





# RAD STUDIO 10.3






















## PRODUCT FEATURE MATRIX

























































































The 10.3 Rio feature matrix below has been updated for release 10.3.1.

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.















### TABLE OF CONTENT

<a href="#">INTEGRATED COMPILERS AND TOOLCHAINS</a>	<a href="#">APPLICATION PLATFORMS, INTEGRATED FRAMEWORKS, DESIGNERS AND SDKS</a>
<a href="#">LICENSING AND TOOL MANAGEABILITY</a>	<a href="#">VISUAL COMPONENT LIBRARY (VCL)</a>
<a href="#">FMX APPLICATION PLATFORM (FIREMONKEY)</a>	<a href="#">INTERNET OF THINGS (IOT) SUPPORT</a>
<a href="#">COM/DCOM SUPPORT</a>	<a href="#">INTEGRATED BUILD TOOLS AND PROJECT SUPPORT</a>
<a href="#">VISUAL LIVEBINDINGS</a>	<a href="#">RECENT DELPHI LANGUAGE AND CORE RTL FEATURES</a>
<a href="#">RECENT C++ LANGUAGE AND CORE RTL FEATURES</a>	<a href="#">INTEGRATED DEVELOPMENT ENVIRONMENT AND DEVELOPER PRODUCTIVITY</a>
<a href="#">SHARED RUNTIME LIBRARY FEATURES</a>	<a href="#">INTERNATIONAL DEVELOPMENT</a>
<a href="#">SOURCE CODE MANAGEMENT</a>	<a href="#">UML MODELING</a>
<a href="#">REFACTORINGS</a>	<a href="#">INTEGRATED UNIT TESTING</a>
<a href="#">INTEGRATED DEBUGGING</a>	<a href="#">DATABASE APPLICATION DEVELOPMENT AND CONNECTIVITY</a>
<a href="#">DOCUMENTATION</a>	<a href="#">DBEXPRESS AND IBX</a>
<a href="#">FIREDAC MULTI-DEVICE DATA ACCESS LIBRARY</a>	<a href="#">DATASNAP MULTI-TIER</a>
<a href="#">RAD SERVER</a>	<a href="#">INCLUDED DATABASES</a>
<a href="#">DATABASE TOOLS</a>	<a href="#">CLOUD SUPPORT</a>
<a href="#">REST CLIENT LIBRARY AND BAAS</a>	<a href="#">IP*WORKS! COMMUNICATION COMPONENTS</a>
<a href="#">XML AND SOAP</a>	<a href="#">LOGGING WITH CODESITE EXPRESS</a>
<a href="#">FILE COMPARE WITH BEYOND COMPARE TEXT COMPARE</a>	<a href="#">TEECHART CHARTING COMPONENTS</a>
<a href="#">FASTREPORT REPORTING SOLUTIONS</a>	<a href="#">DATABASE DESIGN AND DEVELOPMENT</a>
<a href="#">DATABASE APPLICATION DEVELOPMENT</a>	

