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Código, código e mais código

Conectando pessoas através do desenvolvimento

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Mundo Embarcadero:
Aquisições Lançamentos Roadmap

Fernando Rizzato

AGENDA

- Embarcadero Hoje
  - Grupo Idera
  - Aquisições
- Últimos Lançamentos
    - RAD Studio 11
    - Interbase 2020 Update 2
    - Sencha Ext JS 7.4
- Roadmap*

Idera Inc. - Aquisições Recentes

2016 – CONTINUED GROWTH

- 2019: **Travis CI** Acquired
- 2018: **Lansa** Acquired
- 2018: **Assembla** & **MyGet** Acquired
- 2018: **Whole Tomato** Acquired
- 2018: **Froala** Acquired
- 2018: **Webyog** Acquired
- 2017: **Ranorex** Acquired
- 2017: **Sencha** Acquired
- 2017: **Aquafold** Acquired
- 2016: **Gurock TestRail** Acquired

2013 – 2015: IDERA BECOMES GLOBAL

- **2015: Acquired Embarcadero Technologies**
- **2014: Uptime** Acquired
- **2013: CopperEgg and Precise Software** Acquired

2003 – 2012: LAUNCH and EARLY DEVELOPMENT

- **2008**: Windows SharePoint and IDE Platforms Introduced
- **2007: R1Soft** Acquired
- **2003: Idera Software Founded**

2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019

Idera, Inc.

- **Founded:** 2003
- **HQ:** Houston, TX
- **GLOBAL Offices:** 15
- **People:** 600+

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Idera, Inc.

Database Tools

IDERA

AQUAFOLD

Webyog

Developer Tools

embarcadero®

Sencha

WHOLE TOMATO SOFTWARE

Froala

LANSA

DevOps Tools

TestRail

Ranorex®

kiuwan

Travis CI

ASSEMBLA

* Last Updates: https://www.ideracorp.com

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Idera Inc. - Developer Tools

Foco no **Desenvolvedor!**

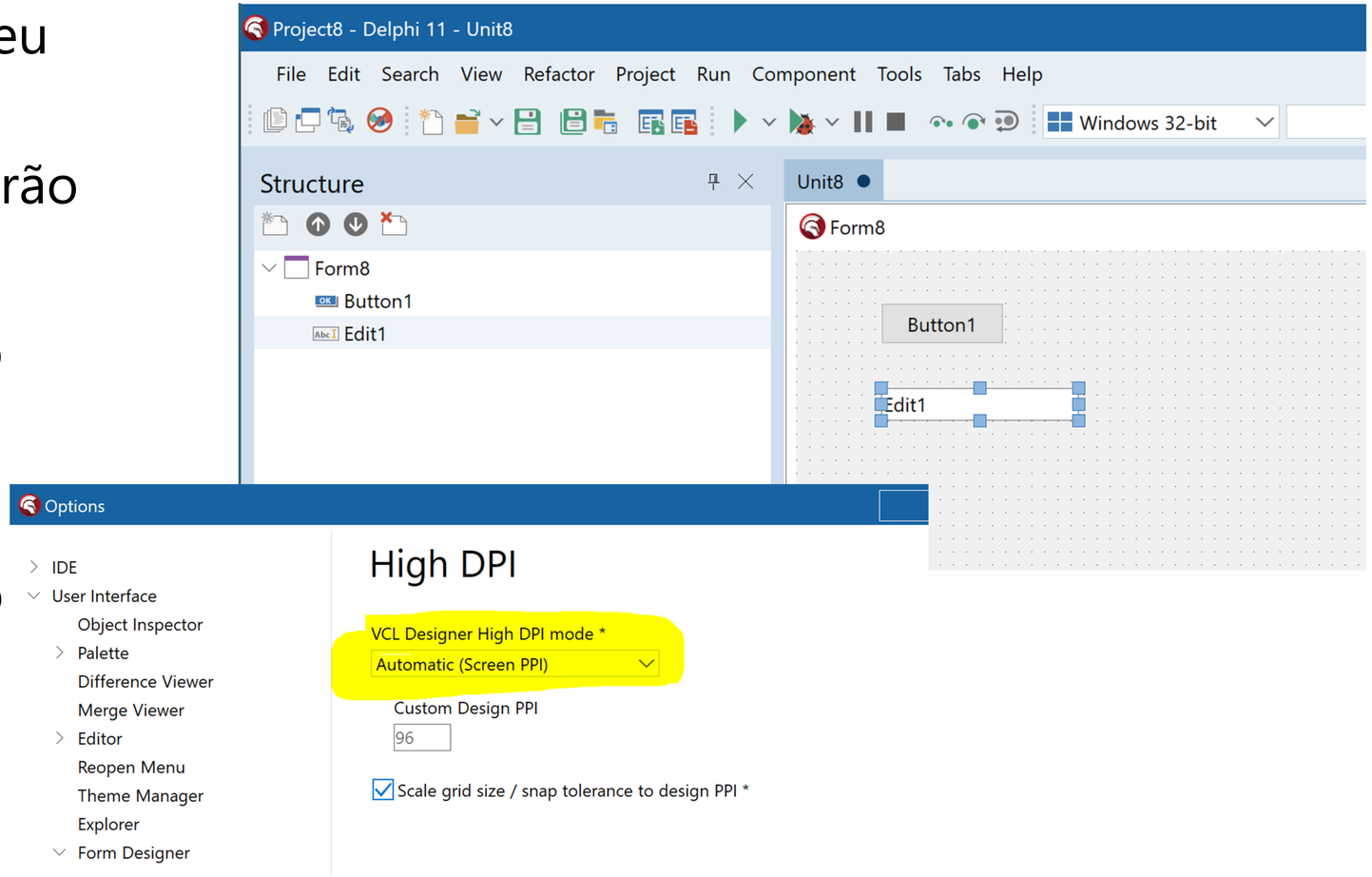
- Comprometida em desenvolver e adquirir as **melhores ferramentas** de desenvolvedor
- **Abordagem de tecnologia aberta** que coloca as escolhas do desenvolvedor em primeiro lugar (ou seja, sem alinhamento com um conjunto de tecnologias ou cadeia de fornecedores)
- Alcance **global** mas com abordagem **local**

RAD STUDIO *11*

I. Novidades da IDE

High DPI Form Designer

- Forms, frames, e data modules
- Designer pode usar DPI baixo (96), seu DPI atual ou um DPI personalizado (definido no diálogo Opções). O padrão é baixo (low)
- O DPI é salvo no DFM e o formulário escalonado no tempo de execução
- Designer FMX simplesmente escala como ele faz em tempo de execução



