



RAD STUDIO 10.3

PRODUCT FEATURE MATRIX

The 10.3 Rio Feature Matrix in this document has been updated for release 10.3.2.









































































































































































































































Each feature in the following table has an indication if it is available in Delphi  and/or C++Builder . RAD Studio editions include both languages. Each column covers multiple, similar editions, with any difference specifically called out. Community edition is available only for single personalities and has a limited license. Some of the features are only available for download from the IDE in the GetIt Package Manager, requiring an Internet connection.






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FEATURE	PROFESSIONAL / COMMUNITY	ARCHITECT / ENTERPRISE
INTEGRATED COMPILERS AND TOOLCHAINS		
Delphi 32-bit native code optimizing compiler (dcc32) and toolchain for Windows. Delphi 64-bit native compiler and toolchain for Windows (dcc64)		
INTRODUCED IN 10.2 TOKYO! Delphi 64-bit native compiler and toolchain for Linux (dcclinux64)		
Delphi native compiler and toolchain for macOS (dccosx)		
NEW IN 10.3 RIO! Delphi native compiler and toolchain for macOS 64-bit (dccosx64)		
Delphi compiler and toolchain for the iOS devices and the iOS simulator (dcciosarm, dccios32), iOS 64 bit Object Pascal compiler and toolchain		
Delphi ARM compiler and toolchain for Android devices (dccaarm)		
NEW IN 10.3 RIO! C++ 17 Clang-enhanced compiler and toolchain for Win32 (bcc32x and bcc32c). Classic Embarcadero C++ compiler and toolchain for Win32 (bcc32)		
NEW IN 10.3 RIO! C++ 17 Clang-enhanced compiler and toolchain for Win64 (bcc64)		
C++ macOS compiler and toolchain (bccosx)		
C++Builder iOS ARM compiler and toolchain (bcciosarm). iOS 64 bit C++ compiler and toolchain		
C++Builder Android ARM compiler and toolchain (bccarm)		
LICENSING		
INTRODUCED IN 10.3 TOKYO! Limited license based on revenue and usage and team size (see EULA for details)	 	COMMUNITY only

	Licensing suitable for larger teams with no restriction on number of licenses you can purchase or use and on revenue derived from the product (see EULA for details)	 	 
	Network named or concurrent licenses available	 	 
ENHANCED IN 10.3 RIO!	Earlier version licenses included in network licenses (Delphi 2007–10.2, C++ Builder 2007–10.2). Delphi 7 and C++Builder 6 available separately	 	 
ENHANCED IN 10.3 RIO!	Access to licenses and downloads for earlier versions with purchase of standalone product licenses (Delphi 2007–10.2, C++Builder 2007–10.2, Delphi 7, and C++Builder 6)	 	 
APPLICATION PLATFORMS, INTEGRATED FRAMEWORKS, DESIGNERS AND SDKS			
INTRODUCED IN 10.2 TOKYO!	Support for Linux server-side and standalone applications for Ubuntu 18.04 LTS, Ubuntu 16.04 LTS, Ubuntu 14.04 LTS, and RedHat Enterprise Linux (version 7)		
NEW IN 10.3.2 RIO!	Support for Linux client-side applications using the bundled FMX Linux library* <i>* Available for download in the GetIt Package Manager</i>		
ENHANCED IN 10.3 RIO!	FireMonkey Application Platform for creating 32-bit Windows applications and 64-bit Windows applications for Windows 10 (up to and including October 2018 Update), Windows 8.x and Windows 7; Windows Server 2016 and 2012 R2	 	 
ENHANCED IN 10.3 RIO!	FireMonkey Application Platform for creating 32-bit macOS applications that run on 10.14 Mojave , 10.13 High Sierra and 10.12 Sierra	 	 
NEW IN 10.3.2 RIO!	FireMonkey Application Platform for creating 64-bit macOS applications that run on 10.14 Mojave , 10.13 High Sierra and 10.12 Sierra		
ENHANCED IN 10.3.1 RIO!	FireMonkey Application Platform for creating native iOS applications for iOS 12, iOS 11, and iOS 10, for both ARMv7 and ARM 64-bit, with expanded support for iOS 12 and iPhone X series devices	 	 
ENHANCED IN 10.3 RIO!	FireMonkey Application Platform for creating native Android ARMv7 applications for Pie (9.0), Oreo (8.0), Nougat (7.x), Marshmallow (6.x) and Lollipop (5.x). Includes support for Android API level 26	 	 
ENHANCED IN 10.3.2 RIO!	VCL (Visual Component Library) for rapidly building 32-bit and 64-bit applications for Windows 10, Windows 8.x and Windows 7; Windows Server 2012 and 2016	 	 
INTRODUCED IN 10.1.2 BERLIN!	Windows Desktop Bridge .appx package format deployment (providing support for deploying to the Win 10 store), including the management of additional files, .appx packaging and code signing automatically invoking the platform SDK (<i>this feature requires running RAD Studio on Windows 10 Anniversary Update or above</i>)	 	 
ENHANCED IN 10.3 RIO!	Microsoft Windows SDK support for Windows 10, Windows 8 and Windows 7 APIs. Includes support for calling both classic Win32/Win64 APIs and enhanced support for WinRT APIs; required for the Windows Desktop Bridge	 	 
FMX APPLICATION PLATFORM (FIREMONKEY)			
	FireUI multi-device designer for visually building mobile and desktop applications and customize them at design time for different form factors and operating systems	 	 
	FireUI multi-device designer ability to make changes on the main user interface that are propagated to other device specific user interfaces and fine tune a device specific form factor without affecting other views; support for adding additional custom views to the designer	 	 
INTRODUCED IN 10.1 BERLIN!	FireUI App Previews lets you preview your FireMonkey application on iOS, Android, macOS and Windows targets as you are designing the app. Changes made in the FMX Designer are broadcasted in real time to connected devices using the appropriate Styles for the devices.	 	 
	Dozens of UI controls for building FMX applications, covering the most common UI guidelines and including also 3D support, for rapidly building multi-device applications	 	 
INTRODUCED IN 10.1 BERLIN!	Address Book component for iOS and Android, allowing access to and extensive modification of device contacts and groups and including monitoring of address book changes by other applications	 	 
NEW IN 10.3.2 RIO!	Google Firebase Push Notification support for the Android platform, with IDE-integrated configuration and updated Google Play services	 	 
INTRODUCED IN 10.2.2 TOKYO!	QuickEdit designers for FireMonkey, including a new pane for editing common control properties faster and several other additions to the IDE designer experience	 	 
INTRODUCED IN 10.1 BERLIN!	Extended clipboard service support, with new IFMXExtendedClipboardService interface, with support for querying and working with text, images, and custom formats	 	 
INTRODUCED IN 10.1 BERLIN!	Better High DPI resolution support on Windows	 	 
INTRODUCED IN 10.1 BERLIN!	Support for accelerator keys on Windows, compatible with other platforms and implemented using the new IFMXAcceleratorKeyRegistryService platform service. There is also a new FocusControl property for the Label control to specify the focus target for the label's accelerator	 	 
ENHANCED IN 10.1 BERLIN!	Grid controls improvements including support for ImageList, new AutoDisplacement and CancelEditingByDefault options, and StringGrid supports for glyph and currency columns	 	 

INTRODUCED IN 10.1 BERLIN!	New ListView item designer, providing an interactive way to work with ListView items; Touch animation support for TListView	 	 
ENHANCED IN 10.1 BERLIN!	Enhanced TFont and TFontStyle to support multi-weight, multi-style fonts	 	 
ENHANCED IN 10.1 BERLIN!	Improvements to MessageBox, ShowMessage and InputQuery now offering both synchronous (blocking) implementation and asynchronous (non-blocking) implementation	 	 
ENHANCED IN 10.1 BERLIN!	Mouse-over Hints support for FireMonkey visual controls on desktop	 	 
	FireMonkey zOrder support for Windows and native style presentation for Windows for Edit and Memo platform controls	 	 
NEW IN 10.3 RIO!	FireMonkey zOrder support for Android and native style presentation for Android for Edit, Calendar, Switch, and Multiview controls	 	 
	Touch animation for Android platform	 	 
	FireMonkey apps can receive Android intents, regardless of the source (email, web link, other app). A new sample demonstrates this ability	 	 
	FireMonkey Behavior service for automatically adjusting UI properties to the target operating system standards	 	 
ENHANCED IN 10.2.2 TOKYO!	MultiView component to create a UI that adapts to the form factor, from mobile to tablet, from portrait to landscape. Now with specific support for Windows 10 UI, new options to manage borders appearance, and new alignments for docked panel mode	 	 
INTRODUCED IN 10.2 TOKYO!	Multi-Threading support for TBitmap, TCanvas and TContext3D	 	 
INTRODUCED IN 10.2 TOKYO!	Unification of Delphi and Java threads on Android	 	 
INTRODUCED IN 10.1 BERLIN!	Radiant Shapes controls collection * <i>* Available for download in the GetIt Package Manager</i>	 	 
	Specific TSwitch behavior for Windows 10 UI	 	 
	Edit and Calendar ability to dynamically render a platform native UI control on iOS; Memo platform controls for iOS for highest input fidelity	 	 
INTRODUCED IN 10.1 BERLIN!	FireMonkey platform rendering TGrid for iOS	 	 
	ListView, Calendar, Switch and ScrollBox platform controls for iOS	 	 
	MapView component for mobile platforms (iOS and Android) supporting platform specific interactive mapping libraries (respectively, by Apple and Google)	 	 
ENHANCED IN 10.2.2 TOKYO!	WebBrowser component for Windows and macOS	 	 
	Improved mixing of platform and styled components, with new platform styling options for iOS and controls Z-order improvements (with ControlType property for non-platform controls)	 	 
	ImageList component for FireMonkey, for storing and manipulating multiple images and sub-images in a single component; several components can more pick their graphical elements from the ImageList, rather than a standalone image	 	 
	Multi-monitor support for desktop platforms	 	 
	Splash screen support for Android, with specific project options matching the iOS ones	 	 
	Form-level multi-touch support for all platforms	 	 
	Tint support for buttons and toolbars on iOS and Android (for control surface and controls icons)	 	 
	In-app purchase component for iOS and Android, to help monetize your applications	 	 
ENHANCED IN 10.2.2 TOKYO!	Advertising component for iOS and Android, including AdMob support based on the Google Mobile Ads SDK (updated to version 7.0 in RAD Studio 10.2.3), also to help you monetize your mobile applications	 	 
ENHANCED IN 10.3.2 RIO!	Push notifications support for mobile platforms, to receive remote notifications even if the app is not running (updated to include Firebase Android support)	 	 
ENHANCED IN 10.2.2 TOKYO!	FireMonkey support for AppTethering across desktop and mobile applications, including both Wifi and Bluetooth support, with protocol enhancements, including encryption hooks and events to handle when a profile is connected or disconnected	 	 
	Native message alerts for iOS and Android	 	 
	Custom Pickers for iOS and Android, including Date Picker (DateEdit component) and Time Picker, Time Picker for Windows and macOS	 	 

