

# MOTOROLA RHOMOBILE SUITE V5.0.38

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## DESCRIPTION

Thank you for selecting Motorola 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 Motorola 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, Motorola RhoMobile Suite will help you get your enterprise mobility solution up and running.

## RELEASE NOTES

### Version 5.0 Service Pack 3 (5.0.38)

Roll-up of previous 5.0 service packs

#### Issues Resolved

- MobileIron will now work with Rho iOS applications. In order to work with the per-application VPN functionality of MobileIron it is necessary to configure both the settings `ios_net_use_curl=0` and `ios_direct_local_requests=1` as explained in the [Runtime configuration guide](#)

### Version 5.0 Service Pack 2 (5.0.30)

Roll-up of previous 5.0 service pack

#### New Features Added

- iOS apps can now be built with 64-bit support. This complies with Apple's change to their terms and conditions stating that from February 1st 2015, all new submissions must be built with the iOS8 SDK and include support for 64-bit architecture, [Support article](#).

#### Issues Resolved

- Critical Windows Phone 8 build issue identified with 5.0 service pack 1 which prevented WP8 applications from being built.

### Version 5.0 Service Pack 1 (5.0.25)

#### **New Features Added**

- Support for MC32 Android Jellybean. Our previous release introduced support for the MC32 CE7 variant, with 5.0 SP1 you can now also target your applications at the entire MC32 product family.
- Support for iOS8 across the entire Apple product line where iOS8 is supported. Support for the latest XCode 6.1 with iOS 8.1 SDK.

#### **Issues Resolved**

- SPR25573: Webkit rendering issue with checkboxes when specifying a viewport on WM/CE devices
- SPR26399: Instability with Barcode API if Scanner API is not preloaded
- SPR26407: Focus issues after scanning barcodes on CE devices
- Applications can now be built with Google services as well as Enterprise APIs in the same application, e.g. Google C2D messaging and Barcode API, where your device supports both.
- Application crashing on WM when creating Native Tabbars
- Cloud build times were slow on Android and iOS
- Building more than two applications in the cloud simultaneously are now queued rather than dropped
- RhoElements applications using 2.2 APIs are now buildable in the cloud
- Wave files are now supported on TC55
- Application log was not available in RhoSimulator
- Printer out of paper state is now correctly being returned as a boolean
- Fixed crash issue on Android GB / JB when opening console log
- Notification playFile() issue on MC31xx CE6 devices resolved
- Websocket API for callback error handlers are now working correctly
- Proxy is now getting set on iOS through the Rho.System.setProxy API
- Android x86 applications can now be built in the cloud
- Signature capture now works full screen on the MK3100 device
- Vibrate function incorrectly illuminating device LEDs on some CE devices
- Problem receiving broadcast intents with some app configurations

### Version 5.0.2

- RhoMobile Suite 5.0 features a completely redesigned licensing model.
  - From 5.0 you no longer purchase licenses to run on a specific device or that are tied to a specific application, instead licenses are purchased on a per-developer basis and integrated with the rebranded [Rhomobile.com](http://Rhomobile.com) website, the Rho cloud build solution.
  - Full details of the new license model are available from <http://docs.rhomobile.com/en/edge/guide/licensing> and that page is worth a quick read before getting started with 5.0.
  - **You will need a developer account before you can start building your applications with 5.0.**
- Relaunch of our cloud build solution
  - A complete redesign of our cloud build offering, now branded [Rhomobile.com](http://Rhomobile.com).
  - RhoMobileSuite 4.x builds can now be executed in the cloud.
  - Integration with RhoStudio and our new license model gives seamless transition between cloud building and building locally on your machine.
  - Performance enhancements to our cloud build will greatly decrease the length of time required to build most applications.
- Runtime and startup performance improvements; you should notice an improvement in application performance when using applications build in RhoMobile Suite 5.0, particularly on Windows Mobile / CE.
- We continue our beta support for Motorola Solutions' 'SimulScan' product

- Support for a new device: MC32N0 CE7.0. Support for the Android variant of that platform will be available closer to that product launch
- New common API for [AudioCapture](#)
- Support for Android KitKat consumer devices. Support for Motorola Solutions' KitKat devices will be available closer to those product launches.
- Additional bug fixes

