FireDAC em Aplicações Mobile

Fernando Rizzato
Lead Software Consultant, *Latin America*

AGENDA

- Interbase Server vs Developer vs IBLite vs IBToGo
- Banco de Dados no Mobile
  - SQLite
  - IBLite/IBToGo
  - Interbase vs SQLite
- Configurações e problemas comuns
- Demos

Interbase Server vs Developer vs IBLite vs IBToGo

Attribute Description	IBLite	InterBase ToGo	InterBase Desktop	InterBase Server
Platforms	Android, iOS, Windows, OS X	Android, iOS, Windows, OS X	Windows	Windows, Linux 32bit and 64bit
Licensing of CPU Cores	1	4	4	8
Maximum simultaneous users	1	1	1	1 to Unlimited
Number of connections per user	1	8	8	4
Access local database from clients on remote systems	No	No	No	Yes
Connect to server hosting database on remote systems	Yes	Yes	Yes	Yes
TCP listening server	No	No	No	Yes
Strong (256bit AES) database and column encryption	No encryption	Yes	Yes	Yes
Strong network (SSL) encryption	No encryption	Yes	Yes	Yes
Able to import add-on licenses	No	No	No	Yes
Database file size limitation	100MB	No limit	No limit	No limit
Change Views	No	Yes	Yes	Yes
Journaling and Journal Archives	No	No	No	Yes

Banco de Dados no Mobile - SQLite

- Embutido (ou Embarcado)
- Sem dependências externas
- Serverless – não tem versão *server*
- Zero-Configuration – não requer instalação
- É transacional e segue o padrão ACID
  - Atomicidade, Consistência, Isolamento e Durabilidade
- Desenvolvido pelo SQLite Consortium
  - http://sqlite.org

Banco de Dados no Mobile – IBLite/IBToGo

- Embutido (ou Embarcado)
- Sem dependências externas
- Possui uma versão *server* de alta performance
- Zero-Configuration – não requer instalação
- É transacional e segue o padrão ACID
  - Atomicidade, Consistência, Isolamento e Durabilidade
- Trata-se de um RDBMS completo, mesmo no mobile
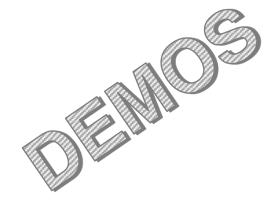- Windows, Linux, Android, iOS, OS X, Solaris...

Banco de Dados no Mobile - IBLite/IBToGo

Attribute Description	IBLite Edition	InterBase ToGo Edition
Licensing of CPU Cores	1	4
Licensed simultaneous users	1	2
Number of connections per user	1	4
Access local database from clients on remote systems	No	No
Connect to server hosting database on remote systems	Yes	Yes
TCP Listening Server	No	No
Strong (AES) Database and Column Encryption	No encryption of any kind (weak or strong) allowed	Yes
Strong Network (SSL) Encryption	No encryption of any kind (weak or strong) allowed	Yes
Able to Import Add-on Licenses	No	No
Database File Size Limitation	100MB	No limit
Simultaneous Transaction per Connection	1*	No limits
Change Views	No	Yes

BANCO DE DADOS NO MOBILE - INTERBASE VS SQLITE

Features	InterBase	SQLite
Stored Procedures	Fully supported including DDL.	Not supported
User and table permissions	Fully supported, allows database, table and user level permissions	Not supported
No simultaneous remote access	Allowed without any limitations	Restricted, as simultaneous database access is not recommended.
True online backups	Supported	Not truly on-line
Encryption	Database level, table level and column level, with permissions control.	Not supported. Extension with only full database encryption available for additional cost.
Numeric Data types	Multiple choices supported, including exact numeric.	Single integer type supported.
Parallelism.	Allow simultaneous query execution. Allow parallel index creation.	Not Supported.
Domains	Allows full support for SQL Domains	No user or domain support.
SQL Cursors	Supported, allows breaking up of operations to one row at a time.	Not supported. Must deal with the complete result set and application must provide and accommodate for the result set.

Mãos a Obra!

DEMOS

RECURSOS ADICIONAIS

- **Downloads**
  - Interbase **Server** Trial (90 dias)
    - https://www.embarcadero.com/products/interbase/start-for-free
  - Interbase **Developer** (20 usuários/ 80 conexões)
    - https://downloads.embarcadero.com/free/ibdev
  - **IBLite** (Free) **/ IBToGo** (Teste)
    - Parte da instalação de seu Delphi/C++ Builder
    - http://docwiki.embarcadero.com/RADStudio/en/IBLite_and_IBToGo_Test_Deployment_Licensing

RECURSOS ADICIONAIS

- Documentação
  - http://docwiki.embarcadero.com/RADStudio/en/Mobile_Tutorial:_Using_FireDAC_in_Mobile_Applications_(iOS_and_Android)
  - http://docwiki.embarcadero.com/RADStudio/en/Mobile_Tutorial:_Using_InterBase_ToGo_with_FireDAC_(iOS_and_Android)
  - http://docwiki.embarcadero.com/RADStudio/en/Mobile_Tutorial:_Using_FireDAC_and_SQLite_(iOS_and_Android)
  - http://docwiki.embarcadero.com/RADStudio/en/Using_SQLite_with_FireDAC

- Blogs
  - http://www.fmxexpress.com/read-and-write-a-blob-field-using-firedac-with-firemonkey-on-android-and-ios/
  - https://delphiaball.co.uk/2016/02/01/interbase-user-security-interbase-labs/
  - https://delphiaball.co.uk/2016/02/08/interbase-journaling-interbase-labs/

OBRIGADO!

Perguntas?

Você pode me encontrar em:
@FernandoRizzato
fernando.rizzato@embarcadero.com

Siga-nos em
fb.com/DelphiBrasil
fb.com/EmbarcaderoBR

Delphi Academy