

---

## Show Commands

### isis

**Syntax** `isis [isis-instance]`

**Context** `show>router`

**Description** This command displays information for a specified IS-IS instance.

**Parameters** *isis-instance* — Specifies the instance ID for an IS-IS instance.

**Values** 1–31

**Default** 0

### adjacency

**Syntax** `adjacency [ip-address | ip-int-name | nbr-system-id] [detail]`

**Context** `show>router>isis`

**Description** This command displays information regarding IS-IS neighbors. When no *ip-address*, *ip-int-name*, or *nbr-system-id* is specified, then all adjacencies are displayed.

**Parameters** *ip-address* — When specified, only adjacencies with that interface is displayed.

**Values**

ipv4-address:	a.b.c.d (host bits must be 0)
ipv6-address:	x:x:x:x:x:x:x (eight 16-bit pieces)
	x:x:x:x:x.d.d.d
x:	[0 — FFFF]H
d:	[0 — 255]D

*ip-int-name* — When specified, only adjacencies with that interface is displayed.

*nbr-system-id* — When specified, only the adjacency with that ID is displayed.

**detail** — All output is displayed in the detailed format.

**Output** **Standard and Detailed IS-IS Adjacency Output** — The following table describes the standard and detailed command output fields for an IS-IS adjacency.

Label	Description
Interface	Interface name associated with the neighbor.
System-id	Neighbor's system ID.
Level	1-L1 only, 2-L2 only, 3-L1 and L2.
State	Up, down, new, one-way, initializing, or rejected.

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Label	Description (Continued)
Hold	Hold time remaining for the adjacency.
SNPA	Subnetwork point of attachment, MAC address of the next hop.
Circuit type	Level on the interface L1, L2, or both.
Expires In	Number of seconds until adjacency expires.
Priority	Priority to become designated router.
Up/down transitions	Number of times neighbor state has changed.
Event	Event causing last transition.
Last transition	Time since last transition change.
Speaks	Supported protocols (only IP).
IP address	IP address of neighbor.
MT enab	Yes – The neighbor is advertising at least 1 non MTID#0.
Topology	Derived from the MT TLV in the IHH • MT#0, MT#2 => “Topology : Unicast, IPv6-Unicast” • Native IPv4 or native IPv6 => “Topology : Unicast” Not supported MTID's => Topology line suppressed

## Sample Output

```
*A:Dut-C# show router isis adjacency

=====
Rtr Base ISIS Instance 0 Adjacency
=====
System ID                Usage State Hold Interface                MT-ID
-----
Dut-B                    L1L2  Up    23   to_Dut-B                    0
Dut-D                    L1L2  Up    23   to_Dut-D1                   0
=====
Adjacencies : 2
=====
*A:Dut-C# show router isis adjacency Dut-D detail

=====
Rtr Base ISIS Instance 0 Adjacency
=====
SystemID      : Dut-D                SNPA      : 00:00:00:00:00:04
Interface    : to_Dut-D1            Up Time   : 0d 00:05:23
State        : Up                    Priority   : 0
Nbr Sys Typ  : L1L2                L. Circ Typ : L1L2
Hold Time    : 19                    Max Hold  : 27
Adj Level    : L1L2                MT Enabled : No
Topology     : Unicast
```

```

IPv6 Neighbor      : fe80::200:ff:fe00:4
IPv4 Neighbor      : 1.3.4.4
IPv4 Adj SID       : Label 262139
Restart Support    : Disabled
Restart Status     : Not currently being helped
Restart Supressed  : Disabled
Number of Restarts: 0
Last Restart at    : Never

```

```

=====
*A:Dut-C#

```

```

*A:ALA-A# show router isis adjacency 180.0.7.12

```

```

=====
Rtr Base ISIS Instance 0 Adjacency
=====

```

System ID	Usage	State	Hold	Interface
asbr_east	L2	Up	25	if2/5

```

-----
Adjacencies : 1
=====

```

```

*A:ALA-A#

```

```

*A:ALA-A# show router isis adjacency if2/5

```

```

=====
Rtr Base ISIS Instance 0 Adjacency
=====

```

System ID	Usage	State	Hold	Interface
asbr_east	L2	Up	20	if2/5

```

-----
Adjacencies : 1
=====

```

```

*A:ALA-A#

```

```

*A:Dut-A# show router isis adjacency detail

```

```

=====
Rtr Base ISIS Instance 0 Adjacency
=====

```

SystemID	: Dut-B	SNPA	: 20:81:01:01:00:01
Interface	: ip-3FFE::A0A:101	Up Time	: 0d 00:56:10
State	: Up	Priority	: 64
Nbr Sys Typ	: L1	L. Circ Typ	: L1
Hold Time	: 2	Max Hold	: 2
Adj Level	: L1	MT Enabled	: Yes
Topology	: Unicast, IPv6-Unicast		

```

IPv6 Neighbor      : FE80::2281:1FF:FE01:1
IPv4 Neighbor      : 10.10.1.2
Restart Support    : Disabled
Restart Status     : Not currently being helped
Restart Supressed  : Disabled
Number of Restarts: 0
Last Restart at    : Never

```

## Show Commands

```
SystemID      : Dut-B                               SNPA         : 20:81:01:01:00:01
Interface     : ip-3FFE::A0A:101                   Up Time      : 0d 00:56:10
State        : Up                                  Priority     : 64
Nbr Sys Typ  : L2                                  L. Circ Typ  : L2
Hold Time    : 2                                  Max Hold    : 2
Adj Level    : L2                                  MT Enabled  : Yes
Topology     : Unicast, IPv6-Unicast
```

```
IPv6 Neighbor : FE80::2281:1FF:FE01:1
IPv4 Neighbor : 10.10.1.2
Restart Support : Disabled
Restart Status : Not currently being helped
Restart Supressed : Disabled
Number of Restarts: 0
Last Restart at : Never
```

```
SystemID      : Dut-F                               SNPA         : 00:00:00:00:00:00
Interface     : ies-1-3FFE::A0A:1501               Up Time      : 0d 01:18:34
State        : Up                                  Priority     : 0
Nbr Sys Typ  : L1L2                                L. Circ Typ  : L1L2
Hold Time    : 5                                  Max Hold    : 6
Adj Level    : L1L2                                MT Enabled  : Yes
Topology     : Unicast, IPv6-Unicast
```

```
IPv6 Neighbor : FE80::2285:FFFF:FE00:0
IPv4 Neighbor : 10.10.21.6
Restart Support : Disabled
Restart Status : Not currently being helped
Restart Supressed : Disabled
Number of Restarts: 0
Last Restart at : Never
```

```
=====
*A:Dut-A#
```

```
A:Dut-A# show router isis status
```

```
=====
Rtr Base ISIS Instance 0 Adjacency
=====
```

```
System Id      : 0100.2000.1001
Admin State    : Up
Ipv4 Routing   : Enabled
Ipv6 Routing   : Disabled
Last Enabled   : 08/28/2006 10:22:17
Level Capability : L2
Authentication Check : True
Authentication Type : None
CSNP-Authentication : Enabled
HELLO-Authentication : Enabled
PSNP-Authentication : Enabled
Traffic Engineering : Enabled
Graceful Restart : Disabled
GR Helper Mode : Disabled
LSP Lifetime   : 1200
LSP Wait      : 1 sec (Max) 1 sec (Initial) 1 sec (Second)
Adjacency Check : loose
L1 Auth Type   : none
L2 Auth Type   : none
```

```

L1 CSNP-Authenticati*: Enabled
L1 HELLO-Authenticat*: Enabled
L1 PSNP-Authenticati*: Enabled
L1 Preference          : 15
L2 Preference          : 18
L1 Ext. Preference     : 160
L2 Ext. Preference     : 165
L1 Wide Metrics        : Disabled
L2 Wide Metrics        : Enabled
L1 LSDB Overload       : Disabled
L2 LSDB Overload       : Disabled
L1 LSPs                : 0
L2 LSPs                : 15
Last SPF               : 08/28/2006 10:22:25
SPF Wait               : 1 sec (Max)   10 ms (Initial)  10 ms (Second)
Export Policies        : None
Area Addresses         : 49.0001
=====

```

\* indicates that the corresponding row element may have been truncated.  
A:Dut-A#

