| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/ObjectStreamConstants.html) | [**Tree**](http://docs.google.com/package-tree.html) | [**Deprecated**](http://docs.google.com/deprecated-list.html) | [**Index**](http://docs.google.com/index-files/index-1.html) | [**Help**](http://docs.google.com/help-doc.html) | | --- | --- | --- | --- | --- | --- | --- | --- | | | ***Java™ Platform***  ***Standard Ed. 6*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [**PREV CLASS**](http://docs.google.com/java/io/ObjectStreamClass.html)   [**NEXT CLASS**](http://docs.google.com/java/io/ObjectStreamException.html) | [**FRAMES**](http://docs.google.com/index.html?java/io/ObjectStreamConstants.html)    [**NO FRAMES**](http://docs.google.com/ObjectStreamConstants.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | CONSTR | METHOD | DETAIL: [FIELD](#2et92p0) | CONSTR | METHOD |

## **java.io**

Interface ObjectStreamConstants

**All Known Implementing Classes:** [ObjectInputStream](http://docs.google.com/java/io/ObjectInputStream.html), [ObjectOutputStream](http://docs.google.com/java/io/ObjectOutputStream.html)

public interface **ObjectStreamConstants**

Constants written into the Object Serialization Stream.

**Since:** JDK 1.1

| **Field Summary** | |
| --- | --- |
| static int | [**baseWireHandle**](http://docs.google.com/java/io/ObjectStreamConstants.html#baseWireHandle)            First wire handle to be assigned. |
| static int | [**PROTOCOL\_VERSION\_1**](http://docs.google.com/java/io/ObjectStreamConstants.html#PROTOCOL_VERSION_1)            A Stream Protocol Version. |
| static int | [**PROTOCOL\_VERSION\_2**](http://docs.google.com/java/io/ObjectStreamConstants.html#PROTOCOL_VERSION_2)            A Stream Protocol Version. |
| static byte | [**SC\_BLOCK\_DATA**](http://docs.google.com/java/io/ObjectStreamConstants.html#SC_BLOCK_DATA)            Bit mask for ObjectStreamClass flag. |
| static byte | [**SC\_ENUM**](http://docs.google.com/java/io/ObjectStreamConstants.html#SC_ENUM)            Bit mask for ObjectStreamClass flag. |
| static byte | [**SC\_EXTERNALIZABLE**](http://docs.google.com/java/io/ObjectStreamConstants.html#SC_EXTERNALIZABLE)            Bit mask for ObjectStreamClass flag. |
| static byte | [**SC\_SERIALIZABLE**](http://docs.google.com/java/io/ObjectStreamConstants.html#SC_SERIALIZABLE)            Bit mask for ObjectStreamClass flag. |
| static byte | [**SC\_WRITE\_METHOD**](http://docs.google.com/java/io/ObjectStreamConstants.html#SC_WRITE_METHOD)            Bit mask for ObjectStreamClass flag. |
| static short | [**STREAM\_MAGIC**](http://docs.google.com/java/io/ObjectStreamConstants.html#STREAM_MAGIC)            Magic number that is written to the stream header. |
| static short | [**STREAM\_VERSION**](http://docs.google.com/java/io/ObjectStreamConstants.html#STREAM_VERSION)            Version number that is written to the stream header. |
| static [SerializablePermission](http://docs.google.com/java/io/SerializablePermission.html) | [**SUBCLASS\_IMPLEMENTATION\_PERMISSION**](http://docs.google.com/java/io/ObjectStreamConstants.html#SUBCLASS_IMPLEMENTATION_PERMISSION)            Enable overriding of readObject and writeObject. |
| static [SerializablePermission](http://docs.google.com/java/io/SerializablePermission.html) | [**SUBSTITUTION\_PERMISSION**](http://docs.google.com/java/io/ObjectStreamConstants.html#SUBSTITUTION_PERMISSION)            Enable substitution of one object for another during serialization/deserialization. |
| static byte | [**TC\_ARRAY**](http://docs.google.com/java/io/ObjectStreamConstants.html#TC_ARRAY)            new Array. |
