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.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>1.0 GHz x86 family (or faster)</td>
</tr>
<tr>
<td>Memory</td>
<td>1GB RAM (or more)</td>
</tr>
<tr>
<td>Free disk space</td>
<td>10GB (or more)</td>
</tr>
</tbody>
</table>
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.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating System</td>
<td>Linux - Ubuntu 10.04</td>
</tr>
<tr>
<td>Java Developer’s Kit (JDK)</td>
<td>1.6.0 (latest version)</td>
</tr>
</tbody>
</table>

### 2.2.2 MIPS Target Requirements

The following table gives requirements for MIPS-based targets.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>MIPS32 74K</td>
</tr>
<tr>
<td>Floating Point</td>
<td>Hard</td>
</tr>
<tr>
<td>ROM</td>
<td>At least 5MB for Java</td>
</tr>
<tr>
<td>RAM</td>
<td>At least 8MB for Java</td>
</tr>
<tr>
<td>Operating System</td>
<td>Linux kernel 2.6.22 or higher; glibc 2.8 or higher</td>
</tr>
</tbody>
</table>

### 2.2.3 x86 Target Requirements

The following table gives requirements for x86-based targets.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>Pentium III or higher</td>
</tr>
<tr>
<td>Floating Point</td>
<td>Hard</td>
</tr>
<tr>
<td>ROM</td>
<td>At least 5MB for Java</td>
</tr>
<tr>
<td>RAM</td>
<td>At least 8MB for Java</td>
</tr>
<tr>
<td>Operating System</td>
<td>Linux kernel 2.6.35 or higher; glibc 2.12.1 or higher</td>
</tr>
</tbody>
</table>
3 Documentation
In addition to these Release Notes, the following documents are included in the Oracle Java Micro Edition Embedded Client documentation set:


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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 ojec1.1.1/
2. Copy the ojec1.1.1/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:
   ```shell
   % cd ojec1.1.1
   % bin/cvm -version
   ```

5 New in this Release
The following changes have been made to Oracle Java Micro Edition Embedded Client 1.1.1:

- The ahead-of-time compilation feature has been disabled due to issues found with different kernel versions.
- A problem has been fixed in which the close() method of ZipOutputStream would enter an infinite loop if forced to terminate while deflating.
- A problem has been fixed in which CVM crashed when Class.getDeclaredMethod() was called with a null parameterTypes argument.
- Other minor bugs have been fixed.

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

No known issues.

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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