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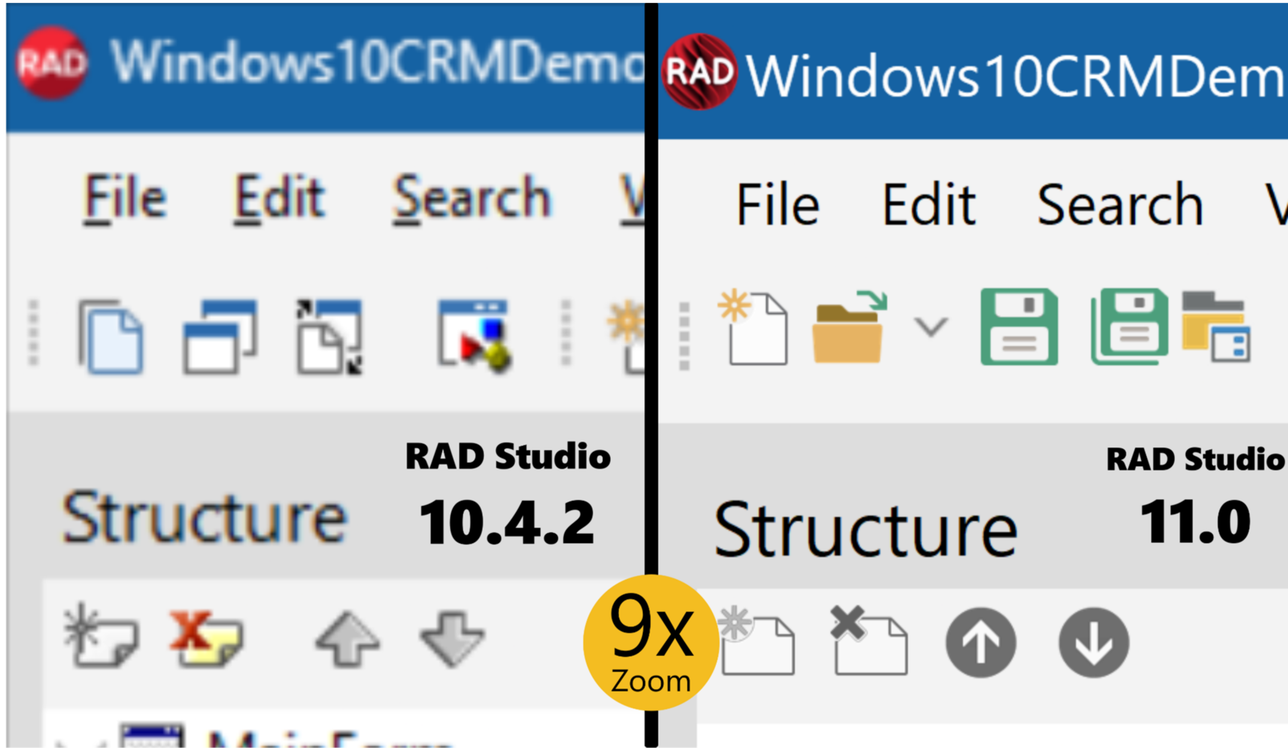
High DPI IDE

- Fontes nítidas em todas as janelas e editor
- Baseado no suporte VCL PerMonitorV2 e suporte High-DPI para estilos
- Novos conjuntos de ícones na IDE (com múltiplas resoluções), O IDE usa os componentes image collection e virtual image list
- ToolsAPI: novas interfaces para APIs que usam imagens



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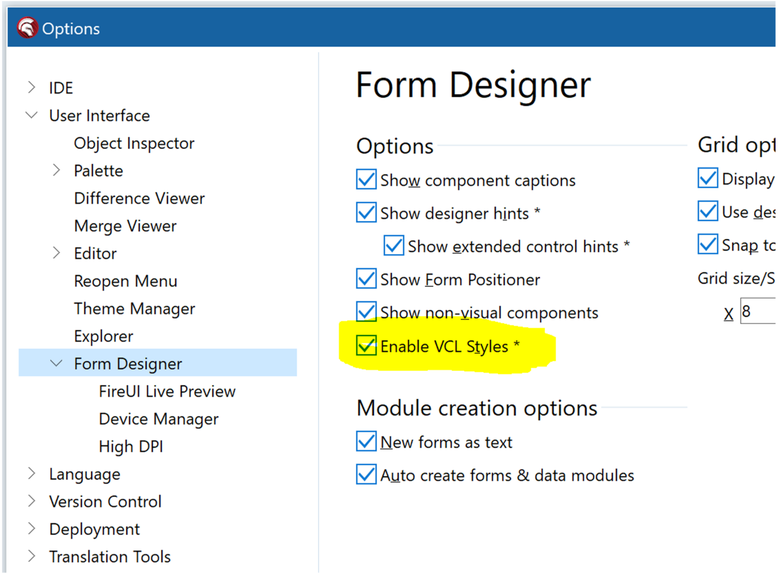
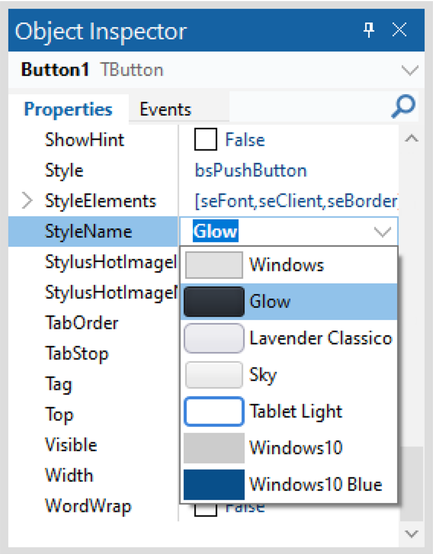
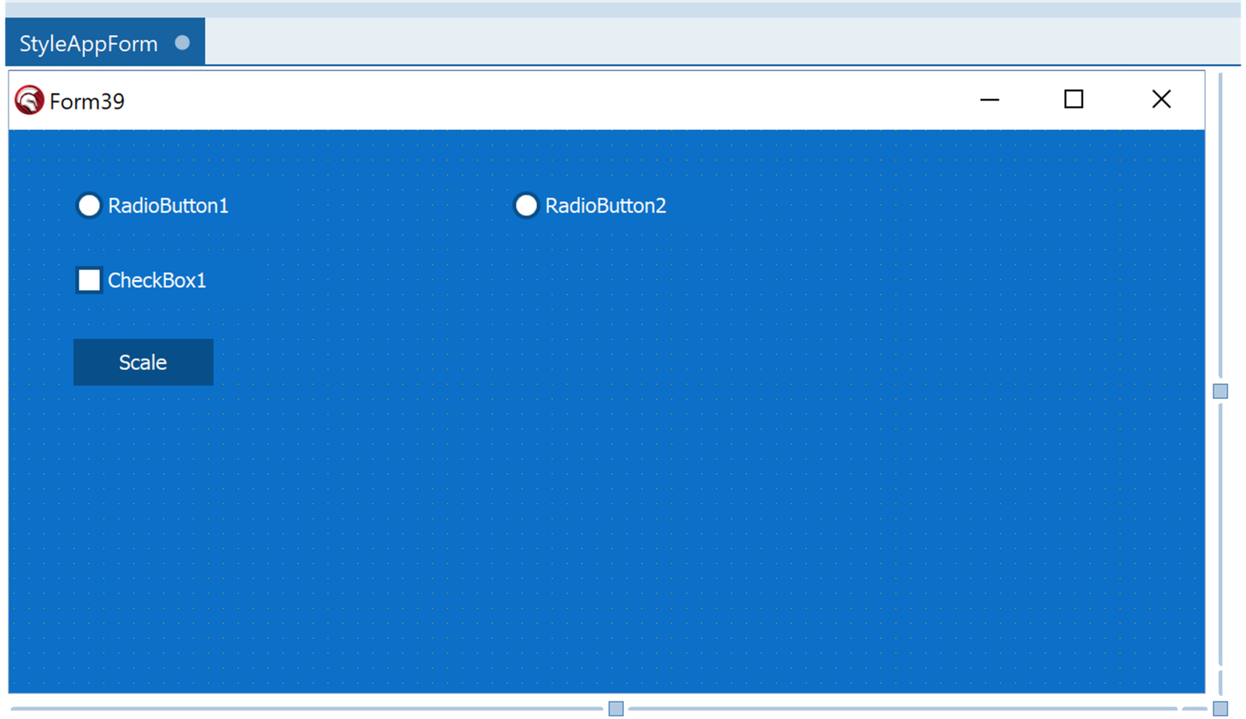
Estilos Ativos no VCL Designer