Phone Dialer Support for iOS and Android	 	 
Built-in text editing mode for Edit and Memo controls on Android and iOS, including Cut/Copy/Paste/Zoom; Spell Check Support for text input controls on iOS and Android	 	 
Notification Center Component for using notifications in your iOS and Android applications, including notification sound and now supporting also Windows 10 Notifications	 	 
Gesture support for iOS and Android including swipe (pan), tap, tap and hold, double tap and pinch & zoom	 	 
FireMonkey Mobile Application Wizard with header/footer, tabbed, and master detail templates	 	 
Full set of native iOS and Android styling options for buttons, toolbars, list boxes, sliders, switch controls	 	 
Swipe-to-Delete and Pull-to-Refresh on iOS and Android with the ListView component; search filtering for ListView	 	 
WebBrowser component for loading and displaying web content in your iOS and Android applications (now with corresponding desktop component)	 	 
Extended ListBox capabilities for iOS and Android, including header/footer/grouped styling, embedded search and expanded LiveBindings support	 	 
Support for various keyboard types on iOS and Android	 	 
TMagnifier component for easily zooming in on images and text	 	 
TCameraComponent component for accessing the front and back camera, the flash, and more device camera features	 	 
TabControl with new settings for using tabs as views and a PlatformDefault tab position to automatically adapt tab layout to the current mobile platform, support for TabControl tab icons on Android, slide transition action for TTabControl	 	 
FireMonkey Frames for designing portions of the UI and repeating them on multiple forms	 	 
Toggle Device Skin to show/hide mobile device background in the multi-device designer	 	 
FireMonkey Save State feature for persisting the forms status between sessions (and when the program is stopped by the operating system)	 	 
macOS Full screen Mode	 	 
Use of IFMXDragDropService to drag data to another applications on macOS	 	 
Actions and ActionLists for FireMonkey for better separation of the application logic from the user interface	 	 
Ready-to-use action for accessing the camera application and for accessing images from the camera roll on iOS and Android	 	 
Share Sheet support on iOS and Android for sharing content via Messaging, Mail, Facebook, Twitter etc.	 	 
FireMonkey control anchors for flexible positioning and sizing of the visual controls; Layout Managers (Flow Layout, Grid Layout) for flexible child controls positioning and sizing	 	 
Location Services component for GPS or triangulation, including geocoding support	 	 
Orientation sensor (gyroscope/compass) on iOS, Android, and on Windows (requires compatible hardware)	 	 
Motion Sensor component for accelerometer access on iOS, Android, and on Windows (requires compatible hardware)	 	 
3D File Import Support	 	 
Non-Client Area Application Styling for Windows and Mac	 	 
Support for Windows gestures. On-screen keyboard support for Windows touch devices	 	 
Edit control with stylable glyph with built-in style support for search bar, password control and more	 	 
Animated progress glyphs, including Windows ring	 	 
StyleLookUp support with preview of available designs for the selected component	 	 
Shared external redistributable bitmap style designer for VCL and FMX	 	 

NEW IN 10.3.1 RIO!	5 new FireMonkey multi-device styles* with theming support for Windows, macOS, Android and iOS <i>* Available for download in the GetIt Package Manager</i>	CX DX	CX DX
ENHANCED IN 10.2.2 TOKYO!	New FireMonkey styles have been added for macOS and Android, macOS Graphite and Android Wear Dark Blue	CX DX	CX DX
	Bitmap Style Designer enhancement, including new templates for Windows, Mac OS and Android Lollipop styles, ability to create blank styles for different platforms, and to adjust objects for different graphic resolutions	CX DX	CX DX
ENHANCED IN 10.1 BERLIN!	Significantly improved integrated FireMonkey Style Designer, and enhancement to the TStyleBook component to support a collection of styles for various platforms	CX DX	CX DX
	StyleViewer for Windows 10 Style in Bitmap Style Designer	CX DX	CX DX
	Bitmap Links editor, to modifying TBitmapLink properties directly inside the IDE	CX DX	CX DX
	Native UI and custom UI control styles	CX DX	CX DX
	FireMonkey Visual Form Inheritance	CX DX	CX DX
	Use one shader language for all rendering libraries (OpenGL or 3D)	CX DX	CX DX
VISUAL COMPONENT LIBRARY (VCL)			
	Object-oriented, fully extensible and reusable visual component library (VCL) and applications architecture	CX DX	CX DX
	VCL Form Designer to visually build native Windows applications, with live snap-to hints and layout guidelines	CX DX	CX DX
	Visual Form Inheritance and Form linking to reduce coding and simplify maintenance; Frames for building and reusing compound components	CX DX	CX DX
	Object Repository for storing and reusing forms, Data Modules, and experts	CX DX	CX DX
	Object Inspector to set component properties and events	CX DX	CX DX
ENHANCED IN 10.2.2 TOKYO!	QuickEdit designers for VCL, including additional items in the designer menu, a new pane for editing common control properties faster, and several other additions to the IDE designer experience	CX DX	CX DX
	Windows components fully integrated with the Windows API.	CX DX	CX DX
NEW IN 10.3 RIO!	New Windows API headers for areas like High-DPI and DPI-awareness, WM_POINTER pen input support, and more	CX DX	CX DX
	VCL library source code to help extending and debugging components	CX DX	CX DX
		Limited in COMMUNITY	
NEW IN 10.3 RIO!	New TImageCollection and DPI-aware TVirtualImageList components to manage multiple-resolution images and improve application support for high-DPI monitors and application form scaling. Includes design time support with a new Image Collection editor and a new Virtual Image List editor.	CX DX	CX DX
NEW IN 10.3 RIO!	Support for Windows 10 "Per Monitor V2" mode in application manifest and enhanced system metrics API support (requires Windows 10 Creator's Update, build 1703)	CX DX	CX DX
ENHANCED IN 10.3 RIO!	High-DPI Awareness and 4K monitor support, plus Windows 8.1/10 multi-monitor support for VCL applications, with dozens of new improvements	CX DX	CX DX
	New custom VCL controls corresponding to some of the new Windows 10 UI controls, which can also be used on previous version of Windows	CX DX	CX DX
INTRODUCED IN 10.2 TOKYO!	DatePicker and TimePicker VCL controls; StackPanel and CardPanel VCL controls	CX DX	CX DX
	ActivityIndicator, SearchBox, RelativePanel, ToggleSwitch, SplitView VCL control; modern looking SelectDirectory function	CX DX	CX DX
INTRODUCED IN 10.1.2 BERLIN!	CalendarView and CalendarPicker VCL controls	CX DX	CX DX
ENHANCED IN 10.3 RIO!	VCL Font Scaling improvements for higher DPI and higher resolution monitors	CX DX	CX DX
INTRODUCED IN 10.1 BERLIN!	Konopka Signature VCL Controls (over 200 additional Windows UI controls)* <i>* Available for download in the GetIt Package Manager</i>	CX DX	CX DX
	VCL sensor components for Windows tablets	CX DX	CX DX
ENHANCED IN 10.1 BERLIN!	VCL support for AppTethering across desktop and mobile applications, with Wifi and Bluetooth support with extensions and protocol enhancements, including encryption hooks, including events to handle when a profile is connected or disconnected	CX DX	CX DX
















































































































