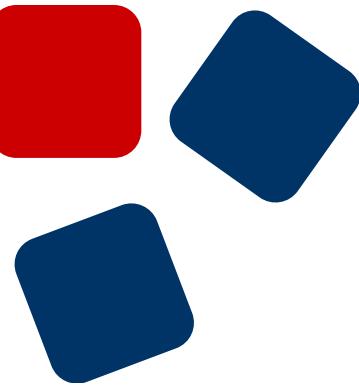
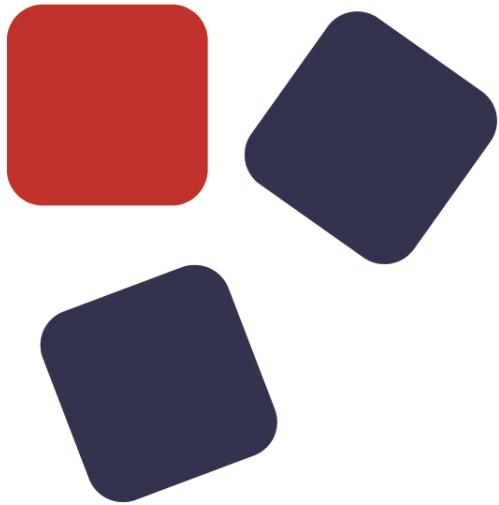




# 8.0 Mobile Platform Release Notes

WEB  RATIO®



# RELEASE NOTES

## WEBRATIO MOBILE PLATFORM 8.0

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## INTRODUCTION

WebRatio Mobile Platform is a powerful development environment that supports business users and IT developers in building mobile applications that can be installed on mobile phones and tablets. Your mobile applications can work both offline, without the use of an Internet connection, or online, synchronizing the information with an external system, which also can be developed with WebRatio Mobile Platform.

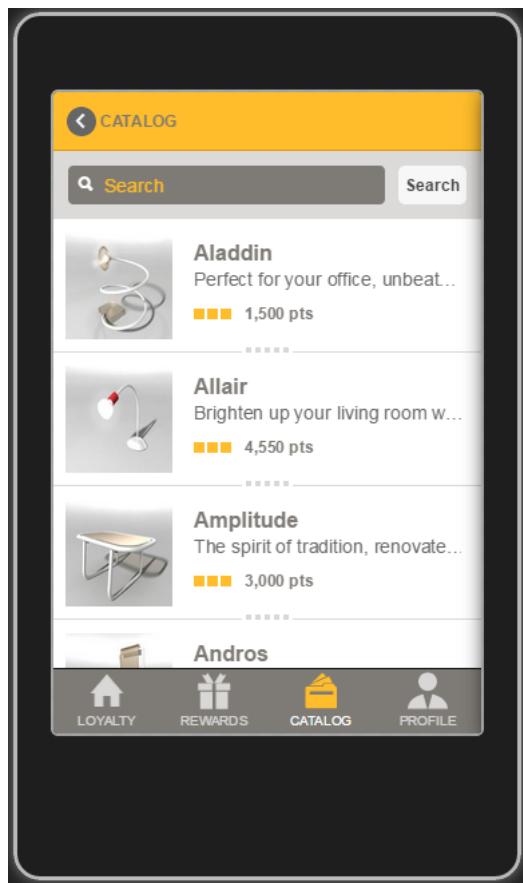
Let's see the main functionalities of this product release.

## RELEASE NOTES

## FEATURES

### Mobile App Modeling

You can model your mobile application using the dedicated project named "Mobile Project". This project uses UML notation to model the data managed by the application, and the IFML language to express the user interaction. See how easy and quick is to create your first mobile application by watching this [lesson](#). Discover the main features available for your mobile app in the next sections.



### Easily target different devices

WebRatio Mobile Platform lets you manage a single mobile project and deliver your apps to any device, such as iOS (iPhone, iPad) or Android.

### Fully Functional Offline Mode

The mobile app works even without being connected to the Internet (offline mode). You don't need to configure anything for this feature; WebRatio Mobile



## FEATURES

Platform takes care of all the technical aspects for you. The mobile app informs the user that it's working in offline mode and takes care of the data synchronization when necessary.

### Up & Back Navigation

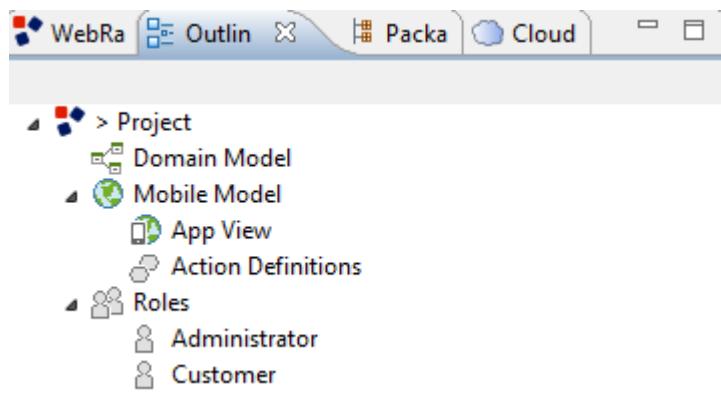
Consistent navigation is an essential component of the overall user experience. Few things frustrate users more than basic navigation that behaves in inconsistent and unexpected ways. For this reason, WebRatio Mobile Platform provides a default mechanism to handle back navigation. Of course you are also free to change the default behavior customizing the target of a back navigation directly in the model.

