Release Notes for Cisco Network Registrar 7.2.3

Revised: January 29, 2013

These release notes describe the system requirements, resolved bugs, and installation and upgrade notes for Cisco Network Registrar 7.2.3.

Contents

These release notes include the following sections:

Americas Headquarters:
Cisco Systems, Inc., 170 West Tasman Drive, San Jose, CA 95134-1706 USA

Introduction

Cisco Network Registrar provides the tools to configure and control the servers necessary to manage your IP address space. This release of Cisco Network Registrar includes bug fixes and enhancements. See:

- Issues Resolved in Release 7.2.3, page 7
- Enhancement Features Added in Release 7.2.3, page 8

Before you Begin

Review the following sections before installing Cisco Network Registrar 7.2.3:

- System Requirements, page 2

Note If you are migrating to Cisco Network Registrar 7.2.3 from an earlier version of Cisco Network Registrar, you must review the release notes for the releases that occurred in between, to fully understand all the changes.

Note If you are upgrading from an earlier version of Cisco Network Registrar to Cisco Network Registrar 7.2.3, ensure that you read the upgrade considerations (see "Upgrade Considerations" section on page 5 of this document and "Installation and Upgrade Procedure" section of *Installation Guide for Cisco Network Registrar 7.2*) thoroughly.

System Requirements

Review these system requirements before installing the Cisco Network Registrar 7.2.3 software:

- Java—You must have the Java Runtime Environment (JRE) 5.0 (1.5.0_06) or later, or the equivalent Java Development Kit (JDK), installed on your system. (The JRE is available from Oracle on its website.)
- Operating System—We recommend that your Cisco Network Registrar software runs on the Windows, Solaris, or Linux operating systems as described in Table 1. Cisco Network Registrar must run on 32-bit or 64-bit operating systems.

  Cisco Network Registrar now supports running in VMWARE (ESX 4.1 and 4.0) environment.

  Note Cisco Network Registrar applications are 32-bit applications and the system should support 32-bit applications (Java JRE/JDK, OpenLDAP library (for RH)).

- User Interfaces—Cisco Network Registrar currently includes two user interfaces: a web UI and a command-line interface (CLI):
  - Web UI—Runs on Microsoft Internet Explorer 7.1, and 8.0, Mozilla Firefox 3.0 and 3.5.

  Note You can run the Web UI on Microsoft Internet Explorer 8.0 in compatibility mode alone.

– CLI—Runs in a Windows, Solaris, or Linux command window.

Note For the CLI, the number of concurrent active user sessions and processes on a cluster can be no more than 14.

Tip Include a network time service (such as NTP) in your configuration to avoid time differences between the local and regional clusters, so that aggregated data appears consistently at the regional server.

Table 1 Cisco Network Registrar System Recommendations

Component	Operating System		
	Solaris	**Linux**	**Windows**
OS version[1]	Solaris 10[2]	Red Hat Enterprise Linux 5.0[3]	Windows Server 2008
Disk space[4]	2 x 73/146 SAS[5] drives	With basic DHCP and optimal hardware configuration: SATA[6] drives with 7500 RPM drive greater than 500 leases/second SAS drives with 15K RPM drive greater than 1000 leases/second (Recommended hard drive 146 GB)	
Memory[7]	16 GB	4 GB (small networks), 8 GB (average networks), or 16 GB (large networks)	

1. Cisco Network Registrar must run on 32-bit or 64-bit operating systems.
2. Cisco Network Registrar supports 128-KB block sizes in the Solaris 10 ZFS.
3. Cisco Network Registrar now supports running in VMWARE (ESX 4.1 and 4.0) environment.
4. Higher I/O bandwidth usually results in higher average leases per second.
5. Serial Attached SCSI.
6. Serial Advanced Technology Attachment (Serial ATA).
7. Faster CPU and more memory typically result in higher peak leases per second.

