

Database
Management
System

LINTER®

Version 5.9

Installation and Basic configuration

Relational Expert Systems



Table of Contents

| | |
|--|-----------|
| Installation | 3 |
| Installation on Unix/Linux Operating Systems | 3 |
| MS Windows Operating Systems | 5 |
| Basic Configuration..... | 10 |
| Setting Environment Variables | 10 |
| The SY00 Variable | 10 |
| Example DB File Distribution | 10 |
| UNIX Systems | 11 |
| MS Windows Systems | 11 |
| Notifying Linter of OS Environment Variables | 11 |

Installation

Your Linter distribution is provided on CD-ROM or can be downloaded from RELEX web site. All of Linter's programs, libraries, and files are in compressed format.

Installation on Unix/Linux Operating Systems

The Linter distribution for UNIX systems contains files:

- linter.tar.Z;
- install.sh;
- license.txt;
- install.txt;
- messages.

To install Linter the install.sh file should be executed using any shell-interpreter (sh, bash, ksh, etc.).

It will be necessary to read the license agreement, confirm the acceptance of its terms, and enter the directory in which the Linter directory tree is to be installed (by default it is the current working directory).

If you do not accept the terms and conditions of the license agreement, stop the installation process and get in touch with the system vendor to find a solution to the problem.

After the first questions have been answered, the system configuration procedure for current user execution environment will be started automatically.

If Linter is being installed manually, read the license file and perform manual installation in case you agree with the terms. To do this, unpack the linter.tar.Z file as follows:

```
uncompress -c linter.tar.Z | tar xf -
```

or

```
gzip -dc linter.tar.Z | tar xf -
```

A Linter directory tree will be created in the current directory. Now you can start the configure program (it is a shell-script) in the Linter directory to adjust to the software environment.

It is advisable to read the install.txt file. It contains a lot of useful information concerning the installation of the system.

To install the Linter on Unix

1. Insert the CD-ROM with the RDBMS Linter SQL distribution into the CD-ROM drive.
2. Mount the CD-ROM into the /linter directory:

```
mount /dev/cdrom/mnt/linter
```

3. Make /linter directory as a default directory:

```
cd /mnt/linter
```

4. Start the RDBMS Linter SQL installation program:

```
./install.sh or sh install.sh
```

5. Read the License Agreement.

The 'more' Unix utility is used to display the RDBMS Linter SQL License Agreement. Only "forward" navigation is possible in the text (the Enter key and the Space key used for this purpose).

6. If you accept the License Agreement terms, answer Y to the following question (otherwise Linter will not be installed):

“Do you agree to these terms?(Y/N)”

7. Select the directory for the RDBMS Linter SQL files:

“RDBMS Linter SQL will be installed in the current directory (.). To install Linter in a different directory you must have write access to the target directory. Do you want to select a directory for Linter install? (Y/N) [Y]:”

8. To use the current directory, select N.
9. To specify another installation directory, select Y or press Enter. The following message will be displayed:

“If the install directory name is /usr, for example, then the Linter directories will be installed in /usr/linter directory. Enter RDBMS Linter SQL installation directory:”

In answer to this message, you should enter any directory accessible for creating Linter home directory. If the specified directory does not exist, it will be created. To install Linter into another user's directory, you should have the required privileges. The system starts the installation process and next messages will be printed out:

“Uncompress Linter archive...Linter archive uncompress successfully. To run Linter C and Java demo application the configuration procedure must be executed. To build Linter interface for tcl/tk, perl, php use configuration procedure.

The configuration procedure may be completed after the installation process.”

10. Next installation question will be:

“Create Linter start procedure script?(Y/N)[Y]:”

If Yes is an answer, there are two choices will be provided:

“Current database:

- 1 – Initial Linter database with the demo tables;
- 2 – Create database;

Enter the number in range from 1 to 2 [Initial Linter database with the demo tables]:”

It is recommended to use Initial Linter database, because that database suites the regular needs of user applications.

11. In answer to the question

“Do you want to start demo database?”, press Yes.

At the end of the installation procedure there are several questions concerning Linter networking interfaces. All questions provided with the detailed explanations.

