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org.apache.commons.beanutils.converters

## Class DateTimeConverter

* [java.lang.Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true)
  + [org.apache.commons.beanutils.converters.AbstractConverter](http://docs.google.com/org/apache/commons/beanutils/converters/AbstractConverter.html)
    - org.apache.commons.beanutils.converters.DateTimeConverter
* All Implemented Interfaces: [Converter](http://docs.google.com/org/apache/commons/beanutils/Converter.html) Direct Known Subclasses: [CalendarConverter](http://docs.google.com/org/apache/commons/beanutils/converters/CalendarConverter.html), [DateConverter](http://docs.google.com/org/apache/commons/beanutils/converters/DateConverter.html), [SqlDateConverter](http://docs.google.com/org/apache/commons/beanutils/converters/SqlDateConverter.html), [SqlTimeConverter](http://docs.google.com/org/apache/commons/beanutils/converters/SqlTimeConverter.html), [SqlTimestampConverter](http://docs.google.com/org/apache/commons/beanutils/converters/SqlTimestampConverter.html)  
    
  public abstract class DateTimeConverter  
  extends [AbstractConverter](http://docs.google.com/org/apache/commons/beanutils/converters/AbstractConverter.html)
* [Converter](http://docs.google.com/org/apache/commons/beanutils/Converter.html) implementaion that handles conversion to and from **date/time** objects.  
  This implementation handles conversion for the following *date/time* types.
  + java.util.Date
  + java.util.Calendar
  + java.sql.Date
  + java.sql.Time
  + java.sql.Timestamp

### String Conversions (to and from)This class provides a number of ways in which date/time conversions to/from Strings can be achieved:

* + Using the SHORT date format for the default Locale, configure using:
    - setUseLocaleFormat(true)
  + Using the SHORT date format for a specified Locale, configure using:
    - setLocale(Locale)
  + Using the specified date pattern(s) for the default Locale, configure using:
    - Either setPattern(String) or setPatterns(String[])
  + Using the specified date pattern(s) for a specified Locale, configure using:
    - setPattern(String) or setPatterns(String[]) and...
    - setLocale(Locale)
  + If none of the above are configured the toDate(String) method is used to convert from String to Date and the Dates's toString() method used to convert from Date to String.

The **Time Zone** to use with the date format can be specified using the setTimeZone() method.Since: 1.8.0 Version: $Id$

### Constructor SummaryConstructors

|  |
| --- |
| * + Constructor and Description |
| * + [DateTimeConverter](http://docs.google.com/org/apache/commons/beanutils/converters/DateTimeConverter.html#DateTimeConverter--)() Construct a Date/Time *Converter* that throws a ConversionException if an error occurs. |
| * + [DateTimeConverter](http://docs.google.com/org/apache/commons/beanutils/converters/DateTimeConverter.html#DateTimeConverter-java.lang.Object-)([Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) defaultValue) Construct a Date/Time *Converter* that returns a default value if an error occurs. |

