Mihini 0.9 Release Review

Planned Review Date: 14-Aug-2013

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mihini

The Mihini project delivers an embedded runtime running on top of Linux, that exposes a high-level Lua API for building Machine-to-Machine applications.

Features

- Features available in this first release at Eclipse are described in the initial project proposal http://www.eclipse.org/proposals/technology.mihini/

- Other work items include:

  - New **GPIO** API http://download.eclipse.org/mihini/api/lua/gpio.html

  - **REST** API for easing remote control of Mihini, from eg Koneki tooling http://wiki.eclipse.org/Mihini/REST_API

  - Bug fixes

- Another objective of this release is to organize the project under the Eclipse umbrella on the required quality level (IP, documentation, ...)

Non-Code Aspects

- http://wiki.eclipse.org/Mihini

    - Mihini architecture, specification and API

    - User & porting guides

    - "How to contribute" section with development doc

    - Tutorials: setup M3DA secured communications, "greenhouse"

APIs

- During this release, an API for manipulating GPIO, and a REST API for remote control of Mihini were added

- This release being a 0.x incubator release, there is no guarantee as to the freeze of the current APIs

- Next releases should address Lua naming conventions and code namespace policy

  - https://bugs.eclipse.org/bugs/show_bug.cgi?id=406242

  - https://bugs.eclipse.org/bugs/show_bug.cgi?id=413588

Architectural Issues

- No outstanding architectural issue

Security Issues

- No outstanding security issue

- Note: Security module was rewritten during this release to use a different set of 3rd party libraries than the one included in the Initial Contribution

Tool Usability

- With the addition of the REST API, Koneki Lua Development Tools upcoming 1.1 release supports the remote management of Mihini apps in addition to the remote development/debugging features that were delivered with 1.0 in Kepler.

End-of-Life

- N/A.

Bugzilla

- 58 issues FIXED during this release
- 49 issues remaining OPENED

		UNCONFIRMED	NEW	ASSIGNED	REOPENED	RESOLVED	VERIFIED	CLOSED	Total
Severity	critical	.	.	.	.	4	.	.	4
	major	1	6	.	1	10	.	1	19
	normal	12	17	2	.	32	1	5	69
	minor	.	1	.	.	.	.	.	1
	trivial	.	.	1	.	.	.	.	1
	enhancement	1	7	1	.	5	.	.	14
	Total	14	31	4	1	51	1	6	108

UI Usability

- In order to make it easy to interact with the Mihini agent, a Telnet **shell** is exposed to developers

  - Provides content assist for easily discovering its capabilities

  - Allows to configure the agent, install/start/stop apps, experiment with a Lua "scratchpad", ...

Community health

- ## Users

  - Good feedback on the mailing list from people using Mihini on different H/W platforms (Raspberry Pi, BeagleBone, …) and starting to use it for M2M apps (SMS, GPIO, …)

  - Engage the community via Twitter (@mihini)

Community health (cont'd)

- Contributions
  - First community contributed tutorials showing up!
    - http://www.electronicsfaq.com/2013/07/helloworld-in-lua-on-raspberry-pi.html
    - http://www.electronicsfaq.com/2013/08/led-blinky-in-lua-on-raspberry-pi.html
  - Several wiki contributions on the tutorial describing the porting on 3rd party hardware (e.g. Raspberry Pi)
    - See http://wiki.eclipse.org/Mihini/Run_Mihini_on_an_Open_Hardware_platform

Community health (cont'd)

- Adopters

  - Mihini is used in Sierra Wireless' Aleos Application Framework commercial product

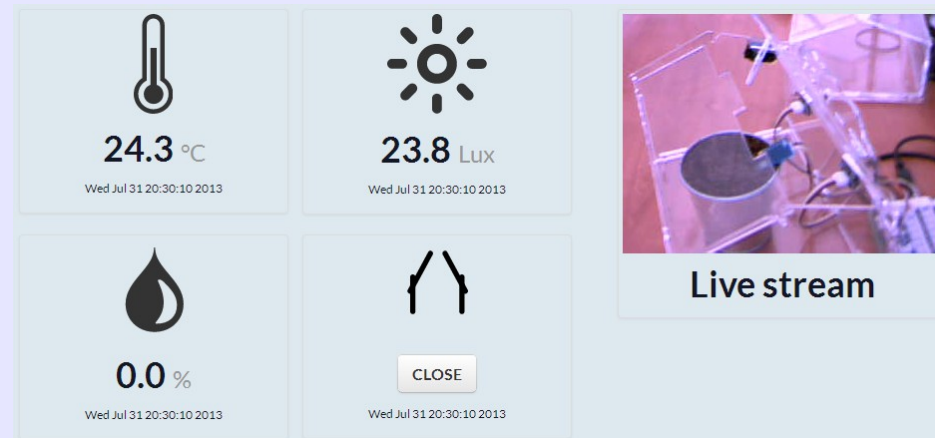 - Interest from Wind River, IBM, Bosch India

Community health (cont'd)

- Mihini was presented at many conferences:

  - FOSDEM feb-2013

  - JFokus feb-2013

    - http://fr.slideshare.net/kartben/open-source-building-blocks-for-the-internet-of-things-jfokus-2013

  - JAX Conference apr-2013

    - http://fr.slideshare.net/kartben/jax2013-keynote-when-opensource-enables-the-internet-of-things
    - http://fr.slideshare.net/kartben/using-eclipse-and-lua-for-the-internet-of-things-jax2013

  - Lua London User Group apr-2013

    - http://skillsmatter.com/podcast/ajax-ria/using-lua-for-the-internet-of-things-with-eclipse-koneki-and-mihini

  - EclipseCon 2013 and EclipseCon France 2013

    - http://www.eclipsecon.org/2013/sessions/using-koneki-and-mihini-developing-m2m-application-lua
    - http://www.eclipsecon.org/2013/sessions/develop-complete-m2m-application-koneki-and-mihini
    - http://eclipsecon.org/france2013/sessions/develop-complete-m2m-application-koneki-and-mihini

  - Eclipse DemoCamps 2013 (Frankfurt, Walldorf, Zurich)

Community health (cont'd)

- ## Several articles in blogs and press

  - http://electronicdesign.com/communications/m2m-iwg-enables-m2m-development-open-source-technologies

  - http://jaxenter.com/new-m2m-portable-project-arrives-at-eclipse-welcome-mihini-43752.html

  - http://jaxenter.com/the-eclipse-m2m-universe-47799.html

  - http://blog.benjamin-cabe.com/fr/2012/08/16/introducing-mihini

  - http://www.infoq.com/fr/interviews/interview-benjamin-cabe-eclipsecon-france-2013

- ## Online demonstrator of Mihini for monitoring a real greenhouse!

  - http://m2m.eclipse.org/demo/

24.3 °C
Wed Jul 31 20:30:10 2013

23.8 Lux
Wed Jul 31 20:30:10 2013

Live stream

0.0 %
Wed Jul 31 20:30:10 2013

CLOSE
Wed Jul 31 20:30:10 2013

IP Log

- The Eclipse IP policies and procedures have been followed

- About files and license files are complete and correct

- The IP log for the 0.9 release has been submitted and is pending approval

  - http://www.eclipse.org/projects/ip_log.php?projectid=technology.mihini

Schedule

- Tentative project plan and schedule for 0.10 is on the wiki
    - http://wiki.eclipse.org/Mihini/Project_Plan/0.10

Thanks!