FEATURE	PROFESSIONAL / COMMUNITY	ARCHITECT / ENTERPRISE
<b>INTEGRATED COMPILERS AND TOOLCHAINS</b>		
Delphi 32-bit native code optimizing compiler (dcc32) and toolchain for Windows. Delphi 64-bit native compiler and toolchain for Windows (dcc64)		
<b>INTRODUCED IN 10.2 TOKYO!</b> Delphi 64-bit native compiler and toolchain for Linux (dcclinux64)		
Delphi native compiler and toolchain for macOS (dccosx)		
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)		
Embarcadero C++ compiler and toolchain for Win64 (bcc64). Embarcadero C++ compiler and toolchain for Win32 (bcc32)		
<b>NEW IN 10.3 RIO!</b> C++ 17 Clang-enhanced compiler and toolchain for Win32 (bcc32x and bcc32c)		
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 (bccaaarm)		
<b>LICENSING</b>		
<b>INTRODUCED IN 10.2.3 TOK</b> 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)	 	 
<b>APPLICATION PLATFORMS, INTEGRATED FRAMEWORKS, DESIGNERS AND SDKS</b>			
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)		
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 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 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 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	 	 
<b>FMX APPLICATION PLATFORM (FIREMONKEY)</b>			
	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	 	 
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	CX DX	CX DX
	FireMonkey zOrder support for Windows and native style presentation for Windows for Edit and Memo platform controls	CX DX	CX DX
NEW IN 10.3 RIO!	FireMonkey zOrder support for Android and native style presentation for Android for Edit, Calendar, Switch, and Multiview controls	CX DX	CX DX
	Touch animation for Android platform	CX DX	CX DX
	FireMonkey apps can receive Android intents, regardless of the source (email, web link, other app). A new sample demonstrates this ability	CX DX	CX DX
	FireMonkey Behavior service for automatically adjusting UI properties to the target operating system standards	CX DX	CX DX
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	CX DX	CX DX
INTRODUCED IN 10.2 TOKYO!	Multi-Threading support for TBitmap, TCanvas and TContext3D	CX DX	CX DX
INTRODUCED IN 10.2 TOKYO!	Unification of Delphi and Java threads on Android	CX DX	CX DX
INTRODUCED IN 10.1 BERLIN!	Radiant Shapes controls collection * <i>* Available for download in the GetIt Package Manager</i>	CX DX	CX DX
	Specific TSwitch behavior for Windows 10 UI	CX DX	CX DX
	Edit and Calendar ability to dynamically render a platform native UI control on iOS; Memo platform controls for iOS for highest input fidelity	CX DX	CX DX
INTRODUCED IN 10.1 BERLIN!	FireMonkey platform rendering TGrid for iOS	CX DX	CX DX
	ListView, Calendar, Switch and ScrollBox platform controls for iOS	CX DX	CX DX
	MapView component for mobile platforms (iOS and Android) supporting platform specific interactive mapping libraries (respectively, by Apple and Google)	CX DX	CX DX
ENHANCED IN 10.2.2 TOKYO!	WebBrowser component for Windows and macOS	CX DX	CX DX
	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)	CX DX	CX DX
	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	CX DX	CX DX
	Multi-monitor support for desktop platforms	CX DX	CX DX
	Splash screen support for Android, with specific project options matching the iOS ones	CX DX	CX DX
	Form-level multi-touch support for all platforms	CX DX	CX DX
	Tint support for buttons and toolbars on iOS and Android (for control surface and controls icons)	CX DX	CX DX
	In-app purchase component for iOS and Android, to help monetize your applications	CX DX	CX DX
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	CX DX	CX DX
	Push notifications support for mobile platforms, to receive remote notifications even if the app is not running	CX DX	CX DX
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	CX DX	CX DX
	Native message alerts for iOS and Android	CX DX	CX DX
	Custom Pickers for iOS and Android, including Date Picker (DateEdit component) and Time Picker, Time Picker for Windows and macOS	CX DX	CX DX
	Phone Dialer Support for iOS and Android	CX DX	CX DX
	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	CX DX	CX DX
	Notification Center Component for using notifications in your iOS and Android applications, including notification sound and now supporting also Windows 10 Notifications	CX DX	CX DX

	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	 	 
<b>NEW IN 10.3.1 RIO!</b>	5 new FireMonkey multi-device styles* with theming support for Windows, macOS, Android and iOS * Available for download in the GetIt Package Manager	 	 
<b>ENHANCED IN 10.2.2 TOKYO!</b>	New FireMonkey styles have been added for macOS and Android, macOS Graphite and Android Wear Dark Blue	 	 

	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
<b>VISUAL COMPONENT LIBRARY (VCL)</b>			
	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	CX DX	CX DX





















































































































