

Advanced IDE Usage

Firebird Conference 2019

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IBSurgeon



Products

- Personal Edition
- Day Edition
- Developer Studio
- CYE/ESYE
- OEM

Modules

- IBExpert.exe
- IBEScript.exe/IBEScript.dll
- hksc

Firebird Demo Database

- db1_30.sql demodb script
- Table Editor
 - Field dependencies
- Procedure Editor
 - Version History
- DB Registration
 - Show Systemtables

Package Editor

- Putils Package
 - Procedure Psoundex
 - Header
 - Body

Functions

- Soundex
 - Lazy mode off
 - Function uses SP for implementation
- IBEExpert FreeAdhoc Function Library
 - Replacement for FreeAdhoc UDF dll/so
 - Complete Implementation available for example for averp.fdb database on request
- Almost any existing dll/so udf can be converted
 - Ask IBEExpert team for details

Version History

- Also available for
 - Functions
 - Trigger
 - Packages
 - Stored procs

SQL Editor

- Drag and drop objects from db explorer
 - Db registration
 - Table object
 - Alias
 - Var prefix
 - Perform Code formatting
- Code Completion
- Keyboard Templates

SQL Editor <> Script Executive

- Multiline SQL Statements → Script executive
- Singleline SQL Statements → SQL Editor
- Both can only execute parts when parts are selected
- Db Query Organizer
- execute procedure initial(10000)
 - Message
 - Performance Analysis

Debugging

- Open SP DELETEALL
 - Debugger
 - Params, Breakpoints etc
 - Debug mode:Collect Statistics
 - F9 Run
 - Goto Statistics Page
 - Order by columns that took longest time
 - Set breakpoint with condition

V_TOP100SALES View and how it works

- Select on a stored proc
- `select * from v_top100sales` in sql editor
 - Runs massive operation only once per minute
 - See sp for details
- Basic concept Materialized View

Using Version Control

- Tools-extract metadata
 - Vcs files
 - Extract all to C:\confllex\
 - Open windows explorer, show file content
 - One file per object
 - Separate Files
 - All meta objects and all data incl. Blobs
 - Optional Where clause
 - C:\confllex2\
 - Open windows explorer, show folder content

Stored Procedure/Trigger View Analyzer

- Red lines → bad
 - Unused variable
 - Compatibility
 - No pk

Dependencies Viewer

- Tools-dependencies viewer
 - Drag and drop product table
 - Expand all

Tools - Table data compare

- Master db1
- Target db2
- Select product table
- Online sync
- Options

Trace API

- Real world example
- How to set up?
- Grid mode

Benchmark

- How to measure speed of firebird hardware/software
 - Ibexpert benchmark
 - Params
 - Ext
 - Async

Database inside

- What is database inside
- How to use?
- Db repair and export from corrupt databases

IBExpert

- Advanced IBExpert Scripting

IBEBlock Script Language

- Basic compatibility to SP and Trigger language
- A lot of extension
 - Script editor
 - Drag and drop connection to editor
 - Ibeblock create connection
 - ibec_createconnection F1
 - Odbc example
 - Ibec_*

DLL and exe

- Exe parameter
 - Use params for
 - Connectionstring
 - Username and password
 - Global variable
 - -e encrypt script file to unreadable mode
- DLL
 - Example
 - Lazarus source code

Tools Extract Metadata

- Commandline based example
 - downgrade/upgrade db with global changes
 - Charset
 - Owner
- Create script for extract
- Show basics to search/replace in ibe\$*.sql files
 - ibec_stringreplace
 - ibec_loadfromfile
 - ibec_savetofile

More examples

- Email processing
- Url Downloading
- Reporting and pdf creation
- Running ibescript from Windows Scheduler

Other tools

- Ibegbak.exe
- Ufw.exe
- Hksc.exe
- Watchdog