RHOMOBILE SUITE V5.2

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DESCRIPTION

Thank you for selecting Zebra as your mobility solution tool provider. User friendly mobile applications are key to leveraging the power, value and return on investment of your mobile solutions and with RhoMobile Suite you can significantly reduce the time and cost associated with mobile application development.

RhoMobile Suite allows you to create flexible, OS-independent, hardware-agnostic applications that look, feel and act the same on every supported device. You can rapidly create robust mobile applications that can include a wide range of advanced data capture capabilities. Whether you want to streamline your warehouse, delivery or service operations or enable more robust asset tracking & visibility, RhoMobile Suite will help you get your enterprise mobility solution up and running.

RELEASE NOTES

Version 5.2

New Features Added

- Android Lollipop support for consumer Android

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DEVICE COMPATIBILITY

RhoMobile Suite supports iOS, Android, Windows Embedded Handheld, and Desktop Windows XP / XPe / 7 development. On Zebra devices the Rhomobile Suite supports Android, Windows Embedded Handheld 6.1, 6.5 and Windows CE 5, 6 & 7.

Not all APIs will be available on every supported platform, please refer to The online API compatibility document (http://docs.rhomobile.com/guide/apisummary) for a comprehensive list.

Consumer Devices

This software release has been approved with the following devices from other manufacturers

MANUFACTURER	DEVICE	OPERATING SYSTEM(S)
Apple	iPod Touch iPhone 3Gs iPhone 4 and 4S iPhone 5 family iPhone 6 and 6plus iPad Family	iOS 6.x iOS 7.x iOS 8.x
Android Devices	Android Devices	Android 4.0 (Ice Cream Sandwich) Android 4.1-4.3 (JellyBean) Android 4.4 (KitKat) Android 5.1 (LolliPop) - Consumer only *Building for both ARM and x86 is supported*
Windows Phone 8 Devices	Windows Phone 8 Devices	Windows Phone 8

Please note that RhoMobile Suite no longer supports Blackberry development from RMS version 4.0 onwards.

Supported Zebra Devices

This software release has been approved for use with the following Zebra Enterprise Mobility devices.

Mobile Computers

	DEVICE FAMILY	DEVICE	OPERATING SYSTEM(S)
	**ES400**	ES400	Windows Embedded Handheld 6.5
	**ET1**	ET1 (Enterprise Tablet), ET1 WAN	Android 4.1 (JellyBean)
	**MC2100***	MC2100, MC2180	Windows CE 6.0 Core
	**MC3100**	MC3100R, MC3100S, MC3190G, MC3190R, MC3190S, MC3190Z	Windows CE 6.0 Professional Windows Embedded

			Handheld 6.5
	**MC32N0**	MC32N0	Windows CE 7.0 Android 4.1 (JellyBean)
	**MC40**	MC40	Android 4.1 (JellyBean)
	**TC70**	TC70 GA1 (Non rebranded device)	Android 4.4 (KitKat)
	**MC18**	MC18	Windows CE 7.0
	**WAP4**	WAP4	Windows CE 6.0
	**MC45**	MC45	Windows Embedded Handheld 6.5
	**MC55**	MC5574, MC5590	Windows Embedded Handheld 6.5
	**MC55A0**	MC55A0	Windows Embedded Handheld 6.5
	**MC55N0**	MC55N0	Windows Embedded Handheld 6.5
	**MC65**	MC659B	Windows Embedded Handheld 6.5
	**MC67**	MC67	Windows Embedded Handheld 6.5 Android 4.1 (JelyBean)

	**MC70**	MC7004, MC7090, MC7094, MC7095	Windows Mobile 6.1
	**MC75**	MC7506, MC7508, MC7596, MC7598	Windows Embedded Handheld 6.5
	**MC75a**	MC75A0, MC75A6, MC75A8	Windows Embedded Handheld 6.5
	**MC9100**	MC9190-G, MC9190Z	Windows CE 6.0 Professional Windows Embedded Handheld 6.5
	**MC9200**	MC92N0	Windows CE 7.0 Windows Embedded Handheld 6.5
	**MC9500**	MC9590, MC9596, MC9598, MC959B (WM6.1)	Windows Mobile 6.1, Windows Embedded Handheld 6.5
	**TC55**	TC55	Android 4.1 (JellyBean)

* The MC2100 family of devices are only supported by RhoElements 2.1.