	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	CX DX	CX DX
	Windows 10 specific VCL styles, to build applications matching Microsoft's Modern look and feel; Premium styles including TabletLight, Sky, and Glow VCL styles	CX DX	CX DX
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>	CX DX	CX DX
	Create your own custom styles with the VCL Style Designer	CX DX	CX DX
	VCL Styling improvements, including support for styling common dialogs and the TWebBrowser component	CX DX	CX DX
	Theming and styling support for TGrid descendants	CX DX	CX DX
	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)	CX DX	CX DX
	TTouchKeyboard a virtual keyboard for enhanced non-keyboard interface interactions that support multiple locales and languages	CX DX	CX DX
	Modern VCL Components: TCategoryPanelGroup, TButtonedEdit, TLinkLabel, TBalloonHint	CX DX	CX DX
	Enhancements to existing controls: TButton, TEdit, TProgressBar, TListView, TTreeView, TRichEdit, TImageList	CX DX	CX DX
	Full support for PNG image format in TImage and TImageList	CX DX	CX DX
INTRODUCED IN 10.2 TOKYO!	TDBImage direct support for JPEG and PNG graphic formats	CX DX	CX DX
	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.	CX DX	CX DX
	Import Component wizard to import a type library, ActiveX control or .NET Assembly	CX DX	CX DX
	Component wizard to create the unit for a new component	CX DX	CX DX
	Standard components including frame, edit, menu, button, label, checkbox, list box, combo box, panel and action list	CX DX	CX DX
	Additional components including graphical buttons, image, shape, scroll box, splitter, buttoned edit, tabs, panels, action toolbar, and color map	CX DX	CX DX
	Windows common controls including page control, image list, rich edit, progress bar, date time, calendar, toolbar, tree view and list view	CX DX	CX DX
	System components including timer, paint box, media player, OLE container and DDE	CX DX	CX DX
	Dialog components including open, save, open/save picture, open/save text, font, color, print, printer setup, find, replace and page setup	CX DX	CX DX
	Data Access Controls via datasource and the use of data-aware controls	CX DX	CX DX
	Data Controls including DBGrid, navigator, text, edit, memo, image, listbox, combo box, checkbox, radiogroup, lookup and rich edit	CX DX	CX DX
	TWebBrowser support, wrapped on the Microsoft IE ActiveX component	CX DX	CX DX
	Task dialog component and enhanced Windows dialog components for file open and file save	CX DX	CX DX
<b>COM/DCOM SUPPORT</b>			
	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	CX DX	CX DX
	Wizards support wrapping existing VCL components as ActiveX controls	CX DX	CX DX
	Import .NET assemblies as COM objects in Win32 VCL applications	CX DX	CX DX
	Legacy support for DataSnap/MIDAS COM/DCOM based multi-tier database application framework		CX DX
	Advanced Type Library Editor that manages IDL, making COM development completely transparent; Support for Automation Object event handling	CX DX	CX DX
	Create reusable native 32-bit and 64-bit dynamically linked libraries (.DLL), COM controls (.OCX), and standalone COM executable	CX DX	CX DX

	COM Object Wizard; Microsoft ActiveX® Control Data binding; Import COM servers as components	CX DX	CX DX
<b>INTERNET OF THINGS (IOT) SUPPORT</b>			
	Native Bluetooth APIs (on platforms that fully support the technology) for FireMonkey and VCL applications	CX DX	CX DX
	Bluetooth framework improvements and new TBluetooth component for classic Bluetooth	CX DX	CX DX
	Bluetooth LE component (on platforms that fully support the technology)	CX DX	CX DX
	Proximity support based on the “beacons” technology (including the iBeacon and AltBeacon standards) for iOS, Android, and macOS	CX DX	CX DX
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	CX DX	CX DX
	New TBeaconDevice class for turning a device on one of the supported platforms into a “beacon”	CX DX	CX DX
	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>		CX DX
INTRODUCED IN 10.1 BERLIN!	BeaconFence enhancements for detecting zones, Windows support, customized calculation of the current position, access last calculated position	CX DX	CX DX
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>	CX DX	CX DX
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	CX DX	CX DX
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	CX DX	CX DX
<b>VISUAL LIVEBINDINGS</b>			
ENHANCED IN 10.3 RIO!	Visual Live Bindings Designer, to visually connect component properties and data, significantly optimized in 10.3	CX DX	CX DX
	Easily replace prototype data with real ClientDataSet data with one click	CX DX	CX DX
	Context sensitive LiveBindings Wizard supporting both dbExpress and FireDAC	CX DX	CX DX
	Support for QuickBinding components, ability to visually add and bind to additional component properties	CX DX	CX DX
	Color coded component properties easily identify bindable members	CX DX	CX DX
	Zoom control for Visual LiveBindings Designer and ability to save image of current LiveBindings Designer layout; Hide visual elements on right-click	CX DX	CX DX
	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	CX DX	CX DX
	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	CX DX	CX DX
<b>INTEGRATED BUILD TOOLS AND PROJECT SUPPORT</b>			
	IDE support for building and managing projects for 32-bit and 64-bit Windows	CX DX	CX DX
INTRODUCED IN 10.2 TOKYO!	IDE support for building and managing projects for 64-bit Linux		DX
	IDE support for building and managing projects for macOS (Note: macOS App Store support is currently not available, because it is limited by Apple to 64-bit applications)	CX DX	CX DX
ENHANCED IN 10.1 BERLIN!	Use MSBuild externally from the IDE to compile very large projects with the stand-alone Delphi and C++ compilers.	CX DX	CX DX
INTRODUCED IN 10.2.2 TOKYO!	The stand-alone Delphi compilers can now use the large memory address space.	DX	DX
INTRODUCED IN 10.1 BERLIN!	The IDE shows Header Dependencies when building with bcc32c	CX	CX
	Define Android application settings, including supported orientations, and use the new Entitlement lists to include advertising and notifications support in an app	CX DX	CX DX
	IDE support for adding Java classes to an Android app classes.dex library and customizing it	CX DX	CX DX
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	DX	DX