- Escolha um estilo nativo (para cada formulário ou controle) e visualize no design
- Também moldura da janela estilizada do Win10
- Não ativado por padrão







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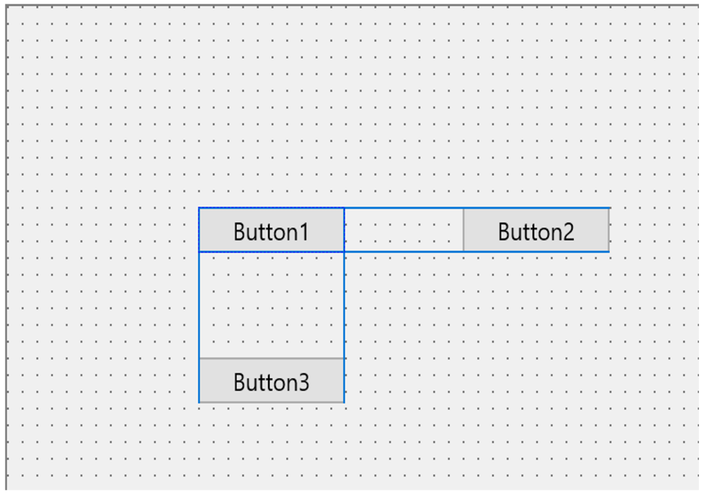
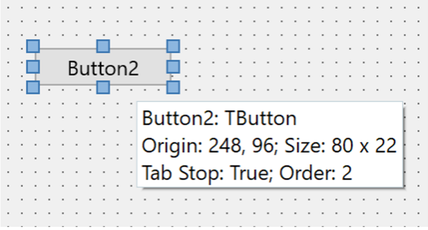
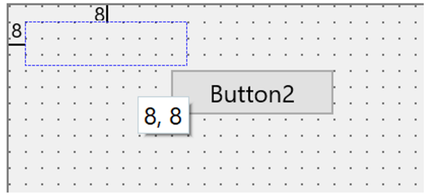
Mais em RAD Studio IDE







- Aprimoramentos de designers da FMX
  - Hints e guidelines
- Melhorias na qualidade do Delphi LSP
- Novo C++ code formatter
  - Com base no formato clang, e pegará automaticamente os arquivos de config em formato .clang do projeto.
  - (Opcional) formatar ao salvar ou como você digita (Enter)
- **Consolas** é a fonte do novo editor, além de fontes adicionais enviadas
- Melhorias no suporte de várias janelas, incluindo design & code de uma unit ao mesmo tempo; aborda caso de uso chave para o antigo designer flutuante

