Acesso a Dados para iOS e Android

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Embarcadero Conference

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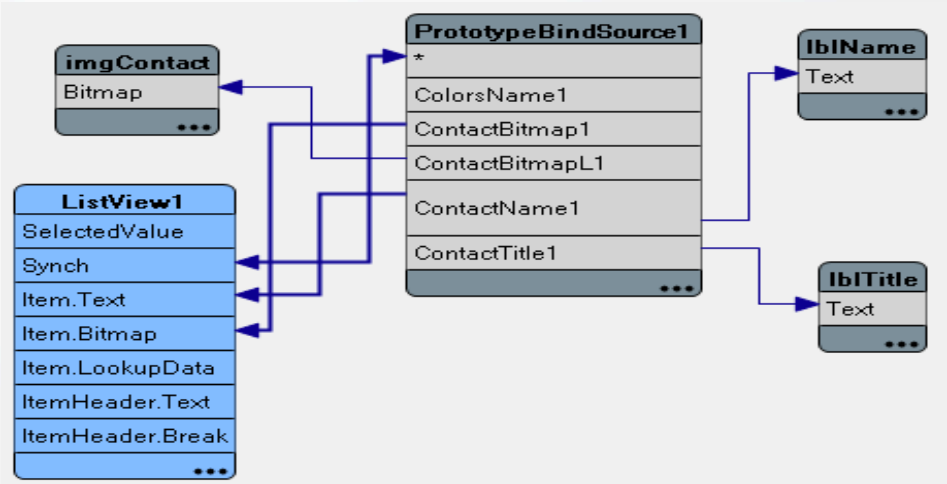
Agenda de Hoje

- Visual LiveBindings
- Databases for iOS e Android
  - IBLite
  - IBToGo
  - SQLite
- Componentes de Acesso
  - DBExpress
  - FireDAC
- CRUD para Aplicações Móveis

Visual LiveBindings

- Conecte Controles a Dados
- Protótipo Rápido de Apps

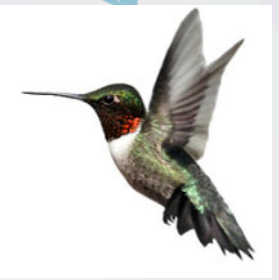


Banco de Dados Locais (iOS e Android)

SQLite	IBLite	InterBase ToGo
Free	Free	Commercial
Feature light	Feature light	Fully featured
No security	No security	Secure Encryption
Simple Data Storage	Full SQL-92 RDBMS	Full SQL-92 RDBMS
Single read/write	Fast multi read/ write	Fast multi read/ write

Distribua IBLite Gratuitamente

- Interbase IBLite é um banco de dados embutido para iOS e Android
- Está incluso em todas as edições do RAD Studio XE4 e Delphi XE4 (PRO com o Mobile Add-On ou superiores)
- Faça o upgrade para o Interbase ToGo para funcionalidades adicionais



Attribute Description	IBLite	InterBase ToGo	InterBase Server Edition
Licensing of CPU Cores	1	4	8
Licensed simultaneous users	1	2	Unlimited
Number of connections per user	1	4	4
Remote client access	Yes	Yes	Yes
TCP listening server	No	No	Yes
Strong (AES) database and column encryption	No encryption of any kind (weak or strong) allowed	Yes	Yes
Strong network (SSL) encryption	No encryption of any kind (weak or strong) allowed	Yes	Yes
Able to import add-on licenses	No	No	Yes
Database file size limitation	100MB	No limit	No limit

InterBase vs. SQLite 3.6.19

Features	InterBase XE3	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.
Filters and user defined functions	Supported	Not supported
Corporate Support	Available	No

FireDAC: Acesso a Banco de Dados Corporativos

ORACLE

SYBASE

Microsoft SQL Server

InterBase

MySQL

PostgreSQL

IBM DB2

Múltiplos Dispositivos

Múltiplas Fontes de Dados

O Que é FireDAC?

- Um conjunto de componentes universais de acesso a dados, possibilitando:
  - Desenvolver para qualquer banco de dados
  - Utilizar Delphi e C++Builder
- Alta performance, fácil de usar, conexão com bancos locais e corporativos
- Acesso a dados universal
  - Porém com características especificas de cada banco de dados

