Building Ice Applications in Java

This page provides important information for Java developers.

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Prerequisites

In order to build applications with Ice in Java, you need:

- 1. the Ice JAR files (ice.jar, icediscovery.jar, icegrid.jar, etc.)
 These JAR files are provided through Maven, as described below. Ice binary distributions for Debian and Ubuntu also include these JAR files.
- the slice2java compiler slice2java is a command-line tool written in C++ and available on most platforms

Platform	Distribution	Package with slice2java
Debian and Ubuntu	apt packages	zeroc-ice-compilers
RHEL, SLES, Amazon Linux	RPMs	ice-compilers
macOS	homebrew	always installed
Windows	MSI	always installed
Windows	NuGet	zeroc.ice.v100, zeroc.ice.v120, zeroc.ice.v140, zeroc.ice.v141

3. the Ice Builder for Gradle, if you are using Gradle.

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Java and Java Compat Mappings

Ice provides two distinct Slice-to-Java mappings:

Java

This is a new mapping that takes advantage of features in Java 8. We recommend you select this mapping for new Ice-based applications written in Java.

Java Compat

This mapping is largely backward-compatible with prior Ice releases. Although Ice 3.7 no longer supports Java versions prior to Java 8, the "Compat" mapping does not depend on any Java 8-specific language or run-time features.

slice2java, the Slice-to-Java code generator, generates code for the Java mapping by default.

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Maven Repository

 $You \ can \ fetch \ all \ lice \ build \ artifacts \ from \ the \ \underline{Maven \ Central} \ repository. \ ZeroC \ provides \ the \ following \ JAR \ files, \ all \ in \ group \ \verb|com.zeroc| with \ version 3.7.0: \ and \ an in \ group \ \verb|com.zeroc| with \ version 3.7.0: \ and \ an in \ group \ \verb|com.zeroc| with \ version 3.7.0: \ and \ an in \ group \ \verb|com.zeroc| with \ version 3.7.0: \ and \ an in \ group \ an$

Java

Name	Description
glacier2	Generated proxy and skeleton classes plus helper classes for connecting to the Glacier2 service
ice	Ice core
icebox	The IceBox server, and generated proxy and skeleton classes for connecting to IceBox
icebt	The IceBT plug-in (only for Android)

icediscovery	The IceDiscovery plug-in
icegrid	Generated proxy and skeleton classes for connecting to the IceGrid service
icelocatordiscovery	The IceLocatorDiscovery plug-in
icepatch2	Generated proxy and skeleton classes for connecting to the IcePatch2 service
icessl	The IceSSL plug-in
icestorm	Generated proxy and skeleton classes for connecting to the IceStorm service

Java Compat

Description
Generated proxy and skeleton classes plus helper classes for connecting to the Glacier2 service
Ice core and IceSSL plug-in
The IceBox server, and generated proxy and skeleton classes for connecting to IceBox
The IceBT plug-in (only for Android)
The IceDiscovery plug-in
Generated proxy and skeleton classes for connecting to the IceGrid service
The IceLocatorDiscovery plug-in
Generated proxy and skeleton classes for connecting to the IcePatch2 service
Generated proxy and skeleton classes for connecting to the IceStorm service

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Bzip2

Ice for Java supports protocol compression using the BZip2 implementation included with Apache Commons Compress. Compression is automatically enabled if these classes are present in your CLASSPATH. The Maven package id for the JAR file is as follows:

groupld	version	artifactId
org.apache.commons	1.14	commons-compress



These classes are a pure Java implementation of the bzip2 algorithm and therefore add significant latency to Ice requests.

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Using the Sample Programs

Sample programs are available at the ice-demos GitHub repository. You can browse this repository to see build and usage instructions for all supported programming languages. You can clone this repository with:

git clone -b 3.7 https://github.com/zeroc-ice/ice-demos.git
cd ice-demos

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