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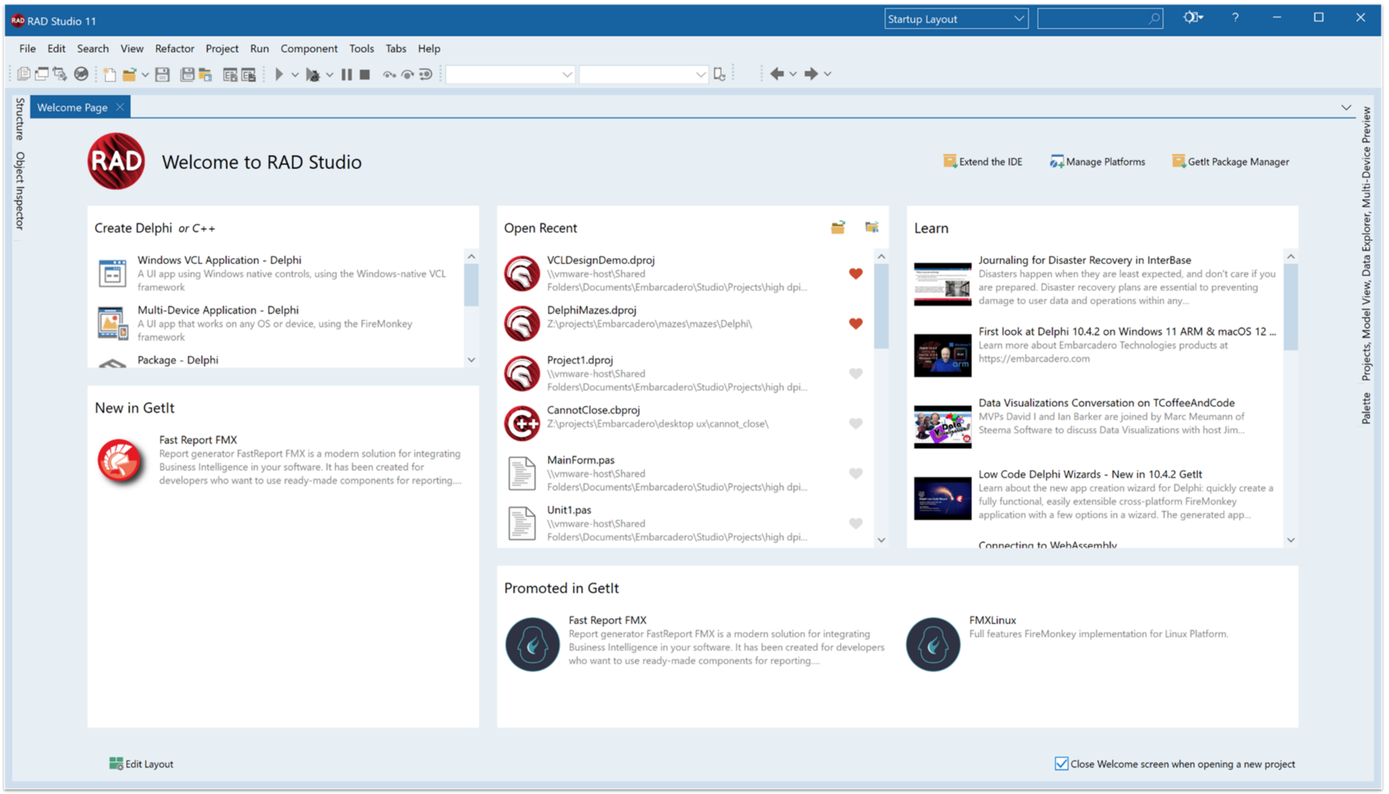
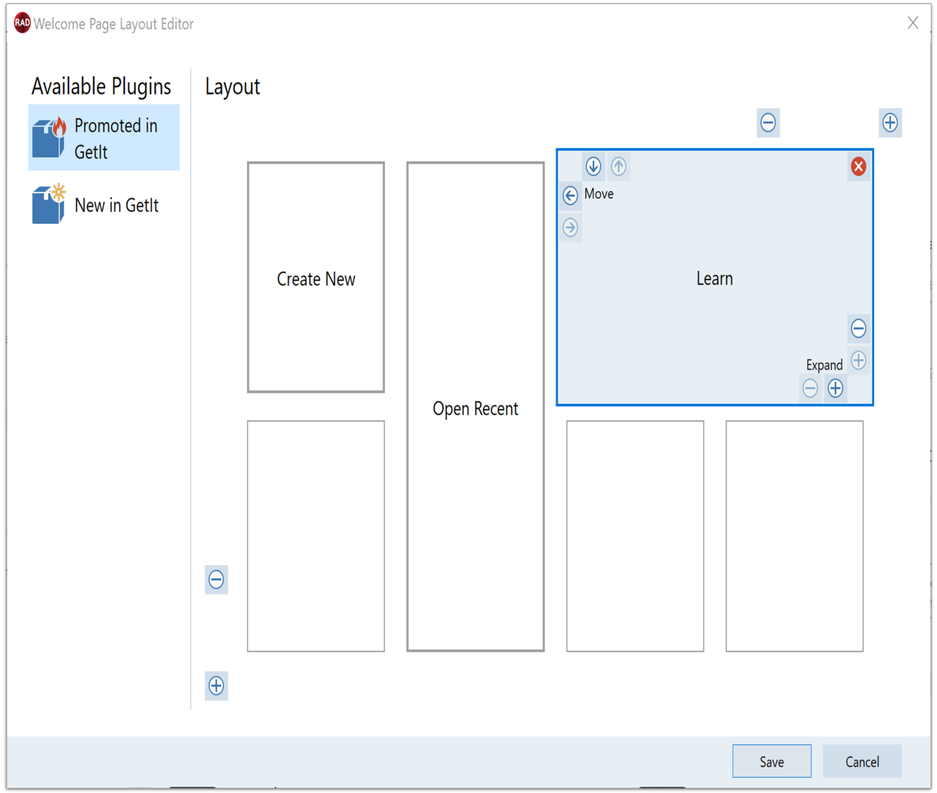
Novo Welcome Page

- Nova *Welcome Page* nativa, baseada em VCL e flexível - conteúdo semelhante ao atual
- Layout e conteúdo são totalmente personalizáveis: mostre o que e onde você quer





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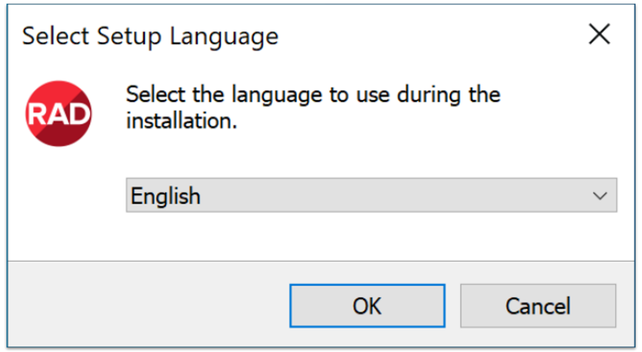
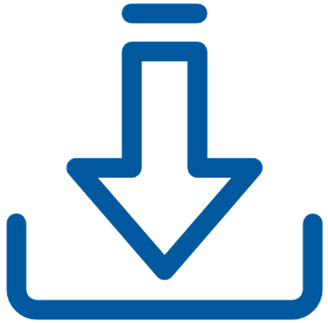
Instalador

- Melhorias no *Minimal Installer*
  - High DPI UI
  - Seleção inicial de idiomas (em vez de detecção)
  - Capacidade de especificar o repositório do catálogo



- Feature Installer
  - Algumas operações de download em paralelo, para instalação mais rápida



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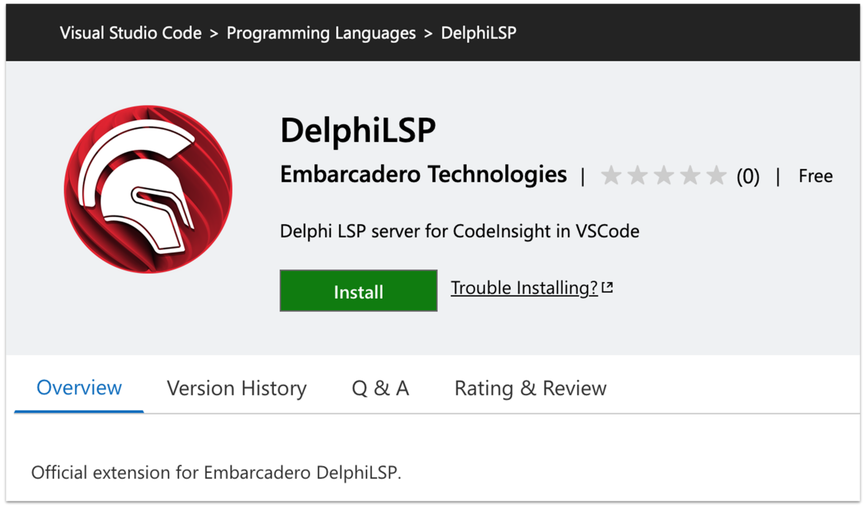
Suporte ao Delphi LSP em Visual Studio Code