	Taskbar component with progress bars, overlay icons, custom buttons, and multiple previews; JumpList component for adding custom menus to taskbar buttons				
	VCL Styles: Create VCL applications with enhanced GUI, with additional Windows 10 Styles for VCL and including Windows touch tablets optimized styles; support for styling of main menus, popup menus, and system menus				
	Windows 10 specific VCL styles, to build applications matching Microsoft's Modern look and feel; Premium styles including TabletLight, Sky, and Glow VCL styles				
NEW IN 10.3.1 RIO!	10 new VCL Windows styles* that users can apply to their Windows applications <i>* Available for download in the GetIt Package Manager</i>				
	Create your own custom styles with the VCL Style Designer				
	VCL Styling improvements, including support for styling common dialogs and the TWebBrowser component				
	Theming and styling support for TGrid descendants				
	Integrated gesturing framework with multi-OS support for Windows 8. Gesture Designer enables full control of all gesture design and interaction; Gesture components (TGestureListView, TGesturePreview, TGestureRecorder) to build gesture creation and management into VCL based applications; Interactive multi-touch gestures for pan, zoom, rotate, tap, double tap, tap and hold (requires multi-touch enabled OS)				
	TTouchKeyboard a virtual keyboard for enhanced non-keyboard interface interactions that support multiple locales and languages				
	Modern VCL Components: TCategoryPanelGroup, TButtonedEdit, TLinkLabel, TBalloonHint				
	Enhancements to existing controls: TButton, TEdit, TProgressBar, TListView, TTreeView, TRichEdit, TImageList				
	Full support for PNG image format in TImage and TImageList				
INTRODUCED IN 10.2 TOKYO!	TDBImage direct support for JPEG and PNG graphic formats				
	Support for Windows Imaging Component (WIC) including JPEG, TIFF, GIF, PNG, BMP, and HD Photo image formats. RAW camera formats (such as NRW, NEF, CRW, CR2, RW2, ARW, SR2, SRF, ORF, PEF, and DNG) also supported with manufacturer supplied codecs.				
	Import Component wizard to import a type library, ActiveX control or .NET Assembly				
	Component wizard to create the unit for a new component				
	Standard components including frame, edit, menu, button, label, checkbox, list box, combo box, panel and action list				
	Additional components including graphical buttons, image, shape, scroll box, splitter, buttoned edit, tabs, panels, action toolbar, and color map				
	Windows common controls including page control, image list, rich edit, progress bar, date time, calendar, toolbar, tree view and list view				
	System components including timer, paint box, media player, OLE container and DDE				
	Dialog components including open, save, open/save picture, open/save text, font, color, print, printer setup, find, replace and page setup				
	Data Access Controls via datasource and the use of data-aware controls				
	Data Controls including DBGrid, navigator, text, edit, memo, image, listbox, combo box, checkbox, radiogroup, lookup and rich edit				
	TWebBrowser support, wrapped on the Microsoft IE ActiveX component				
	Task dialog component and enhanced Windows dialog components for file open and file save				
COM/DCOM SUPPORT					
	Full COM/ActiveX support enabling transparent access to IDL and code, source control friendly, and allowing total control over implementation of COM and ActiveX objects; DCOM support				
	Wizards support wrapping existing VCL components as ActiveX controls				
	Import .NET assemblies as COM objects in Win32 VCL applications				
	Legacy support for DataSnap/MIDAS COM/DCOM based multi-tier database application framework				
	Advanced Type Library Editor that manages IDL, making COM development completely transparent; Support for Automation Object event handling				

	Create reusable native 32-bit and 64-bit dynamically linked libraries (.DLL), COM controls (.OCX), and standalone COM executable				
	COM Object Wizard; Microsoft ActiveX® Control Data binding; Import COM servers as components				
INTERNET OF THINGS (IOT) SUPPORT					
	Native Bluetooth APIs (on platforms that fully support the technology) for FireMonkey and VCL applications				
	Bluetooth framework improvements and new TBluetooth component for classic Bluetooth				
	Bluetooth LE component (on platforms that fully support the technology)				
	Proximity support based on the “beacons” technology (including the iBeacon and AltBeacon standards) for iOS, Android, and macOS				
INTRODUCED IN 10.1 BERLIN!	Beacon enhancements with support for EddyStone format, change of AdvertiseData parser to include all fields, improved Beacon scan performance, new Android scan modes, and WinRT Bluetooth API integration, StartScan method on Android				
	New TBeaconDevice class for turning a device on one of the supported platforms into a “beacon”				
	BeaconFence components* for detecting a device position relative to pre-determined zones based and based on triangulation of beacons positions <i>* Available for download in the GetIt Package Manager</i>				
INTRODUCED IN 10.1 BERLIN!	BeaconFence enhancements for detecting zones, Windows support, customized calculation of the current position, access last calculated position				
INTRODUCED IN 10.1 BERLIN!	New Bluetooth LE and Z-Wave compatible components* for Internet of Things devices, with demo projects for Delphi and C++. In order to use the component, you will need to have the physical IoT device. <i>* Available for download in the GetIt Package Manager</i>				
INTRODUCED IN 10.1 BERLIN!	Ready to use Bluetooth LE-based IoT components including heart rate monitors, blood pressure monitors, weight scales, thermometers, Environment sensors, speed and cadence fitness monitors, items trackers, light bulbs				
INTRODUCED IN 10.1 BERLIN!	Ready to use Z-Wave compatible IoT components including environment monitors, home automation devices, light and temperature monitors, and more				
VISUAL LIVEBINDINGS					
ENHANCED IN 10.3 RIO!	Visual Live Bindings Designer, to visually connect component properties and data, significantly optimized in 10.3				
	Easily replace prototype data with real ClientDataSet data with one click				
	Context sensitive LiveBindings Wizard supporting both dbExpress and FireDAC				
	Support for QuickBinding components, ability to visually add and bind to additional component properties				
	Color coded component properties easily identify bindable members				
	Zoom control for Visual LiveBindings Designer and ability to save image of current LiveBindings Designer layout; Hide visual elements on right-click				
	Integrated Layers Management system for LiveBindings Designer with Photoshop® like layers, allowing you to visually organize and hide set of elements in the LiveBindings Designer				
	Tools Options support for LiveBindings Designer to show/hide certain components from the visual LiveBindings Designer view and enable/disable Wizard option in right-click menu				
INTEGRATED BUILD TOOLS AND PROJECT SUPPORT					
	IDE support for building and managing projects for 32-bit and 64-bit Windows				
INTRODUCED IN 10.2 TOKYO!	IDE support for building and managing projects for 64-bit Linux				
	IDE support for building and managing projects for 32-bit macOS (with no macOS App Store support, due to Apple policies)				
NEW IN 10.3.2 RIO!	IDE support for building and managing projects for 64-bit macOS (including macOS App Store support and integrated Apple Notarization support)				
ENHANCED IN 10.1 BERLIN!	Use MSBuild externally from the IDE to compile very large projects with the stand-alone Delphi and C++ compilers.				
INTRODUCED IN 10.2.2 TOKYO!	The stand-alone Delphi compilers can now use the large memory address space.				
INTRODUCED IN 10.1 BERLIN!	The IDE shows Header Dependencies when building with bcc32c				
	Define Android application settings, including supported orientations, and use the new Entitlement lists to include advertising and notifications support in an app				



















































































































	IDE support for adding Java classes to an Android app classes.dex library and customizing it				
ENHANCED IN 10.1 BERLIN!	Support for Android Services in the IDE, including wizards to create Android Services and to add them to an existing Android app				
ENHANCED IN 10.1 BERLIN!	JavaZOP (Java to Object Pascal bridge) API headers translation tool (for Android), improved to reduce dependency between units and to supports JDK 8				
INTRODUCED IN 10.1 BERLIN!	SdkTransform tool to convert Objective-C / C++ headers to Object Pascal headers				
	Define info.plist application settings including supported orientations in the IDE				
ENHANCED IN 10.1 BERLIN!	Deploy apps to the iOS Device (Debug/Ad Hoc/ App Store), now with several iOS device provisioning improvements to simplify the deployment process – including Auto Bundle identifier and support for executing an application from the IDE using the AdHoc target				
	Define iOS application splash screens and mobile app icons in the IDE				
	Deploy apps to Android devices (Debug/App Store)				
ENHANCED IN 10.3.2 RIO!	Platform Assistant for deploying and debugging across platforms				
INTRODUCED IN 10.2 TOKYO!	Platform Assistant (PAServer) for Linux; Deployment Manager: Deploy to Linux				
	Platform Assistant Manager Mac macOS tray app that helps managing multiple versions of Platform Assistant (PAServer)				
	Deployment Manager: Deploy to iOS, Android, macOS, Windows				
	Automatic inclusion of project files (like media files and resource files) to the Deployment Manager				
	Project Manager view menu for directory (nested), directory (flat) and list view of files in a project and with an enhanced status bar for more file information.				
	File manipulation and creation through the Project Manager facilities				
	Flexible build system leveraging MSBuild with identical build process from the IDE or command line				
ENHANCED IN 10.2 TOKYO!	Delphi 1 through 10.2 project import and C++Builder 3 through 10.2 project import				
	Build Configurations provide flexibility to organize multiple build settings for all compiler, linker options, and platform support				
	Named option sets to save and apply build configurations to any project; Share option-sets between build configurations and between projects				
	Multi-select files in the Project Manager				
	Build Events for pre-build and post-build on project and file levels				
	Project dependency checking, Project level build ordering, Build/Make from here – Make or build current project and all later projects				
	IDE Studio personality indicator – shows which is active when multiple languages are available				
	Additional command line tools include Microsoft Resource Compiler, TDump utility to structurally analyze EXE, OBJ, and LIB files, GREP tool, and MAKE tool				
RECENT C++ LANGUAGE AND CORE RTL FEATURES					
NEW IN 10.3 RIO!	Win32 C++ Clang-enhanced compiler (with C++ 17 language support)				
NEW IN 10.3.2 RIO!	Win64 C++ Clang-enhanced compiler (with C++ 17 language support)				
ENHANCED IN 10.3.2 RIO!	C++ runtime library (RTL) built with the updated Clang-enhanced compiler for Win32 and Win64, including 2018 edition of Dinkumware STL				
NEW IN 10.3 RIO!	Improved C++ and Delphi ABI and header compatibility				
INTRODUCED IN 10.2.3 TOKYO!	Support for using our C++Builder compilers to build CMake projects on the command line for Win32, Win64, iOS32, iOS64, and Android, including deployment support				
ENHANCED IN 10.2 TOKYO!	Improved optimizations for C++ Clang-enhanced compilers code generation (-O1 and -O2 and now also -O3 optimizations)				
	Simplified array initialization and construction for C++ Clang-enhanced compilers				
ENHANCED IN 10.1 BERLIN!	Android and iOS32 compilers updated to Clang version 3.3				

