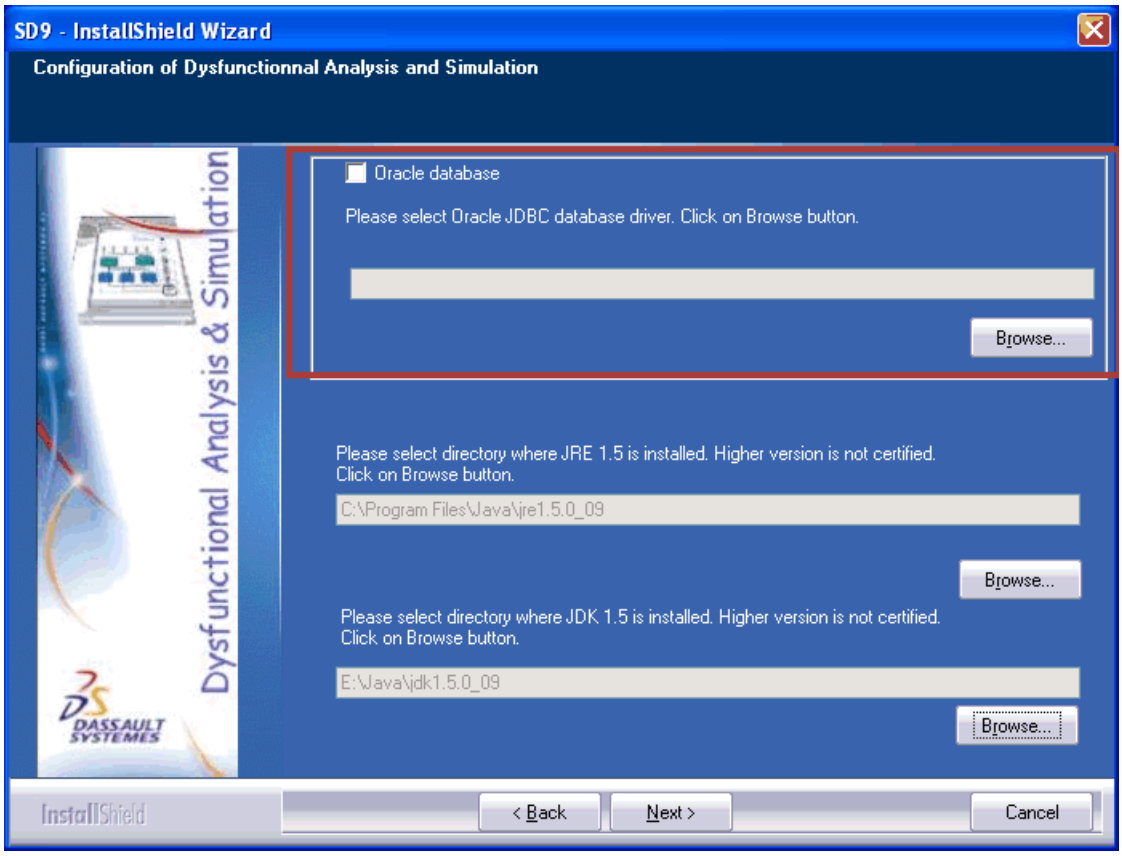
If a higher version of JDK is installed on the machine, the following window appears:

A version higher than 1.6 is not certified by the application.

If a higher version of JRE is installed on the machine, the following window appears:

A version higher than 1.6 is not certified by the application.

Otherwise, the following window appears:



3. If you want to use Safety Designer with an Oracle database, check the box **Oracle database**.

Note: We assume that the installation of the Oracle JDBC drivers has been done correctly.

a) Configure the JDBC driver: browse the file system to find the JDBC driver to fill the **JDBC driver** field.

Note: The Oracle JDBC drivers are commonly located in the following oracle directory: `[ORACLE_HOME]/jdbc/lib`.

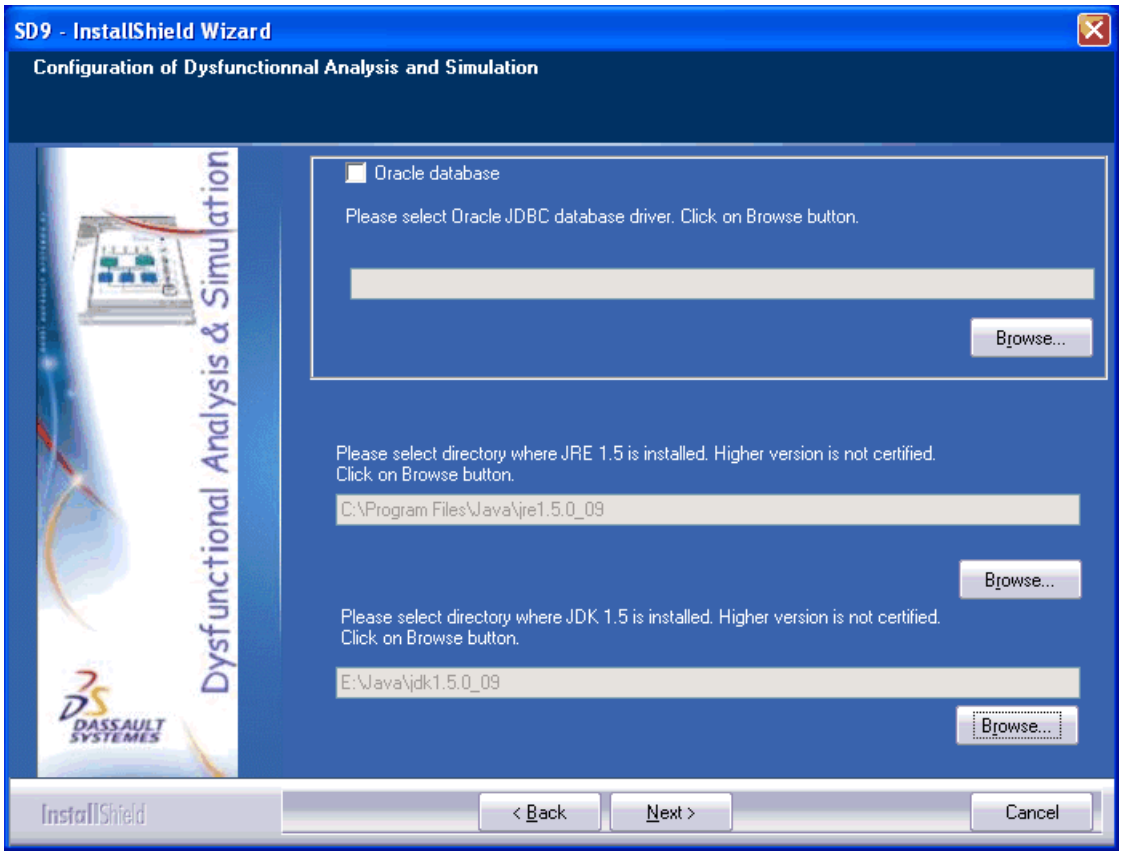
Note: The preferred driver to use for the current version of SafetyDesigner is named `ojdbc14.jar`.

If the Oracle database checkbox is selected and no path is filled, the following window appears:

