

# Chapter 12

## Summary of IS-IS Configuration Statements

The following sections explain each of the Intermediate System to Intermediate System (IS-IS) configuration statements. The statements are organized alphabetically.

### authentication-key

<b>Syntax</b>	authentication-key <i>key</i> ;
<b>Hierarchy Level</b>	[edit protocols isis]; [edit protocols isis level <i>level-number</i> ], [edit protocols isis interface <i>interface-name</i> ], [edit protocols isis interface <i>interface-name</i> level <i>level-number</i> ]
<b>Description</b>	<p>Authentication key (password). Neighboring routers use the password to verify the authenticity of packets sent from this interface. For the key to work, you also must include the authentication-type statement.</p> <p>All routers must use the same password. If you are using the JUNOS IS-IS software with another implementation of IS-IS, the other implementation must be configured to use the same password for the domain, the area, and all interfaces adjacent to the Juniper Networks router.</p> <p>If you specify the authentication-key statement at [edit protocols isis level <i>level-number</i>] in the hierarchy, the global setting is overridden.</p>
<b>Default</b>	If you do not include this statement and the authentication-type statement, IS-IS authentication is disabled.
<b>Options</b>	<i>key</i> —Authentication password. The password can be up to 255 characters. Characters can include any ASCII strings. If you include spaces, enclose all characters in quotation marks (“ ”).
<b>Usage Guidelines</b>	See “Configure IS-IS Authentication” on page 129.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.
<b>See Also</b>	authentication-type on page 148, no-authentication-check on page 157

## authentication-type

<b>Syntax</b>	authentication-type <i>authentication</i> ;
<b>Hierarchy Level</b>	[edit protocols isis], [edit protocols isis level <i>level-number</i> ], [edit protocols isis interface <i>interface-name</i> ], [edit protocols isis interface <i>interface-name</i> level <i>level-number</i> ]
<b>Description</b>	Enable authentication and specify the authentication scheme for IS-IS. If you enable authentication, you must specify a password by including the authentication-key statement.
<b>Default</b>	If you do not include this statement and the authentication-key statement, IS-IS authentication is disabled.
<b>Options</b>	<i>authentication</i> —Authentication scheme: <ul style="list-style-type: none"> <li>md5—Use HMAC authentication in combination with MD5. HMAC-MD5 authentication is defined in RFC 2104, <i>HMAC: Keyed-Hashing for Message Authentication</i>.</li> <li>simple—Use a simple password for authentication. The password is included in the transmitted packet, making this method of authentication relatively insecure. We recommend that you <i>not</i> use this authentication method.</li> </ul>
<b>Usage Guidelines</b>	See “Configure IS-IS Authentication” on page 129.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.
<b>See Also</b>	authentication-key on page 147, no-authentication-check on page 157

## csnp-interval

<b>Syntax</b>	csnp-interval ( <i>seconds</i>   disable);
<b>Hierarchy Level</b>	[edit protocols isis interface <i>interface-name</i> ]
<b>Description</b>	Configure the interval between complete sequence number (CSN) packets on a LAN interface.
<b>Options</b>	disable—Do not send CSN packets on this interface.  <i>seconds</i> —Number of seconds between the sending of CSN packets. <b>Range:</b> 1 through 65,535 <b>Default:</b> 10 seconds
<b>Usage Guidelines</b>	See “Configure the CSNP Interval” on page 132.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## disable

<b>Syntax</b>	disable;
<b>Hierarchy Level</b>	[edit protocols isis], [edit protocols isis wide-metrics-only], [edit protocols isis interface <i>interface-name</i> ], [edit protocols isis interface <i>interface-name</i> level <i>level-number</i> ]
<b>Description</b>	Disable IS-IS on the router, on an interface, or on a level. At the [edit protocols isis wide-metrics-only] hierarchy level, disable IS-IS support for traffic engineering.  Enabling IS-IS on an interface (by including the interface statement at the [edit protocols isis] hierarchy level), disabling it (by including the <b>disable</b> statement), and not actually having IS-IS run on an interface (by including the <b>passive</b> statement) are mutually exclusive states.
<b>Default</b>	IS-IS is enabled for Level 1 and Level 2 routers on all interfaces on which an International Organization for Standardization (ISO) protocol family is enabled.  IS-IS support for traffic engineering is enabled.
<b>Usage Guidelines</b>	See “IS-IS Overview” on page 123 and “Disable IS-IS on the Router” on page 141.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## export

