

# System.Net.Sockets.SocketOptionLevel Enum

```
[ILAsm]  
.class public sealed serializable SocketOptionLevel extends System.Enum  
  
[C#]  
public enum SocketOptionLevel
```

## Assembly Info:

- *Name:* System
- *Public Key:* [00 00 00 00 00 00 00 00 04 00 00 00 00 00 00 00]
- *Version:* 2.0.x.x
- *Attributes:*
  - CLSCompliantAttribute(true)

## Summary

Specifies the option level associated with the `System.Net.Sockets.SocketOptionName` used in the `System.Net.Sockets.Socket.SetSocketOption` and `System.Net.Sockets.Socket.GetSocketOption` methods of the `System.Net.Sockets.Socket` class.

## Inherits From: System.Enum

**Library:** Networking

## Description

Some socket options apply only to specific protocols while others apply to all types. Members of this enumeration specify which protocol applies to a specific socket option.

## SocketOptionLevel.IP Field

```
[ILAsm]  
.field public static literal valuetype  
System.Net.Sockets.SocketOptionLevel IP = 0  
  
[C#]  
IP = 0
```

### Summary

Specifies that members of the `System.Net.Sockets.SocketOptionName` enumeration apply to Internet Protocol (IP).

The following table lists the members of the `System.Net.Sockets.SocketOptionName` enumeration used with this level.

SocketOptionName	Description of Socket Option Data
HeaderIncluded	A <code>System.Boolean</code> where <code>true</code> indicates the application is providing the IP header for outgoing datagrams.
IPOptions	A <code>System.Byte</code> array that specifies IP options to be inserted into outgoing datagrams.
IpTimeToLive	A <code>System.Int32</code> that specifies the time-to-live for datagrams. The time-to-live designates the number of networks on which the datagram is allowed to travel before being discarded by a router.
MulticastInterface	A <code>System.Byte</code> array that specifies the interface for outgoing multicast packets.
MulticastLoopback	A <code>System.Boolean</code> where <code>true</code> enables multicast loopback.
MulticastTimeToLive	A <code>System.Int32</code> that specifies the time-to-live for multicast datagrams.
TypeOfService	A <code>System.Int32</code> that specifies the type of service field in the IP header.
UseLoopback	A <code>System.Boolean</code> where <code>true</code> indicates Bypass hardware when possible.

# SocketOptionLevel.Socket Field

```
[ILAsm]
.field public static literal valuetype
System.Net.Sockets.SocketOptionLevel Socket = 65535

[C#]
Socket = 65535
```

## Summary

Specifies that members of the `System.Net.Sockets.SocketOptionName` enumeration are not specific to a particular protocol.

The following table lists the members of the `System.Net.Sockets.SocketOptionName` enumeration used with this level.

SocketOptionName	Description
Broadcast	A <code>System.Boolean</code> where <code>true</code> indicates broadcast messages are allowed to be sent to the socket.
Debug	A <code>System.Boolean</code> where <code>true</code> indicates to record debugging information.
DontLinger	A <code>System.Boolean</code> where <code>true</code> indicates to close the socket without lingering.
DontRoute	A <code>System.Boolean</code> where <code>true</code> indicates not to route data; <code>false</code> indicates to send data directly to interface addresses.
Error	A <code>System.Int32</code> that contains the error code associated with the last socket error. The error code is cleared by this option. This option is read-only.
KeepAlive	A <code>System.Boolean</code> where <code>true</code> (the default) indicates to enable keep-alives, which allows a connection to remain open after a request.
OutOfBandInline	A <code>System.Boolean</code> where <code>true</code> indicates to receive out-of-band data in the normal data stream.
ReceiveBuffer	A <code>System.Int32</code> that specifies the total per-socket buffer space reserved for receives. This is unrelated to the maximum message size or the size of a TCP window.
ReceiveTimeout	A <code>System.Int32</code> that specifies the maximum time, in milliseconds, the <code>System.Net.Sockets.Socket.Receive</code> and

	<code>System.Net.Sockets.Socket.ReceiveFrom</code> methods will block when attempting to receive data. If data is not received within this time, a <code>System.Net.Sockets.SocketException</code> exception is thrown.
ReuseAddress	A <code>System.Boolean</code> where <code>true</code> allows the socket to be bound to an address that is already in use.
SendBuffer	A <code>System.Int32</code> that specifies the total per-socket buffer space reserved for sends. This is unrelated to the maximum message size or the size of a TCP window.
SendTimeout	A <code>System.Int32</code> that specifies the maximum time, in milliseconds, the <code>System.Net.Sockets.Socket.Send</code> and <code>System.Net.Sockets.Socket.SendTo</code> methods will block when attempting to send data. If data is not sent within this time, a <code>System.Net.Sockets.SocketException</code> exception is thrown.
Type	One of the values defined in the <code>System.Net.Sockets.SocketType</code> enumeration. This option is read-only.

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# SocketOptionLevel.Tcp Field

```
[ILAsm]
.field public static literal valuetype
System.Net.Sockets.SocketOptionLevel Tcp = 6

[C#]
Tcp = 6
```

## Summary

Specifies that members of the `System.Net.Sockets.SocketOptionName` enumeration apply to Transmission Control Protocol (TCP).

The following table lists the members of the `System.Net.Sockets.SocketOptionName` enumeration used with this level.

SocketOptionName	Description of Socket Option Data
BsdUrgent	A <code>System.Boolean</code> where <code>true</code> indicates to use urgent data as defined by IETF RFC 1222. Once set, this option cannot be turned off.
Expedited	A <code>System.Boolean</code> where <code>true</code> indicates to use expedited data as defined by IETF RFC 1222. Once set, this option cannot be turned off.
NoDelay	A <code>System.Boolean</code> where <code>true</code> indicates to disable the Nagle algorithm for send coalescing.

## SocketOptionLevel.Udp Field

```
[ILAsm]  
.field public static literal valuetype  
System.Net.Sockets.SocketOptionLevel Udp = 17  
  
[C#]  
Udp = 17
```

### Summary

Specifies that members of the `System.Net.Sockets.SocketOptionName` enumeration apply to User Datagram Protocol (UDP).

The following table lists the members of the `System.Net.Sockets.SocketOptionName` enumeration used with this level.

SocketOptionName	Description of Socket Option Data
ChecksumCoverage	A <code>System.Boolean</code> that specifies UDP checksum coverage.
NoChecksum	A <code>System.Boolean</code> where <code>true</code> indicates to send UDP datagrams with the checksum set to zero.