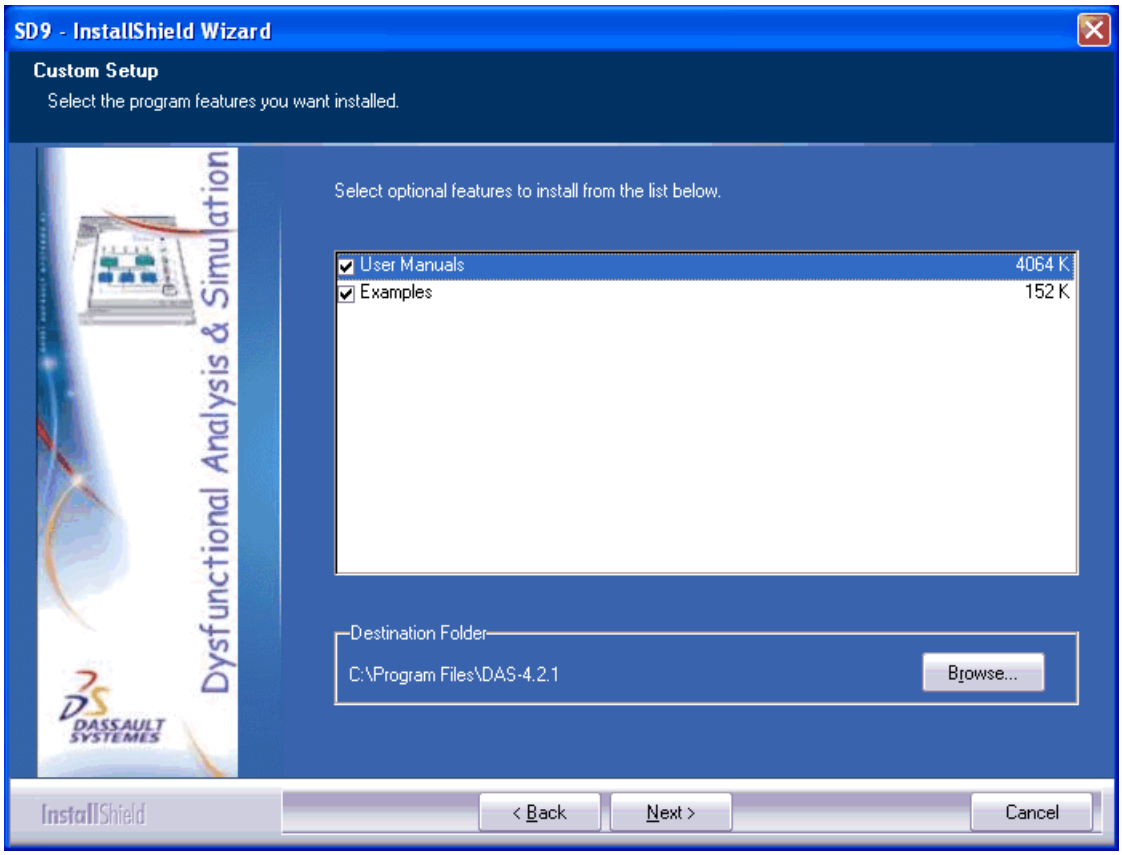
4. If you want to change the location of the JDK and the JRE filled by the wizard, browse the file system and fill the required fileds.

   The Safety Designer software needs the JDK and the JRE to run.

   JDK and JRE 1.6 are required. Any higher version is not certified.



5. Click **Next** to coninue the installation.
   The following window appears:



The following features are optional to install:

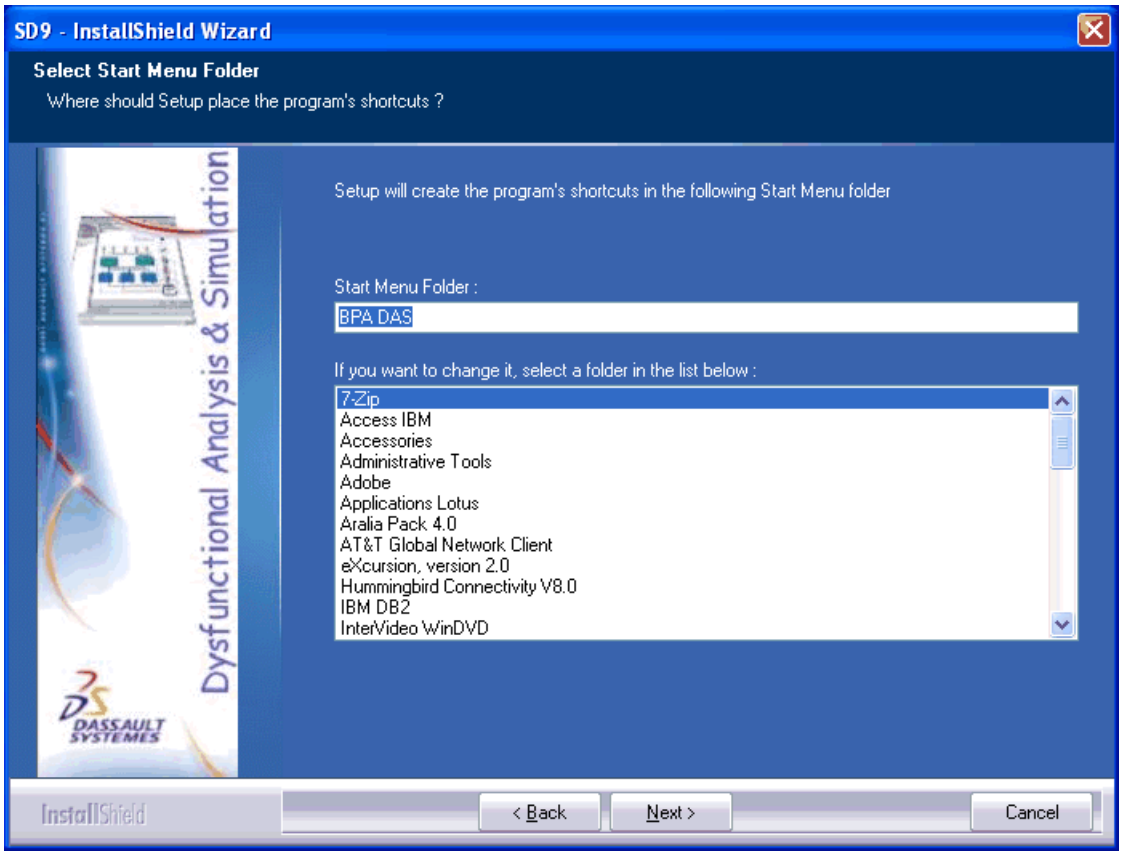
• User manuals: installation of the user manual and the appendix;
• Examples: drivers used by Oracle, optional for Access.

6. Click **Next**.

Note: You can check optional fields to install.

Note: You can change the default installation directory of the application.

The following window appears:

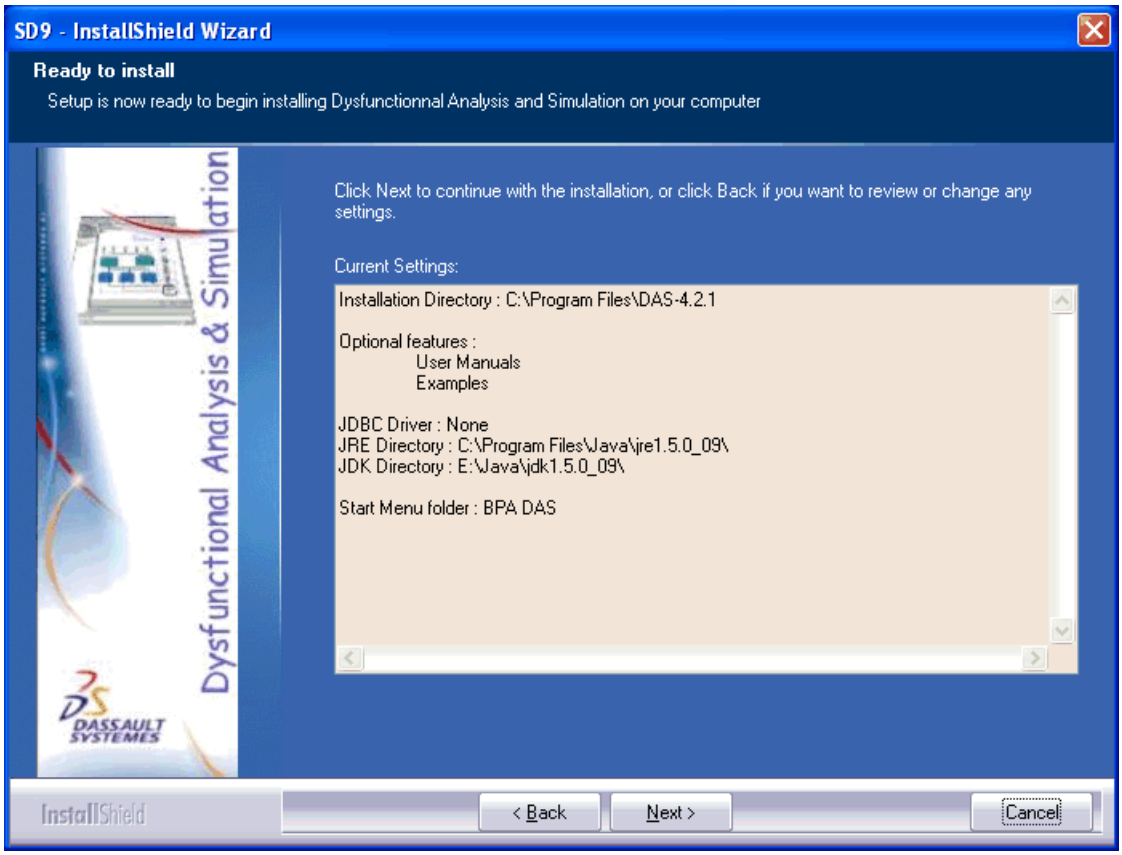


The setup will create the program's shortcuts.