<b>Statement</b>	export [ <i>policy-names</i> ];
<b>Hierarchy Level</b>	[edit protocols isis]
<b>Description</b>	Apply one or more policies to routes being exported from the routing table into IS-IS.
<b>Options</b>	<i>policy-name</i> —Name of one or more policies.
<b>Usage Guidelines</b>	See “Configure IS-IS Routing Policy” on page 141 and “IPv6 Routing Policy” on page 67.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## external-preference

**Syntax** external-preference *preference*;

**Hierarchy Level** [edit protocols isis level *level-number*]

**Description** Configure the preference of external routes.

**Options** *preference*—Preference value.

**Range:** 0 through 255

**Default:** 15 (for Level 1 internal routes), 18 (for Level 2 internal routes), 160 (for Level 1 external routes), 165 (for Level 2 external routes)

**Usage Guidelines** See “Configure Route Preferences” on page 134.

**Required Privilege Level** routing—To view this statement in the configuration.  
routing-control—To add this statement to the configuration.

**See Also** preference on page 158

## graceful-restart

**Syntax** graceful-restart {  
    disable;  
}

**Hierarchy Level** [edit protocols isis]

**Description** Disables graceful restart for IS-IS.

**Options** disable—Disable graceful restart.

**Usage Guidelines** See “Disable Graceful Restart” on page 140.

**Required Privilege Level** routing—To view this statement in the configuration.  
routing-control—To add this statement to the configuration.

## hello-authentication-key

<b>Syntax</b>	hello-authentication-key <i>key</i> ;
<b>Hierarchy Level</b>	[edit protocols isis interface <i>interface-name</i> ], [edit protocols isis interface <i>interface-name</i> level <i>number</i> ]
<b>Description</b>	Authentication key (password) for hello packets. Neighboring routers use the password to verify the authenticity of packets sent from an interface. For the key to work, you also must include the hello-authentication-type statement.
<b>Default</b>	By default, hello authentication is not configured on an interface. However, if IS-IS authentication is configured, the hello packets are authenticated using the IS-IS authentication type and password.
<b>Options</b>	<i>key</i> —Authentication password. The password can be up to 255 characters. Characters can include any ASCII strings. If you include spaces, enclose all characters in quotation marks (“ ”).
<b>Usage Guidelines</b>	See “Configure Authentication for Hello Packets” on page 136.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.
<b>See Also</b>	authentication-key on page 147, authentication-type on page 148, hello-authentication-type on page 151

## hello-authentication-type

<b>Syntax</b>	hello-authentication-type <i>authentication</i> ;
<b>Hierarchy Level</b>	[edit protocols isis interface <i>interface-name</i> ], [edit protocols isis interface <i>interface-name</i> level <i>number</i> ]
<b>Description</b>	Enable authentication on an interface for hello packets. If you enable authentication on hello packets, you must specify a password by including the hello-authentication-key statement.
<b>Options</b>	<i>authentication</i> —Specifies the packet verification type.
<b>Default</b>	By default, hello authentication is not configured on an interface. However, if IS-IS authentication is configured, the hello packets are authenticated using the IS-IS authentication type and password.
<b>Usage Guidelines</b>	See “Configure Authentication for Hello Packets” on page 136.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.
<b>See Also</b>	authentication-key on page 147, authentication-type on page 148, hello-authentication-key on page 151

## hello-interval

- Syntax** hello-interval *seconds*;
- Hierarchy Level** [edit protocols isis interface *interface-name* level *level-number*]
- Description** How often the router sends hello packets from an interface.
- Options** *seconds*—Length of time of hello packets.  
**Range:** 1 through 20,000 seconds  
**Default:** 3 seconds (for designated intersystem [DIS] routers), 9 seconds (for non-DIS routers)
- Usage Guidelines** See “Modify the Hello Interval” on page 137.
- Required Privilege Level** routing—To view this statement in the configuration.  
routing-control—To add this statement to the configuration.
- See Also** hold-time on page 152

