Java. Cloud. Leadership.

IcedTea and IcedTea-Web
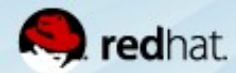
Andrew Overholt
Principal Software Engineer
Red Hat Canada
2011-11-03

Persistent index will always show current point
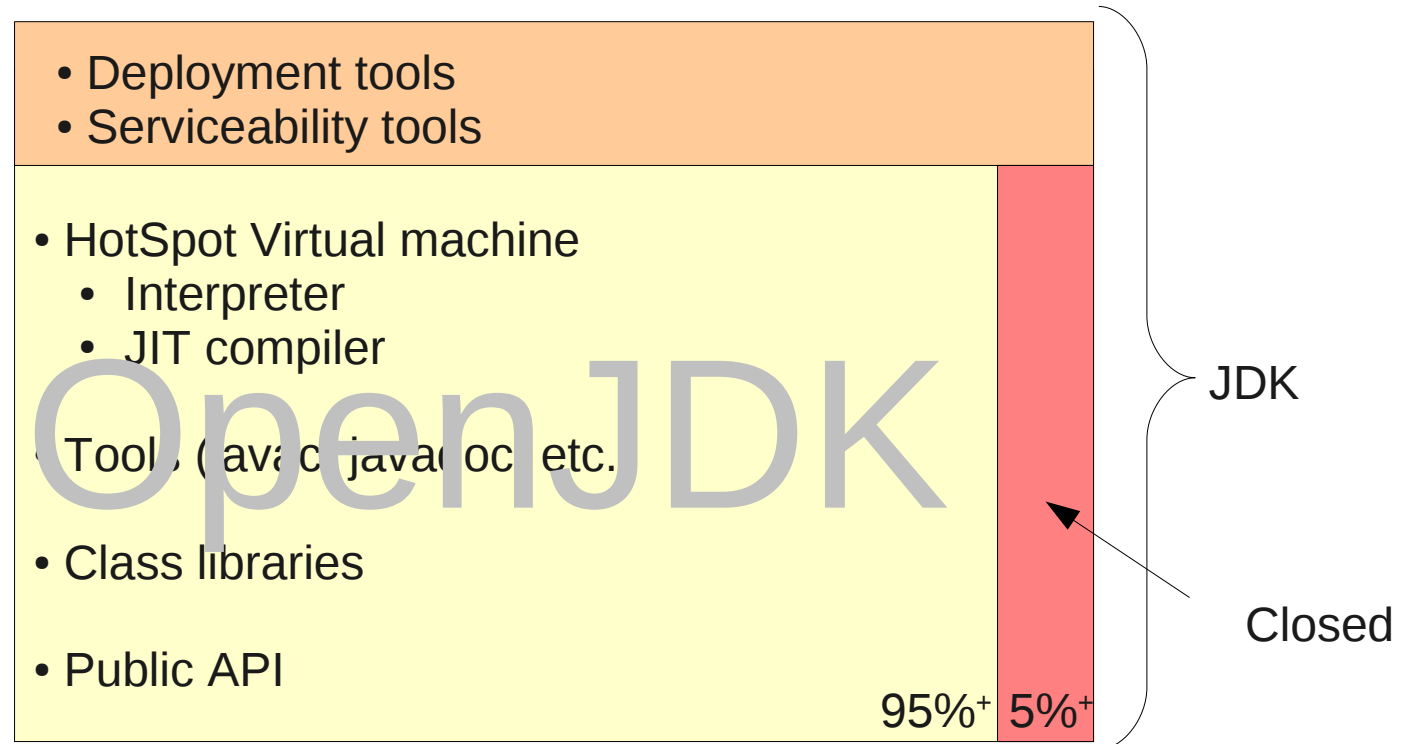
Agenda

This presentation is designed to be used with audio as a primary mode of content delivery. If you have downloaded it, see notes section for rough notes on applicable slides (draft quality). For pdf, it should be at the end of the slide deck.
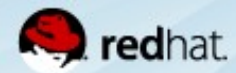
redhat. | JBoss by Red Hat

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OpenJDK vs JDK

- Deployment tools
- Serviceability tools

OpenJDK

- HotSpot Virtual machine
  - Interpreter
  - JIT compiler

- Tools (javac, javadoc etc.

- Class libraries

- Public API

95%+ 5%+

JDK

Closed

+ *Last heard, for OpenJDK7 and JDK7*

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What is IcedTea?

Image sources:
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http://www.openclipart.org/detail/22712

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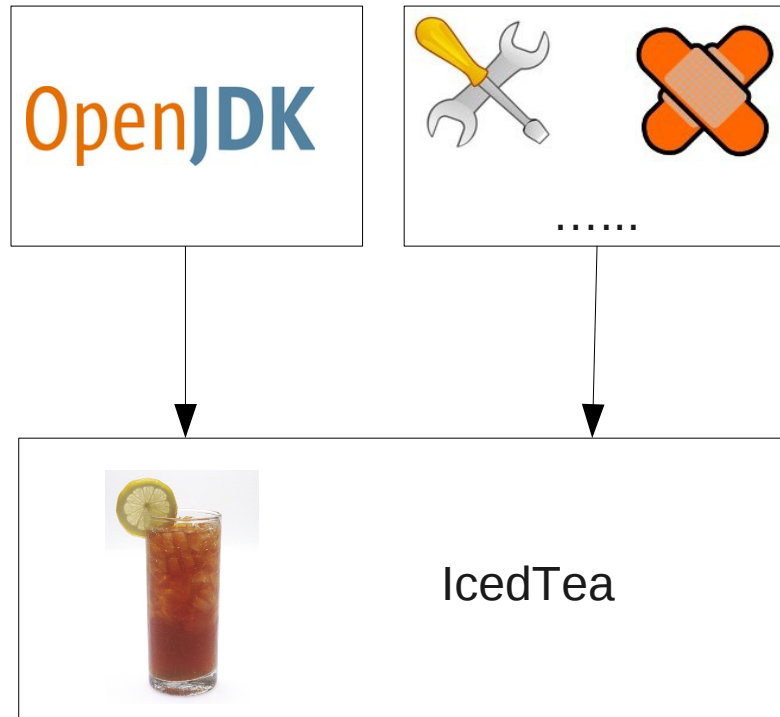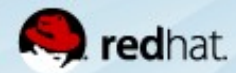
Some of the users...

