

Syntax Checks

This appendix describes the syntax checks that are performed on configuration files by the Cisco IP Manager software.

Syntax errors are reported in the **Syntax Errors** report.

To view this report, open the **Baseline Summary** report and double-click on the **Syntax Errors** row of the **Results** grid (or select it and click the **Show Report** button).

Following is a list and brief description (where needed) of the syntax checks performed by the Cisco IP Manager software. The checks are divided into AppleTalk, Frame Relay, IP, Novell/IPX, SRB, SNA, DLSW, and general categories.

AppleTalk

- AppleTalk address must be **<network>.<node>** where **<network>** is in the range 0 through 65279 and **<node>** is in the range 0 through 254.
- AppleTalk cable range must be **<start>-<end>** where **<start>** and **<node>** are decimal numbers in the range 0 through 65279.

Frame Relay

- Frame Relay: address already in map.
- Frame Relay not configured on this interface.

IP

- Command valid for OSPF only.
- Interface subcommand not preceded by **interface** major command.
- Interface not allowed with OUT in case of OSPF.
- Invalid access list number. The command requires a standard IP access list number. Must be in the range 1 through 99.
- Invalid bridge number. Must be in the range 1 through 15.
- Invalid channel group. Must be in the range 0 through 23.
- Invalid command specified. The command **default-metric** with multiple metrics can be applied to an IGRP routing process only.
- Invalid configuration command.
- Invalid EIGRP external distance. Must be in the range 1 through 255.
- Invalid EIGRP internal distance. Must be in the range 1 through 255.
- Invalid encapsulation type.
- Invalid ICMP code. Must be in the range 0 through 255.
- Invalid ICMP message name.
- Invalid ICMP type. Must be in the range 0 through 255.
- Invalid IGMP message name.
- Invalid IGMP type. Must be in the range 0 through 15.
- Invalid interface name. Valid interface names (case insensitive) are: *null, hssi, fddi, serial, ethernet, tokenring, bri, loopback, dialer, async, tunnel, and atm.*
- Invalid IP address.
- Invalid maximum hops. In the command **metric maximum-hops <hops>**, hop count must be in the range 1 through 255.
- Invalid net mask.
- Invalid OSPF cost value. Must be in the range 1 through 65535.

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- Invalid OSPF metric type value. Must be 1 or 2.
 - Invalid port number. Must be in the range 0 through 7.
 - Invalid port name in IP extended access list.
 - Invalid precedence level. Must be in the range 0 through 7.
 - Invalid precedence name in IP extended access list.
 - Invalid priority-list number. Must be in the range 1 through 10.
 - Invalid protocol command. The **timers-basic** command can only be used for EGP, RIP, or IGRP.
 - Invalid protocol number. In the extended IP access list command, the protocol number must be in the range 0 through 255.
 - Invalid queue size. Must be in the range 10 through 500.
 - Invalid slot number. Must be in the range 0 through 12.
 - Invalid subinterface number. Must be in the range from 1 through 4294967293.
 - Invalid TOS level. Must be in the range 0 through 15.
 - Invalid TOS name in IP extended access list.
 - Invalid TOS value. TOS must have a value of 0 in the command **metric weights TOS K1 K2 K3 K4 K5**.
 - Invalid Type of Service value. Must be in the range 0 through 15.
 - Invalid variance multiplier. Must be nonzero positive integer.
 - Invalid weight value. In the command **metric <weight>, <weight>** must be an integer in the range 10 through 255.
 - Multiple active **access-group** commands per interface. There should be only one active **access-group** command per interface.
 - Missing autonomous system number. In the **router** global command, an autonomous system number must be specified for the following routing protocols: IGRP, BGP, OSPF, and EGP.
 - Must delete all secondary IP addresses before deleting primary address.

- This command must be preceded by a **router eigrp** command.

Novell/IPX

- Duplicate Novell/IPX network numbers assigned to same interface.
- Invalid Novell/IPX access list number.
- Invalid Novell/IPX address.
- Invalid Novell/IPX encapsulation type. Must be one the following: *arpa*, *hdlc*, *novell-ether*, *sap*, or *snap*.
- Invalid Novell/IPX host address (node ID). Must be dotted triplets of four-digit hexadecimal numbers. The value of each four-digit triplet must be in the range 0 through 65536.
- Invalid Novell/IPX network number. Must be a 32-bit number written in hexadecimal.
- Invalid Novell/IPX SAP access-list number. Must be in the range 1000 through 1099.
- Invalid Novell/IPX extended access list number. Must be in the range 900 through 999.
- Invalid Novell/IPX max paths. Must be in the range 1 through 512.
- Multiple Novell/IPX **access-group** commands. There should be only one IPX **access-group** command per interface.
- Multiple Novell/IPX **input-network-filter** commands. There should be only one IPX **input-network-filter** command per interface.
- Multiple Novell/IPX **input-sap-filter** commands. There should be only one IPX **input-sap-filter** command per interface.
- Multiple Novell/IPX **output-network-filter** commands. There should be only one IPX **output-network-filter** command per interface.
- Multiple Novell/IPX **output-sap-filter** commands. There should be only one IPX **output-sap-filter** command per interface.
- Multiple Novell/IPX **router** commands. There must be only one IPX routing command per configuration file.

SRB

- Bridge number must be in the range 1 through 15.
- Duplicate **source-bridge fst-peername** command.
- Duplicate **source-bridge remote-peer** command.
- Duplicate **source-bridge ring-group** command.
- Invalid interface name. Valid interface names in the **source-bridge remote-peer interface** command must be of type *serial*, *ethernet*, *FDDI*, or *tokenring*.
- Invalid max frame size in **source-bridge remote-peer** command. Valid values are: 516, 1500, 2052, 4472, 8144, 11407, and 17800.
- Invalid ring group number. Must be in the range 1 through 4095.
- Source-route bridging can be configured on token ring or FDDi interface.

SNA

- Invalid MAC address in **sdllc tradd** command. Must be of the form *xxxx.xxxx.xx00*.
- Invalid ring speed. Must be either 4 or 16.
- Invalid SDLC address in **sdllc partner** command. Must be in the range 1 through 0xfe.
- This command can be applied to Token Ring interface only.

DLSW

- Invalid DLSW peer group number. Must be in the range 1 through 255.
- Invalid DLSW peer cost. Must be in the range 1 through 5.
- Invalid DLSW largest frame size.
- Invalid DLSW **keep-alive** time. Must be in the range 0 through 1200.
- Invalid DLSW **lsap-output-list** number. Must be in the range 200 through 299.
- Invalid DLSW max output TCP queue size. Must be in the range 10 through 2000.

General Syntax Checks

- A sub-interface must be preceded by the main interface to which it belongs.
- Invalid buffer size. Must be either *small*, *middle*, *big*, *very big*, *large*, or *huge*.
- Invalid buffer type. Must be either *permanent*, *max-free*, *min-free*, or *initial*.
- Invalid FDDI token rotation time. Must be in the range 4000 through 165000 microseconds.
- Invalid hold-queue length. Must be in the range 0 through 4096.
- Invalid queue list number. Must be in the range 1 through 10.
- Invalid custom queue number. Must be in the range 1 through 10.
- Invalid custom queue limit. Must be in the range 0 through 32767.
- Route map subcommand must be preceded by **route-map** major command.
- Router subcommand must be preceded by **router major** command.
- This command can be applied to an FDDI interface only.
- This command cannot be applied to an FDDI interface.