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 10.2 TOKYO!	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, 32-bit and 64-bit 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	 	 
<b>RECENT C++ LANGUAGE AND CORE RTL FEATURES</b>			
NEW IN 10.3 RIO!	Win32 C++ Clang-enhanced compiler (with C++ 17 language support)		
NEW IN 10.3 RIO!	C++ runtime library (RTL) built with the updated Clang-enhanced compiler for Win32, 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 the Win32, Win64, iOS32, iOS64, and Android platforms, 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		
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()		
INTRODUCED IN 10.1 BERLIN!	C++ functions for TPoint, TPointF, TRect, TRectF core types		






























































































































































































	ANSI/ISO C++11 and 99 Standard language conformance support for 64-bit		
	#pragma once support that allows for better compatibility with MSVC and also acts as a header guard		
	[[deprecated]] attribute to flag constructs as deprecated		
	Secure C library functions		
	Custom evaluators for C++ Strings types		
	C++ RTTI compatibility with Delphi		
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		
	ANSI/ISO standard library Technical Report 1		
	Improved standard C++ heap manager		
	Optimized string/memory handling functions		
	UnicodeString class and Unicode character types char16_t and char32_t		
	Move semantics with rvalue references		
	Explicit conversion operators		
	Static assertions		
	Full type trait support		
	Extern templates		
	[[final]] and [[noreturn]] attributes		
	Decltype keyword		
	Linker error handling to improve memory management flexibility and resolution		
INTRODUCED IN 10.2 TOKYO!	Large-memory space support for C++ linker and improved resource handling to address heap errors		
<b>RECENT DELPHI LANGUAGE AND CORE RTL FEATURES</b>			
NEW IN 10.3 RIO!	Inline variables declaration, supporting local scope, direct initialization, and type inference; inline constants declaration		
NEW IN 10.3 RIO!	Type inference for inline variable declarations (the type is inferred from the value assigned to the variable)		
ENHANCED IN 10.3 RIO!	Support for calling WinRT APIs, with now over 50 specific Object Pascal interface units		
INTRODUCED IN 10.1 BERLIN!	[Weak] and [Unsafe] support for interface references		
INTRODUCED IN 10.1 BERLIN!	[Volatile] attribute can be attached to a method parameters and local variables		
ENHANCED IN 10.1 BERLIN!	Delphi compiler and linker performance improvements to improve compilation speed for generic methods and generic methods in standard classes		
	Improved initialization for dynamic arrays, support for mixing and matching constant and dynamic arrays		
	New string-like operations on dynamic arrays including + operator concatenation, Insert and Delete		
	Class, record, and intrinsic types helpers		
	Predefined helpers for core types such as string, char, integer, other ordinal types, and floating point types		
	RTTI for indexed properties and RTL support		
	Reflection support for exposure of Methods, Fields, and Properties to support dynamic invocations and other meta-programming approaches (Enhanced RTTI)		
	Custom attribute support for most code elements – types, fields, properties, methods, and parameters		








