Swordfish 0.10 (Helios) Release Review

Planned Review Date: 06-11-2010

Communication Channel: eclipse.swordfish

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Introduction

- Swordfish provides an extensible runtime framework aimed at creating service-oriented applications
- Swordfish is internally based on Apache ServiceMix 4 as the core messaging engine
- Swordfish hooks into ServiceMix and adds functionality that is required for enterprise environments, such as service registry integration, remote configuration and monitoring
- Swordfish includes basic tool support and additional components such as a Service Registry and potentially a Process Engine

Features

- General interceptor framework that hooks into the underlying messaging engine (Apache ServiceMix NMR)
- APIs and exemplary plug-ins based on the general framework for specific areas that are significant for enterprise usage:
  - Dynamic Service Resolution: Resolve logical service endpoints into physically addressable endpoints by querying a service registry at runtime
  - Monitoring: Generate monitoring events that allow for detailed tracking of how messages are processed and that can be stored for later analysis or reporting.
  - Remote Configuration: Configure framework via a local Configuration Agent that can retrieve configurations from a remote server and uses the OSGi Configuration Admin service to provide them to the framework
- Basic tools supporting the most important use cases
- Service Registry to dynamically resolve logical service names into service endpoint addresses

New in 0.10

- Remote Deployment of Swordfish participants. This includes
  - on the runtime site a swordfish provisioning manager
  - on the tooling site remote deployer based on WTP server tools.
- A swordfish server based on Equinox including p2, Swordfish runtime and provisioning manager.

Features – not accomplished yet

- Some features that were originally planned for this release have not been accomplished for various reasons
  - Enhanced Policy Processing
  - Service Activity Monitoring
  - JMS Transport

Non-Code Aspects

- 45 min “Getting Started” video available
- Swordfish is now included in the SOA package
- Unit test coverage has improved since last release (from 50% to 60%)
- JUnit-based integration tests further extended
- Tool components are well documented (Eclipse Help, Cheat sheets)
- Added documentation how to setup a Swordfish runtime
- Javadoc for the framework APIs

APIs

- All APIs are still provisional and are expected to further evolve based on community feedback, stabilization is planned for 1.0 release
- Extensibility and customizability is one of the key aspects of Swordfish
  - General interceptor API (creation of custom interceptors, custom processing planners etc.)
  - Service Resolver API (integration of custom service registries, custom service description document types etc.)
  - Configuration API (integration of custom configuration backends)
  - Monitoring API (integration of custom event types, event sources and event receivers)
  - based on open standards (such as JBI)

Architectual Issues

- Swordfish makes extensive use of OSGi services in order to reduce coupling of internal components and allow for extensibility and customizability
- Plug-ins are registered using the OSGi Whiteboard pattern
  - Plug-in developers are free in their technology choice:
    OSGi DS, Spring DM, SAT, manual service registration
- All internal OSGi services are registered with a low service rank and can be replaced by custom implementations
- Swordfish core is based on Spring DM as the dependency injection framework
  - robust tracking of service registrations/de-registrations → fully dynamic behaviour, no re-starts required
  - components easily replaced by Mocks for testing purposes

Architectual Issues (cont'd)

- Swordfish tooling is usin internal API's from the following projects: PDE, WST, and P2. After Helios we will work together with the mentioned projects to remove the usage of the internal API's