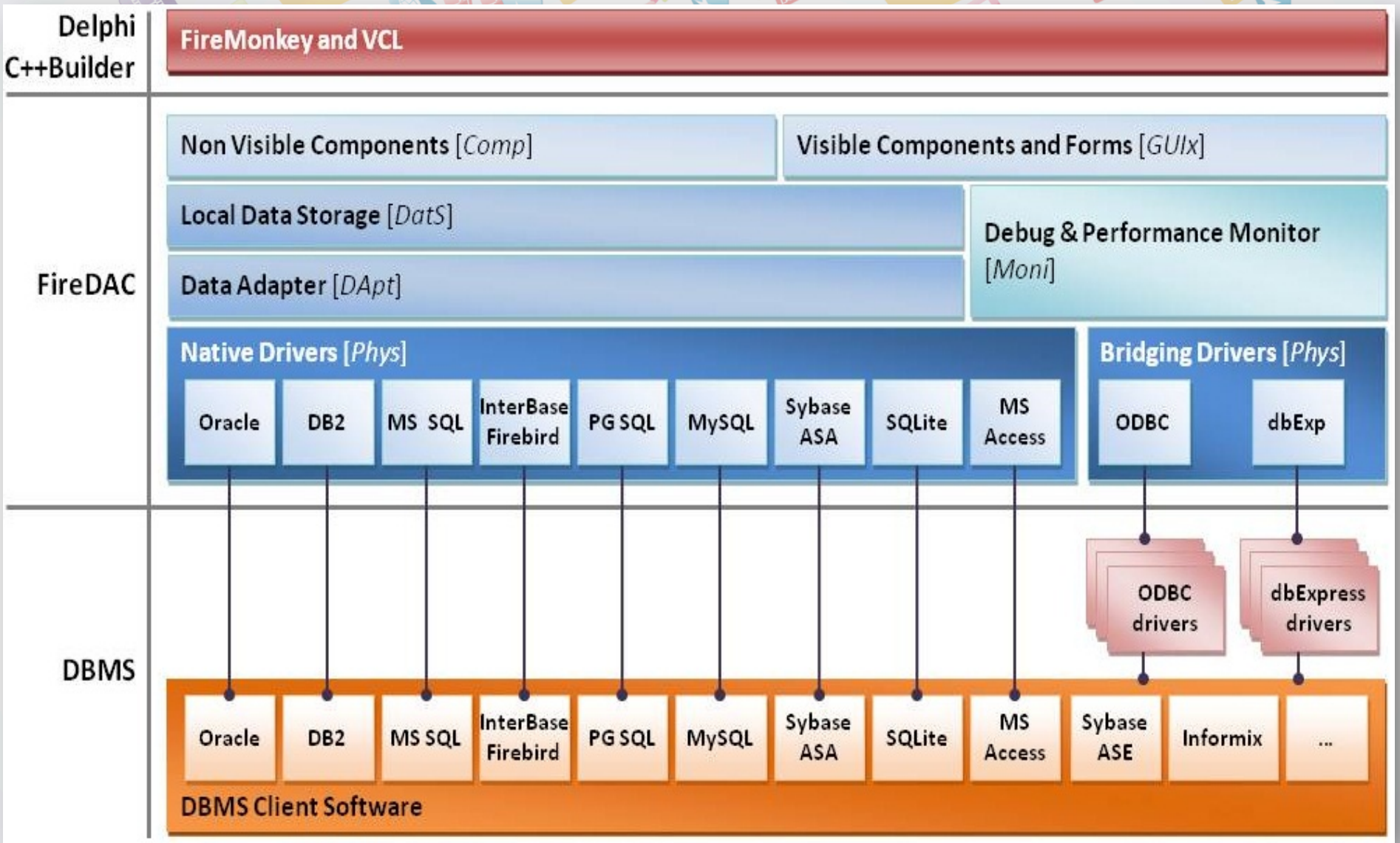
FireDAC: Principais Características

- Mecanismo de acesso a dados
  - Baseado em classes + componentes TDataSet
- Alta performance de acesso
  - Desde *Live Data* até *Array DML*
- API unificada
  - Abstração de SQL e suporte a *scripting*
  - Controle de transações e erros unificados

FireDAC: Drivers Nativo

- MySQL
- Microsoft SQL
- Server
- Oracle Database
- InterBase
- PostgreSQL
- DataSnap
- SQLite
- Sybase SQL
- Anywhere
- Microsoft Access
- IBM DB2 Server
- Firebird
- Advantage Database
- ODBC gateway
- dbExpress gateway