- O Language Server Protocol (LSP) aberto permite que você use um editor diferente com Code Insight
- VSCode plugin para usar DelphiLSP
  - No Visual Studio Marketplace agora
  - Windows somente




```
procedure TForm1.FormCreate(Sender: TObject);
begin
  //
  var Hello : string := 'Hello from VSCode';
  Caption := He
end;
```

abc Hello

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II. C++ e Delphi Languages

C++ Quality e Delphi Interop

- Foco em RTTI (para componentes)
  - Delphi-style RTTI para comps C++ permite o uso de comps construídos via Clang na IDE
  - C++-style RTTI para tipos Delphi disponíveis para Clang
  - typeid() para tipos estilo Delphi funciona
- Tratamento de exceção: mais trabalhos após 10.4.2's: cenários complexos passando
- CMake: revisão da funcionalidade e pacotes que ele pode lidar
- C++/Delphi melhorias na interoperabilidade
  - std::string_view para Delphi strings
  - String assignment
  - String conversion methods to_string() and from_string() para tipos Delphi
  - ...and make_shared<> and make_unique para classes Delphi!

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Delphi

- Nova plataforma ARM de 64 bits do macOS
- Para Apple Silicon M1 e além
  - Inclui toolchain e suporte de assinatura
  - Universal binary (package Intel + ARM)

```
begin
  try
    var I : Integer := 1_000_000; // Thousands Separ
    Writeln(I);
    I := %1001001; // Binary Literal
    Writeln(I);
    Readln;
  except
    on E: Exception do
      Writeln(E.ClassName, ': ', E.Message);
  end;
end.
```

- Pequenos aprimoramentos de linguagem
  - Binary literals e suporte para separador de dígitos
  - Suporte para *Inline assembler* para instruções AVX (AVX-512)

- Mais otimizações de desempenho do compilador
  - A maioria já entregue em 10.4.2 e patches

M1

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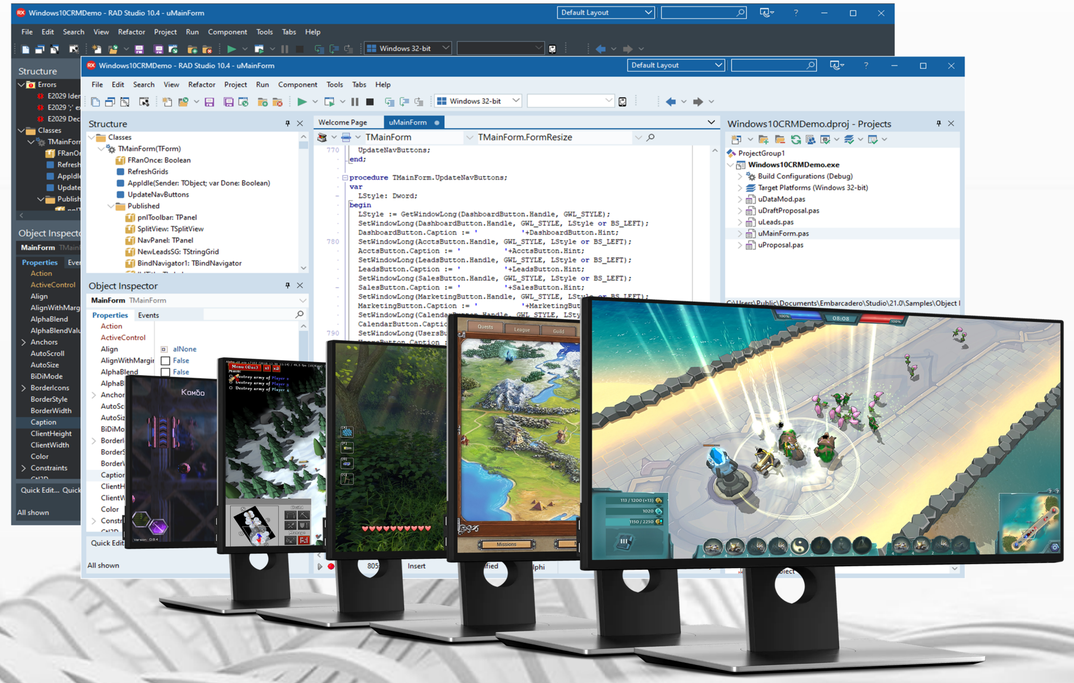
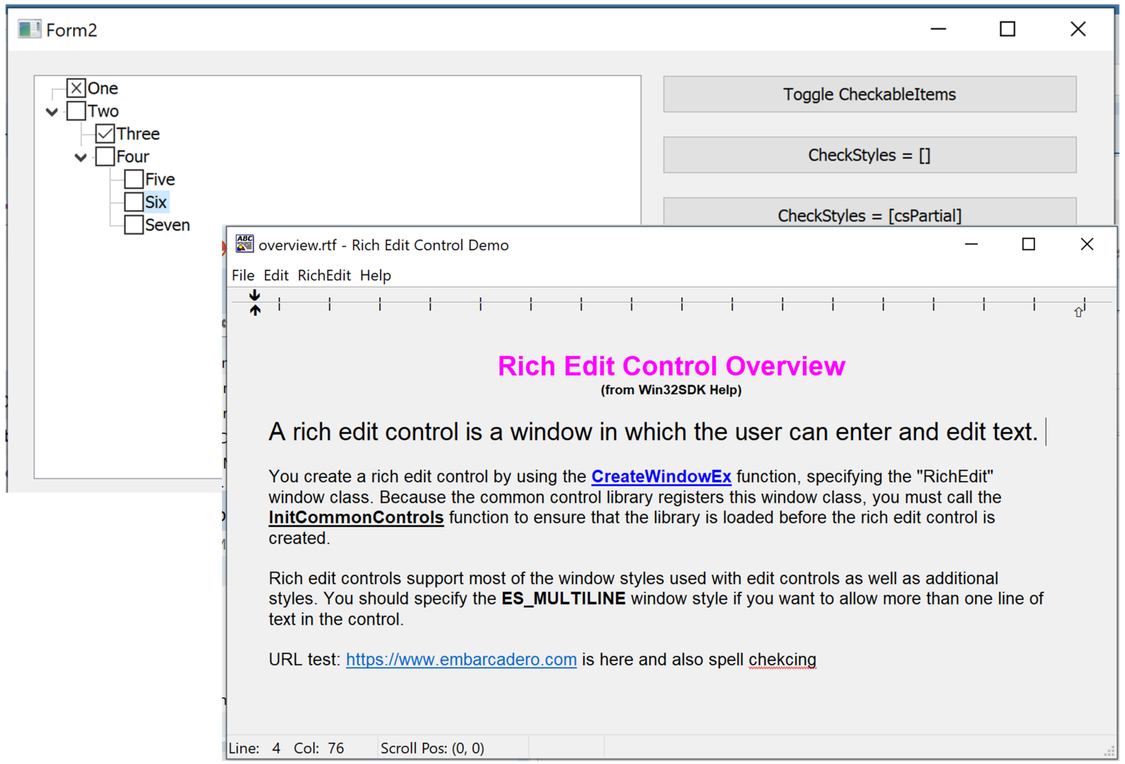
III. RAD 11 Libraries Quality & Improvements