ENHANCED IN 10.1 BERLIN!	The Clang-enhanced compilers are now large-address aware and can take advantage of additional memory	CX	CX
INTRODUCED IN 10.1 BERLIN!	Additional iterator wrappers over common Delphi RTL containers for all Clang-enhanced compilers for use with C++11 range-for loops and non-member std::begin() and std::end()	CX	CX
INTRODUCED IN 10.1 BERLIN!	C++ functions for TPoint, TPointF, TRect, TRectF core types	CX	CX
	ANSI/ISO C++11 and 99 Standard language conformance support for 64-bit	CX	CX
	#pragma once support that allows for better compatibility with MSVC and also acts as a header guard	CX	CX
	[[deprecated]] attribute to flag constructs as deprecated	CX	CX
	Secure C library functions	CX	CX
	Custom evaluators for C++ Strings types	CX	CX
	C++ RTTI compatibility with Delphi	CX	CX
ENHANCED IN 10.3 RIO!	Updated 2018 edition of the Dinkumware STL with C++17 headers for Win32, support for C++ 11 language standard on Win64	CX	CX
	ANSI/ISO standard library Technical Report 1	CX	CX
	Improved standard C++ heap manager	CX	CX
	Optimized string/memory handling functions	CX	CX
	UnicodeString class and Unicode character types char16_t and char32_t	CX	CX
	Move semantics with rvalue references	CX	CX
	Explicit conversion operators	CX	CX
	Static assertions	CX	CX
	Full type trait support	CX	CX
	Extern templates	CX	CX
	[[final]] and [[noreturn]] attributes	CX	CX
	Decltype keyword	CX	CX
	Linker error handling to improve memory management flexibility and resolution	CX	CX
INTRODUCED IN 10.2 TOKYO!	Large-memory space support for C++ linker and improved resource handling to address heap errors	CX	CX
RECENT DELPHI LANGUAGE AND CORE RTL FEATURES			
NEW IN 10.3 RIO!	Inline variables declaration, supporting local scope, direct initialization, and type inference; inline constants declaration	DX	DX
NEW IN 10.3 RIO!	Type inference for inline variable declarations (the type is inferred from the value assigned to the variable)	DX	DX
ENHANCED IN 10.3 RIO!	Support for calling WinRT APIs, with now over 50 specific Object Pascal interface units	DX	DX
INTRODUCED IN 10.1 BERLIN!	[Weak] and [Unsafe] support for interface references	DX	DX
INTRODUCED IN 10.1 BERLIN!	[Volatile] attribute can be attached to a method parameters and local variables	DX	DX
ENHANCED IN 10.1 BERLIN!	Delphi compiler and linker performance improvements to improve compilation speed for generic methods and generic methods in standard classes	DX	DX
	Improved initialization for dynamic arrays, support for mixing and matching constant and dynamic arrays	DX	DX
	New string-like operations on dynamic arrays including + operator concatenation, Insert and Delete	DX	DX
	Class, record, and intrinsic types helpers	DX	DX
	Predefined helpers for core types such as string, char, integer, other ordinal types, and floating point types	DX	DX

	RTTI for indexed properties and RTL support	DX	DX
	Reflection support for exposure of Methods, Fields, and Properties to support dynamic invocations and other meta-programming approaches (Enhanced RTTI)	DX	DX
	Custom attribute support for most code elements – types, fields, properties, methods, and parameters	DX	DX
	Generics with full RTL list and collection support	DX	DX
	UnicodeString type as the default string type and support for Unicode char manipulation	DX	DX
	Anonymous methods (or closures)	DX	DX
	Compiler option to treat warnings as errors	DX	DX
SHARED RUNTIME LIBRARY FEATURES			
INTRODUCED IN 10.2 TOKYO!	Delphi RTL for 64-bit Linux		DX
	Delphi and C++ RTL for 32-bit Windows and 64-bit Windows	CX DX	CX DX
	Delphi and C++ packages support for 32-bit applications and 64-bit Windows	CX DX	CX DX
	Support for Windows 10 Notifications using the NotificationCenter component	CX DX	CX DX
NEW IN 10.3 RIO!	Support for Windows Store interaction via TWindowsStore component, with support for paid applications, paid add-ons, and trial mode	CX DX	CX DX
	Support for contracts, the system mechanism for sharing information with other Windows 10 applications (apps can behave like <i>contract sources</i>) using the new SharingContract component – C++ supported in the GetIt Package Manager	CX DX	CX DX
	Parallel Programming library for easy development of asynchronous code and faster multi-core applications, without coding threads manually	CX DX	CX DX
	System.Threading unit supporting parallel for loops, tasks scheduling and futures	CX DX	CX DX
	Automatic Reference Counting in iOS and Android ARM compilers	CX DX	CX DX
	Optimized Unicode strings handling in iOS and Android ARM compilers	CX DX	CX DX
ENHANCED IN 10.3 RIO!	Traditional Memory Reference Counting in the Linux compiler		DX
INTRODUCED IN 10.1 BERLIN!	Support for string types UTF8String and RawByteString on iOS and Android	CX DX	CX DX
	Delphi and C++ RTL for macOS (including enhanced macOS C++ exceptions handling)	CX DX	CX DX
NEW IN 10.3.2 RIO!	Delphi RTL for macOS 64-bit	DX	DX
	Delphi and C++ RTL for iOS, iOS 64-bit API headers and RTL integration	CX DX	CX DX
ENHANCED IN 10.3 RIO!	Delphi and C++ RTL for Android, with support for Android API level 26	CX DX	CX DX
INTRODUCED IN 10.1 BERLIN!	DirectX 12 support on Windows	CX DX	CX DX
	OpenGL 4.3 support	CX DX	CX DX
	Enhanced compiler switches for XML representation of source code	CX DX	CX DX
	Extensible, cross platform, framework agnostic login credentials service	CX DX	CX DX
	Native zip file support. TZipFile class now has a callback to use during the extraction process to know the current progress, support added to extract ZIP files with passwords	CX DX	CX DX
ENHANCED IN 10.3 RIO!	Regular Expressions (Regex) library, now supporting PCRE UTF-16 on Windows	CX DX	CX DX
	Object-oriented path, file and directory I/O classes	CX DX	CX DX
INTRODUCED IN 10.1 BERLIN!	Buffered file read and write support, based on the TBufferedFileStream class, a high performance TFileStream descendant based on an internal configurable buffer	CX DX	CX DX
ENHANCED IN 10.1 BERLIN!	TMemIniFile and TIniFile have new Modified and AutoSave properties	CX DX	CX DX
INTRODUCED IN 10.1 BERLIN!	TStrings enhancements including new properties IsUpdating, TrailingLineBreak, UseLocale, Options, plus overloaded TStringList constructors and AddPair fluent method	CX DX	CX DX

ENHANCED IN 10.1 BERLIN!	StringReplace and Pos speed optimization	 	 
	Box2D physics engine, for manipulating on-screen objects according to the physics rules	 	 
	Object Pascal interfaces for the Box2D physics engine		
ENHANCED IN 10.3 RIO!	TStringBuilder for easier and faster string concatenation, optimized and with flexible growth strategy	 	 
ENHANCED IN 10.3 RIO!	JSON (JavaScript Object Notation) processing using a JSON.NET implementation for JSON streaming with new readers and writers (including base TJsonReader and TJsonWriter classes)	 	 
ENHANCED IN 10.3 RIO!	Specialized JSON readers and writers, including the TJsonTextReader and TJsonTextWriter classes, the new TAsciiStreamWriter class, support for Extended JSON, better exception handling when reading not-well-defined JSON	 	 
	Binary JSON (BSON) readers and writers support, as part of the same JSON.NET architecture (including the new TBsonReader and TBsonWriter classes)	 	 
	JSON and BSON fluent method builders, including the TJSONArrayBuilder and TJSONObjectBuilder classes	 	 
	JSON and BSON fast forward-only iterator (TJSONIterator)	 	 
	System.NetEncoding RTL unit for Web encoding and decoding (Base64, HTML, URL)	 	 
ENHANCED IN 10.2 TOKYO!	System.Hash RTL unit, with hash functions to support the HTTP framework, now including also method for files hashing	 	 
ENHANCED IN 10.2 TOKYO!	HTTP client framework, mapped to platforms libraries on all supported platforms, including also platform HTTPS support (with no need to deploy the OpenSSL library), with improved asynchronous support	 	 
	NetHTTPClient and NetHttpRequest components, offering easy access to the HTTP client framework	 	 
	Support for native HTTP(S) client libraries on Windows, macOS, iOS and Android	 	 
INTRODUCED IN 10.2 TOKYO!	Support for native HTTP(S) client libraries on Linux		
ENHANCED IN 10.1 BERLIN!	HTTP client library improvements including support for asynchronous HTTP requests, time-outs, and automatic decompression of gzip content	 	 
	Support for localized resources	 	 
	Expression evaluation in compiler directives	 	 
	Custom variants with support of your own data types, complex numbers, safe arrays, and passing variants through data sets; Variant support for Int64, unsigned types and Unicode strings	 	 
INTEGRATED DEVELOPMENT ENVIRONMENT AND DEVELOPER PRODUCTIVITY			
NEW IN 10.3.1 RIO!	New IDE productivity tool: Bookmarks*, which extends the IDE's previous marking of locations in the code editor. <i>* Available for download in the GetIt Package Manager</i>	 	 
NEW IN 10.3.1 RIO!	New IDE productivity tool: Navigator*, which allows you to quickly jump to any location in your unit through intelligent search (for Delphi), and adds a minimap to the code editor. <i>* Available for download in the GetIt Package Manager</i>	 	 
NEW IN 10.3 RIO!	IDE main window UX extensively improved, with a clean and modern look and feel designed for long-term use and productivity	 	 
NEW IN 10.3 RIO!	Commonly used dialogs (Project Options, IDE Options, New Items dialog, GetIt Package Manager dialog, Compiler progress dialog) have been redesigned and improved, for productivity and clarity	 	 
NEW IN 10.3 RIO!	Search added to the Project Options and IDE Options dialogs, allowing you to search for a setting inside each dialog	 	 
ENHANCED IN 10.3 RIO!	Styled IDE UI, including ability to toggle and disable IDE styling and support for a dark style. In 10.3 the IDE has a new Light theme based around the blue color and an updated Dark theme	 	 
INTRODUCED IN 10.2.2 TOKYO!	IDE UX improvements including a new Welcome page with sample projects, upcoming webinars, YouTube videos feed; updated component icons; and more	 	 
ENHANCED IN 10.3 RIO!	Additional IDE Startup Layout for the Welcome Page, with the ability for users to change and set the layout they want to use for each layout, including Startup	 	 
INTRODUCED IN 10.1 BERLIN!	The VCL and FireMonkey Designers can be separated from the code editor window, making it possible to have the designer on one monitor, while coding on another monitor, and to work on multiple forms at the same time	 	 
INTRODUCED IN 10.1 BERLIN!	Delphi project option "Show general messages" to show info messages when building a project		
INTRODUCED IN 10.1 BERLIN!	The C++ Structure Parser has been rewritten and includes support for modern C++		


























