Vehicle Computers

	DEVICE FAMILY	DEVICE	OPERATING SYSTEM(S)
	**VC6000**	VC6000, VC6096	Windows Embedded Handheld 6.5
	**VC70**	VC70	Windows CE 7.0

Micro Kiosks

	DEVICE FAMILY	DEVICE	OPERATING SYSTEM(S)
	**MK3100**	MK3100, MK3190	Windows CE 7.0

Wearable Computers

	DEVICE FAMILY	DEVICE	OPERATING SYSTEM(S)
	**WT41N0**	WT41N0	Windows CE 7.0

Deprecated Zebra Devices

Following Zebra Devices are not supported from 5.1

Mobile Computers

	DEVICE FAMILY	DEVICE	OPERATING SYSTEM(S)
	**MC3000**	MC3000, MC3090	Windows CE 5.0 Windows Mobile 6.1
	**MC9000**	MC9090, MC9097, MC9094	Windows CE 5.0 Windows Mobile 6.1

Micro Kiosks

	DEVICE FAMILY	DEVICE	OPERATING SYSTEM(S)
	**MK3000**	MK3000, MK3090	Windows CE 5.0
	**MK4000**	MK4000, MK4090	Windows CE 5.0

Vehicle Computers

	DEVICE FAMILY	DEVICE	OPERATING SYSTEM(S)
	VC5090	VC5090	Windows CE 5.0

			

Wearable Computers

	DEVICE FAMILY	DEVICE	OPERATING SYSTEM(S)
	**WT4090**	WT4070, WT4090	Windows CE 5.0

Printers

The underlying SDK wrapped by RhoElements for each printer manufacturer will support a wide range of that manufacturer's printers and their documentation should be consulted for an up to date list. Zebra has formally validated a number of specific popular printers, (QLn320, MZ220, MZ220) but the API will support the same range of printers supported by the manufacturer SDK. more details of which can be found at the Printing documentation

Memory Considerations

RhoElements 4.0 introduces support for our older device families such as the MC9000 and MK4000. The devices supported by RhoElements span the entire range of the performance spectrum and therefore care should be taken when developing applications, especially for these older devices. Please have the capabilities of your target device in mind when developing your application, the following points will help with this.

- Devices must have a minimum of 128MB of physical RAM to support RhoElements
- JavaScript libraries such as Sencha touch or JQuery Mobile can use a significant amount of memory at runtime. The more JavaScript libraries loaded into the DOM then the greater the RAM footprint of the web page will be.
- Out of the box you will find JQueryMobile will not be included automatically in your views on Windows Mobile / CE devices, this is to give the best possible performance.
- There are APIs available in the product to monitor the memory including memory logs and a Memory API. You can use these tools to get a handle on the requirements of your application.
- Resources are available on developer.zebra.com to help create great looking, streamlined apps including blogs and webinars.
- Online performance tests for JavaScript and CSS, particularly those involving DOM manipulation will often be written to target desktop computers and may not run on all supported devices.
- On some of our lower end CE devices you may find you need to increase the program memory available to install RhoElements and you can do this from the Control Panel. Out of the box you will have sufficient memory on your device but if you have already installed a lot of programs you may need to allocate more program memory or delete your existing files.
- The more RhoElements applications you run on your device the greater the required memory will be. Consider using the TabBar in a single application rather than multiple separate applications.
- Windows Mobile 5.0 is not supported in this release, devices should be updated to Windows Mobile 6.x where possible.
- Some older devices such as the MK4000 and MK3000 have insufficient storage space in the application partition to install RhoElements applications. If required on these devices it is suggested to store RhoElements on an SD card and copy files to the \program files folder using the Startupctl utility.

Localizations

RhoMobile Suite has been approved to run on the following localized device operating systems:

- French
- Italian
- Traditional Chinese
- Simplified Chinese

- German
- Spanish
- Portuguese
- Korean (Windows Embedded Handheld Only)
- Japanese

Approved localized operating systems can be obtained from Support Central.

Non-Zebra Devices

Whilst RhoMobile Suite will also run on many competitor devices running Windows Embedded Handheld 6.5 this configuration is not officially supported.

COMPONENTS OF RHOMOBILE SUITE

PC Components

If the default install location is not changed, the components are installed in the following folders:

COMPONENT	LOCATION
RhoStudio	C:\RhoMobileSuite[version#]\rhostudio
RhoConnect	C:\RhoMobileSuite[version#]\ruby\lib\ruby\gems\1.9.1\gems\rhoconnect-5.0.x
GNU make	C:\RhoMobileSuite[version#]\make-3.81
Redis database	C:\RhoMobileSuite[version#]\redis-2.6.x
RhoMobile sample applications	C:\RhoMobileSuite[version#]\samples

Device components for Windows Embedded Handheld and Windows CE devices:

COMPONENT	LOCATION
Runtime Executable	\Program Files\<App Name>\
Default Configuration Files	\Program Files\<App Name>\Config
Default HTML Files	\Program Files\<App Name>\HTML
Default Image Files	\Program Files\<App Name>\Image
MPM accessory libraries	\Program Files\<App Name>\MPM
NPAPI Plugin Directory	\Program Files\<App Name>\NPAPI
EMML Plugin Libraries	\Program Files\<App Name>\Plugin
Files required for Ruby Wrapper	\Program Files\<App Name>\rho

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INSTALLATION

Instructions for installing RhoMobile Suite including all its components (RhoElements, Rhodes, RhoConnect) on both Windows and Mac can be found in the online installation instructions (http://docs.rhomobile.com/en/4.0.0/guide/rhomobile-install).

