**Module** java.base
**Package** java.net.spi

# Class InetAddressResolverProvider

java.lang.Object
    java.net.spi.InetAddressResolverProvider

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```
public abstract class InetAddressResolverProvider
extends Object
```

Service-provider class for InetAddress resolvers.

A resolver provider is a factory for custom implementations of InetAddress resolvers. A resolver defines operations for looking up (resolving) host names and IP addresses.

A resolver provider is a concrete subclass of this class that has a zero-argument constructor and implements the abstract methods specified below.

A given invocation of the Java virtual machine maintains a single system-wide resolver instance, which is used by InetAddress. It is set after the VM is fully initialized and when an invocation of a method in InetAddress class triggers the first lookup operation.

A resolver provider is located and loaded by InetAddress to create the system-wide resolver as follows:

1. The ServiceLoader mechanism is used to locate an InetAddressResolverProvider using the system class loader. The order in which providers are located is implementation specific. The first provider found will be used to instantiate the InetAddressResolver by invoking the get(InetAddressResolverProvider.Configuration) method. The returned InetAddressResolver will be set as the system-wide resolver.
2. If the previous step fails to find any resolver provider the built-in resolver will be set as the system-wide resolver.

If instantiating a custom resolver from a provider discovered in step 1 throws an error or exception, the system-wide resolver will not be set and the error or exception will be propagated to the caller of the method that triggered the lookup operation. Otherwise, any lookup operation will be performed using the *system-wide resolver*.

**Implementation Note:**

InetAddress will use the *built-in resolver* for any lookup operation that might occur before the VM is fully booted.

**Since:**

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## Nested Class Summary

### Nested Classes

| Modifier and Type | Class | Description |
|---|---|---|
| static interface | **InetAddressResolverProvider.Configuration** | A Configuration object is supplied to the get(Configuration) method when setting the system-wide resolver. |

## Constructor Summary

### Constructors

| Modifier | Constructor | Description |
|---|---|---|
| protected | **InetAddressResolverProvider**() | Creates a new instance of InetAddressResolverProvider. |

## Method Summary

**All Methods** | **Instance Methods** | **Abstract Methods**

| Modifier and Type | Method | Description |
|---|---|---|
| abstract InetAddressResolver | **get**(InetAddressResolverProvider.Configuration) | Initialize and return an InetAddressResolver provided by this provider. |
| abstract String | **name**() | Returns the name of this provider, or null if unnamed. |

### Methods declared in class java.lang.Object

clone, equals, finalize, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait

## *Constructor Details*

### InetAddressResolverProvider

protected InetAddressResolverProvider()

Creates a new instance of `InetAddressResolverProvider`.

**Implementation Note:**

It is recommended that an `InetAddressResolverProvider` service implementation initialization should be as simple as possible, in order to avoid possible risks of deadlock or class loading cycles during the instantiation of the service provider.

**Throws:**

SecurityException - if a security manager is present and its `checkPermission` method doesn't allow the RuntimePermission("inetAddressResolverProvider").

## *Method Details*

### get

public abstract InetAddressResolver get(InetAddressResolverProvider.Configuration configuration)

Initialize and return an `InetAddressResolver` provided by this provider. This method is called by `InetAddress` when installing the system-wide resolver implementation.

Any error or exception thrown by this method is considered as a failure of `InetAddressResolver` instantiation and will be propagated to the caller of the method that triggered the lookup operation.

**Parameters:**

configuration - a `InetAddressResolverProvider.Configuration` instance containing platform built-in address resolution configuration.

**Returns:**

the resolver provided by this provider

### name

public abstract String name()

Returns the name of this provider, or `null` if unnamed.

**Returns:**

the name of this provider, or `null` if unnamed

Report a bug or suggest an enhancement