| | [**Overview**](http://docs.google.com/overview-summary.html) | **Package** | Class | [**Use**](http://docs.google.com/package-use.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 PACKAGE**](http://docs.google.com/javax/print/attribute/package-summary.html)   [**NEXT PACKAGE**](http://docs.google.com/javax/print/event/package-summary.html) | [**FRAMES**](http://docs.google.com/index.html?javax/print/attribute/standard/package-summary.html)    [**NO FRAMES**](http://docs.google.com/package-summary.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |

## Package javax.print.attribute.standard

Package javax.print.attribute.standard contains classes for specific printing attributes.

**See:**

[**Description**](#3znysh7)

| **Class Summary** | |
| --- | --- |
| [**Chromaticity**](http://docs.google.com/javax/print/attribute/standard/Chromaticity.html) | Class Chromaticity is a printing attribute class, an enumeration, that specifies monochrome or color printing. |
| [**ColorSupported**](http://docs.google.com/javax/print/attribute/standard/ColorSupported.html) | Class ColorSupported is a printing attribute class, an enumeration, that identifies whether the device is capable of any type of color printing at all, including highlight color as well as full process color. |
| [**Compression**](http://docs.google.com/javax/print/attribute/standard/Compression.html) | Class Compression is a printing attribute class, an enumeration, that specifies how print data is compressed. |
| [**Copies**](http://docs.google.com/javax/print/attribute/standard/Copies.html) | Class Copies is an integer valued printing attribute class that specifies the number of copies to be printed. |
| [**CopiesSupported**](http://docs.google.com/javax/print/attribute/standard/CopiesSupported.html) | Class CopiesSupported is a printing attribute class, a set of integers, that gives the supported values for a [Copies](http://docs.google.com/javax/print/attribute/standard/Copies.html) attribute. |
| [**DateTimeAtCompleted**](http://docs.google.com/javax/print/attribute/standard/DateTimeAtCompleted.html) | Class DateTimeAtCompleted is a printing attribute class, a date-time attribute, that indicates the date and time at which the Print Job completed (or was canceled or aborted). |
| [**DateTimeAtCreation**](http://docs.google.com/javax/print/attribute/standard/DateTimeAtCreation.html) | Class DateTimeAtCreation is a printing attribute class, a date-time attribute, that indicates the date and time at which the Print Job was created. |
| [**DateTimeAtProcessing**](http://docs.google.com/javax/print/attribute/standard/DateTimeAtProcessing.html) | Class DateTimeAtProcessing is a printing attribute class, a date-time attribute, that indicates the date and time at which the Print Job first began processing. |
| [**Destination**](http://docs.google.com/javax/print/attribute/standard/Destination.html) | Class Destination is a printing attribute class, a URI, that is used to indicate an alternate destination for the spooled printer formatted data. |
| [**DocumentName**](http://docs.google.com/javax/print/attribute/standard/DocumentName.html) | Class DocumentName is a printing attribute class, a text attribute, that specifies the name of a document. |
| [**Fidelity**](http://docs.google.com/javax/print/attribute/standard/Fidelity.html) | Class Fidelity is a printing attribute class, an enumeration, that indicates whether total fidelity to client supplied print request attributes is required. |
| [**Finishings**](http://docs.google.com/javax/print/attribute/standard/Finishings.html) | Class Finishings is a printing attribute class, an enumeration, that identifies whether the printer applies a finishing operation of some kind of binding to each copy of each printed document in the job. |
| [**JobHoldUntil**](http://docs.google.com/javax/print/attribute/standard/JobHoldUntil.html) | Class JobHoldUntil is a printing attribute class, a date-time attribute, that specifies the exact date and time at which the job must become a candidate for printing. |
| [**JobImpressions**](http://docs.google.com/javax/print/attribute/standard/JobImpressions.html) | Class JobImpressions is an integer valued printing attribute class that specifies the total size in number of impressions of the document(s) being submitted. |