## capabilities

**Syntax** `capabilities [system-id | lsp-id] [level level]`

**Context** `show>router>isis`

**Description** This command displays the IS-IS capability information.

### Sample Output

```

*A:Dut-C# show router isis capabilities
=====
Rtr Base ISIS Instance 0 Capabilities
=====

Displaying Level 1 capabilities
-----
LSP ID      : Dut-B.00-00
  Router Cap : 10.20.1.2, D:0, S:0
    TE Node Cap : B E M P
    SR Cap: IPv4 , SRGB Base:20000, Range:10001
    SR Alg: metric based SPF

LSP ID      : Dut-C.00-00
  Router Cap : 10.20.1.3, D:0, S:0
    TE Node Cap : B E M P
    SR Cap: IPv4 , SRGB Base:20000, Range:10001
    SR Alg: metric based SPF

LSP ID      : Dut-D.00-00
  Router Cap : 10.20.1.4, D:0, S:0
    TE Node Cap : B E M P

```

## Show Commands

```
SR Cap: IPv4 , SRGB Base:20000, Range:10001
SR Alg: metric based SPF

LSP ID   : Dut-E.00-00
  Router Cap : 10.20.1.5, D:0, S:0
  TE Node Cap : B E M P
  SR Cap: IPv4 , SRGB Base:20000, Range:10001
  SR Alg: metric based SPF

Level (1) Capability Count : 4

Displaying Level 2 capabilities
-----
LSP ID   : Dut-B.00-00
  Router Cap : 10.20.1.2, D:0, S:0
  TE Node Cap : B E M P
  SR Cap: IPv4 , SRGB Base:20000, Range:10001
  SR Alg: metric based SPF

LSP ID   : Dut-B.00-01

LSP ID   : Dut-C.00-00
  Router Cap : 10.20.1.3, D:0, S:0
  TE Node Cap : B E M P
  SR Cap: IPv4 , SRGB Base:20000, Range:10001
  SR Alg: metric based SPF

LSP ID   : Dut-C.00-01

LSP ID   : Dut-D.00-00
  Router Cap : 10.20.1.4, D:0, S:0
  TE Node Cap : B E M P
  SR Cap: IPv4 , SRGB Base:20000, Range:10001
  SR Alg: metric based SPF

LSP ID   : Dut-D.00-01

LSP ID   : Dut-E.00-00
  Router Cap : 10.20.1.5, D:0, S:0
  TE Node Cap : B E M P
  SR Cap: IPv4 , SRGB Base:20000, Range:10001
  SR Alg: metric based SPF

LSP ID   : Dut-E.00-01

Level (2) Capability Count : 8
=====
*A:Dut-C#
```

## database

**Syntax** `database [system-id | lsp-id] [detail] [level level]`

**Context** `show>router>isis`

**Description** This command displays the entries in the IS-IS link state database.

- Parameters**
- system-id* — Only the LSPs related to the specified *system-id* are listed. If no *system-id* or *lsp-id* are specified, all database entries are listed.
  - lsp-id* — Only the specified LSP (hostname) is listed. If no *system-id* or *lsp-id* are specified, all database entries are listed.
  - level level* — Specifies the interface level (1, 2, or 1 and 2).
  - detail* — All output is displayed in the detailed format.

### Sample Output

```
*A:ALA-A# show router isis database
=====
Rtr Base ISIS Instance 0 Database
=====
LSP ID                               Sequence Checksum Lifetime Attributes
-----
Displaying Level 1 database
-----
abr_dfw.00-00                          0x50      0x164f    603      L1L2
Level (1) LSP Count : 1
Displaying Level 2 database
-----
asbr_east.00-00                        0x53      0xe3f5    753      L1L2
abr_dfw.00-00                          0x57      0x94ff    978      L1L2
abr_dfw.03-00                          0x50      0x14f1    614      L1L2
Level (2) LSP Count : 3
=====
*A:ALA-A#

*A:Dut-B# show router isis database Dut-A.00-00 detail
=====
Rtr Base ISIS Instance 0 Database
=====
Displaying Level 1 database
-----
Level (1) LSP Count : 0

Displaying Level 2 database
-----
LSP ID      : Dut-A.00-00                      Level      : L2
Sequence    : 0x6                               Checksum   : 0xb7c4  Lifetime   : 1153
Version     : 1                               Pkt Type  : 20      Pkt Ver    : 1
Attributes: L1L2                             Max Area  : 3
SysID Len  : 6                               Used Len  : 311   Alloc Len  : 311

TLVs :
  Area Addresses:
    Area Address : (2) 30.31
  Supp Protocols:
    Protocols    : IPv4
  IS-Hostname   : Dut-A
  Router ID     :
    Router ID    : 10.20.1.1
  I/F Addresses :
    I/F Address  : 10.20.1.1
```

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```
I/F Address : 10.10.1.1
I/F Address : 10.10.2.1
TE IS Nbrs :
Nbr : Dut-B.01
Default Metric : 1000
Sub TLV Len : 98
IF Addr : 10.10.1.1
MaxLink BW: 100000 kbps
Resvble BW: 100000 kbps
Unresvd BW:
  BW[0] : 10000 kbps
  BW[1] : 40000 kbps
  BW[2] : 40000 kbps
  BW[3] : 40000 kbps
  BW[4] : 50000 kbps
  BW[5] : 50000 kbps
  BW[6] : 50000 kbps
  BW[7] : 10000 kbps
Admin Grp : 0x0
TE Metric : 1000
SUBTLV BW CONSTS : 8
  BW Model : 1
  BC[0]: 10000 kbps
  BC[1]: 0 kbps
  BC[2]: 40000 kbps
  BC[3]: 0 kbps
  BC[4]: 0 kbps
  BC[5]: 50000 kbps
  BC[6]: 0 kbps
  BC[7]: 0 kbps
TE IP Reach :
  Default Metric : 0
  Control Info: , prefLen 32
  Prefix : 10.20.1.1
  Default Metric : 1000
  Control Info: , prefLen 24
  Prefix : 10.10.1.0
  Default Metric : 1000
  Control Info: , prefLen 24
  Prefix : 10.10.2.0

Level (2) LSP Count : 1
=====
*A:Dut-B#
```

## hostname

**Syntax** hostname

**Context** show>router>isis

**Description** This command displays the hostname database. There are no options or parameters.



**Output** **IS-IS Hostname Output** — The following table describes output fields for IS-IS hostname output.

Label	Description
System-id	System identifier mapped to hostname.
Hostname	Hostname for the specific <i>system-id</i> .
Type	The type of entry (static or dynamic).

### Sample Output

```
A:ALA-A# show router isis hostname
=====
Rtr Base ISIS Instance 0 Database
=====
System Id          Hostname
-----
1800.0000.0002     core_west
1800.0000.0005     core_east
1800.0000.0008     asbr_west
1800.0000.0009     asbr_east
1800.0000.0010     abr_sjc
1800.0000.0011     abr_lax
1800.0000.0012     abr_nyc
1800.0000.0013     abr_dfw
1800.0000.0015     dist_oak
1800.0000.0018     dist_nj
1800.0000.0020     acc_nj
1800.0000.0021     acc_ri
1800.0000.0027     dist_arl
1800.0000.0028     dist_msq
1800.0000.0029     acc_arl
1800.0000.0030     acc_msq
=====
A:ALA-A#
```

## interface

**Syntax** **interface** [*ip-int-name* | *ip-address*] [**detail**]

**Context** show>router>isis

**Description** This command shows IS-IS interface information. When no *ip-addr* or the *ip-int-name* is specified, all interfaces are listed.

**Parameters** *ip-address* — Only displays the interface information associated with the specified IP address.

<b>Values</b>	ipv4-address	a.b.c.d (host bits must be 0)
	ipv6-address	x:x:x:x:x:x:x (eight 16-bit pieces)
		x:x:x:x:x:d.d.d.d
		x: [0 — FFFF]H
		d: [0 — 255]D

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*ip-int-name* — Only displays the interface information associated with the specified IP interface name.

**detail** — All output is displayed in the detailed format.

**Output IS-IS Interface Output** — The following table describes IS-IS interface output fields.

Label	Description
Interface	The interface name.
Level	Specifies the interface level (1, 2, or 1 and 2).
CircID	Specifies the circuit identifier.
Oper State	Up — The interface is operationally up. Down — The interface is operationally down.
L1/L2 Metric	Interface metric for Level 1 and Level 2, if none are set to 0.

### Sample Output