(IcedTea-Web only)
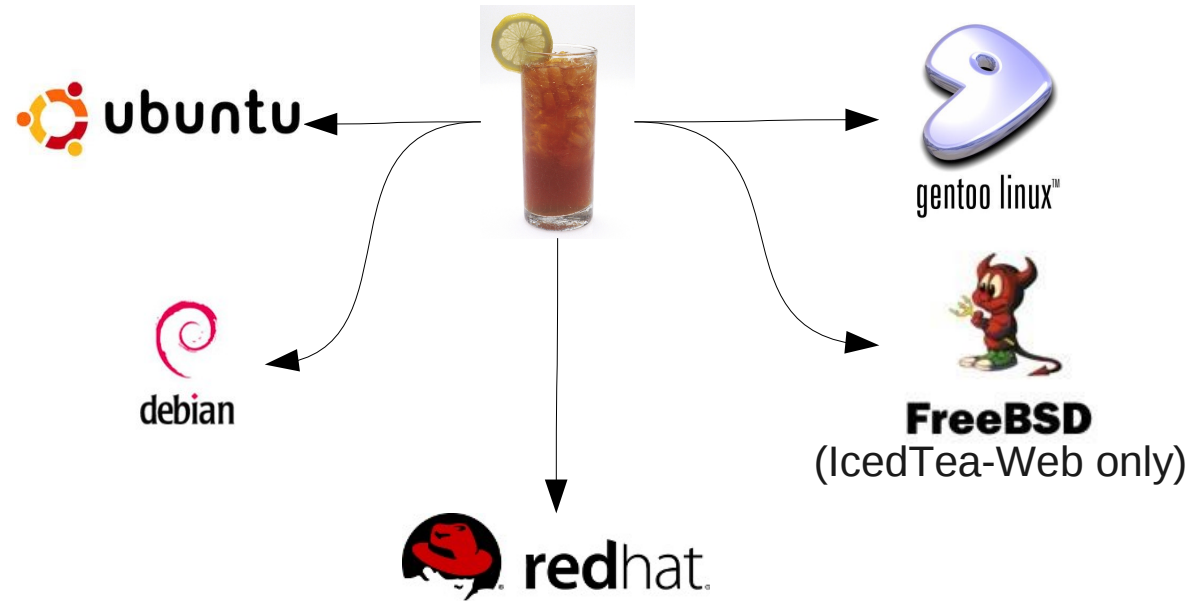
Some of the contributors...

(IcedTea-Web only)

(Indirectly through OpenJDK)

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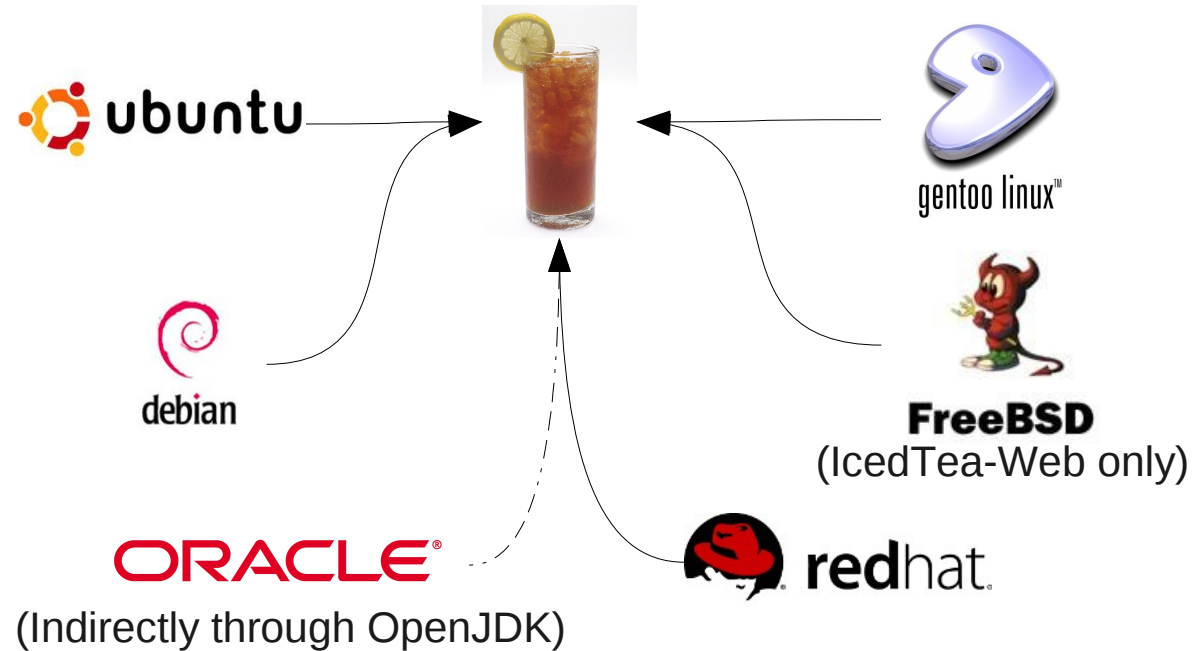
Why was IcedTea created?
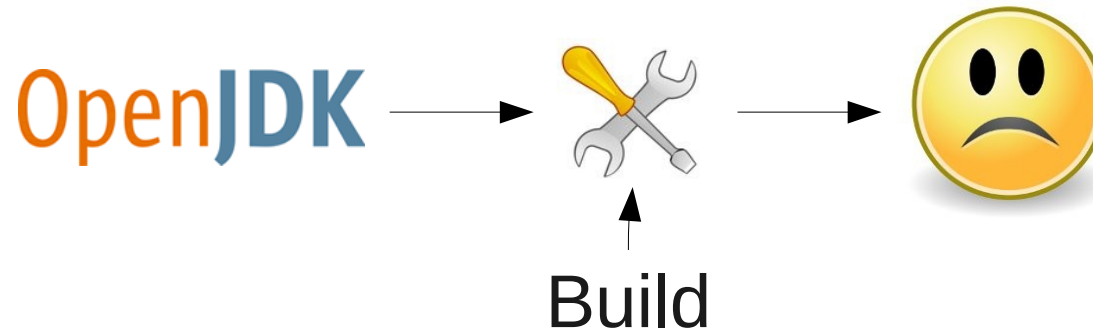
Build

(For the first release...)