Trabalho de Modernização da VCL

- Nova implementação do RichEdit (RichEdit 4.1 via MSFTEDIT.dll)
  - Incluindo detecção de URL, transparência, verificação ortográfica
- Grande coleção de pequenas melhorias focadas na remoção de legados XP e melhorar características principais
  - TreeView checkboxes
  - Smaller: nsDropHilited, Coolbar Chevron, mouse wheel, button category gutter, TWICImage multi frame, default form size, SetSelText Undo, default form font, exception dialog copy button… muitos para listar aqui
- Qualidade VCL
  - Remote desktop melhorias para VCL e IDE
  - Novo componente TDBLabeledEdit



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FireMonkey

- Melhor integração com Windows e desktop FMX
  - Serviços de plataforma para macOS e Windows refatorados em units separadas
  - IFMXSaveStateService, IFMXDeviceService, IFMXVirtualKeyboardService, IFMXTimerService, IFMXLoggingService, IFMXMenuService, FMX.Platform.Metrics.*
- Melhorias do FireMonkey Windows High-DPI
  - De pixels a unidades independentes de dispositivos (PX to DP)
  - Extended IFMXMultiDisplayService
  - Oferece qualidade de interface muito maior em monitores High DPI (Windows)
- Target Android API 30
  - Requisitos relacionados para AndroidX, in-app purchases, correspondendo aos requisitos da Play Store
  - Vários arquivos classes.dex, simplificando a integração de dependências externas do Android

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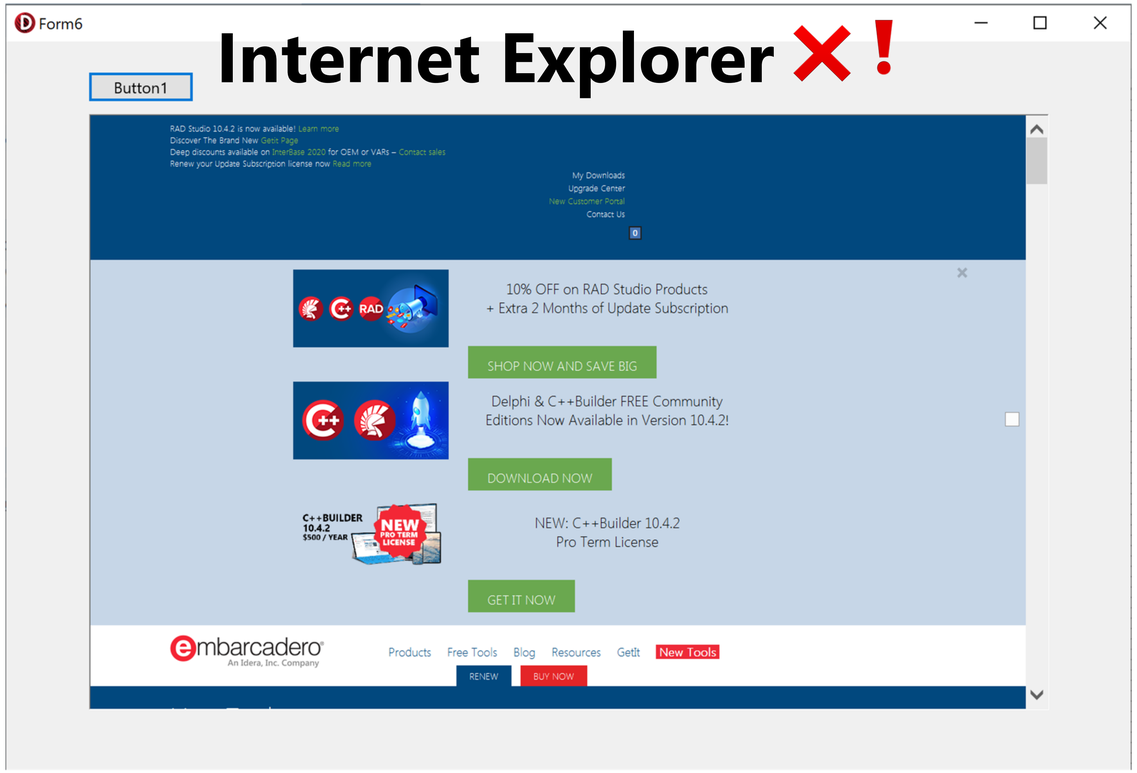
FMX TWebBrowser com Edge

- Implementação do WebView 2 (Chromium Edge) do TWebBrowser no Windows



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(Delphi) RTL & Data Improvements

- TZipFile (incluindo Zip64, exclusão de arquivos, melhorias de qualidade e otimizações)
- Large data structures (and 64-bit) improvements
  - Lists, large stream operations, dictionary improvements for hashing and capacity
- Record helpers para TDateTime and TCurrency, função UTCNow
- Novas classes base: TNoRefCountObject and TPointerStream
- Qualidade Bluetooth LE (para a maioria das plataformas)
- Otimizações de desempenho e melhorias de RTTI (open array support)
- Estatísticas do PPL Thread pool
- FireDAC: melhorias específicas para os bancos de dados PostgreSQL, Oracle e Firebird

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HTTP, REST, Cloud, Multitier

- Web Technologies
  - HTTP Client Library: suporte no Windows para HTTP / 2
    - Nova propriedade THttpClient.ProtocolVersion
  - CustomContentType no RestRequest
  - TCertificate.PublicKey
  - DataSnap: Rest URI configurável para mapeamento de métodos
  - Codificação Base64url

