Workshop Firebird 5 Update and Know-how

Day 1:

- Overview of the benefits of switching to Firebird 5
  - Data types and their impact
- Installation expertise
  - Parallel operation with older versions
  - Legacy Mode
  - Compatibility Mode
  - Memory Settings
  - Client Library and other DLLs
  - Further Conf adjustments
- Optimising hardware and the operating system
  - CPU types and configuration
  - Drive types and configuration
- Backup and restore
  - Speed analysis and optimisation
  - Common pitfalls and how to avoid them
  - Client side, local, partial, variants
  - ODS, data types, system tables, keywords
- Upgrading Your Database Version
  - Automating unsupervised upgrades at customer sites
  - Scripts for automated testing with embedded Firebird
  - Fallback security: handling incomplete or failed upgrades
  - Replacing the database owner and character set
- Post-Upgrade Tasks
  - Recompiling all objects and identifying typical errors
  - Analysing table structures and indices
  - Splitting tables (vertical and horizontal); using views for compatibility
  - Outsourcing table contents (especially BLOBs) to separate databases; using calculated fields and triggers for compatibility
- Identifying and correcting typical errors in your own application
  - TField objects in datasets
  - Memory issues with 32-bit executables handling large datasets in Datasource/Dataset/DBGrid
  - Asynchronous BLOB data display

Day 2:

- Optimisation of database operations
    - Understanding what is transferred, when, why, and how across the network
    - Optimising your own SQL commands
    - Implementing calculated fields with caching
    - Prepare/unprepare, commit/rollback effects
- Database monitoring and trace
    - Overview of database monitoring and the relevant system tables
    - Filter and use trace
    - Adding custom runtime logging in stored procedures and triggers
- Basics for a user-created log
    - Trigger for insert/update/delete logging with IP/User/Process
    - Using a separate database for logging
    - Extending triggers to log old/new data values
    - Extending the logging for BLOB content
    - Outsourcing logs to separate annual databases
    - Enhancing logs for undo/redo functionality, including execution of undos (e.g., restoring deleted records)
- Basic custom replication techniques
    - Using triggers to synchronise two or more databases
    - Synchronous or asynchronous replication, also for Firebird>=2.5
    - Activating and deactivating replication without downtime
    - Clustering as master-slave, master-multislave, master-master, multi-master
    - Out of the box: Using IBEReplicator in practice as a ready-to-use product
- Automatic metadata generation and analysis
    - Automatically generate and delete log and replication triggers
    - Transaction-safe activation and deactivation of metadata
- Advanced IBExpert Scripting
    - IBEBlock for UPS shipping interface integration with barcode result import and other uses
    - IBEBlock for PDF and scan processing, conversion to JPEG, selective OCR with Tesseract
    - Metadata and data compare
- IBExpert IDE
    - What many long-time users do not know ...
    - Customisation and automation
    - Using scripting for completely different tasks

There are certainly many items in the catalogue of topics that are relevant for you and almost everything shown can also be implemented with older Firebird versions.

All technologies presented are based on real customer projects.

We will not be able to work out all the details of every topic together, if subjects such as logging, replication, OCR, ... are of interest to you, I will show you in the workshop how you can implement these using the existing basic technology of Firebird and IBExpert.

Some topics serve more as a showcase to demonstrate how certain solutions can be realised, which you might not have otherwise implemented in this way.

I also share real experiences from customer projects where significant volumes of data were accidentally deleted, but where we were not only able to identify the cause using the above-mentioned logging and undo/redo, but were also able to completely reverse the deletion process days later using a procedure.

In this way, you can gain a considerable competitive advantage over your competitors with your industry software, or have your own in-house software validated.

Many decision-makers would certainly be significantly influenced by such a feature when choosing one system or another, especially those who have previously encountered issues with data security and a complete history of data changes or even complete losses due to Trojans or simply incorrect usage.

Many features, such as replication, are already included in the Firebird engine itself, but these solutions often have a black-box character and can only be used very restrictively and with forced downtime or are not multi-master-capable.

The workshop will be recorded (screen and audio). All participants will receive the video for download following the workshop. However, it is explicitly forbidden to pass it on to third parties.

If you are still interested in certain topics after the workshop, we can work together to realize your planned projects on your production database, e.g. as part of our IBExpert & Firebird Prepaid Hotline.

You are also welcome to book the above programme as an individual workshop at your premises, so that we can tailor the 2-day workshop to your specific needs and database structures.

If you are interested, please contact our IBExpert sales team at sales@ibexpert.biz for a quote and to schedule a date. We offer workshops and training both remotely and on-site worldwide, in German or English.

If you are interested in our workshop but are unable to attend in person, or if you are interested in the asynchronous video content, please contact our IBExpert Sales team at sales@ibexpert.biz. We are happy to help you.

After the restrictions of the first corona lockdown more than 5 years ago, we still believe in the advantages of in-person participation. Questions that you could not even formulate during the workshop itself can often be directly clarified much faster and more effectively during the evening get-together between you and myself over a beer, than if you are still trying to recall them weeks later while watching the video. Neither the video nor any AI will provide the answers to your specific questions.

We hope to see you soon!