Image sources:
http://www.openclipart.org/detail/30223

To fix the build...

Build

Image sources:
http://www.openclipart.org/detail/30217

To fill what's missing...

- Deployment tools

Implemented independently

- Deployment tools

- HotSpot Virtual machine
  - Interpreter
  - JIT compiler

- Tools (javac, javadoc, etc.)

- Class libraries
...

JDK

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To back patch fixes...

• Deployment tools

Implemented independently

• Deployment tools

• HotSpot Virtual machine
  • Interpreter
  • JIT compiler

• Tools (javac, javadoc, etc.)

• Class libraries
...

JDK

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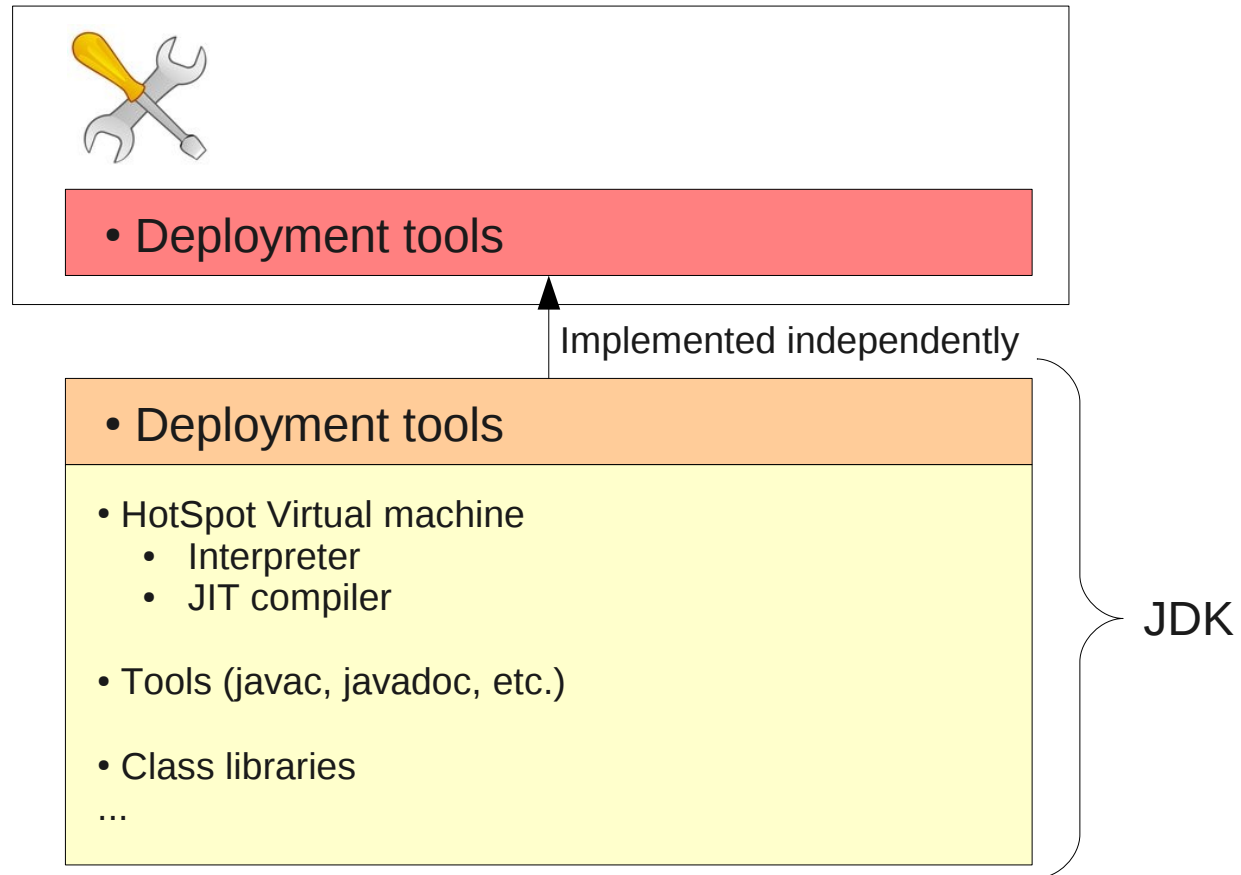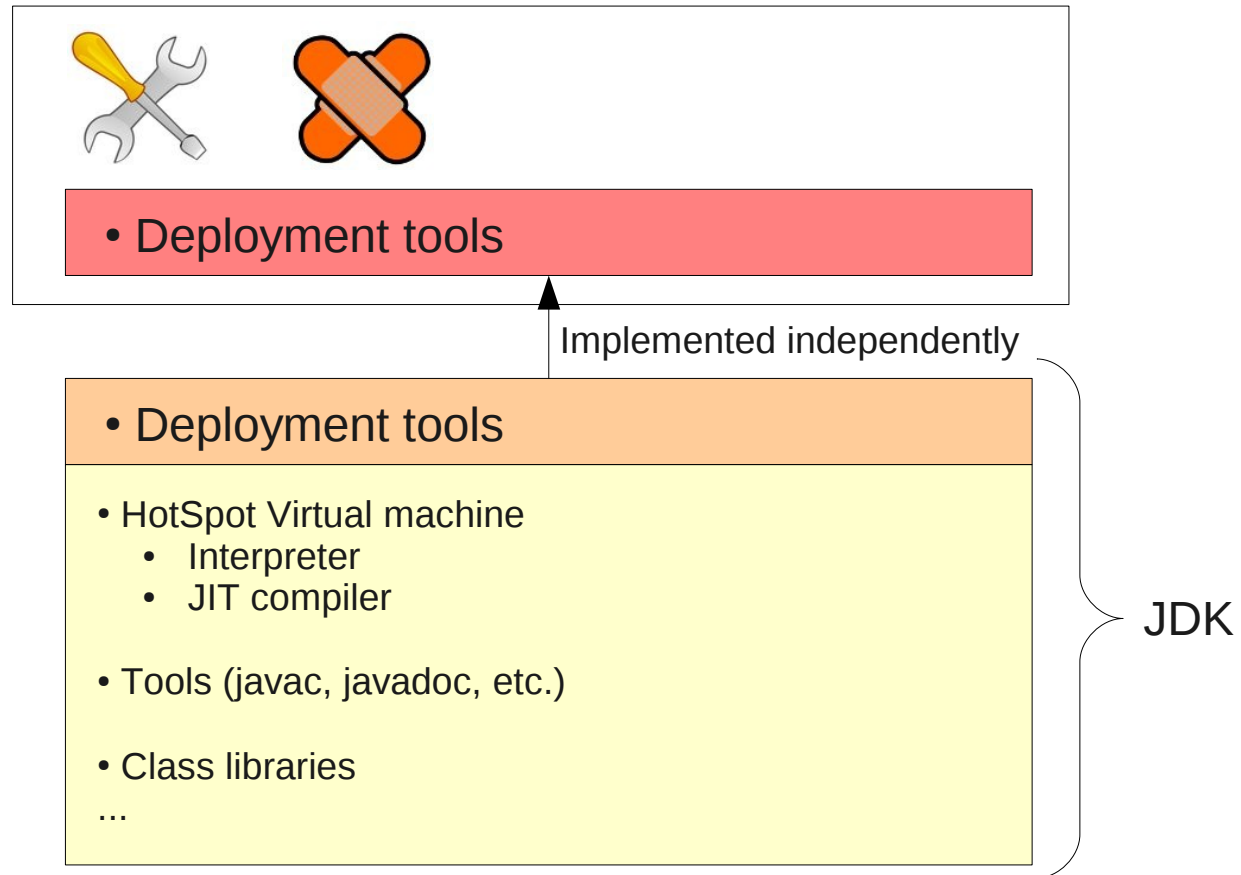
To support additional architectures...

