



Disable Novell IPX/NLSP/SAP

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Support for Novell Internetwork Packet Exchange (IPX) routing using NetWare Link Services Protocol (NLSP), Service Advertising Protocol (SAP), Enhanced Interior Gateway Routing Protocol (EIGRP), and Routing Information Protocol (RIP), related features, and commands has been removed from Cisco IOS Release 15.1(3)S and later releases.

Finding Feature Information

Your software release may not support all the features documented in this module. For the latest feature information and caveats, see the release notes for your platform and software release. To find information about the features documented in this module, and to see a list of the releases in which each feature is supported, see the [“Feature Information for Disable Novell IPX/NLSP/SAP”](#) section on page 8.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to <http://www.cisco.com/go/cfn>. An account on Cisco.com is not required.

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Removal of Support for IPX Routing

The Novell Internetwork Packet Exchange (IPX) is a routed protocol that is derived from the Xerox Network Systems (XNS) Internet Datagram Protocol (IDP). Cisco supports IPX routing using the EIGRP/RIP protocol.

Because of a significant decrease in the usage of and demand for the Novell IPX protocol, Cisco has decided to discontinue support for IPX routed protocols EIGRP and RIP.

The Novell IPX routed protocol is not supported in Cisco IOS release 15.1(3)S and later releases.

Removal of Support for Novell IPX Commands

The following commands are obsolete and are no longer supported in Cisco IOS Releases 15.1(3)S and later releases (no replacement commands are provided):

- **access-list** (IPX extended)
- **access-list** (IPX standard)
- **access-list** (NLSP)
- **access-list** (SAP filtering)
- **area-address** (NLSP)
- **clear ipx accounting**
- **clear ipx cache**
- **clear ipx nhrp**
- **clear ipx nlsr neighbors**
- **clear ipx route**
- **clear ipx sap**
- **clear ipx traffic**
- **debug ipx**
- **deny** (extended)
- **deny** (NLSP)
- **deny** (SAP filtering)
- **deny** (standard)
- **distribute-list in**
- **distribute-list out**
- **distribute-sap-list in**
- **distribute-sap-list out**
- **ipx access-group**
- **ipx access-list**
- **ipx accounting**
- **ipx accounting-list**
- **ipx accounting-threshold**

- **ipx accounting-transits**
- **ipx advertise-default-route-only** (RIP)
- **ipx advertise-to-lost-route**
- **ipx backup-server-query-interval** (EIGRP)
- **ipx bandwidth-percent eigrp**
- **ipx broadcast-fastswitching**
- **ipx compression cipx**
- **ipx default-output-rip-delay**
- **ipx default-output-sap-delay**
- **ipx default-route**
- **ipx default-triggered-rip-delay**
- **ipx default-triggered-rip-holddown**
- **ipx default-triggered-sap-delay**
- **ipx default-triggered-sap-holddown**
- **ipx delay**
- **ipx down**
- **ipx eigrp-redistribution-bandwidth**
- **ipx eigrp-sap-split-horizon**
- **ipx encapsulation**
- **ipx flooding-unthrottled** (NLSP)
- **ipx gns-reply-disable**
- **ipx gns-response-delay**
- **ipx gns-round-robin**
- **ipx hello-interval eigrp**
- **ipx helper-address**
- **ipx helper-list**
- **ipx hold-down eigrp**
- **ipx hold-time eigrp**
- **ipx input-network-filter** (RIP)
- **ipx input-sap-filter**
- **ipx internal-network**
- **ipx ipxwan**
- **ipx ipxwan error**
- **ipx ipxwan static**
- **ipx link-delay**
- **ipx linkup-request** (RIP)
- **ipx maximum-hops** (RIP)
- **ipx maximum-paths**

- **ipx nasi-server enable**
- **ipx netbios input-access-filter**
- **ipx netbios output-access-filter**
- **ipx netbios-socket-input-checks**
- **ipx network**
- **ipx nhrp authentication**
- **ipx nhrp holdtime**
- **ipx nhrp interest**
- **ipx nhrp map**
- **ipx nhrp max-send**
- **ipx nhrp network-id**
- **ipx nhrp nhs**
- **ipx nhrp record**
- **ipx nhrp responder**
- **ipx nhrp use**
- **ipx nlsp csnp-interval**
- **ipx nlsp enable**
- **ipx nlsp hello-interval**
- **ipx nlsp hello-multiplier**
- **ipx nlsp lsp-interval**
- **ipx nlsp metric**
- **ipx nlsp multicast**
- **ipx nlsp priority**
- **ipx nlsp retransmit-interval**
- **ipx nlsp rip**
- **ipx nlsp sap**
- **ipx output-ggs-filter**
- **ipx output-gns-filter**
- **ipx output-network-filter (RIP)**
- **ipx output-rip-delay**
- **ipx output-sap-delay**
- **ipx output-sap-filter**
- **ipx pad-process-switched-packets**
- **ipx per-host-load-share**
- **ipx ping-default**
- **ipx potential-pseudonode (NLSP)**
- **ipx rip-max-packetsize**
- **ipx rip-multiplier**