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USAGE NOTES

Overview / Setup

- RhoMobileSuite allows you to develop applications using Rhodes, an open source development toolkit for mobile devices or using RhoElements, a superset of Rhodes which also includes licensed APIs and support for Windows Mobile / CE.
- Once installed please refer to the online documentation at http://docs.rhomobile.com for a quick start guide and full list of functionality. A Kitchen Sink demo application is also available at http://docs.rhomobile.com/guide/kitchensink to illustrate a majority of the API available in RhoMobile suite.
- Installation and Application paths on Windows must not contain spaces.
- The "Shared Runtime" has been removed from RMS 5.0, customers wishing to create hybrid applications (web apps which use device capabilities through javascript) are advised to use Enterprise Browser
- Once the installer has completed you can use 'rhodes-setup' command to provide paths to various SDKs : http://docs.rhomobile.com/rhodes/install#setup-rhodes. You can also edit rhobuild.yml manually or copy it from an old Rhodes installation. Another way to edit your rhobuild.yml is to use RhoStudio, from the Windows menu select Preferences and then RhoMobile to access the dialog.
- From RMS version 4.1 onwards, building Android applications on Windows XP is no longer supported.

Usage Notes for RhoConnect

The latest guides and information on supported platforms are available at http://docs.rhomobile.com/rhoconnect/introduction. The migration guide from 2.2 to 4.0 is available at http://docs.rhomobile.com/rhoconnect/migration

- RhoConnect JavaScript code generation is not available directly in RhoStudio. You will need to call the generators from the command line and pass "--js" flag.
  - For example, to generate an app with JavaScript:
    - rhoconnect app helloworld --js
  - Then, to generate a source:
    - cd helloworld
    - rhoconnect source product --js
- Although you should upgrade your application by following the migration guide, RhoConnect apps using v3.4.x will run with only an updated 'rhoconnect' version in the Gemfile followed by "bundle install" inside of the application.
- All ruby processes should be killed before debugging RhoConnect applications.
- Warning Alerts shown whilst using RhoConnect Push on Android devices can be ignored.
- After uninstalling RhoConnect push from a Windows Mobile / CE device you must also remove the shortcut from the startup folder normally found at `'\Windows\StartUp\rhoconnect-push-service.lnk'`
- RhoConnect client-side JavaScript applications should be hosted locally on the device and not on a remote server.
- RhoConnect push is not available on the MK4000

Usage Notes for RhoStudio

RhoMobileSuite ships with RhoStudio. The latest guides and information on supported platforms is available at http://docs.rhomobile.com/rhostudio.tutorial.

- If you are running Windows, RhoMobile Suite Installer installs the Ruby stack, Redis, RhoConnect and Rhodes.
- If you are running Mac OS, RhoMobile Suite Installer installs Redis, RhoConnect and Rhodes.
- Although Mac OS has Ruby installed, the official way to install Ruby for RhoStudio is to install Ruby Version Manager and then install Ruby version 1.9.3
- Avoid using custom conditions for breakpoints.
- If you are running Windows 64-bit, you need to use 32-bit Java when you run RhoStudio. You can include the 32-bit Java in the PATH, or you can run RhoStudio with a link to 32-bit Java: C:\RhoStudio\eclipse\RhoStudio.exe -vm "<32-bit java path>\bin\javaw.exe"
- Network proxy or firewall settings preventing outgoing https or SSH connections may prevent RhoHub build from working in RhoStudio
- Debugging through RhoStudio may not work on machines connected to multiple networks.
- JavaScript Debugging is limited to the RhoSimulator only
- Ruby exception breakpoints are not supported.

Usage Notes for Cloud Building

- Applications built in the cloud and not hosted in RhoMobile.com will fail to build if initiated through RhoStudio or the desktop command line. The web interface can be used as a workaround.
- The maximum allowable application size in the repository is 50MB
- It is not currently possible to push your application to the cloud build server from behind a proxy, please push your files from an open network.