Shark/Zero

- Deployment tools

Implemented independently

- Deployment tools

- HotSpot Virtual machine
  - Interpreter
  - JIT compiler

- Tools (javac, javadoc, etc.)

- Class libraries
...

JDK

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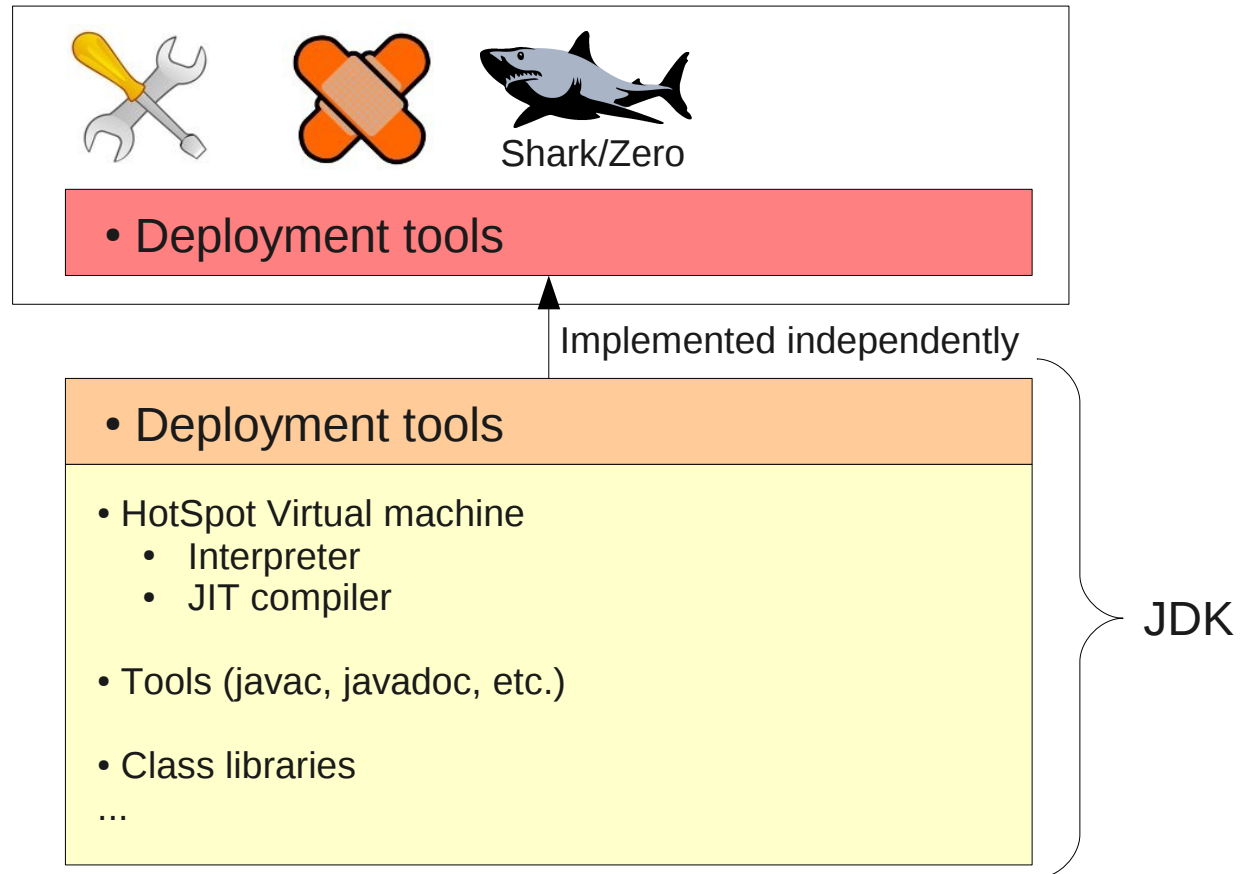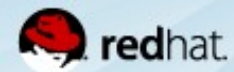
To support additional tools...

