JSR 339: JAX-RS 2.0 Update

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Agenda

• Overview
• Achievements
• Issues/Risks
• Planned Actions
JSR Information

• Expert Group formed in February, 2011
  • Lead by Oracle
    Marek Potociar, Santiago Pericas-Geertsen
  • 13 Group members
    Jan Algermissen, Florent Benoit (OW2), Sergey Beryozkin (Talend/CXF), Adam Bien, Bill Burke (RedHat), Clinton L Combs, Bill De Hora, Markus Karg, Sastry Mallady (eBay), Wendy Raschke (IBM), Julian Reschke, Guilherme Silveira, Dionysios Synodinos
Publications

• Early Draft 1: 10/2011 ✔
• Early Draft 2: 2/2012 ✔
• Early Draft 3: 6/2012 ✔
• Public Review: 9/2012 ✔
  • PR Ballot Completion: 11/2012 ✔
• Proposed Final Draft: late 3/2013
  • PFD Ballot Completion: 4/2013
Achievements from Plan

• Client API ✔
• Filters ✔
• Asynchronous Processing ✔
• Validation ✔
• Integration with JSR 330 (@Inject) ✗
• Improved Content Negotiation ✔
• Hypermedia ✔
• MVC Pattern ✗
Client API ✔

- HTTP client libraries too low level
- Leveraging providers and concepts from the JAX-RS 1.x API
- Proprietary APIs introduced by major JAX-RS 1.x implementations
Filters (and Interceptors) ✔

• Customize JAX-RS request/response processing
  • Use Cases: Logging, Compression, Security, Etc.
• Introduced for client and server APIs
• Replace existing proprietary support
  • Provided by most JAX-RS 1.x implementations
Asynchronous Processing ✔

• Server API support
  • Off-load I/O container threads (blocking or long-running operations)
  • Represent suspendable client connection
  • Leverage Servlet 3.x async support (if available)

• Client API support
  • Asynchronous request invocation API
Bean Validation ✔

- Integration with JSR 349
- Validation of JAX-RS resources with constraint annotations
- Support for resource method validation
  - Parameters and return values
Hypermedia ✔

- Support Link and LinkBuilder classes
  - RFC 5988: Web Linking
- Adding links to responses as headers
- Using links in JAXB beans
- Changes in Client API to follow hyperlinks
Achievements since PR

• Integration with BV restored✔
  • Only via CDI in PR
• Improved hypermedia support✔
  • Especially around relative links
• Improved configuration API✔
Outstanding for PFD

- Support for JSON API (JSR 353) types
- Improve exception hierarchy
- Support for HTTPS in Client API
  - API access to key stores, contexts, etc.
Risks/Issues

• JAX-RS Spec:
  • Dependency on BV schedule (mid March)
• JAX-RS RI (Jersey 2.0):
  • CDI integration via HK2 has problems
  • May need to re-use old Jersey 1.X code
Adopt a JSR

• *Mohamed Taman* from Morocco’s JUG is helping us test drive new features:
  • Client API requests in sync and async modes
  • Server-side asynchronous processing
  • API extensibility using new features
  • Hypermedia and Link class
Planned Actions

• Complete outstanding items:
  • Exception hierarchy
  • HTTPS in Client API
• Review all other open issues
• Evaluate implementation feedback for PFD