Debugging and optimization your RhoMobile Application

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• Live Update – New ways to Debug and troubleshoot RhoMobile Apps
  • Introduction
  • Enabling Live update
  • Live Update Modes
  • What all can be changed
  • RhoStudio features
  • Advantages
Live Updates - Introduction

- Debugging with RhoSimulator
Live Update - Introduction

• Live Update is a new feature in RhoMobile Suite 5.1 that instantly displays changes to many parts of a RhoMobile app on-device without the need to manually recompile and redeploy.

• This enables on-the-fly programming and debugging on multiple mobile devices/Platforms at the same time. It supports Android, iOS, the Apple iOS simulator, and Windows Mobile/CE in any combination.

• Live Updates supports on MAC and Windows(Beta) hosts
Live Update - Enabling

- Establish Single Wi-Fi Subnet
- Modify the build.yml
  - build type to “debug”
  - add “development” extention
- Build, Deploy and Run the App
- Discover Devices, Begin Live Update Service
Live Update - Discovery

- Discover the available devices to deploy the updated application
- rake "dev:network:discovery"

```
Raghavendras-MacBook-Pro-3:LiveUpdate_Test rhelements$ rake dev:network:discovery
$TIME$- message [ First timestamp ] time is { 2015-09-18T02:00:30Z } milliseconds
start (0) Network mask 192.168.0.* will be used
Discovering...done
{"uri":"192.168.150.42:37579", "name":"Raghavendras-MacBook-Pro-3.local", "platform":"APPLE", "application":"LiveUpdate_Test", "enabled":true}
{"uri":"192.168.0.103:37579", "name":"Raghavendras-iPhone", "platform":"APPLE", "application":"LiveUpdate_Test", "enabled":true}
Storing subscribers...done
Raghavendras-MacBook-Pro-3:LiveUpdate_Test rhelements$
```
Live Update – What can be changed

- Other files in /app and /public folders
- HTML
- CSS
- JavaScript
- Ruby
- Embedded Ruby
- Images
Live Update – Different Modes

- **Partial Updates**
  - packages the portions of a project that have changed and notifies devices that a download is available. This on-command feature works only from the command line and must be initialized before each debugging session.

- **Full Update**
  - packages all files in a project regardless of whether they’ve been changed and notifies devices. This on-command feature works only from the command line and does not require initialization.

- **Auto Update**
  - monitors all files in a project and automatically packages the app and notifies devices every time changes are saved. This mode is invoked by pressing the ‘Enable Live Update’ button in the Live Update Settings page in RhoStudio or using the CLI command below. It can be monitored and stopped from the Progress tab or using the CLI command below.

- **Build and Notify**
  - mode is intended for use when integrating Live Update with an external build system. This CLI-only feature is invoked with the `rake dev:update:build_and_notify` command.
Live Update – Partial Update

- Partial update can be done from Command prompt only
- Steps:
  - Initialize host and device applications
  - Update the changes required in the application
  - run rake “dev:update:partial”
Live Update – Full Update

- Full update can be done from Command prompt whenever multiple changes done in the application
- While doing partial update application also may ask for Full update if application in device is very old
- Steps:
  - Update multiple changes in the application
  - run rake “dev:update:full”
Live Update – Auto Update

• To update the changes instantly, use Auto update feature
• run "rake dev:update:auto" to start the auto update server
• Update any changes in “/app or /public” folder and save the file
Live Update – HTML & CSS

- HTML
  - Elements: link, input, buttons, form, layout
  - Attributes: Font Style, color, size
  - Media: Images, Audio, Video
- CSS
  - inline CSS
  - external CSS
  - Styles: background color, font styles, size, color, text-size
Live Update – JavaScript & Meta Tags

- inline JavaScript

```html
<script type="text/javascript">
function getInput() {
    alert("getInput Function Called!!!");
}
</script>
```

- External JavaScript

```html
<script type="text/javascript" charset="utf-8" src="/public/jquery/jquery-1.9.1.min.js"></script>
<script type="text/javascript" charset="utf-8" src="/public/jquery/jquery.json-2.3.min.js"></script>
<script type="text/javascript" src="/public/api/rhoapi-modules.js"></script>
```

- Meta Tags

```html
<META HTTP-Equiv="quitbutton" Content="visibility:visible;left:10;top:30">
<META HTTP-Equiv="BackButton" content="visibility:visible;left:100;top:30">
```
Live Update – Build and Notify

- Write your own watchers to identify custom changes of your own applications using Grunt watchers etc
- Update watcher for Addition/Update/Deletion of files for your applications
- Run the watchers and start updating the applications

```
Raghavendras-MacBook-Pro-3:LiveUpdate_Test rhoelements$ grunt
Running "watch" task
Waiting...
app/autoUpdate.html was indeed changed
>> File "app/autoUpdate.html" changed.

Running "watch" task
Completed in 0.008s at Fri Sep 18 2015 16:29:19 GMT+0530 (IST) - Waiting...
```
Live Update - RhoStudio - Discovery

• Available devices can be discovered from “Live Update setting”
Live Update - RhoStudio - Enable/Disable devices

• Developer can Enable Auto update feature using “Enable Live update” button in “Live update settings”
• Developer can “Enable/Disable” the devices from dev-config.ml
• Developer can update device ip address from dev-config.yml
THANK YOU
On device debugging with Chrome

1. Open a browser window and enter ‘chrome://inspect’ in the address bar. You should see a screen similar the one above.

2. To begin debugging, click an inspect link