7. Click **Next**.

   You can change the default shortcuts.

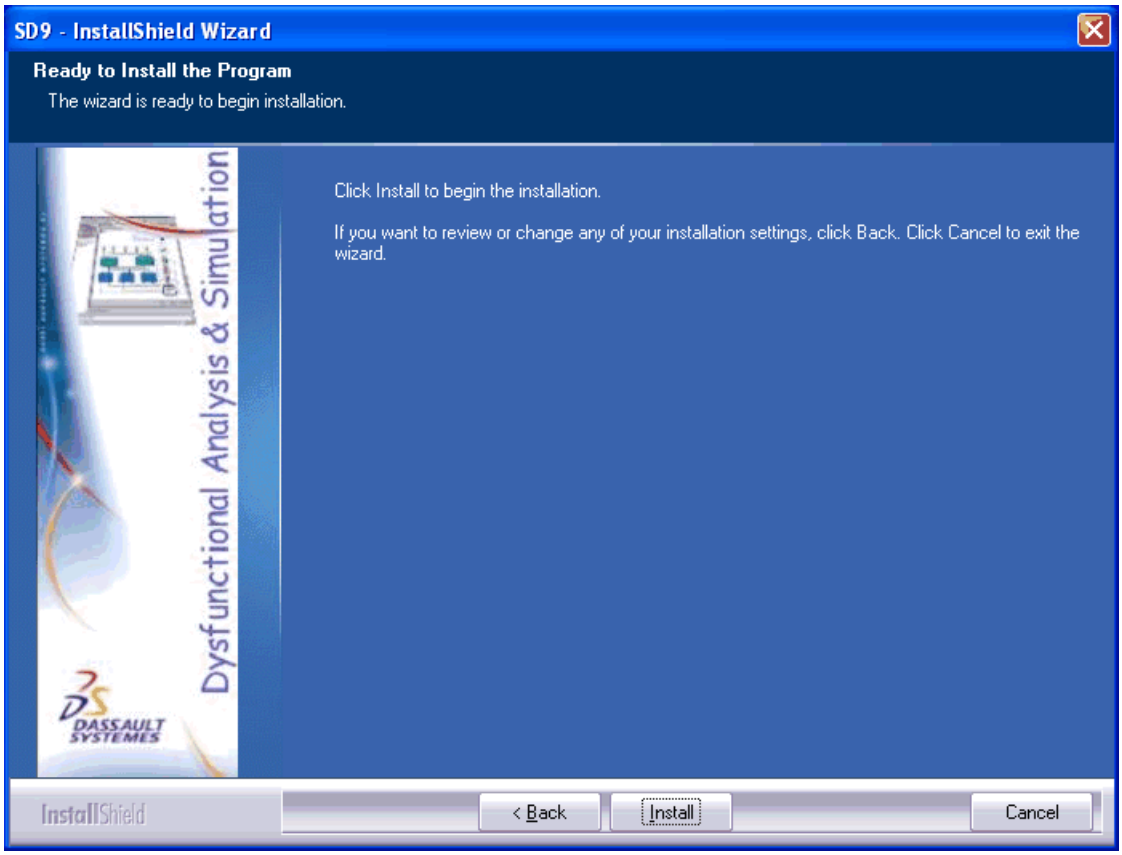
   The following window appears:



The window presents the current settings :

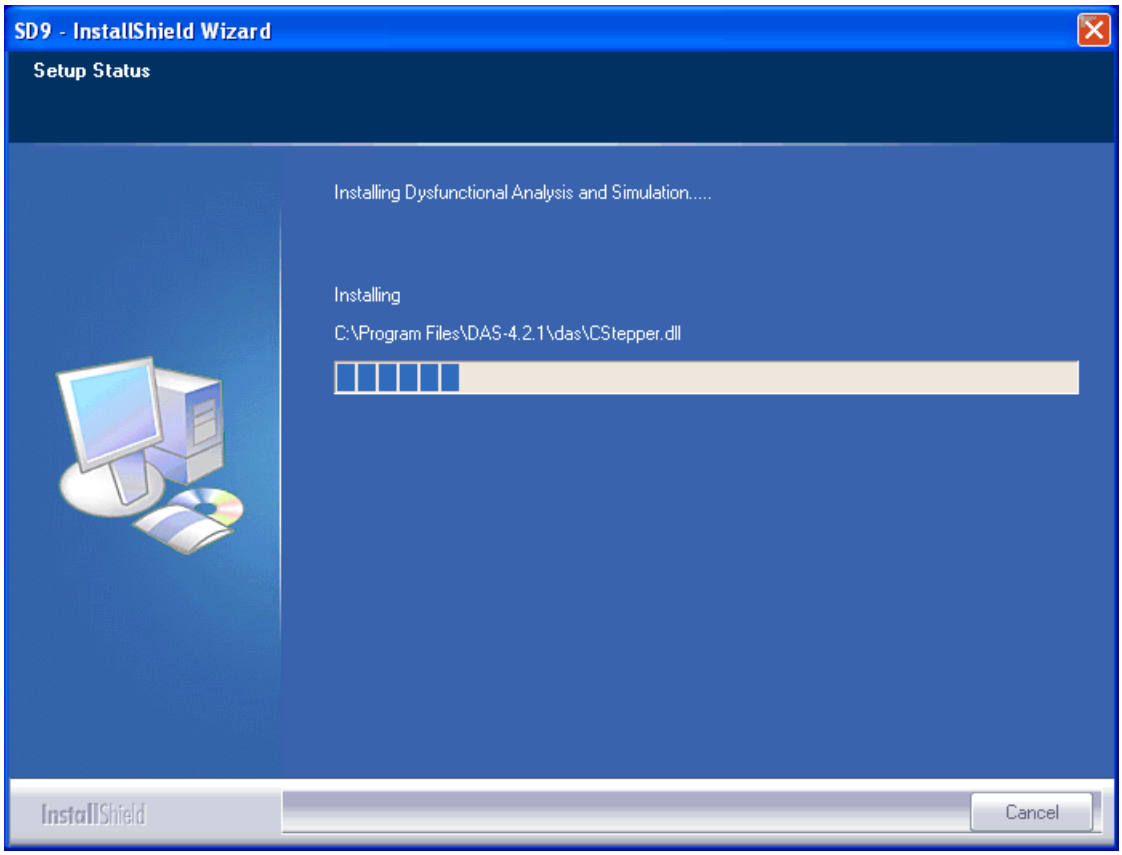
- Installation Directory: installation directory,
- Optional features: user manuals, examples,
- JDBC Driver: none or Oracle (directory of the driver),
- JRE Directory: JRE used by the application,
- JDK Directory: JDK used by the application,
- Start Menu Folder: shortcut for the application.