MS Windows Operating Systems

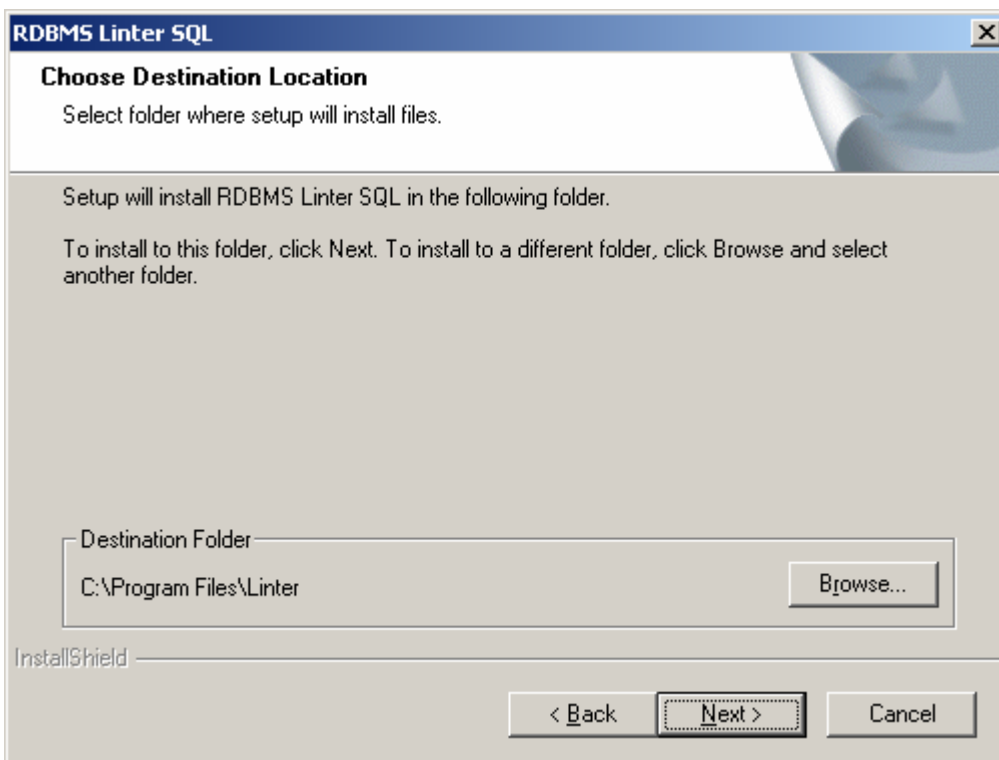
Linter installation procedure is similar for all Windows operating systems. To start the Linter installation process, please run setup.exe installation component.

For MS Windows NT/2000/XP, you must have Administrator privileges in order to create Linter services during the installation process.

In case of lack of administrator privileges the warning message will be displayed:

Sorry, You don't have administrative privileges.
Personal configuration will be installed.

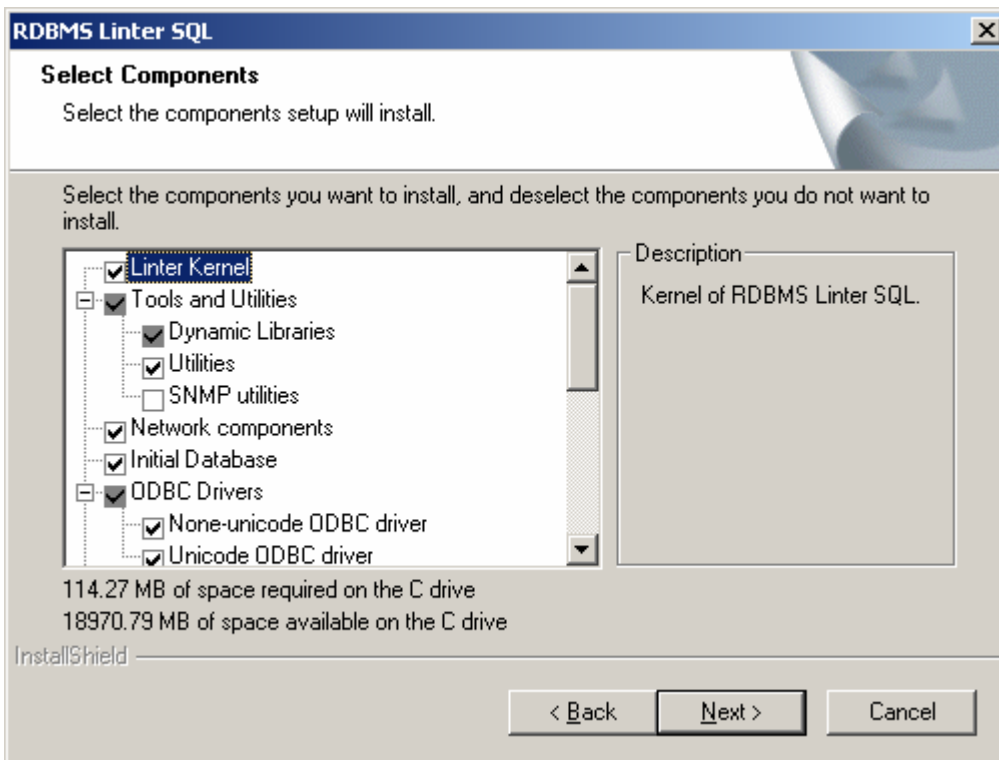
The next window allows you to select a different directory for the installation, with the Browse button.