### Toolbars

Toolbars are where the user can start different actions on the mobile application and access all the app content. For this reason it's important to study how to organize the toolbars of your mobile app. WebRatio Mobile Platform gives you a dedicated modeling concept in order to model toolbars and to distribute the actions on the screen of the device.

### User Profiling

You can model a mobile app that requires the user to register and to login with a valid profile in order to be able to use the application. You can create different user roles in your Mobile Project and give users with specific roles access to specific sections of the mobile application. You can also decide whether or not these roles are centralized in a back-end server.



### Mobile App Basic Features

You can model a mobile app that allows the user to manage specific information by creating, updating, deleting and viewing the information, using a

## RELEASE NOTES

set of predefined components. You can model lists and details, forms with validation rules and searches.

### Integrate with existing services

Your mobile app can also use existing services if they are exposed through REST. You can use a dedicated component to call an external web service and use the result in the mobile app.



## FEATURES

### Mobile App Custom User Interface

WebRatio gives you the ability to easily customize the appearance of a mobile application by applying a visual identity of your choice using a dedicated project named "Mobile Style Project". This project uses HTML5, CSS and JavaScript to express the templates to be applied to the Mobile Project elements and to get your custom user interface.

Loyalty APP

Stefano Butti 1,408 pts  
stefano.butti@webratio.com

Suggested rewards

Andros 1,200 pts  
Create your space and make...

Byron 1,000 pts  
High quality Italian design for ...

1,000 pts

Loyalty Rewards Catalog Profile

LOYALTY APP

logo design

Stefano Butti  
stefano.butti@webratio.com

1,408 pts

SUGGESTED REWARDS

Andros  
Create your space and make ...  
1,200 pts

Byron  
High quality Italian design for ...  
1,000 pts

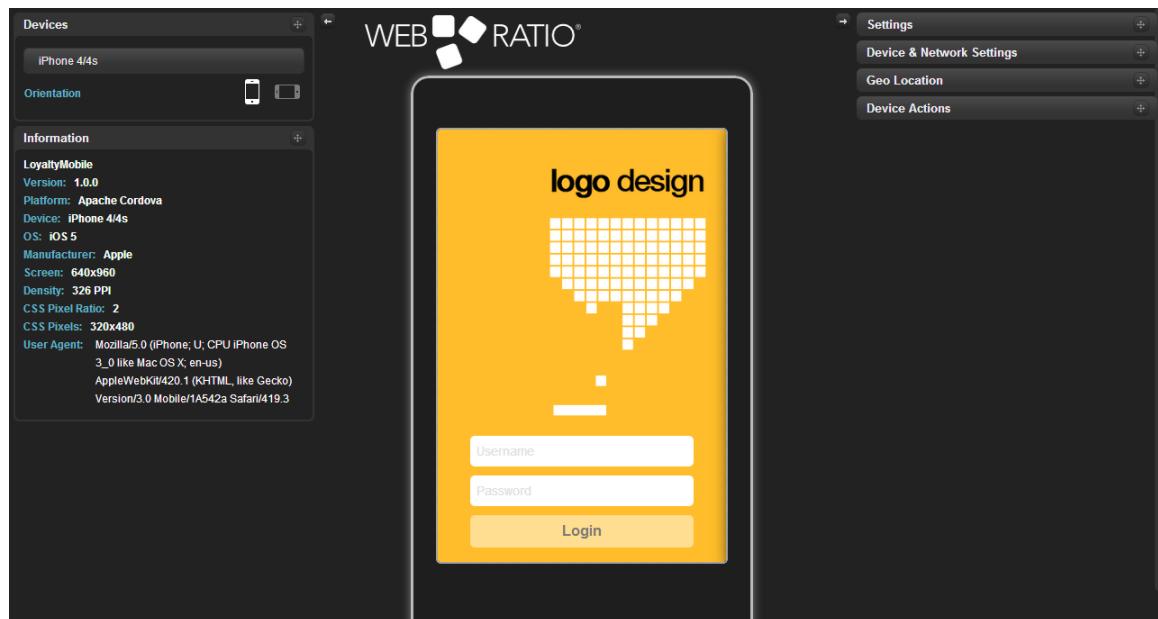
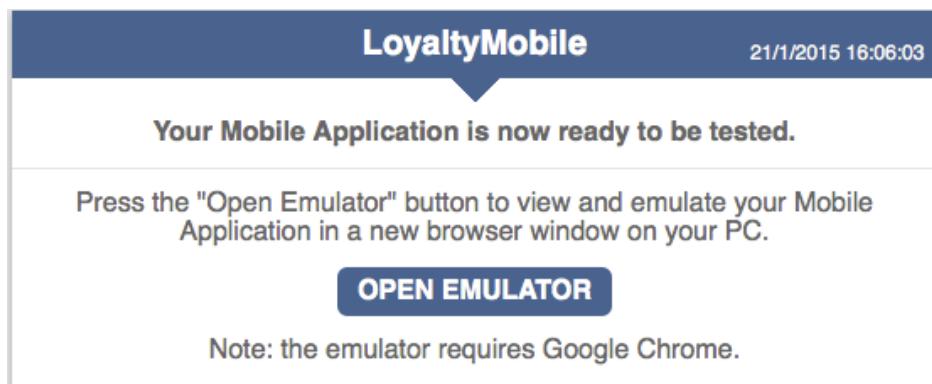
Atlas

LOYALTY REWARDS CATALOG PROFILE

## RELEASE NOTES

### Mobile App Emulation on a PC

WebRatio gives you the chance to easily emulate a mobile application directly on your computer to test the feature just modeled in WebRatio Mobile Platform. Using the Google Chrome browser, it's possible to navigate the mobile application through the Emulator embedded in the tool. Just click on the "Open Emulator" link provided in the opened Dashboard.





