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org.apache.commons.beanutils

## Class WrapDynaClass

* [java.lang.Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true)
  + org.apache.commons.beanutils.WrapDynaClass
* All Implemented Interfaces: [DynaClass](http://docs.google.com/org/apache/commons/beanutils/DynaClass.html)  
    
  public class WrapDynaClass  
  extends [Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true)  
  implements [DynaClass](http://docs.google.com/org/apache/commons/beanutils/DynaClass.html)  
  Implementation of DynaClass for DynaBeans that wrap standard JavaBean instances.  
  It is suggested that this class should not usually need to be used directly to create new WrapDynaBean instances. It's usually better to call the WrapDynaBean constructor directly. For example:  
   Object javaBean = ...;  
   DynaBean wrapper = new WrapDynaBean(javaBean);  
     
  Version: $Id$

### Field SummaryFields

|  |  |
| --- | --- |
| * + Modifier and Type | * + Field and Description |
| * + protected [Class](https://docs.oracle.com/javase/7/docs/api/java/lang/Class.html?is-external=true)<?> | * + [beanClass](http://docs.google.com/org/apache/commons/beanutils/WrapDynaClass.html#beanClass) Deprecated.  No longer initialized, use getBeanClass() method instead |
| * + protected [PropertyDescriptor](https://docs.oracle.com/javase/7/docs/api/java/beans/PropertyDescriptor.html?is-external=true)[] | * + [descriptors](http://docs.google.com/org/apache/commons/beanutils/WrapDynaClass.html#descriptors) The set of PropertyDescriptors for this bean class. |
| * + protected [HashMap](https://docs.oracle.com/javase/7/docs/api/java/util/HashMap.html?is-external=true)<[String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true),[PropertyDescriptor](https://docs.oracle.com/javase/7/docs/api/java/beans/PropertyDescriptor.html?is-external=true)> | * + [descriptorsMap](http://docs.google.com/org/apache/commons/beanutils/WrapDynaClass.html#descriptorsMap) The set of PropertyDescriptors for this bean class, keyed by the property name. |
| * + protected static [HashMap](https://docs.oracle.com/javase/7/docs/api/java/util/HashMap.html?is-external=true)<[Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true),[Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true)> | * + [dynaClasses](http://docs.google.com/org/apache/commons/beanutils/WrapDynaClass.html#dynaClasses) Deprecated.  The dynaClasses Map will be removed in a subsequent release |
| * + protected [DynaProperty](http://docs.google.com/org/apache/commons/beanutils/DynaProperty.html)[] | * + [properties](http://docs.google.com/org/apache/commons/beanutils/WrapDynaClass.html#properties) The set of dynamic properties that are part of this DynaClass. |
| * + protected [HashMap](https://docs.oracle.com/javase/7/docs/api/java/util/HashMap.html?is-external=true)<[String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true),[DynaProperty](http://docs.google.com/org/apache/commons/beanutils/DynaProperty.html)> | * + [propertiesMap](http://docs.google.com/org/apache/commons/beanutils/WrapDynaClass.html#propertiesMap) The set of dynamic properties that are part of this DynaClass, keyed by the property name. |