| [**JobImpressionsCompleted**](http://docs.google.com/javax/print/attribute/standard/JobImpressionsCompleted.html) | Class JobImpressionsCompleted is an integer valued printing attribute class that specifies the number of impressions completed for the job so far. |
| [**JobImpressionsSupported**](http://docs.google.com/javax/print/attribute/standard/JobImpressionsSupported.html) | Class JobImpressionsSupported is a printing attribute class, a set of integers, that gives the supported values for a [JobImpressions](http://docs.google.com/javax/print/attribute/standard/JobImpressions.html) attribute. |
| [**JobKOctets**](http://docs.google.com/javax/print/attribute/standard/JobKOctets.html) | Class JobKOctets is an integer valued printing attribute class that specifies the total size of the document(s) in K octets, i.e., in units of 1024 octets requested to be processed in the job. |
| [**JobKOctetsProcessed**](http://docs.google.com/javax/print/attribute/standard/JobKOctetsProcessed.html) | Class JobKOctetsProcessed is an integer valued printing attribute class that specifies the total number of print data octets processed so far in K octets, i.e., in units of 1024 octets. |
| [**JobKOctetsSupported**](http://docs.google.com/javax/print/attribute/standard/JobKOctetsSupported.html) | Class JobKOctetsSupported is a printing attribute class, a set of integers, that gives the supported values for a [JobKOctets](http://docs.google.com/javax/print/attribute/standard/JobKOctets.html) attribute. |
| [**JobMediaSheets**](http://docs.google.com/javax/print/attribute/standard/JobMediaSheets.html) | Class JobMediaSheets is an integer valued printing attribute class that specifies the total number of media sheets to be produced for this job. |
| [**JobMediaSheetsCompleted**](http://docs.google.com/javax/print/attribute/standard/JobMediaSheetsCompleted.html) | Class JobMediaSheetsCompleted is an integer valued printing attribute class that specifies the number of media sheets which have completed marking and stacking for the entire job so far, whether those sheets have been processed on one side or on both. |
| [**JobMediaSheetsSupported**](http://docs.google.com/javax/print/attribute/standard/JobMediaSheetsSupported.html) | Class JobMediaSheetsSupported is a printing attribute class, a set of integers, that gives the supported values for a [JobMediaSheets](http://docs.google.com/javax/print/attribute/standard/JobMediaSheets.html) attribute. |
| [**JobMessageFromOperator**](http://docs.google.com/javax/print/attribute/standard/JobMessageFromOperator.html) | Class JobMessageFromOperator is a printing attribute class, a text attribute, that provides a message from an operator, system administrator, or "intelligent" process to indicate to the end user the reasons for modification or other management action taken on a job. |
| [**JobName**](http://docs.google.com/javax/print/attribute/standard/JobName.html) | Class JobName is a printing attribute class, a text attribute, that specifies the name of a print job. |
| [**JobOriginatingUserName**](http://docs.google.com/javax/print/attribute/standard/JobOriginatingUserName.html) | Class JobOriginatingUserName is a printing attribute class, a text attribute, that contains the name of the end user that submitted the print job. |
| [**JobPriority**](http://docs.google.com/javax/print/attribute/standard/JobPriority.html) | Class JobPriority is an integer valued printing attribute class that specifies a print job's priority. |
| [**JobPrioritySupported**](http://docs.google.com/javax/print/attribute/standard/JobPrioritySupported.html) | Class JobPrioritySupported is an integer valued printing attribute class that specifies whether a Print Service instance supports the [JobPriority](http://docs.google.com/javax/print/attribute/standard/JobPriority.html) attribute and the number of different job priority levels supported. |
| [**JobSheets**](http://docs.google.com/javax/print/attribute/standard/JobSheets.html) | Class JobSheets is a printing attribute class, an enumeration, that determines which job start and end sheets, if any, must be printed with a job. |
| [**JobState**](http://docs.google.com/javax/print/attribute/standard/JobState.html) | JobState is a printing attribute class, an enumeration, that identifies the current state of a print job. |