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## DEVICE COMPATIBILITY

RhoMobile Suite supports iOS, Android, Windows Embedded Handheld, and Desktop Windows XP / XPe / 7 development. On MSI 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.rhmobile.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)
<b>Apple</b>	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
<b>Android Devices</b>	Android Devices	Android 2.3 (Gingerbread) Android 4.0 (Ice Cream Sandwich) Android 4.1-4.3 (JellyBean) Android 4.4 (KitKat) - Consumer only <i>Building for both ARM and x86 is supported</i>
<b>Windows Phone 8 Devices</b>	Windows Phone 8 Devices	Windows Phone 8

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

### Motorola Solutions Devices

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

#### Mobile Computers

	DEVICE FAMILY	DEVICE	OPERATING SYSTEM(S)
	<b>ES400</b>	ES400	Windows Embedded Handheld 6.5




			
	<b>ET1</b>	ET1 (Enterprise Tablet), ET1 WAN	Android 2.3 (Gingerbread) Android 4.1 (JellyBean)
	<b>MC2100*</b>	MC2100, MC2180	Windows CE 6.0 Core
	<b>MC3090</b>	MC3000, MC3090	Windows CE 5.0 Windows Mobile 6.1
	<b>MC3100</b>	MC3100R, MC3100S, MC3190G, MC3190R, MC3190S, MC3190Z	Windows CE 6.0 Professional Windows Embedded Handheld 6.5
	<b>MC32N0</b>	MC32N0	Windows CE 7.0 Android 4.1 (JellyBean)
	<b>MC40</b>	MC40	Android 2.3 (Gingerbread) Android 4.1 (JellyBean)
	<b>MC45</b>	MC45	Windows Embedded Handheld 6.5
	<b>MC55</b>	MC5574, MC5590	Windows Embedded Handheld 6.5
	<b>MC55A0</b>	MC55A0	Windows Embedded Handheld 6.5
	<b>MC55N0</b>	MC55N0	Windows Embedded Handheld 6.5
	<b>MC65</b>	MC659B	Windows

			Embedded Handheld 6.5
	<b>MC67</b>	MC67	Windows Embedded Handheld 6.5 Android 4.1 (JellyBean)
	<b>MC70</b>	MC7004, MC7090, MC7094, MC7095	Windows Mobile 6.1
	<b>MC75</b>	MC7506, MC7508, MC7596, MC7598	Windows Embedded Handheld 6.5
	<b>MC75a</b>	MC75A0, MC75A6, MC75A8	Windows Embedded Handheld 6.5
	<b>MC9000</b>	MC9090, MC9097, MC9094	Windows CE 5.0 Windows Mobile 6.1
	<b>MC9100</b>	MC9190-G, MC9190Z	Windows CE 6.0 Professional Windows Embedded Handheld 6.5
	<b>MC9200</b>	MC92N0	Windows CE 7.0 Windows Embedded Handheld 6.5
	<b>MC9500</b>	MC9590, MC9596, MC9598, MC959B (WM6.1)	Windows Mobile 6.1, Windows Embedded Handheld 6.5
	<b>TC55</b>	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)
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	<b>VC5090</b>	VC5090	Windows CE 5.0
	<b>VC6000</b>	VC6000, VC6096	Windows Embedded Handheld 6.5
	<b>VC70</b>	VC70	Windows CE 7.0

### Micro Kiosks

	<b>DEVICE FAMILY</b> <b>MK3000</b>	<b>DEVICE</b> MK3000, MK3090	<b>OPERATING SYSTEM(S)</b> Windows CE 5.0
	<b>MK3100</b>	MK3100, MK3190	Windows CE 7.0
	<b>MK4000</b>	MK4000, MK4090	Windows CE 5.0

### Wearable Computers

	<b>DEVICE FAMILY</b> <b>WT4090</b>	<b>DEVICE</b> WT4070, WT4090	<b>OPERATING SYSTEM(S)</b> Windows CE 5.0
	<b>WT41N0</b>	WT41N0	Windows CE 7.0

### 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. Motorola Solutions 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.motorolasolutions.com](http://developer.motorolasolutions.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 Motorola Startupctl utility.

## Localizations

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

- French
- Italian
- German
- Spanish
- Portuguese
- Traditional Chinese
- Simplified Chinese
- Korean (Windows Embedded Handheld Only)
- Japanese

Approved localized operating systems can be obtained from [Support Central](#).