8. Click **Next** to continue the installation.
   The following window appears:

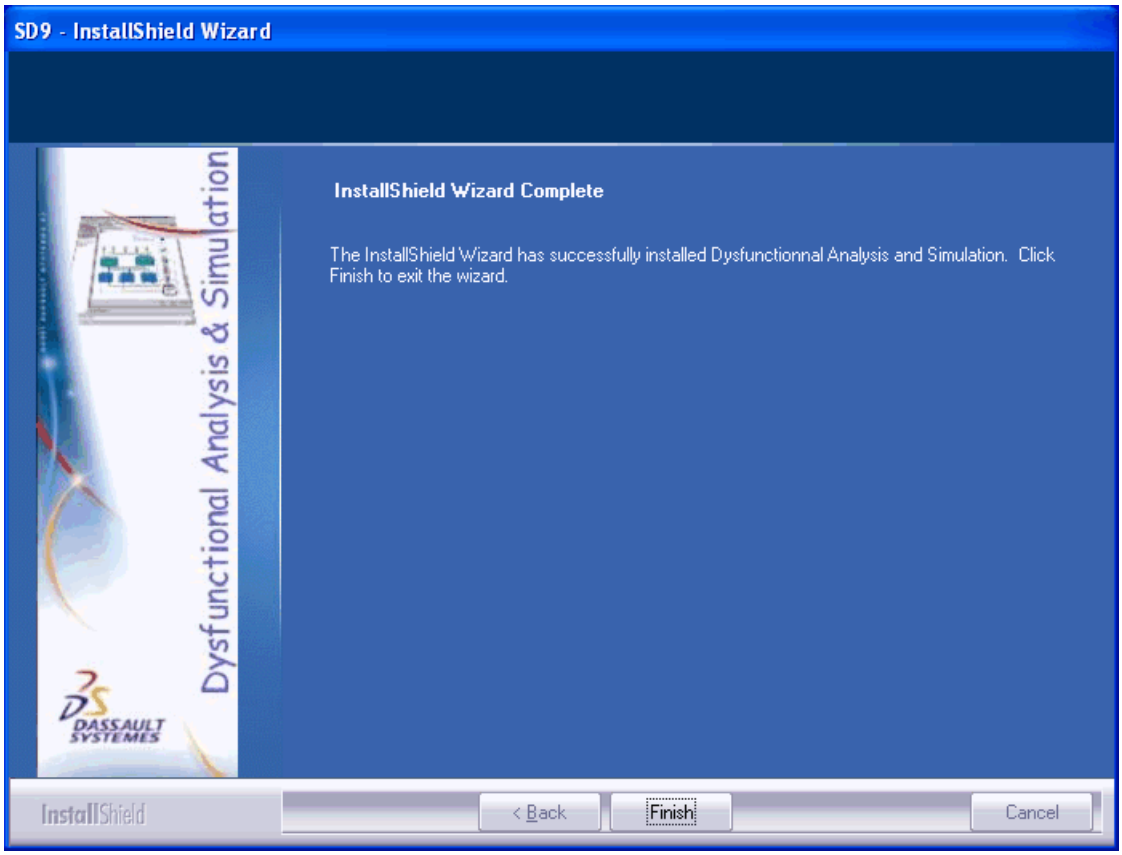


9. Click **Install** to begin the installation.

   The following window shows the setup status:



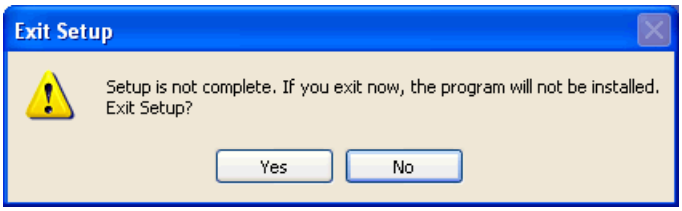
Once the installation is complete, the following window appears:



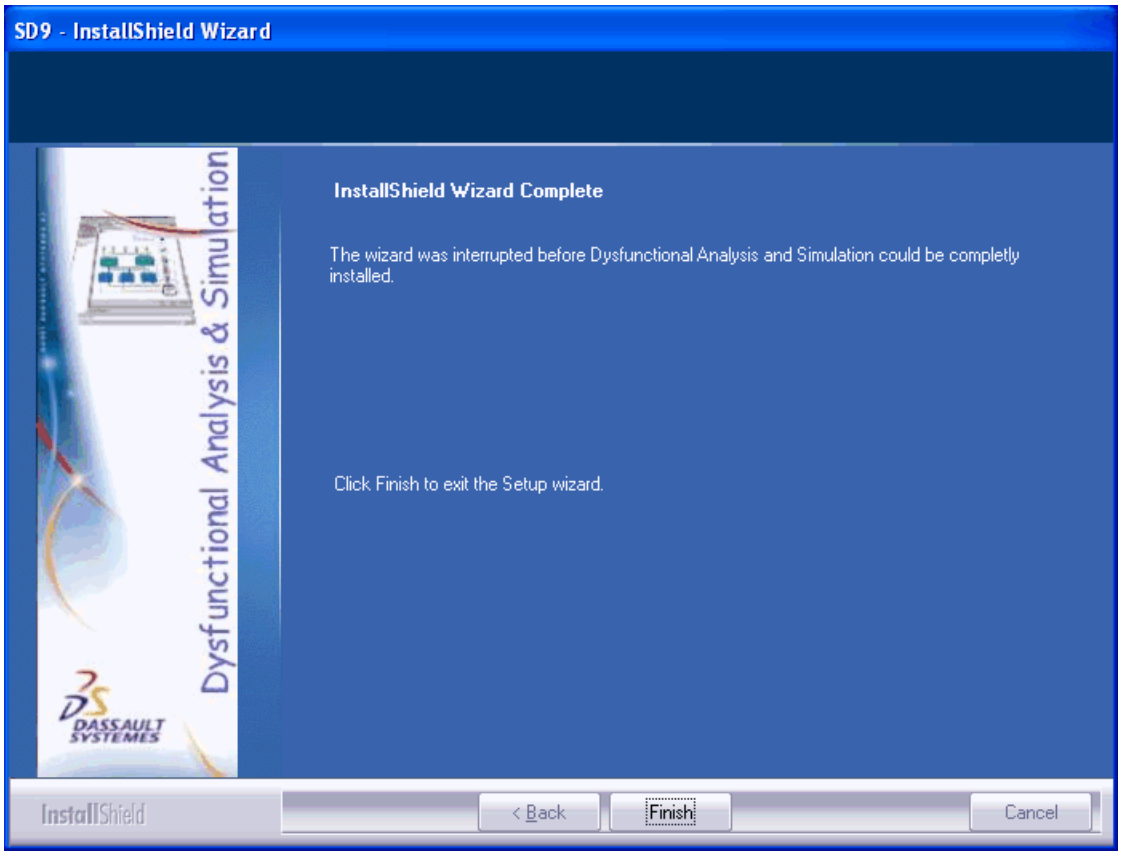
10. Click **Finish** to finish the installation and to quit the installation wizard.

Note: Anytime during the intallation it is possible to interrupt it and to quit the installation wizard.

a) To quit the installation wizard click **Cancel**.
The following window appears:



b) Click **Yes** to confirm or **No** to return to the installation wizard.
If the cancelation is confirmed, the following window appears:



c) Click **Finish** to exit the installation wizard.

The application has been successfully installed.

Launching Safety Designer

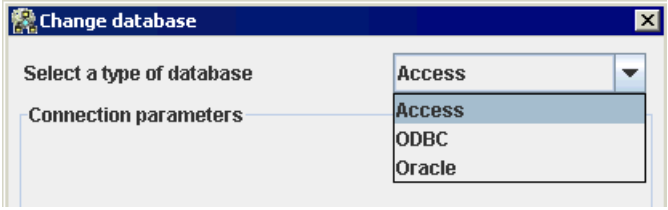
This task shows you how to launch the Safety Designer.

Safety Designer should be installed.

1. To start the application, go to **Programs** and choose the shortcut folder created for the application.

Note: You can also double click on the file `SafetyDesigner.bat` located in the `SafetyDesigner/SafetyD` directory.

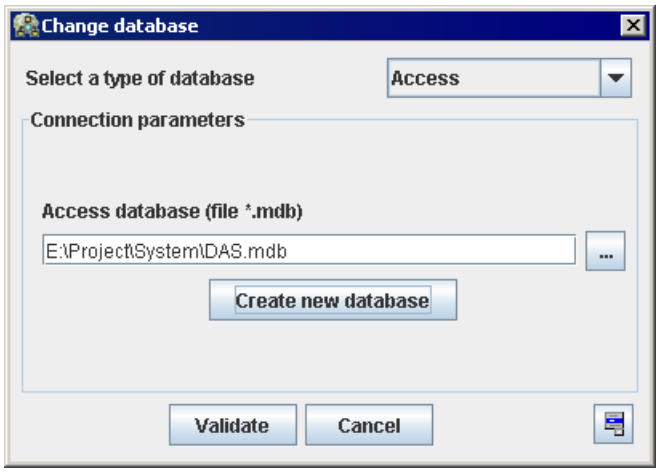
When you launch the application for the first time, the following window appears:



Note: When you launch the application for the first time, the database is not chosen. You have to choose the database you want to use and to specify the connection parameters.

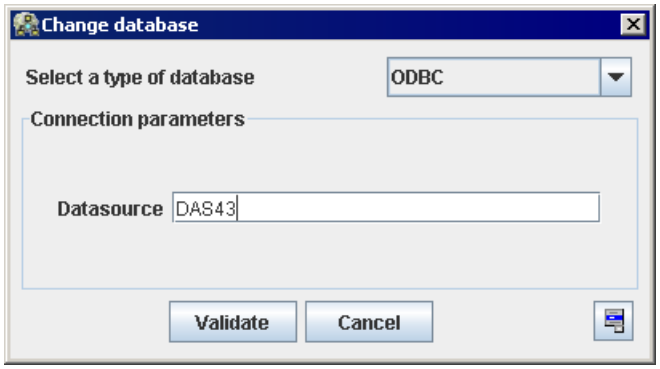
2. Select the database type in the **Select a type of database** area.

   - If you select **Access**, specify Access file (`.mdb`).



