

GFIX - Firebird Administration

GFIX is Firebird's command line tool for administration issues like data repair, sweeping, etc.

General Syntax

```
gfix [options] -user <username> -password <password> <database> [options]
```

Database Shutdown

When a database has been shut down, only SYSDBA and the database owner are able to connect to the database in order to perform administrative tasks.

Options

<code>-at[tach] <seconds></code>	Used with the <code>-shut</code> option. Waits <code><seconds></code> seconds for all current connections to end. If after <code><seconds></code> seconds there are still connections open, the shutdown will be cancelled.
<code>-f[orce] <seconds></code>	Used with the <code>-shut</code> option. Waits <code><seconds></code> seconds for all connections and transactions to end. After this time, all connections and transactions are cancelled and the database is shut down. Use with caution.
<code>-o[nline]</code>	If a <code>-shut</code> operation is pending, it is cancelled. Otherwise, takes a database back online
<code>-sh[ut]</code>	Shut down database. Must be used together with <code>-attach</code> , <code>-force</code> or <code>-tran</code>
<code>-tr[an] <seconds></code>	Used with the <code>-shut</code> option. Waits <code><seconds></code> seconds for all running transactions to end. If after <code><seconds></code> seconds there are still running transactions, the shutdown will be cancelled.

Examples

Shut down database, wait 60 seconds until all connections are closed

```
gfix -user SYSDBA -password "masterkey" dbserver:/db/mydb.fdb -shut -attach 60
```

Note that GFIX will terminate with an error if there are still connections open after 60 seconds.

Shut down database, force shutdown after 60 seconds

```
gfix -user SYSDBA -password masterkey dbserver:/db/mydb.fdb -shut -force 60
```

Shut down database, force shutdown NOW

```
gfix -user SYSDBA -password masterkey dbserver:/db/mydb.fdb -shut -force 0
```

Put database online again

```
gfix -user SYSDBA -password masterkey dbserver:/db/mydb.fdb -online
```

Extended State Options in GFIX for Firebird 2.0

The state keyword is inserted before the options:

normal	online database
multi	multi-user shutdown mode (the legacy one, unlimited attachments of SYSDBA and Owner are allowed)
single	single-user shutdown (only one attachment is allowed, used by the restore process)
full	full/exclusive shutdown (no attachments are allowed)

Example:

Shut down database, force shutdown NOW, allow no subsequent connections, even from SYSDBA or Owner

```
gfix -user SYSDBA -password masterkey dbserver:/db/mydb.fdb -shut full -force 0
```

Database Repair, Sweeping

Options

-f[ull]	Use with the -v option. Checks all records and pages and releases unassigned record fragments
-h[ousekeeping] 0	Switch off automatic sweeping
-h[ousekeeping] <n>	Set Sweep Interval to <n> transactions (default is 20000)
-i[gnore]	Ignores checksum errors during a validate or sweep
-m[end]	Marks corrupt records as unavailable so they are skipped on a subsequent backup
-n[o_update]	Use with the -v option. Checks all records and pages and reports errors

but does not repair them

<code>-s[weep]</code>	Forces an immediate sweep
<code>-v[alidate]</code>	Check database for validity. At the same time, errors are reported and repaired

Examples

Validate Database

```
gfix -user SYSDBA -password masterkey dbserver:/db/mydb.fdb -v -f
```

Sweep Database now

```
gfix -user SYSDBA -password masterkey dbserver:/db/mydb.fdb -s
```

Set Sweep Interval to 50000 transactions

```
gfix -user SYSDBA -password masterkey dbserver:/db/mydb.fdb -h 50000
```

Switch off Automatic Sweeping

```
gfix -user SYSDBA -password masterkey dbserver:/db/mydb.fdb -h 0
```

Misc Options

<code>-b[uffers] <pages></code>	Default cache buffers for the database will be set to <pages> pages
<code>-c[ommit] <id></code>	Commits limbo transaction specified by the given <id>
<code>-c[ommit] all</code>	Commits all limbo transactions
<code>-l[ist]</code>	Display IDs of all limbo transactions and what would happen to each transaction if you would use -t on it
<code>-mo[de] read_write</code>	Set mode of database to read/write (default). Requires exclusive access to database (shutdown)
<code>-mo[de] read_only</code>	Set mode of database to read-only. Requires exclusive access to database (shutdown)
<code>-pa[ssword] <password></code>	Database password

<code>-p[rompt]</code>	Use with <code>-l</code> . Prompts for action.
<code>-r[ollback] <id></code>	Rolls back limbo transaction specified by the given <code><id></code>
<code>-r[ollback] all</code>	Rolls back all limbo transactions
<code>-s[ql_dialect] 1</code>	Sets SQL dialect 1 for the database
<code>-s[ql_dialect] 3</code>	Sets SQL dialect 3 for the database
<code>-t[wo_phase] <id></code>	Performs automated two-phase recovery for limbo transaction with the given <code><id></code>
<code>-t[wo_phase] all</code>	Performs automated two-phase recovery for all limbo transactions
<code>-user <name></code>	Database username
<code>-w[rite] sync</code>	Enables Forced Writes
<code>-w[rite] async</code>	Disabled Forced Writes
<code>-z</code>	Show GFIX and server version

Examples

Set Database to Read-Only

```
gfix -user SYSDBA -password masterkey dbserver:/db/mydb.fdb -shut -attach 60
gfix -user SYSDBA -password masterkey dbserver:/db/mydb.fdb -shut -force 0
gfix -user SYSDBA -password masterkey dbserver:/db/mydb.fdb -mode read_only
gfix -user SYSDBA -password masterkey dbserver:/db/mydb.fdb -online
```

Set Database to SQL Dialect 3

```
gfix -user SYSDBA -password masterkey dbserver:/db/mydb.fdb -sql_dialect 3
```

Enable Forced Writes

```
gfix -user SYSDBA -password masterkey dbserver:/db/mydb.fdb -write sync
```

Disable Forced Writes

```
gfix -user SYSDBA -password masterkey dbserver:/db/mydb.fdb -write async
```

Stefan Heymann, last change 2006-05-04

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