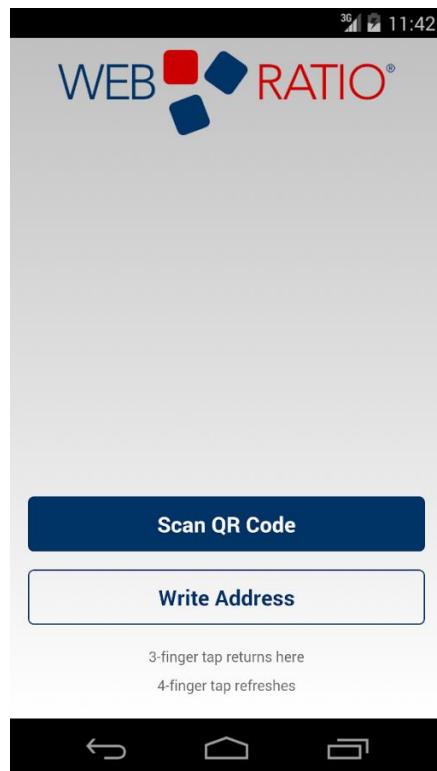
### Mobile App Emulation on Device

WebRatio lets you emulate a mobile application modeled with WebRatio Mobile Platform directly on your devices, without having to install the application. Just download the **WebRatio Mobile Developer App** from [Google Play Store](#) or [Apple App Store](#), and scan the QR Code provided in the dashboard. In seconds, the WebRatio Mobile Developer App connects to your computer and you can navigate the mobile application on your device.

Start the WebRatio Mobile Developer app on your device and scan the QR code or connect to **192.168.95.13:53198** to view and emulate your Mobile Application using your mobile device



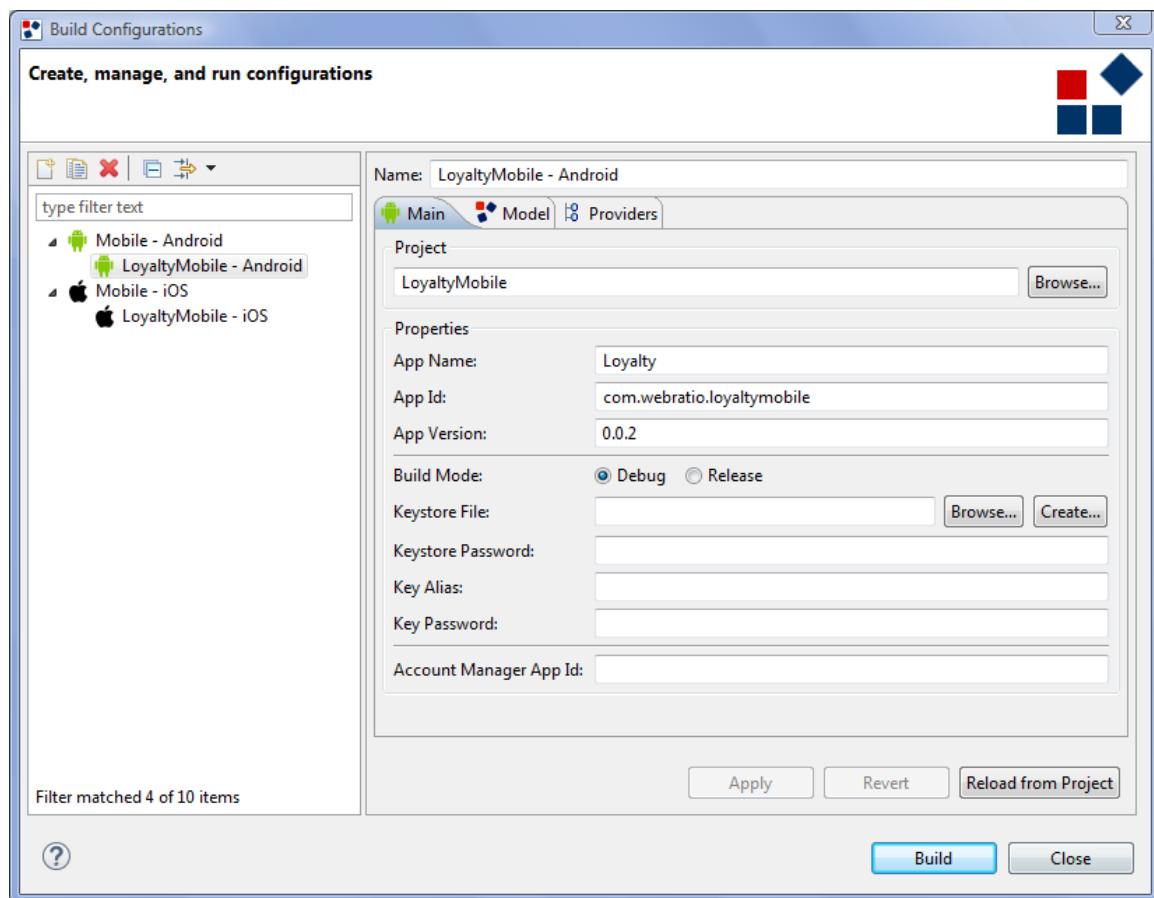
Note: Download and install WebRatio Mobile Developer free app from [Google Play](#) or [App Store](#).