### Method SummaryAll Methods Static Methods Instance Methods Concrete Methods

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + static void | * + [clear](http://docs.google.com/org/apache/commons/beanutils/WrapDynaClass.html#clear--)() Clear our cache of WrapDynaClass instances. |
| * + static [WrapDynaClass](http://docs.google.com/org/apache/commons/beanutils/WrapDynaClass.html) | * + [createDynaClass](http://docs.google.com/org/apache/commons/beanutils/WrapDynaClass.html#createDynaClass-java.lang.Class-)([Class](https://docs.oracle.com/javase/7/docs/api/java/lang/Class.html?is-external=true)<?> beanClass) Create (if necessary) and return a new WrapDynaClass instance for the specified bean class. |
| * + static [WrapDynaClass](http://docs.google.com/org/apache/commons/beanutils/WrapDynaClass.html) | * + [createDynaClass](http://docs.google.com/org/apache/commons/beanutils/WrapDynaClass.html#createDynaClass-java.lang.Class-org.apache.commons.beanutils.PropertyUtilsBean-)([Class](https://docs.oracle.com/javase/7/docs/api/java/lang/Class.html?is-external=true)<?> beanClass, [PropertyUtilsBean](http://docs.google.com/org/apache/commons/beanutils/PropertyUtilsBean.html) pu) Create (if necessary) and return a new WrapDynaClass instance for the specified bean class using the given PropertyUtilsBean instance for introspection. |
| * + protected [Class](https://docs.oracle.com/javase/7/docs/api/java/lang/Class.html?is-external=true)<?> | * + [getBeanClass](http://docs.google.com/org/apache/commons/beanutils/WrapDynaClass.html#getBeanClass--)() Return the class of the underlying wrapped bean. |
| * + [DynaProperty](http://docs.google.com/org/apache/commons/beanutils/DynaProperty.html)[] | * + [getDynaProperties](http://docs.google.com/org/apache/commons/beanutils/WrapDynaClass.html#getDynaProperties--)() Return an array of ProperyDescriptors for the properties currently defined in this DynaClass. |
| * + [DynaProperty](http://docs.google.com/org/apache/commons/beanutils/DynaProperty.html) | * + [getDynaProperty](http://docs.google.com/org/apache/commons/beanutils/WrapDynaClass.html#getDynaProperty-java.lang.String-)([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) name) Return a property descriptor for the specified property, if it exists; otherwise, return null. |
| * + [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) | * + [getName](http://docs.google.com/org/apache/commons/beanutils/WrapDynaClass.html#getName--)() Return the name of this DynaClass (analogous to the getName() method of java.lang.ClassDynaClass implementation class to support different dynamic classes, with different sets of properties. |
| * + [PropertyDescriptor](https://docs.oracle.com/javase/7/docs/api/java/beans/PropertyDescriptor.html?is-external=true) | * + [getPropertyDescriptor](http://docs.google.com/org/apache/commons/beanutils/WrapDynaClass.html#getPropertyDescriptor-java.lang.String-)([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) name) Return the PropertyDescriptor for the specified property name, if any; otherwise return null. |
| * + protected [PropertyUtilsBean](http://docs.google.com/org/apache/commons/beanutils/PropertyUtilsBean.html) | * + [getPropertyUtilsBean](http://docs.google.com/org/apache/commons/beanutils/WrapDynaClass.html#getPropertyUtilsBean--)() Returns the PropertyUtilsBean instance associated with this class. |
| * + protected void | * + [introspect](http://docs.google.com/org/apache/commons/beanutils/WrapDynaClass.html#introspect--)() Introspect our bean class to identify the supported properties. |
| * + [DynaBean](http://docs.google.com/org/apache/commons/beanutils/DynaBean.html) | * + [newInstance](http://docs.google.com/org/apache/commons/beanutils/WrapDynaClass.html#newInstance--)() Instantiates a new standard JavaBean instance associated with this DynaClass and return it wrapped in a new WrapDynaBean instance. |

### 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--), [toString](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true#toString--), [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-)

### Field Detail

#### beanClass [@Deprecated](https://docs.oracle.com/javase/7/docs/api/java/lang/Deprecated.html?is-external=true) protected [Class](https://docs.oracle.com/javase/7/docs/api/java/lang/Class.html?is-external=true)<?> beanClass Deprecated. No longer initialized, use getBeanClass() method instead The JavaBean Class which is represented by this WrapDynaClass.

#### descriptors protected [PropertyDescriptor](https://docs.oracle.com/javase/7/docs/api/java/beans/PropertyDescriptor.html?is-external=true)[] descriptors The set of PropertyDescriptors for this bean class.

#### descriptorsMap protected [HashMap](https://docs.oracle.com/javase/7/docs/api/java/util/HashMap.html?is-external=true)<[String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true),[PropertyDescriptor](https://docs.oracle.com/javase/7/docs/api/java/beans/PropertyDescriptor.html?is-external=true)> descriptorsMap The set of PropertyDescriptors for this bean class, keyed by the property name. Individual descriptor instances will be the same instances as those in the descriptors list.

#### properties protected [DynaProperty](http://docs.google.com/org/apache/commons/beanutils/DynaProperty.html)[] properties The set of dynamic properties that are part of this DynaClass.