| [**JobStateReason**](http://docs.google.com/javax/print/attribute/standard/JobStateReason.html) | Class JobStateReason is a printing attribute class, an enumeration, that provides additional information about the job's current state, i.e., information that augments the value of the job's [JobState](http://docs.google.com/javax/print/attribute/standard/JobState.html) attribute. |
| [**JobStateReasons**](http://docs.google.com/javax/print/attribute/standard/JobStateReasons.html) | Class JobStateReasons is a printing attribute class, a set of enumeration values, that provides additional information about the job's current state, i.e., information that augments the value of the job's [JobState](http://docs.google.com/javax/print/attribute/standard/JobState.html) attribute. |
| [**Media**](http://docs.google.com/javax/print/attribute/standard/Media.html) | Class Media is a printing attribute class that specifies the medium on which to print. |
| [**MediaName**](http://docs.google.com/javax/print/attribute/standard/MediaName.html) | Class MediaName is a subclass of Media, a printing attribute class (an enumeration) that specifies the media for a print job as a name. |
| [**MediaPrintableArea**](http://docs.google.com/javax/print/attribute/standard/MediaPrintableArea.html) | Class MediaPrintableArea is a printing attribute used to distinguish the printable and non-printable areas of media. |
| [**MediaSize**](http://docs.google.com/javax/print/attribute/standard/MediaSize.html) | Class MediaSize is a two-dimensional size valued printing attribute class that indicates the dimensions of the medium in a portrait orientation, with the X dimension running along the bottom edge and the Y dimension running along the left edge. |
| [**MediaSize.Engineering**](http://docs.google.com/javax/print/attribute/standard/MediaSize.Engineering.html) | Class MediaSize.Engineering includes [MediaSize](http://docs.google.com/javax/print/attribute/standard/MediaSize.html) values for engineering media. |
| [**MediaSize.ISO**](http://docs.google.com/javax/print/attribute/standard/MediaSize.ISO.html) | Class MediaSize.ISO includes [MediaSize](http://docs.google.com/javax/print/attribute/standard/MediaSize.html) values for ISO media. |
| [**MediaSize.JIS**](http://docs.google.com/javax/print/attribute/standard/MediaSize.JIS.html) | Class MediaSize.JIS includes [MediaSize](http://docs.google.com/javax/print/attribute/standard/MediaSize.html) values for JIS (Japanese) media. |
| [**MediaSize.NA**](http://docs.google.com/javax/print/attribute/standard/MediaSize.NA.html) | Class MediaSize.NA includes [MediaSize](http://docs.google.com/javax/print/attribute/standard/MediaSize.html) values for North American media. |
| [**MediaSize.Other**](http://docs.google.com/javax/print/attribute/standard/MediaSize.Other.html) | Class MediaSize.Other includes [MediaSize](http://docs.google.com/javax/print/attribute/standard/MediaSize.html) values for miscellaneous media. |
| [**MediaSizeName**](http://docs.google.com/javax/print/attribute/standard/MediaSizeName.html) | Class MediaSizeName is a subclass of Media. |
| [**MediaTray**](http://docs.google.com/javax/print/attribute/standard/MediaTray.html) | Class MediaTray is a subclass of Media. |
| [**MultipleDocumentHandling**](http://docs.google.com/javax/print/attribute/standard/MultipleDocumentHandling.html) | Class MultipleDocumentHandling is a printing attribute class, an enumeration, that controls finishing operations and the placement of one or more print-stream pages into impressions and onto media sheets. |
| [**NumberOfDocuments**](http://docs.google.com/javax/print/attribute/standard/NumberOfDocuments.html) | Class NumberOfDocuments is an integer valued printing attribute that indicates the number of individual docs the printer has accepted for this job, regardless of whether the docs' print data has reached the printer or not. |
| [**NumberOfInterveningJobs**](http://docs.google.com/javax/print/attribute/standard/NumberOfInterveningJobs.html) | Class NumberOfInterveningJobs is an integer valued printing attribute that indicates the number of jobs that are ahead of this job in the relative chronological order of expected time to complete (i.e., the current scheduled order). |