INTRODUCED IN 10.1 BERLIN!	Method Toxicity Metrics; Bookmarks stack, Selection Expansion	DX	DX
INTRODUCED IN 10.2 TOKYO!	New modular View menu, re-arranged with subsections	CX DX	CX DX
	IDE built with large memory address model, to provide significantly more memory to the embedded compilers, integrated debuggers, and various tools executed in the IDE process	CX DX	CX DX
	Redesigned compiler unit caching mechanism, to free older units in case the available memory is being filled up, when compiling project groups with multiple projects	CX DX	CX DX
	Improved multi-monitor support in the IDE, with the ability to place most forms and panes on different secondary monitors	CX DX	CX DX
	Form designer option to hide/show non-visual controls icon (reducing form design potential clutter)	CX DX	CX DX
	Structure View Icons representing the corresponding component	CX DX	CX DX
	Unsaved file auto-recovery – unsaved work is periodically saved to a temporary location. If the IDE closes ungracefully (because of a system crash) the IDE will attempt to recover the user's unsaved work	CX DX	CX DX
ENHANCED IN 10.2 TOKYO!	Enhanced IDE Project Options to easily enable High-DPI Awareness in your applications, now supporting also several execution levels affecting the project manifest file on Windows	CX DX	CX DX
ENHANCED IN 10.2 TOKYO!	Full customization of the Object Inspector layout, with the ability of hiding the description panel, the quick actions, and the new filter panel	CX DX	CX DX
	Object Inspector contents can be filtered to display specific elements	CX DX	CX DX
	Shortcuts to increase/decrease the size of the font in the code editor	CX DX	CX DX
ENHANCED IN 10.1 BERLIN!	GetIt Library Manager for easy discovery, download and update of source code libraries, components, and other features from Embarcadero GetIt servers*. Extended with Categories, UI improvements, and new actions * Use of GetIt requires Internet connectivity. The feature is not available to off-line developers.	CX DX	CX DX
	Configuration settings migration tool to migrate configurations of older versions of the product to a newer version, or between different installations of the same version	CX DX	CX DX
ENHANCED IN 10.1 BERLIN!	Welcome page with a list of favorite and recent projects	CX DX	CX DX
ENHANCED IN 10.3.2 RIO!	Project statistics information for activity tracking and to better understand team productivity (now optional and disabled by default)	CX DX	CX DX
	Clipboard history, keeping track of the content of past cut and copy operations, to paste it once more	CX DX	CX DX
	Multi-paste support to let you perform the same paste operation on multiple source code lines at once	CX DX	CX DX
	Structural highlighting ; Flow control highlighting, to visually see the flow jumps in your code directly in the editor; Code navigation toolbar with classes and methods combo boxes at the top of the editor, with an additional option to hide it	DX	DX
	Project Manager enhancements, with the support for adding database files and simplifying their deployment	CX DX	CX DX
ENHANCED IN 10.2 TOKYO!	New install experience based on the GetIt architecture; with the ability to select the platforms to install and add more platforms later form the IDE (which has a Platforms Manager option in the Tools menu). Additional installation features are now available in the regular GetIt form. Now supporting parallel downloads to reduce installation time.	CX DX	CX DX
	A set of examples and demos to help new and existing developers get the most out of the environment	CX DX	CX DX
	Designer snapshots – copy form images to the clipboard	CX DX	CX DX
ENHANCED IN 10.3 RIO!	IDE Insight, the fastest way to find and execute commands in the IDE with 1-button click also with object inspector property support	CX DX	CX DX
	Code Formatter and beautification for source code including block formatting	CX DX	CX DX
	Command-line Code Formatter for integration with automated build processes	CX DX	CX DX
	Code Formatter profiles allow users to create / save / load custom formatter options sets	CX DX	CX DX
	Audits and metrics	DX	DX
	Audits for C++	CX *	CX *
	*not available for the new Clang-enhanced C++ 17 compiler		
	Search for Usages command now available from the code editor and Delphi Class Explorer context menus	DX	DX

	Find Definitions/References in Clang-based C++ compilers (C++ Indexer), supporting the Navigate To command	 *	 *
	<small>*not available for the new Clang-enhanced C++ 17 compiler</small>		
	Compilation can be done in a background thread	 	 
	Support for C++ parallel compilation		
	Checkbox for Boolean types in the Object Inspector greatly enhancing readability	 	 
	Property Editors for Date properties now use Calendar controls	 	 
	Use Unit interaction capabilities increased		
	Class Explorer gives configurable hierarchical view of class libraries throughout project. Also enables fast navigation to declarations and implementations, as well as easy addition of fields and methods.	 	 
	Resource Manager greatly simplifies the addition of resources to projects	 	 
	Live Code Templates – dynamic scriptable templates streamlines coding complex and common structures and operations. Create or customize code templates and control the behavior, code generation, and user experience of your templates. Surround Templates that can wrap around selected code or text.	 	 
	Editor “Change Bar” indicates modified lines and saved modified lines	 	 
	“Smart” Block completion – anticipates and gracefully adds block closures as you type	 	 
	Virtual form positioner for VCL designer and FireMonkey designer	 	 
	Main toolbar with the addition of Run without Debug option	 	 
	Project Manager now has the ability to run selected applications with either Run or Run without Debug from the context menu.	 	 
	Hot-key Tool Palette w/ Incremental search – find any component quickly	 	 
	Gallery in Tool Palette – find gallery wizards when you need them	 	 
	SyncEdit – block-edit multiple instances of a symbol simultaneously	 	 
	History Manager with automatic multi-level file backups, file differencing and restore	 	 
	Structure Pane that displays hierarchical view of source code and provides a VCL Object Treeview for quick navigation and manipulation of objects in the VCL designer	 	 
	Syntax Highlighting Open Tools API extension with built in support for JavaScript, PHP, and INI files	 	 
	Ability to individually customize editor options for particular file types	 	 
ENHANCED IN 10.3 RIO!	Full-featured Open Tools API allows for customization of the IDE through wizards and experts, operate on projects and their various modules, access to the editor and designers, with improved style and theme support	 	 
	Symbol Insight – click to navigate to declarations and implementations	 	 
	Code Insight for C++ and Object Pascal languages, offering code and parameter completion providing on-the-fly member lists and parameter hints as you type	 	 
	Code Insight – Code completion for DTD described markup language including HTML, WML, XHTML, and XSL	 	 
	Code Folding configuration and properties	 	 
	Editor Gutter – easier to read with less clutter	 	 
	Code Completion for Object Pascal		
ENHANCED IN 10.3.2 RIO!	Updated support for Code Completion for the C++ language, with asynchronous invocation support, based on the Language Server Protocol architecture		
	Custom IDE desktop layout profiles with enhanced support for docked windows	 	 
	To-do lists keep your development on track	 	 

Help Insight – convenient tooltips provide help snippets as you develop	CX DX	CX DX
SOURCE CODE MANAGEMENT		
Version Insight – Integrated framework for supporting source code management tooling inside the IDE	CX DX	CX DX
Subversion integration into the IDE, including change list labels, SVN merge dialog, branches switching and more	CX DX	CX DX
Subversion/History integration	CX DX	CX DX
A full default Diff viewer	CX DX	CX DX
Git version control integration into the IDE, now including authentication, Push and Pull changes to and from remote repositories	CX DX	CX DX
Mercurial version control integration into the IDE (supports cloning your remote repository, commit changes locally, show log data)	CX DX	CX DX
Version Insight also available as an open source project	CX DX	CX DX
INTERNATIONAL DEVELOPMENT		
UnicodeString type ; Unicode-enabled development environment; Unicode-enabled VCL and FMX frameworks	CX DX	CX DX
English, German, French, and Japanese translations available for IDE menus and dialogs, compiled units, resources, and source code	CX DX	CX DX
Easy switching between the available languages for the IDE menus, dialogs, and more	CX DX	CX DX
REFACTORINGS		
Prototype synchronization – as you change the prototype for a function, you can use this feature to synchronize the interface and implementation sections to match (Object Pascal language only)	DX	DX
Extract method and change parameters refactoring, including support for generic types	DX	DX
<div style="background-color: yellow; padding: 2px; display: inline-block;">UPDATED IN 10.2.1 TOKYO!</div> Rename refactoring, for Delphi and C++* <div style="margin-left: 20px; font-size: small;">*not available for the new Clang-enhanced C++ 17 compilers</div>	CX * DX	CX * DX
Refactor driven Find References	DX	DX
Other refactorings include: Introduce Variable, Introduce Field, Inline Variable, Safe Delete, Push Members Up / Down, Pull Members Up, Extract Superclass, Extract Interface, Move Members, Declare variable, Declare field, Find unit/import namespace, Extract to resource string	DX	DX
Refactor driven “Find in Files”	DX	DX
UML MODELING		
UML Code Visualization – at any time, get a UML model view of your source code	DX	DX
Object Pascal code generation from class diagram	DX	DX
Object Ancestry; show an object full hierarchy	DX	DX
Automatic Sequence diagrams generation support	DX	DX
Ability to load an image into the diagram for annotations and advanced documentation	DX	DX
Sequence diagrams		DX
Collaboration diagrams		DX
State charts		DX
Deployment diagrams		DX
Use case diagrams		DX
Activity diagrams		DX
Component diagrams		DX
Documentation generation		DX
Run Documentation generation from the command-line		DX