## Non-Motorola Solutions Devices

Whilst Motorola 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:\MotorolaRhoMobileSuite[version#]\rhostudio
RhoConnect	C:\MotorolaRhoMobileSuite[version#]\ruby\lib\ruby\gems\1.9.1\gems\rhoconnect-5.0.x

GNU make	C:\MotorolaRhoMobileSuite[version#]\make-3.81
Redis database	C:\MotorolaRhoMobileSuite[version#]\redis-2.6.x
RhoMobile sample applications	C:\MotorolaRhoMobileSuite[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.rhobile.com/en/4.0.0/guide/rhobile-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.rhobile.com> for a quick start guide and full list of functionality. A Kitchen Sink demo application is also available at <http://docs.rhobile.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.rhobile.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.
- The System.applicationUninstall API is not functional on Windows Mobile or CE, customers wishing to make use of this functionality should consider RhoGallery to manage and deploy their applications.

## Usage Notes for RhoConnect

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

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

- If you are running Windows, Motorola RhoMobile Suite Installer installs the Ruby stack, Redis, RhoConnect and Rhodes.
- If you are running Mac OS, Motorola 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.

- Windows Mobile / CE cloud builds are only available for device, not for simulator.
- The maximum allowable application size in the repository is 50MB
- Applications built in the cloud will only support the [new ORM](#), not the [old ORM](#).
- 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.
- Proxy settings for the Network api should be configured through rhoconfig.txt and not through config.xml or the System.setHTTPProxy API for 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 Motorola Android

- To compile applications for Android please ensure you have the latest versions of the Android SDK and NDK 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 Motorola) unless you specify <EnableFunctionKey\_F1/> and <EnableFunctionKey\_F2/> in your config.xml file.
- When extracting the console log from JellyBean devices you should not interact with the device
- The ScreenOrientation API is not available on Android x86 devices built on RhoMobile.com
- Invoking a Javascript callback will hide the SIP, if shown on Android JB devices

## 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.
- Tabbar colours are not available on iOS

## 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 <div> and <span> 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 Motorola 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
- Continual scrolling of form controls in excess of 2 minutes should not be performed with the out of process engine

## 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 brought 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
- The Notification API showStatus method is not available for Win32 applications or the RhoSimulator
- The Network API detectConnection method should not be exercised in the RhoSimulator.
- 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.
- RhoSimulator uses a port of Webkit based on QT which is unlikely to be as up to date as the Webkit port running on the majority of devices, as such more modern Webkit features may not be implemented in Rhosimulator

## 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

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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.
- FTP via Ruby (require 'net/ftp') will not work on CE6 devices
- The Rho MapView is not available on Android, please use ESRI map as a workaround.

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

- HTTP authentication (Basic and Digest) does not work on Non Motorola 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 Motorola 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 Backspace Key will navigate to the previous page in applications that use the Out of Process engine. Set `webkit_outprocess: 0` in your `Build.yml` to use the in process engine
- The Camera API will capture the image to the file system of the MC67 (WM) but is not able to return the `imageURI` on that specific device
- 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

### Known issues on Android. Both Consumer and Motorola 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 `isMotorolaDevice` 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.
- RhoElements applications may require you to scroll the webview to bring input boxes into view after selection
- Tilt and Shake gestures are unavailable on the MC32 Android device
- The VideoCapture 'Duration' parameter has no effect on the TC55 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.

## 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.
- The responseTimeout() method needs to be invoked twice to take effect on Windows desktop or RhoSimulator builds

## Rendering Engine Issues

- The following HTML5 canvas methods / properties have not yet been fully implemented
  - GlobalCompositeOperation (Copy), fill(), animation using drawImage and StrokeText
- 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 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.

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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

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 known issues only affect those APIs included in 4.0 for backwards compatibility with 2.2.

[\[Show 2.2 Specific Known Issues\]](#)

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## SUPPORTED CIPHERS



## The following SSL Ciphers are supported in Motorola 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\_ECDSA\_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_05005.0.38_WIN	RhoMobile Suite for Windows operating systems	24th April 2015	Version 5.0.38
RMS_050038_DMG	RhoMobile Suite for Mac operating systems	24th April 2015	Version 5.0.38

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Last revised: 24<sup>th</sup> April 2015  
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