| [**NumberUp**](http://docs.google.com/javax/print/attribute/standard/NumberUp.html) | Class NumberUp is an integer valued printing attribute class that specifies the number of print-stream pages to impose upon a single side of an instance of a selected medium. |
| [**NumberUpSupported**](http://docs.google.com/javax/print/attribute/standard/NumberUpSupported.html) | Class NumberUpSupported is a printing attribute class, a set of integers, that gives the supported values for a [NumberUp](http://docs.google.com/javax/print/attribute/standard/NumberUp.html) attribute. |
| [**OrientationRequested**](http://docs.google.com/javax/print/attribute/standard/OrientationRequested.html) | Class OrientationRequested is a printing attribute class, an enumeration, that indicates the desired orientation for printed print-stream pages; it does not describe the orientation of the client-supplied print-stream pages. |
| [**OutputDeviceAssigned**](http://docs.google.com/javax/print/attribute/standard/OutputDeviceAssigned.html) | Class OutputDeviceAssigned is a printing attribute class, a text attribute, that identifies the output device to which the service has assigned this job. |
| [**PageRanges**](http://docs.google.com/javax/print/attribute/standard/PageRanges.html) | Class PageRanges is a printing attribute class, a set of integers, that identifies the range(s) of print-stream pages that the Printer object uses for each copy of each document which are to be printed. |
| [**PagesPerMinute**](http://docs.google.com/javax/print/attribute/standard/PagesPerMinute.html) | Class PagesPerMinute is an integer valued printing attribute that indicates the nominal number of pages per minute to the nearest whole number which may be generated by this printer (e.g., simplex, black-and-white). |
| [**PagesPerMinuteColor**](http://docs.google.com/javax/print/attribute/standard/PagesPerMinuteColor.html) | Class PagesPerMinuteColor is an integer valued printing attribute that indicates the nominal number of pages per minute to the nearest whole number which may be generated by this printer when printing color (e.g., simplex, color). |
| [**PDLOverrideSupported**](http://docs.google.com/javax/print/attribute/standard/PDLOverrideSupported.html) | Class PDLOverrideSupported is a printing attribute class, an enumeration, that expresses the printer's ability to attempt to override processing instructions embedded in documents' print data with processing instructions specified as attributes outside the print data. |
| [**PresentationDirection**](http://docs.google.com/javax/print/attribute/standard/PresentationDirection.html) | Class PresentationDirection is a printing attribute class, an enumeration, that is used in conjunction with the [NumberUp](http://docs.google.com/javax/print/attribute/standard/NumberUp.html) attribute to indicate the layout of multiple print-stream pages to impose upon a single side of an instance of a selected medium. |
| [**PrinterInfo**](http://docs.google.com/javax/print/attribute/standard/PrinterInfo.html) | Class PrinterInfo is a printing attribute class, a text attribute, that provides descriptive information about a printer. |
| [**PrinterIsAcceptingJobs**](http://docs.google.com/javax/print/attribute/standard/PrinterIsAcceptingJobs.html) | Class PrinterIsAcceptingJobs is a printing attribute class, an enumeration, that indicates whether the printer is currently able to accept jobs. |
| [**PrinterLocation**](http://docs.google.com/javax/print/attribute/standard/PrinterLocation.html) | Class PrinterLocation is a printing attribute class, a text attribute, that identifies the location of the device. |
| [**PrinterMakeAndModel**](http://docs.google.com/javax/print/attribute/standard/PrinterMakeAndModel.html) | Class PrinterMakeAndModel is a printing attribute class, a text attribute, that the make and model of the printer. |
| [**PrinterMessageFromOperator**](http://docs.google.com/javax/print/attribute/standard/PrinterMessageFromOperator.html) | Class PrinterMessageFromOperator is a printing attribute class, a text attribute, that provides a message from an operator, system administrator, or "intelligent" process to indicate to the end user information about or status of the printer, such as why it is unavailable or when it is expected to be available. |