- RAD Server
  - Suporte Multipart/form-data
  - Novo TRESTRequestDataSetAdapter para upload de datasets para o RAD Server
  - RAD Server Lite: Incorpora o IBToGo, fácil de implantar, implantação ilimitada, throughput limitado

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Qualidade em Geral

Problemas relatados via QP pelo cliente corrigidos

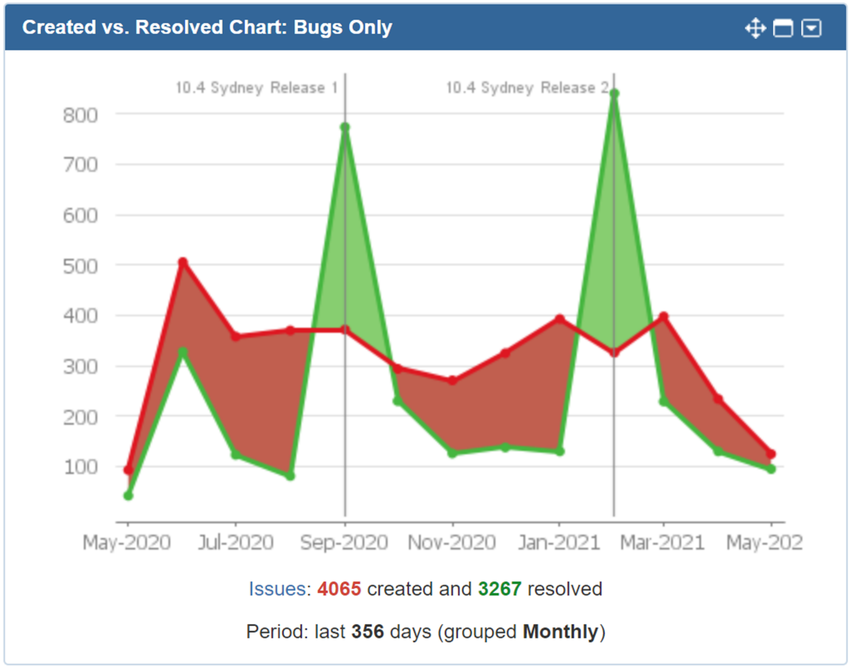
New Features: 115

Bugs: 670

Total de problemas via QP abordados (*any resolution*)

New Features: 150

Bugs: 920



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INTERBASE 2020 *UPDATE 2*

O que é INTERBASE

InterBase® é um banco de dados SQL multiplataforma de alto desempenho, ultrarrápido, criptográfico, escalável, relacional e incorporado com segurança de dados de nível corporativo, recuperação de desastres e sincronização de alterações para desenvolvedores que estão procurando incorporar um banco de dados seguro de baixo custo e seguro em seus aplicativos conectados multiplataforma. Empresas globais de diversos setores têm uma vantagem competitiva com InterBase® através de proteção avançada de dados, segurança, velocidade e desempenho.

Secure (1)	Self-reliant	Resilient	Lightweight	Flexible	Efficient	Compliant
Cross-Platform Encryption Separate Security Login Reduced Exposure to Risk Role-Based User Security Encrypted Backups	Independent Operation Near-Zero Maintenance Rapid Crash Recovery Disaster Recovery	Live Backups Distinguished Data Dumps Fast Restores Write-Ahead Logging Point-in-Time Recovery	Small Footprint Fast Install Faster Data	Multi-Language Support Cross-Platform Support Server Data Storage Local Data Storage Single On-Disk Format	Log-Less Replication Data Change Subscriptions ChangeViews Data Tracking Role-Based User Security Early Fetch Data Deltas	ANSI SQL Stored Procedures and Triggers SQL-Based Performance Monitoring Open-Standards-Based Database Connectivity Multi-Gen Architecture/MVCC Event Alerts Customizable Generators

(1) https://tecnoblog.net/504249/twitch-sofre-ataque-e-hacker-vaza-dados-de-streamers-e-codigos-do-site

Edições do INTERBASE

InterBase Server

1 to 100's of network users

Fully featured,
+ Server monitoring

InterBase ToGo

Deeply Embedded

Fully featured
Optimized for single app use

Conectando ao INTERBASE

Multiple languages and IDE's

ODBC
JDBC
ADO.NET

```
static void InterBase()
{
   ADO.Net = true;
   Delphi = true;
         C++Builder = true;
   PHP = true;
   ODBC = true;
   JDBC = true;
   Python = true;
   Ruby = true;
}
```

InterBase: Visual Studio

NuGet Package

- Core ADO.Net framework support
- Supports InterBase Server and ToGo / IBLite

Entity Framework Support

- Supports .NET Object-Relational mapping layer (InterBase Server)

Visual Studio DDEX integration

- Navigate the database connection and the actual data within the Visual Studio IDE

Onde obter os últimos drivers ADO.NET para InterBase

GitHub : https://github.com/Embarcadero/IB.NETDataProvider
NuGet Drivers : https://www.nuget.org/packages/InterBaseSql.Data.InterBaseClient/
Entity Framework : https://www.nuget.org/packages/InterBaseSql.EntityFrameworkCore.InterBase/
ADO.NET Usage : http://docwiki.embarcadero.com/InterBase/2020/en/ADO.NET_Driver

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INTERBASE 2020, UPDATE 1, UPDATE 2

- Database Tablespaces
- Novas plataformas para versões embutidas
  - Android 64 bits
  - macOS 64 bits
- Monitoramento de desempenho aprimorado
- DDL para o dicionário de dados
- Otimizações de SQL
- Aprimoramento de segurança
- Melhorias no IBConsole
- ADO.NET para InterBase
- Recursive Common Table Expressions (Recursive CTE)
- Mais em https://interbase.com/

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Recursive CTE – Sample #1

```
/* Using Recursive CTE, List all departments that have sub-departments under them
*/
WITH RECURSIVE CTE_RECS (DEPT_NO, HEAD_DEPT, DEPT_LEVEL) AS
  (
  /* Anchor query: Get a department that does not have a higher-level head
department */
  SELECT DEPT_NO, HEAD_DEPT, 0 AS DEPT_LEVEL
    FROM DEPARTMENT D
   WHERE HEAD_DEPT IS NULL    /* Anchor query condition */


  UNION ALL /* Mandatory clause for Recursive CTE */

  /* Main recursive CTE query; uses and feeds source result set for generating
     more records; see use of CTE_RECS below in the JOIN clause */
  SELECT SUB.DEPT_NO, SUB.HEAD_DEPT, CAST(CR.DEPT_LEVEL+1 as int)
    FROM DEPARTMENT SUB INNER JOIN CTE_RECS CR ON SUB.HEAD_DEPT = CR.DEPT_NO
  )
SELECT * FROM CTE_RECS;
```