## hold-time

- Syntax** hold-time *seconds*;
- Hierarchy Level** [edit protocols isis interface *interface-name* level *level-number*]
- Description** How long a neighbor should consider the sending router (this router) to be operative (up). The hold time is advertised in IS-IS hello packets.
- Options** *seconds*—Hold-time value.  
**Range:** 3 through 65,535 seconds  
**Default:** 9 seconds (for DIS routers), 27 seconds (for non-DIS routers) (three times the default hello interval)
- Usage Guidelines** See “Modify the Hold-Time Value” on page 137.
- Required Privilege Level** routing—To view this statement in the configuration.  
routing-control—To add this statement to the configuration.
- See Also** hello-interval on page 152

## interface

```

Syntax interface interface-name {
    disable;
    authentication-key key;
    authentication-type authentication;
    csnp-interval (seconds | disable);
    hello-authentication-key key;
    hello-authentication-type authentication;
    lsp-interval milliseconds;
    mesh-group (value | blocked);
    passive;
    level level-number {
        disable;
        authentication-key key;
        authentication-type authentication;
        hello-authentication-type authentication;
        hello-authentication-key key;
        hello-interval seconds;
        hold-time seconds;
        metric metric;
        passive;
        priority number;
        te-metric metric;
    }
}

```

**Hierarchy Level** [edit protocols isis]

**Description** Configure interface-specific IS-IS properties. To configure more than one interface, include the interface statement multiple times.

Enabling IS-IS on an interface (by including the interface statement at the [edit protocols isis] hierarchy level), disabling it (by including the **disable** statement), and not actually having IS-IS run on an interface (by including the **passive** statement) are mutually exclusive states.

**Options** *interface-name*—Name of an interface. Specify the full interface name, including the physical and logical address components. To configure all interfaces, specify the interface name as all. For details about specifying interfaces, see the *JUNOS Internet Software Configuration Guide: Interfaces and Class of Service* .

The remaining statements are explained separately.

**Usage Guidelines** See “Configure Interface-Specific Properties” on page 131.

**Required Privilege Level** routing—To view this statement in the configuration.  
routing-control—To add this statement to the configuration.

## isis

<b>Syntax</b>	isis { ... }
<b>Hierarchy Level</b>	[edit protocols]
<b>Description</b>	Enable IS-IS routing on the router.  You must include the isis statement in the configuration to run IS-IS on the router.
<b>Default</b>	IS-IS is disabled on the router.
<b>Usage Guidelines</b>	See “Minimum IS-IS Configuration” on page 129.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## level

### ***level (global IS-IS)***

<b>Syntax</b>	level <i>level-number</i> { authentication-key <i>key</i> ; authentication-type <i>authentication</i> ; external-preference <i>preference</i> ; preference <i>preference</i> ; wide-metrics-only; }
<b>Hierarchy Level</b>	[edit protocols isis]
<b>Description</b>	Configure the global-level properties.
<b>Options</b>	<i>level-number</i> —IS-IS level number. <b>Value:</b> 1 or 2  The remaining statements are explained separately.
<b>Usage Guidelines</b>	See “Configure Route Preferences” on page 134.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

**level (IS-IS interfaces)**

**Syntax** level *level-number* {  
 disable;  
 authentication-key *key*;  
 authentication-type *authentication*;  
 hello-authentication-key *key*;  
 hello-authentication-type *authentication*;  
 hello-interval *seconds*;  
 hold-time *seconds*;  
 metric *metric*;  
 passive;  
 priority *number*;  
 te-metric *metric*;  
 }

**Hierarchy Level** [edit protocols isis interface *interface-name*]

**Description** Configure the IS-IS level. You can configure one instance of Level 1 routing and one instance of Level 2 routing on each interface, and you can configure the two levels differently.

**Options** *level-number*—IS-IS level number.  
**Value:** 1 or 2  
**Default:** The router operates as both a Level 1 and Level 2 router.

The remaining statements are explained separately.

**Usage Guidelines** See “Configure IS-IS Levels on an Interface” on page 134.

**Required Privilege Level** routing—To view this statement in the configuration.  
 routing-control—To add this statement to the configuration.