| [**PrinterMoreInfo**](http://docs.google.com/javax/print/attribute/standard/PrinterMoreInfo.html) | Class PrinterMoreInfo is a printing attribute class, a URI, that is used to obtain more information about this specific printer. |
| [**PrinterMoreInfoManufacturer**](http://docs.google.com/javax/print/attribute/standard/PrinterMoreInfoManufacturer.html) | Class PrinterMoreInfoManufacturer is a printing attribute class, a URI, that is used to obtain more information about this type of device. |
| [**PrinterName**](http://docs.google.com/javax/print/attribute/standard/PrinterName.html) | Class PrinterName is a printing attribute class, a text attribute, that specifies the name of a printer. |
| [**PrinterResolution**](http://docs.google.com/javax/print/attribute/standard/PrinterResolution.html) | Class PrinterResolution is a printing attribute class that specifies an exact resolution supported by a printer or to be used for a print job. |
| [**PrinterState**](http://docs.google.com/javax/print/attribute/standard/PrinterState.html) | Class PrinterState is a printing attribute class, an enumeration, that identifies the current state of a printer. |
| [**PrinterStateReason**](http://docs.google.com/javax/print/attribute/standard/PrinterStateReason.html) | Class PrinterStateReason is a printing attribute class, an enumeration, that provides additional information about the printer's current state, i.e., information that augments the value of the printer's [PrinterState](http://docs.google.com/javax/print/attribute/standard/PrinterState.html) attribute. |
| [**PrinterStateReasons**](http://docs.google.com/javax/print/attribute/standard/PrinterStateReasons.html) | Class PrinterStateReasons is a printing attribute class, a set of enumeration values, that provides additional information about the printer's current state, i.e., information that augments the value of the printer's [PrinterState](http://docs.google.com/javax/print/attribute/standard/PrinterState.html) attribute. |
| [**PrinterURI**](http://docs.google.com/javax/print/attribute/standard/PrinterURI.html) | Class PrinterURI is a printing attribute class, a URI, that specifies the globally unique name of a printer. |
| [**PrintQuality**](http://docs.google.com/javax/print/attribute/standard/PrintQuality.html) | Class PrintQuality is a printing attribute class, an enumeration, that specifies the print quality that the printer uses for the job. |
| [**QueuedJobCount**](http://docs.google.com/javax/print/attribute/standard/QueuedJobCount.html) | Class QueuedJobCount is an integer valued printing attribute that indicates the number of jobs in the printer whose [JobState](http://docs.google.com/javax/print/attribute/standard/JobState.html) is either PENDING, PENDING\_HELD, PROCESSING, or PROCESSING\_STOPPED. |
| [**ReferenceUriSchemesSupported**](http://docs.google.com/javax/print/attribute/standard/ReferenceUriSchemesSupported.html) | Class ReferenceUriSchemesSupported is a printing attribute class an enumeration, that indicates a "URI scheme," such as "http:" or "ftp:", that a printer can use to retrieve print data stored at a URI location. |
| [**RequestingUserName**](http://docs.google.com/javax/print/attribute/standard/RequestingUserName.html) | Class RequestingUserName is a printing attribute class, a text attribute, that specifies the name of the end user that submitted the print job. |
| [**Severity**](http://docs.google.com/javax/print/attribute/standard/Severity.html) | Class Severity is a printing attribute class, an enumeration, that denotes the severity of a [PrinterStateReason](http://docs.google.com/javax/print/attribute/standard/PrinterStateReason.html) attribute. |
| [**SheetCollate**](http://docs.google.com/javax/print/attribute/standard/SheetCollate.html) | Class SheetCollate is a printing attribute class, an enumeration, that specifies whether or not the media sheets of each copy of each printed document in a job are to be in sequence, when multiple copies of the document are specified by the [Copies](http://docs.google.com/javax/print/attribute/standard/Copies.html) attribute. |
| [**Sides**](http://docs.google.com/javax/print/attribute/standard/Sides.html) | Class Sides is a printing attribute class, an enumeration, that specifies how print-stream pages are to be imposed upon the sides of an instance of a selected medium, i.e., an impression. |

