

10.3 Rio - Release 2

Updated RAD Studio 10.3 Rio release available (July 18th, 2019).

RAD Studio 10.3 Rio - Release 2 (also known as 10.3.2), is available for installation. 10.3.2 builds on the feature set of 10.3 and 10.3.1 by adding new capabilities throughout the product. It is an update for Delphi 10.3 Rio, C++Builder 10.3 Rio, and RAD Studio 10.3 Rio available to any active Update Subscription customer.

If you have already installed 10.3 Rio (November 22nd, 2018) or 10.3 Rio - Release 1 (February 14th, 2019), installing 10.3 Rio - Release 2 requires a full uninstall and reinstall to preserve your settings. You can also preserve settings with the [Settings Migration Tool](#).

10.3 Rio - Release 2 includes the following new features, enhancements, and quality improvements:

New features in 10.3.2

Delphi macOS 64-bit

New in 10.3.2 is **macOS 64-bit application support for Delphi**. Build App Store-ready macOS 64-bit applications, complete with [macOS notarization support](#). Reach a large customer base of macOS users with Delphi 10.3.2.

- A new Delphi compiler for the macOS 64-bit platform, based on the LLVM compiler infrastructure, with a non-ARC model like all other Delphi desktop and server platforms (macOS, Windows, Linux).
- Extensive RTL support including core file system access, platform integration, memory and threads management, but also HTTP and REST client libraries, the Parallel Programming Library, and more.
- Complete support for the FireMonkey library and all FireMonkey controls previously available on the macOS 32-bit platform.
- Support for the database RTL and the FireDAC client access library, with support for the same databases previously available on the macOS 32-bit platform.
- Improvements in FMX support for the macOS platform, for both 64-bit and 32-bit apps.
- **InterBase** support for Delphi macOS 64-bit. Target macOS 64-bit with embedded InterBase (IBLite and IBToGo).

C++17 for Windows 64-bit

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New in 10.3.2 is **C++17 support for Windows 64-bit for C++Builder**. C++Builder and RAD Studio 10.3.2 introduce an updated Clang-enhanced compiler with C++17 support for Windows 64-bit. As part of our progressive compiler upgrade, you can now use the latest C++ language features for more powerful and concise code, more compiler optimizations giving you faster code, and access to more third-party C++ libraries to build more powerful applications.

- C++17 Clang-enhanced compiler and toolchain for Win64 (bcc64), meaning C++17 is available for both Win32 and Win64 targets.
- C++ runtime library (RTL) built with the updated Clang-enhanced compiler for Win64, including 2018 edition of Dinkumware STL.
- Additional, included support for C++14.
- Boost library support for both Win32 and Win64 (Boost v1.68).

C++ LSP Code Insight Improvements

- Quality and performance improvements for code completion. 10.3.2 includes full-featured code completion support for C++.
- New for Clang compilers: Parameter completion, Tooltip Insight, and Go To Definition (ctrl+click). This brings the full set of editing productivity features to C++, as well as significantly improving them by making them asynchronous and non-blocking.

RAD Server Wizards and Deployment Improvements

- Enhancements in RAD Server Wizards (for automatic FireDAC database mapping and API documentation).
- Android Firebase push notification support in RAD Server.
- New RAD Server admin console with configuration editor and integrated REST debugger.
- Swagger API documentation improvements (automatic documentation for your custom APIs) and support for Swagger-UI.
- Improved startup error messages and richer error logging, simplifying the deployment process.
- Deployment installers for Linux and Windows servers (available via GetIt).

Enhanced Firebase Android Support

RAD Studio 10.3.2 includes the following updates and enhancements to the Android Firebase push notification support:

- The FireBase patch (http://docwiki.embarcadero.com/PlatformStatus/en/Main_Page#Firebase_Push_Notification_Patch%7CAndroid) distributed for 10.3.1 is now part of the 10.3.2 product release, all files are part of the Android platform installation.
- Improvements to icons for all notifications.
- Updates to Google Play services and Maps to match Firebase version support requirements.
- Firebase replaces Google Cloud Messaging (deprecated by Google).