```
A:ALA-A# show router isis interface
=====
Rtr Base ISIS Instance 0 Database
=====
Interface                Level CircID  Oper State  L1/L2 Metric
-----
system                   L1L2   1         Up          10/10
if2/1                    L2     8         Up          -/10
if2/2                    L1     5         Up          10/-
if2/3                    L1     6         Up          10/-
if2/4                    L1     7         Up          10/-
if2/5                    L2     2         Up          -/10
lag-1                    L2     3         Up          -/10
if2/8                    L2     4         Up          -/10
-----
Interfaces : 8
=====
A:ALA-A#

*A:Dut-C# show router isis interface "system" detail
=====
Rtr Base ISIS Instance 0 Interfaces
=====
Interface      : system                Level Capability: L1L2
Oper State    : Up                    Admin State      : Up
Auth Keychain : Disabled
Auth Type     : None                    Auth State      : Enabled
Circuit Id    : 1                    Retransmit Int. : 5
Type          : Pt-to-Pt                LSP Pacing Int. : 100
Oper Type     : Pt-to-Pt                CSNP Int.       : 10
Mesh Group    : Inactive                BER              : none
LFA NH Template : None                    Bfd Enabled     : No
Topology      : IPv4-Unicast, IPv6-Unicast, IPv4-Multicast, IPv6-Multicast
```

```

Te Metric      : 0
Admin Groups   : None
Ldp Sync      : outOfService
Ldp Timer State : Disabled
Route Tag     : None
Default Instance: N/A
IPv4 Node SID  : Index 1003

Level         : 1
Auth Keychain : Disabled
Auth Type    : None
Hello Timer   : 3
Priority      : 64
Passive      : No
SD-Offset    : 0
Hello Mult.   : 2

Level         : 2
Auth Keychain : Disabled
Auth Type    : None
Hello Timer   : 3
Priority      : 64
Passive      : No
SD-Offset    : 0
Hello Mult.   : 2

Te State       : Down
Ldp Sync Wait : Disabled
Ldp Tm Left   : 0
LFA           : Included
LFA           :
IPv6 Node SID : none

Adjacencies   : 0

Metric        : 0
IPv6-Ucast-Met : 0
IPv6-Mcast-Met : 0
IPv4-Mcast-Met : 0
SF-Offset     : 0

Adjacencies   : 0

Metric        : 0
IPv6-Ucast-Met : 0
IPv6-Mcast-Met : 0
IPv4-Mcast-Met : 0
SF-Offset     : 0

```

## lfa-coverage

**Syntax** lfa-coverage

**Context** show>router>isis

**Description** This command displays IS-IS LFA coverage information.

### Sample Output

```

*A:SR# show router isis lfa-coverage
=====
Rtr Base ISIS Instance 0 LFA Coverage
=====
Topology Level Node   IPv4
-----
IPV4 Unicast L1 4/4(100%) 826/826(100%)
IPV4 Unicast L2 2/2(100%) 826/826(100%)
IPV6 Unicast L1 3/3(100%) 0/0(0%)
IPV6 Unicast L2 0/0(0%) 0/0(0%)
=====
*A:SR#

*A:SRR>config>router>isis# show router isis lfa-coverage
=====

```

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```
LFA Coverage
=====
Topology          Level   Node           IPv4           IPv6
-----
IPV4 Unicast     L1      3/4 (75%)      1484/1975 (75%) 0/0 (0%)
IPV4 Unicast     L2      3/3 (100%)     1484/1975 (75%) 0/0 (0%)
=====
*A:SRR>config>router>isis#
```

## link-group-member-status

**Syntax** `link-group-member-status name [level level]`

**Context** `show>router>isis`

**Description** This command displays IS-IS link-group-member status.

**Parameters** *name* — Up to 32 characters.

*level level* — Specifies the interface level (1, 2, or 1 and 2).

### Sample Output

```
A:cses-V94# show router isis link-group-member-status
- link-group-member-status <name> [level <level>]
```

```
<name>           : [32 chars max]
<level>          : 1|2
```

```
A:cses-V94# show router isis link-group-member-status "toDutB"
```

```
=====
Rtr Base ISIS Instance 0 Link-Group Member
=====
```

Link-group	I/F name	Level	State
toDutB	ip-10.10.12.3	L1	Up
toDutB	ip-10.10.3.3	L1	Up
toDutB	ip-10.10.12.3	L2	Up
toDutB	ip-10.10.3.3	L2	Up

```
Legend: BER = bitErrorRate
=====
```

```
A:cses-V94#
```

## link-group-status

**Syntax** `link-group-status name [level level]`

**Context** `show>router>isis`

**Description** This command displays IS-IS link-group status.

*name* — Specifies the link-group name.

*level level* — Specifies the interface level (1, 2, or 1 and 2).

### Sample Output

```
A:cses-V94# show router isis link-group-status
```

```
=====
Rtr Base ISIS Instance 0 Link-Group Status
=====
```

Link-group	Mbrs	Oper Mbr	Revert Mbr	Active Mbr	Level	State
toDutB	2	2	2	2	L1	normal
toDutB	2	2	2	2	L2	normal
toDutE	2	2	2	2	L1	normal
toDutE	2	2	2	2	L2	normal

```
=====
A:cses-V94#
```

## prefix-sids

**Syntax** `prefix-sids [ipv4-unicast|ipv6-unicast|ipv4-multicast|ipv6-multicast|mt mt-id-number][ip-prefix[/prefix-length]] [sid sid] [adv-router system-id|hostname]`

**Context** `show>router>isis`

**Description** This command displays IS-IS prefix SIDs.

### Sample Output

```
*A:Dut-C# show router isis prefix-sids
```

```
=====
Rtr Base ISIS Instance 0 Prefix/SID Table
=====
```

Prefix	SID	Lvl/Typ	SRMS MT	AdvRtr Flags
4.0.0.1/32	1	2/Int.	N	Dut-B 0 RNnP
4.0.0.1/32	1	2/Int.	N	Dut-C 0 RNnP
4.0.0.1/32	1	1/Int.	N	Dut-D

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4.0.0.1/32          1          2/Int.    N    0      NnP
                  0      Dut-D
4.0.0.1/32          1          2/Int.    N    0      NnP
                  0      Dut-E
                  0      RNnP
10.20.1.2/32        1002         1/Int.    N    0      Dut-B
                  0      NnP
10.20.1.2/32        1002         2/Int.    N    0      Dut-B
                  0      NnP
10.20.1.2/32        1002         2/Int.    N    0      Dut-C
                  0      RNnP
10.20.1.2/32        1002         2/Int.    N    0      Dut-D
                  0      RNnP
10.20.1.2/32        1002         2/Int.    N    0      Dut-E
                  0      RNnP
10.20.1.3/32        1003         2/Int.    N    0      Dut-B
                  0      RNnP
10.20.1.3/32        1003         1/Int.    N    0      Dut-C
                  0      NnP
10.20.1.3/32        1003         2/Int.    N    0      Dut-C
                  0      NnP
10.20.1.3/32        1003         2/Int.    N    0      Dut-D
                  0      RNnP
10.20.1.3/32        1003         2/Int.    N    0      Dut-E
                  0      RNnP
10.20.1.4/32        1004         2/Int.    N    0      Dut-B
                  0      RNnP
10.20.1.4/32        1004         2/Int.    N    0      Dut-C
                  0      RNnP
10.20.1.4/32        1004         1/Int.    N    0      Dut-D
                  0      NnP
10.20.1.4/32        1004         2/Int.    N    0      Dut-D
                  0      NnP
10.20.1.4/32        1004         2/Int.    N    0      Dut-E
                  0      RNnP
10.20.1.5/32        1005         2/Int.    N    0      Dut-B
                  0      RNnP
10.20.1.5/32        1005         2/Int.    N    0      Dut-C
                  0      RNnP
10.20.1.5/32        1005         2/Int.    N    0      Dut-D
                  0      RNnP
10.20.1.5/32        1005         1/Int.    N    0      Dut-E
                  0      NnP
10.20.1.5/32        1005         2/Int.    N    0      Dut-E
                  0      NnP
-----
No. of Prefix/SIDs: 25
Flags: R = Re-advertisement
       N = Node-SID
       nP = no penultimate hop POP
       E = Explicit-Null
       V = Prefix-SID carries a value
       L = value/index has local significance
=====
*A:Dut-C#

```

## routes

**Syntax** `routes [ipv4-unicast | ipv6-unicast | ipv4-multicast | ipv6-multicast | mt mt-id-number] [ip-prefix[/prefix-length]] [alternative] [exclude-shortcut]`

**Context** show>router>isis

**Description** This command displays the routes in the IS-IS route table.

**Parameters** **ipv4-unicast** — Displays IPv4 unicast parameters.

**ipv6-unicast** — Displays IPv6 unicast parameters.

**mt *mt-id-number*** — Displays multi-topology parameters.

**Values** 0, 2

**alternative** — Displays LFA details.

**exclude-shortcut** — Displays the routes without shortcuts

**Output** **IS-IS Route Output** — The following table describes IS-IS route output fields.

Label	Description
Prefix	The route prefix and mask.
Metric MT	The route's metric.
Lvl/Type	Specifies the level (1 or 2) and the route type, Internal (Int) or External (Ext).
Version	SPF version that generated route.
Nexthop	System ID of nexthop, give hostname if possible.
Hostname	Hostname for the specific <i>system-id</i> .

### Sample Output

