

LUNI

Overview

LUNI - java.lang, java.util, java.net and java.io

A module in the [ClassLibrary](#).

Status

Check the [component_development_status](#) page for the status of other [ClassLibrary](#) modules.

JAPI Harmony/JDK5 Report - http://www.kaaffe.org/~stuart/japi/htmlout/h-jdk15-harmony.html#pkg_java_lang

J2SE 1.4.2

Current code in classlib is assumed compliant with J2SE 1.4.2 specification.

Java 5.0

There is some support for new Java 5 APIs and enhancements. Below are some details about what's available, missing and in process.

java.lang

Primitive Wrapper Updates

There were only minor updates to the primitive wrapper classes for Java 5. The biggest addition is the 'valueOf' method to each class, which is generally used by compilers to facilitate boxing.

- Boolean (API: done, Test Case: done), references: <http://issues.apache.org/jira/browse/HARMONY-179>
- Byte (API: done, Test Case: done), references: <http://issues.apache.org/jira/browse/HARMONY-180>
- Short (API: done, Test Case: done), references: <https://issues.apache.org/jira/browse/HARMONY-201>
- Integer (API: done, Test Case: done), references: <http://issues.apache.org/jira/browse/HARMONY-210>
- Long (API: done, Test Case: done), references: <http://issues.apache.org/jira/browse/HARMONY-214>
- Float (API: done, Test Case: partial-done), references: <http://issues.apache.org/jira/browse/HARMONY-239>
- Double (API: done, Test Case: partial-done), references: <http://issues.apache.org/jira/browse/HARMONY-244>
- Character (API: partially complete, Test Case: partially complete)
 - <https://issues.apache.org/jira/browse/HARMONY-197> - Added basic code point support.
 - Character.UnicodeBlock - Update complete; matches Java 5 specification.
 - Unicode 4.0.0 (4.0.1?) support in process
 - <https://issues.apache.org/jira/browse/HARMONY-1418> - upgrade to 5.0.
 - <https://issues.apache.org/jira/browse/HARMONY-1436> - upgrade to 5.0.

All primitive wrapper objects have been uplifted to include the generics signatures; references: <http://issues.apache.org/jira/browse/HARMONY-355>, <http://issues.apache.org/jira/browse/HARMONY-356>, <http://issues.apache.org/jira/browse/HARMONY-392>.

[NathanBeyer](#) is working on these, if anyone's curious.

StringBuilder

Complete.

References:

- <https://issues.apache.org/jira/browse/HARMONY-253>
- <https://issues.apache.org/jira/browse/HARMONY-348>
- <https://issues.apache.org/jira/browse/HARMONY-383>

StringBuffer

Java 5 API methods complete.

References:

- <http://issues.apache.org/jira/browse/HARMONY-168>
- <http://issues.apache.org/jira/browse/HARMONY-260>

Math

Complete.

References:

- <http://issues.apache.org/jira/browse/HARMONY-1388>
- <http://issues.apache.org/jira/browse/HARMONY-1415>
- <http://issues.apache.org/jira/browse/HARMONY-1438>
- <http://issues.apache.org/jira/browse/HARMONY-1449>

StrictMath

Complete.

References:

- <http://issues.apache.org/jira/browse/HARMONY-1388>
- <http://issues.apache.org/jira/browse/HARMONY-1415>
- <http://issues.apache.org/jira/browse/HARMONY-1438>
- <http://issues.apache.org/jira/browse/HARMONY-1449>

java.util

New classes

Queue, [AbstractQueue](#), [PriorityQueue](#)

Status: Completed

References:

<https://issues.apache.org/jira/browse/HARMONY-478>

<https://issues.apache.org/jira/browse/HARMONY-559>

Formatter

Status: Ongoing

Reference:

<https://issues.apache.org/jira/browse/HARMONY-395>

<https://issues.apache.org/jira/browse/HARMONY-455>

Scanner

Status: Ongoing

<https://issues.apache.org/jira/browse/HARMONY-522>

<https://issues.apache.org/jira/browse/HARMONY-567>

EnumMap

Status: Completed

Reference:

<https://issues.apache.org/jira/browse/HARMONY-595> <https://issues.apache.org/jira/browse/HARMONY-1203> <https://issues.apache.org/jira/browse/HARMONY-1210> <https://issues.apache.org/jira/browse/HARMONY-1220> <https://issues.apache.org/jira/browse/HARMONY-1246> <https://issues.apache.org/jira/browse/HARMONY-1250> <https://issues.apache.org/jira/browse/HARMONY-1264> <https://issues.apache.org/jira/browse/HARMONY-1277> <https://issues.apache.org/jira/browse/HARMONY-1287> <https://issues.apache.org/jira/browse/HARMONY-1341> <https://issues.apache.org/jira/browse/HARMONY-1356>

EnumSet

Status: Completed

Reference:

<https://issues.apache.org/jira/browse/HARMONY-594> <https://issues.apache.org/jira/browse/HARMONY-1211> <https://issues.apache.org/jira/browse/HARMONY-1219> <https://issues.apache.org/jira/browse/HARMONY-1239> <https://issues.apache.org/jira/browse/HARMONY-1267> <https://issues.apache.org/jira/browse/HARMONY-1288> <https://issues.apache.org/jira/browse/HARMONY-1344> <https://issues.apache.org/jira/browse/HARMONY-1387>