Usage Notes for RhoElements applications

Interaction with Datawedge

In order to run RhoElements alongside DataWedge please configure a DataWedge profile as documented under the 'Profile Configuration Menu' page in the DW help file under the following scenarios:

- You are running on Windows Embedded Handheld / Windows CE devices
- You are running on Android

You can also refer to the RhoElements scanner documentation page for step by step instructions on how to do this.

License Sign in / Sign up

- You can sign into Rhomobile.com using the command prompt or through RhoStudio. Sign in through Visual Studio is not yet supported.

Localized Builds

- In order to install your application on localized Windows devices(including Korean) - install the application to the non-localized 'Program Files' folder.
- APD functionality is not available on localized German and Italian builds on MC75a and MC31xx devices.
- RhoElements only supports non Latin fonts when they are encoded in one of the following character sets: US-ASCII, ISO-8859-1 and Unicode.

Module specific notes

- It is not recommended to use alert boxes to display scanned information or notify of gesture recognition in a production environment.
- When dropping a table using the ORM API you should always provide at least two non-nil parameters, e.g. tx.executeSql('DROP TABLE myTable',[]);
- The ScannerType property of the Barcode API should not be relied upon to accurately report the type of Scanner in use.
- The RhoElements Audio capture APIs will return a null file name after the audio is saved on consumer Android.

- Only one alert should be shown at any one time on WM/CE devices.
- The File API close method is not available on WM/CE devices through Ruby.
- Printing Issues:
    - Printer discovery is unreliable on Windows and Android devices. The most reliable way to connect to a printer is by calling 'searchPrinters' and providing the Bluetooth or IP address of the printer you want to connect to. Switching from IP to Bluetooth connections on WinCE requires a restart of the application.
    - Android Gingerbread devices are not supported by the printing API, please update to Jellybean.
    - Attempting to connect to a printer after disconnecting will return an error on Android/WM but error_not_connected on iOS
    - The retrieveFileNames and retrieveFileNamesWithExtensions methods require you to pass an anonymous callback function. Named callback functions will not work.
    - Connecting to a Bluetooth printer on Windows CE7 may not work after disconnecting from an existing printer. Please contact Customer support for possible hot fixes.
    - The printing API will incorrectly return success when attempting to send ZPL commands to a printer that does not support ZPL

Usage notes for Windows Mobile / Windows Embedded Handheld and Windows CE

- If your application uses Ruby you must use the Out of Process engine, configurable through your build.yml file.
- Scanner and Imager viewfinder parameters are not infinitely adjustable and the requested resolution must be supported by the hardware, otherwise the output may be scaled or snapped to the closest supported size. The viewfinder should be configured prior to being displayed. Additionally on Windows Embedded Handheld the Imager module width and height parameters should not be set to 500 or greater when using the color camera.
- Configuring the data buffer size or data format on Windows CE or Windows Embedded handheld should be done prior to enabling the scanner.
- The Kiosk devices may spuriously report that they have a camera installed when queried through the System API
- When capturing a video on the MC45 device the preview window will fill the whole screen. To stop the capture prematurely use the KeyCapture API to stop() the capture.
- Filenames used in the Video Capture API should be restricted to alphabetical characters.
- When using the Signature API on Windows, the filename of the capture will be returned without the associated extension.
- When capturing audio or video, please be aware of file locks when overwriting existing files, as this can cause the capture to fail.
- Audio Capture should not be invoked on devices without a microphone, such as the VC5090
- Do not set the Windows start menu to 'auto hide' on CE, this has compatibility issues with RhoElements full screen mode.
- Streaming audio or video is not available in the Media Player API for WM or CE
- Notes around using the RemoteScanner Module:
    - It is recommended to store the PIN and not require users to manually enter it when associating with the scanner
    - The rsmDecodeFeedback property can not be used to disable the sound and illumination.
- The Video Capture API can not be accessed through Ruby, please use the JavaScript interface instead.
- Functionality of the Network API should not be exercised through ActiveSync or Windows Device Center, depending on your desktop OS.
- The Bluetooth server connection has stability issues under some deployment scenarios

Usage notes for Android. Both Consumer and Zebra Android

- For TC70 Non rebranded devices default Barcode sound should be used
- Bluetooth read and write operations works on the same OS versions of device.
- To compile applications for Android please ensure you have the latest versions of the Android SDK and NDK version 9 installed. Google changed the structure of these between our 2.2 and 4.0 releases.
- The Home Key cannot be intercepted or blocked on Android; please refer to the device documentation for details of how to enable OS lockout.