Shark/Zero

VisualVM

- Deployment tools

Implemented independently

- Deployment tools

- HotSpot Virtual machine
  - Interpreter
  - JIT compiler

- Tools (javac, javadoc, etc.)

- Class libraries
...

JDK

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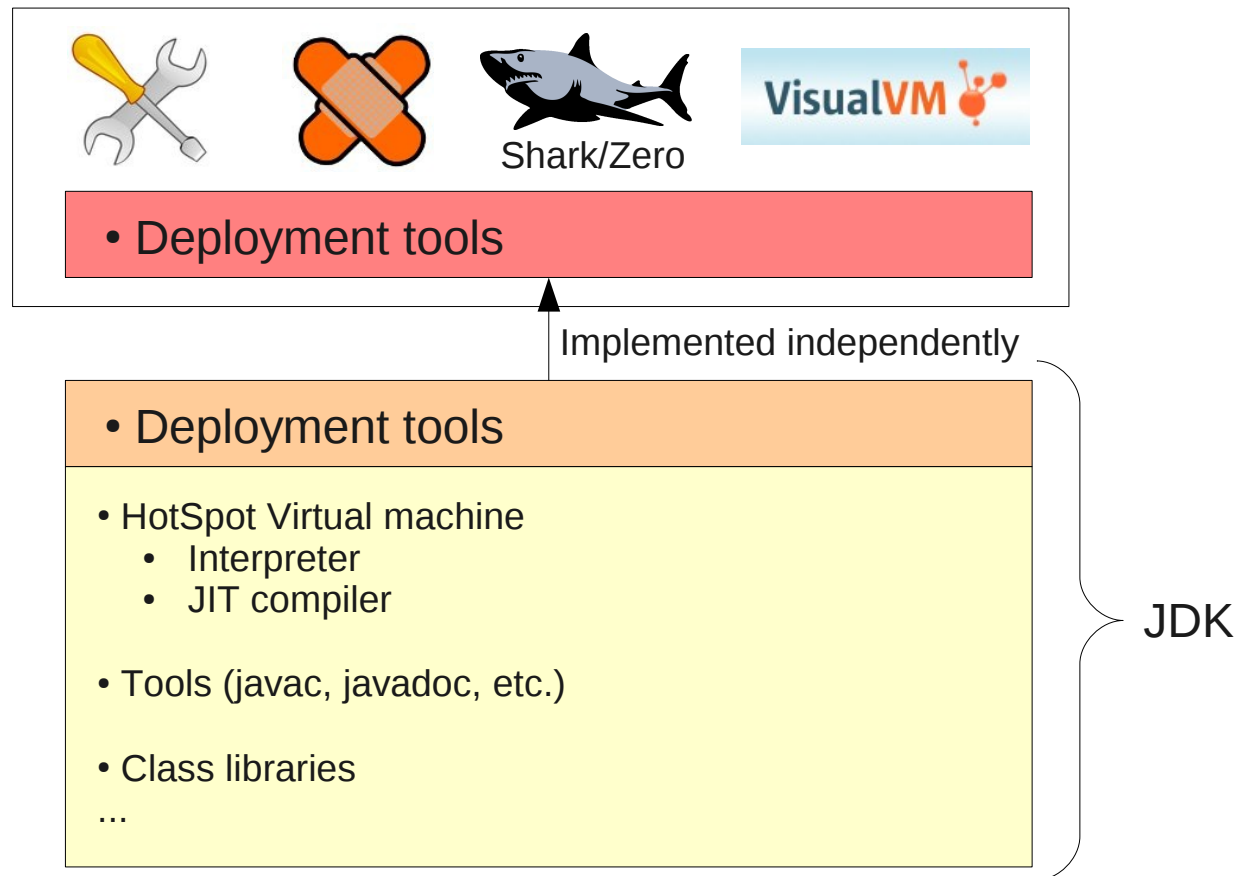
To keep OpenJDK6 up-to-date

JDK6 (closed)