## Package javax.print.attribute.standard Description

Package javax.print.attribute.standard contains classes for specific printing attributes. The parent package,  [javax.print.attribute](http://docs.google.com/package-summary.html), provides classes and interfaces that describe the types of Java Print Service attributes and how they can be collected into attribute sets.

An attribute represents a printing feature that a print service can provide. For each attribute, a print service either does or does not support the attribute. For each possible value of a supported attribute, a print service either does or does not support the value.

The API requires every print service to support certain attributes; other attributes are optional and the service can choose whether or not to support them. Each attribute has a set of values that it accepts. The API requires every print service to support certain values for certain attributes; other attribute values are optional and the service can choose whether or not to support them. These support requirements are recorded in the documentation for each attribute class.

Package javax.print.attribute.standard contains standard printing attributes and standard printing attribute values that are widely used in the printing domain. A print service vendor can provide new vendor-specific printing attributes in addition to the standard ones. A vendor can also provide vendor-specific extensions (subclasses) of the standard printing attributes -- for example, to provide additional vendor-specific values for an existing standard attribute. Of course, if a vendor wants clients to be able to use any added or extended attributes, the vendor must publish the new attribute classes.

Many of the standard attribute classes extend one of the abstract syntax classes of the javax.print.attribute package. These abstract syntax classes each represent a different type. The  [EnumSyntax](http://docs.google.com/EnumSyntax.html) class, for example, represents a type-safe enumeration. The abstract syntax class provides a wrapper for the attribute value.

If an attribute class extends EnumSyntax, and the value of the attribute is an IPP-compatible value, the attribute's toString method returns the IPP string representation of the attribute value, such as "processing-stopped" for the [JobState](http://docs.google.com/JobState.html) attribute. However, because the EnumSyntax class is extensible, vendors can define their own attribute values. If an attribute uses the EnumSyntax class and is set to one of these vendor-defined values then the toString method will not return the IPP string representation of the value.

A printing client application will typically not need to use all the printing attribute classes in package javax.print.attribute.standard, just the ones that pertain to the application.

The attribute classes in package javax.print.attribute.standard are based on the Internet Printing Protocol (IPP) attributes as defined in the Internet RFC document, *RFC 2911 Internet Printing Protocol/1.1: Model and Semantics* dated September 2000. See [RFC 2911](http://www.ietf.org/rfc/rfc2911.txt) for more information. The descriptive text for each attribute class was taken largely from the above documents. The above authors' contribution to the API is gratefully acknowledged.

### Attribute Organization

There are five kinds of printing attributes: doc attributes, print request attributes, print job attributes, print service attributes, and supported-values attributes.

#### Doc Attributes

Doc attributes specify the characteristics of an individual doc and the print job settings to be applied to an individual doc. A doc attribute class implements interface [DocAttribute](http://docs.google.com/DocAttribute.html). A doc attribute can appear in a  [DocAttributeSet](http://docs.google.com/DocAttributeSet.html).

#### Print Request Attributes

Print request attributes specify the settings to be applied to a whole print job and to all the docs in the print job. A print request attribute class implements interface  [PrintRequestAttribute](http://docs.google.com/PrintRequestAttribute.html). A print request attribute can appear in a  [PrintRequestAttributeSet](http://docs.google.com/PrintRequestAttributeSet.html).

Some attributes are doc attributes but not print request attributes and may only be specified at the doc level. Some attributes are print request attributes but not doc attributes and may only be specified at the Print Request level. Some attributes are both doc attributes and print request attributes and may be specified either at the doc level or at the Print Request level.

When specified at the doc level, an attribute applies just to that one doc. When specified at the Print Request level, an attribute applies to the whole job, including all the docs in the job. However, an attribute specified at the doc level overrides an attribute in the same category specified at the Print Request level.

#### Print Job Attributes

Print job attributes report the status of a Print Job. A print job attribute class implements interface [PrintJobAttribute](http://docs.google.com/PrintJobAttribute.html). A print job attribute can appear in a  [PrintJobAttributeSet](http://docs.google.com/PrintJobAttributeSet.html).

Some attributes are both print request attributes and print job attributes; a client may include such attributes in a Print Request to specify characteristics for the ensuing Print Job, and those attributes then also appear in the Print Job's attribute set. Some attributes are print job attributes but not print request attributes; the print service itself adds these attributes to the Print Job's attribute set.

#### Print Service Attributes

Print service attributes report the status of a print service. A print service attribute class implements interface  [PrintServiceAttribute](http://docs.google.com/PrintServiceAttribute.html). A print service attribute can appear in a  [PrintServiceAttributeSet](http://docs.google.com/PrintServiceAttributeSet.html).