Note Cisco Network Registrar no longer supports Windows Server 2003, Red Hat 4.0, and Solaris 8 and 9. If you are running any of these operating systems, you must upgrade to Windows Server 2008, Red Hat 5.0, or Solaris 10, as appropriate, before you install or upgrade to Cisco Network Registrar 7.2.3. (See the "Upgrade Considerations" section on page 5.)

Interoperability

Cisco Network Registrar 7.2.3 protocol servers interoperate with versions 7.2.x, 7.1.x, 7.0.x, and 6.3.x. Cisco Network Registrar 7.2.3 will not support interoperability with the versions before 6.3.x.

- Cisco Network Registrar 7.2.3 DHCPv4 failover servers interoperate with Cisco Network Registrar 7.2.x, 7.1.x, 7.0.x, and 6.3.x failover servers.

- By the nature of the EDNS0 protocol, Cisco Network Registrar 7.2.3 DNS servers interoperate with earlier versions of Cisco Network Registrar DNS (and 3rd party DNS vendors). EDNS0 defines the interoperability with DNS servers that do not support EDNS0; Cisco Network Registrar 7.2.3 DNS adhere to the RFC and consequently interoperate with earlier versions of Cisco Network Registrar.
- Cisco Network Registrar 7.2.3 HA DNS servers interoperate with Cisco Network Registrar 7.2.x, 7.1.x, 7.0.x, and 6.3.x versions.
- Cisco Network Registrar 7.2.3 DDNSv6 interoperates only with Cisco Network Registrar 7.0 and later DNS servers because of the use of the DHCID RRs (in place of TXT RRs for DDNSv6).

Installation and Upgrade Notes

The Cisco Network Registrar 7.2.3 kit contains the following files and directories:

- Solaris—Solaris 10 installation kit
- Linux5—Red Hat Linux ES 5.0 installation kit
- Windows—Windows Server 2008 R2 installation kit
- Docs—Product documentation in the PDF format

Review the following points before beginning a new installation or an upgrade. For full installation and upgrade procedures, see the *Installation Guide for Cisco Network Registrar 7.2*.

This section covers the following topics:

For information about Network Registrar SDK, see the "About Cisco Network Registrar SDK" section on page 5.

General Installation

Refer to the *Installation Guide for Cisco Network Registrar 7.2* for the detailed installation procedure. Points to remember while installing Cisco Network Registrar 7.2.3 are as follows:

Note Cisco Network Registrar 7.2.3 supports Windows Server 2008.

- The default Program files location for 32-bit OS and 64-bit OS are as follows:
  - Program files (32-bit OS)—C:\Program Files\Network Registrar\{Local | Regional}
  - Program files (64-bit OS)—C:\Program Files (x86)\Network Registrar\{Local | Regional}

  When installing Cisco Network Registrar on a 64-bit system, you must ensure that it is installed in the \Program Files (x86) area and that you specify the path to a 32-bit version of the Java Runtime Environment.
- Cisco Network Registrar includes a list of informational, activity, warning, and error messages that it logs during certain operating conditions. Obtain this list in HTML files for each component as links from a MessageIDIndex.html file, which, by default, is in:
  - Windows—C:\Program Files\Network Registrar\{Local | Regional}\docs\msgid\MessageIDIndex.html

- Solaris and Linux—/opt/nwreg2/{local | regional}/docs/msgid/MessageIDIndex.html

Upgrade Considerations

Cisco Network Registrar no longer supports the Windows Server 2003, Red Hat 4.0, 3.0, and Solaris 8 and 9 operating systems. Back up your Cisco Network Registrar data and upgrade your operating system before installing this latest release. (See Table 1 for currently supported operating systems.)

Note When upgrading from a pre-7.2 cluster to Cisco Network Registrar 7.2.3, a platform-specific tool cnr_mcdexport is required. This tool can be downloaded from Cisco.com as an archive file. The archive contains an extensive README file with specific instructions on the process to be followed.