**lsp-interval**

**Syntax** lsp-interval *milliseconds*;

**Hierarchy Level** [edit protocols isis interface *interface-name*]

**Description** Configure the link-state PDU (LSP) interval time.

**Options** *milliseconds*—Number of milliseconds between the sending of LSPs. Specifying a value of 0 blocks all LSP transmission.  
**Range:** 0 through 65,535  
**Default:** 100 milliseconds

**Usage Guidelines** See “Modify the LSP Interval” on page 139.

**Required Privilege Level** routing—To view this statement in the configuration.  
 routing-control—To add this statement to the configuration.

## lsp-lifetime

<b>Syntax</b>	lsp-lifetime <i>seconds</i> ;
<b>Hierarchy Level</b>	[edit protocols isis]
<b>Description</b>	How long an LSP originating from the router should persist in the network. The router sends LSPs often enough so that the LSP lifetime never expires.
<b>Options</b>	<i>seconds</i> —LSP lifetime. <b>Range:</b> 350 through 65,535 <b>Default:</b> 1200 seconds
<b>Usage Guidelines</b>	See “Modify the LSP Lifetime” on page 139.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## mesh-group

<b>Syntax</b>	mesh-group ( <i>value</i>   blocked);
<b>Hierarchy Level</b>	[edit protocols isis interface <i>interface-name</i> ]
<b>Description</b>	Configure an interface to be part of a mesh group, which is a set of fully connected nodes.
<b>Options</b>	blocked—Configure the interface so that it does not flood LSP packets.  <i>value</i> —Number that identifies the mesh group. <b>Range:</b> 1 through 4,294,967,295 (32 bits are allocated to identify a mesh group)
<b>Usage Guidelines</b>	See “Configure Mesh Groups” on page 132.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## metric

<b>Syntax</b>	metric <i>metric</i> ;
<b>Hierarchy Level</b>	[edit protocols isis interface <i>interface-name</i> level <i>level-number</i> ]
<b>Description</b>	Metric value for the level.
<b>Options</b>	<i>metric</i> —Metric value. <b>Range:</b> 1 through 63, or 1 through 16,777,215 (if you have configured wide metrics) <b>Default:</b> 10 (for all interfaces except lo0), 0 (for the lo0 interface)
<b>Usage Guidelines</b>	See “Modify the IS-IS Metric” on page 137.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.
<b>See Also</b>	te-metric on page 160, wide-metrics-only on page 163

## no-authentication-check

<b>Syntax</b>	no-authentication-check;
<b>Hierarchy Level</b>	[edit protocols isis]
<b>Description</b>	Generate authenticated packets, and check the authentication on received packets but do not reject packets that cannot be authenticated.
<b>Usage Guidelines</b>	See “Configure IS-IS Authentication” on page 129.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.
<b>See Also</b>	csnp-interval on page 148, hello-authentication-type on page 151

## overload

<b>Syntax</b>	overload <timeout <i>seconds</i> >;
<b>Hierarchy Level</b>	[edit protocols isis]
<b>Description</b>	Configure the local router so that it appears to be overloaded. You might want to do this when you want the router to participate in IS-IS routing, but do not want it to be used for transit traffic. Note that traffic to immediately attached interfaces continues to transit the router.
<b>Option</b>	timeout <i>seconds</i> —Number of seconds at which the overloading is reset. <b>Range:</b> 60 through 1800 seconds <b>Default:</b> 0 seconds
<b>Usage Guidelines</b>	See “Configure the Router to Appear Overloaded” on page 140.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## passive

**Syntax** passive;

**Hierarchy Level** [edit protocols isis interface *interface-name*],  
[edit protocols isis interface *interface-name* level *level-number*]

**Description** Advertise the direct interface addresses on an interface or into a level on the interface without actually running IS-IS on that interface or level.

Enabling IS-IS on an interface (by including the interface statement at the [edit protocols isis] hierarchy level), disabling it (by including the **disable** statement), and not having IS-IS run on an interface (by including the **passive** statement) are mutually exclusive states.

**Usage Guidelines** See “Advertise Interface Addresses without Running IS-IS” on page 136.

**Required Privilege Level** routing—To view this statement in the configuration.  
routing-control—To add this statement to the configuration.