#### Supported-Values Attributes

A supported-value attribute indicates the legal values for another attribute that a print service supports. A supported-values attribute class implements interface  [SupportedValuesAttribute](http://docs.google.com/SupportedValuesAttribute.html). However, supported-values attributes never appear in attribute sets, so there is no restricted  [AttributeSet](http://docs.google.com/AttributeSet.html) subinterface for them.

#### Attribute Table

The table below lists all the printing attributes. The table shows the tagging interfaces each attribute class implements in addition to interface  [Attribute](http://docs.google.com/Attribute.html), thus indicating how each attribute is used in the API. For each doc attribute and print request attribute, the column marked "SupportedValuesAttribute" lists the supported-values attribute class, if any, with which a print service indicates the supported values for that attribute category.

| Attribute Class | Doc  Attribute | Print  Request  Attribute | Print  Job  Attribute | Print  Service  Attribute | SupportedValuesAttribute |
| --- | --- | --- | --- | --- | --- |
| [Compression](http://docs.google.com/Compression.html) | X |  |  |  |  |
| [DocumentName](http://docs.google.com/DocumentName.html) | X |  |  |  |  |
| [Chromaticity](http://docs.google.com/Chromaticity.html) | X | X | X |  |  |
| [Copies](http://docs.google.com/Copies.html) |  | X | X |  | [CopiesSupported](http://docs.google.com/CopiesSupported.html) |
| [Finishings](http://docs.google.com/Finishings.html) | X | X | X |  |  |
| [JobHoldUntil](http://docs.google.com/JobHoldUntil.html) |  | X | X |  |  |
| [JobImpressions](http://docs.google.com/JobImpressions.html) |  | X | X |  | [JobImpressionsSupported](http://docs.google.com/JobImpressionsSupported.html) |
| [JobKOctets](http://docs.google.com/JobKOctets.html) |  | X | X |  | [JobKOctetsSupported](http://docs.google.com/JobKOctetsSupported.html) |
| [JobMediaSheets](http://docs.google.com/JobMediaSheets.html) |  | X | X |  | [JobMediaSheetsSupported](http://docs.google.com/JobMediaSheetsSupported.html) |
| [JobName](http://docs.google.com/JobName.html) |  | X | X |  |  |
| [JobPriority](http://docs.google.com/JobPriority.html) |  | X | X |  | [JobPrioritySupported](http://docs.google.com/JobPrioritySupported.html) |
| [JobSheets](http://docs.google.com/JobSheets.html) |  | X | X |  |  |
| [Media](http://docs.google.com/Media.html) | X | X | X |  |  |
| [MediaSize](http://docs.google.com/MediaSize.html) |  |  |  |  |  |
| [MultipleDocumentHandling](http://docs.google.com/MultipleDocumentHandling.html) |  | X | X |  |  |
| [NumberUp](http://docs.google.com/NumberUp.html) | X | X | X |  | [NumberUpSupported](http://docs.google.com/NumberUpSupported.html) |
| [OrientationRequested](http://docs.google.com/OrientationRequested.html) | X | X | X |  |  |
| [PageRanges](http://docs.google.com/PageRanges.html) | X | X | X |  |  |
| [PresentationDirection](http://docs.google.com/PresentationDirection.html) | X | X | X |  |  |
| [PrinterResolution](http://docs.google.com/PrinterResolution.html) | X | X | X |  |  |
| [PrintQuality](http://docs.google.com/PrintQuality.html) | X | X | X |  |  |
| [RequestingUserName](http://docs.google.com/RequestingUserName.html) |  | X | X |  |  |
| [SheetCollate](http://docs.google.com/SheetCollate.html) | X | X | X |  |  |
| [Sides](http://docs.google.com/Sides.html) | X | X | X |  |  |
| [DateTimeAtCompleted](http://docs.google.com/DateTimeAtCompleted.html) |  |  | X |  |  |
| [DateTimeAtCreation](http://docs.google.com/DateTimeAtCreation.html) |  |  | X |  |  |
| [DateTimeAtProcessing](http://docs.google.com/DateTimeAtProcessing.html) |  |  | X |  |  |
