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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

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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

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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

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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

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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

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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

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