Note: You can also create a new Access file specific for SafetyDesigner with the button **Create new database**.

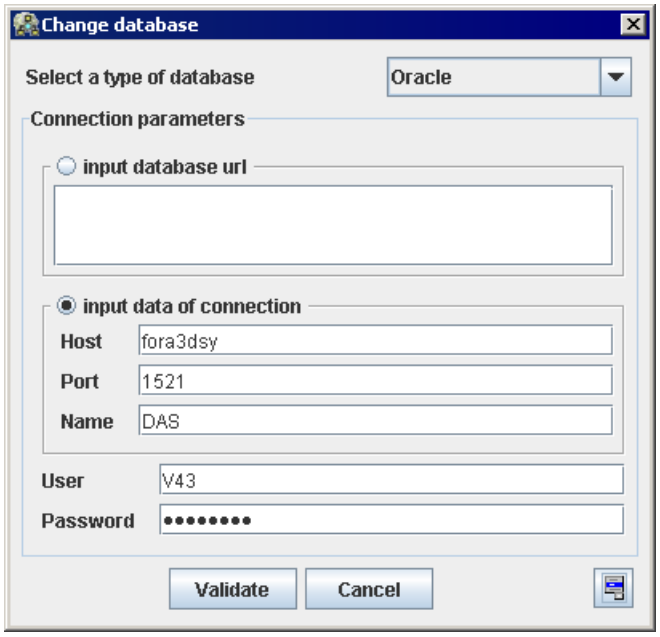
   - If you select **ODBC**, you should fill the ODBC datasource.



For more informations about the creation of an ODBC datasource, see *Creating an ODBC datasource* on page 42.

   - If you select **Oracle**, you have to fill the following parameters:

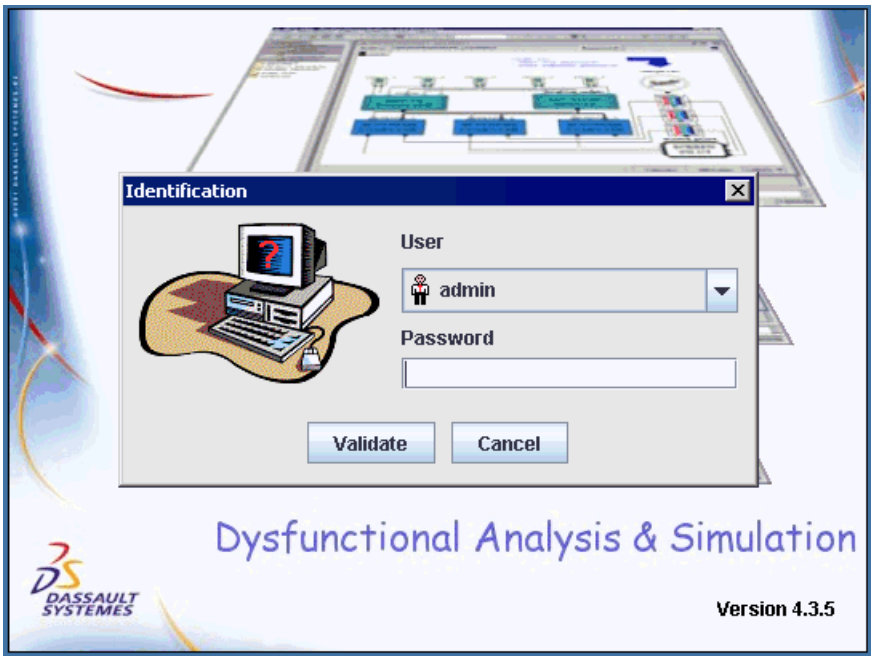
- Host: server supporting the database (including the DNS tree structure).
- Port: connection port to the database.
- Base: name of the database instance.
- Login: connection login to the database.
- Password: login password to the database.



For experienced users, it is also possible to directly enter the database connection url instead of the parameters fields. The syntaxe of an url is the following one: `Host:Port@Base`.

Note: The Oracle database is accessible only if the drivers are available, so the JDBC driver specified has to be correctly filled during the installation.

Once the connection to the database done, and there is no problem with the license, the identification window appears:



Note: When you create a new database, there is only one user, the administrator. The administrator login and password are:

- Login: admin.
- Password: admin.

3. Enter login and password in the corresponding fields and click **Validate** to launch the application.

The application starts.

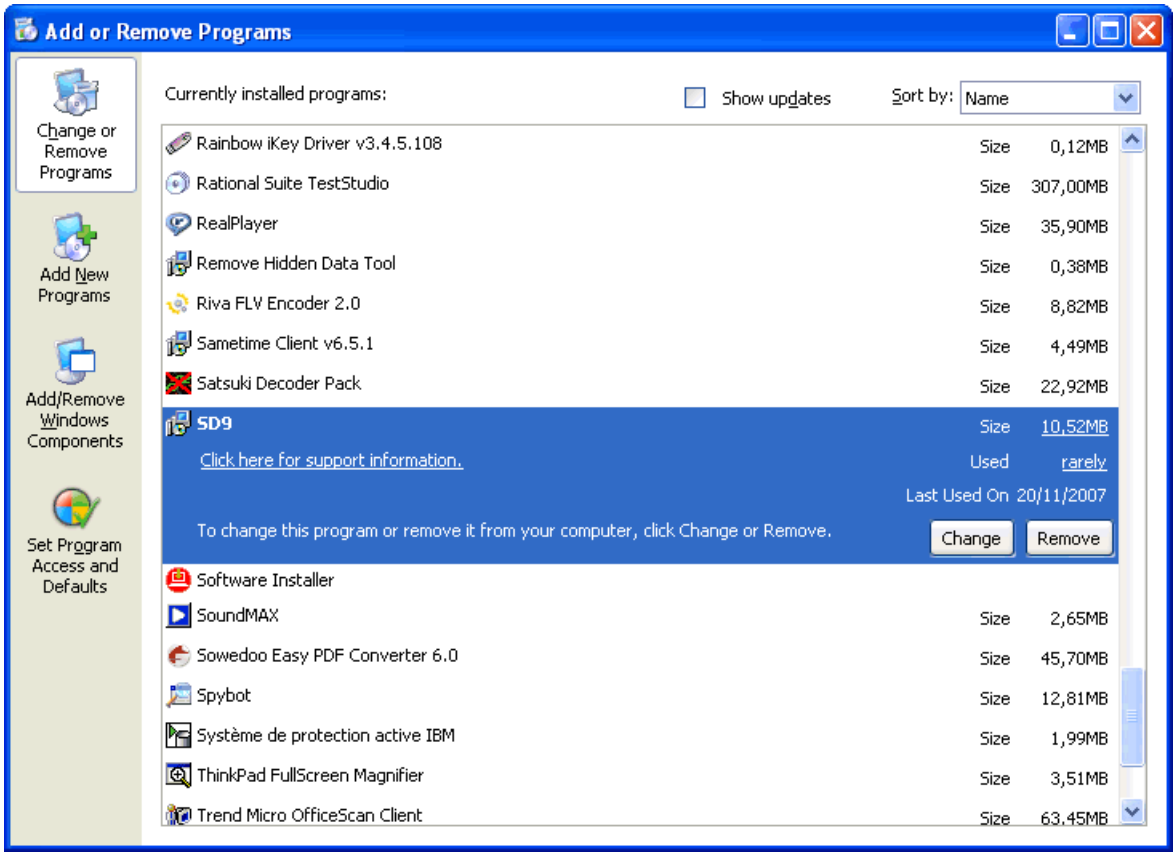
Uninstalling Safety Designer

This task shows you how to uninstall Safety Designer.

Install Safety Designer.

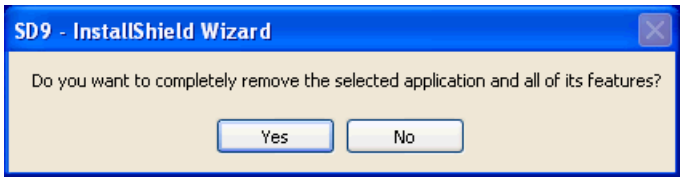
1. Go to **Control Panel** and then select **Add or Remove Programs**.