| [JobImpressionsCompleted](http://docs.google.com/JobImpressionsCompleted.html) |  |  | X |  |  |
| [JobKOctetsProcessed](http://docs.google.com/JobKOctetsProcessed.html) |  |  | X |  |  |
| [JobMediaSheetsCompleted](http://docs.google.com/JobMediaSheetsCompleted.html) |  |  | X |  |  |
| [JobMessageFromOperator](http://docs.google.com/JobMessageFromOperator.html) |  |  | X |  |  |
| [JobOriginatingUserName](http://docs.google.com/JobOriginatingUserName.html) |  |  | X |  |  |
| [JobState](http://docs.google.com/JobState.html) |  |  | X |  |  |
| [JobStateReasons](http://docs.google.com/JobStateReasons.html)  Contains zero or more -- |  |  | X |  |  |
| -- [JobStateReason](http://docs.google.com/JobStateReason.html) |  |  |  |  |  |
| [NumberOfDocuments](http://docs.google.com/NumberOfDocuments.html) |  |  | X |  |  |
| [NumberOfInterveningJobs](http://docs.google.com/NumberOfInterveningJobs.html) |  |  | X |  |  |
| [OutputDeviceAssigned](http://docs.google.com/OutputDeviceAssigned.html) |  |  | X |  |  |
| [ColorSupported](http://docs.google.com/ColorSupported.html) |  |  |  | X |  |
| [PagesPerMinute](http://docs.google.com/PagesPerMinute.html) |  |  |  | X |  |
| [PagesPerMinuteColor](http://docs.google.com/PagesPerMinuteColor.html) |  |  |  | X |  |
| [PDLOverrideSupported](http://docs.google.com/PDLOverrideSupported.html) |  |  |  | X |  |
| [PrinterIsAcceptingJobs](http://docs.google.com/PrinterIsAcceptingJobs.html) |  |  |  | X |  |
| [PrinterInfo](http://docs.google.com/PrinterInfo.html) |  |  |  | X |  |
| [PrinterLocation](http://docs.google.com/PrinterLocation.html) |  |  |  | X |  |
| [PrinterMessageFromOperator](http://docs.google.com/PrinterMessageFromOperator.html) |  |  |  | X |  |
| [PrinterMakeAndModel](http://docs.google.com/PrinterMakeAndModel.html) |  |  |  | X |  |
| [PrinterMoreInfo](http://docs.google.com/PrinterMoreInfo.html) |  |  |  | X |  |
| [PrinterMoreInfoManufacturer](http://docs.google.com/PrinterMoreInfoManufacturer.html) |  |  |  | X |  |
| [PrinterName](http://docs.google.com/PrinterName.html) |  |  |  | X |  |
| [PrinterState](http://docs.google.com/PrinterState.html) |  |  |  | X |  |
| [PrinterStateReasons](http://docs.google.com/PrinterStateReasons.html)  Contains zero or more -- |  |  |  | X |  |
| -- [PrinterStateReason](http://docs.google.com/PrinterStateReason.html) |  |  |  |  |  |
| -- [Severity](http://docs.google.com/Severity.html) |  |  |  |  |  |
| [QueuedJobCount](http://docs.google.com/QueuedJobCount.html) |  |  |  | X |  |
| [ReferenceUriSchemesSupported](http://docs.google.com/ReferenceUriSchemesSupported.html) |  |  |  |  |  |

Please note: In the javax.print APIs, a null reference parameter to methods is incorrect unless explicitly documented on the method as having a meaningful interpretation. Usage to the contrary is incorrect coding and may result in a run time exception either immediately or at some later time. IllegalArgumentException and NullPointerException are examples of typical and acceptable run time exceptions for such cases.

**Since:** 1.4

| | [**Overview**](http://docs.google.com/overview-summary.html) | **Package** | Class | [**Use**](http://docs.google.com/package-use.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 PACKAGE**](http://docs.google.com/javax/print/attribute/package-summary.html)   [**NEXT PACKAGE**](http://docs.google.com/javax/print/event/package-summary.html) | [**FRAMES**](http://docs.google.com/index.html?javax/print/attribute/standard/package-summary.html)    [**NO FRAMES**](http://docs.google.com/package-summary.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |

[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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