	Generics with full RTL list and collection support		
	UnicodeString type as the default string type and support for Unicode char manipulation		
	Anonymous methods (or closures)		
	Compiler option to treat warnings as errors		
<b>SHARED RUNTIME LIBRARY FEATURES</b>			
<b>INTRODUCED IN 10.2 TOKYO!</b>	Delphi RTL for 64-bit Linux		
	Delphi and C++ RTL for 32-bit Windows and 64-bit Windows	 	 
	Delphi and C++ packages support for 32-bit applications and 64-bit Windows	 	 
	Support for Windows 10 Notifications using the NotificationCenter component	 	 
<b>NEW IN 10.3 RIO!</b>	Support for Windows Store interaction via TWindowsStore component, with support for paid applications, paid add-ons, and trial mode	 	 
	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	 	 
	Parallel Programming library for easy development of asynchronous code and faster multi-core applications, without coding threads manually	 	 
	System.Threading unit supporting parallel for loops, tasks scheduling and futures	 	 
	Automatic Reference Counting in iOS and Android ARM compilers	 	 
	Optimized Unicode strings handling in iOS and Android ARM compilers	 	 
<b>ENHANCED IN 10.3 RIO!</b>	Traditional Memory Reference Counting in the Linux compiler		
<b>INTRODUCED IN 10.1 BERLIN!</b>	Support for string types UTF8String and RawByteString on iOS and Android	 	 
	Delphi and C++ RTL for macOS (including enhanced macOS C++ exceptions handling)	 	 
	Delphi and C++ RTL for iOS, iOS 64-bit API headers and RTL integration	 	 
<b>ENHANCED IN 10.3 RIO!</b>	Delphi and C++ RTL for Android, with support for Android API level 26	 	 
<b>INTRODUCED IN 10.1 BERLIN!</b>	DirectX 12 support on Windows	 	 
	OpenGL 4.3 support	 	 
	Enhanced compiler switches for XML representation of source code	 	 
	Extensible, cross platform, framework agnostic login credentials service	 	 
	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	 	 
<b>ENHANCED IN 10.3 RIO!</b>	Regular Expressions (Regex) library, now supporting PCRE UTF-16 on Windows	 	 
	Object-oriented path, file and directory I/O classes	 	 
<b>INTRODUCED IN 10.1 BERLIN!</b>	Buffered file read and write support, based on the TBufferedFileStream class, a high performance TFileStream descendant based on an internal configurable buffer	 	 
<b>ENHANCED IN 10.1 BERLIN!</b>	TMemIniFile and TIniFile have new Modified and AutoSave properties	 	 
<b>INTRODUCED IN 10.1 BERLIN!</b>	TStrings enhancements including new properties IsUpdating, TrailingLineBreak, UseLocale, Options, plus overloaded TStringList constructors and AddPair fluent method	 	 
<b>ENHANCED IN 10.1 BERLIN!</b>	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		
<b>ENHANCED IN 10.3 RIO!</b>	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)	CX DX	CX DX
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	CX DX	CX DX
	Binary JSON (BSON) readers and writers support, as part of the same JSON.NET architecture (including the new TBsonReader and TBsonWriter classes)	CX DX	CX DX
	JSON and BSON fluent method builders, including the TJSONArrayBuilder and TJSONObjectBuilder classes	CX DX	CX DX
	JSON and BSON fast forward-only iterator (TJSONIterator)	CX DX	CX DX
	System.NetEncoding RTL unit for Web encoding and decoding (Base64, HTML, URL)	CX DX	CX DX
ENHANCED IN 10.2 TOKYO!	System.Hash RTL unit, with hash functions to support the HTTP framework, now including also method for files hashing	CX DX	CX DX
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	CX DX	CX DX
	NetHTTPClient and NetHttpRequest components, offering easy access to the HTTP client framework	CX DX	CX DX
	Support for native HTTP(S) client libraries on Windows, macOS, iOS and Android	CX DX	CX DX
INTRODUCED IN 10.2 TOKYO!	Support for native HTTP(S) client libraries on Linux		DX
ENHANCED IN 10.1 BERLIN!	HTTP client library improvements including support for asynchronous HTTP requests, time-outs, and automatic decompression of gzip content	CX DX	CX DX
	Support for localized resources	CX DX	CX DX
	Expression evaluation in compiler directives	CX DX	CX DX
	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	CX DX	CX DX
<b>INTEGRATED DEVELOPMENT ENVIRONMENT AND DEVELOPER PRODUCTIVITY</b>			
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>	CX DX	CX DX
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>	CX DX	CX DX
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	CX DX	CX DX
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	CX DX	CX DX
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	CX DX	CX DX
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	CX DX	CX DX
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	CX DX	CX DX
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	CX DX	CX DX
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	CX DX	CX DX
INTRODUCED IN 10.1 BERLIN!	Delphi project option "Show general messages" to show info messages when building a project	DX	DX
INTRODUCED IN 10.1 BERLIN!	The C++ Structure Parser has been rewritten and includes support for modern C++	CX	CX
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	 	 
	Form designer option to hide/show non-visual controls icon (reducing form design potential clutter)	 	 
	Structure View Icons representing the corresponding component	 	 
	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	 	 
<b>ENHANCED IN 10.2 TOKYO!</b>	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	 	 
<b>ENHANCED IN 10.2 TOKYO!</b>	Full customization of the Object Inspector layout, with the ability of hiding the description panel, the quick actions, and the new filter panel	 	 
	Object Inspector contents can be filtered to display specific elements	 	 
	Shortcuts to increase/decrease the size of the font in the code editor	 	 
<b>ENHANCED IN 10.1 BERLIN!</b>	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.	 	 
	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	 	 
<b>ENHANCED IN 10.1 BERLIN!</b>	Welcome page with a list of favorite and recent projects	 	 
	Project statistics information for activity tracking and to better understand team productivity	 	 
	Clipboard history, keeping track of the content of past cut and copy operations, to paste it once more	 	 
	Multi-paste support to let you perform the same paste operation on multiple source code lines at once	 	 
	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		
	Project Manager enhancements, with the support for adding database files and simplifying their deployment	 	 
<b>ENHANCED IN 10.2 TOKYO!</b>	New install experience based on the GetIt architecture; with the ability to select the platforms to install and add more platforms later from 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.	 	 
	A set of examples and demos to help new and existing developers get the most out of the environment	 	 
	Designer snapshots – copy form images to the clipboard	 	 
<b>ENHANCED IN 10.3 RIO!</b>	IDE Insight, the fastest way to find and execute commands in the IDE with 1-button click also with object inspector property support	 	 
	Code Formatter and beautification for source code including block formatting	 	 
	Command-line Code Formatter for integration with automated build processes	 	 
	Code Formatter profiles allow users to create / save / load custom formatter options sets	 	 
	Audits and metrics		
	Audits for C++ <small>*not available for the new Clang-enhanced C++ 17 compiler</small>	 *	 *
	Search for Usages command now available from the code editor and Delphi Class Explorer context menus		
	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	 	 
<b>ENHANCED IN 10.3 RIO!</b>	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		
<b>ENHANCED IN 10.3 RIO!</b>	Updated support for Code Completion for the C++ language, with asynchronous invocation support		
	Code Completion for HTML, XHTML, XSL, and CSS	 	 
	Class Completion		
	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	 	 
<b>SOURCE CODE MANAGEMENT</b>			
	Version Insight – Integrated framework for supporting source code management tooling inside the IDE	 	 