JDK7
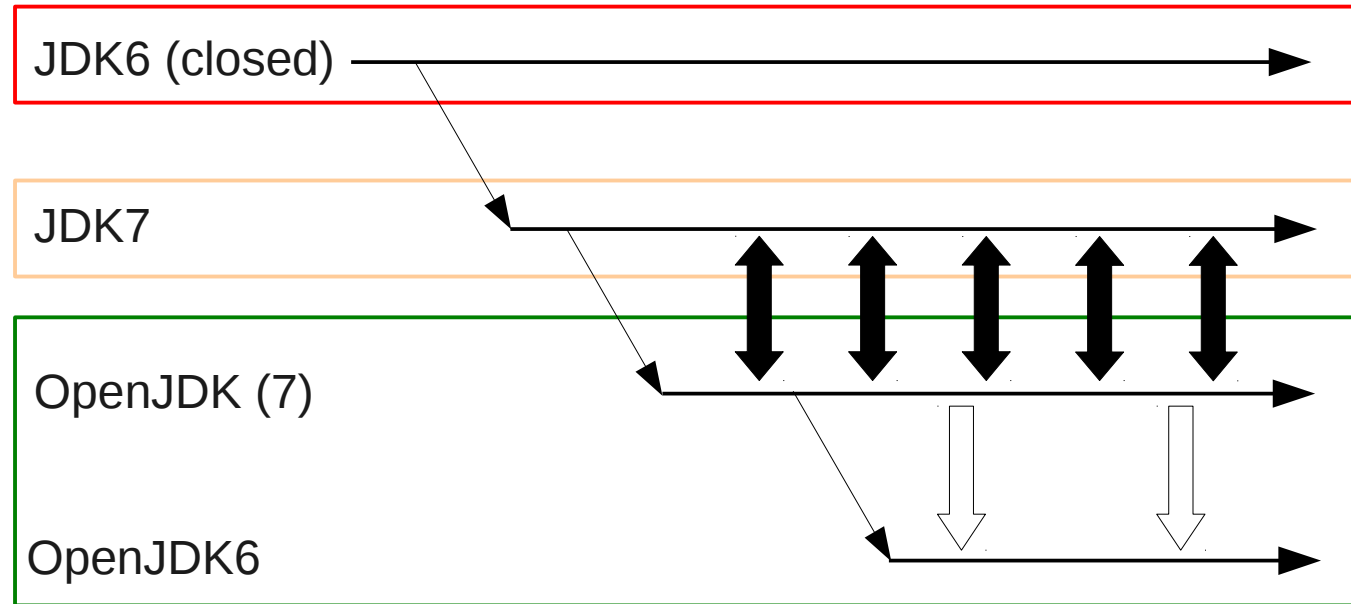
OpenJDK (7)

OpenJDK6

■ Proprietary
■ Semi-open (Development in open + some proprietary patches)
■ Open

OpenJDK6 involvement

- OpenJDK7 ➔ OpenJDK6

- Majority of the OpenJDK6 commits are backports

- Red Hat is the primary backporter
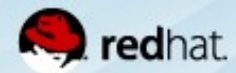
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Co-ordinated security

	Update planned	Patches sent	Distros notified	Public release

JDK

OpenJDK

IcedTea

Distros

Legend:
- ── Not in code base
- ── In code base, not public
- ── In code base, public
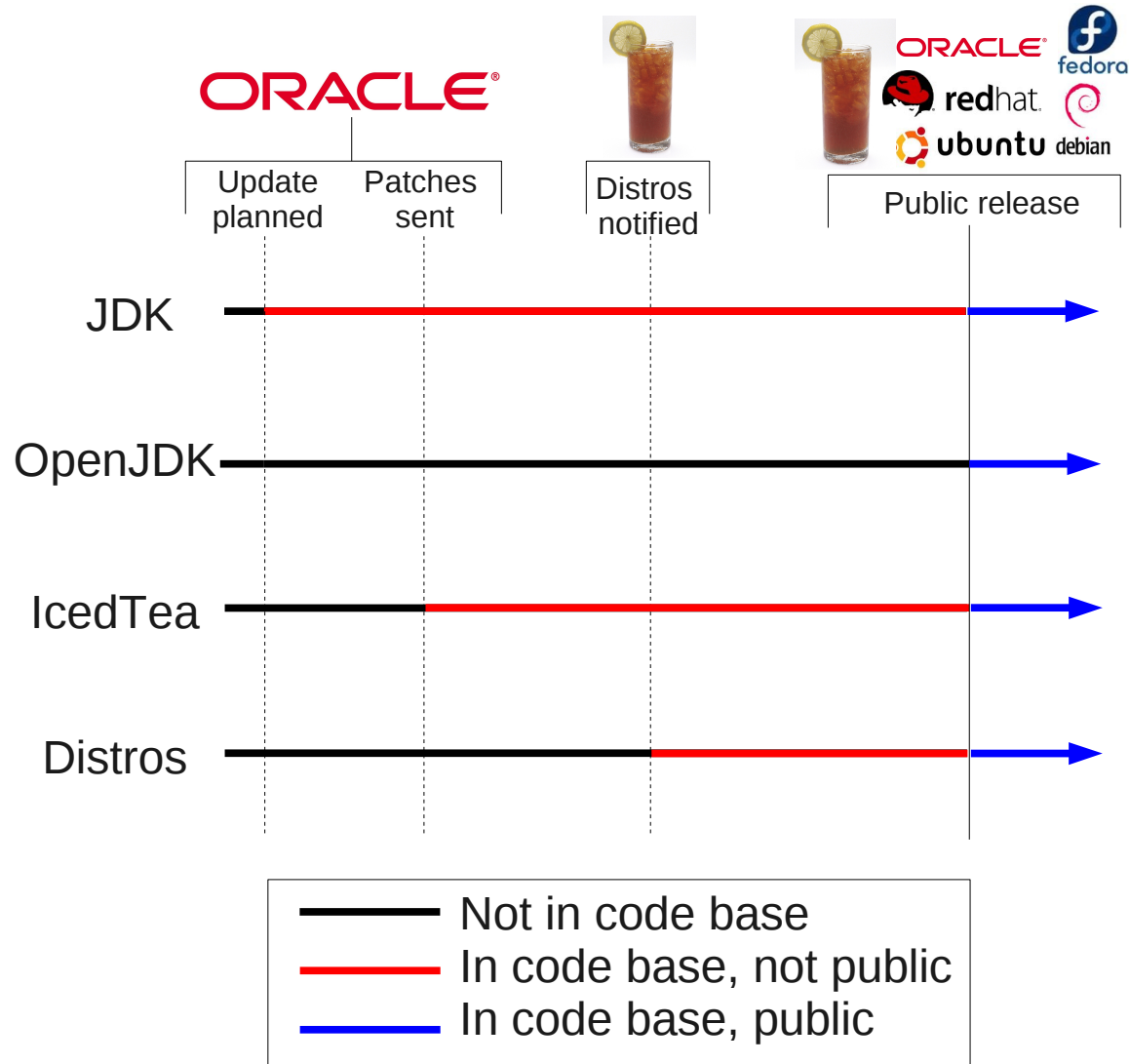
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Current structure

hg.openjdk.java.net/hg/jdk6/jdk6-gate

\+ patches, autotools, JamVM support, etc.