The MCD DB database technology has been in use in Cisco Network Registrar for several earlier versions. The mcdexport kit extracts the MCD DB data, which, during the upgrade procedure, is transferred to new locations.

When you install the software, the installation program automatically detects an existing version and upgrades the software to the latest release. The program first prompts you to archive existing Cisco Network Registrar data. If the program encounters errors during the upgrade, it restores the software to the earlier release.

During an upgrade, Network Registrar displays any pre-existing HTTPS configuration defaults for the keystore filename and password to enable a secure connection for web UI logins. If you have enabled HTTPS, and are unaware of the keystore filename and password at the time of the upgrade, you can preserve HTTPS connectivity during the upgrade, and re-enter the defaults when prompted.

Note The default keystore filename and password appear only if you are upgrading from Cisco Network Registrar 6.3.1 or later versions, or reinstalling Cisco Network Registrar 7.2.3.

For detailed install and upgrade procedures, see the "Installation and Upgrade Procedure" section in *Installation Guide for Cisco Network Registrar 7.2*.

To revert to an earlier version of Cisco Network Registrar, see the "Reverting to Earlier Product Version" procedure in *Installation Guide for Cisco Network Registrar 7.2*.

To move Cisco Network Registrar to a new machine, see the "Moving an Installation to a New Machine" procedure in *Installation Guide for Cisco Network Registrar 7.2*.

About Cisco Network Registrar SDK

This section documents how to install the Cisco Network Registrar SDK and details the compatibility considerations. This section covers the following topics:

Installing Cisco Network Registrar SDK

This section documents how to install the Cisco Network Registrar SDK on the Linux, Solaris, and Windows platforms. Before installing the SDK, ensure that you have Java Runtime Environment (JRE) 5.0 (1.5.0_06) or later, or the equivalent Java Development Kit (JDK), installed on your system.

Installing on Linux or Solaris

To install the Cisco Network Registrar SDK on a Linux or Solaris platform:

Step 1 Extract the contents of the distribution .tar file.

a. Create the SDK directory:

```
% mkdir /cnr-sdk
```

b. Change to the directory that you just created and extract the .tar file contents:

```
% cd /cnr-sdk
% tar xvf sdk_tar_file_location/cnrsdk.tar
```

Step 2 Export your LD_LIBRARY_PATH and CLASSPATH environment variable:

```
% export LD_LIBRARY_PATH=/cnr-sdk/lib
% export CLASSPATH=/cnr-sdk/classes/cnrsdk.jar:.
```

Installing on Windows

To install the Cisco Network Registrar SDK on a Windows platform:

Step 1 Extract the contents of the distribution .tar file.

a. Create the SDK directory:

```
> md c:\cnr-sdk
```

b. Change to the directory that you just created and extract the .tar file contents:

```
> c:
> cd \cnr-sdk
> tar xvf sdk_tar_file_location\cnrsdk.tar
```

You may optionally use Winzip to extract cnrsdk.tar to the C:\cnr-sdk directory.

Step 2 Set your PATH and CLASSPATH variables:

```
> set PATH=%PATH%;c:\cnr-sdk\lib
> set CLASSPATH=c:\cnr-sdk\classes\cnrsdk.jar;.
```

Testing Your Installation

On Linux or Solaris, the following test program verifies that you have set your PATH or LD_LIBRARY_PATH correctly:

```
% java -jar /cnr-sdk/classes/cnrsdk.jar
```

On Windows, the following test program verifies that you have set your CLASSPATH correctly:

```
> java -jar c:\cnr-sdk\classes\cnrsdk.jar
```

Compatibility Considerations

For Java SDK client code developed with an earlier version of the SDK, you can simply recompile most code with the latest JAR file to connect to an upgraded server.

But in cases where the client code for versions before 7.1 directly manipulates reservation lists in scopes or prefixes, changes are required. These changes are required because the embedded reservation lists in both scopes and prefixes are no longer used. Beginning with version 7.1, individual reservations are stored separately and reference the parent scope or prefix by name.

