



RFC 211 – Event Admin Update

Draft

8 Pages

Abstract

That RFC document covers some new Event Admin enhancements.

0 Document Information

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0.3 Feedback

This document can be downloaded from the OSGi Alliance design repository at <https://github.com/osgi/design>. The public can provide feedback about this document by opening a bug at <https://www.osgi.org/bugzilla/>.

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0.5 Terminology and Document Conventions

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "NOT RECOMMENDED", "MAY" and "OPTIONAL" in this document are to be interpreted as described in 10.1.

Source code is shown in this typeface.

0.6 Revision History

The last named individual in this history is currently responsible for this document.

Revision	Date	Comments
Initial	Mar 28 2014	Initial version to cover: Bug 2643 - [Event Admin] Service Event mapping should contain all service properties. Evgeni Grigorov, ProSyst Software GmbH, e.grigorov@prosyst.com

1 Introduction

Event Admin is a fundamental service for the OSGi eventing bus. It's widely integrated with the Compendium, Residential and Enterprise OSGi services. The service is allowed to deliver the event in two different ways. Synchronous, the event operation doesn't return to the caller before the delivery of the event is completed. Asynchronous, the event operation can return to the caller before the delivery of the event.

The current set of features is complete, but some of them are not fine-grained. That's why some updates are requested by that RFC document.

2 Application Domain

Publish-subscribe event communication is widely used from the fat enterprise servers to the tiny residential devices. In the OSGi world that event communication is provided by Event Admin service. As a base service, it's critical to keep it up to date and applicable to the different domains.

3 Problem Description

3.1 Bug 2643 - [Event Admin] Service Event mapping should contain all service properties

OSGi Compendium R5, 113.6.5 Service Event, defines those event properties:

- event – (ServiceEvent) The original Service Event object.
- service – (ServiceReference) The result of the getServiceReference method
- service.id – (Long) The service's ID.
- service.pid – (String or Collection<String>) The service's persistent identity. Only set if not null. If the PID is specified as a String[] then it must be coerced into a Collection<String>.
- service.objectClass – (String[]) The service's object class.

In fact, not all service properties are visible as event properties. That breaks one critical feature, the events cannot be filtered by Event Admin service and that asynchronous service notification is less useful.

4 Requirements

1. Event Admin **MUST** be able to filter the mapped OSGi service events based on their properties.

5 Technical Solution

5.1 Bug 2643 - [Event Admin] Service Event mapping should contain all service properties

The service event mapping:

- event – (ServiceEvent) The original Service Event object.
- service – (ServiceReference) The result of the getServiceReference method
- service.id – (Long) The service's ID.
- service.pid – (String or Collection<String>) The service's persistent identity. Only set if not null. If the PID is specified as a String[] then it must be coerced into a Collection<String>.
- service.objectClass – (String[]) The service's object class.
- other service properties – the rest service properties MUST be translated as event properties as they are. For example, service.ranking service property will be available as service.ranking in the event properties.

If the service properties duplicate the event properties. The event properties are handled with higher priority and MUST not be overridden by the service properties. That approach will keep the event properties consistent.

6 Data Transfer Objects

The current Event Admin doesn't have DTO support. That section can fix that missing feature.

7 Javadoc

The current document contains an update to the specification text and doesn't require Javadoc update.

8 Considered Alternatives

Currently, no alternatives are considered.

9 Security Considerations

No additional security considerations are required.

10 Document Support

10.1 References

- [1]. Bradner, S., Key words for use in RFCs to Indicate Requirement Levels, RFC2119, March 1997.
 - [2]. Software Requirements & Specifications. Michael Jackson. ISBN 0-201-87712-0
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10.2 Author's Address

Name	Evgeni Grigorov
Company	ProSyst Software GmbH
Address	Aachener Str. 222, 50931 Cologne, Germany
Voice	+49 221 6604-0
e-mail	e.grigorov@prosyst.com

10.3 Acronyms and Abbreviations

There are no new acronyms and abbreviations.

10.4 End of Document