IcedTea

Use by distros

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Future

hg.openjdk.java.net/hg/jdkN/jdkN-gate

+ patches

icedtea.classpath.org/hg/jdkN-gate

+ autotools, JamVM, etc.

Direct use by distros possible

IcedTea

Distros can also use IcedTea
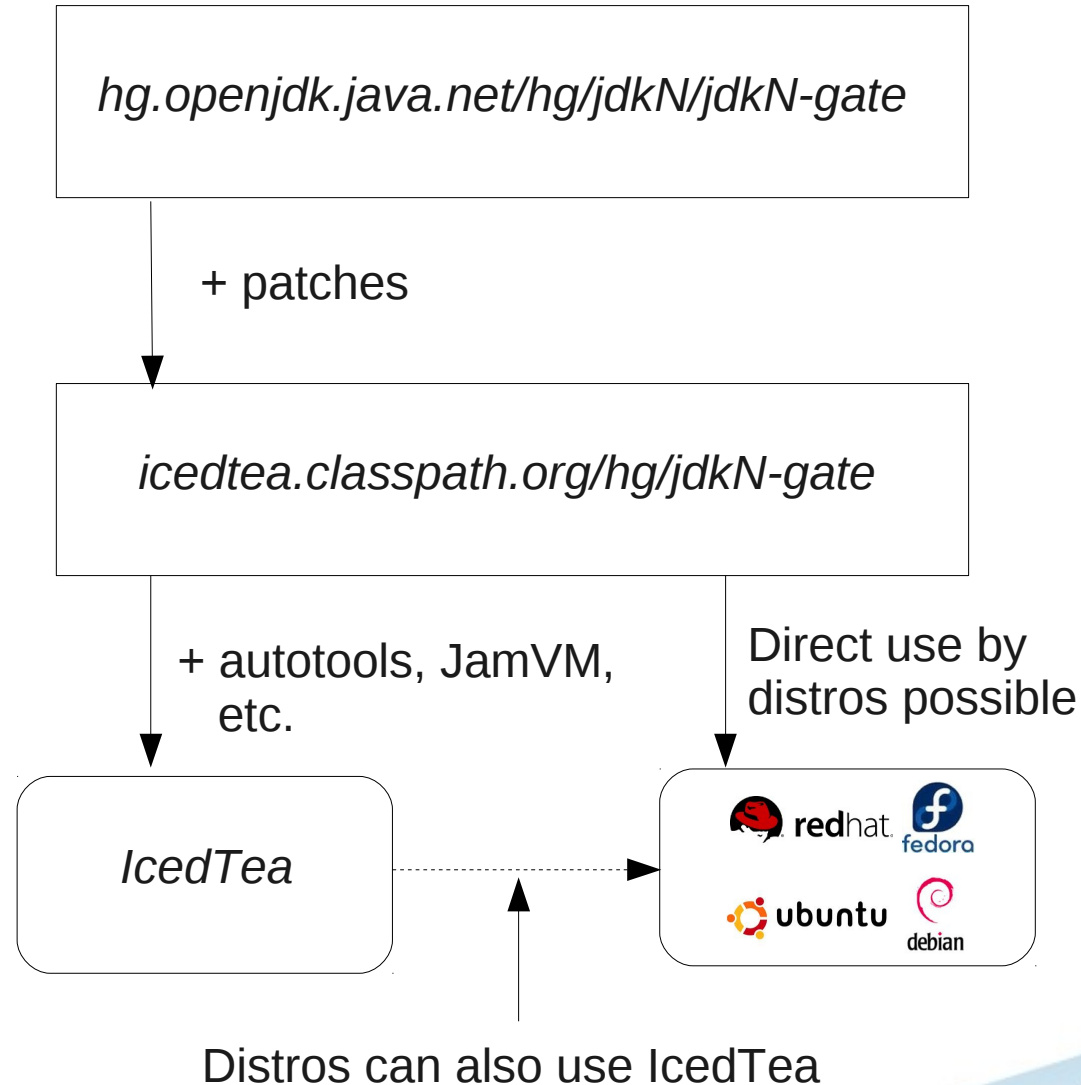
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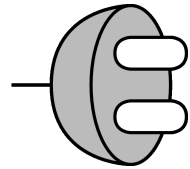
IcedTea-Web

Web Browser Plug-in

Web Start (javaws)

Settings tool (itweb-settings)

Image sources:
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http://www.openclipart.org/detail/86059
http://www.openclipart.org/detail/112249

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Why is this needed?

"this software may not be modified, decompiled or reverse engineered"

\- paraphrased from the BCL[+]

[+] *BCL is the Binary Code License under which the proprietary JDK is released*
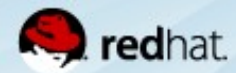
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Fully Open Source

GPL

LGPL

$+$

Classpath Exception

[+] *GPL   stands for GNU **G**eneral **P**ublic **L**icense*
[++]*LGPL stands for GNU **L**esser **G**eneral **P**ublic **L**icense*
Image source: http://www.gnu.org/graphics/official%20gnu.svg
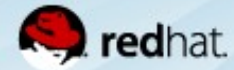
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plug-in features

Java ⟷ *JavaScript*

Full LiveConnect support (with testsuite to ensure adherence)

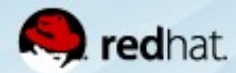*All logos are copyright by their respective owners. Other image sources:*
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plug-in features

... (anything that supports NPAPI) ...

Multi-browser support

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plug-in features

… and any others where Shark/Zero will work ...