Subversion integration into the IDE, including change list labels, SVN merge dialog, branches switching and more	 	 
Subversion/History integration	 	 
A full default Diff viewer	 	 
Git version control integration into the IDE, now including authentication, Push and Pull changes to and from remote repositories	 	 
Mercurial version control integration into the IDE (supports cloning your remote repository, commit changes locally, show log data)	 	 
Version Insight also available as an open source project	 	 
<b>INTERNATIONAL DEVELOPMENT</b>		
UnicodeString type ; Unicode-enabled development environment; Unicode-enabled VCL and FMX frameworks	 	 
English, German, French, and Japanese translations available for IDE menus and dialogs, compiled units, resources, and source code	 	 
Easy switching between the available languages for the IDE menus, dialogs, and more	 	 
<b>REFACTORINGS</b>		
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)		
Extract method and change parameters refactoring, including support for generic types		
<div style="background-color: yellow; padding: 2px; display: inline-block; font-size: 0.8em;">UPDATED IN 10.2.1 TOKYO!</div> Rename refactoring, for Delphi and C++* <div style="margin-left: 20px; font-size: 0.8em;">*not available for the new Clang-enhanced C++ 17 compiler</div>	 * 	 * 
Refactor driven Find References		
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		
Refactor driven “Find in Files”		
<b>UML MODELING</b>		
UML Code Visualization – at any time, get a UML model view of your source code		
Object Pascal code generation from class diagram		
Object Ancestry; show an object full hierarchy		
Automatic Sequence diagrams generation support		
Ability to load an image into the diagram for annotations and advanced documentation		
Sequence diagrams		
Collaboration diagrams		
State charts		
Deployment diagrams		
Use case diagrams		
Activity diagrams		
Component diagrams		
Documentation generation		
Run Documentation generation from the command-line		
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		
<b>INTEGRATED DEBUGGING</b>			
	Full-featured debugger with color syntax highlighting	 	 
	Debug remote and local 64-bit Windows applications	 	 
	Debug remote macOS applications	 	 
	Remote iOS device debugging and remote iOS 64-bit device debugging	 	 
	Android device debugging	 	 
INTRODUCED IN 10.2 TOKYO!	Remote Linux 64-bit debugging		
ENHANCED IN 10.2 TOKYO!	Improved debugging support for Clang-enhanced C++ compilers for Win32 and Win64		
ENHANCED IN 10.1 BERLIN!	Support for Delphi Unicode string evaluation, for evaluating properties and variants and function call support when debugging iOS64 applications	 	 
ENHANCED IN 10.1 BERLIN!	CPU View support for iOS and Android application debugging along with support for Delphi Dynamic Arrays	 	 
ENHANCED IN 10.2.1 TOKYO!	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	 	 
<b>INTEGRATED UNIT TESTING</b>			
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		
	Runtime support for the DUnit testing framework	 	 
	Unit test wizards for quick and easy unit test and unit test project creation	 	 



