Release Notes for Cisco ASR 1000 Series Aggregation Services Routers for Cisco IOS XE Release 3.7.0Xx

November 7, 2012

Cisco IOS XE Release 3.7.0Xx

The Cisco IOS XE Release 3.7.0Xx is based on Cisco IOS XE Release 3.7.0 and is a continuation of Cisco IOS Release 2.5.1XC and are updated as needed. Use these release notes with the Cross-Platform Release Notes for Cisco IOS XE Release 2.5.1XC and Earlier Releases and Cisco ASR 1000 Series Aggregation Services Routers Release Notes.

Contents

Introduction

Cisco IOS XE Release 3.7.0Xx is based on Cisco IOS XE Release 3.7.0 and is a continuation of Cisco IOS Release 2.5.1XC. Many features and hardware that are supported in this software have been previously released to customers on other software releases. This release is intended exclusively for the deployment of the Locator/ID Separation Protocol (LISP) functionality on the routers that are listed in the "Supported Hardware" section on page 2 section.

For information on new features and Cisco IOS commands that are supported by Release 3.7.0Xx, see the "New and Changed Information" section on page 2.

System Requirements

This section describes the system requirements for Cisco IOS XE Release 3.7.0Xx and earlier releases and includes the following section:

- Supported Hardware, page 2

Supported Hardware

Cisco IOS XE Release 3.7.0Xx and earlier releases support the following Cisco routers:

Cisco Aggregation Services Router ASR 1000 Series with:

- Cisco ASR 1001 Router
- Cisco ASR 1002 Router
- Cisco ASR 1002-F Router
- Cisco ASR 1004 Router
- Cisco ASR 1006 Router

New and Changed Information

This section lists the new hardware and software features supported by Cisco IOS XE Release 3.7.0Xx and contains the following subsections.

- New Hardware Features in Cisco IOS Release 3.7.0XB
- New Software Features in Cisco IOS Release 3.7.0XB
- New Hardware Features in Cisco IOS Release 3.7.0XA
- New Software Features in Cisco IOS Release 3.7.0XA

New Hardware Features in Cisco IOS Release 3.7.0XB

There are no new hardware features in Cisco IOS Release 3.7.0XB.

New Software Features in Cisco IOS Release 3.7.0XB

This section describes new and changed software features in Cisco IOS XE Release 3.7.0XB.

- LISP Extended Subnet Mode Mobility Support
- SHA-2 Support

LISP Extended Subnet Mode Mobility Support

The LISP Extended Subnet Mode (LISP ESM) feature enables an IP host (virtual or physical) to migrate (move) between data centers where the subnet or VLAN is extended between these data centers using OTV or other L2 extension mechanisms.

SHA-2 Support

The SHA-2 feature enables the configuration of the SHA-2 cryptographic hash function for use in LISP Map-Register and Map-Notify messages. Prior releases only included the SHA-1 cryptographic hash function for these messages.

New Hardware Features in Cisco IOS Release 3.7.0XA

There are no new hardware features in Cisco IOS Release 3.7.0XA.

New Software Features in Cisco IOS Release 3.7.0XA

This section describes new and changed software features in Cisco IOS Release 3.7.0XA.

- LISP Across Subnet Mode Mobility Support
- LISP-Security Support
- LISP Delegated Database Tree
- LISP Locator Table Virtualization Support
- LISP ALT Summary Route
- LISP PETR Load Sharing
- LISP Remote RLOC Probe
- LISP RLOC Auto-Discovery
- LISP Route-Import
- LISP Instance ID Support

LISP Across Subnet Mode Mobility Support

The LISP Across Subnet Mode (ASM) feature enables an IP host (virtual or physical) to be migrated from one IP subnet to another IP subnet while retaining its original IP address.

LISP-Security Support

The LISP-Security (LISP-Sec) feature enables a set of security mechanisms that provide origin authentication, integrity, and anti-replay protection for Map-Request/Map-Reply mapping resolution exchanges.

LISP Delegated Database Tree

The LISP Delegated Database Tree (DDT) feature provides the ability to define a large-scale distributed database of LISP Endpoint Identifier (EID) space using a new type of LISP-speaking device known as a DDT node. A DDT node is configured to be authoritative for some specified portion of an overall LISP EID space, as well as the set of more specific subprefixes that are delegated to other DDT nodes.

LISP Locator Table Virtualization Support

The LISP Locator Table virtualization feature allows multiple LISP instantiations created in support of multi-tenancy to each be associated with their own routing locator address space reachable via a Virtual Routing and Forwarding (VRF) table.

LISP ALT Summary Route

The LISP ALT Summary Route feature enables an ALT-connected device to summarize and announce an aggregate prefix into the LISP ALT. This summary route can be announced in lieu of more-specifics to improve ALT scalability, and to simplify Map-Request handling.

LISP PETR Load Sharing

The LISP PETR Load Sharing feature adds priority and weight options to configured PETRs for configurable load sharing.

LISP Remote RLOC Probe

The LISP Remote RLOC Probe feature improves convergence times for LISP encapsulations by immediately sending triggered probes to remote RLOCs that undergo next-hop changes.

LISP RLOC Auto-Discovery

The LISP RLOC Auto-Discovery feature provides the ability to configure a LISP site with multiple xTRs to use dynamic provisioning for their RLOC interfaces (locators).

LISP Route-Import

The LISP Route-Import feature enables dynamic proxying of EID-space by a Proxy-ITR.

LISP Instance ID Support

The LISP Instance ID Support feature includes the following support:

- Multi-tenancy support on xTR: Ability to associate LISP instance IDs with virtual routing and forwarding (VRF) tables running on an xTR. This allows for an xTR that is connected to the multiple networks to use LISP instance IDs to provide segmentation of traffic for the EID prefixes that they support. (When Multi-tenancy is configured on an xTR, it must also be configured on the Map-Server. Note that multi-tenancy support for the Map-Server was provided in Cisco IOS Release 15.1(1)XB3.)

ALT-less Proxy Ingress Tunnel Route support: Ability to configure LISP PITR functionality without requiring the PITR to be ALT-connected for EID-to-RLOC mapping resolution. This results in a simpler configuration of the PITR, and allows the PITR to use standard Map-resolution mechanisms for EID-to-RLOC mapping resolution instead of the ALT.

Related Documentation

The following section describes the documentation available for Cisco IOS XE Release 3.7.0Xx.

Release-Specific Documents

The following documents are specific to Cisco IOS XE Release 3.7.0Xx:

- *Cisco IOS LISP Command Reference for Cisco IOS Release 15.1(4)XB6* at:

  http://www.cisco.com/en/US/docs/ios/lisp/command/reference/
  LISP_command_reference_1514xb6-only.pdf

- Other LISP related documents can be found at:

  http://lisp.cisco.com/lisp_down.html

Note If you do not find the answers to your questions or issues in the documentation that we have provided, please use the lisp-support@cisco.com mailing list.

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