#### propertiesMap protected [HashMap](https://docs.oracle.com/javase/7/docs/api/java/util/HashMap.html?is-external=true)<[String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true),[DynaProperty](http://docs.google.com/org/apache/commons/beanutils/DynaProperty.html)> propertiesMap The set of dynamic properties that are part of this DynaClass, keyed by the property name. Individual descriptor instances will be the same instances as those in the properties list.

#### dynaClasses [@Deprecated](https://docs.oracle.com/javase/7/docs/api/java/lang/Deprecated.html?is-external=true) protected static [HashMap](https://docs.oracle.com/javase/7/docs/api/java/util/HashMap.html?is-external=true)<[Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true),[Object](https://docs.oracle.com/javase/7/docs/api/java/lang/Object.html?is-external=true)> dynaClasses Deprecated. The dynaClasses Map will be removed in a subsequent release The set of WrapDynaClass instances that have ever been created, keyed by the underlying bean Class. The keys to this map are Class objects, and the values are corresponding WrapDynaClass objects. This static variable is safe even when this code is deployed via a shared classloader because it is keyed via a Class object. The same class loaded via two different classloaders will result in different entries in this map. Note, however, that this HashMap can result in a memory leak. When this class is in a shared classloader it will retain references to classes loaded via a webapp classloader even after the webapp has been undeployed. That will prevent the entire classloader and all the classes it refers to and all their static members from being freed. !!!!!!!!!!!! PLEASE NOTE !!!!!!!!!!!! \*\*\*\*\*\*\*\*\*\*\*\*\* THE FOLLOWING IS A NASTY HACK TO SO THAT BEANUTILS REMAINS BINARY COMPATIBLE WITH PREVIOUS RELEASES. There are two issues here: 1) Memory Issues: The static HashMap caused memory problems (See BEANUTILS-59) to resolve this it has been moved into a ContextClassLoaderLocal instance (named CLASSLOADER\_CACHE above) which holds one copy per ClassLoader in a WeakHashMap. 2) Binary Compatibility: As the "dynaClasses" static HashMap is "protected" removing it breaks BeanUtils binary compatibility with previous versions. To resolve this all the methods have been overriden to delegate to the Map for the ClassLoader in the ContextClassLoaderLocal.

### Method Detail

#### getBeanClass protected [Class](https://docs.oracle.com/javase/7/docs/api/java/lang/Class.html?is-external=true)<?> getBeanClass() Return the class of the underlying wrapped bean.Returns: the class of the underlying wrapped bean Since: 1.8.0

#### getName public [String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) getName() Return the name of this DynaClass (analogous to the getName() method of java.lang.ClassDynaClass implementation class to support different dynamic classes, with different sets of properties.Specified by: [getName](http://docs.google.com/org/apache/commons/beanutils/DynaClass.html#getName--) in interface [DynaClass](http://docs.google.com/org/apache/commons/beanutils/DynaClass.html) Returns: the name of the DynaClass

#### getDynaProperty public [DynaProperty](http://docs.google.com/org/apache/commons/beanutils/DynaProperty.html) getDynaProperty([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) name) Return a property descriptor for the specified property, if it exists; otherwise, return null.Specified by: [getDynaProperty](http://docs.google.com/org/apache/commons/beanutils/DynaClass.html#getDynaProperty-java.lang.String-) in interface [DynaClass](http://docs.google.com/org/apache/commons/beanutils/DynaClass.html) Parameters: name - Name of the dynamic property for which a descriptor is requested Returns: The descriptor for the specified property Throws: [IllegalArgumentException](https://docs.oracle.com/javase/7/docs/api/java/lang/IllegalArgumentException.html?is-external=true) - if no property name is specified

#### getDynaProperties public [DynaProperty](http://docs.google.com/org/apache/commons/beanutils/DynaProperty.html)[] getDynaProperties() Return an array of ProperyDescriptors for the properties currently defined in this DynaClass. If no properties are defined, a zero-length array will be returned. **FIXME** - Should we really be implementing getBeanInfo() instead, which returns property descriptors and a bunch of other stuff?Specified by: [getDynaProperties](http://docs.google.com/org/apache/commons/beanutils/DynaClass.html#getDynaProperties--) in interface [DynaClass](http://docs.google.com/org/apache/commons/beanutils/DynaClass.html) Returns: the set of properties for this DynaClass