```
*A:Dut-C# show router isis routes
=====
Rtr Base ISIS Instance 0 Route Table
=====
Prefix[Flags]           Metric    Lvl/Typ   Ver.  SysID/Hostname
  NextHop              MT        AdminTag/SID[F]
-----
1.1.2.0/24              20        1/Int.    0     Dut-A
  1.1.3.1                0         0         0     0
1.1.2.0/24              20        1/Int.    0     Dut-B
  1.2.3.2                0         0         0     0
1.1.3.0/24              10        1/Int.    0     Dut-C
  0.0.0.0                0         0         0     0
1.2.3.0/24              10        1/Int.    0     Dut-C
  0.0.0.0                0         0         0     0
1.2.4.0/24              20        1/Int.    0     Dut-B
  1.2.3.2                0         0         0     0
```

## Show Commands

```

1.3.5.0/24          10          1/Int.      0          Dut-C
  0.0.0.0           0           0           0
1.4.5.0/24          20          1/Int.      0          Dut-E
  1.3.5.5           0           0           0
1.4.6.0/24          30          1/Int.      0          Dut-B
  1.2.3.2           0           0           0
1.4.6.0/24          30          1/Int.      0          Dut-E
  1.3.5.5           0           0           0
10.20.1.1/32        10          1/Int.      0          Dut-A
  1.1.3.1           0           0           0
10.20.1.2/32        10          1/Int.      0          Dut-B
  1.2.3.2           0           0           0
10.20.1.3/32        0           1/Int.      0          Dut-C
  0.0.0.0           0           0           0
10.20.1.4/32        20          1/Int.      0          Dut-B
  1.2.3.2           0           0           0
10.20.1.4/32        20          1/Int.      0          Dut-E
  1.3.5.5           0           0           0
10.20.1.5/32        10          1/Int.      0          Dut-E
  1.3.5.5           0           0           0
10.20.1.6/32        30          1/Int.      0          Dut-B
  1.2.3.2           0           0           0
10.20.1.6/32        30          1/Int.      0          Dut-E
  1.3.5.5           0           0           0

```

```

-----
No. of Routes: 17
Flags: L = LFA nexthop available
=====

```

```
*A:Dut-C#
```

```
*A:Dut-C# show router isis routes ipv4-unicast
```

```

=====
Rtr Base ISIS Instance 0 Route Table
=====

```

Prefix[Flags] NextHop	Metric	Lvl/Typ	Ver. MT	SysID/Hostname AdminTag/SID[Flags]
1.2.3.0/24	10	1/Int.	8	Dut-C
0.0.0.0			0	0
1.2.4.0/24	20	1/Int.	8	Dut-D
1.3.4.4			0	0
1.2.5.0/24	20	1/Int.	8	Dut-B
1.2.3.2			0	0
1.3.4.0/24	10	1/Int.	8	Dut-C
0.0.0.0			0	0
1.3.5.0/24 [L]	30	1/Int.	11	Dut-B
1.2.3.2			0	0
1.4.5.0/24	20	1/Int.	8	Dut-D
1.3.4.4			0	0
2.3.4.0/24	40	1/Int.	11	Dut-D
1.3.4.4			0	0
4.0.0.1/32	10	1/Int.	8	Dut-D
1.3.4.4			0	0/1 [NnP]
10.20.1.2/32	10	1/Int.	8	Dut-B



```

    1.2.3.2                                0          0/1002 [NnP]
10.20.1.3/32                               0          1/Int.    5      Dut-C
    0.0.0.0                                0          0/1003 [NnP]
10.20.1.4/32                               10         1/Int.    8      Dut-D
    1.3.4.4                                0          0/1004 [NnP]
10.20.1.5/32 [L]                           20         1/Int.   11     Dut-B
    1.2.3.2                                0          0/1005 [NnP]
10.21.1.2/32                               10         1/Int.    8      Dut-B
    1.2.3.2                                0          0
10.21.1.3/32                               0          1/Int.    5      Dut-C
    0.0.0.0                                0          0
10.21.1.4/32                               10         1/Int.    8      Dut-D
    1.3.4.4                                0          0
10.21.1.5/32 [L]                           20         1/Int.   11     Dut-B
    1.2.3.2                                0          0

```

```

-----
No. of Routes: 16
Flags: L = LFA nexthop available
=====

```

```
*A:Dut-C# show router isis routes ipv4-unicast alternative
```

```
=====
Rtr Base ISIS Instance 0 Route Table
=====
```

Prefix[Flags] NextHop Alt-Nexthop	Metric	Lvl/Typ	Ver. MT Alt- Metric	SysID/Hostname AdminTag Alt-Type
1.2.3.0/24	10	1/Int.	8	Dut-C
0.0.0.0			0	0
1.2.4.0/24	20	1/Int.	8	Dut-D
1.3.4.4			0	0
1.2.5.0/24	20	1/Int.	8	Dut-B
1.2.3.2			0	0
1.3.4.0/24	10	1/Int.	8	Dut-C
0.0.0.0			0	0
1.3.5.0/24	30	1/Int.	11	Dut-B
1.2.3.2			0	0
1.3.4.4(L)			30	NP
1.4.5.0/24	20	1/Int.	8	Dut-D
1.3.4.4			0	0
2.3.4.0/24	40	1/Int.	11	Dut-D
1.3.4.4			0	0
4.0.0.1/32	10	1/Int.	8	Dut-D
1.3.4.4			0	0/1 [NnP]
10.20.1.2/32	10	1/Int.	8	Dut-B
1.2.3.2			0	0/1002 [NnP]
10.20.1.3/32	0	1/Int.	5	Dut-C
0.0.0.0			0	0/1003 [NnP]
10.20.1.4/32	10	1/Int.	8	Dut-D
1.3.4.4			0	0/1004 [NnP]
10.20.1.5/32	20	1/Int.	11	Dut-B
1.2.3.2			0	0/1005 [NnP]
1.3.4.4(L)			20	NP
10.21.1.2/32	10	1/Int.	8	Dut-B
1.2.3.2			0	0
10.21.1.3/32	0	1/Int.	5	Dut-C

## Show Commands