## RELEASE NOTES

### Mobile App Build and Release

development cycle and lets you create a build of your application in minutes. It's possible to create a build for the Android or iOS platforms using our cloud services; you just need to configure a couple of properties. Learn how to configure a build and publish it on the Google Play Store or Apple App Store by reading the related articles on [learn.webratio.com](http://learn.webratio.com).



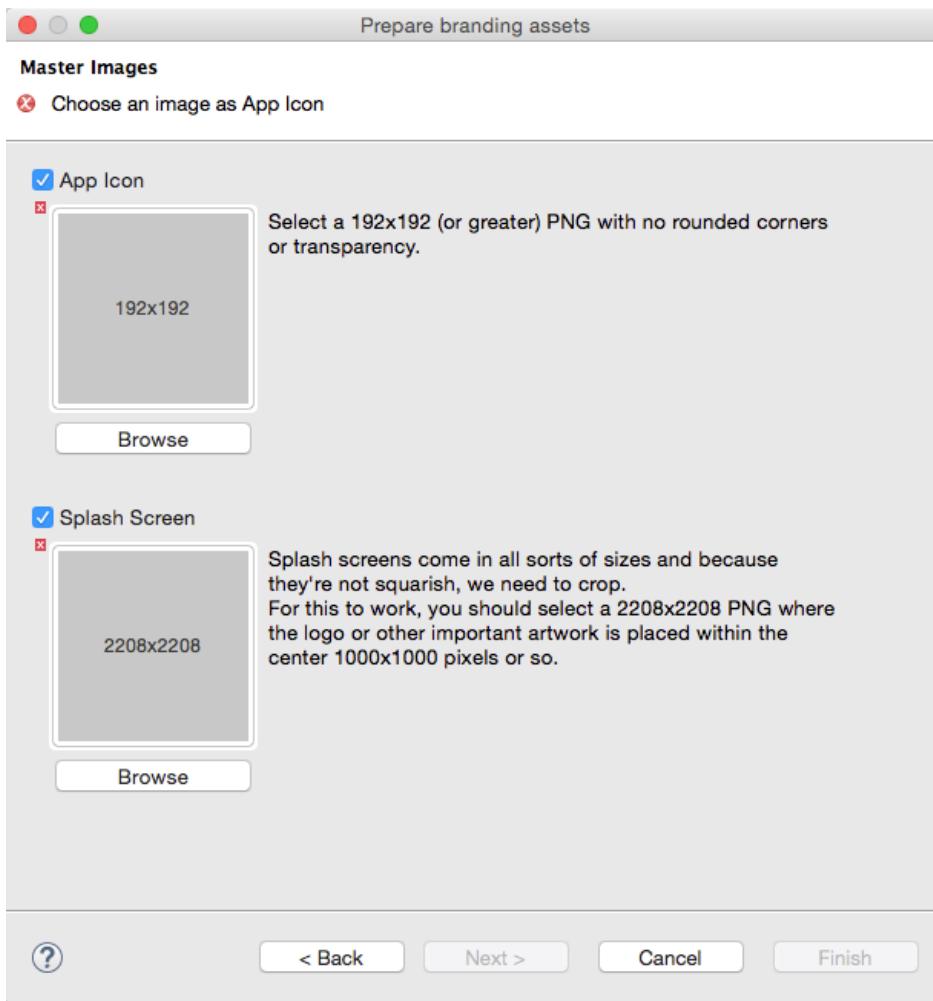
[How to Build and Publish an Application on Google Play Store](#)  
[How to Build and Publish an Application on Apple App Store](#)



### Customize your App branding assets

In order to publish a Mobile Application you have to prepare a set of assets, called branding assets, that belong to the \*.ipa or \*.apk package.

WebRatio Mobile Platform helps you define the sets of icons and splash screens through the Prepare Branding Assets tool. You only have to provide one icon file for the Icons and one for the splash screens; the tool automatically resizes the images to fit all of the required sizes and resolutions. The tool then produces, as output, two folders containing the generated icons and splash screens.



### Back End Server Modeling

WebRatio Mobile Platform lets you model the back-end server that stores all the information shown and managed by a mobile application. The back-end server can be modeled in a dedicated project named “Data Service Project”.

## RELEASE NOTES

This project uses UML notation to define the data managed by the application. Then with a set of configuration steps, you can easily publish a set of RESTful services used by the mobile application to exchange information with the back-end server. Learn about the main features available for your back-end server in the next sections.