   The following window appears:



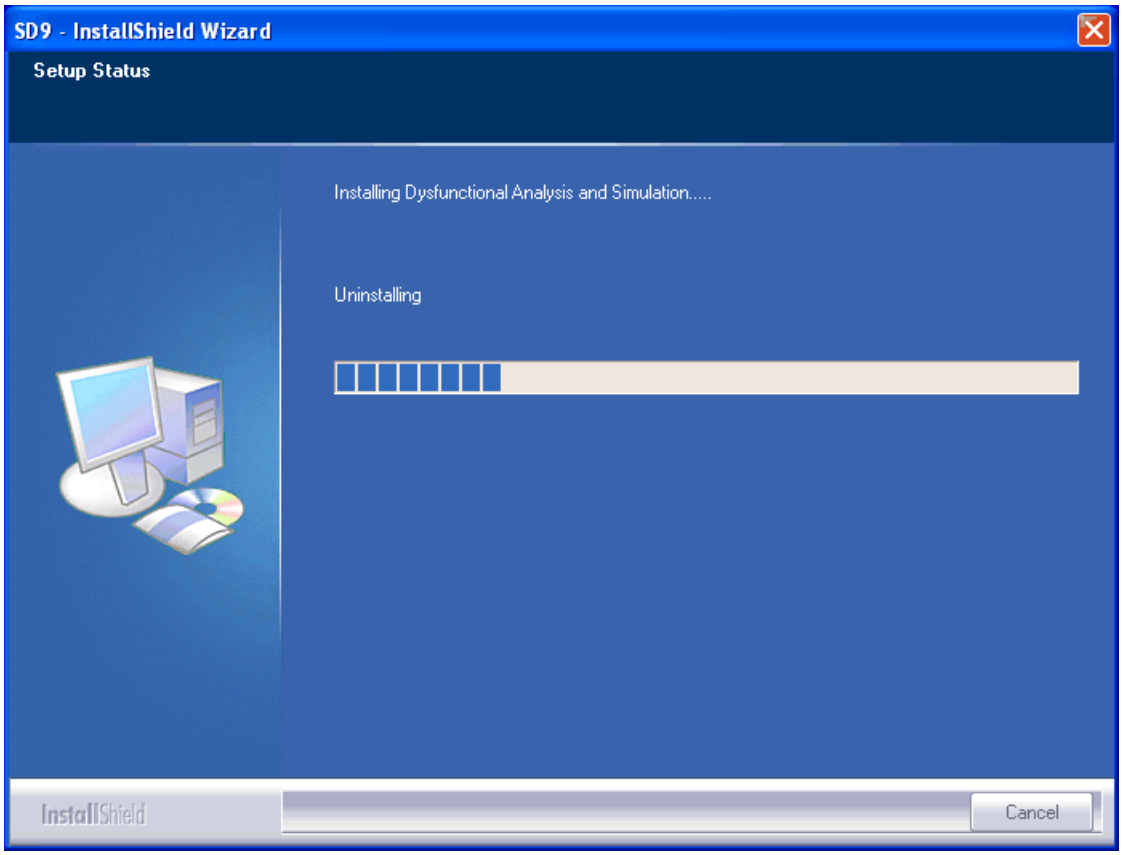
2. Select Dassault Systemes Software BPA SD9 and click **Remove**.

   The following window appears:

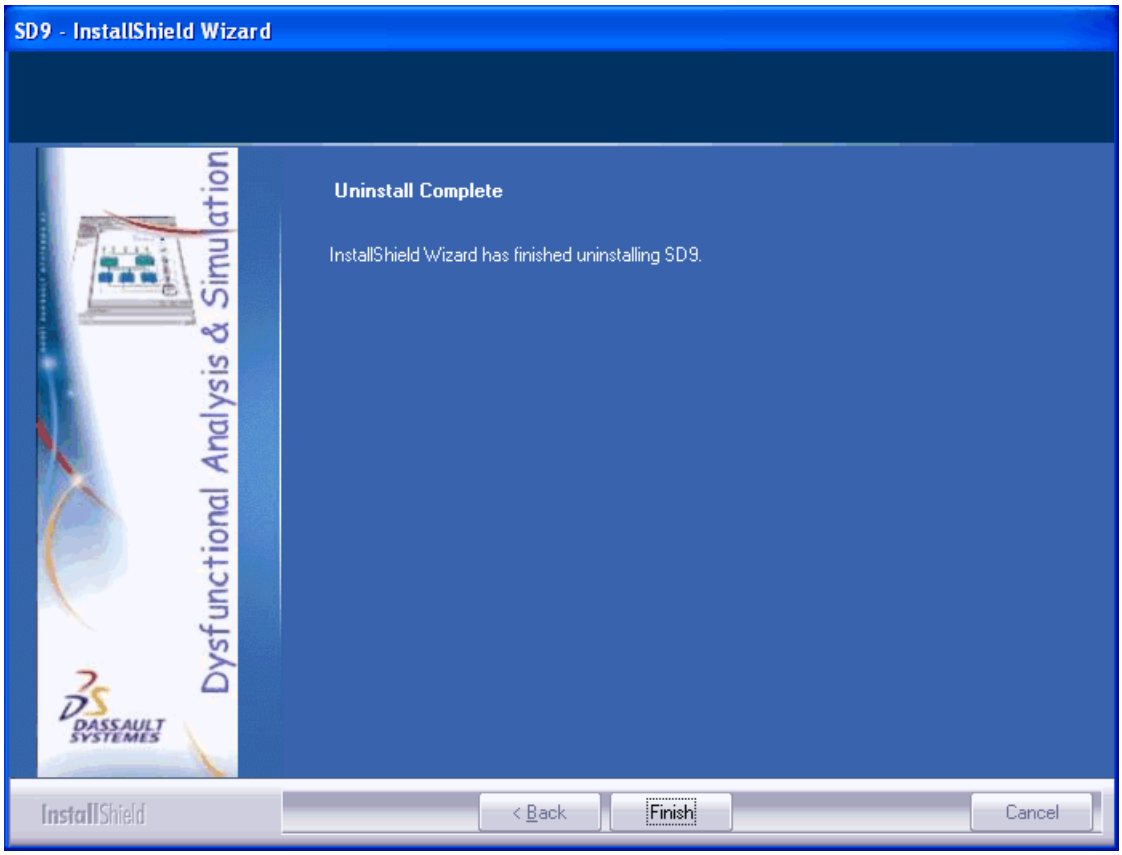


3. Click **Yes** to confim or **No** to cancel.

   During the uninstallation, the following window appears:



Once the application is uninstalled, the following panel appears :



4. Click **Finish** to exit the wizard.

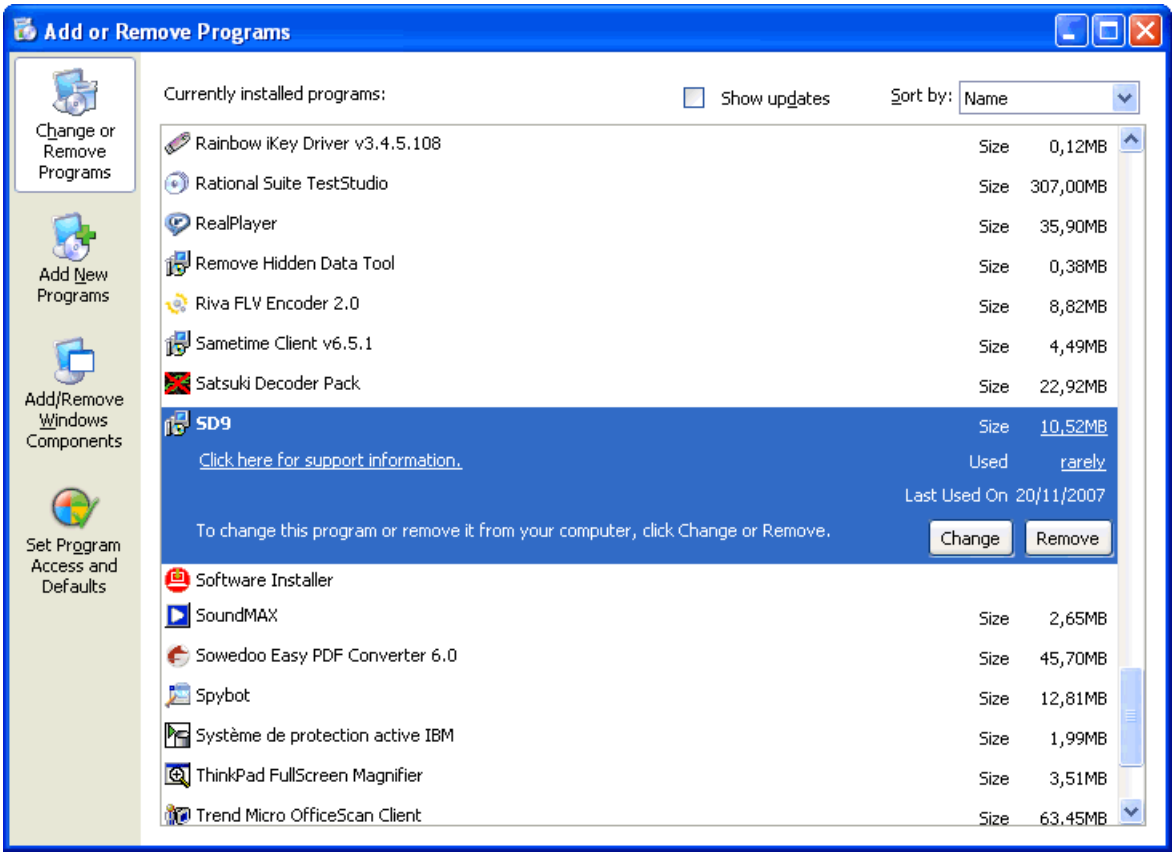
The application has been successfully uninstalled.