```

0.0.0.0                                0      0
10.21.1.4/32                            10     1/Int.  8      Dut-D
1.3.4.4                                  0      0
10.21.1.5/32                            20     1/Int.  11     Dut-B
1.2.3.2                                  0      0
1.3.4.4(L)                              20     NP
-----
No. of Routes: 16
Flags: L = Loop-Free Alternate nexthop
Legend: LP = linkProtection, NP = nodeProtection
=====
*A:Dut-C#

```

## spf-log

**Syntax** **spf-log [detail]**

**Context** show>router>isis

**Description** This command displays IS-IS SPF log information.

**Parameters** **detail** — Displays detailed spf-log information.

**Output** **Router ISIS SFP Log Output** — The following table describes the ISIS SPF log output fields.

Label	Description
When	Displays the timestamp when the SPF run started on the system.
Duration	Displays the time (in hundredths of a second) required to complete the SPF run.
L1 Nodes	Displays the number of Level 1 nodes involved in the SPF run.
L2 Nodes	Displays the number of Level 2 nodes involved in the SPF run.
Event Count	Displays the number of SPF events that triggered the SPF calculation.
Type	Displays the SPF type, Reg (regular) or Lfa (loop free alternative).
Trigger LSP	Displays the LSP that triggered the SPF run.
Reason	Displays the reason(s) for the SPF run.

Label	Description (Continued)
	NEWADJ: An adjacency changed.
	NEWLSP: A new LSP was received.
	NEWAREA: An area changed.
	NEWREACH: A prefix changed.
	ECMPCHANGED: An ECMP path changed.
	NEWMETRIC: A prefix metric changed.
	RESTART: The graceful restart exited.
	LSPEXPIRED: An LSP expired.
	DBCHANGED: The LSP database was cleared by an administrator.
	LSPCONTENT: The content of an LSP changed.
	NEWPREF: The external route preference changed.
	NEWNLPID: The routed protocols (IPv4 or IPv6) changed.
	MANUALREQ: An SPF calculation was requested by an administrator.
	ADMINTAGCHANGED: An administrative tag changed.
	TUNNELCHANGED: An MPLS tunnel changed.

### Sample Output

```
*A:Dut-C# show router isis spf-log
```

```
=====
Rtr Base ISIS Instance 0 SPF Log
=====
```

When	Duration	L1 Nodes	L2 Nodes	Event Count	Type
01/26/2015 11:22:19	<0.01s	-	-	-	pLfa
01/26/2015 11:22:19	<0.01s	-	-	-	rLfa
01/26/2015 11:22:20	<0.01s	4	4	25	Reg
01/26/2015 11:22:20	<0.01s	-	-	-	Lfa
01/26/2015 11:22:20	<0.01s	-	-	-	rLfa
01/26/2015 11:22:24	<0.01s	4	4	11	Reg
01/26/2015 11:22:24	<0.01s	-	-	-	Lfa
01/26/2015 11:22:24	<0.01s	-	-	-	rLfa
01/26/2015 11:22:32	<0.01s	4	4	21	Reg
01/26/2015 11:22:32	<0.01s	-	-	-	Lfa
01/26/2015 11:22:32	<0.01s	-	-	-	rLfa
01/26/2015 11:22:33	<0.01s	-	-	-	pSpf
01/26/2015 11:22:33	<0.01s	-	-	-	pLfa
01/26/2015 11:22:33	<0.01s	-	-	-	rLfa
01/26/2015 11:22:41	<0.01s	-	-	-	pSpf
01/26/2015 11:22:41	<0.01s	-	-	-	pLfa
01/26/2015 11:22:41	<0.01s	-	-	-	rLfa
01/26/2015 11:22:51	<0.01s	4	4	4	Reg
01/26/2015 11:22:51	<0.01s	-	-	-	Lfa
01/26/2015 11:22:51	<0.01s	-	-	-	rLfa

```
-----
Log Entries : 20
=====
```

```
*A:Dut-C#
```

## Show Commands

```
A:SetupCLI# show router isis spf-log detail
=====
Rtr Base ISIS Instance 0 SPF Log
=====
When      : 10/01/2011 03:40:25          Duration   : <0.01s
L1 Nodes  : 1                          L2 Nodes  : 1
Trigger LSP: SetupCLI.00-00           Event Count : 78
SPF Type  : Reg
Reason    : LSPCONTENT

When      : 10/01/2011 03:40:26          Duration   : <0.01s
L1 Nodes  : 1                          L2 Nodes  : 1
Trigger LSP: SetupCLI.00-00           Event Count : 1
SPF Type  : Reg
Reason    : LSPCONTENT

When      : 10/01/2011 03:40:25          Duration   : <0.01s
L1 Nodes  : 1                          L2 Nodes  : 1
Trigger LSP: SetupCLI.00-00           Event Count : 25
SPF Type  : Reg
Reason    : NEWAREA NEWREACH LSPCONTENT MANUALREQ

When      : 10/01/2011 03:40:27          Duration   : <0.01s
L1 Nodes  : 1                          L2 Nodes  : 1
Trigger LSP: SetupCLI.00-00           Event Count : 1
SPF Type  : Reg
Reason    : LSPCONTENT

When      : 10/01/2011 03:40:27          Duration   : <0.01s
L1 Nodes  : 0                          L2 Nodes  : 0
Trigger LSP: SetupCLI.00-00           Event Count : 1
SPF Type  : Lfa
Reason    : LSPCONTENT

When      : 10/01/2011 03:40:25          Duration   : <0.01s
L1 Nodes  : 1                          L2 Nodes  : 1
Trigger LSP: SetupCLI.00-00           Event Count : 75
SPF Type  : Reg
Reason    : LSPCONTENT

When      : 10/01/2011 03:40:27          Duration   : <0.01s
L1 Nodes  : 1                          L2 Nodes  : 1
Trigger LSP: SetupCLI.00-00           Event Count : 1
SPF Type  : Reg
Reason    : LSPCONTENT
=====
A:SetupCLI#
```

## statistics

**Syntax** **statistics**

**Context** show>router>isis

**Description** This command displays information regarding IS-IS traffic statistics.

**Output** **IS-IS Statistics Output** — This table describes IS-IS statistics output fields.

Label	Description
Purge Initiated	The number of times purges have been initiated.
SPF Runs	The number of times shortest path first calculations have been made.
LSP Regens	The count of LSP regenerations.
Requests	The number of CSPF requests made to the protocol.
Paths Found	The number of responses to CSPF requests for which paths satisfying the constraints were found.
PDU Type	The PDU type.
Received	The count of link state PDUs received by this instance of the protocol.
Processed	The count of link state PDUs processed by this instance of the protocol.
Dropped	The count of link state PDUs dropped by this instance of the protocol.
Sent	The count of link state PDUs sent out by this instance of the protocol.
Retransmitted	The count of link state PDUs that had to be retransmitted by this instance of the protocol.

### Sample Output

```
*A:Dut-C# show router isis statistics
```

```
=====
Rtr Base ISIS Instance 0 Statistics
=====
```

```
ISIS Instance      : 0
Purge Initiated    : 0
Sid SRGB err       : 0
LSP Regens.        : 17
Sid dupl err       : 0

CSPF Statistics
Requests           : 0
Request Drops      : 0
```

## Show Commands

```
Paths Found      : 0                      Paths Not Found: 0

SPF Statistics
SPF Runs        : 7
  Last runTimeStamp: 01/26/2015 11:22:50
Partial SPF Runs : 3
  Last runTimeStamp: 01/26/2015 11:22:51

LFA Statistics
LFA Runs        : 7
  Last runTimeStamp: 01/26/2015 11:22:51
Partial LFA Runs : 3
  Last runTimeStamp: 01/26/2015 11:22:41

RLFA Statistics
RLFA Runs       : 10
  Last runTimeStamp: 01/26/2015 11:22:51
```

```
-----
PDU Type   Received   Processed   Dropped    Sent       Retransmitted
-----
LSP        164           164         0           151        0
IIH        146           146         0           147        0
CSNP       288           288         0           291        0
PSNP       71            71          0            74        0
Unknown    0             0           0            0         0
-----
```