- **ipx rip-queue-maximum**
- **ipx rip-response-delay**
- **ipx rip-update-queue-maximum**
- **ipx route**
- **ipx route-cache**
- **ipx route-cache inactivity-timeout**
- **ipx route-cache max-size**
- **ipx route-cache update-timeout**
- **ipx router**
- **ipx router-filter**
- **ipx router-sap-filter**
- **ipx routing**
- **ipx sap**
- **ipx sap follow-route-path**
- **ipx sap-helper**
- **ipx sap-incremental (EIGRP)**
- **ipx sap-incremental split-horizon**
- **ipx sap-max-packetsize**
- **ipx sap-multiplier**
- **ipx sap-queue-maximum**
- **ipx sap-update-queue-maximum**
- **ipx server-split-horizon-on-server-paths**
- **ipx split-horizon eigrp**
- **ipx spx-idle-time**
- **ipx spx-spoof**
- **ipx throughput**
- **ipx triggered-rip-delay**
- **ipx triggered-rip-holddown**
- **ipx triggered-sap-delay**
- **ipx triggered-sap-holddown**
- **ipx type-20-helpered**
- **ipx type-20-input-checks**
- **ipx type-20-output-checks**
- **ipx type-20-propagation**
- **ipx update interval**
- **ipx update sap-after-rip**
- **ipx watchdog**
- **ipx watchdog-spoof**

- **log-adjacency-changes** (IPX)
- **log-neighbor-changes** (EIGRP)
- **log-neighbor-warnings**
- **lsp-gen-interval** (IPX)
- **lsp-mtu** (IPX)
- **lsp-refresh-interval** (IPX)
- **max-lsp-lifetime** (IPX)
- **multicast**
- **nasi authentication**
- **netbios access-list** (IPX)
- **network** (IPX Enhanced IGRP)
- **permit** (IPX extended)
- **permit** (IPX standard)
- **permit** (NLSP)
- **permit** (SAP filtering)
- **ping ipx**
- **prc-interval** (IPX)
- **priority-list** (global)
- **redistribute** (IPX)
- **route-aggregation** (NLSP)
- **show ipx access-list**
- **show ipx accounting**
- **show ipx cache**
- **show ipx eigrp interfaces**
- **show ipx eigrp neighbors**
- **show ipx eigrp topology**
- **show ipx eigrp traffic**
- **show ipx interface**
- **show ipx nasi connections**
- **show ipx nhrp**
- **show ipx nhrp traffic**
- **show ipx nlsdp database**
- **show ipx nlsdp neighbors**
- **show ipx nlsdp spf-log**
- **show ipx route**
- **show ipx servers**
- **show ipx spx-spoof**
- **show ipx traffic**

- `show sse summary`
- `spf-interval`

Additional References

The following sections provide references related to the Disable Novell IPX/NLSP/SAP feature.

Related Documents

Related Topic	Document Title
Novell IPX commands	Cisco IOS Novell IPX Command Reference
Novell IPX configuration tasks	Cisco IOS Novell IPX Configuration Guide

Standards

Standard	Title
None	—

MIBs

MIB	MIBs Link
None	—

RFCs

RFC	Title
None	—

Technical Assistance

Description	Link
The Cisco Support and Documentation website provides online resources to download documentation, software, and tools. Use these resources to install and configure the software and to troubleshoot and resolve technical issues with Cisco products and technologies. Access to most tools on the Cisco Support and Documentation website requires a Cisco.com user ID and password.	http://www.cisco.com/cisco/web/support/index.html

Feature Information for Disable Novell IPX/NLSP/SAP

Table 1 lists the release history for this feature.

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Note

Table 1 lists only the software release that introduced support for a given feature in a given software release train. Unless noted otherwise, subsequent releases of that software release train also support that feature.

Table 1 Feature Information for Disable Novell IPX/NLSP/SAP

Feature Name	Releases	Feature Information
Disable Novell IPX/NLSP/SAP	15.1(3)S	<p>Support for Novell Internetwork Packet Exchange (IPX) routing using NLSP, SAP, EIGRP, and RIP, related features, and commands has been removed from Cisco IOS Release 15.1(3)S and later releases.</p> <p>The following sections provide information about this feature:</p> <ul style="list-style-type: none"> Information About Disable Novell IPX/NLSP/SAP Removal of Support for Novell IPX Commands

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