## preference

**Syntax** preference *preference*;

**Hierarchy Level** [edit protocols isis level *level-number*]

**Description** Configure the preference of internal routes.

**Options** *preference*—Preference value.

**Range:** 0 through 255

**Default:** 15 (for Level 1 internal routes), 18 (for Level 2 internal routes), 160 (for Level 1 external routes), 165 (for Level 2 external routes)

**Usage Guidelines** See “Configure Route Preferences” on page 134.

**Required Privilege Level** routing—To view this statement in the configuration.  
routing-control—To add this statement to the configuration.

**See Also** external-preference on page 150

## priority

<b>Syntax</b>	<code>priority number;</code>
<b>Hierarchy Level</b>	[edit protocols isis interface <i>interface-name</i> level <i>level-number</i> ]
<b>Description</b>	The interface priority for becoming the designated router. The interface with the highest priority value becomes that level's designated router.  The priority value is meaningful only on a multiaccess network. It has no meaning on a point-to-point interface.
<b>Options</b>	<i>number</i> —Priority value. <b>Range:</b> 0 through 127 <b>Default:</b> 64
<b>Usage Guidelines</b>	See "Configure the Priority for Becoming the Designated Router" on page 138.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## reference-bandwidth

<b>Syntax</b>	<code>reference-bandwidth reference-bandwidth;</code>
<b>Hierarchy Level</b>	[edit protocols isis]
<b>Description</b>	Set the reference bandwidth used in calculating the default interface cost. The cost is calculated using the following formula:  $cost = reference\text{-}bandwidth / bandwidth$
<b>Options</b>	<i>reference-bandwidth</i> —Reference bandwidth in bits per second. <b>Default:</b> 10 Mbps (if the reference bandwidth is not configured)
<b>Usage Guidelines</b>	See "Modify the Interface Metric" on page 133.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## rib-group

<b>Syntax</b>	<code>rib-group group-name;</code>
<b>Hierarchy Level</b>	[edit protocols isis]
<b>Description</b>	Install routes learned from IS-IS into routing tables in the IS-IS routing table group.
<b>Options</b>	<i>group-name</i> —Name of the routing table group.
<b>Usage Guidelines</b>	See "Configure How Interface Routes Are Imported into Routing Tables" on page 86, and "Create Routing Table Groups" on page 85.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## spf-delay

<b>Syntax</b>	spf-delay <i>milliseconds</i> ;
<b>Hierarchy Level</b>	[edit protocols isis], [edit routing-instances <i>routing-instance-name</i> protocols isis]
<b>Description</b>	Configure the shortest path first (SPF) delay.
<b>Options</b>	<i>milliseconds</i> —Number of milliseconds between the detection of a topology change and running the SPF algorithm. <b>Range:</b> 50 through 1000 <b>Default:</b> 1000 milliseconds
<b>Usage Guidelines</b>	See “Configure the SPF Delay” on page 140.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

## te-metric

<b>Syntax</b>	te-metric <i>metric</i> ;
<b>Hierarchy Level</b>	[edit protocols isis interface <i>interface-name</i> level <i>level-number</i> ]
<b>Description</b>	Metric value used by traffic engineering for information injected into the traffic engineering database (TED). The value of the traffic engineering metric does not affect normal IS-IS forwarding.
<b>Options</b>	<i>metric</i> —Metric value. <b>Range:</b> 1 through 16,777,215 <b>Default:</b> 10 (for all interfaces except lo0), 0 (for the lo0 interface)
<b>Usage Guidelines</b>	See “Modify the Traffic Engineering Metric” on page 138.
<b>Required Privilege Level</b>	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.
<b>See Also</b>	metric on page 156, wide-metrics-only on page 163