```
*A:Dut-C#
```

## status

**Syntax** status

**Context** show>router>isis

**Description** This command displays information regarding IS-IS status.

**Output** **IS-IS Status Output** — The following table describes IS-IS status output fields.

Label	Description
System-id	Neighbor system ID.
Admin State	Up — IS-IS is administratively up. Down — IS-IS is administratively down.
Ipv4 Routing	Enabled — IPv4 routing is enabled. Disabled — IPv4 routing is disabled.
Ipv6 Routing	Disabled — IPv6 routing is disabled.

Label	Description (Continued)
	Enabled, Native – IPv6 routing is enabled.
	Enabled, Multi-topology – Multi-topology TLVs for IPv6 routing is enabled.
Multi-topology	Disabled – Multi-topology TLVs for IPv6 routing is disabled.
	Enabled – Multi-topology TLVs for IPv6 routing is enabled.
Last Enabled	The date/time when IS-IS was last enabled in the router.
Level Capability	The routing level for the IS-IS routing process.
Authentication Check	True – All IS-IS mismatched protocol packets are rejected.
	False – Authentication is performed on received IS-IS protocol packets but mismatched packets are not rejected.
Authentication Type	The method of authentication used to verify the authenticity of packets sent by neighboring routers on an IS-IS interface.
Traffic Engineering	Enabled – TE is enabled for the router.
	Disabled – TE is disabled so that TE metrics are not generated and are ignored when received by this node.
Graceful Restart	Enabled – Graceful restart is enabled for this instance of IS-IS on the router.
	Disabled – Graceful restart capability is disabled for this instance of IS-IS on the router.
Ldp Sync Admin State	Indicates whether the IGP-LDP synchronization feature is enabled or disabled on all interfaces participating in the OSPF routing protocol.
LFA NH Template	Indicates the LFA template that is applied for the configured LFA policies.
LFA Policies	Indicates the configured LFA policies.
Loopfree-Alternate	When enabled, excludes a prefix entry defined in the specified LFA policy from LFA calculation.

### Sample Output

```
*A:Dut-C# show router isis status
```

```
=====
Rtr Base ISIS Instance 0 Status
=====
```

```
System Id           : 0100.2000.1003
```

## Show Commands

```
ISIS Cfg Router Id      : 0.0.0.0
ISIS Oper Router Id    : 10.20.1.3
Admin State            : Up
Oper State             : Up
Ipv4 Routing           : Enabled
Ipv6 Routing           : Enabled, Native
Mcast Ipv4 Routing    : Enabled, Native
Mcast Ipv6 Routing    : Enabled, Native
Last Enabled          : 01/26/2015 11:22:13
Level Capability       : L1L2
Authentication Check   : True
Auth Keychain          : Disabled
Authentication Type    : None
CSNP-Authentication    : Enabled
HELLO-Authentication  : Enabled
PSNP-Authentication   : Enabled
Traffic Engineering    : Enabled
Graceful Restart       : Disabled
GR Helper Mode         : Disabled
Overload-On-Boot Tim* : 0
Overload Max-Metric    : False
Overload-On-Boot Max* : False
LSP Lifetime          : 1200
LSP Refresh Interval  : 600
LSP Wait               : 5 sec (Max)  0 sec (Initial)  1 sec (Second)
LSP MTU Size          : 1300 (Config) 1300 (Oper)
Adjacency Check       : loose
L1 Auth Keychain      : Disabled
L1 Auth Type          : none
L1 CSNP-Authenticati* : Enabled
L1 HELLO-Authenticat* : Enabled
L1 PSNP-Authenticati* : Enabled
L1 Preference         : 15
L1 Ext. Preference    : 160
L1 Wide Metrics       : Enabled
L1 LSDB Overload      : Disabled
L1 LSPs               : 4
L1 Default Metric     : 10
L1 IPv6 Def Metric    : 10
L1 Mcast IPv4 Def Me* : 10
L1 Mcast IPv6 Def Me* : 10
L1 Adv Router Cap     : Enabled
Last SPF              : 01/26/2015 11:22:51
SPF Wait              : 10 sec (Max)  1000 ms (Initial)  1000 ms (Second)
Multi-topology        : Disabled
IPv6-Unicast MT2      : Disabled
IPv4-Multicast MT3    : Disabled
IPv6-Multicast MT4    : Disabled
Area Addresses        : 49.0001
Total Exp Routes(L1)  : 0
IID TLV               : Disabled
All-L1-MacAddr        : 01:80:c2:00:00:14
L2 Auth Keychain      : Disabled
L2 Auth Type          : none
L2 CSNP-Authenticati* : Enabled
L2 HELLO-Authenticat* : Enabled
L2 PSNP-Authenticati* : Enabled
L2 Preference         : 18
L2 Ext. Preference    : 165
```



```

L2 Wide Metrics      : Enabled
L2 LSDB Overload    : Disabled
L2 LSPs              : 8
L2 Default Metric   : 10
L2 IPv6 Def Metric  : 10
L2 Mcast IPv4 Def Me*: 10
L2 Mcast IPv6 Def Me*: 10
L2 Adv Router Cap   : Enabled
Export Policies     : None
LFA Policies        : None
Multicast Import    : None
Advertise-Passive-On*: Disabled
Ignore Attached Bit : Disabled
Suppress Attached Bit: Disabled
Default Route Tag   : None
Rib Prio List High  : None
Rib Prio Tag High   : None
Ldp Sync Admin State : Up
LDP-over-RSVP       : Disabled
RSVP-Shortcut       : Disabled
Advertise-Tunnel-Link: Disabled
Export Limit        : 0
Exp Lmt Log Percent : 0
Total Exp Routes(L2) : 0
All-L2-MacAddr      : 01:80:c2:00:00:15
Loopfree-Alternate  : Enabled
Remote-LFA          : Enabled
L1 LFA              : Included
L2 LFA              : Included
Advertise Router Cap : Area
Hello Padding       : Disabled
Ignore Lsp Errors   : Disabled
Reference Bandwidth : 0
Ucast Import Disable : None
Segment Routing     : Up

```

=====

\* indicates that the corresponding row element may have been truncated.

\*A:Dut-C#

The following two examples illustrate sample output and detail sample output with LFA policies configured in the configure router ISIS context.

\*A:SRR# show router isis status

```

=====
Rtr Base ISIS Instance 0 Status
=====
System Id           : 0100.2000.1003
ISIS Cfg Router Id  : 0.0.0.0
ISIS Oper Router Id : 10.20.1.3
Admin State         : Up
Oper State          : Up
Ipv4 Routing        : Enabled
Ipv6 Routing        : Disabled
Mcast Ipv4 Routing  : Enabled, Native
Mcast Ipv6 Routing  : Disabled
Last Enabled        : 04/29/2014 15:14:33
Level Capability     : L1

```

## Show Commands

```
Authentication Check : True
Auth Keychain       : Disabled
Authentication Type : None
CSNP-Authentication : Enabled
HELLO-Authentication : Enabled
PSNP-Authentication : Enabled
Traffic Engineering : Disabled
Graceful Restart    : Disabled
GR Helper Mode      : Disabled
Overload-On-Boot Tim*: 0
Overload Max-Metric : False
Overload-On-Boot Max*: False
LSP Lifetime        : 1200
LSP Refresh Interval : 600
LSP Wait            : 5 sec (Max)  0 sec (Initial)  1 sec (Second)
LSP MTU Size        : 1492 (Config) 1492 (Oper)
Adjacency Check     : loose
L1 Auth Keychain    : Disabled
L1 Auth Type        : none
L1 CSNP-Authenticati*: Enabled
L1 HELLO-Authenticat*: Enabled
L1 PSNP-Authenticati*: Enabled
L1 Preference       : 15
L1 Ext. Preference  : 160
L1 Wide Metrics     : Enabled
L1 LSDB Overload    : Disabled
L1 LSPs             : 5
L1 Default Metric   : 10
L1 IPv6 Def Metric  : 10
L1 Mcast IPv4 Def Me*: 10
L1 Mcast IPv6 Def Me*: 10
Last SPF            : 04/29/2014 15:22:13
SPF Wait           : 10 sec (Max)  1000 ms (Initial)  1000 ms (Second)
Multi-topology      : Disabled
IPv6-Unicast MT2    : Disabled
IPv4-Multicast MT3  : Disabled
IPv6-Multicast MT4  : Disabled
Area Addresses      : 49.0001
Total Exp Routes(L1) : 1
IID TLV            : Disabled
All-L1-MacAddr     : 01:80:c2:00:00:14
L2 Auth Keychain    : Disabled
L2 Auth Type        : none
L2 CSNP-Authenticati*: Enabled
L2 HELLO-Authenticat*: Enabled
L2 PSNP-Authenticati*: Enabled
L2 Preference       : 18
L2 Ext. Preference  : 165
L2 Wide Metrics     : Disabled
L2 LSDB Overload    : Disabled
L2 LSPs             : 0
L2 Default Metric   : 10
L2 IPv6 Def Metric  : 10
L2 Mcast IPv4 Def Me*: 10
L2 Mcast IPv6 Def Me*: 10
Export Policies     : static
LFA Policies        : pol1
                   : pol2
                   : pol3
```