- UsPlanetReportCheckDigit and UsPostNetReportCheckDigit have no effect on Android
- Default meta tags cannot be used to specify scanner decoder tags on Android.
- Once disabled, EAN13 barcodes should not be scanned with Android.
- The SIP can not be set to manual mode on Android through Ruby, to work around this issue use the JavaScript SIP interface.
- Bluetooth radio does not turn off when BluetoothManager.off_bluetooth is called and will not turn on automatically on Android when Bluetooth APIs are exercised.
- The Code128IsBtTable Barcode symbology is not supported on Android
- Autorotate should not be disabled on Android devices
- When using the Native TabBar on Android, ensure the enablePageLoadingIndication property is set to 'true' to avoid potential issues on load.
- The device volume buttons will become non-functional in all Android devices (both consumer and Zebra) unless you specify <EnableFunctionKey_F1/> and <EnableFunctionKey_F2/> in your config.xml file.

Usage notes for iOS

- The MapView API should only be used on iPhone when the device has Internet connectivity.
- The -ipa-file created on the command line cannot be installed on an iOS7 device using iTunes, please use XCode to deploy to the device and submit to the appstore.
- If building an application with RhoElements capabilities please use rake commands to build the archive, rather than XCode.
- Applications running on iOS7 do not support fullscreen mode.
- The look and feel of your application will be different in iOS7 because of Apple's new, flat design; this will impact some UI elements such as Toolbar, TabBar, NavigationBar and the Phone Status bar.

Usage notes for WP8

- The NativeTabBar properties useCurrentViewForTab, selectedColor, backgroundColor are not yet supported.

Usage notes for the Rendering Engine

- SMS, Email and wtai URIs e.g. <a href="tel:18006535350"> are not supported on Windows Mobile / CE.
- It is strongly recommended to avoid using framesets and make use of and tags. A single page is faster to process and it is not possible to guarantee which frames' tags will be parsed first; also any JavaScript callbacks will always be sent to the parent frameset page.
- Form input types http://www.w3.org/TR/html5/forms.html are not yet supported.
- HTML5 Video / Audio is not yet supported.
- CSS Gradients, Complicated CSS shadows or displaying shadows on rotated objects have been known to cause visual and performance issues in the WebKit browser.
- The HTML5 web worker functionality should not be used on Windows devices
- You can not select multiple items simultaneously from a combo box on Android devices.
- Input attribute 'autofocus' should not be relied upon to set field focus, please use JavaScript alternatives

Notes for running multiple applications simultaneously

- Windows applications running in the background should not attempt to display a JavaScript alert.
- Scanner parameters 'ScanTimeout' and 'DisconnectBtOnDisable' are not application specific and their default should not be assumed prior to use.
- Minimized applications should be bought to the foreground by using the application shortcut.
- Notifications such as the beeper must have their state set to 'off' prior to switching applications on Android to work between applications.
- To use the Barcode API in multiple applications you must ensure both applications are running before you use the Barcode API in either app.

Development

- During development the application exe should not be forcibly quit on WM/CE. If absolutely required then a warm boot should be performed following the quit.
- If developing on multiple WM/CE devices, clean your work environment before transitioning devices
- SendLog should not be used in the RhoSimulator, the log file is stored on your machine disk.
- When building on Windows 8 you must specify your HTTP proxy through the rhobuild.yml file.

Configuration Options

- On Windows Embedded Handheld and Windows CE the configuration option <LogURI> is not fully supported. The name of the log file will always be 'rholog.txt' and for native applications it will always be stored in the \rho directory of the application.
- The only <LogProtocol /> configuration option supported is 'file'
- On reinstalling RhoElements on Android, the previous config.xml file will not be overwritten.
- The <LogUser /> log severity has no effect if <LogInfo /> is disabled, disabling <LogInfo /> will have no effect on info logs.
- Some JavaScript libraries check for the existence of 'ActiveXObject' and if it exists try to create a 'Microsoft.XMLHTTP' object for AJAX. To avoid libraries erroneously doing this for RhoElements set all <PreloadLegacy* /> options to '0'.
- To navigate to secure web pages please it is necessary to specify both the HTTP and HTTPS proxies

Usage notes for Beta Functionality

- SimulScan: Do not press the Android home button whilst capturing a document when using SimulScan
- SimulScan: The following properties / methods may not work correctly depending on your device and version of SimulScan installed: LedFeedback, AudioFeedback, FetchTemplates, AutoImageCapture, getDataUri.
- NFC: It is not possible to make an NFC tag read-only through the API.
- NFC: Passing the parameter 'tagsToBeDetected' to the setTagDetectionHandler method will have no effect.

Usage Notes for New ORM Common API (Beta)

New ORM API provides Ruby and JS access to the Rhodes mini database object mapper (ORM), performing database operation on Rhodes model objects. It replaces old Ruby and JS implementations and serve as a basis for new features and enhancements. For further information consult online Module Core API and Models API documents. Existing implementation (Old ORM) is kept in parallel at this moment to provide smooth transitioning to the new API. By default, existing Old ORM API will be enabled by default in RE 4.1.