	Execute unit tests from project manager				
<b>INTEGRATED HELP</b>					
	Support for CHM help engine and updated IDE help structure				
	Continually updated help system with diagrams showing class hierarchy and declared members pages				
<b>DATABASE APPLICATION DEVELOPMENT AND CONNECTIVITY</b>					
	Powerful cross-platform and multi-database DB access architecture, based on TDataSet class, field definitions, fields and parameters managements				
	Support for multiple TDataSet descendant classes shipping with the product or available from third-party vendors				
INTRODUCED IN 10.2 TOKYO!	Support for display options for BlobFields				
INTRODUCED IN 10.2 TOKYO!	Direct GUID access for TField classes				
	Control of the automatic and persistent fields of a data set using the FieldOptions and FieldLifeCycle features.				
<b>FIREDAC MULTI-DEVICE DATA ACCESS LIBRARY<sup>1</sup></b>					
ENHANCED IN 10.2 TOKYO!	Windows/Mac 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				
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 <sup>1</sup> are limited to local connections in Professional editions</i>				
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.				
	iOS and Android mobile database support, including SQLite, IBToGo and IBLite				
ENHANCED IN 10.3 RIO!	Updated FireDAC Microsoft SQL Server driver, supporting MS SQL 2017				
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				
ENHANCED IN 10.2 TOKYO!	Updated FireDAC ODBC driver 13, with support for data type mapping by data type name				
ENHANCED IN 10.3 RIO!	Updated FireDAC SQLite driver 3.23.1 with improvements on the Linux platform including encryption and collation support				
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				
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.				
INTRODUCED IN 10.1 BERLIN!	TFDOracleAdmin service component				
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				
ENHANCED IN 10.1 BERLIN!	Updated FireDAC DB2 driver, with support for DB2 on AS/400, IDENTITY columns, and a connection definition parameter				
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.				
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				

<sup>1</sup> Some features are limited to local connections in Professional and Community editions

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	CX DX	CX DX
	DataSnap client support for HTTP, HTTPS and TCP/IP protocols and authentication		CX DX
	Local SQL with heterogeneous SQL commands to TDataSets, full SQLite SQL dialect support, add-hoc TDataSet lookup	CX DX	CX DX
<b>DBEXPRESS AND IBX</b>			
	dbExpress™ 4 database connectivity framework with connection pooling, tracing, and delegate drivers	CX DX	CX DX
	dbExpress local connectivity to InterBase, MySQL, SQLite	CX DX	CX DX
	Included dbExpress drivers available for macOS and 64-bit Windows - InterBase local, MySQL local, and SQLite local	CX DX	CX DX
	Included dbExpress drivers available for macOS and 64-bit Windows - InterBase, Firebird, Oracle, MySQL, SQL Anywhere, and Informix		CX DX
	TSQLMonitor support		CX DX
	InterBase ToGo dbExpress driver for Windows, iOS and Android	CX DX	CX DX
	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		CX DX
	dbExpress ODBC Driver		CX DX
	TClientDataSet for managing and manipulating datasets in-memory (with support for iOS and Android, macOS, 64-bit Windows)	CX DX	CX DX
INTRODUCED IN 10.2 TOKYO!	ClientDataSet support for 64-bit Linux		DX
	LiveBindings connect any type of data to any UI or graphical element in VCL and FMX	CX DX	CX DX
	dbGO™ for ADO connectivity for Windows (MDAC 2.8)	CX DX	CX DX
	InterBase Express (IBX) Components, including support for iOS and Android	CX DX	CX DX
<b>RAD SERVER <sup>2</sup></b>			
ENHANCED IN 10.3 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	CX DX	
INTRODUCED IN 10.2 TOKYO!	Build, test and deploy RAD Server packages on Linux		DX
	Create custom REST APIs for your business functionality and map them to custom URIs, using loadable packages for RAD server	CX DX	
	Integrated with FireDAC high-performance enterprise data access for Oracle, DB2, Microsoft SQL Server, Informix, SQL Server, and many more database servers	CX DX	
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	CX DX	
NEW IN 10.3 RIO!	HTTP Verb to Custom Method Name Mapping	CX DX	
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	
INTRODUCED IN 10.2 TOKYO!	RAD Server (EMS) multi-tenancy support and console app for managing tenants configuration (on Windows and Linux)	CX DX	

