

Mac OS X Port Project Status

This page outlines the status of high-level feature areas to bring from Apple's Java SE 6 to the Mac OS X port of JDK 7u4.

7u4 is now complete; 7u6 is in active development in jdk7u-dev.

A list of popular open issues is available at the [JIRA bug reporter](#).

Features in the macosx-port src repository

- Build
 - build using clang
 - build .jdk bundle (for CommandLine and embedded use only)
 - build embeddable .jre bundle
 - build JavaAppLauncher stub
- HotSpot
 - remove ALWAYS_PASS_TEST_GAMMA hack
 - register new threads as ObjC-GC capable
 - DTrace v2-style probes
- Core Libraries
 - Load .jniLib (in addition to .dylib) - fixed for 7u4!
- Precomposed/Decomposed File path translation
- NIO
 - kqueue based Selectors
 - WatchService implementation (kqueue-based)
 - WatchService implementation (polling-based)
 - Async I/O API
- Proxy Server handling
- Locale support
- System properties fixup (vendor name, etc)
 - Resolve "Darwin" vs. "Mac OS X" checks
- JNI interface
- Networking
- X11
- Universal binaries
- JObjC
 - get tests passing
 - self-generate BridgeSupport full files
- Cocoa AWT
 - 2D drawing (OpenGL based)
 - OpenGL layer needs to be vended from an NSOpenGLLayer (10.6+)
 - Cocoa key/text events
 - cleanup to use JRSEvent API
 - merge JDK6 CWindow -> LWWindow changes and style flags
 - update CImage
 - Transparent window support
 - Headless
 - remove \$AWT_TOOLKIT=CToolkit, switch to default
 - threading cleanup
- Aqua LaF
 - Requires an image tile cache
 - Screen Menu Bar
 - Needs cleanup to use JRSMenue API
 - Needs refresh from Apple trunk
- Fonts/Text drawing
 - Needs cleanup to use JRSFont API
- Accessibility
- Clipboard
- Drag & Drop
- InputMethod support
- AppleScript javax.script engine
- Sound
- Printing
- Keychain Provider
- JAWT (for SWT/3D embedding)
- Smartcard
- Fix Kerberos code to read config info from SCDynamicStore (needed on Lion) | http://java.net/jira/browse/MACOSX_PORT-566
- AWT Desktop API
- System Tray

Features not yet ported from Apple's Java SE 6

- Bundled app launching

- JavaApplicationStub replacement
 - Stub source now checked in. More tools for bundling an app are coming.
 - Stub and AWT reviewed for sandboxing
 - need to fix JavaSound, launcher stub, and remove dependency on X11 libfreetype.

Features not in public macosx-port ("deploy" is private to Oracle). You'll have to trust us on these – deploy is not ready to be open-sourced.

- **Applets/Plugin2**
 - Need to create .plugin bundle
 - Need to embed slimmed JRE into .plugin bundle
 - Need NPAPI/Cocoa event -> Java event conversion
 - Need the LWAWT to render into NSOpenGLLayer (see above)
 - Need cross-process CALayer connection mechanism to be exposed
 - Need to determine update mechanism ([Sparkle.framework?](#))
 - JavaFx support
- **Web Start**
 - Need to determine delivery vehicle (inside Applet plug-in, or some other form) – Java Web Start.app will find javaws in the deployment bundle and execute that. Requires at least 10.7.3.
 - Shortcut support
- **Java Preferences**
 - UI cleanup: Look better on Mac OS X
 - Preference pane

Non-feature tasks

- Merge BSDPort into mainline jdk so that Mac OS X Port can be inserted into mainline:
 - Merge BSDPort hotspot, patch and description at: [BSDPort](#), [Description of jdk7 changes](#)
- Move internal bugs to http://java.net/jira/browse/MACOSX_PORT
- Write up [development wiki pages](#) for
 - Quickstart
 - Status
 - Compiler changes/issues
 - Cocoa & Java crash course
 - Threading manifesto
 - Memory management manifesto
 - AppKit Threading & Cocoa Memory Management best practices examples
 - Internal "Adopt-an-app" testing workflows
- [Port private JUnit harness tests to jtrg](#)
 - [Detailed status](#)

Non-Features

These features will not be ported to OpenJDK from the Apple Java SE 6 port

- **MacRoman default encoding**
 - UTF-8 only, for all locales/languages
- **NSView-based AWT heavyweight widgets**
 - LWAWT Swing-based widgets only
- **NSView-based JAWT embedding**
 - CALayer embedding instead
- **CocoaComponent**
 - Use CALayer-based JAWT embedding instead
- **SWT Carbon EventLoop support**
 - No 32-bit only technologies, Cocoa only
- **JNI instantiation through the JavaVM.framework**
 - Embed your own JRE instead
- **Apple JavaApplicationStub**
 - Use the new JavaAppLauncher, loads an embedded .jre, JavaApplicationStub compatible
- **Apple native crypto**
 - Use standard Java crypto
- **HotSpot Shared Archive Generation**
 - Automatic JSA creation is of limited use until HotSpot supports class sharing in 64-bit, and in all garbage collectors

Status icon meanings

- Done
- In progress
- Not done
- Unknown