

Administration tools

Firebird comes with a number of administration [command-line tools](#):

isql	Command-line interactive tool for the execution of DDL and DML commands and scripts.
gbak	Backup, restore.
gfix	Various parameters, repair.
gsec	User administration.
gstat	Statistics.
fbmgr	Linux only: starts and shuts down the Firebird demon.
nbackup	Incremental backups.
instsvc	Service setup.
instreg	Registry parameters setup.

We recommend the comprehensive tool, IBExpert (<https://www.ibexpert.com>), which also offers a free [Personal Edition?](#), for working with Firebird. This tool is however only available for Windows.

You can also download the free “FbAdmin” from the Consic homepage. This is a simple, German-language administration program, that covers the most important administrative tasks: <https://www.consic.de/firebird>.

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ISQL

The [ISQL](#) utility (“Interactive SQL”) can be found in the Firebird installation's bin directory. When started it reports back with an SQL prompt:

```
SQL> _
```

Each command must end with a semicolon to be executed. Commands can also extend over several lines, from the second line onwards they must be preceded with [CON>](#) (*Continue*) as a prompt.

Create a database

Use the following command to create a new, empty [database](#):

```
SQL> create database 'c:\test.fdb'  
CON> user 'SYSDBA'  
CON> password 'masterkey'  
CON> page_size 4096  
CON> default character set iso8859_1 ;
```

A [page size](#) of 4096 bytes is considered optimal for up-to-date server operating systems. The page size has to be a multiple of 1024.

Following the [database creation](#), you should convert to [SQL Dialect 3](#). This can be done using the [GFIX utility](#) (detailed in a [separate chapter](#)):

```
gfix c:\test.fdb -user SYSDBA -password masterkey -sql_dialect 3
```

Connect to a database

```
SQL> connect 'c:\test.fdb' user 'SYSDBA' password 'masterkey';
```

Use this command to test to connect to a database.

Closing ISQL

ISQL can be closed using the commands, QUIT or EXIT. EXIT commits the current transaction first, QUIT rolls the current transaction back.

Executing an SQL script file

```
isql -i C:\DB\myscript.sql
```

The script file should include a [CONNECT](#) command for the database connection. Alternatively the database can be named, along with the user name and password, directly:

Starting ISQL with a direct database connection

```
isql c:\test.fdb -user SYSDBA -password masterkey
```

Determining the database SQL dialect

```
SQL> show sql dialect;  
Client SQL dialect is set to: 3 and database SQL dialect is: 3.
```

See also:

[ISQL](#)

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GSEC: user administration

The users of all databases run by one service are stored in the security database, [security.fdb](#). There is always at least one user, the Database Administrator, [SYSDBA](#).

Following the installation of a new service, the SYSDBA's password is set to masterkey. (Exception: Firebird for Linux, see [Installing on Linux](#)).

Only the first 8 characters of a Firebird password are significant. A password may not contain any spaces.

Starting GSEC

GSEC can only be started by the SYSDBA.

To start GSEC on the local server, enter:

```
gsec -user sysdba -password <password> [options]
```

To start GSEC for a server in the network, enter:

```
gsec -user sysdba -password <password> -database <databasename>
```

where <databasename> is the name of the security.fdb database on the server.

GSEC can be used as an interactive command-line tool. Alternatively the commands can also be input directly on a command line.

Commands

di[splay]	Displays all users.
di[splay] <username>	Displays all information for the specified user (excepting the password).
a[dd] <username> -pw <password> [options]	Insert a new user.
mo[dify] <username> [options]	Alters the user.
de[lete] <username>	Deletes the user.
h[elp] oder ?	Displays the help.
q[uit]	Ends the interactive mode.
z	Displays the GSEC version number.

If you do not wish to start the interactive mode, all commands may be entered directly in the command line. Each command then need to be preceded by a hyphen ("-").

Options

-pa[ssword] <password>	The password of the user carrying out the alterations.
-user <username>	The user name of the user carrying out the alterations.
-pw <password>	Password of the user being altered or new password.
-fname <first name>	First name of the user being altered.
-mname <middle name>	Middle name of the user being altered.
-lname <last name>	Last name of the user being altered.

Examples

Add the user Elvis Presley as user name, **ELVIS**, the password is **Aaron**:

```
gsec -user SYSDBA -password masterkey
GSEC> add elvis -pw Aaron -fname Elvis -lname Presley
GSEC> quit
```

Change user **ELVIS**'s password to chuck:

```
gsec -user SYSDBA -password masterkey
GSEC> modify elvis -pw chuck
GSEC> quit
```

On Linux, change the **SYSDBA** password from harry to **hamburg**:

```
gsec -user SYSDBA -password masterkey -database
-> harry:/opt/firebird/security.fdb -modify sysdba -pw hamburg
```

On Windows, change **SYSDBA**'s password from Sally to **hannover**:

```
gsec -user SYSDBA -password masterkey -database
-> sally:"C:\Program Files\Firebird\security.fdb"
-> -modify sysdba -pw hannover
```

Change **SYSDBA**'s password on server, **jake**, on TCP port **3051** to **london**:

```
gsec -user SYSDBA -password masterkey -database
-> jake/3051:/opt/firebird/security.fdb" -modify sysdba -pw london
```

Delete user **JOE** on the local server:

```
gsec -user SYSDBA -password masterkey -delete joe
```

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