- To enable New ORM API for existing Rhodes app
  - Edit "rhoconfig.txt" file and add 'use_new_orm' option to it
    - use_new_orm = 1
  - For JavaScript app make sure that your html file includes reference to "rhoapi-modules.js" file. Any references to "rhoapi-modules-ORM.js" should be commented or removed.
  - New ORM JS API uses different interface for 'addModel' like Rho.ORM.addModel(?Product?, function(model){ /* ... */ }). Update your code properly.
- To enable/continue usage of Old ORM API for existing Rhodes app
  - In "rhoconfig.txt" file remove 'use_new_orm' option or set it as use_new_orm = 0
  - Make sure that your main html file includes references to both files
    - rhoapi-modules.js
    - rhoapi-modules-ORM.js

Usage Notes for Cloud Building

- For "printRawString" method use js api for cpcl command

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KNOWN ISSUES

Known Issues with RhoConnect

- Async mode is not supported with RhoStudio debugger.
- Async mode is only supported with Thin Server.
- RhoConnect applications currently do not run on Windows XP due to issues with the redis server.

Known issues with RhoStudio

- Debugging of RhoConnect applications does not work on Windows
- The Clean command will not delete the cab files associated with a build.

Known issues with Cloud Building

- Cloud building does not support applications with underscores ('_') at the beginning in their names. This will be resolved in the next release.

Known Issues with RhoElements applications

Known issues with Modules

- The following APIs are not supported in the JavaScript ORM: deleteAll(), find(args) with advanced queries, clearNotification(), findAll(), findBySql(string), paginate, setNotification(), search(), sync(). An alternative to the sync() call is to use RhoConnectClient.doSync().
- The following APIs are not supported in RhoConnect client: JS Search, JS bulk Sync, JS blob sync, JS onSyncCreate / Update / DeleteError handlers. Applications requiring this functionality are currently limited to the Ruby API.
- The Sensor API readData() method should not be relied upon to return immediate Sensor data, please use the start() method to read the data periodically.
- The RhomSource API will return incorrect sync information for the following fields: last_inserted_size, last_deleted_size and distinct_objects.

Known issues on Windows Mobile / Windows Embedded Handheld and Windows CE

- HTTP authentication (Basic and Digest) does not work on Non Zebra WM devices.
- Native applications will not launch on the MC21XX series of devices, only hybrid applications are supported using RhoElements which ships on the device.
- Supplementals will not be decoded if picklist mode is enabled on the MC65.
- displayBtAddressBarcodeOnEnable parameter will fail to re-pair the RSM device after connection timeout. The RSM will need to be reconnected by clicking hardware reconnection button.
- On large screen CE devices, such as the VC70, the MapView control will not be rendered full screen.
- The Bluetooth module should not be instructed to disconnect() on Windows Mobile prior to a connection being established or without specifying a device name.
- The signal icon will remain reporting full signal strength on the VC70 even after the WLAN has been disconnected.
- The MapView API zoom_enabled and scroll_enabled properties are ignored on CE7 and will default to true.
- 3D gestures will not be reliably detected on the WT41N0
- When restoring minimized applications on WM/CE, they will not come back full screen regardless of the value of the fullScreen configuration option.
- For WM/CE the Bluetooth method is_bluetooth_available will return whether or not the device has Bluetooth capabilities. On Android the same method will return whether or not Bluetooth is turned on.
- The diagnostics property of the Gesture API on Windows is not available on WM or CE devices
- The Alarm API is not available on WM/CE devices

- convertGs1DataBarToUpcean property has no effect when scanning GS1Databar barcodes.
- Disabling poll based synchronization with RhoConnect Client may cause issues with SSL connections
- The navigationTimeout property of the WebView API is not available, please specify this setting in your configuration file.
- When accessing the Native Toolbar through JavaScript the predefined icons will be replaced by text. The predefined icons are 'back', 'home', etc.
- The following APIs should not be exercised on Non Zebra WM devices: Notification, ScreenOrientation, CardReader, Log, Network.
- For two or more applications to share the scanner resource on the device, when each application gains focus it should re-enable the scanner with its required configuration
- The app_install method of the System API will not work for CE devices, please instead use System.applicationInstall(). To install remote applications, first download the app to the device with the Network API.
- The CaptureTrigger API is not available on the MC32 CE7 device
- Rho supports only Microsoft Bluetooth Stack printing, Stone Street Bluetooth Stack printing is not supported. Workaround shall be to change the Bluetooth Stack from StoneStreet to Microsoft through registry, [HKEY_LOCAL_MACHINE\Software\SymbolBluetooth\SSStack] from 1 to 0
- Imager on MC92 CE7 will open camera in upside down.