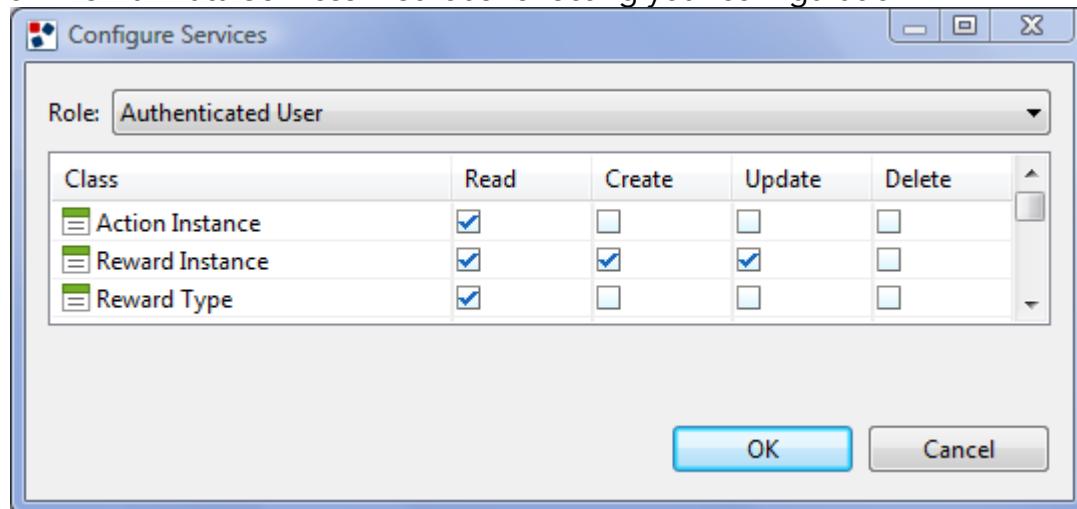
The screenshot shows the REST Web Services interface. On the left, there's a sidebar with navigation links for Data Services, File Services, and User Services. The main area is titled '/Data Services/data' and shows a sub-section '/ActionInstance'. A 'Request' section contains a GET method and a URL template: GET https://localhost/LoyaltyDataServices/data/ActionInstance/{objectId}. Below this is a table with columns 'Input Parameter Name', 'Type', and 'Notes'. The table rows are:

Input Parameter Name	Type	Notes
Authorization	Header	The authorization token generated by the authentication service [mandatory].
X-Props	Header	The special request header allowing to specify the response objects' properties [optional]. Allowed values: _OBJECT_ID.
delta	Query String	The timestamp parameter used to filter-out the class objects by created or updated time [optional].
objectId	URL Parameter	The identifier of the object to handle.

At the bottom, there's a 'Response: Details response' section and a table with columns 'Output Parameter Name', 'Type', and 'Notes'.

### Data Services

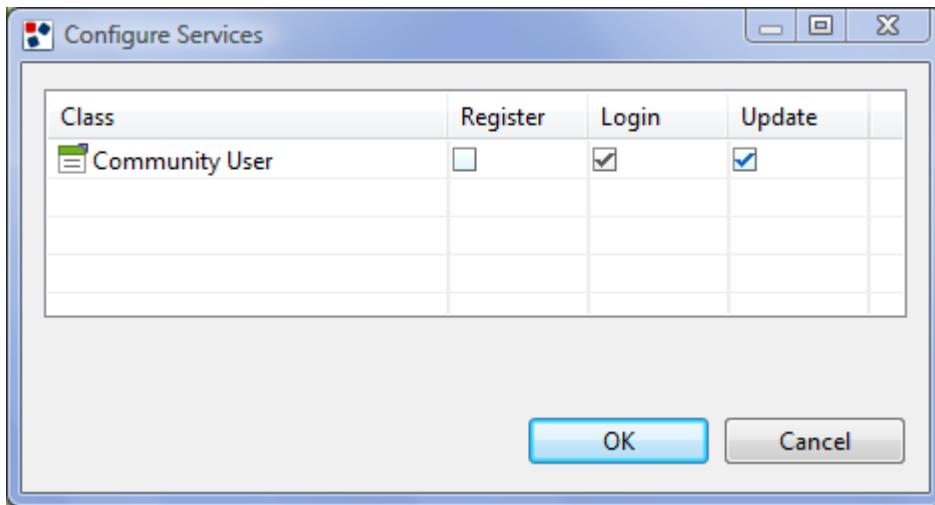
You can publish a Class of the back-end domain model as a RESTful resource, in minutes. You just have to configure a simple dialog in which you decide which operations are available for a specific Class: read, create, update or delete. You can also decide for which user role these operations are available and which are the exposed attributes for that Class. WebRatio Mobile Platform creates a set of RESTful Data Services methods reflecting your configuration.





### User Services

In order to be able to use the Data Services presented in the above section, the client user must be authorized. For this reason WebRatio Mobile Platform lets you configure a set of User Services that can allow a user to register, login and update his profile. The login is mandatory if the user needs to invoke a Data Service; all the other methods are optional.