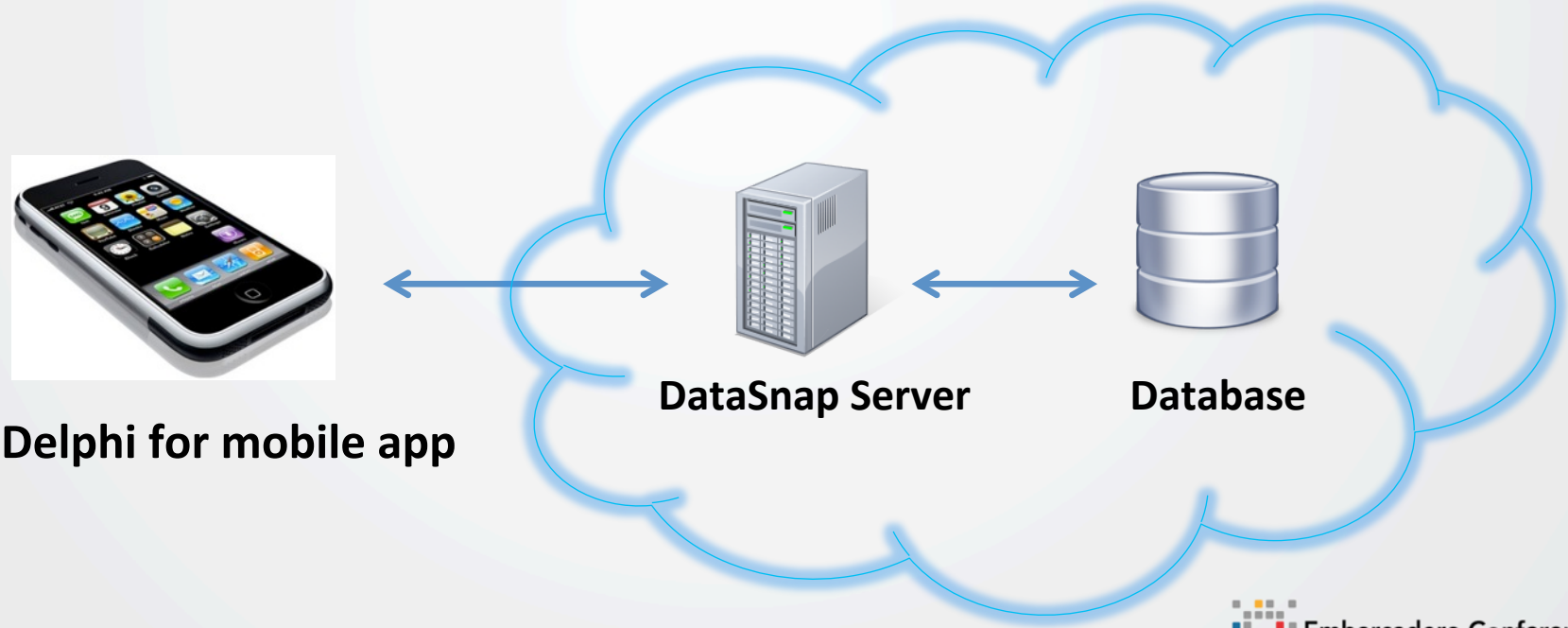
FireDAC: Visão Geral



Multitier com DataSnap

Acessando serviços locais ou cloud-based via REST/ JSON ou SOAP

Conectando dados corporativos a partir de um dispositivo móvel



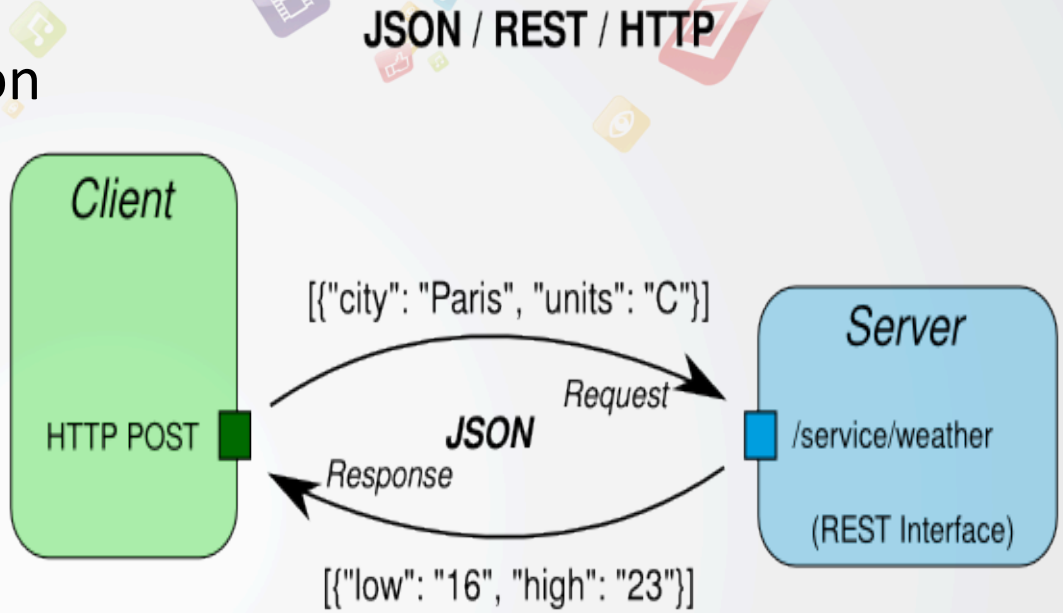
Conexão ao Backend com REST/JSON

Comprehensive HTTP client
- Asynchronous execution
- Proxy connection
- HTTPS

Authentication
- Basic, OAuth1, OAuth2

JSON
- Parsing, Formatting
- JSON to TObject, TObject to JSON

Rapid Prototyping
- LiveBindings
- Design time execution



Demo: Local Interbase + iOS + Android

Referencias

- Visual LiveBindings
  - http://www.malcolmgroves.com/blog/?p=1084
  - http://www.malcolmgroves.com/blog/?p=1186
  - http://www.malcolmgroves.com/blog/?p=1254
  - http://www.malcolmgroves.com/blog/?p=1226
  - http://www.malcolmgroves.com/blog/?p=1490

Obrigado!!!

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