Known issues on Android. Both Consumer and Zebra Android

- The Battery and Signal icons are not shown on x86 Android devices
- When Android devices running Android 3.2 have no connectivity applications may not work for some carrier providers.
- Bluetooth printers should be paired to the device prior to using APD, otherwise the first call may not be received.
- On the ET1 if you are running RhoElements you should disable the Camera when it is not in use.
- The FaceUp 3D gesture does not work on Android
- Setting the Scanner illuminationMode will have no effect on Android.
- For Android and iOS the Bluetooth method session_bt_disconnect will always return status 'error' in the callback regardless of success.
- getProperty and getProperties do not work for the Barcode API on consumer Android.
- The Sensor API method makeSensorType() does not return a valid Sensor object on Android.
- The Sensor and Media Player APIs are not available on MC40 Gingerbread, please update your device to JellyBean.
- The Audio Capture API should be allowed to record for the configured number of seconds, rather than allowing the user to stop the recording on demand
- Inline Signature Capture should not be used, instead please use the (non inline) Signature API on this platform.
- Web Plugins (Flash) is only available on Android 2.x and below. On Android 3.x and above the WebView API 'enableWebPlugins' will not be able to successfully enable Flash.
- The System API method isSymbolDevice will return false regardless of the device if the application is built without app_type:RhoElements.
- The Intent API cannot be accessed through Ruby, it must be accessed through Javascript.
- Tilt and Shake gestures are unavailable on the MC32 Android device
- The Camera API is not available on the Nexus S device

Known issues on iOS

- Application minimize and restore may show screen distortion on iOS when being performed
- MP3 and wave files will not play through the Media player's playFile method.
- Barcode scanning is not yet available on IPod
- The Webview API methods navigationBack() and currentLocation() may not work as expected.
- The Camera API should not be used on iOS7
- The Application event callbacks 'ScreenOn' and 'Deactivated' are not supported in Ruby applications.

- Building through Xcode is not working, you can build through RhoStudio or using the command line.
- The Printing API will not work on IPhone when the application is built in the cloud. Please build applications locally that require printing through iOS.
- "outputFormat" as dataURI is not supported for Ruby over VPN,You can use "outputFormat" as image instead.

Known issues on Windows Phone 8

- If your compiler complains about machine type conflicts following a build then perform a clean build first.

Known issues on Windows Desktop applications & RhoSimulator

- The mask color of the Toolbar API will have no effect.
- The application log is not available in RhoSimulator
- Accessing remote web pages through Win32 applications from behind a proxy may, in rare conditions cause an application crash. It is recommended to avoid deploying Win32 applications in this scenario.

Rendering Engine Issues

- Cookie expiration times should not be relied upon in Windows Mobile and Windows CE.
- CSS Font-Family property is not functioning.
- The viewport meta tag, once set, will persist across pages and is not compatible with device rotation.
- Specifying a viewport may cause form components or iFrames to be scaled incorrectly. This will be resolved in the next release.

Known issues with Live Update

- Deleting folders and sub folders works only for Full update.

Known issues with New ORM Common API

- Blob type is not supported
- Ruby implementation for Property Bag models with advanced find options (:conditions, :select, :op, :order) is incomplete and should be avoided.
- On building iphone application in cloud, "Connect" API fails for BT printing.

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USAGE NOTES AFFECTING 2.2 APIS

With the move to 4.0 a number of new APIs were created to harmonize the sometimes disjointed set of APIs available under 2.2. All 2.2 APIs are still backwardly supported under 4.0 and a migration guide is available under http://docs.rhomobile.com/guide/apiusage. The following usage notes only affect those APIs included in 4.0 for backwards compatibility with 2.2.

[Show 2.2 Specific Usage Notes]

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KNOWN ISSUES AFFECTING 2.2 APIS

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[Show 2.2 Specific Known Issues]