Screen 1 – Destination location window

When you are satisfied with the directory, click Next.

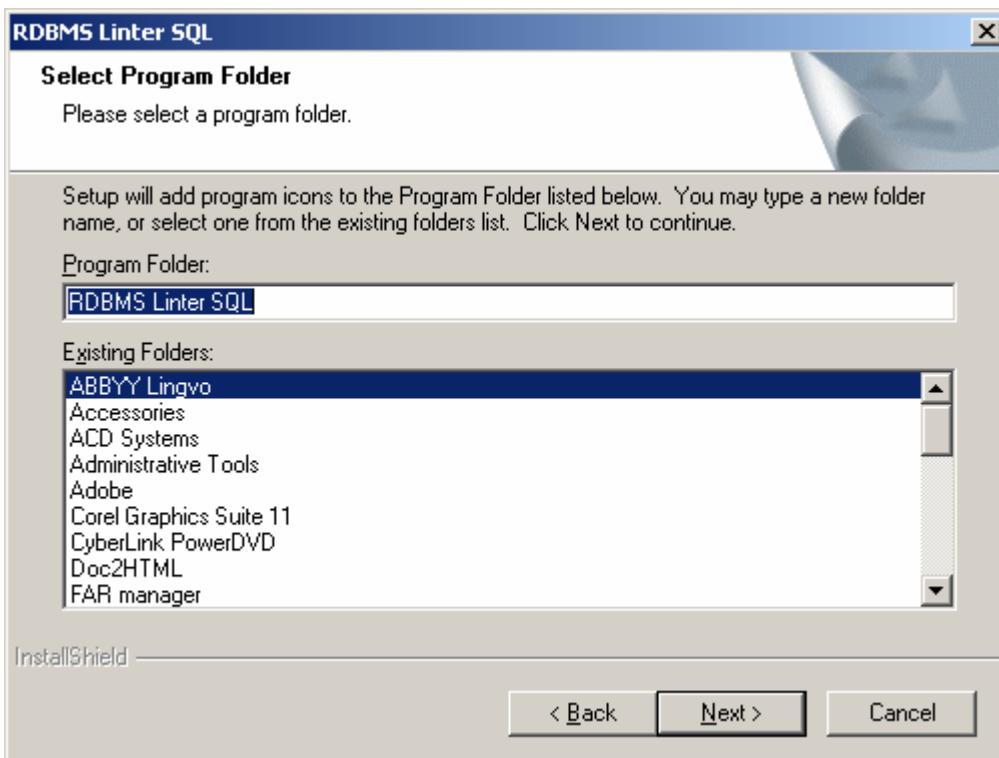
In the following window, you may uncheck the boxes, by clicking on them, to avoid installing the indicated components. For example, if you don't need Demo database, click on its checkbox to remove the checkmark. If you are unsure about which components you need, include them all.



Screen 2 – Select components window

When you have selected the components you want, click Next.

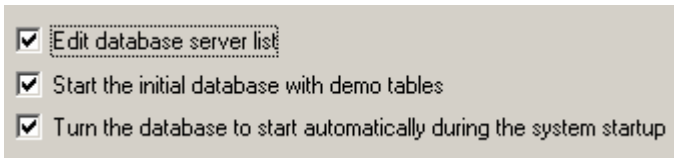
That next window allows you to rename the folder in which linter will be installed. If the default, in the text box is not acceptable, edit it.