### Data Profiling

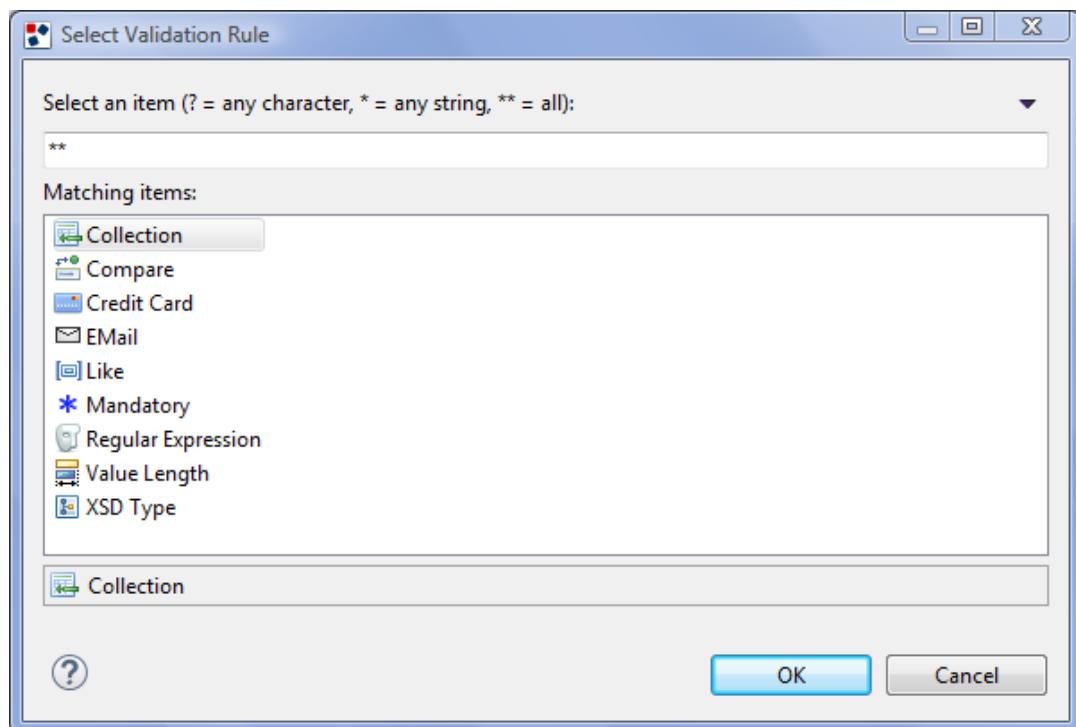
You can configure the Data Service of your back-end server to work only when a user in a specific role tries to use them. For this reason it's possible to model, on the Data Service project, a set of user roles. Roles can also be used to restrict the amount of information visible to a user, thanks to the Restriction mechanism. Restrictions are conditions that can be modeled over an exposed class, role or method in order to state which objects are visible to the user for that method.

## RELEASE NOTES

The screenshot shows the WebRatio Mobile Platform's Data Services configuration interface. The left pane displays a hierarchical tree structure under 'Data Services'. The 'Action Instance' node is expanded, showing 'Authenticated User' and 'Read' under it. Below 'Read' is a 'Restriction Expression' node, which has a child node named 'my actions' with a checked checkbox. The right pane contains a 'Properties' tab and an 'Overview' tab. The 'Properties' tab is active, showing a table for 'my actions [rrcond2h]'. The table has four rows: 'Id' (rrcond2h), 'Name' (my actions), 'Association Role' (User HeadQuarterToAction), and 'Predicate' (In). The 'Association Role' row includes a dropdown menu icon.

### Validation

Data Services, by default, do not make validation checks on the data sent by the mobile application. Nevertheless, you can add your own set of validation rules directly on the exposed Class. You can choose between different types of validation rules.



### WADL

In addition to the REST Summary page showing the list of all available methods with a sample request and response, WebRatio Mobile Platform also generates



# FEATURES

for all the published services the WADL (Web Application Description Language). The official website <http://www.w3.org/Submission/wadl/> describes the WADL as follows:

"An increasing number of Web-based enterprises (Google, Yahoo, Amazon, Flickr to name but a few) are developing HTTP-based applications that provide programmatic access to their internal data. Typically these applications are described using textual documentation that is sometimes supplemented with more formal specifications such as XML schema for XML-based data formats. WADL is designed to provide a machine process-able description of such HTTP-based Web applications."

The URL at which you can find the generated WADL definition is composed in this way:

<http://<host>:<port>/<application-name>/wadl>

You can see in the following image an example of the generated WADL.