80+ Static Code Metrics that allow for deep understanding and analysis of the health of the object domain		
Kiviat graph enhancements for interactive reporting		
10+ introductory level static code Metrics for understanding the health of the object diagram		
Run static Metrics from the command-line		
10 introductory level static code audits for better code understanding		
200+ Static Code Audits for deep code analysis to better understand the coding style and approach		
Pointer Analysis for Audits. Run static Audits from the command-line		
Import model from Rational® Rose (mdl import)		
Language neutral UML 1.5 and 2.0 modeling		
Transformation from language neutral UML 1.5 and UML 2.0 projects to source code projects		
Design Patterns support, including GOF patterns		
Diagram printing		
XMI 1.1 Import/Export		
Full two-way class diagrams with synchronization between code and diagrams		
OCL 2.0 support		
“UML in Color” profile		
Diagram hyper-linking and annotations		







































































































INTEGRATED DEBUGGING

	Full-featured debugger with color syntax highlighting				
	Debug remote and local 64-bit Windows applications				
	Debug remote macOS applications				
NEW IN 10.3.2 RIOI	Debug remote macOS 64-bit applications				
	Remote iOS device debugging and remote iOS 64-bit device debugging				
	Android device debugging				
INTRODUCED IN 10.2 TOKYOI	Remote Linux 64-bit debugging				
ENHANCED IN 10.2 TOKYOI	Improved debugging support for Clang-enhanced C++ compilers for Win32 and Win64				
ENHANCED IN 10.1 BERLINI	Support for Delphi Unicode string evaluation, for evaluating properties and variants and function call support when debugging iOS64 applications				
ENHANCED IN 10.1 BERLINI	CPU View support for iOS and Android application debugging along with support for Delphi Dynamic Arrays				
ENHANCED IN 10.2 TOKYOI	Debugging visualizers to enable extended views of debugging data, enhanced with support for Delphi generics and C++ templates				
	Build debugger visualizers for your own custom data types				
	Debug visualizer for TStrings, TDateTime, TDate, and TTime types				
	Detach from “Debug session in progress. Terminate?” dialog				
	Multi-threaded-debugging the ability to selectively “Freeze” and “Thaw” threads				
	Multi-threaded-debugging the ability to set a breakpoint for a selected thread				

	Support for Wait Chain Traversal on Windows				
	Disassembly pane has "Show Opcodes" and "Show Addresses" local menu items				
	Debugger Options: "Scroll new events into view" and "Ignore non-user breakpoints"				
	Call Stack View shows a glyph indicating if the frame has debug info				
	CPU view panes can be opened individually outside of an editor tab				
	Integration between debugger views and panes making it easier to find and understand information				
	Call Stack view now automatically syncs the Locals view when you double click an item				
	Evaluator tooltip hints go transparent when the CTRL key is pressed, allowing you to see through them to the editor				
	Expandable tooltip expression evaluation				
	Expandable watches and local variables view				
	Selective symbol table loading				
	Close implicitly opened files after debugging				
	Multi-select and copy to clipboard support in CPU view				
	Ctrl-Click in editor gutter to enable/disable breakpoints				
	Sort by load order in Modules view				
	Set Next Statement local menu item in editor				
	Exception notification dialog: Break/Continue buttons, "Ignore exception type" checkbox				
	Modules View sorting				
	Thread view displays status on all processes and threads under debugger control				
	CPU view for low-level debugging				
	Multi-Process debugging for easy tracing through complex applications				
	Breakpoint view with toolbar, in-place editing, and enable/disable checkbox				
	Watch view supporting in place editing, checkbox enable/disabling, and the watch names separated from the values with columns				
	Multi-tab watch view for logically grouping variables				
	Attach to and debug any process, detach from any process				
	Run until return				
	Advanced breakpoints with Tooltips, actions, and groups for complete debugging control				
	Breakpoint Data Aware Triggers				
	Debug spawned processes				
	Debug Inspector for easily monitoring properties while debugging				
	Event log view				
INTEGRATED UNIT TESTING					
ENHANCED IN 10.3 RIO!	Integrated unit testing with the DUnitX testing framework				
ENHANCED IN 10.3 RIO!	DUnitX unit testing support for mobile platforms (iOS and Android)				

INTRODUCED IN 10.2 TOKYO!	DUnitX unit testing support for Linux			DX
	Runtime support for the DUnit testing framework	CX	DX	CX DX
	Unit test wizards for quick and easy unit test and unit test project creation	CX	DX	CX DX
	Execute unit tests from project manager	CX	DX	CX DX
INTEGRATED HELP				
	Support for CHM help engine and updated IDE help structure	CX	DX	CX DX
	Continually updated help system with diagrams showing class hierarchy and declared members pages	CX	DX	CX DX
DATABASE APPLICATION DEVELOPMENT AND CONNECTIVITY				
	Powerful cross-platform and multi-database DB access architecture, based on TDataSet class, field definitions, fields and parameters managements	CX	DX	CX DX
	Support for multiple TDataSet descendant classes shipping with the product or available from third-party vendors	CX	DX	CX DX
INTRODUCED IN 10.2 TOKYO!	Support for display options for BlobFields	CX	DX	CX DX
INTRODUCED IN 10.2 TOKYO!	Direct GUID access for TField classes	CX	DX	CX DX
	Control of the automatic and persistent fields of a data set using the FieldOptions and FieldLifeCycle features.	CX	DX	CX DX
FIREDAC MULTI-DEVICE DATA ACCESS LIBRARY¹				
ENHANCED IN 10.2 TOKYO!	Windows/macOS enterprise database support, including MySQL, MariaDB, Microsoft SQL Server, Oracle Database, InterBase, PostgreSQL, Informix, Sybase SQL Anywhere, Microsoft Access, IBM DB2 Server, Firebird, Advantage Database, generic ODBC driver			CX DX
ENHANCED IN 10.2 TOKYO!	Support for local databases, including Microsoft Access database, SQLite and MariaDB database, IBToGo / IBLite, InterBase on localhost, MySQL Embedded, MySQL Server on localhost, Advantage Database local engine, PostgreSQL on localhost, Firebird Embedded, Firebird on localhost <i>Some features in this table marked as ¹ are limited to local connections in Professional editions</i>	CX	DX	CX DX
INTRODUCED IN 10.2 TOKYO!	Linux enterprise database support, including MySQL, MariaDB, Microsoft SQL Server, Oracle Database, InterBase, PostgreSQL, Sybase SQL Anywhere, IBM DB2 Server, Firebird, Advantage Database, MongoDB, generic ODBC driver. Includes also support for local databases like SQLite database and IBToGo / IBLite.			DX
	iOS and Android mobile database support, including SQLite, IBToGo and IBLite	CX	DX	CX DX
ENHANCED IN 10.3 RIO!	Updated FireDAC Microsoft SQL Server driver, supporting MS SQL 2017			CX DX
ENHANCED IN 10.3 RIO!	Updated FireDAC MySQL driver, supporting MySQL v 8.0 and MariaDB v 10.3, MySQL Prepared Statements API, internal BLOB streaming	CX ¹	DX ¹	CX DX
ENHANCED IN 10.2 TOKYO!	Updated FireDAC ODBC driver 13, with support for data type mapping by data type name			CX DX
ENHANCED IN 10.3 RIO!	Updated FireDAC SQLite driver 3.23.1 with improvements on the Linux platform including encryption and collation support	CX	DX	CX DX
ENHANCED IN 10.3 RIO!	Updated FireDAC InterBase 2017 with new support for TRUNCATE command, transaction wait time and little/big endian configuration in connection parameters, which adds to the support for querying the database service manager, real BLOB streaming and array data type	CX ¹	DX ¹	CX DX
ENHANCED IN 10.1 BERLIN!	Updated FireDAC Oracle driver to support v 11g and 12c APIs, including among many other new features support for VARCHAR2, NVARCHAR2, and RAW data types up to 32K, native BOOLEAN in PL/SQL, 64-bit integers and unsigned INTs, identity / auto-increment columns, query change notifications, implicit ROWID fetching, implicit results, additional connection modes, network timeouts, and transaction state detection and synchronization.			CX DX
INTRODUCED IN 10.1 BERLIN!	TFDOracleAdmin service component			CX DX
ENHANCED IN 10.1 BERLIN!	Updated FireDAC Advantage driver with support for version 12 features like GUID data type, backup archive, default values phrase; improved support for encrypted tables, improved TFDADSUtility component	CX ¹	DX ¹	CX DX
ENHANCED IN 10.1 BERLIN!	Updated FireDAC DB2 driver, with support for DB2 on AS/400, IDENTITY columns, and a connection definition parameter			CX DX
ENHANCED IN 10.3.1 RIO!	Updated FireDAC Firebird driver with support for version 3.0.4 and Firebird embedded, including local connection protocol, FB\$OUT package, support for long statements, little/big endian configuration in connection parameters, and more.	CX ¹	DX ¹	CX DX

¹ Some features are limited to local connections in Professional and Community editions