The new design provides the following benefits:

- Reservation edits (add/modify/delete) do not require a scope or prefix edit.
- Reservations can be indexed directly to allow quick search and retrieval.
- Edits to scopes or prefixes with a large number of reservations no longer result in large scope or prefix change entry logs.

No changes are required for client code that adds or removes reservations using the addReservation or removeReservation methods. However, these methods are now deprecated because the edit functionality is replaced and extended by the general addObject, modifyObject, removeObject, addObjectList, modifyObjectList, and removeObjectList methods.

Issues Resolved and Enhancements Added in Release 7.2.3

This section describes the most important changes made in the Cisco Network Registrar 7.2.3.

- Issues Resolved in Release 7.2.3, page 7
- Enhancement Features Added in Release 7.2.3, page 8

Issues Resolved in Release 7.2.3

Table 2 lists the key issues resolved in the Cisco Network Registrar 7.2.3 release.

Click on the bug ID to view the bug details. This information is displayed in the Bug Toolkit.

Table 2 Issues Resolved in Cisco Network Registrar 7.2.3 Release

Bug ID	Description
CSCuc14576	Change logging to only flush after Warning or Error
CSCuc52453	Inhibit-renews-at-reboot does not work for DHCPv6

Table 2 Issues Resolved in Cisco Network Registrar 7.2.3 Release (continued)

Bug ID	Description
CSCuc77137	nrcmd cannot import root zone in bind format
CSCuc96698	DNS caches multiple copies of NS records when resolving recursive query

For the complete list of bugs for this release, see the cnr_7_2_3-buglist.pdf file available at the product download site. Refer to this list especially for information about fixes to customer-reported issues.

Enhancement Features Added in Release 7.2.3

For the complete list of enhancements for this release, see the cnr_7_2_3-enhancement_list.pdf file available at the product download site.

Limitations and Restrictions

This section describes limitations and restrictions you might encounter using Cisco Network Registrar 7.2.3.

- The Regional Pull Replica Address Space fails when reservations are being pulled for new failover-pair objects. This problem occurs only if there is a new failover-pair and one or more reservations associated with that failover-pair.

  To work around this issue, repeat the operation twice—first checking Omit Reservations and then without checking Omit Reservations. After the failover-pairs have been pulled, subsequent pull replica address space operations will work correctly.

- In situations where a DHCPv6 server supports clients with multiple leases, the demand on server memory increases. DHCPv4 supports only one lease per client, while DHCPv6 supports multiple leases. Therefore, a server running DHCPv6 cannot support as many leases (clients) as the same server running DHCPv4. For example, one DHCPv6 client might require 2,500 bytes of space compared to 1,000 bytes per DHCPv4 client. This means that a machine that would support one million DHCPv4 clients supports only 400,000 DHCPv6 clients. We recommend that you allow three times the memory for DHCPv6 clients as you would for DHCPv4.

  You must:

  - Be aware of how many prefixes per link are configured. If the configuration has two prefixes on a link, then with default configuration parameters, you have to cut in half the number of clients.
  - Use care if you enable inhibit-all-renews. When enabled, each client would use at least two leases, and perhaps three, depending on the grace and affinity times per prefix.

Product Documentation

Note We sometimes update the electronic documentation after original publication. Therefore, you should also review the documentation on Cisco.com for any updates.

You can view the marketing and user documents for Cisco Network Registrar at: http://www.cisco.com/en/US/products/sw/netmgtsw/ps1982/index.html.

The following document gives you the list of user documents for Cisco Network Registrar 7.2:

http://www.cisco.com/en/US/products/sw/netmgtsw/ps1982/products_documentation_roadmaps_list.html

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation:

http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html

Subscribe to the *What's New in Cisco Product Documentation* as an RSS feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service. Cisco currently supports RSS Version 2.0.

This document is to be used in conjunction with the documents listed in the "Product Documentation" section.