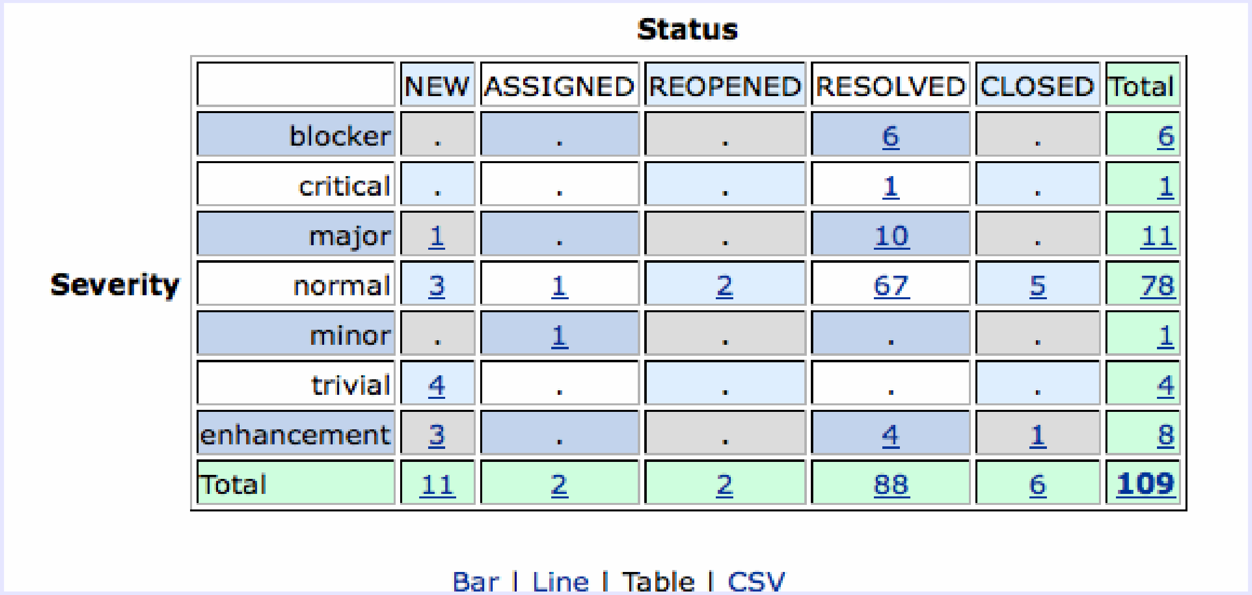
Tool Usability

- Swordfish provides basic tooling to support the most relevant service development use cases:
  - Implement service consumers and providers based on a WSDL document (WSDL-first approach)
  - Implement services based on a Java interface (Code-first approach)
  - Publish WSDL documents into the service registry
- We are working closely with various sub-projects and components of STP in order to make service creation and deployment into Swordfish even more smooth and seamless

End-of-Life

- No features from the previous release have been end-of-life'd in Release 0.10

Bugzilla



Status

Severity		NEW	ASSIGNED	REOPENED	RESOLVED	CLOSED	Total
	blocker	.	.	.	6	.	6
	critical	.	.	.	1	.	1
	major	1	.	.	10	.	11
	normal	3	1	2	67	5	78
	minor	.	1	.	.	.	1
	trivial	4	.	.	.	.	4
	enhancement	3	.	.	4	1	8
	Total	11	2	2	88	6	**109**

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Standards

- Parts of Swordfish's API make use of concepts from JBI (JSR 208) instead of re-inventing the wheel
- All standards relevant in the SOA space are supported through third-party components, e.g. WSDL, SOAP, WS-Security, WS-Addressing,...
- JAX-WS can be used to implement services and is specifically supported by the Swordfish tools

UI Usability

- The Swordfish tool components expose only a very limited UI which adheres to the Eclipse User Interface Guidelines. Most UI elements are actually reused from the Workbench.

Schedule

- 0.9.1 GA: planned for Galileo SR1, delivered in time
- 0.9.2 GA: planned for Galileo SR2, delivered in time
- 0.10 M3 - M7: planned for the corresponding Helios milestones, delivered in time
- 0.10 RC1: planned for 05/19/2010, delivered in time
- 0.10 RC2: planned for 05/26/2010
- 0.10 RC3: planned for 06/02/2010
- 0.10 RC4: planned for 06/09/2010
- 0.10 GA: planned for 06/16/2010

Communities

- Swordfish currently has 7 committers and 2 contributors
  - 6 committers from SOPERA, 1 from Progress Software (former IONA)
- Open and public development process
  - following the Scrum methodology
  - planning and progress tracking done in the open in a public group chat (currently on Skype)
  - Incorporating feedback from forum and mailing list
- Actively Evangelizing
  - Talks on Eclipse Summit Europe 2009, EclipseCon 2010 and various other conferences, e.g. Java User Group Stuttgart, Open Source Expo 09.
- Close interaction with the Apache Community
  - working with the ServiceMix 4 and especially the CXF project to resolve integration issues

IP Log

- All applicable IP policies and procedures as defined by the Eclipse Foundation have been followed.
- For all third-party libraries in use, the corresponding CQs have been approved.
- All source code was either 100% written by one of the committers or by a contributor who works for the same member organization as the committer.
- Swordfish's IP log can be found at http://www.eclipse.org/projects/ip_log.php?projectid=soa.swordfish
- A frozen copy of the reviewed-and-approved-by-Eclipse-legal IP log has been supplied as part of the Release Review documentation

Other

- Swordfish originally planned to have its graduation review before the Helios release and to deliver a 1.0 for Helios. Because only recently several projects started to use and extend Swordfish we postponed graduation to be able to solicit feedback from the projects regarding the API's.