```

                : pol4
                : pol5
Multicast Import : None
Advertise-Passive-On* : Disabled
Suppress Default : Disabled
Default Route Tag : None
Ldp Sync Admin State : Up
LDP-over-RSVP : Disabled
RSVP-Shortcut : Disabled
Advertise-Tunnel-Link: Disabled
Export Limit : 0
Exp Lmt Log Percent : 0
Total Exp Routes(L2) : 0
All-L2-MacAddr : 01:80:c2:00:00:15
Loopfree-Alternate : Enabled
L1 LFA : Included
L2 LFA : Included
Advertise Router Cap : disable
Hello Padding : disable

```

```

=====
* indicates that the corresponding row element may have been truncated.

```

```

*A:SRR#

```

```

*A:SRR# show router isis interface "DUTC_TO_DUTE.1.0" detail

```

```

=====
Rtr Base ISIS Instance 0 Interfaces
=====

```

```

-----
Interface      : DUTC_TO_DUTE.1.0          Level Capability: L1L2
Oper State     : Up                       Admin State      : Up
Auth Keychain  : Disabled
Auth Type      : None                     Auth State       : Enabled
Circuit Id     : 3                        Retransmit Int. : 5
Type           : Broadcast                 LSP Pacing Int. : 100
Oper Type      : Broadcast                 CSNP Int.        : 10
Mesh Group     : Inactive                  BER              : none
LFA NH Template : "template1"             Bfd Enabled      : No
Topology       : IPv4-Unicast, IPv6-Unicast, IPv4-Multicast, IPv6-Multicast
Te Metric      : 0                         Te State         : Down
Admin Groups   : None
Ldp Sync       : outOfService              Ldp Sync Wait    : Disabled
Ldp Timer State : Disabled                 Ldp Tm Left     : 0
Route Tag      : None                      LFA              : Included

Level          : 1                         Adjacencies      : 0
Desg. IS       : Dut-C
Auth Keychain  : Disabled
Auth Type      : None                     Metric           : 10
Hello Timer    : 9                        IPv6-Ucast-Met  : 10
Priority       : 64                        IPv6-Mcast-Met  : 10
Passive        : No                        IPv4-Mcast-Met  : 10
SD-Offset     : 0                         SF-Offset       : 0
Hello Mult.    : 3

Level          : 2                         Adjacencies      : 0
Desg. IS       : Dut-C
Auth Keychain  : Disabled
Auth Type      : None                     Metric           : 10

```

## Show Commands

```
Hello Timer      : 9
Priority         : 64
Passive         : No
SD-Offset       : 0
Hello Mult.     : 3
IPv6-Ucast-Met : 10
IPv6-Mcast-Met : 10
IPv4-Mcast-Met : 10
SF-Offset       : 0
```

```
=====
*A:SRR#
```

## summary-address

**Syntax** `summary-address [ip-address [/mask]]`

**Context** `show>router>isis`

**Description** Displays ISIS summary addresses.

**Output** **Router ISIS Summary Address Output** — The following table describes the ISIS summary address output fields.

Label	Description
Address	The IP address.
Level	Specifies the IS-IS level from which the prefix should be summarized.

### Sample Output

```
A:ALA-48# show router isis summary-address
=====
Rtr Base ISIS Instance 0 Summary Address
=====
Address                               Level
-----
1.0.0.0/8                               L1
2.1.0.0/24                              L1L2
3.1.2.3/32                              L2
-----
Summary Addresses : 3
=====
A:ALA-48#
```

## topology

**Syntax** `topology [ipv4-unicast | ipv6-unicast | ipv4-multicast | ipv6-multicast | mt mt-id-number] [lfa] [detail]`

**Context** show>router>isis

**Description** This command shows IS-IS topology information.

**Parameters**

- ipv4-unicast** — Displays IPv4 unicast parameters.
- ipv6-unicast** — Displays IPv6 unicast parameters.
- ipv4-multicast** — Displays IPv4 multicast parameters.
- ipv6-multicast** — Displays IPv6 multicast parameters.
- mt *mt-id-number*** — Displays multi-topology parameters.

**Values** 0, 2, 3, 4

**lfa** — Displays LFA (loop free alternative) information.

**detail** — Displays detailed topology information.

**Output** **Router ISIS Topology Output** — The following table describes the ISIS topology output fields.

Label	Description
Node	Displays the IP address.
Interface	Displays the interface name.
Nexthop	Displays the nexthop IP address.
LFA Interface	Displays the LFA interface name.
LFA Nexthop	Displays the LFA nexthop IP address.

### Sample Output

```
*A:Dut-A# show router isis topology
=====
Rtr Base ISIS Instance 0 Topology Table
=====
Node                               Interface                            Nexthop
-----
IS-IS IP paths (MT-ID 0), Level 1
-----
Dut-B.00                           ip-3FFE::A0A:101                    Dut-B
Dut-B.01                           ip-3FFE::A0A:101                    Dut-B
Dut-CA.00                          ip-3FFE::A0A:101                    Dut-B
Dut-CA.01                          ip-3FFE::A0A:101                    Dut-B
Dut-CA.02                          ip-3FFE::A0A:101                    Dut-B
Dut-CA.05                          ip-3FFE::A0A:101                    Dut-B
Dut-DA.00                          ip-3FFE::A0A:101                    Dut-B
```

## Show Commands