#### newInstance public [DynaBean](http://docs.google.com/org/apache/commons/beanutils/DynaBean.html) newInstance() throws [IllegalAccessException](https://docs.oracle.com/javase/7/docs/api/java/lang/IllegalAccessException.html?is-external=true), [InstantiationException](https://docs.oracle.com/javase/7/docs/api/java/lang/InstantiationException.html?is-external=true) Instantiates a new standard JavaBean instance associated with this DynaClass and return it wrapped in a new WrapDynaBean instance. **NOTE** the JavaBean should have a no argument constructor.**NOTE** - Most common use cases should not need to use this method. It is usually better to create new WrapDynaBean instances by calling its constructor. For example: Object javaBean = ...; DynaBean wrapper = new WrapDynaBean(javaBean); (This method is needed for some kinds of DynaBean framework.)Specified by: [newInstance](http://docs.google.com/org/apache/commons/beanutils/DynaClass.html#newInstance--) in interface [DynaClass](http://docs.google.com/org/apache/commons/beanutils/DynaClass.html) Returns: A new DynaBean instance Throws: [IllegalAccessException](https://docs.oracle.com/javase/7/docs/api/java/lang/IllegalAccessException.html?is-external=true) - if the Class or the appropriate constructor is not accessible [InstantiationException](https://docs.oracle.com/javase/7/docs/api/java/lang/InstantiationException.html?is-external=true) - if this Class represents an abstract class, an array class, a primitive type, or void; or if instantiation fails for some other reason

#### getPropertyDescriptor public [PropertyDescriptor](https://docs.oracle.com/javase/7/docs/api/java/beans/PropertyDescriptor.html?is-external=true) getPropertyDescriptor([String](https://docs.oracle.com/javase/7/docs/api/java/lang/String.html?is-external=true) name) Return the PropertyDescriptor for the specified property name, if any; otherwise return null.Parameters: name - Name of the property to be retrieved Returns: The descriptor for the specified property

#### clear public static void clear() Clear our cache of WrapDynaClass instances.

#### createDynaClass public static [WrapDynaClass](http://docs.google.com/org/apache/commons/beanutils/WrapDynaClass.html) createDynaClass([Class](https://docs.oracle.com/javase/7/docs/api/java/lang/Class.html?is-external=true)<?> beanClass) Create (if necessary) and return a new WrapDynaClass instance for the specified bean class.Parameters: beanClass - Bean class for which a WrapDynaClass is requested Returns: A new *Wrap* [DynaClass](http://docs.google.com/org/apache/commons/beanutils/DynaClass.html)

#### createDynaClass public static [WrapDynaClass](http://docs.google.com/org/apache/commons/beanutils/WrapDynaClass.html) createDynaClass([Class](https://docs.oracle.com/javase/7/docs/api/java/lang/Class.html?is-external=true)<?> beanClass, [PropertyUtilsBean](http://docs.google.com/org/apache/commons/beanutils/PropertyUtilsBean.html) pu) Create (if necessary) and return a new WrapDynaClass instance for the specified bean class using the given PropertyUtilsBean instance for introspection. Using this method a specially configured PropertyUtilsBean instance can be hooked into the introspection mechanism of the managed bean. The argument is optional; if no PropertyUtilsBean object is provided, the default instance is used.Parameters: beanClass - Bean class for which a WrapDynaClass is requested pu - the optional PropertyUtilsBean to be used for introspection Returns: A new *Wrap* [DynaClass](http://docs.google.com/org/apache/commons/beanutils/DynaClass.html) Since: 1.9

#### getPropertyUtilsBean protected [PropertyUtilsBean](http://docs.google.com/org/apache/commons/beanutils/PropertyUtilsBean.html) getPropertyUtilsBean() Returns the PropertyUtilsBean instance associated with this class. This bean is used for introspection.Returns: the associated PropertyUtilsBean instance Since: 1.9

#### introspect protected void introspect() Introspect our bean class to identify the supported properties.

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