UUID

Status: complete

Reference: <http://issues.apache.org/jira/browse/HARMONY-426>

Updated classes

Arrays

- <https://issues.apache.org/jira/browse/HARMONY-294>
- implement 1.5 methods deepHashCode, deepEquals, hashCode(*) Reference: <http://issues.apache.org/jira/browse/HARMONY-533>
Status: done

Collections

three kinds of new methods

1. emptyXXX
2. checkedXXX
3. some algorithms implementation, like disjoint, reverseOrder, etc

Status: ongoing

Reference: <https://issues.apache.org/jira/browse/HARMONY-140> <https://issues.apache.org/jira/browse/HARMONY-342>

Calendar and [GregorianCalendar](#)

some new methods

Status: Welcome volunteer

[LinkedList](#)

implement interface Queue and its methods

Reference: <http://issues.apache.org/jira/browse/HARMONY-494>

Status: ongoing

Properties

XML support

Reference: <http://issues.apache.org/jira/browse/HARMONY-563>

Status: done

Timer

implement new constructors and purge()

Reference: <http://issues.apache.org/jira/browse/HARMONY-553>

Status: ongoing

Misc

- 14 new exceptions
- some accessories like FormattableFlags, Formatter.BigDecimalLayoutForm, etc

Status: API - done, Test - done

Reference:

<https://issues.apache.org/jira/browse/HARMONY-306>

<https://issues.apache.org/jira/browse/HARMONY-326>

<https://issues.apache.org/jira/browse/HARMONY-384>

java.net

Summary the gap between Harmony and Java 5 on java.net below.

New Classes in Java 5

- CacheRequest
- CacheResponse
- ResponseCache
- SecureCacheResponse
- Authenticator.RequestType
- Proxy.Type
- HttpRetryException
- CookieHandler
- Proxy
- ProxySelector

Status: Done

Reference:

<http://issues.apache.org/jira/browse/HARMONY-215>

<http://issues.apache.org/jira/browse/HARMONY-223>

Updated Classes in Java 5

Authenticator

Three new methods

Status: Done

Complexity: Novice

Reference:

<https://issues.apache.org/jira/browse/HARMONY-323>

URLConnection

Add two fields and two methods

Status: Done

Complexity: Moderate

Reference:

<https://issues.apache.org/jira/browse/HARMONY-328>

Inet6Address

Four new methods

Status: Done

Complexity: Novice

Reference:

<https://issues.apache.org/jira/browse/HARMONY-360>

InetAddress

Add API of testing for the reachability

Status: Done

Complexity: Moderate

Reference:

<https://issues.apache.org/jira/browse/HARMONY-327>

InetSocketAddress

Add one method.

Status: Done

Reference: <http://issues.apache.org/jira/browse/HARMONY-224>

ServerSocket

Add support for performance preference

Status: Done

Complexity: Not sure yet

Reference: <http://issues.apache.org/jira/browse/HARMONY-301>

Socket

Improve support for proxy, add support for performance preference

Status: Done

Complexity: Moderate

Reference: <http://issues.apache.org/jira/browse/HARMONY-301>

SocketImpl

Add support for performance preference

Status: Done

Complexity: Not sure yet

Reference: <http://issues.apache.org/jira/browse/HARMONY-301>

URL

Improve support for proxy, add method to convert to URI

Status: Done

Complexity: Moderate

Reference: <http://issues.apache.org/jira/browse/HARMONY-297>

URLConnection

Improve support for timeout and cache

Status: Done

Complexity: Novice

Reference:

<http://issues.apache.org/jira/browse/HARMONY-361>

<http://issues.apache.org/jira/browse/HARMONY-462>

URLStreamHandler

Improve support for proxy

Status: Done

Complexity: Moderate

Reference: <http://issues.apache.org/jira/browse/HARMONY-425>

Serialization-test for java.net

Add serialization-test for java.net

Status: Done

Complexity: Novice

Reference: <http://issues.apache.org/jira/browse/HARMONY-495>

Richard Liang is working on the upgrade of java.net package, welcome others' help.

java.io

Summary the gap between Harmony and Java 5 on java.io below. Paulex Yang is working on this package, welcome other's help.

Support for format and printf

PrintStream and PrintWriter now support c style printf function, as well as similar format function, which should based on Java 5 new class java.util.Formatter.

Status: pending on java.util.Formatter, and welcome volunteer

Complexity: Hard

Interface Appendable is added to some classes

Affected classes include: PrintStream, Writer, PrintWriter, StringWriter, CharArrayWriter, etc.

Status: Done

Reference: <http://issues.apache.org/jira/browse/HARMONY-230>

Some other new interfaces added

Some classes are required to implement new interfaces, such as Closeable, Flushable, Readable, DataInput, DataOutput, etc. Affected classes include:

- InputStream
- OutputStream
- Reader
- Writer
- RandomAccessFile

Status: API - done, Test - done

Reference: <http://issues.apache.org/jira/browse/HARMONY-231>

Other minor changes

- ObjectOutputStreamConstants add two constants
- PrintStream and PrintWriter add new constructors
- PushbackInputStream update the behavior of mark and reset method

Status: API - done, Test - done

Reference: <http://issues.apache.org/jira/browse/HARMONY-232>