```
Dut-DA.01          ip-3FFE::A0A:101          Dut-B
Dut-E.00           ip-3FFE::A0A:101          Dut-B
Dut-F.00           ies-1-3FFE::A0A:1501      Dut-F
Dut-F.01           ies-1-3FFE::A0A:1501      Dut-F
Dut-F.02           ies-1-3FFE::A0A:1501      Dut-F
-----
IS-IS IPv6 paths (MT-ID 2), Level 1
-----
Dut-B.00           ip-3FFE::A0A:101          Dut-B
Dut-B.01           ip-3FFE::A0A:101          Dut-B
Dut-CA.00          ip-3FFE::A0A:101          Dut-B
Dut-CA.01          ip-3FFE::A0A:101          Dut-B
Dut-CA.02          ip-3FFE::A0A:101          Dut-B
Dut-CA.05          ip-3FFE::A0A:101          Dut-B
Dut-DA.00          ip-3FFE::A0A:101          Dut-B
Dut-DA.01          ip-3FFE::A0A:101          Dut-B
Dut-E.00           ip-3FFE::A0A:101          Dut-B
Dut-F.00           ies-1-3FFE::A0A:1501      Dut-F
Dut-F.01           ies-1-3FFE::A0A:1501      Dut-F
Dut-F.02           ies-1-3FFE::A0A:1501      Dut-F
-----
IS-IS IP paths (MT-ID 0), Level 2
-----
Dut-B.00           ip-3FFE::A0A:101          Dut-B
Dut-B.01           ip-3FFE::A0A:101          Dut-B
Dut-CA.00          ip-3FFE::A0A:101          Dut-B
Dut-CA.01          ip-3FFE::A0A:101          Dut-B
Dut-CA.02          ip-3FFE::A0A:101          Dut-B
Dut-CA.05          ip-3FFE::A0A:101          Dut-B
Dut-DA.00          ip-3FFE::A0A:101          Dut-B
Dut-DA.01          ip-3FFE::A0A:101          Dut-B
Dut-E.00           ip-3FFE::A0A:101          Dut-B
Dut-F.00           ies-1-3FFE::A0A:1501      Dut-F
Dut-F.01           ies-1-3FFE::A0A:1501      Dut-F
Dut-F.02           ies-1-3FFE::A0A:1501      Dut-F
-----
IS-IS IPv6 paths (MT-ID 2), Level 2
-----
Dut-B.00           ip-3FFE::A0A:101          Dut-B
Dut-B.01           ip-3FFE::A0A:101          Dut-B
Dut-CA.00          ip-3FFE::A0A:101          Dut-B
Dut-CA.01          ip-3FFE::A0A:101          Dut-B
Dut-CA.02          ip-3FFE::A0A:101          Dut-B
Dut-CA.05          ip-3FFE::A0A:101          Dut-B
Dut-DA.00          ip-3FFE::A0A:101          Dut-B
Dut-DA.01          ip-3FFE::A0A:101          Dut-B
Dut-E.00           ip-3FFE::A0A:101          Dut-B
Dut-F.00           ies-1-3FFE::A0A:1501      Dut-F
Dut-F.01           ies-1-3FFE::A0A:1501      Dut-F
Dut-F.02           ies-1-3FFE::A0A:1501      Dut-F
=====
*A:Dut-A#
```

---

## Clear Commands

### isis

**Syntax** `isis [isis-instance]`

**Context** `clear>router>isis`

**Description** This command enables the context to clear and reset ISIS protocol entities.

**Parameters** *isis-instance* — Specifies the instance ID for the IS-IS instance.

**Values** 1 — 31

### adjacency

**Syntax** `adjacency [system-id]`

**Context** `clear>router>isis`

**Description** This command clears and resets the entries from the IS-IS adjacency database.

**Parameters** *system-id* — When the system ID is entered, only the specified entries are removed from the IS-IS adjacency database.

### database

**Syntax** `database [system-id]`

**Context** `clear>router>isis`

**Description** This command removes the entries from the IS-IS link-state database which contains information about PDUs.

**Parameters** *system-id* — When the system ID is entered, only the specified entries are removed from the IS-IS link-state database.

## Clear Commands

### export

**Syntax** **export**

**Context** clear>router>isis

**Description** This command re-evaluates route policies participating in the export mechanism, either as importers or exporters of routes.

### overload

**Syntax** **overload** {rtm | fib}

**Context** clear>router>isis

**Description** This command clears the IS-IS overload.

**Parameters** rtm — Clears the overload because IS-IS reached the configured maximum route limit set with **maximum-routes** or **maximum-ipv6-routes** in a VPRN.

fib — Clears the overload because adding routes to the hardware FIB failed.

### spf-log

**Syntax** **spf-log**

**Context** clear>router>isis

**Description** This command clears the SPF log.

### statistics

**Syntax** **statistics**

**Context** clear>router>isis

**Description** This command clears and resets IS-IS statistics.



---

## Debug Commands

### isis

<b>Syntax</b>	<b>isis</b> [ <i>isis-instance</i> ]
<b>Context</b>	debug>router
<b>Description</b>	This command enables the context to debug IS-IS protocol entities.
<b>Parameters</b>	<i>isis-instance</i> — Specifies the IS-IS instance.
<b>Values</b>	1 — 31

### adjacency

<b>Syntax</b>	<b>[no] adjacency</b> [ <i>ip-int-name</i>   <i>ip-address</i>   <i>nbr-system-id</i> ]										
<b>Context</b>	debug>router>isis										
<b>Description</b>	This command enables debugging for IS-IS adjacency. The <b>no</b> form of the command disables debugging.										
<b>Parameters</b>	<i>ip-address</i> — When specified, only adjacencies with the specified interface address are debugged.										
<b>Values</b>	<table> <tr> <td>ipv4-address:</td> <td>a.b.c.d (host bits must be 0)</td> </tr> <tr> <td>ipv6-address:</td> <td>x:x:x:x:x:x:x (eight 16-bit pieces)</td> </tr> <tr> <td></td> <td>x:x:x:x:x.d.d.d.d</td> </tr> <tr> <td>x:</td> <td>[0 — FFFF]H</td> </tr> <tr> <td>d:</td> <td>[0 — 255]D</td> </tr> </table>	ipv4-address:	a.b.c.d (host bits must be 0)	ipv6-address:	x:x:x:x:x:x:x (eight 16-bit pieces)		x:x:x:x:x.d.d.d.d	x:	[0 — FFFF]H	d:	[0 — 255]D
ipv4-address:	a.b.c.d (host bits must be 0)										
ipv6-address:	x:x:x:x:x:x:x (eight 16-bit pieces)										
	x:x:x:x:x.d.d.d.d										
x:	[0 — FFFF]H										
d:	[0 — 255]D										
	<i>ip-int-name</i> — When specified, only adjacencies with the specified interface name are debugged.										
	<i>nbr-system-id</i> — When specified, only the adjacency with the specified ID is debugged.										

### cspf

<b>Syntax</b>	<b>[no] cspf</b>
<b>Context</b>	debug>router>isis
<b>Description</b>	This command enables debugging for IS-IS cspf. The <b>no</b> form of the command disables debugging.

## Debug Commands

### graceful-restart

**Syntax** [no] graceful-restart

**Context** debug>router>isis

**Description** This command enables debugging for IS-IS graceful-restart.  
The **no** form of the command disables debugging.

### interface

**Syntax** interface [*ip-int-name* | *ip-address*]  
**no interface**

**Context** debug>router>isis

**Description** This command enables debugging for IS-IS interface.  
The **no** form of the command disables debugging.

**Parameters** *ip-address* — When specified, only the interface with the specified interface address is debugged.

<b>Values</b>	ipv4-address:	a.b.c.d (host bits must be 0)
	ipv6-address:	x:x:x:x:x:x:x (eight 16-bit pieces)
		x:x:x:x:x:d.d.d.d
	x:	[0 — FFFF]H
	d:	[0 — 255]D

*ip-int-name* — When specified, only the interface with the specified interface name is debugged.

### leak

**Syntax** leak [*ip-address*]  
**no leak**

**Context** debug>router>isis

**Description** This command enables debugging for IS-IS leaks.  
The **no** form of the command disables debugging.

**Parameters** *ip-address* — When specified, only the specified address is debugged for IS-IS leaks.

<b>Values</b>	ipv4-address:	a.b.c.d (host bits must be 0)
	ipv6-address:	x:x:x:x:x:x:x (eight 16-bit pieces)
		x:x:x:x:x:d.d.d.d
	x:	[0 — FFFF]H
	d:	[0 — 255]D

## lsdb

**Syntax** `[no] lsdb [level-number] [system-id | lsp-id]`

**Context** debug>router>isis

**Description** This command enables debugging for Link State DataBase (LSDB).  
The **no** form of the command disables debugging.

**Parameters** *system-id* — When specified, only the specified system-id is debugged. Host name up to 38 characters.  
*lsp-id* — When specified, only the specified lsp-id is debugged. Hostname up to 38 characters.  
*level-number* — Specifies the interface level (1, 2, or 1 and 2).

## misc

**Syntax** `[no] misc`

**Context** debug>router>isis

**Description** This command enables debugging for IS-IS misc.  
The **no** form of the command disables debugging.

## packet

**Syntax** `packet [packet-type] [ip-int-name | ip-address] [detail]`

**Context** debug>router>isis

**Description** This command enables debugging for IS-IS packets.  
The **no** form of the command disables debugging.

**Parameters** *ip-address* — When specified, only packets with the specified interface address are debugged.

<b>Values</b>	ipv4-address:	a.b.c.d (host bits must be 0)
	ipv6-address:	x:x:x:x:x:x:x (eight 16-bit pieces)
		x:x:x:x:x:d.d.d.d
	x:	[0 — FFFF]H
	d:	[0 — 255]D

*ip-int-name* — When specified, only packets with the specified interface name are debugged.

*packet-type* — When specified, only packets of the specified type are debugged.

**Values** ptop-hello | 11-hello | 12-hello | 11-psnp | 12-psnp | 11-csnp | 12-csnp | 11-lsp | 12-lsp

**detail** — All output is displayed in the detailed format.

## Debug Commands

### rtm

**Syntax** **rtm** [*ip-address*]  
**no rtm**

**Context** debug>router>isis

**Description** This command enables debugging for IS-IS route table manager (RTM).  
The **no** form of the command disables debugging.

**Parameters** *ip-address* — The specified IP address.

ipv4-address: a.b.c.d (host bits must be 0)  
ipv6-address: x:x:x:x:x:x:x (eight 16-bit pieces)  
                  x:x:x:x:x:d.d.d.d  
                  x: [0 — FFFF]H  
                  d: [0 — 255]D

### spf

**Syntax** [**no**] **spf** [*level-number*] [*system-id*]

**Context** debug>router>isis

**Description** This command enables debugging for IS-IS SFP.  
The **no** form of the command disables debugging.

**Parameters** *system-id* — When specified, only the specified system-id is debugged. A 6-octet system identifier (xxxx.xxxx.xxxx).

*level-number* — Specifies the interface level (1, 2, or 1 and 2).