ENHANCED IN 10.3 RIO!	FireDAC PostgreSQL driver enhancements for version 10 including identity columns, macaddr8, password encryption and little/big endian configuration in connection parameters	 	 
ENHANCED IN 10.3 RIO!	FireDAC SQL Anywhere driver, now with support for ToolHome property and FDEventAlerter		 
ENHANCED IN 10.1 BERLIN!	Updated FireDAC Informix driver with support for retain update locks and pessimistic locking, plus ISAM error codes		 
ENHANCED IN 10.3 RIO!	Complete FireDAC support for the NoSQL MongoDB database, including a FireDAC MongoDB driver, now with TimeZone connection parameter		 
	MongoDB API wrapping classes, including TMongoConnection, TMongoDatabase, TMongoCollection and more		 
	MongoDB query, pipeline, update commands, with fluent methods builders		 
ENHANCED IN 10.1 BERLIN!	MongoDB specific datasets, including TFDMongoDataSet (which allows to attach dataset to MongoDB cursor), TFDMongoQuery (which allows to execute queries to MongoDB collection) and TFDMongoPipeline (which allows to execute pipelines to MongoDB collection), and TMongoDocument Iterate method to iterate through document items		 
	FireDAC Teradata database support, based on the Teradata database ODBC driver		 
	FireDAC support for InterBase XE7 Change Views	 	 
ENHANCED IN 10.1 BERLIN!	FireDAC support for change notifications, now with additional support for Oracle and MongoDB databases	 	 
	Improved FireDAC updates management	 	 
	Tools and scripts to help migration of dbExpress code to FireDAC	 	 
	FireDAC streaming support for blob fields and support for MSSQL file streams	 	 
	Support for DBMS API command native timeouts	 	 
	FireDAC connection parameters are now displayed in the Object Inspector as a record	 	 
	IBLite specific driver for desktop and mobile	 	 
	InterBase encryption connection options	 	 
	Windows/Mac native driver for Informix database		 
	Source code of the included database drivers		 
	Comprehensive support for SQLite v3.+ database, including "smart" data type recognition, supporting both dynamic and static linking	 	 
ENHANCED IN 10.2 TOKYO!	FireDAC ETL support (Batch move) with optimization and extension of the TFDBatchMoveSQLWriter component, with support for MERGE / INSERT OR REPLACE commands and for dmAppend, dmUpdate, dmAppendUpdate modes. Features new JSON Writer support added in 10.2.2.	 	 
	Easy to use TDataSet descendant classes	 	 
	Unified Data Access API	 	 
	Improvements of FireDAC cached updates mode, including UpdateOptions.AutoCommitUpdates property and improved compatibility with ClientDataSet	 	 
	FireDAC clients for DataSnap		 
	High-performance in-memory dataset	 	 
	FireDAC complete source code, including drivers source code		 
	Live Data Window mode enabling fast bi-directional navigation through large datasets	 	 
	Array Data Manipulation Language (DML) command execution and Command Batches for batch applications and for minimizing network traffic	 	 
	Direct support for asynchronous command execution, command execution timeout, and command execution canceling	 	 
	Cached updates mode with ability to track correlated changes for several datasets with cascading updates	 	 

	Full support for auto-incrementing fields, including those based on generators and table triggers				
	SQL dialect abstraction through FireDAC escape sequences, conditional statements and macros				
	Data type unification with flexible and adjustable data type mapping				
UPDATED IN 10.2 TOKYO!	Easy to use TFDMemTable - in-memory dataset, highly compatible with TClientDataSet, now including optimized JSON serialization and the ability to edit the dataset data at design time				
	DataSnap client support for HTTP, HTTPS and TCP/IP protocols and authentication				
	Local SQL with heterogeneous SQL commands to TDataSets, full SQLite SQL dialect support, add-hoc TDataSet lookup				

DBEXPRESS AND IBX

	dbExpress™ 4 database connectivity framework with connection pooling, tracing, and delegate drivers				
	dbExpress local connectivity to InterBase, MySQL, SQLite				
	Included dbExpress drivers available for macOS and 64-bit Windows - InterBase local, MySQL local, and SQLite local				
	Included dbExpress drivers available for macOS and 64-bit Windows - InterBase, Firebird, Oracle, MySQL, SQL Anywhere, and Informix				
	TSQLMonitor support				
	InterBase ToGo dbExpress driver for Windows, iOS and Android				
	dbExpress Server connectivity to InterBase® XE7 and XE3, Firebird 2.5, 2.1 and 1.5, Oracle® 11g and 10g, Microsoft SQL Server® 2008, 2005, and 2000, Informix® 9x (not Unicode-enabled), IBM DB2® 9.x (not Unicode-enabled), SQL Anywhere™ 12 and 11 (Unicode-enabled); and SQL Anywhere 9 (not Unicode-enabled), Sybase® 12.5 (not Unicode-enabled), MySQL 5.1 and 5.0 (Unicode enabled) and 4.1				
	dbExpress ODBC Driver				
	TClientDataSet for managing and manipulating datasets in-memory (with support for iOS and Android, macOS, 64-bit Windows)				
INTRODUCED IN 10.2 TOKYO!	ClientDataSet support for 64-bit Linux				
INTRODUCED IN 10.3.2 RIO!	ClientDataSet support for 64-bit macOS				
	LiveBindings connect any type of data to any UI or graphical element in VCL and FMX				
	dbGO™ for ADO connectivity for Windows (MDAC 2.8)				
	InterBase Express (IBX) Components, including support for iOS and Android				

RAD SERVER⁴

























ENHANCED IN 10.3.2 RIO!	RAD Server (formerly known as EMS) turnkey REST based middleware stack that includes API hosting, data access, and SQL Database access, with significantly optimized performance ²				
INTRODUCED IN 10.2 TOKYO!	Build, test and deploy RAD Server packages on Linux				
	Create custom REST APIs for your business functionality and map them to custom URIs, using loadable packages for RAD server				
	Integrated with FireDAC high-performance enterprise data access for Oracle, DB2, Microsoft SQL Server, Informix, SQL Server, and many more database servers				
NEW IN 10.3 RIO!	New EndpointProduce attribute to map MIME types (from Accept HTTP request header) to GET endpoints; new EndpointConsume attribute to map MIME types (from Content-Type HTTP request header) to PUT, POST, PATCH endpoints				
NEW IN 10.3 RIO!	HTTP Verb to Custom Method Name Mapping				

² In version 10.3 Rio, Enterprise editions include also a single site RAD Server deployment license (additional RAD Server deployment licenses are sold separately), while Architect editions include a multi-site deployment license









































NEW IN 10.3 RIO!	Ability to Delegate Processing of a Request to a Custom Class or Component (sharing response processing code)	CX	DX
NEW IN 10.3 RIO!	New TEMSFileResource and TEMSDataSetResource components for an extremely simplified implementation of RAD Server endpoints mapped to file system folders access and database tables and queries access, including support for paging and sorting	CX	DX
NEW IN 10.3.2 RIO!	New FireDAC database connection wizard, for generating a properly configured TEMSDataSetResource components mapped to queries for one or more selected database tables	CX	DX
INTRODUCED IN 10.2 TOKYO!	RAD Server (EMS) multi-tenancy support and console app for managing tenants configuration (on Windows and Linux)	CX	DX
INTRODUCED IN 10.2 TOKYO!	RAD Server File Dispatching Support	CX	DX
ENHANCED IN 10.3.2 RIO!	RAD Server Console UI redesign and migration to the Ext JS library	CX	DX
ENHANCED IN 10.3.2 RIO!	EMS Push Notifications server support for iOS and Android (updated to Firebase)	CX	DX
	EMSClientAPI component to simplify EMS client side development	CX	DX
ENHANCED IN 10.2 TOKYO!	User, groups, sessions, and API calls analytics and reporting using a web based interface using the EMS Console (eventually filtered by tenant)	CX	DX
ENHANCED IN 10.3.2 RIO!	Redesigned and expanded RAD Server Console (RSConsole.exe) client application to manage user accounts, edit the local configuration and run REST debugger-based requests against a RAD Server instance	CX	DX
INTRODUCED IN 10.1 BERLIN!	ThingPoint provides developers with an enterprise access point between remote gadgets and devices; a ThingPoint can locally store, filter, and compute vast amounts of IoT data collected at the edge, while ensuring only critical data is synched with the central repository, an Enterprise Mobility Services server	CX	DX
ENHANCED IN 10.3.2 RIO!	Support for declaring and retrieving EMS metadata, based on the Swagger open API initiative (http://swagger.io). This allows the use of the metadata language as YAML or JSON for the representation of the EMS REST API. Initial documentation generation is now an option of the RAD Server module wizard.	CX	DX
NEW IN 10.3.2 RIO!	Installers to deploy the RAD Server engine and all of the required files to Windows and Linux servers* <i>* Available for download in the GetIt Package Manager</i>	CX	DX
WEBBROKER AND DATASNAP MULTI-TIER			
	WebBroker library for HTTP servers development and integration, supporting CGI, ISAPI libraries for Microsoft IIS, and native HTTP servers based on Indy library	CX	DX
	WebBroker support for Apache HTTP server modules	CX	DX
ENHANCED IN 10.1 BERLIN!	WebBroker default encoding changed to UTF-8 rather than ANSI	CX	DX
INTRODUCED IN 10.2 TOKYO!	WebBroker deployment support in Linux, as stand-alone or Apache modules		DX
	Create multi-tier database applications with DataSnap for Windows servers	CX	DX
INTRODUCED IN 10.2 TOKYO!	Create multi-tier database applications with DataSnap for Linux servers		DX
	Deploy DataSnap servers on Microsoft IIS server (HTTP or HTTPS) using the WebBroker architecture	CX	DX
ENHANCED IN 10.2 TOKYO!	Deploy DataSnap servers on Apache HTTP server (using HTTP or HTTPS) using the WebBroker architecture. For Delphi available also on Linux.	CX	DX
ENHANCED IN 10.1 BERLIN!	DataSnap clients uses System.NET for HTTP and HTTPS, with no need to deploy the OpenSSL client library (now both for REST connections and HTTP connections)	CX	DX
ENHANCED IN 10.1 BERLIN!	DataSnap server methods support TDBXJSONStream parameter for passing JSON streams between client and server	CX	DX
	HTTPS support in stand-alone DataSnap Applications	CX	DX
	DataSnap server ability to terminate socket connection. Communication Timeout for HTTP protocol	CX	DX
	Specific DataSnap support for exposing FireDAC datasets and reconciling changes using deltas (with the unit FireDACJSONReflect), now with data compression for better throughput optimization	CX	DX
	Heavyweight callbacks support broadcasting to specific callbacks	CX	DX
	Authentication and role-based authorization.	CX	DX

