Oracle® Java Micro Edition Embedded Client

Release Notes

Release 1.1

E23816-01

June 2012

These Release Notes describe platform requirements, documentation, installation, new features, known problems and issues, and documentation accessibility for the Oracle Java Micro Edition Embedded Client.

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1 Introduction

Oracle Java Micro Edition Embedded Client is a Java platform that can be deployed to a number of embedded devices including, but not limited to, set-top boxes, electronic book readers, multi-function printers, residential gateways, smart utility meters, network attached storage, and Internet phones.

2 Platforms and Requirements

You use two platforms when you work with Oracle Java Micro Edition Embedded Client: the host and the target. The host is the personal computer on which Oracle Java Micro Edition Embedded Client applications are built. The target is the device where applications run.

2.1 Host Requirements

The host is an x86 personal computer running Linux. The following table gives the detailed host requirements.

Requirement	Description
CPU	1.0 GHz x86 family (or faster)
Memory	1GB RAM (or more)
Free disk space	10GB (or more)

Requirement	Description
Operating System	Linux - Ubuntu 10.04
Java Developer's Kit (JDK)	1.6.0 (latest version)

2.2 Target Requirements

This release supports targets based on three CPU architectures: ARM, MIPS, and x86. Older Linux kernels and `glibc` libraries might work, but this section lists the tested versions.

2.2.1 ARM Target Requirements

The following table gives requirements for ARM-based targets.

Requirement	Description
CPU	ARM v5, v6, or v7
Floating Point	Soft
ROM	At least 5MB for Java
RAM	At least 8MB for Java
Operating System	■ v5: Linux kernel 2.6.31 or higher; `glibc` 2.10.2 or higher ■ v6/v7: Linux kernel 2.6.35 or higher, `glibc` 2.12.1 or higher

2.2.2 MIPS Target Requirements

The following table gives requirements for MIPS-based targets.

Requirement	Description
CPU	MIPS32 74K
Floating Point	Hard
ROM	At least 5MB for Java
RAM	At least 8MB for Java
Operating System	Linux kernel 2.6.22 or higher; `glibc` 2.8 or higher

2.2.3 x86 Target Requirements

The following table gives requirements for x86-based targets.

Requirement	Description
CPU	Pentium III or higher
Floating Point	Hard
ROM	At least 5MB for Java
RAM	At least 8MB for Java
Operating System	Linux kernel 2.6.35 or higher; `glibc` 2.12.1 or higher

3 Documentation

In addition to these Release Notes, the following documents are included in the Oracle Java Micro Edition Embedded Client documentation set:

- *Oracle Java Micro Edition Embedded Client Architecture Guide*
- *Oracle Java Micro Edition Embedded Client Customization Guide*
- *Oracle Java Micro Edition Embedded Client Developer's Guide*

> **Note:** The *Oracle Java Micro Edition Embedded Client Architecture Guide* is a prerequisite for all Oracle Java Micro Edition Embedded Client guides. It defines concepts that are mentioned in the other guides.

4 Installation Instructions

Follow these installation instructions:

1. On the host computer, unzip the downloaded product zip file, which creates the directory `ojec1.1/`.
2. Copy the `ojec1.1/bin/` and `lib/` directories to the target device, or mount them across the network.
3. Use the following commands on the target to verify the installation:

```
% cd ojec1.1
% bin/cvm -version
```

5 New Features

The following important features have been added to Oracle Java Micro Edition Embedded Client 1.1 (JSR = Java Specification Request, see `http://jcp.org`):

- Just-in-time (JIT) compilation is extended to the x86 architecture.
- 32-bit typeids are supported.
- XML API (JSR 280) has been added.
- The `-Xjnicheck` runtime option performs additional validation of calls to native methods.

Refer to the Oracle Java Micro Edition Embedded Client *Architecture Guide* for the definitive list of components and versions supported in this release.

6 Known Problems and Issues

This section describes known problems and issues in this release.

6.1 Debugging Limitations

- Only interpreted code can be debugged.
- Oracle Java Micro Edition Embedded Client debugger connections use sockets. Shared memory connections are not supported.

6.2 Profiling Limitations

- To profile with the NetBeans IDE, use version 7.0.

  An OutOfMemoryException might be thrown if there is not enough memory for the class file instrumentation code to run to completion before garbage collection occurs. If this happens, increase the heap size. For example, this option sets the heap to 64 megabytes: `-Xmx64m`.

- JVMTI CPU profiling measures the time spent between method entry and exit. Should a method call out to native C code, the profiling tool is unaware of whether the application is blocked or looping. In order to eliminate discrepancies in the results, a NetBeans "Customized Filter Set" can be used to exclude methods that call out to native code.

- Heap-dump is not currently implemented.

- Profiling of ROMized system classes is not supported.

- While configuring Attach Mode options, the Select Target Type menu option "Attach Method" must be set to "Remote" for working with Oracle Java Embedded Client. The "Local" mode is not supported.

6.3 Documentation Issues

The documentation set has been redesigned for release 1.1. Begin by reading the *Architecture Guide*, which is an overview and prerequisite for the other documents.

7 Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at
http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

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