| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/DataHandler.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/javax/activation/DataContentHandlerFactory.html)   [**NEXT CLASS**](http://docs.google.com/javax/activation/DataSource.html) | [**FRAMES**](http://docs.google.com/index.html?javax/activation/DataHandler.html)    [**NO FRAMES**](http://docs.google.com/DataHandler.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | [CONSTR](#3znysh7) | [METHOD](#2et92p0) | DETAIL: FIELD | [CONSTR](#3dy6vkm) | [METHOD](#17dp8vu) |

## **javax.activation**

Class DataHandler

[java.lang.Object](http://docs.google.com/java/lang/Object.html)  
 **javax.activation.DataHandler**

**All Implemented Interfaces:** [Transferable](http://docs.google.com/java/awt/datatransfer/Transferable.html)

public class **DataHandler**extends [Object](http://docs.google.com/java/lang/Object.html)implements [Transferable](http://docs.google.com/java/awt/datatransfer/Transferable.html)

The DataHandler class provides a consistent interface to data available in many different sources and formats. It manages simple stream to string conversions and related operations using DataContentHandlers. It provides access to commands that can operate on the data. The commands are found using a CommandMap.

**DataHandler and the Transferable Interface**

DataHandler implements the Transferable interface so that data can be used in AWT data transfer operations, such as cut and paste and drag and drop. The implementation of the Transferable interface relies on the availability of an installed DataContentHandler object corresponding to the MIME type of the data represented in the specific instance of the DataHandler.

**DataHandler and CommandMaps**

The DataHandler keeps track of the current CommandMap that it uses to service requests for commands (getCommand, getAllCommands, getPreferredCommands). Each instance of a DataHandler may have a CommandMap associated with it using the setCommandMap method. If a CommandMap was not set, DataHandler calls the getDefaultCommandMap method in CommandMap and uses the value it returns. See *CommandMap* for more information.

**DataHandler and URLs**

The current DataHandler implementation creates a private instance of URLDataSource when it is constructed with a URL.

**Since:** 1.6 **See Also:**[CommandMap](http://docs.google.com/javax/activation/CommandMap.html), [DataContentHandler](http://docs.google.com/javax/activation/DataContentHandler.html), [DataSource](http://docs.google.com/javax/activation/DataSource.html), [URLDataSource](http://docs.google.com/javax/activation/URLDataSource.html)

| **Constructor Summary** | |
| --- | --- |
| [**DataHandler**](http://docs.google.com/javax/activation/DataHandler.html#DataHandler(javax.activation.DataSource))([DataSource](http://docs.google.com/javax/activation/DataSource.html) ds)            Create a DataHandler instance referencing the specified DataSource. |
| [**DataHandler**](http://docs.google.com/javax/activation/DataHandler.html#DataHandler(java.lang.Object,%20java.lang.String))([Object](http://docs.google.com/java/lang/Object.html) obj, [String](http://docs.google.com/java/lang/String.html) mimeType)            Create a DataHandler instance representing an object of this MIME type. |
| [**DataHandler**](http://docs.google.com/javax/activation/DataHandler.html#DataHandler(java.net.URL))([URL](http://docs.google.com/java/net/URL.html) url)            Create a DataHandler instance referencing a URL. |