This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
<!-- RedeeemUserReward [id:slu8q] -->
<xsd:schema xmlns:ns1="urn:slu15q" targetNamespace="urn:slu8q">
  <xsd:import namespace="urn:slp15q" schemaLocation="http://localhost/LoyaltyDataServices/xsd.do?res=slp15q"/>
  <xsd:element name="JSON" type="ns1:JSON"/>
</xsd:schema>
<!-- RedeeemUserRewardResponse [id:rsu7q] -->
<xsd:schema xmlns:ns1="urn:rsp11q" targetNamespace="urn:rsu7q">
  <xsd:import namespace="urn:rsp11q" schemaLocation="http://localhost/LoyaltyDataServices/xsd.do?res=rsp11q"/>
  <xsd:element name="userAvailablePoints" type="ns1:userAvailablePoints"/>
</xsd:schema>
<!-- Error Response -->
<xsd:schema targetNamespace="urn:error">
  <xsd:element name="Error">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element name="Cause" type="xsd:string"/>
        <xsd:element name="Detail" type="xsd:anyType"/>
      </xsd:sequence>
    </xsd:complexType>
  </xsd:element>
</xsd:schema>
<!-- Data Services -->
<xsd:schema xmlns:ns1="urn:ent14xOids" xmlns:ns18="urn:ent14pDetails" xmlns:ns19="urn:ent14pList" xmlns:ns16="urn:ent12pOids"
  xmlns:ns15="urn:ent12pDetails" xmlns:ns17="urn:ent12pList" xmlns:ns110="urn:ent14pOids" xmlns:ns17="urn:ent14p" xmlns:ns12="urn:ent14xList"
  xmlns:ns11="urn:ent14xDetails" targetNamespace="urn:dataservices">
  <xsd:import namespace="urn:ent14xOids" schemaLocation="http://localhost/LoyaltyDataServices/xsd.do?res=ent14xOids"/>
  <xsd:import namespace="urn:ent14pDetails" schemaLocation="http://localhost/LoyaltyDataServices/xsd.do?res=ent14pDetails"/>
  <xsd:import namespace="urn:ent14pList" schemaLocation="http://localhost/LoyaltyDataServices/xsd.do?res=ent14pList"/>
  <xsd:import namespace="urn:ent12pOids" schemaLocation="http://localhost/LoyaltyDataServices/xsd.do?res=ent12pOids"/>
  <xsd:import namespace="urn:ent12pDetails" schemaLocation="http://localhost/LoyaltyDataServices/xsd.do?res=ent12pDetails"/>
  <xsd:import namespace="urn:ent12pList" schemaLocation="http://localhost/LoyaltyDataServices/xsd.do?res=ent12pList"/>
  <xsd:import namespace="urn:ent14pOids" schemaLocation="http://localhost/LoyaltyDataServices/xsd.do?res=ent14pOids"/>
  <xsd:import namespace="urn:ent14p" schemaLocation="http://localhost/LoyaltyDataServices/xsd.do?res=ent14p"/>
  <xsd:import namespace="urn:ent14xList" schemaLocation="http://localhost/LoyaltyDataServices/xsd.do?res=ent14xList"/>
  <xsd:import namespace="urn:ent14xDetails" schemaLocation="http://localhost/LoyaltyDataServices/xsd.do?res=ent14xDetails"/>
  <xsd:element name="ActionInstanceDetails" type="ns1:ActionInstanceDetails"/>
</xsd:schema>
```

### Mobile App Smart Synchronization

WebRatio introduced a smart synchronization algorithm that allows the mobile application to exchange information with the back-end server optimized in the best way possible. Data are automatically synchronized using the configuration options you can configure in the “Mobile Project”. No code is needed.



## FIXED IN 8.0.6

### FIXED IN 8.0.6

- Fixed the runtime behavior for Mobile Application when emptying a date field.
- Date fields now show the datepicker on Android 4.2 devices.
- In the App View of Mobile Project it is now possible to add a Screen or a ScreenSet by using the contextual menu in the work area.
- Fixed an issue that now prevents in a Mobile Project to model more than one back event from a Screen to another one.
- Fixed the behavior of logout service for Mobile Applications running on Android devices. The "Access denied: please login again" message is no longer displayed after restarting the Mobile App.
- In a Mobile Project it's now possible to model selection fields using any data type.
- The preloaded field values of a Mobile Application Form are now preserved after the periodical background synchronization completes.
- Fields of a Mobile Application Form are no longer reset after the screen refresh.
- Selection Fields having the Split Output property enabled now work properly in the Mobile Application when submitting, even if not filled.
- A Generation Error is now properly returned when generating a Mobile Project having an Attribute of a Class mapped to a non-existing Server Attribute in the associated DataService Project.
- Solved an issue that may have caused the startup synchronization to be slow. The performance of the startup synchronization has thus been improved.

### FIXED IN 8.0.5

- Validation rules on BLOB are now properly working at runtime. Changed the code for writing BLOB fields in the default templates from `<div wr-blob="view.form.[%= field["id"] %]>` to `<div ng-model="view.form.[%= field["id"] %]" wr-form-property wr-blob>`. Custom templates also need to be updated.
- The back-end database connection is now released in case of failed authentication of the login. Added the `log4j.logger.com.mchange.v2=TRACE`, `RTXLogFile` log configuration to check the connection pool usage at runtime.
- It's now possible to use Google Maps. Added "geo" and "google.navigation" URL protocols to those considered "safe" by the Mobile App Runtime.
- Date and Time fields belonging to Form Component in a Mobile Project can now be preloaded with string values.
- The "Search Reference" command available in the contextual menu of a Class is now properly working.
- Items belonging to DataService Projects shared in CVS Repositories are now properly decorated when shown in the Synchronize perspective.
- The WebRatio Compare Editor available in the Team Synchronizing perspective now opens up properly when selecting a conflicting screen of the Mobile Project.
- Changed the layout for dialogs displayed by the Mobile Application in case of errors. Now the dialog contains an OK button that closes it. These dialogs are shown when, in a Mobile Project, you bind something with the Notification Message of an Error Port Definition.
- Fixed an issue that caused the mobile application to hang when an explicit "Error" dialog is displayed and not yet closed by the user.
- In a Mobile Project, double-clicking on a Screen now opens its Layout tab.
- The back-end "Update" services now always include the file id in the response when a new file is uploaded.
- The "Update" command available in the contextual menu on items shown in the Compare Editor for Screen of Mobile Projects now correctly imports the change in the local model.

## FIXED IN 8.0.5



- DataService Projects are now properly shown in the WebRatio Explorer View when the "Show Working Set" toggle is enabled.
- The back-end runtime has been improved in order to avoid the wrong update of information belonging to database views, which cannot be changed.
- The generated Mobile Application can be now properly emulated on Linux environments.
- In the WebRatio Explorer View, the items referring to the Mobile or DataService Project model element are now properly decorated when the "Show Model Folder" toggle is enabled.