Screen 3 – Select program folder window

When the name is to your satisfaction, click Next.

At this stage the same set of actions takes place as there will later.

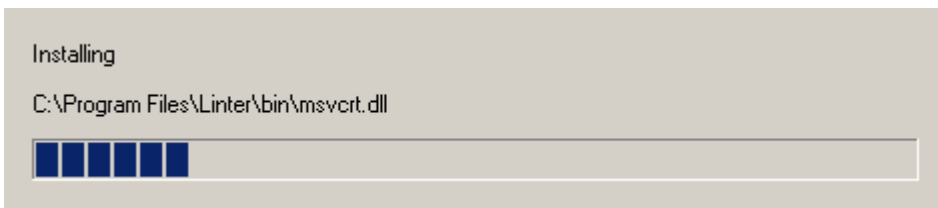


Screen 4 – Choosing action window

The checkbox 'Edit database server' list allows to modify the remote Linter database server access parameters. If the field is not checked, it is possible to change that information later using LinADM utility.

If **Start the initial database with demo tables** checkbox is checked, then Linter will be working with the initial database. It is recommended to use initial database.

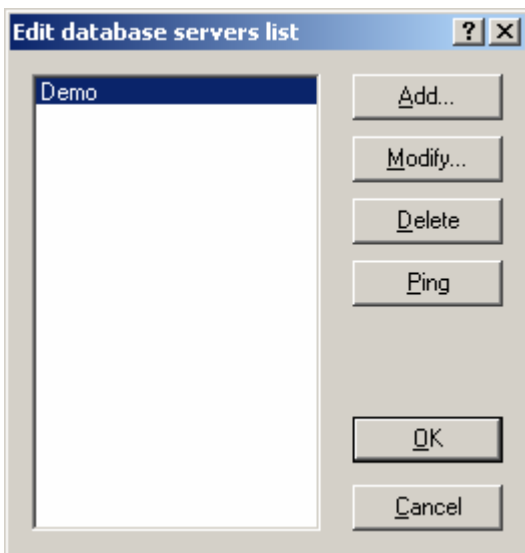
The installation will now begin. You will see a window showing the installation's progress.



Screen 5 – Linter file copying window

The Linter file copying operation is performed automatically by the installation program and does not require operator's actions.

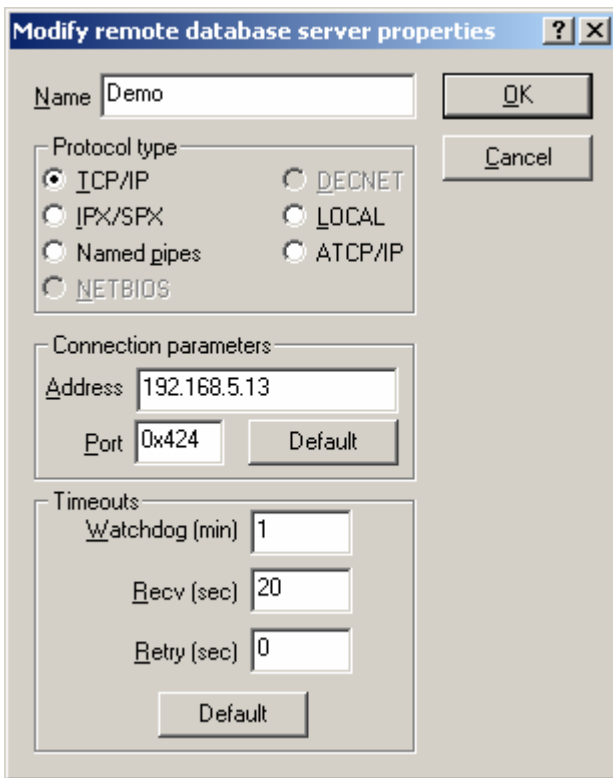
If **Edit database server list** switch has been checked, then **Edit database server list** window is displayed.



Screen 6 – Editing database server list window

The following buttons can be used to edit database server list:

- **Add** – add new remote Linter-server parameters;
- **Modify** – change existing remote Linter-server parameters;
- **Delete** – delete the chosen remote Linter server parameters.