Modifying Safety Designer

This task shows you how to modify the installation of the application.

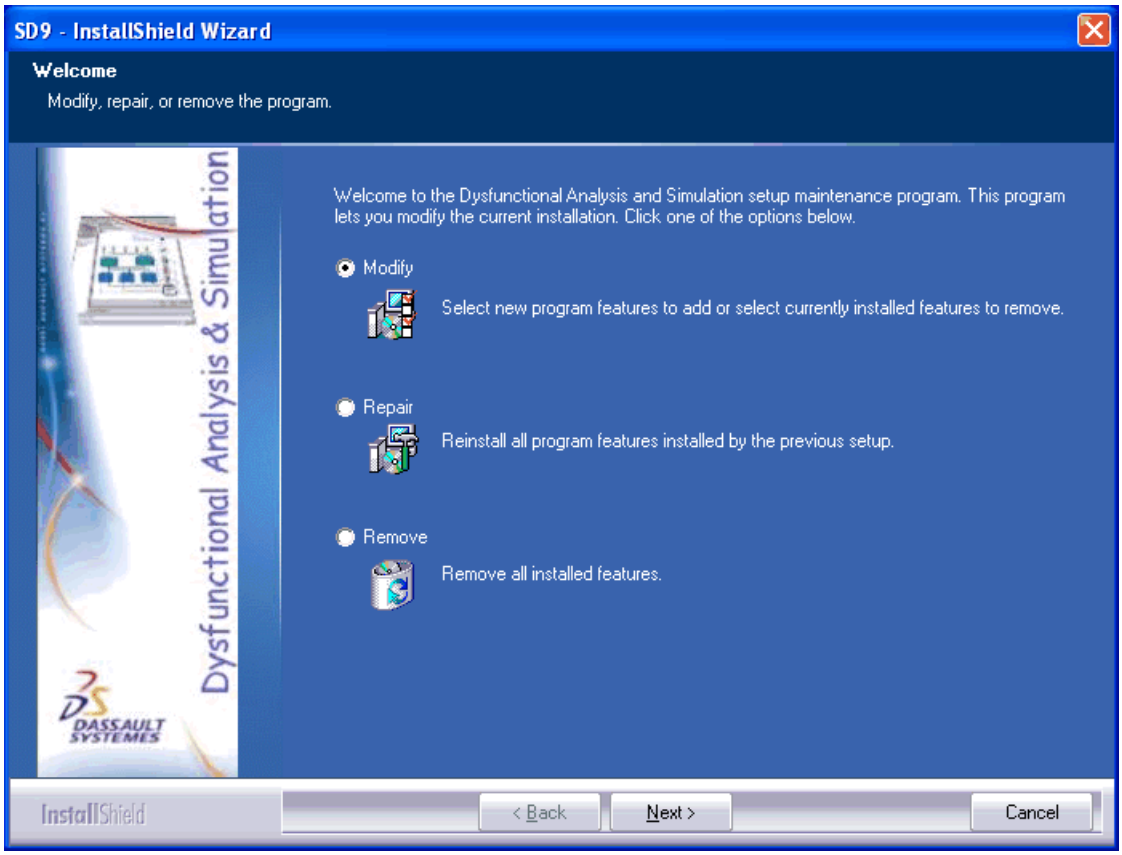
Install Safety Designer.

1. Go to **Control Panel** and then select **Add or Remove Programs**.
   The following window appears:



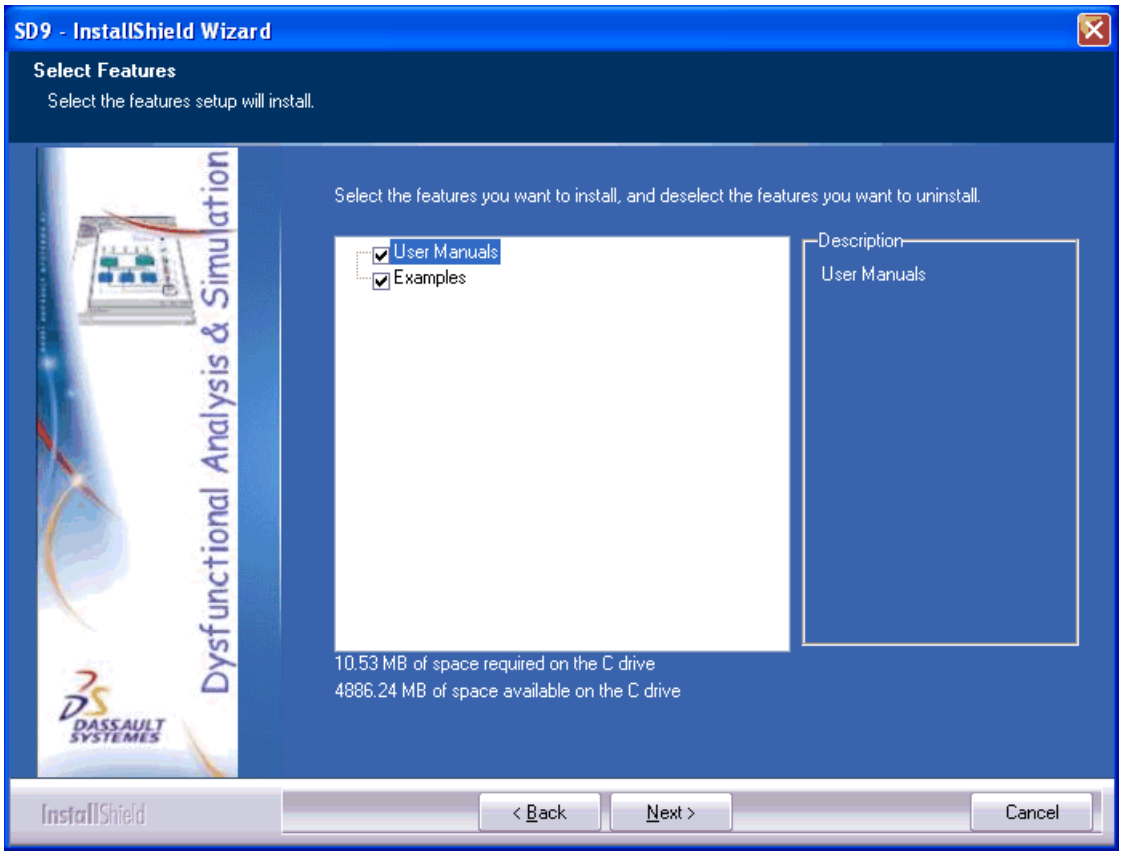
2. Select Dassault Systemes Software BPA SD9 and click **Change**.