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SUPPORTED CIPHERS

The following SSL Ciphers are supported in WebKit

- TLS_ECDHE_RSA_WITH_RC4_128_SHA (0xc011)
- TLS_ECDHE_ECDSA_WITH_RC4_128_SHA (0xc007)
- TLS_ECDH_RSA_WITH_RC4_128_SHA (0xc00c)
- TLS_ECDH_ECDSA_WITH_RC4_128_SHA (0xc002)
- TLS_RSA_WITH_RC4_128_SHA (0x0005)
- TLS_RSA_WITH_RC4_128_MD5 (0x0004)
- TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 (0xc030)
- TLS_ECDHE_ECDSA_WITH_AES_256_GCM_SHA384 (0xc02c)
- TLS_ECDHE_RSA _WITH_AES_256_CBC_SHA384 (0xc028)
- TLS_ECDHE_ECDSA_WITH_AES_256_CBC_SHA384 (0xc024)
- TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA (0xc014)
- TLS_ECDHE_ECDSA_WITH_AES_256_CBC_SHA (0xc00a)
- TLS_DHE_DSS_WITH_AES_256_GCM_SHA384 (0x00a3)
- TLS_DHE_RSA_WITH_AES_256_GCM_SHA384 (0x009f)
- TLS_DHE_RSA_WITH_AES_256_CBC_SHA256 (0x006b)
- TLS_DHE_DSS_WITH_AES_256_CBC_SHA256 (0x006a)
- TLS_DHE_RSA_WITH_AES_256_CBC_SHA (0x0039)
- TLS_DHE_DSS_WITH_AES_256_CBC_SHA (0x0038)
- TLS_ECDH_RSA_WITH_AES_256_GCM_SHA384 (0xc032)
- TLS_ECDH_ECDSA_WITH_AES_256_GCM_SHA384 (0xc02e)
- TLS_ECDH_RSA_WITH_AES_256_CBC_SHA384 (0xc02a)
- TLS_ECDH_ECDSA_WITH_AES_256_CBC_SHA384 (0xc026)
- TLS_ECDH_RSA_WITH_AES_256_CBC_SHA (0xc00f)
- TLS_ECDH_ECDSA_WITH_AES_256_CBC_SHA (0xc005)
- TLS_RSA_WITH_AES_256_GCM_SHA384 (0x009d)
- TLS_RSA_WITH_AES_256_CBC_SHA256 (0x003d)
- TLS_RSA_WITH_AES_256_CBC_SHA (0x0035)
- TLS_ECDHE_RSA_WITH_3DES_EDE_CBC_SHA (0xc013)
- TLS_ECDHE_E CDSA_WITH_3DES_EDE_CBC_SHA (0xc008)
- TLS_DHE_RSA_WITH_3DES_EDE_CBC_SHA (0x0016)
- TLS_DHE_DSS_WITH_3DES_EDE_CBC_SHA (0x0013)
- TLS_ECDH_RSA_WITH_3DES_EDE_CBC_SHA (0xc00d)
- TLS_ECDH_ECDSA_WITH_3DES_EDE_CBC_SHA (0xc003)
- TLS_RSA_WITH_3DES_EDE_CBC_SHA (0x000a)
- TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 (0xc02f)
- TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256 (0xc02b)
- TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA256 (0xc027)
- TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA256 (0xc023)
- TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA (0xc013)
- TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA (0xc009)

- TLS_DHE_DSS_WITH_AES_128_GCM_SHA256 (0x00a2)
- TLS_DHE_RSA_WITH_AES_128_GCM_SHA256 (0x009e)
- TLS_DHE_RSA_WITH_AES_128_CBC_SHA256 (0x0067)
- TLS_DHE_DSS_WITH_AES_128_CBC_SHA256 (0x0040)
- TLS_DHE_RSA_WITH_AES_128_CBC_SHA (0x0033)
- TLS_DHE_DSS_WITH_AES_128_CBC_SHA (0x0032)
- TLS_ECDH_RSA_WITH_AES_128_GCM_SHA256 (0xc031)
- TLS_ECDH_ECDSA_WITH_AES_128_GCM_SHA256 (0xc02d)
- TLS_ECDH_RSA_WITH_AES_128_CBC_SHA256 (0xc029)
- TLS_ECDH_ECDSA_WITH_AES_128_CBC_SHA256 (0xc025)
- TLS_ECDH_RSA_WITH_AES_128_CBC_SHA (0xc00e)
- TLS_ECDH_ECDSA_WITH_AES_128_CBC_SHA (0xc004)
- TLS_RSA_WITH_AES_128_GCM_SHA256 (0x009c)
- TLS_RSA_WITH_AES_128_CBC_SHA256 (0x003c)
- TLS_RSA_WITH_AES_128_CBC_SHA (0x002f)
- TLS_EMPTY_RENEGOTIATION_INFO_SCSV (0x00ff)

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PART NUMBERS

The following table lists the part numbers for RhoMobile Suite

PART NUMBER	DESCRIPTION	FIRST RELEASE DATE	COMMENTS
RMS_050202_WIN	RhoMobile Suite for Windows operating systems	14th August 2015	Version 5.2.2
RMS_050202_DMG	RhoMobile Suite for Mac operating systems	14th August 2015	Version 5.2.2

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