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Recursive CTE – Sample #2

```
/* Using Recursive CTE, List all departments that have sub-departments under them.
   An optional "Terminating Clause" can be provided in the recursive part of the query
   to limit the number of recursive iterations.
   For e.g.
     only up to Level 1 head departments
 */
WITH RECURSIVE CTE_RECS (DEPT_NO, HEAD_DEPT, DEPT_LEVEL) AS
  (
  /* Anchor query: Get a department that does not have a higher-level head department */
  SELECT DEPT_NO, HEAD_DEPT, 0 AS DEPT_LEVEL
    FROM DEPARTMENT D
   WHERE HEAD_DEPT IS NULL    /* Anchor query condition */


  UNION ALL /* Mandatory clause for Recursive CTE */

  /* Main recursive CTE query; uses and feeds source result set for generating
     more records; see use of CTE_RECS below in the JOIN clause */
  SELECT SUB.DEPT_NO, SUB.HEAD_DEPT, CAST(CR.DEPT_LEVEL+1 as int)
    FROM DEPARTMENT SUB INNER JOIN CTE_RECS CR ON SUB.HEAD_DEPT = CR.DEPT_NO
   WHERE CR.DEPT_LEVEL <= 1 /* Terminating Clause */
  )
SELECT * FROM CTE_RECS;
```

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SENCHA EXT JS *7.4*

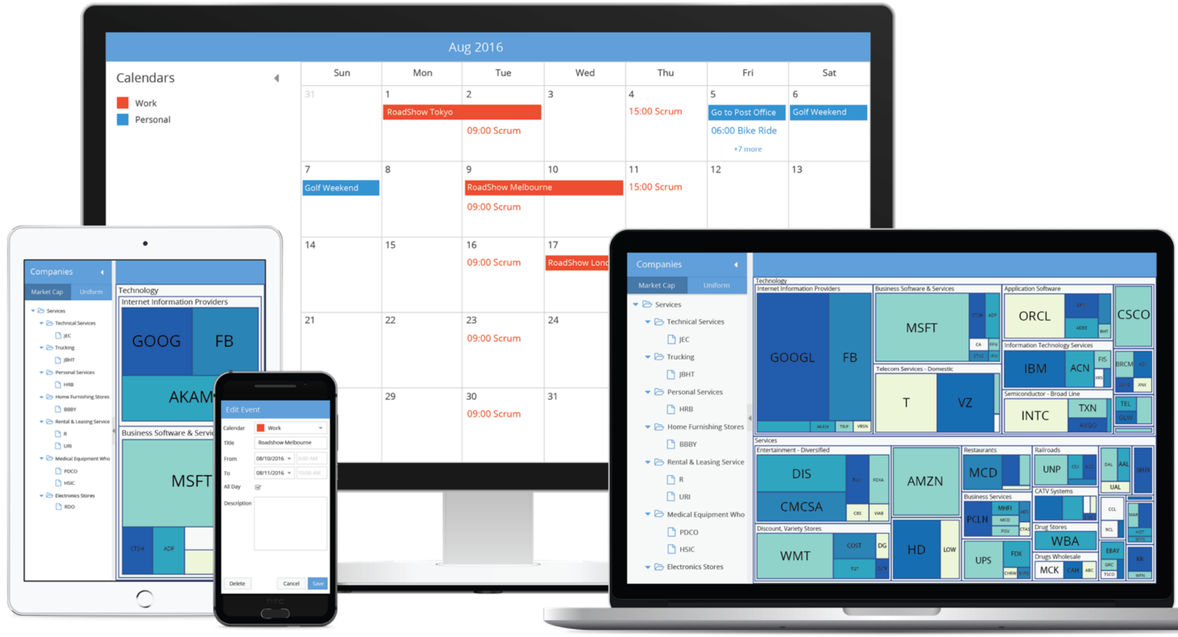
Sencha fornece
tudo
que um desenvolvedor
precisa para construir
aplicações web com uso
intensivo de dados.

Sencha Inc. ©2019

Sencha

Sencha Ext JS

- Framework abrangente para aplicativos multiplataforma com uso intensivo de dados
- Suporta navegadores modernos e legados
- Componentes personalizáveis de alto desempenho:
  - D3 Adapter for sophisticated data visualization
  - Advanced charting
  - Grid which can handle millions of records efficiently
  - Pivot Grid for data analytics
  - Exporter to export data from Pivot Grid and Grid
  - Calendar to view and manage schedules and events
- Agnóstico quanto ao back-end
- Layout Manager responsivo



Sencha Inc. ©2019

Sencha

Sencha Tools – Eficiência de Desenvolvimento

Focado em Ambientes de Desenvolvimento Integrados (IDEs), e aumentar Produtividade do Desenvolvimento

- **Sencha IDE Plugins** – Productivity
- **Sencha Themer** – Styling Tool
- **Sencha Architect** – Visual Builder
- **Sencha Inspector** – Debugging
- **Sencha Cmd** – Build Optimization
- **Sencha Stencils** – Designer Tool
- **Sencha Test** – Test Automation

Sencha Inc. ©2019

Sencha

ROADMAP*

RAD Studio 10.5

High DPI IDE, strong developer productivity focus, new platform support

Delphi

- Add **Delphi language extensions** for increasingly powerful coding
- Improved Delphi language support for LLDB debugging, giving a more **powerful debug experience**
- Math performance improvements to increase your **application speed**
- macOS 64 ARM compiler for Delphi lets you **target upcoming Apple Silicon** devices

C++Builder

- Integrating Whole Tomato Visual Assist into C++Builder, for expanded **coding productivity** (stage 1)
  - Refactorings
  - Navigation
  - Find References
  - Code Generation
  - ...and more
- New C++ Win64 Linker for **robust linking**, including for big projects
- Improved Delphi/C++ interop, for **smoother integration** with RTL features

***** Features are not committed until completed and GA released***

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Research Areas

Additional features and platforms under consideration and internal research

Target Platforms under Consideration

- Delphi support for the latest iOS Simulator
- Additional Delphi ARM Platforms
- Delphi Wasm compiler (WebAssembly) research
- C++ Android 64 or Linux 64 (Intel)
- C++ macOS 64 ARM
- C++20 and upgraded Clang
- 64-bit Compilers and Linkers

User Experience Plans and Other Research Areas

- Visual Assist for Delphi
- New IDE code editor
- DevOps integration and support
- Python integration opportunities

***** Features are not committed until completed and GA released***

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Links e Recursos

- https://www.ideracorp.com/news
- https://docwiki.embarcadero.com/RADStudio/Alexandria/en/What%27s_New
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