| **Method Summary** | |
| --- | --- |
| [CommandInfo](http://docs.google.com/javax/activation/CommandInfo.html)[] | [**getAllCommands**](http://docs.google.com/javax/activation/DataHandler.html#getAllCommands())()            Return all the commands for this type of data. |
| [Object](http://docs.google.com/java/lang/Object.html) | [**getBean**](http://docs.google.com/javax/activation/DataHandler.html#getBean(javax.activation.CommandInfo))([CommandInfo](http://docs.google.com/javax/activation/CommandInfo.html) cmdinfo)            A convenience method that takes a CommandInfo object and instantiates the corresponding command, usually a JavaBean component. |
| [CommandInfo](http://docs.google.com/javax/activation/CommandInfo.html) | [**getCommand**](http://docs.google.com/javax/activation/DataHandler.html#getCommand(java.lang.String))([String](http://docs.google.com/java/lang/String.html) cmdName)            Get the command *cmdName*. |
| [Object](http://docs.google.com/java/lang/Object.html) | [**getContent**](http://docs.google.com/javax/activation/DataHandler.html#getContent())()            Return the data in its preferred Object form. |
| [String](http://docs.google.com/java/lang/String.html) | [**getContentType**](http://docs.google.com/javax/activation/DataHandler.html#getContentType())()            Return the MIME type of this object as retrieved from the source object. |
| [DataSource](http://docs.google.com/javax/activation/DataSource.html) | [**getDataSource**](http://docs.google.com/javax/activation/DataHandler.html#getDataSource())()            Return the DataSource associated with this instance of DataHandler. |
| [InputStream](http://docs.google.com/java/io/InputStream.html) | [**getInputStream**](http://docs.google.com/javax/activation/DataHandler.html#getInputStream())()            Get the InputStream for this object. |
| [String](http://docs.google.com/java/lang/String.html) | [**getName**](http://docs.google.com/javax/activation/DataHandler.html#getName())()            Return the name of the data object. |
| [OutputStream](http://docs.google.com/java/io/OutputStream.html) | [**getOutputStream**](http://docs.google.com/javax/activation/DataHandler.html#getOutputStream())()            Get an OutputStream for this DataHandler to allow overwriting the underlying data. |
| [CommandInfo](http://docs.google.com/javax/activation/CommandInfo.html)[] | [**getPreferredCommands**](http://docs.google.com/javax/activation/DataHandler.html#getPreferredCommands())()            Return the *preferred* commands for this type of data. |
| [Object](http://docs.google.com/java/lang/Object.html) | [**getTransferData**](http://docs.google.com/javax/activation/DataHandler.html#getTransferData(java.awt.datatransfer.DataFlavor))([DataFlavor](http://docs.google.com/java/awt/datatransfer/DataFlavor.html) flavor)            Returns an object that represents the data to be transferred. |
| [DataFlavor](http://docs.google.com/java/awt/datatransfer/DataFlavor.html)[] | [**getTransferDataFlavors**](http://docs.google.com/javax/activation/DataHandler.html#getTransferDataFlavors())()            Return the DataFlavors in which this data is available. |
| boolean | [**isDataFlavorSupported**](http://docs.google.com/javax/activation/DataHandler.html#isDataFlavorSupported(java.awt.datatransfer.DataFlavor))([DataFlavor](http://docs.google.com/java/awt/datatransfer/DataFlavor.html) flavor)            Returns whether the specified data flavor is supported for this object. |
| void | [**setCommandMap**](http://docs.google.com/javax/activation/DataHandler.html#setCommandMap(javax.activation.CommandMap))([CommandMap](http://docs.google.com/javax/activation/CommandMap.html) commandMap)            Set the CommandMap for use by this DataHandler. |
| static void | [**setDataContentHandlerFactory**](http://docs.google.com/javax/activation/DataHandler.html#setDataContentHandlerFactory(javax.activation.DataContentHandlerFactory))([DataContentHandlerFactory](http://docs.google.com/javax/activation/DataContentHandlerFactory.html) newFactory)            Sets the DataContentHandlerFactory. |
| void | [**writeTo**](http://docs.google.com/javax/activation/DataHandler.html#writeTo(java.io.OutputStream))([OutputStream](http://docs.google.com/java/io/OutputStream.html) os)            Write the data to an OutputStream. |

| **Methods inherited from class java.lang.**[**Object**](http://docs.google.com/java/lang/Object.html) |
| --- |
| [clone](http://docs.google.com/java/lang/Object.html#clone()), [equals](http://docs.google.com/java/lang/Object.html#equals(java.lang.Object)), [finalize](http://docs.google.com/java/lang/Object.html#finalize()), [getClass](http://docs.google.com/java/lang/Object.html#getClass()), [hashCode](http://docs.google.com/java/lang/Object.html#hashCode()), [notify](http://docs.google.com/java/lang/Object.html#notify()), [notifyAll](http://docs.google.com/java/lang/Object.html#notifyAll()), [toString](http://docs.google.com/java/lang/Object.html#toString()), [wait](http://docs.google.com/java/lang/Object.html#wait()), [wait](http://docs.google.com/java/lang/Object.html#wait(long)), [wait](http://docs.google.com/java/lang/Object.html#wait(long,%20int)) |

| **Constructor Detail** |
| --- |

### DataHandler

public **DataHandler**([DataSource](http://docs.google.com/javax/activation/DataSource.html) ds)

Create a DataHandler instance referencing the specified DataSource. The data exists in a byte stream form. The DataSource will provide an InputStream to access the data.