### Method SummaryAll Methods Instance Methods Concrete Methods

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + protected [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) | * + [convertToString](http://docs.google.com/org/apache/commons/beanutils/converters/DateTimeConverter.html#convertToString-java.lang.Object-)([Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) value) Convert an input Date/Calendar object into a String. |
| * + protected <T> T | * + [convertToType](http://docs.google.com/org/apache/commons/beanutils/converters/DateTimeConverter.html#convertToType-java.lang.Class-java.lang.Object-)([Class](https://docs.oracle.com/javase/7/docs/api/java/lang/Class.html?is-external=true)<T> targetType, [Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) value) Convert the input object into a Date object of the specified type. |
| * + protected [DateFormat](https://docs.oracle.com/javase/7/docs/api/java/text/DateFormat.html?is-external=true) | * + [getFormat](http://docs.google.com/org/apache/commons/beanutils/converters/DateTimeConverter.html#getFormat-java.util.Locale-java.util.TimeZone-)([Locale](https://docs.oracle.com/javase/7/docs/api/java/util/Locale.html?is-external=true) locale, [TimeZone](https://docs.oracle.com/javase/7/docs/api/java/util/TimeZone.html?is-external=true) timeZone) Return a DateFormat for the Locale. |
| * + [Locale](https://docs.oracle.com/javase/7/docs/api/java/util/Locale.html?is-external=true) | * + [getLocale](http://docs.google.com/org/apache/commons/beanutils/converters/DateTimeConverter.html#getLocale--)() Return the Locale for the *Converter* (or null if none specified). |
| * + [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true)[] | * + [getPatterns](http://docs.google.com/org/apache/commons/beanutils/converters/DateTimeConverter.html#getPatterns--)() Return the date format patterns used to convert dates to/from a java.lang.String (or null if none specified). |
| * + [TimeZone](https://docs.oracle.com/javase/7/docs/api/java/util/TimeZone.html?is-external=true) | * + [getTimeZone](http://docs.google.com/org/apache/commons/beanutils/converters/DateTimeConverter.html#getTimeZone--)() Return the Time Zone to use when converting dates (or null if none specified. |
| * + void | * + [setLocale](http://docs.google.com/org/apache/commons/beanutils/converters/DateTimeConverter.html#setLocale-java.util.Locale-)([Locale](https://docs.oracle.com/javase/7/docs/api/java/util/Locale.html?is-external=true) locale) Set the Locale for the *Converter*. |
| * + void | * + [setPattern](http://docs.google.com/org/apache/commons/beanutils/converters/DateTimeConverter.html#setPattern-java.lang.String-)([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) pattern) Set a date format pattern to use to convert dates to/from a java.lang.String. |
| * + void | * + [setPatterns](http://docs.google.com/org/apache/commons/beanutils/converters/DateTimeConverter.html#setPatterns-java.lang.String:A-)([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true)[] patterns) Set the date format patterns to use to convert dates to/from a java.lang.String. |
| * + void | * + [setTimeZone](http://docs.google.com/org/apache/commons/beanutils/converters/DateTimeConverter.html#setTimeZone-java.util.TimeZone-)([TimeZone](https://docs.oracle.com/javase/7/docs/api/java/util/TimeZone.html?is-external=true) timeZone) Set the Time Zone to use when converting dates. |
| * + void | * + [setUseLocaleFormat](http://docs.google.com/org/apache/commons/beanutils/converters/DateTimeConverter.html#setUseLocaleFormat-boolean-)(boolean useLocaleFormat) Indicate whether conversion should use a format/pattern or not. |
| * + [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) | * + [toString](http://docs.google.com/org/apache/commons/beanutils/converters/DateTimeConverter.html#toString--)() Provide a String representation of this date/time converter. |

### Methods inherited from class org.apache.commons.beanutils.converters.[**AbstractConverter**](http://docs.google.com/org/apache/commons/beanutils/converters/AbstractConverter.html)[conversionException](http://docs.google.com/org/apache/commons/beanutils/converters/AbstractConverter.html#conversionException-java.lang.Class-java.lang.Object-), [convert](http://docs.google.com/org/apache/commons/beanutils/converters/AbstractConverter.html#convert-java.lang.Class-java.lang.Object-), [convertArray](http://docs.google.com/org/apache/commons/beanutils/converters/AbstractConverter.html#convertArray-java.lang.Object-), [getDefault](http://docs.google.com/org/apache/commons/beanutils/converters/AbstractConverter.html#getDefault-java.lang.Class-), [getDefaultType](http://docs.google.com/org/apache/commons/beanutils/converters/AbstractConverter.html#getDefaultType--), [handleError](http://docs.google.com/org/apache/commons/beanutils/converters/AbstractConverter.html#handleError-java.lang.Class-java.lang.Object-java.lang.Throwable-), [handleMissing](http://docs.google.com/org/apache/commons/beanutils/converters/AbstractConverter.html#handleMissing-java.lang.Class-), [isUseDefault](http://docs.google.com/org/apache/commons/beanutils/converters/AbstractConverter.html#isUseDefault--), [setDefaultValue](http://docs.google.com/org/apache/commons/beanutils/converters/AbstractConverter.html#setDefaultValue-java.lang.Object-)

### Methods inherited from class java.lang.[**Object**](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true)[clone](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#clone--), [equals](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#equals-java.lang.Object-), [finalize](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#finalize--), [getClass](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#getClass--), [hashCode](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#hashCode--), [notify](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#notify--), [notifyAll](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#notifyAll--), [wait](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#wait--), [wait](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#wait-long-), [wait](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#wait-long-int-)

### Constructor Detail

#### DateTimeConverter public DateTimeConverter() Construct a Date/Time *Converter* that throws a ConversionException if an error occurs.

#### DateTimeConverter public DateTimeConverter([Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) defaultValue) Construct a Date/Time *Converter* that returns a default value if an error occurs.Parameters: defaultValue - The default value to be returned if the value to be converted is missing or an error occurs converting the value.

### Method Detail

#### setUseLocaleFormat public void setUseLocaleFormat(boolean useLocaleFormat) Indicate whether conversion should use a format/pattern or not.Parameters: useLocaleFormat - true if the format for the locale should be used, otherwise false

#### getTimeZone public [TimeZone](https://docs.oracle.com/javase/7/docs/api/java/util/TimeZone.html?is-external=true) getTimeZone() Return the Time Zone to use when converting dates (or null if none specified.Returns: The Time Zone.

