

# Class `java.net.InetAddress`

[java.lang.Object](#)

└─ `java.net.InetAddress`

public final class **InetAddress**

extends [Object](#)

implements [Serializable](#)

This class represents an Internet Protocol (IP) address.

Applications should use the methods `getLocalHost`, `getByName`, or `getAllByName` to create a new `InetAddress` instance.

**Since:**

JDK1.0

**See Also:**

[getAllByName\(java.lang.String\)](#), [getByName\(java.lang.String\)](#), [getLocalHost\(\)](#), [Serialized Form](#)

## Method Summary

boolean	<a href="#">equals</a> ( <a href="#">Object</a> obj) Compares this object against the specified object.
byte[]	<a href="#">getAddress</a> () Returns the raw IP address of this <code>InetAddress</code> object.
static <a href="#">InetAddress</a> []	<a href="#">getAllByName</a> ( <a href="#">String</a> host) Determines all the IP addresses of a host, given the host's name.
static <a href="#">InetAddress</a>	<a href="#">getByName</a> ( <a href="#">String</a> host) Determines the IP address of a host, given the host's name.
<a href="#">String</a>	<a href="#">getHostAddress</a> () Returns the IP address string "%d".
<a href="#">String</a>	<a href="#">getHostName</a> () Returns the hostname for this address.
static <a href="#">InetAddress</a>	<a href="#">getLocalHost</a> () Returns the local host.
int	<a href="#">hashCode</a> () Returns a hashcode for this IP address.
boolean	<a href="#">isMulticastAddress</a> () Utility routine to check if the <code>InetAddress</code> is a IP multicast address.
<a href="#">String</a>	<a href="#">toString</a> () Converts this IP address to a <code>String</code> .

## Methods inherited from class `java.lang.Object`

[clone](#) , [finalize](#) , [getClass](#) , [notify](#) , [notifyAll](#) , [wait](#) , [wait](#) , [wait](#)

## Method Detail

### isMulticastAddress

```
public boolean isMulticastAddress()
```

Utility routine to check if the `InetAddress` is a IP multicast address. IP multicast address is a Class D address i.e first four bits of the address are 1110.

**Since:**

JDK1.1

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### getHostName

```
public String getHostName()
```

Returns the hostname for this address. If the host is equal to null, then this address refers to any of the local machine's available network addresses.

**Returns:**

the host name for this IP address.

---

### getAddress

```
public byte[] getAddress()
```

Returns the raw IP address of this `InetAddress` object. The result is in network byte order: the highest order byte of the address is in `getAddress()[0]`.

**Returns:**

the raw IP address of this object.

---

### getHostAddress

```
public String getHostAddress()
```

Returns the IP address string "%d.%d.%d.%d".

**Returns:**

the raw IP address in a string format.

**Since:**

JDK1.0.2

---

### hashCode

```
public int hashCode()
```

Returns a hashcode for this IP address.

**Returns:**

a hash code value for this IP address.

**Overrides:**

[hashCode](#) in class [Object](#)

---

**equals**

```
public boolean equals(Object obj)
```

Compares this object against the specified object. The result is true if and only if the argument is not null and it represents the same IP address as this object.

Two instances of `InetAddress` represent the same IP address if the length of the byte arrays returned by `getAddress` is the same for both, and each of the array components is the same for the byte arrays.

**Parameters:**

obj - the object to compare against.

**Returns:**

true if the objects are the same; false otherwise.

**Overrides:**

[equals](#) in class [Object](#)

**See Also:**

[getAddress\(\)](#)

---

**toString**

```
public String toString()
```

Converts this IP address to a String.

**Returns:**

a string representation of this IP address.

**Overrides:**

[toString](#) in class [Object](#)

---

**getByName**

```
public static InetAddress getByName(String host)  
    throws UnknownHostException
```

Determines the IP address of a host, given the host's name. The host name can either be a machine name, such as "java.sun.com", or a string representing its IP address, such as "206.26.48.100".

**Parameters:**

host - the specified host, or null for the local host.

**Returns:**

an IP address for the given host name.

**Throws:**

[UnknownHostException](#) - if no IP address for the host could be found.

---

**getAllByName**

```
public static InetAddress[] getAllByName(String host)  
    throws UnknownHostException
```

Determines all the IP addresses of a host, given the host's name. The host name can either be a machine name, such as "java.sun.com", or a string representing its IP address, such as "206.26.48.100".

**Parameters:**

host - the name of the host.

**Returns:**

an array of all the IP addresses for a given host name.

**Throws:**

[UnknownHostException](#) - if no IP address for the host could be found.

---

## getLocalHost

```
public static InetAddress getLocalHost()  
    throws UnknownHostException
```

Returns the local host.

**Returns:**

the IP address of the local host.

**Throws:**

[UnknownHostException](#) - if no IP address for the host could be found.

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*Java Platform 1.2*

*Beta 4*

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