RFC 0129 Initial Provisioning Update

Final

6 Pages

Abstract

Initiali Provisioning is gaining in popularity but has at least one problem: the extra field. This RFC describes a remedies to problems with IP.

0 Document Information

0.1 Table of Contents

0.2 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 7.1.

```
Source code is shown in this typeface.
```

0.3 Revision History

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

Revision	Date	Comments
Initial	NOV 24 2007	Peter Kriens, aQute, Initial draft
2nd draft	4 Feb 2008	Updated based upon CPEG discussions 2008-01-31. BJ Hargrave, IBM
Final	2 December 2008	No changes. Final for CPEG vote.

1 Introduction

This RFC investigates any issues with the Initial Provisioning specification and proposes remedies.

2 Application Domain

Initiali Provisioning specifies the process how an initially blank system Service Platform can be configured from a single URL. The process is described in the compendium in The OSGi Service Platform Specification.

For this RFC, the use of the extra field is the key issue. The extra field in the ZIP entry is used to indicate the type of the entry. A MIME type is used for this. The following types are supported:

- text — text/plain;charset=utf-8
- binary — application/octet-stream
- bundle — application/x-osgi-bundle
- bundle-url — text/x-osgi-bundle-url

3 Problem Description

The R4 IP specification requires that the MIME type of a Provisioning Dictionary is stored in the extra field of a Zip entry. Though the extra field is well supported in the Java util.jar package classes, it is not well supported in build tools. This makes the creating of the Provisioning Dictionary extra hard.

4 Requirements

- Provide an alternative to the IP use of the extra field that is supported by standard tools

5 Technical Solution

5.1 Manifest header

The list of entries to be processed can be specified by this new manifest header.

```
  InitialProvisioning-Entries ::= entry ( ',' entry )*

entry ::= path ( ';' parameter ) *
```

The entry is the path name of a resource in the JAR file. The following attributes is recognized:

- mime – Describes the mime type of the entry. This must be one of the four valid mime types of the ZIP entry.
- type – Is one of the 4 types: text, binary, bundle, or bundle-url

If neither the mime or type parameter entry is specified for an entry, then the type will be inferred from the extension of the entry.

5.2 Extension

The type of an entry can be inferred from its extension. The following extensions to type mappings are proposed:

Type	Extension	Description
text	.txt	The IP Dictionary must contain a String. The file must be encoded in UTF-8
binary	Not .txt, .url, .jar	Any file not recognized as one of the other three types is treated as binary
bundle	.jar	A jar file is treated as a bundle to be installed
bundle-url	.url	A text file, UTF-8 encoded, containing a URL to a bundle that will be installed

If the new manifest header is not specified and the extra field of the entry is not specified, then an entry whose extension matches one of these extensions will be processed as an IP entry.

5.3 Priority

An implementation of the Initial Provisioning must determine the mime type of an entry in the following priority order:

1. The extra field - This is necessary to prevent existing systems from failing because an extension does not match the intent.
2. The InitialProvisining-Entries manifest header
3. The extension of the entry.

5.4 Bundle MIME Type

The current mime type used in IP is application/x-osgi-bundle. Subsequent to the creation of the IP specification, OSGi registered an official mime type for bundles: application/vnd.osgi.bundle. The original application/x-osgi-bundle mime type may continue to be used as an alternative to the new application/vnd.osgi.bundle type. However, applications must continue to recognize the older type.

6 Security Considerations

There are no additional security considerations for these modifications.

7 Document Support

7.1 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

[3]. OSGi Bundle Mime Type, http://www.iana.org/assignments/media-types/application/vnd.osgi.bundle

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