## traceoptions

<b>Syntax</b>	<pre> traceoptions {   file <i>name</i> &lt;replace&gt; &lt;size <i>size</i>&gt; &lt;files <i>number</i>&gt; &lt;no-stamp&gt;     &lt;(world-readable   no-world-readable)&gt;;   flag <i>flag</i> &lt; <i>flag-modifier</i>&gt; &lt; disable&gt; ; } </pre>
<b>Hierarchy Level</b>	[edit protocols isis]
<b>Description</b>	<p>Configure IS-IS protocol-level tracing options.</p> <p>To specify more than one tracing operation, include multiple flag statements.</p>
<b>Default</b>	The default IS-IS protocol-level tracing options are those inherited from the routing protocols traceoptions statement included at the [edit routing-options] hierarchy level.
<b>Options</b>	<p><b>disable</b>—(Optional) Disable the tracing operation. You can use this option to disable a single operation when you have defined a broad group of tracing operations, such as all.</p> <p><b>file <i>name</i></b>—Name of the file to receive the output of the tracing operation. Enclose the name within quotation marks. All files are placed in the directory /var/log. We recommend that you place IS-IS tracing output in the file isis-log.</p> <p><b>files <i>number</i></b>—(Optional) Maximum number of trace files. When a trace file named <i>trace-file</i> reaches its maximum size, it is renamed <i>trace-file.0</i>, then <i>trace-file.1</i>, and so on, until the maximum number of trace files is reached. Then, the oldest trace file is overwritten.</p> <p>If you specify a maximum number of files, you also must specify a maximum file size with the size option.</p> <p><b>Range:</b> 2 through 1000 files  <b>Default:</b> 2 files</p> <p><b>flag <i>flag</i></b>—Tracing operation to perform. To specify more than one flag, include multiple flag statements.</p> <p><b>IS-IS Tracing Flags</b></p> <p>csn—Complete sequence number PDU (CSNP) packets</p> <p>error—Error IS-IS packets</p> <p>hello—Hello packets</p> <p>lsp—Link-state PDU packets</p> <p>lsp-generation—Link-state PDU generation packets</p> <p>packets—All IS-IS protocol packets</p> <p>psn—Partial sequence number PDU (PSNP) packets</p> <p>spf—Shortest-path-first calculations</p>

### Global Tracing Flags

all—All tracing operations

general—A combination of the normal and route trace operations

normal—All normal operations, including adjacency changes

**Default:** If you do not specify this flag, only unusual or abnormal operations are traced.

policy—Policy operations and actions

route—Routing table changes

state—State transitions

task—Interface transactions and processing

timer—Timer usage

*flag-modifier*—(Optional) Modifier for the tracing flag. You can specify one or more of these modifiers:

detail—Detailed trace information

receive—Packets being received

send—Packets being transmitted

no-stamp—(Optional) Do not place timestamp information at the beginning of each line in the trace file.

**Default:** If you do not include this option, timestamp information is placed at the beginning of each line of the tracing output.

no-world-readable—(Optional) Disallow any user to read the log file.

replace—(Optional) Replace an existing trace file if there is one.

**Default:** If you do not include this option, tracing output is appended to an existing trace file.

size *size*—(Optional) Maximum size of each trace file, in kilobytes (KB), megabytes (MB), or gigabytes (GB). When a trace file named *trace-file* reaches this size, it is renamed *trace-file.0*. When the *trace-file* again reaches its maximum size, *trace-file.0* is renamed *trace-file.1* and *trace-file* is renamed *trace-file.0*. This renaming scheme continues until the maximum number of trace files is reached. Then, the oldest trace file is overwritten.

If you specify a maximum file size, you also must specify a maximum number of trace files with the files option.

**Syntax:** *xk* to specify KB, *xm* to specify MB, or *xg* to specify GB

**Range:** 10 KB through the maximum file size supported on your system

**Default:** 1 MB

world-readable—(Optional) Allow any user to read the log file.

**Usage Guidelines** See “Trace IS-IS Protocol Traffic” on page 143.

**Required Privilege Level** routing and trace—To view this statement in the configuration.  
routing-control and trace-control—To add this statement to the configuration.

## wide-metrics-only

**Statement** wide-metrics-only;

**Hierarchy Level** [edit protocols isis level *level-number*]

**Description** Configure IS-IS to generate metric values greater than 63 on a per IS-IS level basis.

**Usage Guidelines** See “Enable Wide Metrics for Traffic Engineering” on page 133.

**Required Privilege Level** routing—To view this statement in the configuration.  
routing-control—To add this statement to the configuration.

**See Also** te-metric on page 160