<sup>2</sup> 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

INTRODUCED IN 10.2 TOKYO!	RAD Server File Dispatching Support	CX	DX
NEW IN 10.3.1 RIO!	RAD Server Console UI redesign and migration to the Ext JS library* <i>* Available for download in the GetIt Package Manager</i>	CX	DX
	EMS Push Notifications server support for iOS and Android	CX	DX
	EMSCientAPI 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 10.2.3 TOKYO!	EMS client application to manage user accounts (including a demo of how to synchronize RAD Server user accounts with ActiveDirectory users)	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
INTRODUCED IN 10.1 BERLIN!	Support for declaring and retrieving EMS metadata, based on the Swagger open API initiative ( <a href="http://swagger.io">http://swagger.io</a> ). This allows the use of the metadata language as YAML or JSON for the representation of the EMS REST API	CX	DX
<b>WEBBROKER AND DATASNAP MULTI-TIER</b>			
	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	CX	DX
	DataSnap REST server support for multiple Callback Tunnels	CX	DX
	Session Events for TCP/IP Protocol, Object support in DataSnap sessions	CX	DX
	Monitor and control connections	CX	DX
NEW IN 10.2 RIO!	DataSnap REST now explicitly specifies "Content-Type=application/json"	CX	DX
ENHANCED IN 10.2 RIO!	DataSnap REST client connection (TDSRestConnection), for all platforms, with new SecureProtocols property	CX	DX
	Allow query parameters in REST calls and store them	CX	DX
	Proxy information support for HTTP connections	CX	DX

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 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**

<b>ENHANCED IN 10.2.3 TOKYO!</b> 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				
<b>NEW IN 10.2.3 RIO!</b> 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				
<b>ENHANCED IN 10.2 TOKYO!</b> 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	CX DX	CX DX
	Deploy to Amazon EC2 and Windows Azure	CX DX	CX DX

**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)	CX DX	CX DX
	Authorization support including Basic Authentication, Plan Authentication, OAuth1, OAuth2	CX DX	CX DX
	TRestClient, TRestRequest, and TRestResponse components	CX DX	CX DX
	REST Debugger tool for testing REST calls and their parameters	CX DX	CX DX
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	CX DX	CX DX
	JSON reader and writers used in the REST client library	CX DX	CX DX
	Backend as a Service (BAAS) architecture, with unified interfaces for the most common operations like user management, file storage, objects storage, and notifications support	CX DX	CX DX
	Integrated BaaS support for Kinvey and the Parse API	CX DX	CX DX
	JSON reader and writers used in the BaaS client library	CX DX	CX DX

**XML AND SOAP**

	TXMLDocument component working on all platforms	CX DX	CX DX
	TXMLDocument component support for MSXML on Windows; native OmniXML library and native ADOM library on other platforms	CX DX	CX DX
	Easier selection of the default XML engine for XML data processing	CX DX	CX DX
	Easily create Win32, Win64 SOAP Web Services	CX DX	CX DX
	Build client-side SOAP Web Services, including support for SOAP 1.2 clients and mobile platforms	CX DX	CX DX
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)	CX DX	CX DX
	WSDL External Schema support		CX DX
	XML Transformation Tools and Components to easily build data exchanges between XML and datasets		CX DX
	Native Object Pascal and C++ XML bindings to simplify XML programming – access XML documents using interfaces		CX DX
	SOAP runtime support for optional and unbounded elements	CX DX	CX DX

**ADDITIONAL AND THIRD PARTY INTEGRATED TOOLS**

**FILE COMPARE with Beyond Compare Text Compare**

	Beyond Compare Text Compare integration	CX DX	CX DX
	Compare and edit the contents of files with syntax highlighting	CX DX	CX DX
	Ignore changes in whitespace and comments	CX DX	CX DX
	Print reports of differences or save them as HTML or plain	CX DX	CX DX
	Filter display to only show differences, optionally with a few lines of context	CX DX	CX DX
	Built-in support for Object Pascal, C++, HTML, DFMs, and more	CX DX	CX DX
	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	CX DX	CX DX
	Automatically configured for both differences and merges from the History view	CX DX	CX DX

**LOGGING with CodeSite Express**

UPDATED IN 10.2 TOKYO!	Raize Software CodeSite Express integration provides advanced application logging and debugging capabilities* * Available for download in the GetIt Package Manager	CX DX	CX DX
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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**

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* <i>* Available for download in the GetIt Package Manager</i>				
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 RIO!	FastReport FMX RAD Edition reporting tool * <i>* Available for download in the GetIt Package Manager</i>				

**SENCHA EXT JS PROFESSIONAL EDITION**

Ext JS 6.6 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
<b>AQUA DATA STUDIO</b>	
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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