| static byte | [**TC\_BASE**](http://docs.google.com/java/io/ObjectStreamConstants.html#TC_BASE)            First tag value. |
| static byte | [**TC\_BLOCKDATA**](http://docs.google.com/java/io/ObjectStreamConstants.html#TC_BLOCKDATA)            Block of optional data. |
| static byte | [**TC\_BLOCKDATALONG**](http://docs.google.com/java/io/ObjectStreamConstants.html#TC_BLOCKDATALONG)            long Block data. |
| static byte | [**TC\_CLASS**](http://docs.google.com/java/io/ObjectStreamConstants.html#TC_CLASS)            Reference to Class. |
| static byte | [**TC\_CLASSDESC**](http://docs.google.com/java/io/ObjectStreamConstants.html#TC_CLASSDESC)            new Class Descriptor. |
| static byte | [**TC\_ENDBLOCKDATA**](http://docs.google.com/java/io/ObjectStreamConstants.html#TC_ENDBLOCKDATA)            End of optional block data blocks for an object. |
| static byte | [**TC\_ENUM**](http://docs.google.com/java/io/ObjectStreamConstants.html#TC_ENUM)            new Enum constant. |
| static byte | [**TC\_EXCEPTION**](http://docs.google.com/java/io/ObjectStreamConstants.html#TC_EXCEPTION)            Exception during write. |
| static byte | [**TC\_LONGSTRING**](http://docs.google.com/java/io/ObjectStreamConstants.html#TC_LONGSTRING)            Long string. |
| static byte | [**TC\_MAX**](http://docs.google.com/java/io/ObjectStreamConstants.html#TC_MAX)            Last tag value. |
| static byte | [**TC\_NULL**](http://docs.google.com/java/io/ObjectStreamConstants.html#TC_NULL)            Null object reference. |
| static byte | [**TC\_OBJECT**](http://docs.google.com/java/io/ObjectStreamConstants.html#TC_OBJECT)            new Object. |
| static byte | [**TC\_PROXYCLASSDESC**](http://docs.google.com/java/io/ObjectStreamConstants.html#TC_PROXYCLASSDESC)            new Proxy Class Descriptor. |
| static byte | [**TC\_REFERENCE**](http://docs.google.com/java/io/ObjectStreamConstants.html#TC_REFERENCE)            Reference to an object already written into the stream. |
| static byte | [**TC\_RESET**](http://docs.google.com/java/io/ObjectStreamConstants.html#TC_RESET)            Reset stream context. |
| static byte | [**TC\_STRING**](http://docs.google.com/java/io/ObjectStreamConstants.html#TC_STRING)            new String. |

| **Field Detail** |
| --- |

### STREAM\_MAGIC

static final short **STREAM\_MAGIC**

Magic number that is written to the stream header.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.io.ObjectStreamConstants.STREAM_MAGIC)

### STREAM\_VERSION

static final short **STREAM\_VERSION**

Version number that is written to the stream header.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.io.ObjectStreamConstants.STREAM_VERSION)

### TC\_BASE

static final byte **TC\_BASE**

First tag value.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.io.ObjectStreamConstants.TC_BASE)

### TC\_NULL

static final byte **TC\_NULL**

Null object reference.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.io.ObjectStreamConstants.TC_NULL)

### TC\_REFERENCE

static final byte **TC\_REFERENCE**

Reference to an object already written into the stream.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.io.ObjectStreamConstants.TC_REFERENCE)

### TC\_CLASSDESC

static final byte **TC\_CLASSDESC**

new Class Descriptor.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.io.ObjectStreamConstants.TC_CLASSDESC)

### TC\_OBJECT

static final byte **TC\_OBJECT**

new Object.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.io.ObjectStreamConstants.TC_OBJECT)

### TC\_STRING

static final byte **TC\_STRING**

new String.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.io.ObjectStreamConstants.TC_STRING)