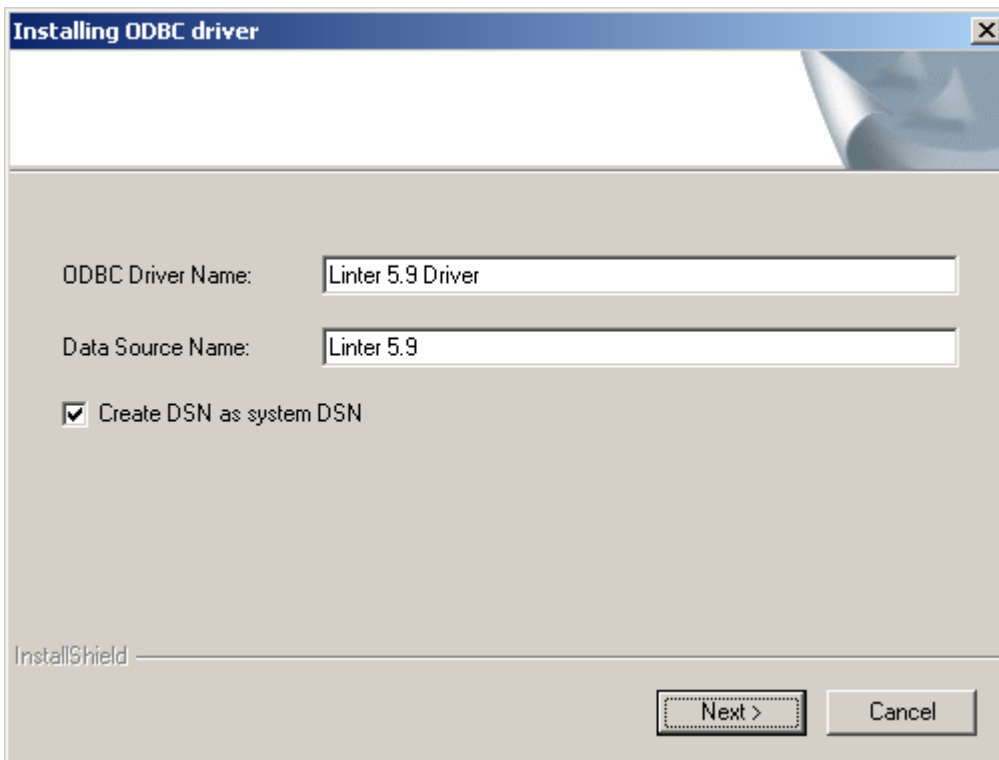


Screen 7 – Modify remote Linter database server properties window

The following list describes Linter database server properties.

| | |
|-------------|---|
| Name | Remote Linter server an arbitrary name. The length of the name is up to 8 characters. |
| Server type | Connection network protocol. |
| Address | Linter database server IP address (for TCP/IP). |
| Port | Socket port number. |
| Watchdog | Time in minutes, setting the maximum allowed time between queue messages of Linter client agent (exchange of client messages or server test messages) to the Linter server listener. If the Linter network has not received the message in a certain amount of time from the client driver, then an error occurs. |
| Send | Time, in seconds, during which the data exchange operation (client messages or client Linter agent test messages) must be processed. If the Linter client agent is unable to perform this operation within the specified time, an error occurs. |
| Retry | Network exchanges retry timeout. |

When the installation is almost complete, you will see the following pop-up form.



Screen 8 – Linter ODBC DSN parameters window

If you have received notification that the ODBC driver or its source file name differs from what is indicated on the form, you may edit either or both text boxes.

If you intend to use Linter's DSN, Data Source Name, as the Windows DSN, check the check box at the bottom of the form.

After clicking OK on the ODBC setup form, you will receive a message that installation is complete.



Screen 9 – ODBC driver version detection window

User will have an option to install newer ODBC driver manager version. If user chooses 'YES', then the older version will be replaced with the new one. If the user chooses 'NO', then version renewal doesn't take place.

Basic Configuration

Setting Environment Variables

Linter maintains more than 30 variables in its own environment. These variables are Linter's run-time parameters. For five of them, you may, optionally, set operating system, environment variables to distribute Linter databases across different disk drives, including UNIX mounted local and NFS drives and MS local and mapped network drives.