Extended architecture support

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plug-in features
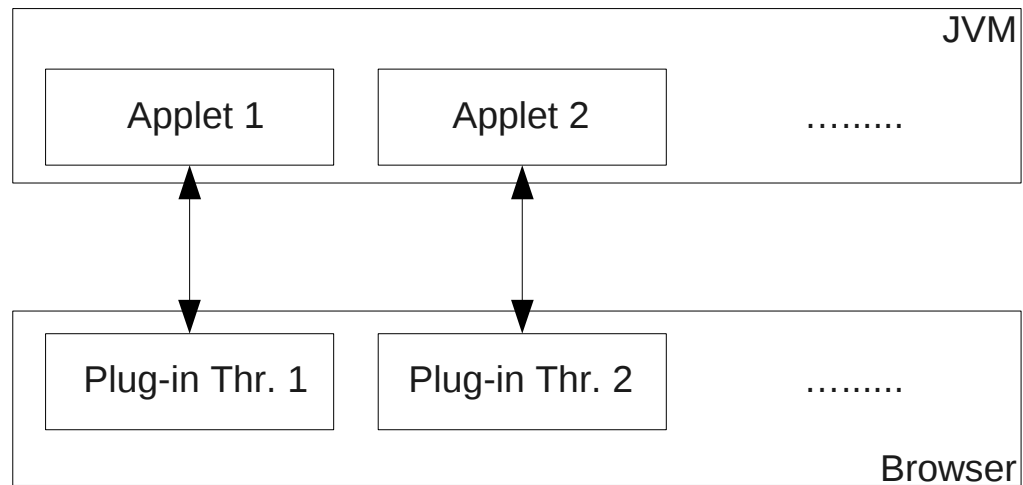
Single JVM design

'javaws' features

… and any others where Shark/Zero will work ...

Extended architecture support

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'javaws' features

Headless (command-line) support

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'javaws' features
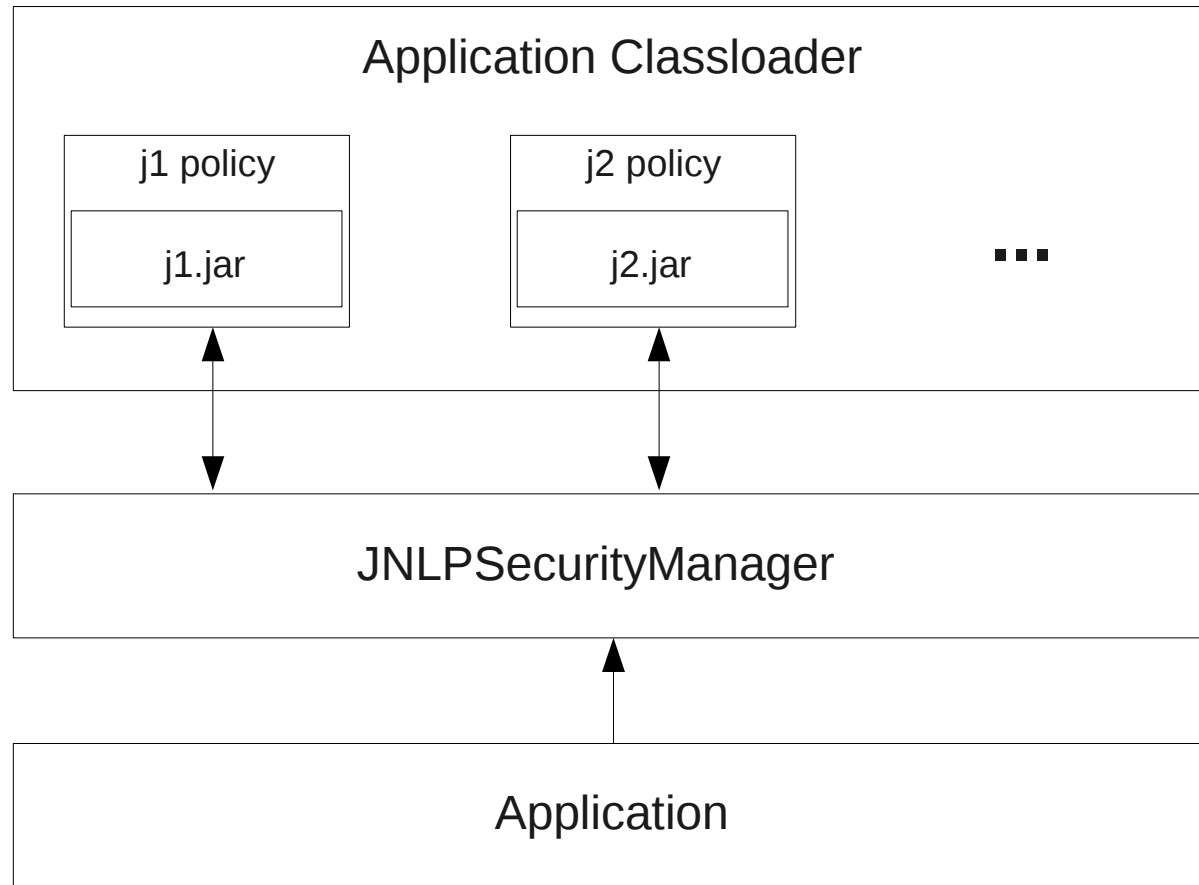
Per-jar policy, even with jnlp hrefs

'itweb-settings' features

Certificate management

Proxy configuration

Cache management

Security configuration

Image sources:
http://www.openclipart.org/detail/25557
http://www.openclipart.org/detail/35311
http://www.openclipart.org/detail/152407
http://www.openclipart.org/detail/134449

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Future

- Full LWJGL support

- JNLP_HREF support

- Per site security policies configurable via GUI

- Cache management improvements
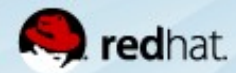
Questions?

```
Contact:

Name:  Deepak Bhole
Email: dbhole@redhat.com
IRC:   dbhole on #openjdk on irc.oftc.net
Blog:  http://dbhole.wordpress.com

IcedTea:      http://icedtea.classpath.org/
IcedTea-Web: http://icedtea.classpath.org/wiki/IcedTea-Web
```

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