### TC\_ARRAY

static final byte **TC\_ARRAY**

new Array.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.io.ObjectStreamConstants.TC_ARRAY)

### TC\_CLASS

static final byte **TC\_CLASS**

Reference to Class.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.io.ObjectStreamConstants.TC_CLASS)

### TC\_BLOCKDATA

static final byte **TC\_BLOCKDATA**

Block of optional data. Byte following tag indicates number of bytes in this block data.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.io.ObjectStreamConstants.TC_BLOCKDATA)

### TC\_ENDBLOCKDATA

static final byte **TC\_ENDBLOCKDATA**

End of optional block data blocks for an object.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.io.ObjectStreamConstants.TC_ENDBLOCKDATA)

### TC\_RESET

static final byte **TC\_RESET**

Reset stream context. All handles written into stream are reset.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.io.ObjectStreamConstants.TC_RESET)

### TC\_BLOCKDATALONG

static final byte **TC\_BLOCKDATALONG**

long Block data. The long following the tag indicates the number of bytes in this block data.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.io.ObjectStreamConstants.TC_BLOCKDATALONG)

### TC\_EXCEPTION

static final byte **TC\_EXCEPTION**

Exception during write.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.io.ObjectStreamConstants.TC_EXCEPTION)

### TC\_LONGSTRING

static final byte **TC\_LONGSTRING**

Long string.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.io.ObjectStreamConstants.TC_LONGSTRING)

### TC\_PROXYCLASSDESC

static final byte **TC\_PROXYCLASSDESC**

new Proxy Class Descriptor.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.io.ObjectStreamConstants.TC_PROXYCLASSDESC)

### TC\_ENUM

static final byte **TC\_ENUM**

new Enum constant.

**Since:** 1.5 **See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.io.ObjectStreamConstants.TC_ENUM)

### TC\_MAX

static final byte **TC\_MAX**

Last tag value.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.io.ObjectStreamConstants.TC_MAX)

### baseWireHandle

static final int **baseWireHandle**

First wire handle to be assigned.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.io.ObjectStreamConstants.baseWireHandle)

### SC\_WRITE\_METHOD

static final byte **SC\_WRITE\_METHOD**

Bit mask for ObjectStreamClass flag. Indicates a Serializable class defines its own writeObject method.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.io.ObjectStreamConstants.SC_WRITE_METHOD)

### SC\_BLOCK\_DATA

static final byte **SC\_BLOCK\_DATA**

Bit mask for ObjectStreamClass flag. Indicates Externalizable data written in Block Data mode. Added for PROTOCOL\_VERSION\_2.

**Since:** 1.2 **See Also:**[PROTOCOL\_VERSION\_2](http://docs.google.com/java/io/ObjectStreamConstants.html#PROTOCOL_VERSION_2), [Constant Field Values](http://docs.google.com/constant-values.html#java.io.ObjectStreamConstants.SC_BLOCK_DATA)

### SC\_SERIALIZABLE

static final byte **SC\_SERIALIZABLE**

Bit mask for ObjectStreamClass flag. Indicates class is Serializable.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.io.ObjectStreamConstants.SC_SERIALIZABLE)

### SC\_EXTERNALIZABLE

static final byte **SC\_EXTERNALIZABLE**

Bit mask for ObjectStreamClass flag. Indicates class is Externalizable.

**See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.io.ObjectStreamConstants.SC_EXTERNALIZABLE)

### SC\_ENUM

static final byte **SC\_ENUM**

Bit mask for ObjectStreamClass flag. Indicates class is an enum type.

**Since:** 1.5 **See Also:**[Constant Field Values](http://docs.google.com/constant-values.html#java.io.ObjectStreamConstants.SC_ENUM)

### SUBSTITUTION\_PERMISSION

static final [SerializablePermission](http://docs.google.com/java/io/SerializablePermission.html) **SUBSTITUTION\_PERMISSION**

Enable substitution of one object for another during serialization/deserialization.