**Parameters:**ds - the DataSource

### DataHandler

public **DataHandler**([Object](http://docs.google.com/java/lang/Object.html) obj,  
 [String](http://docs.google.com/java/lang/String.html) mimeType)

Create a DataHandler instance representing an object of this MIME type. This constructor is used when the application already has an in-memory representation of the data in the form of a Java Object.

**Parameters:**obj - the Java ObjectmimeType - the MIME type of the object

### DataHandler

public **DataHandler**([URL](http://docs.google.com/java/net/URL.html) url)

Create a DataHandler instance referencing a URL. The DataHandler internally creates a URLDataSource instance to represent the URL.

**Parameters:**url - a URL object

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

### getDataSource

public [DataSource](http://docs.google.com/javax/activation/DataSource.html) **getDataSource**()

Return the DataSource associated with this instance of DataHandler.

For DataHandlers that have been instantiated with a DataSource, this method returns the DataSource that was used to create the DataHandler object. In other cases the DataHandler constructs a DataSource from the data used to construct the DataHandler. DataSources created for DataHandlers **not** instantiated with a DataSource are cached for performance reasons.

**Returns:**a valid DataSource object for this DataHandler

### getName

public [String](http://docs.google.com/java/lang/String.html) **getName**()

Return the name of the data object. If this DataHandler was created with a DataSource, this method calls through to the DataSource.getName method, otherwise it returns *null*.

**Returns:**the name of the object

### getContentType

public [String](http://docs.google.com/java/lang/String.html) **getContentType**()

Return the MIME type of this object as retrieved from the source object. Note that this is the *full* type with parameters.

**Returns:**the MIME type

### getInputStream

public [InputStream](http://docs.google.com/java/io/InputStream.html) **getInputStream**()  
 throws [IOException](http://docs.google.com/java/io/IOException.html)

Get the InputStream for this object.

For DataHandlers instantiated with a DataSource, the DataHandler calls the DataSource.getInputStream method and returns the result to the caller.

For DataHandlers instantiated with an Object, the DataHandler first attempts to find a DataContentHandler for the Object. If the DataHandler can not find a DataContentHandler for this MIME type, it throws an UnsupportedDataTypeException. If it is successful, it creates a pipe and a thread. The thread uses the DataContentHandler's writeTo method to write the stream data into one end of the pipe. The other end of the pipe is returned to the caller. Because a thread is created to copy the data, IOExceptions that may occur during the copy can not be propagated back to the caller. The result is an empty stream.

**Returns:**the InputStream representing this data **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - if an I/O error occurs**See Also:**[DataContentHandler.writeTo(java.lang.Object, java.lang.String, java.io.OutputStream)](http://docs.google.com/javax/activation/DataContentHandler.html#writeTo(java.lang.Object,%20java.lang.String,%20java.io.OutputStream)), [UnsupportedDataTypeException](http://docs.google.com/javax/activation/UnsupportedDataTypeException.html)

### writeTo

public void **writeTo**([OutputStream](http://docs.google.com/java/io/OutputStream.html) os)  
 throws [IOException](http://docs.google.com/java/io/IOException.html)

Write the data to an OutputStream.

If the DataHandler was created with a DataSource, writeTo retrieves the InputStream and copies the bytes from the InputStream to the OutputStream passed in.

If the DataHandler was created with an object, writeTo retrieves the DataContentHandler for the object's type. If the DataContentHandler was found, it calls the writeTo method on the DataContentHandler.

**Parameters:**os - the OutputStream to write to **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - if an I/O error occurs

### getOutputStream

public [OutputStream](http://docs.google.com/java/io/OutputStream.html) **getOutputStream**()  
 throws [IOException](http://docs.google.com/java/io/IOException.html)

Get an OutputStream for this DataHandler to allow overwriting the underlying data. If the DataHandler was created with a DataSource, the DataSource's getOutputStream method is called. Otherwise, null is returned.

**Returns:**the OutputStream **Throws:** [IOException](http://docs.google.com/java/io/IOException.html)**See Also:**[DataSource.getOutputStream()](http://docs.google.com/javax/activation/DataSource.html#getOutputStream()), [URLDataSource](http://docs.google.com/javax/activation/URLDataSource.html)

### getTransferDataFlavors

public [DataFlavor](http://docs.google.com/java/awt/datatransfer/DataFlavor.html)[] **getTransferDataFlavors**()

Return the DataFlavors in which this data is available.

