| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/GatheringByteChannel.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/nio/channels/FileLockInterruptionException.html)   [**NEXT CLASS**](http://docs.google.com/java/nio/channels/IllegalBlockingModeException.html) | [**FRAMES**](http://docs.google.com/index.html?java/nio/channels/GatheringByteChannel.html)    [**NO FRAMES**](http://docs.google.com/GatheringByteChannel.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | CONSTR | [METHOD](#3znysh7) | DETAIL: FIELD | CONSTR | [METHOD](#3dy6vkm) |

## **java.nio.channels**

Interface GatheringByteChannel

**All Superinterfaces:** [Channel](http://docs.google.com/java/nio/channels/Channel.html), [Closeable](http://docs.google.com/java/io/Closeable.html), [WritableByteChannel](http://docs.google.com/java/nio/channels/WritableByteChannel.html) **All Known Implementing Classes:** [DatagramChannel](http://docs.google.com/java/nio/channels/DatagramChannel.html), [FileChannel](http://docs.google.com/java/nio/channels/FileChannel.html), [Pipe.SinkChannel](http://docs.google.com/java/nio/channels/Pipe.SinkChannel.html), [SocketChannel](http://docs.google.com/java/nio/channels/SocketChannel.html)

public interface **GatheringByteChannel**extends [WritableByteChannel](http://docs.google.com/java/nio/channels/WritableByteChannel.html)

A channel that can write bytes from a sequence of buffers.

A *gathering* write operation writes, in a single invocation, a sequence of bytes from one or more of a given sequence of buffers. Gathering writes are often useful when implementing network protocols or file formats that, for example, group data into segments consisting of one or more fixed-length headers followed by a variable-length body. Similar *scattering* read operations are defined in the [ScatteringByteChannel](http://docs.google.com/java/nio/channels/ScatteringByteChannel.html) interface.

**Since:** 1.4

| **Method Summary** | |
| --- | --- |
| long | [**write**](http://docs.google.com/java/nio/channels/GatheringByteChannel.html#write(java.nio.ByteBuffer%5B%5D))([ByteBuffer](http://docs.google.com/java/nio/ByteBuffer.html)[] srcs)            Writes a sequence of bytes to this channel from the given buffers. |
| long | [**write**](http://docs.google.com/java/nio/channels/GatheringByteChannel.html#write(java.nio.ByteBuffer%5B%5D,%20int,%20int))([ByteBuffer](http://docs.google.com/java/nio/ByteBuffer.html)[] srcs, int offset, int length)            Writes a sequence of bytes to this channel from a subsequence of the given buffers. |

| **Methods inherited from interface java.nio.channels.**[**WritableByteChannel**](http://docs.google.com/java/nio/channels/WritableByteChannel.html) |
| --- |
| [write](http://docs.google.com/java/nio/channels/WritableByteChannel.html#write(java.nio.ByteBuffer)) |

| **Methods inherited from interface java.nio.channels.**[**Channel**](http://docs.google.com/java/nio/channels/Channel.html) |
| --- |
| [close](http://docs.google.com/java/nio/channels/Channel.html#close()), [isOpen](http://docs.google.com/java/nio/channels/Channel.html#isOpen()) |

| **Method Detail** |
| --- |

### write

long **write**([ByteBuffer](http://docs.google.com/java/nio/ByteBuffer.html)[] srcs,  
 int offset,  
 int length)  
 throws [IOException](http://docs.google.com/java/io/IOException.html)

Writes a sequence of bytes to this channel from a subsequence of the given buffers.

An attempt is made to write up to *r* bytes to this channel, where *r* is the total number of bytes remaining in the specified subsequence of the given buffer array, that is,

srcs[offset].remaining()  
 + srcs[offset+1].remaining()  
 + ... + srcs[offset+length-1].remaining()

at the moment that this method is invoked.

Suppose that a byte sequence of length *n* is written, where 0 <= *n* <= *r*. Up to the first srcs[offset].remaining() bytes of this sequence are written from buffer srcs[offset], up to the next srcs[offset+1].remaining() bytes are written from buffer srcs[offset+1], and so forth, until the entire byte sequence is written. As many bytes as possible are written from each buffer, hence the final position of each updated buffer, except the last updated buffer, is guaranteed to be equal to that buffer's limit.

Unless otherwise specified, a write operation will return only after writing all of the *r* requested bytes. Some types of channels, depending upon their state, may write only some of the bytes or possibly none at all. A socket channel in non-blocking mode, for example, cannot write any more bytes than are free in the socket's output buffer.

This method may be invoked at any time. If another thread has already initiated a write operation upon this channel, however, then an invocation of this method will block until the first operation is complete.

**Parameters:**srcs - The buffers from which bytes are to be retrievedoffset - The offset within the buffer array of the first buffer from which bytes are to be retrieved; must be non-negative and no larger than srcs.lengthlength - The maximum number of buffers to be accessed; must be non-negative and no larger than srcs.length - offset **Returns:**The number of bytes written, possibly zero **Throws:** [IndexOutOfBoundsException](http://docs.google.com/java/lang/IndexOutOfBoundsException.html) - If the preconditions on the offset and length parameters do not hold [NonWritableChannelException](http://docs.google.com/java/nio/channels/NonWritableChannelException.html) - If this channel was not opened for writing [ClosedChannelException](http://docs.google.com/java/nio/channels/ClosedChannelException.html) - If this channel is closed [AsynchronousCloseException](http://docs.google.com/java/nio/channels/AsynchronousCloseException.html) - If another thread closes this channel while the write operation is in progress [ClosedByInterruptException](http://docs.google.com/java/nio/channels/ClosedByInterruptException.html) - If another thread interrupts the current thread while the write operation is in progress, thereby closing the channel and setting the current thread's interrupt status [IOException](http://docs.google.com/java/io/IOException.html) - If some other I/O error occurs

### write

long **write**([ByteBuffer](http://docs.google.com/java/nio/ByteBuffer.html)[] srcs)  
 throws [IOException](http://docs.google.com/java/io/IOException.html)

Writes a sequence of bytes to this channel from the given buffers.

An invocation of this method of the form c.write(srcs) behaves in exactly the same manner as the invocation

c.write(srcs, 0, srcs.length);

**Parameters:**srcs - The buffers from which bytes are to be retrieved **Returns:**The number of bytes written, possibly zero **Throws:** [NonWritableChannelException](http://docs.google.com/java/nio/channels/NonWritableChannelException.html) - If this channel was not opened for writing [ClosedChannelException](http://docs.google.com/java/nio/channels/ClosedChannelException.html) - If this channel is closed [AsynchronousCloseException](http://docs.google.com/java/nio/channels/AsynchronousCloseException.html) - If another thread closes this channel while the write operation is in progress [ClosedByInterruptException](http://docs.google.com/java/nio/channels/ClosedByInterruptException.html) - If another thread interrupts the current thread while the write operation is in progress, thereby closing the channel and setting the current thread's interrupt status [IOException](http://docs.google.com/java/io/IOException.html) - If some other I/O error occurs

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[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.

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