On a single computer, you can enhance performance by locating different files on different drives. Availability of disk space and security are other considerations in distributing database files.

With the exception of SY00 (the path to the DB), if any of the optional, operating system, environment variables are set, you must set their corresponding Linter, environment variables. Because Linter is programmed to work with a variable named SY00, it does not need to be set as a part of Linter's environment.

This section describes setting the operating system environment variables. Document "Create a Database", section "SET" describes setting Linter's corresponding environment variables for: SYSWRK DEVICE, SYSWBV DEVICE, SYSSRT DEVICE, and SYSLOG DEVICE.

Finally, the operating system PATH must include Linter's bin directory.

The five Linter run-time parameters for which operating system variables may be set are:

| <u>Run Time Parameter</u> | <u>Expected Environment Variable (if set)</u> |
|---------------------------|---|
| DATABASE PATH | SY00 Default is current working directory |
| SYSWRK DEVICE | none |
| SYSWBV DEVICE | none |
| SYSSRT DEVICE | none |
| SYSLOG DEVICE | none |

The SY00 Variable

Linter looks for the operating system environment variable SY00. If found, Linter will use the path described by that variable to locate the database. If SY00 has not been set, Linter assumes that the DB is located in the user's current working directory.

SY00 is the only variable hard coded into Linter. It is perfectly possible to set, e.g., SY01 as an operating system environment variable for the DB path. However, this will require you to set the Linter environment variable DATABASE PATH to SY01. Using various variable names for various DATABASE PATHS provides an alternative method for assigning different paths to different users.

Example DB File Distribution

In the following examples:

- The name of the DB is DEMO. It is located on the local system's boot drive in the directory `/linter/dbs/demo`.

- The names of the operating system environment variables take their first two letters from the DB name, DEMO and the last two letters from the fourth and sixth letters of the Linter environment variables they will be referencing.
- The length of the operating system variables is limited to four alphanumeric characters.
- The SYSWRK and SYSWBV (bit vector) files will be located on the same drive as the DB.
- The sort file, SYSSRT, is to be located on a local hard drive mounted as hd1 in UNIX; designated as drive D in Windows.

The log file, SYSLOG, will be set for a remote system, NFS mounted on the directory node4; mapped to drive H in Windows.

UNIX Systems

Linters Environment Variable

Add Linter to path
 DATABASE PATH
 SYSWRK DEVICE
 SYSWBV DEVICE
 SYSSRT DEVICE
 SYSLOG DEVICE

Command to Create OS Variable

(device names are examples only)

```
PATH=$PATH :/linter/bin
SY00=/linter/dbs/demo
dewk=/linter/dbs/demo/working
dewv=/linter/dbs/demo/bvector
dest=/hd1 /linter/demo/sort
delg=/node4/linter/systemlogs
```

MS Windows Systems

Environment Variable

Add Linter to path

DATABASE PATH
 SYSWRK DEVICE
 SYSWBV DEVICE
 SYSSRT DEVICE
 SYSLOG DEVICE

Command or Method

(device names are examples only)

For NT: Control panel>System>Environment tab.
 Click on the Value: textbox that contains the current PATH. Use the → key to move to the end of the line and append:

```
;C:\linter\bin
```

For 95 & 98: Include the following line

```
SET PATH=C:\Linter\bin
```

in the AUTOEXEC.BAT file. Windows will append it to the system path.

```
SET SY00=C:\linter\dbs\Demo
```

```
SET DEWK=C:\linter\demo\working
```

```
SET DEWV=C:\linter\dbs\Demo\bvector
```

```
SET DEST=D:\linter\demo\sort
```

```
SET DELG=H:\linter\systemlogs
```

Notifying Linter of OS Environment Variables

To make these environment variables usable by Linter, Linter's environment variables must be set to the operating system's variables.

This is done with the gendb utility's SET command which is described in Document "Create a Database", section "SET". This step cannot be taken until the DB has been created.

Linter Environment Variable

SYSWRK DEVICE

YSWBV DEVICE

SYSSRT DEVICE

SYSLOG DEVICE

gendb SET Command

SET SYSWRK DEVICE DEWK

SET SYSWBV DEVICE DEWV

SET SYSSRT DEVICE DEST

SET SYSLOG DEVICE DELG