#### setTimeZone public void setTimeZone([TimeZone](https://docs.oracle.com/javase/7/docs/api/java/util/TimeZone.html?is-external=true) timeZone) Set the Time Zone to use when converting dates.Parameters: timeZone - The Time Zone.

#### getLocale public [Locale](https://docs.oracle.com/javase/7/docs/api/java/util/Locale.html?is-external=true) getLocale() Return the Locale for the *Converter* (or null if none specified).Returns: The locale to use for conversion

#### setLocale public void setLocale([Locale](https://docs.oracle.com/javase/7/docs/api/java/util/Locale.html?is-external=true) locale) Set the Locale for the *Converter*.Parameters: locale - The Locale.

#### setPattern public void setPattern([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) pattern) Set a date format pattern to use to convert dates to/from a java.lang.String.Parameters: pattern - The format pattern. See Also: [SimpleDateFormat](https://docs.oracle.com/javase/7/docs/api/java/text/SimpleDateFormat.html?is-external=true)

#### getPatterns public [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true)[] getPatterns() Return the date format patterns used to convert dates to/from a java.lang.String (or null if none specified).Returns: Array of format patterns. See Also: [SimpleDateFormat](https://docs.oracle.com/javase/7/docs/api/java/text/SimpleDateFormat.html?is-external=true)

#### setPatterns public void setPatterns([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true)[] patterns) Set the date format patterns to use to convert dates to/from a java.lang.String.Parameters: patterns - Array of format patterns. See Also: [SimpleDateFormat](https://docs.oracle.com/javase/7/docs/api/java/text/SimpleDateFormat.html?is-external=true)

#### convertToString protected [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) convertToString([Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) value) throws [Throwable](https://docs.oracle.com/javase/7/docs/api/java/lang/Throwable.html?is-external=true) Convert an input Date/Calendar object into a String. **N.B.**If the converter has been configured to with one or more patterns (using setPatterns()), then the first pattern will be used to format the date into a String. Otherwise the default DateFormat for the default locale (and *style* if configured) will be used.Overrides: [convertToString](http://docs.google.com/org/apache/commons/beanutils/converters/AbstractConverter.html#convertToString-java.lang.Object-) in class [AbstractConverter](http://docs.google.com/org/apache/commons/beanutils/converters/AbstractConverter.html) Parameters: value - The input value to be converted Returns: the converted String value. Throws: [Throwable](https://docs.oracle.com/javase/7/docs/api/java/lang/Throwable.html?is-external=true) - if an error occurs converting to a String

#### convertToType protected <T> T convertToType([Class](https://docs.oracle.com/javase/7/docs/api/java/lang/Class.html?is-external=true)<T> targetType, [Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true) value) throws [Exception](https://docs.oracle.com/javase/7/docs/api/java/lang/Exception.html?is-external=true)

* + - Convert the input object into a Date object of the specified type.  
      This method handles conversions between the following types:
      * java.util.Date
      * java.util.Calendar
      * java.sql.Date
      * java.sql.Time
      * java.sql.Timestamp

It also handles conversion from a String to any of the above types.  
For String conversion, if the converter has been configured with one or more patterns (using setPatterns()), then the conversion is attempted with each of the specified patterns. Otherwise the default DateFormat for the default locale (and *style* if configured) will be used.Specified by: [convertToType](http://docs.google.com/org/apache/commons/beanutils/converters/AbstractConverter.html#convertToType-java.lang.Class-java.lang.Object-) in class [AbstractConverter](http://docs.google.com/org/apache/commons/beanutils/converters/AbstractConverter.html) Type Parameters: T - The desired target type of the conversion. Parameters: targetType - Data type to which this value should be converted. value - The input value to be converted. Returns: The converted value. Throws: [Exception](https://docs.oracle.com/javase/7/docs/api/java/lang/Exception.html?is-external=true) - if conversion cannot be performed successfully

#### getFormat protected [DateFormat](https://docs.oracle.com/javase/7/docs/api/java/text/DateFormat.html?is-external=true) getFormat([Locale](https://docs.oracle.com/javase/7/docs/api/java/util/Locale.html?is-external=true) locale, [TimeZone](https://docs.oracle.com/javase/7/docs/api/java/util/TimeZone.html?is-external=true) timeZone) Return a DateFormat for the Locale.Parameters: locale - The Locale to create the Format with (may be null) timeZone - The Time Zone create the Format with (may be null) Returns: A Date Format.

#### toString public [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) toString() Provide a String representation of this date/time converter.Overrides: [toString](http://docs.google.com/org/apache/commons/beanutils/converters/AbstractConverter.html#toString--) in class [AbstractConverter](http://docs.google.com/org/apache/commons/beanutils/converters/AbstractConverter.html) Returns: A String representation of this date/time converter

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