Delphi Linux Client Application Support

- FireMonkey Linux provides the ability to create GUI applications for Linux, extending RAD Studio's (Delphi Edition) FireMonkey cross-platform framework.
- Includes several ready-to-use user interface styles.
- Many of the FMX components, such as grids, widgets, etc. also work seamlessly on Linux clients.
- Leverage RAD Studio's innovative features, such as Live Bindings, and much more, in your Linux client applications.
- Available via GetIt for Enterprise and Architect Edition customers.

Enhancements included in 10.3.2

Runtime Library Performance

- FireMonkey styles performance optimization
- VCL DFM files loading optimization
- Variants conversions performance

VCL Quality Improvements

Significant VCL quality improvements, with over 50 VCL customer reported issues fixed.

- Improvements in many components including ComboBox, MainMenu and PopupMenu, TreeView, StatusBar, PageControl, Button, DateTimePicker
- Additional High DPI and scaling refinement
- Improvements in forms, frames, painting and styling primitives

iOS

- Better FullScreen mode on iOS including visible status bar

C++17 Quality Enhancements

Enhancements in numerous toolchain areas.

- STL quality in a number of scenarios, including mixing `std::bind` with `__fastcall` methods, `std::function` and lambda methods, and many more.
- Compiler quality improvements, especially stability with some code constructs.
- Code completion, introduced in 10.3, has had a significant revision with a number of quality improvements, including case-insensitivity, invoking completion when part of an identifier is already typed, issues with spaces or other characters in the file paths, as well as new UI tweaks to the completion list and more.

IDE

- A number of quality IDE improvements, especially when resizing and moving the IDE.
- Optimization in source code file access for large projects through a unit cache, particularly when residing on remote drives. The feature is controlled by a new IDE option at **Tools > Options > IDE > Compiling and Running > Enable unit directory cache**, and is on by default.
- Delphi background compilation in the IDE for all platforms.
- Performance improvements loading forms.
- Significant UI and UX quality improvements, including issues around the IDE's toolbars, title bar and search, scrolling in the Options dialog, switching between layouts such as when starting debugging, flicker, previously unthemed elements now themed, the guided tour, and more.
- Faster file search operations.
- The Options dialog now no longer allows you to choose any style for the IDE, but you can still choose a custom VCL style via a registry key.

FireMonkey

- macOS quality improvements for 32-bit and 64-bit.
- Push notification improvements on iOS and local notifications on Android.
- Notification icon improvements on Android.
- TEdit improvements on Android.
- Improved compatibility with older versions of Android.
- TMediaPlayer quality on Android and Windows.
- In the application menu for macOS 64-bit applications, system menu items such as **Services**, **Hide**, **Hide Others** and **Quit** are now added automatically. This is a change compared to macOS 32-bit where system menus had to be

added by the developer.

FireDAC & Database

- Microsoft SQL Improvements, including invocation of stored procedures.
- Master-detail cleanup.
- Oracle CHAR parameters.

Web Clients

- Additional runtime properties in THTTPClient to handle certificates and authentication (PreemptiveAuthentication, AutomaticDecompression, SecureFailureReasons) and new TCertificate properties (CertName and SerialNum) for HTTP and SOAP clients
- JSON serialization compatibility (offering DataSnap JSON compatibility with 10.2)
- REST Client Library quality improvements

This release also includes quality improvements to around 400 customer-reported issues.

For a complete list of features and quality improvements, click [here](#).

Note: *You need to be an active Update Subscription customer to download and install 10.3 Rio - Release 2.*

Installation

RAD Studio 10.3 Rio - Release 2, is available as an installer (Feature Installer) and as an ISO (Offline Installer) from the registered users web page.

The installers are available for download on the following registered users download pages:

- **RAD Studio:** https://cc.embarcadero.com/reg/rad_studio
- **Delphi Rio:** <http://cc.embarcadero.com/reg/delphi>
- **C++Builder Rio:** http://cc.embarcadero.com/reg/c_builder

To preserve your existing installation settings, it is recommended to install 10.3 Rio - Release 2, using the same installer (Offline Installer or Feature Installer) you used when installing 10.3 Rio. To determine which installer you used, verify if the IDE shows the **Manage Platforms** option under the **Tools** menu. If the menu item is available it means you used the Feature Installer.

See Also

- [Installation Notes](#)
- [Release Notes](#)
- [New features and customer reported issues fixed in RAD Studio 10.3.2](#)

This page was last edited on 15 July 2019, at 16:10.