| | [**Overview**](http://docs.google.com/overview-summary.html) | [**Package**](http://docs.google.com/package-summary.html) | **Class** | [**Use**](http://docs.google.com/class-use/ECPoint.html) | [**Tree**](http://docs.google.com/package-tree.html) | [**Deprecated**](http://docs.google.com/deprecated-list.html) | [**Index**](http://docs.google.com/index-files/index-1.html) | [**Help**](http://docs.google.com/help-doc.html) | | --- | --- | --- | --- | --- | --- | --- | --- | | | ***Java™ Platform***  ***Standard Ed. 6*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| [**PREV CLASS**](http://docs.google.com/java/security/spec/ECParameterSpec.html)   [**NEXT CLASS**](http://docs.google.com/java/security/spec/ECPrivateKeySpec.html) | [**FRAMES**](http://docs.google.com/index.html?java/security/spec/ECPoint.html)    [**NO FRAMES**](http://docs.google.com/ECPoint.html)     [**All Classes**](http://docs.google.com/allclasses-noframe.html) |
| SUMMARY: NESTED | [FIELD](#3znysh7) | [CONSTR](#2et92p0) | [METHOD](#tyjcwt) | DETAIL: [FIELD](#1t3h5sf) | [CONSTR](#2s8eyo1) | [METHOD](#3rdcrjn) |

## **java.security.spec**

Class ECPoint

[java.lang.Object](http://docs.google.com/java/lang/Object.html)  
 **java.security.spec.ECPoint**

public class **ECPoint**extends [Object](http://docs.google.com/java/lang/Object.html)

This immutable class represents a point on an elliptic curve (EC) in affine coordinates. Other coordinate systems can extend this class to represent this point in other coordinates.

**Since:** 1.5

| **Field Summary** | |
| --- | --- |
| static [ECPoint](http://docs.google.com/java/security/spec/ECPoint.html) | [**POINT\_INFINITY**](http://docs.google.com/java/security/spec/ECPoint.html#POINT_INFINITY)            This defines the point at infinity. |

| **Constructor Summary** | |
| --- | --- |
| [**ECPoint**](http://docs.google.com/java/security/spec/ECPoint.html#ECPoint(java.math.BigInteger,%20java.math.BigInteger))([BigInteger](http://docs.google.com/java/math/BigInteger.html) x, [BigInteger](http://docs.google.com/java/math/BigInteger.html) y)            Creates an ECPoint from the specified affine x-coordinate x and affine y-coordinate y. |

| **Method Summary** | |
| --- | --- |
| boolean | [**equals**](http://docs.google.com/java/security/spec/ECPoint.html#equals(java.lang.Object))([Object](http://docs.google.com/java/lang/Object.html) obj)            Compares this elliptic curve point for equality with the specified object. |
| [BigInteger](http://docs.google.com/java/math/BigInteger.html) | [**getAffineX**](http://docs.google.com/java/security/spec/ECPoint.html#getAffineX())()            Returns the affine x-coordinate x. |
| [BigInteger](http://docs.google.com/java/math/BigInteger.html) | [**getAffineY**](http://docs.google.com/java/security/spec/ECPoint.html#getAffineY())()            Returns the affine y-coordinate y. |
| int | [**hashCode**](http://docs.google.com/java/security/spec/ECPoint.html#hashCode())()            Returns a hash code value for this elliptic curve point. |

| **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()), [finalize](http://docs.google.com/java/lang/Object.html#finalize()), [getClass](http://docs.google.com/java/lang/Object.html#getClass()), [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)) |

| **Field Detail** |
| --- |

### POINT\_INFINITY

public static final [ECPoint](http://docs.google.com/java/security/spec/ECPoint.html) **POINT\_INFINITY**

This defines the point at infinity.

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

### ECPoint

public **ECPoint**([BigInteger](http://docs.google.com/java/math/BigInteger.html) x,  
 [BigInteger](http://docs.google.com/java/math/BigInteger.html) y)

Creates an ECPoint from the specified affine x-coordinate x and affine y-coordinate y.

**Parameters:**x - the affine x-coordinate.y - the affine y-coordinate. **Throws:** [NullPointerException](http://docs.google.com/java/lang/NullPointerException.html) - if x or y is null.

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

### getAffineX

public [BigInteger](http://docs.google.com/java/math/BigInteger.html) **getAffineX**()

Returns the affine x-coordinate x. Note: POINT\_INFINITY has a null affine x-coordinate.

**Returns:**the affine x-coordinate.

### getAffineY

public [BigInteger](http://docs.google.com/java/math/BigInteger.html) **getAffineY**()

Returns the affine y-coordinate y. Note: POINT\_INFINITY has a null affine y-coordinate.

**Returns:**the affine y-coordinate.

### equals

public boolean **equals**([Object](http://docs.google.com/java/lang/Object.html) obj)

Compares this elliptic curve point for equality with the specified object.

**Overrides:**[equals](http://docs.google.com/java/lang/Object.html#equals(java.lang.Object)) in class [Object](http://docs.google.com/java/lang/Object.html) **Parameters:**obj - the object to be compared. **Returns:**true if obj is an instance of ECPoint and the affine coordinates match, false otherwise.**See Also:**[Object.hashCode()](http://docs.google.com/java/lang/Object.html#hashCode()), [Hashtable](http://docs.google.com/java/util/Hashtable.html)

### hashCode

public int **hashCode**()

Returns a hash code value for this elliptic curve point.

**Overrides:**[hashCode](http://docs.google.com/java/lang/Object.html#hashCode()) in class [Object](http://docs.google.com/java/lang/Object.html) **Returns:**a hash code value.**See Also:**[Object.equals(java.lang.Object)](http://docs.google.com/java/lang/Object.html#equals(java.lang.Object)), [Hashtable](http://docs.google.com/java/util/Hashtable.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/ECPoint.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*** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
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[Submit a bug or feature](http://bugs.sun.com/services/bugreport/index.jsp)

For further API reference and developer documentation, see [Java SE Developer Documentation](http://docs.google.com/webnotes/devdocs-vs-specs.html). That documentation contains more detailed, developer-targeted descriptions, with conceptual overviews, definitions of terms, workarounds, and working code examples.

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