

Ideas on modular UI

Vojtech Szöcs

Software Engineer at Red Hat

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GWT applications in general, p1

- compiled GWT application is monolithic by design
 - process all source code and generate permutations
 - specific permutation loaded by selector script
 - code splitting (fragments) on Java method level
 - no inherent concept of logical application module
- application structure
 - component level – Model-View-Presenter, etc.
 - module level – ?

GWT applications in general, p2

- compiling monolithic GWT permutations [browser x locale]
 - need to parse and process all source code
 - source AST kept in memory per each permutation
 - huge resource consumption with multiple locales
 - known issue – GWT compiler runs out of temp. file handles
 - RFE – cut off locale vector, implement run-time i18n support
- debug performance proportional to compile performance
 - GWT 3.0 should bring incremental (faster) compile
 - see [this blog post](#) for ideas on future GWT

GWT applications in oVirt

- UI plugin infrastructure
 - designed to (only) extend standard UI
 - plugins cannot interfere with standard UI
- standard UI itself is still monolithic

Modular UI, p1

- introduce concept of UI module
 - modules communicate through common interface
 - modules can declare dependencies on other modules
 - each module is loaded only once
 - each module supports async loading at run-time
 - allow combining multiple modules for initial page load
- module implementation
 - ES5 + [AMD](#) – [RequireJS](#) etc.
 - ES6 + native module support – [Traceur](#) etc.
 - module bundles (JS, CSS, etc.) using [webpack](#)

Modular UI, p2

- anatomy of UI module
 - JavaScript code
 - web resources (HTML, CSS etc.)
- different logical types of modules
 - layout – define base page layout with API for extension
 - extension – extend UI via API defined by other modules
 - resource – provide 3rd party JS libs, common widgets etc.

Modular UI, p3

- impact on development
 - modules are built separately from each other
 - JavaScript is the lowest common denominator
 - modules can be written in JavaScript or anything that eventually becomes JavaScript (GWT etc.)
 - existing GWT code can be moved into different logical modules (virtualization, storage, networking, etc.)



Thanks!

vszocs@redhat.com

vszocs at #ovirt (irc.oftc.net)