	Callback channel events for servers and clients		
	DataSnap REST server support for multiple Callback Tunnels		
	Session Events for TCP/IP Protocol. Object support in DataSnap sessions		
	Monitor and control connections		
NEW IN 10.2 RIO!	DataSnap REST now explicitly specifies "Content-Type=application/json"		
ENHANCED IN 10.2 RIO!	DataSnap REST client connection (TDSRestConnection), for all platforms, with new SecureProtocols property		
	Allow query parameters in REST calls and store them		
	Proxy information support for HTTP connections		
	Identify client connection information (IP address and protocol, and application name for HTTP)		
	ServerMethods give complete control over functionality of middle tier. Use TJSONValue pairs making it easier to pass data		
	Improved Session events for increased simplicity of a multi-tier implementation		
	DataSnap wizards from the Object Gallery to make server and client creation even easier		
	DataSnap wizard source code enabling developers to build their own DataSnap server wizards		
	Added support for REST(ful) interface and exposure from the Server and REST client proxy generation		
	DataSnap Server Proxy generation for Object Pascal and C++ clients		
	Support for HTTP and HTTPS communication protocol beyond the local DataSnap (TCP/IP) approach: Added HTTP tunneling support for client code outside the firewall		
	Added Filter support for encryption and compression over-the-wire		
	Included encryption PC1 and compression filters now included for quick enablement.		
	Lightweight Callbacks		
	Windows 32-bit and 64-bit native (DBX) clients and REST clients		
	macOS 32-bit native (DBX) clients and REST clients		
	REST / JavaScript client support for browser platforms		
DATABASE TOOLS			
	Data Explorer support for FireDAC, optimized to add and manage database connections and browse database schema, including primary keys, foreign keys and sequences or generators		
	Data Explorer optimized to add and manage database connections and browse database schema		
	Drag and Drop from FireDAC nodes and dbExpress nodes in the Data Explorer into forms and data modules to speed development		
	Direct SQL manipulation for any FireDAC connection		
	SQL console views for running queries and viewing results on any dbExpress 4 supported database		
INCLUDED DATABASES			
ENHANCED IN 10.2.3 TOKYO!	InterBase 2017 Developer Edition – up to 20 users and 80 logical connections		
	IBLite 2017 for iOS and Android with unlimited deployment license		
	IBLite 2017 for Windows with unlimited deployment license		
NEW IN 10.2.3 RIO!	Free InterBase ToGo Deployment License for mobile platforms		
CLOUD SUPPORT			
	Windows Azure components including AzureConnectionString, AzureBlobManagement, AzureQueueManagement, and AzureTableManagement		





















	Cloud libraries now use the System.Net native HTTP and HTTPS support				
	Ability to manipulate Windows Azure blobs, queues, and tables				
	MetaData support for TAzureQueueManagement				
	ContinuationToken support for Azure Table				
ENHANCED IN 10.2 TOKYO!	Azure support updated to the current Azure APIs				
	Amazon Simple Storage Service (S3) API				
	Amazon Queue Service API				
	Amazon SimpleDB API				
ENHANCED IN 10.2 TOKYO!	AWS support updated to the current AWS APIs				
	Deploy to Amazon EC2 and Windows Azure				
REST CLIENT LIBRARY AND BAAS					
ENHANCED IN 10.3 RIO!	REST Client Library for simplified invocation of REST services, with improvements in MIME types handling, new properties (RedirectsWithGET and SecurityProtocols) and new events (OnNeedClientCert and OnAuthEvent)				
	Authorization support including Basic Authentication, Plan Authentication, OAuth1, OAuth2				
	TRestClient, TRestRequest, and TRestResponse components				
	REST Debugger tool for testing REST calls and their parameters				
NEW IN 10.3 RIO!	Enhanced REST Request parameters, with support for list parameters, parameters streaming, query parameters for all request methods, content body access				
	JSON reader and writers used in the REST client library				
	Backend as a Service (BAAS) architecture, with unified interfaces for the most common operations like user management, file storage, objects storage, and notifications support				
	Integrated BaaS support for Kinvey and the Parse API				
	JSON reader and writers used in the BaaS client library				
XML AND SOAP					
	TXMLDocument component working on all platforms				
	TXMLDocument component support for MSXML on Windows; native OmniXML library and native ADOM library on other platforms				
	Easier selection of the default XML engine for XML data processing				
	Easily create Win32, Win64 SOAP Web Services				
	Build client-side SOAP Web Services, including support for SOAP 1.2 clients and mobile platforms				
ENHANCED IN 10.3.1 RIO!	SOAP clients use the HTTP client library, with full support for the native SSL layer on each platform (with improved support for client certificates)				
	WSDL External Schema support				
	XML Transformation Tools and Components to easily build data exchanges between XML and datasets				
	Native Object Pascal and C++ XML bindings to simplify XML programming – access XML documents using interfaces				
	SOAP runtime support for optional and unbounded elements				
ADDITIONAL AND THIRD PARTY INTEGRATED TOOLS					
FILE COMPARE with Beyond Compare Text Compare					
	Beyond Compare Text Compare integration				
	Compare and edit the contents of files with syntax highlighting				

	Ignore changes in whitespace and comments	 	 
	Print reports of differences or save them as HTML or plain	 	 
	Filter display to only show differences, optionally with a few lines of context	 	 
	Built-in support for Object Pascal, C++, HTML, DFMs, and more	 	 
	Adds a "Compare" menu to the IDE's "Edit" menu and Project Manager, with commands to compare against previous revisions, other editor tabs, and original files	 	 
	Automatically configured for both differences and merges from the History view	 	 





LOGGING with CodeSite Express

UPDATED IN 10.2 TOKYO!	<p>Raize Software CodeSite Express integration provides advanced application logging and debugging capabilities*</p> <p><i>* Available for download in the GetIt Package Manager</i></p>	 	 
	Log all kinds of information without data conversions including strings, numbers, dates & times and even objects, string lists, exceptions, and much more	 	 
	Log information from application code (including recursive functions and multiple threads) without interrupting program execution or causing side effects	 	 
	Emphasize important logging information through a variety of message types	 	 
	Send logging messages to a CodeSite Log File for later review or to the CodeSite Live Viewer for real-time analysis, or to both simultaneously	 	 
	Utilize the extensive analysis tools in the CodeSite Viewers to analyze message logs and locate problem areas faster	 	 
	Filter message logs by application name, process id, thread name, computer name, category, and message text	 	 
	Quickly organize the message log into multiple views by using the advanced CodeSite Message Organizer	 	 
	Control the amount of logging information generated by using additional CodeSite loggers with their own Category instead of relying on arbitrary logging levels	 	 
	Record method calls to add call stack structure to the message log	 	 





















IP*Works! COMMUNICATION COMPONENTS



































	<p>The full version of /n software's IP*Works! Components – A comprehensive suite of components for Internet communications including more than 40 individual components covering every major Internet Protocol*</p> <p><i>* Available for download in the GetIt Package Manager</i></p>	 	 
	Royalty free commercial components for Internet development including ATOM, CalDAV, FileMailer, FTP, HTMLMailer, HTTP, ICMPPort, IMAP, IPDaemon, IPInfo, IPMonitor, IPPort, JSON, LDAP, Mcast, MIME, MX, NetClock, NetCode, NetDial, NNTP, Ping, POP, RCP, REST, Rexec, Rshell, RSS, SMPP, SNPP, SOAP, Syslog, Telnet, TFTP, TraceRoute, UDPPort, WebDav, WebForm, WebUpload, Whois, XMLp, and XMPP	 	 
	Components are easy to use, with a uniform, intuitive, and extensible design; share common interfaces across platforms and technologies	 	 
	Components are fast, robust, and reliable with minimal resource consumption; lightweight and have no dependencies on external libraries	 	 
	Detailed reference documentation, hundreds of sample applications, fully-indexed helps files, and an extensive online knowledge base	 	 

TeeChart CHARTING COMPONENTS

UPDATED IN 10.3 RIO!	TeeChart Standard components including chart, DBchart, and a rich set of different business graph types.	 	 
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FastReport REPORTING SOLUTIONS

UPDATED IN 10.3 RIO!	FastReport VCL RAD Edition reporting tool	 	 
	Exports to popular formats (PDF, RTF, HTML, BMP, JPEG, TIFF, GIF, TXT, CSV)	 	 
	Grouping with drill-downs	 	 
	Caching of the big reports(uses less memory)	 	 
	Six levels in master-detail-subdetail relation	 	 

UPDATED IN 10.3 R10!	FastReport FMX RAD Edition reporting tool * <i>* Available for download in the GetIt Package Manager</i>	 	 
SENCHA EXT JS PROFESSIONAL EDITION			
	Ext JS 6.7 HTML5/JavaScript Framework		  ARCHITECT ONLY
	ExtReact: Pre-built React components		  ARCHITECT ONLY
	Sencha Test: Unit and end-to-end testing		  ARCHITECT ONLY
	Cmd: Build Optimization Tool		  ARCHITECT ONLY
	Ext JS Stencils: Design Kit		  ARCHITECT ONLY
	Architect: Visual App Builder		  ARCHITECT ONLY
	Sencha Themer: Styling Tool		  ARCHITECT ONLY
AQUA DATA STUDIO			
	Register Servers/Databases, Database Navigator/Explorer		  ARCHITECT ONLY
	Query Analyzer (SQL editor) and Query Builder		  ARCHITECT ONLY
	Table Data Editor		  ARCHITECT ONLY
	Visual Analytics		  ARCHITECT ONLY
	Schema/Data/File Compare		  ARCHITECT ONLY
	Import/Export Data and DDL		  ARCHITECT ONLY
	ER Modeler		  ARCHITECT ONLY
	Database Administration		  ARCHITECT ONLY

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