- Fixed a problem preventing the WebRatio Platform from startup on Linux environments.
- Fixed the behavior for the "Layout.xml" file editing in Mobile Style Projects. There's no more need to reload the file after saving the file.
- The Calendar Component available for the Mobile Project now also works using string values as input for the current date, year and month.
- Fixed the issue regarding the behavior at runtime of View Components in Mobile Projects having the "App User" class as Data Binding property.
- Double-clicking on the "Missing Home Element" Generation Error in Mobile Project now opens the Project tab.
- The selection of an element in the Outline View of a Mobile Project now always highlights the corresponding model element in the work area.
- The Top Bar Location shown in the Layout View of a Screen in a Mobile Project now opens up properly when selected.

### FIXED IN 8.0.4

- In WebRatio Mobile Platform Community Edition you can now see the correct license expiration date in the "License Information" dialog. Go to the "Help" menu and choose the "License Information" option.
- Fixed the behavior for WebRatio Mobile Platform startup in case of an expired license. A warning dialog is now shown to inform the user about the expired license.
- The back-end runtime has been improved in order to update the information in the database by accepting, for the delta parameter timestamp values, milliseconds and time zone (e.g. "20150126T14:03:46.000" ).
- Fixed the behavior for List Component in Mobile Projects containing Conditional Expressions having the "empty" value as "Default Policy" property and having for each condition the "True" value for the "Required" property.
- Fixed the generation process behavior regarding the "Ignore Case" property of an Attribute Condition added on a List Component in Mobile Projects. This property is now ignored when not supported by the associated Predicate (i.e., "Is Null", "Greater Than", ...).
- Fixed the rendering for Selection Fields belonging to a Form Component in Mobile Projects. If the Selection Field contains a Slot having only the "Label" property activated, it is now properly rendered at runtime.
- Improved the logged information for non-checkable List Components placed in Screens of Mobile Projects. If the List Component has the "Checkable" property disabled, an empty array is logged in the emulator console about the corresponding "checkedRows" for the List Service.
- A proper warning dialog is now displayed when the user tries to download any item from WebRatio Add-Ons using a WebRatio Mobile Platform edition with an inactivated license.
- Conditional Expressions having the "Fill" value as "Default Policy" property for the List Component now work properly in Mobile Applications.
- Fixed the runtime behavior regarding Create Operations in Mobile Projects marked as bulk when receiving as input arrays and simple values (or 1-element arrays) at the same time. Now in a Class, many instances are created as the length of the array with the simple value associated with each element of the array.



- The validation rules on fields of a mobile application form are now performed only when the "Enable Validation" property is enabled on the On Select Event placed on the correspondent Form Component in the Mobile Project.
- Attribute Conditions added on the View Components (such as List Component, Details Component) in Mobile Projects now work properly on Date, Time and Timestamp attributes.
- The Attribute Conditional Expression Parts of List Component in Mobile Project now support a series of constant values in the Value property. The constant values must be separated by single pipe (|) characters.
- Fixed the runtime behavior for Fields belonging to the Form Component in Mobile Projects having the "url" value for the "Type" property. Now the entered value for url fields is properly saved even if the url doesn't begin with the "http://" prefix.
- Fixed the generation of a Mobile Project containing a View Component (i.e., List, Detail, ...) having a Conditional Expression with no conditions defined.
- Fixed the runtime behavior for Detail Components in Mobile Projects that do not have the "Display Attributes" property set. In this case, an empty Detail Component is now displayed.
- A warning is now reported if an element in the Mobile Project is protected and there are roles defined in the Mobile Project when you run the "Find Model Problems" command. It's mandatory to select at least one role for that element.
- Fixed the behavior for copying and pasting the "Login" Action Definitions in Mobile Projects. Now if you copy the "Login" Action Definition from a Mobile Project and paste it into another one, the "Login Definition" flag property is preserved.
- There is now a dedicated dialog where you can see the default errors and warning messages that can be reported for the WebRatio Mobile Platform version. To see this dialog, go to the "Window" menu -> "Preferences" and in the opening dialog expand the "WebRatio" node and the "Error/Warnings" node. At the end, select the "Mobile" option.
- Fixed the behavior for cutting and pasting Screens in Mobile Projects. Now if you cut the Home Screen from a ScreenSet and paste it into another one, the "Home" flag property is preserved.

## RELEASE NOTES

- In Mobile Project, it's now possible to bind arrays of a constant (i.e., element separated by pipe) as input to View Component Conditions such as List or Details Component.



## SYSTEM REQUIREMENTS

### SYSTEM REQUIREMENTS

#### WebRatio Development Platform

##### Operating System

- Microsoft Windows Vista or higher, 64 bit
- Linux, 64 bit
- Mac OSX 10.7 (Lion) or higher, 64 bit

Installing WebRatio Development Platform also requires:

- Disk Space: 600 MB
- RAM: 4 GB minimum, suggested is 8 GB

##### Java

When running WebRatio Development Platform on a computer you will need the Java Runtime Environment (JRE) 1.7 or higher.

You can download JDKs here:

<http://www.oracle.com/technetwork/java/javase/downloads/index.html>

#### WebRatio Generated Server Applications

##### Application Server

When running WebRatio Generated Server Applications on a server you will need a Java Application Server compatible with Servlet 3.0 and JSP 2.2.

##### Java

When running WebRatio Generated Server Applications on a server you will need the Java Runtime Environment (JRE) 1.6 or higher.

You can download JDKs here:

<http://www.oracle.com/technetwork/java/javase/downloads/index.html>

#### WebRatio Generated Mobile Applications

The Mobile Apps generated with WebRatio Mobile Platform are compatible with:

- Android 4.0.3 or higher
- iOS 7 or higher

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