Returns an array of DataFlavor objects indicating the flavors the data can be provided in. The array is usually ordered according to preference for providing the data, from most richly descriptive to least richly descriptive.

The DataHandler attempts to find a DataContentHandler that corresponds to the MIME type of the data. If one is located, the DataHandler calls the DataContentHandler's getTransferDataFlavors method.

If a DataContentHandler can *not* be located, and if the DataHandler was created with a DataSource (or URL), one DataFlavor is returned that represents this object's MIME type and the java.io.InputStream class. If the DataHandler was created with an object and a MIME type, getTransferDataFlavors returns one DataFlavor that represents this object's MIME type and the object's class.

**Specified by:**[getTransferDataFlavors](http://docs.google.com/java/awt/datatransfer/Transferable.html#getTransferDataFlavors()) in interface [Transferable](http://docs.google.com/java/awt/datatransfer/Transferable.html) **Returns:**an array of data flavors in which this data can be transferred**See Also:**[DataContentHandler.getTransferDataFlavors()](http://docs.google.com/javax/activation/DataContentHandler.html#getTransferDataFlavors())

### isDataFlavorSupported

public boolean **isDataFlavorSupported**([DataFlavor](http://docs.google.com/java/awt/datatransfer/DataFlavor.html) flavor)

Returns whether the specified data flavor is supported for this object.

This method iterates through the DataFlavors returned from getTransferDataFlavors, comparing each with the specified flavor.

**Specified by:**[isDataFlavorSupported](http://docs.google.com/java/awt/datatransfer/Transferable.html#isDataFlavorSupported(java.awt.datatransfer.DataFlavor)) in interface [Transferable](http://docs.google.com/java/awt/datatransfer/Transferable.html) **Parameters:**flavor - the requested flavor for the data **Returns:**true if the data flavor is supported**See Also:**[getTransferDataFlavors()](http://docs.google.com/javax/activation/DataHandler.html#getTransferDataFlavors())

### getTransferData

public [Object](http://docs.google.com/java/lang/Object.html) **getTransferData**([DataFlavor](http://docs.google.com/java/awt/datatransfer/DataFlavor.html) flavor)  
 throws [UnsupportedFlavorException](http://docs.google.com/java/awt/datatransfer/UnsupportedFlavorException.html),  
 [IOException](http://docs.google.com/java/io/IOException.html)

Returns an object that represents the data to be transferred. The class of the object returned is defined by the representation class of the data flavor.

**For DataHandler's created with DataSources or URLs:**

The DataHandler attempts to locate a DataContentHandler for this MIME type. If one is found, the passed in DataFlavor and the type of the data are passed to its getTransferData method. If the DataHandler fails to locate a DataContentHandler and the flavor specifies this object's MIME type and the java.io.InputStream class, this object's InputStream is returned. Otherwise it throws an UnsupportedFlavorException.

**For DataHandler's created with Objects:**

The DataHandler attempts to locate a DataContentHandler for this MIME type. If one is found, the passed in DataFlavor and the type of the data are passed to its getTransferData method. If the DataHandler fails to locate a DataContentHandler and the flavor specifies this object's MIME type and its class, this DataHandler's referenced object is returned. Otherwise it throws an UnsupportedFlavorException.

**Specified by:**[getTransferData](http://docs.google.com/java/awt/datatransfer/Transferable.html#getTransferData(java.awt.datatransfer.DataFlavor)) in interface [Transferable](http://docs.google.com/java/awt/datatransfer/Transferable.html) **Parameters:**flavor - the requested flavor for the data **Returns:**the object **Throws:** [UnsupportedFlavorException](http://docs.google.com/java/awt/datatransfer/UnsupportedFlavorException.html) - if the data could not be converted to the requested flavor [IOException](http://docs.google.com/java/io/IOException.html) - if an I/O error occurs**See Also:**[ActivationDataFlavor](http://docs.google.com/javax/activation/ActivationDataFlavor.html)

### setCommandMap

public void **setCommandMap**([CommandMap](http://docs.google.com/javax/activation/CommandMap.html) commandMap)

Set the CommandMap for use by this DataHandler. Setting it to null causes the CommandMap to revert to the CommandMap returned by the CommandMap.getDefaultCommandMap method. Changing the CommandMap, or setting it to null, clears out any data cached from the previous CommandMap.