   The following window appears:



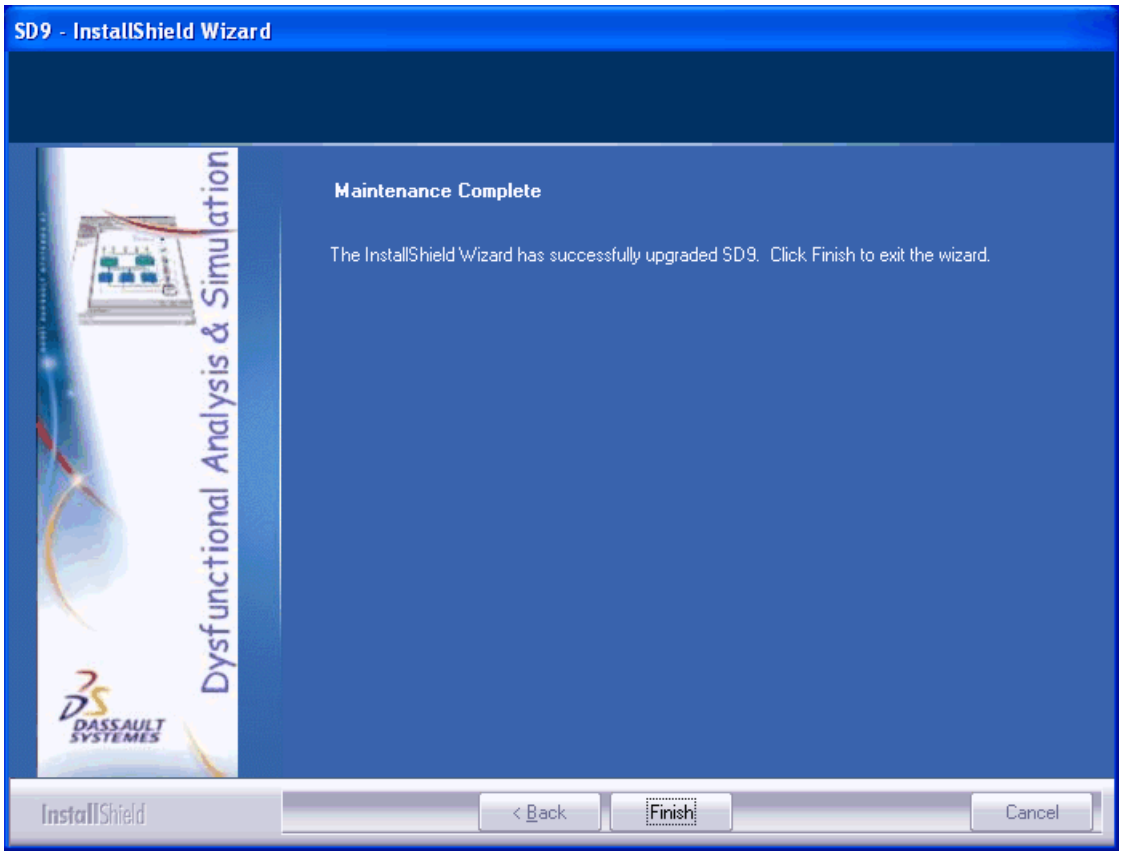
3. Select **Modify** and click **Next**.

   The following window appears:



4. Select the features you want to add or remove and click **Next**.

   The following window appears:



The maintenance is over.

5. Click **Finish** to quit the wizard.

Appendix

This section describes additional information about Safety Designer installation.

Data migration kit for database version 4.3 on page 42

Creating an ODBC datasource on page 42

Data migration kit for database version 4.3

The Safety Designer data migration kit allows users to transform the version 4.0 of the database schema into the version 4.3 of the database schema. For an Oralcle database, the kit also allows retrieving data from an old version.

The data migration is composed of the two following successive steps:

1. Execution of scripts allowing to create objects in the database and to retrieve simple data from the old models.
2. Application of the `migration.jar` file allowing to retrieve more complexe data. It is mandatory to the completeness of the data retrieval and the consistency of the final data.

User can execute the following scripts:

- `launch_sql.bat` file: the first step of migration
- `launch_java.bat` file: the second step of migration
- `launch_all.bat` file: enables to execute the two step successively.

Important: Before executing one of these scripts, environment variable of `launch_all.bat` must be correctly modified.

Every file of `log` directory must be read in order to verify that there was no issue, specially files:

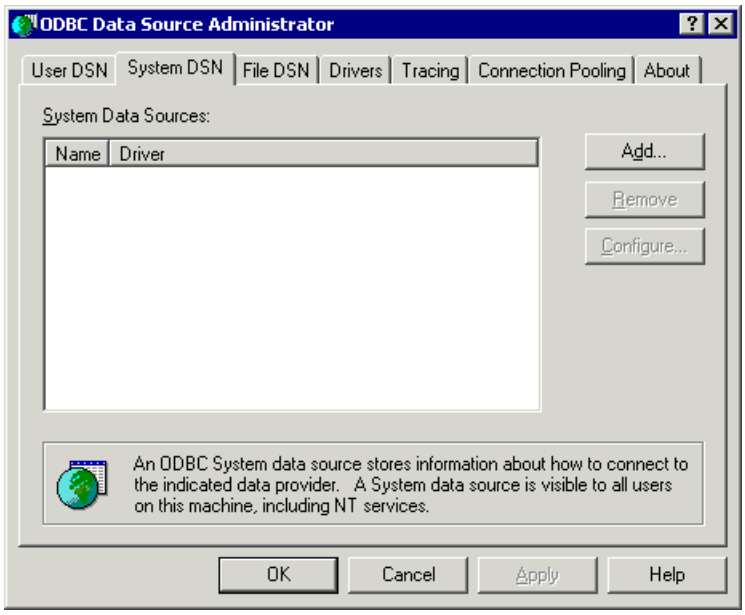
- `log/user.lst`: log for creation of user who is responsible for new schema.
- `log/creation.lst`: log for creation of tables/sequences/... of new schema.
- `log/migration.lst`: log for data migration to new schema.
- `log/logfile.log`: log for Java part of data migration.

Creating an ODBC datasource

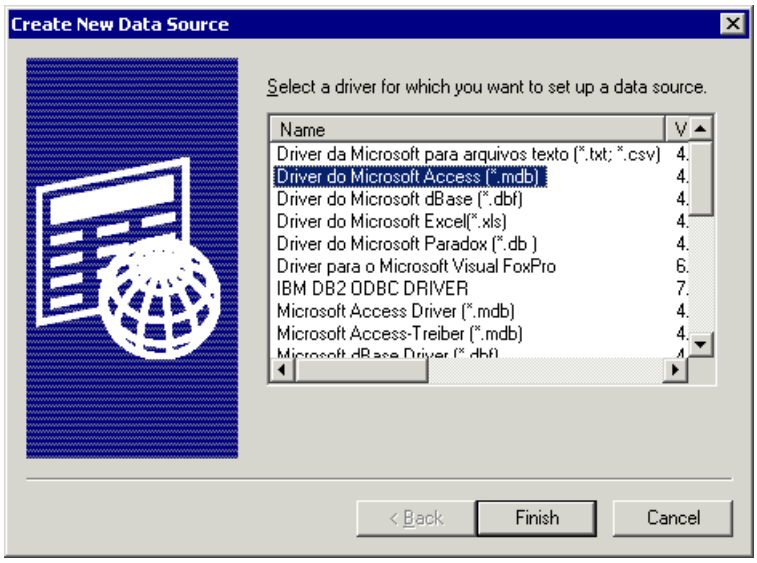
This task shows you how to use the application on an Access database.

You need Access to be installed on your workstation.

1. Copy the MS Access reference file (containing the SDA data model) from the Installation package on your hard drive.
2. Create an ODBC data source on the MS Access file copied just before.
   a) Go to **Start** > **Control Panel** and then select **Administrative Tools** and **Data Sources (ODBC)**. The **ODBC Data Source Administrator** window appears:

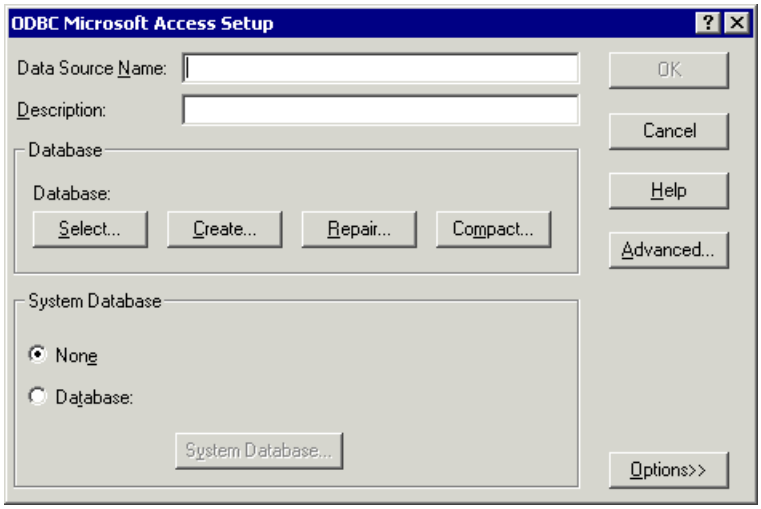


b) Click on **System DSN** tab and then then click **Add**.
The following window appears:



c) Select **Microsoft Access Driver (*.mdb)** and click **Finish**.

The following window appears:



d) Type the name of the data source and click **Select...** to browse the system files for the MS Access file copied before.

e) Click **OK**.