**Since:** 1.2 **See Also:**[ObjectOutputStream.enableReplaceObject(boolean)](http://docs.google.com/java/io/ObjectOutputStream.html#enableReplaceObject(boolean)), [ObjectInputStream.enableResolveObject(boolean)](http://docs.google.com/java/io/ObjectInputStream.html#enableResolveObject(boolean))

### SUBCLASS\_IMPLEMENTATION\_PERMISSION

static final [SerializablePermission](http://docs.google.com/java/io/SerializablePermission.html) **SUBCLASS\_IMPLEMENTATION\_PERMISSION**

Enable overriding of readObject and writeObject.

**Since:** 1.2 **See Also:**[ObjectOutputStream.writeObjectOverride(Object)](http://docs.google.com/java/io/ObjectOutputStream.html#writeObjectOverride(java.lang.Object)), [ObjectInputStream.readObjectOverride()](http://docs.google.com/java/io/ObjectInputStream.html#readObjectOverride())

### PROTOCOL\_VERSION\_1

static final int **PROTOCOL\_VERSION\_1**

A Stream Protocol Version.

All externalizable data is written in JDK 1.1 external data format after calling this method. This version is needed to write streams containing Externalizable data that can be read by pre-JDK 1.1.6 JVMs.

**Since:** 1.2 **See Also:**[ObjectOutputStream.useProtocolVersion(int)](http://docs.google.com/java/io/ObjectOutputStream.html#useProtocolVersion(int)), [Constant Field Values](http://docs.google.com/constant-values.html#java.io.ObjectStreamConstants.PROTOCOL_VERSION_1)

### PROTOCOL\_VERSION\_2

static final int **PROTOCOL\_VERSION\_2**

A Stream Protocol Version.

This protocol is written by JVM 1.2. Externalizable data is written in block data mode and is terminated with TC\_ENDBLOCKDATA. Externalizable classdescriptor flags has SC\_BLOCK\_DATA enabled. JVM 1.1.6 and greater can read this format change. Enables writing a nonSerializable class descriptor into the stream. The serialVersionUID of a nonSerializable class is set to 0L.

**Since:** 1.2 **See Also:**[ObjectOutputStream.useProtocolVersion(int)](http://docs.google.com/java/io/ObjectOutputStream.html#useProtocolVersion(int)), [SC\_BLOCK\_DATA](http://docs.google.com/java/io/ObjectStreamConstants.html#SC_BLOCK_DATA), [Constant Field Values](http://docs.google.com/constant-values.html#java.io.ObjectStreamConstants.PROTOCOL_VERSION_2)

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/ObjectStreamConstants.html) | [**Tree**](http://docs.google.com/package-tree.html) | [**Deprecated**](http://docs.google.com/deprecated-list.html) | [**Index**](http://docs.google.com/index-files/index-1.html) | [**Help**](http://docs.google.com/help-doc.html) | | --- | --- | --- | --- | --- | --- | --- | --- | | | ***Java™ Platform***  ***Standard Ed. 6*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [**PREV CLASS**](http://docs.google.com/java/io/ObjectStreamClass.html)   [**NEXT CLASS**](http://docs.google.com/java/io/ObjectStreamException.html) | [**FRAMES**](http://docs.google.com/index.html?java/io/ObjectStreamConstants.html)    [**NO FRAMES**](http://docs.google.com/ObjectStreamConstants.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | CONSTR | METHOD | DETAIL: [FIELD](#2et92p0) | CONSTR | METHOD |

[Submit a bug or feature](http://bugs.sun.com/services/bugreport/index.jsp)

For further API reference and developer documentation, see [Java SE Developer Documentation](http://docs.google.com/webnotes/devdocs-vs-specs.html). That documentation contains more detailed, developer-targeted descriptions, with conceptual overviews, definitions of terms, workarounds, and working code examples.

Copyright 2006 Sun Microsystems, Inc. All rights reserved. Use is subject to [license terms](http://docs.google.com/legal/license.html). Also see the [documentation redistribution policy](http://java.sun.com/docs/redist.html).