**Parameters:**commandMap - the CommandMap to use in this DataHandler**See Also:**[CommandMap.setDefaultCommandMap(javax.activation.CommandMap)](http://docs.google.com/javax/activation/CommandMap.html#setDefaultCommandMap(javax.activation.CommandMap))

### getPreferredCommands

public [CommandInfo](http://docs.google.com/javax/activation/CommandInfo.html)[] **getPreferredCommands**()

Return the *preferred* commands for this type of data. This method calls the getPreferredCommands method in the CommandMap associated with this instance of DataHandler. This method returns an array that represents a subset of available commands. In cases where multiple commands for the MIME type represented by this DataHandler are present, the installed CommandMap chooses the appropriate commands.

**Returns:**the CommandInfo objects representing the preferred commands**See Also:**[CommandMap.getPreferredCommands(java.lang.String)](http://docs.google.com/javax/activation/CommandMap.html#getPreferredCommands(java.lang.String))

### getAllCommands

public [CommandInfo](http://docs.google.com/javax/activation/CommandInfo.html)[] **getAllCommands**()

Return all the commands for this type of data. This method returns an array containing all commands for the type of data represented by this DataHandler. The MIME type for the underlying data represented by this DataHandler is used to call through to the getAllCommands method of the CommandMap associated with this DataHandler.

**Returns:**the CommandInfo objects representing all the commands**See Also:**[CommandMap.getAllCommands(java.lang.String)](http://docs.google.com/javax/activation/CommandMap.html#getAllCommands(java.lang.String))

### getCommand

public [CommandInfo](http://docs.google.com/javax/activation/CommandInfo.html) **getCommand**([String](http://docs.google.com/java/lang/String.html) cmdName)

Get the command *cmdName*. Use the search semantics as defined by the CommandMap installed in this DataHandler. The MIME type for the underlying data represented by this DataHandler is used to call through to the getCommand method of the CommandMap associated with this DataHandler.

**Parameters:**cmdName - the command name **Returns:**the CommandInfo corresponding to the command**See Also:**[CommandMap.getCommand(java.lang.String, java.lang.String)](http://docs.google.com/javax/activation/CommandMap.html#getCommand(java.lang.String,%20java.lang.String))

### getContent

public [Object](http://docs.google.com/java/lang/Object.html) **getContent**()  
 throws [IOException](http://docs.google.com/java/io/IOException.html)

Return the data in its preferred Object form.

If the DataHandler was instantiated with an object, return the object.

If the DataHandler was instantiated with a DataSource, this method uses a DataContentHandler to return the content object for the data represented by this DataHandler. If no DataContentHandler can be found for the the type of this data, the DataHandler returns an InputStream for the data.

**Returns:**the content. **Throws:** [IOException](http://docs.google.com/java/io/IOException.html) - if an IOException occurs during this operation.

### getBean

public [Object](http://docs.google.com/java/lang/Object.html) **getBean**([CommandInfo](http://docs.google.com/javax/activation/CommandInfo.html) cmdinfo)

A convenience method that takes a CommandInfo object and instantiates the corresponding command, usually a JavaBean component.

This method calls the CommandInfo's getCommandObject method with the ClassLoader used to load the javax.activation.DataHandler class itself.

**Parameters:**cmdinfo - the CommandInfo corresponding to a command **Returns:**the instantiated command object

### setDataContentHandlerFactory

public static void **setDataContentHandlerFactory**([DataContentHandlerFactory](http://docs.google.com/javax/activation/DataContentHandlerFactory.html) newFactory)

Sets the DataContentHandlerFactory. The DataContentHandlerFactory is called first to find DataContentHandlers. The DataContentHandlerFactory can only be set once.

If the DataContentHandlerFactory has already been set, this method throws an Error.

**Parameters:**newFactory - the DataContentHandlerFactory **Throws:** [Error](http://docs.google.com/java/lang/Error.html) - if the factory has already been defined.**See Also:**[DataContentHandlerFactory](http://docs.google.com/javax/activation/DataContentHandlerFactory.html)

| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/DataHandler.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/javax/activation/DataContentHandlerFactory.html)   [**NEXT CLASS**](http://docs.google.com/javax/activation/DataSource.html) | [**FRAMES**](http://docs.google.com/index.html?javax/activation/DataHandler.html)    [**NO FRAMES**](http://docs.google.com/DataHandler.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | FIELD | [CONSTR](#3znysh7) | [METHOD](#2et92p0) | DETAIL: FIELD | [CONSTR](#3dy6vkm) | [METHOD](#17dp8vu) |

[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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