Cisco Prime Network Registrar 8.1.1 Release Notes

Revised: July 2012, OL-27483-01

Cisco Prime Network Registrar is comprised of four components including an IP address management application, a Domain Name System (DNS) protocol service, a Caching DNS service, and a Dynamic Host Configuration Protocol (DHCP) service.

Cisco offers these components as individually licensable applications or in a mix of suites.

These release notes describe the new software features, software and standards compatibility, interoperability and important notes for Cisco Prime Network Registrar 8.1.1.

Contents

These release notes includes the following sections:

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

Introduction

Cisco Prime Network Registrar is one of the Prime suite of network solution products. The Cisco Prime portfolio offerings empower IT organizations to more effectively manage their networks and the services they deliver. Built on a service-centric foundation, the Cisco Prime portfolio of products supports integrated lifecycle management through an intuitive workflow-oriented user experience and a set of common operational attributes.

Cisco Prime products deliver unified management by supporting integrated lifecycle operations across Cisco architectures, technologies, and networks. The portfolio of Cisco Prime for Service Providers solutions provides A-to-Z management for IP Next-Generation Networks, Mobility, Video, and Managed services. Cisco Prime Network Registrar is a product of the Prime portfolio.

Cisco Prime Network Registrar is comprised of these components:

- An IP address management application
- A Domain Name System (DNS) protocol service
- A Caching DNS service
- A Dynamic Host Configuration Protocol (DHCP) service.

Cisco offers these components as individually licensable applications or in a mix of suites.

Cisco Prime Network Registrar provides the tools to configure and control the servers necessary to manage your IP address space.

Before you Begin

Before installing Cisco Prime Network Registrar 8.1.1, review the system requirements and licensing in the *Cisco Prime Network Registrar 8.1 Installation Guide*.

Note If you are migrating to Cisco Prime Network Registrar 8.1.1 from an earlier version of Cisco Prime Network Registrar, you must review the release notes for the releases that occurred in between, to fully understand all the changes.

The Cisco Prime Network Registrar 8.1.1 kit contains the following files and directories:

- Solaris—Solaris 10 installation kit
- Linux5—Red Hat Linux ES 5.x or 6.x installation kit
- Windows—Windows Server 2008 R2 installation kit
- Docs—Product documentation in the PDF format

Interoperability

Cisco Prime Network Registrar 8.1.1 uses individual component licenses first introduced for version 8.0. Licenses issued for 8.0 or 8.1 are also valid for 8.1.1. The component licenses allow users to purchase and install Dynamic Host Configuration Protocol services (DHCP), and Domain Name System services (DNS) individually, or as a suite. When purchasing the full complement of Cisco Prime Network Registrar components, customers will receive a separate license package for Cisco Prime Network Registrar DHCP and DNS components.

To install and manage DHCP, DNS, and Caching DNS licenses customers must establish a Regional server. The Regional server is used to install, count, and manage licensing for these components.

For common features, Cisco Prime Network Registrar 8.1.1 is interoperable with 8.0 and later releases. External SDK clients using version 8.0 or later can be used to connect to 8.1.1 regional or local clusters. However, to make full use of new features in the later releases, it is recommended that the regional server and any external SDK clients be upgraded to use the new version. External SDK clients should be recompiled with the new kit whenever an updated SDK kit is deployed. Synchronizing operations between 8.1.1 and pre-8.1.1 local clusters should also be done from an 8.1.1 regional or the 8.1.1 local cluster.

Cisco Prime Network Registrar 8.1.1 protocol servers interoperate with versions 7.0 through 8.1.1. Cisco Prime Network Registrar 8.1.1 will not support interoperability with the versions before 7.0.x.

- Cisco Prime Network Registrar 8.1.1 DHCPv4 failover servers interoperate with Cisco Network Registrar 7.0 through 8.1.1 failover servers.
- By the nature of the EDNS0 protocol, Cisco Prime Network Registrar 8.1.1 DNS servers interoperate with earlier versions of Cisco Prime Network Registrar DNS (and 3rd party DNS vendors). EDNS0 defines the interoperability with DNS servers that do not support EDNS0; Cisco Prime Network Registrar 8.1.1 DNS adhere to the RFC and consequently interoperate with earlier versions of Cisco Prime Network Registrar.
- Cisco Prime Network Registrar 8.1.1 DDNSv6 interoperates 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).
- The HA protocol version has been updated in Cisco Prime Network Registrar and communications with versions before 8.0 is not supported.

Note Interoperability applies only if the features are supported in both versions involved. You may be not be able to synchronize configurations with clusters running older clusters if the feature is not supported in the older cluster.

Issues Resolved and Enhancements Added in CPNR 8.1.1

This section describes the most important changes made in the Cisco Prime Network Registrar 8.1.1.

- Issues Resolved in Release 8.1.1, page 3
- Enhancement Features Added in Release 8.1.1, page 4

Issues Resolved in Release 8.1.1

Table 1 lists the issues resolved in the Cisco Prime Network Registrar 8.1.1 release.

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

Table 1 Issues Resolved in Cisco Prime Network Registrar 8.1.1 Release

Bug ID	Description
CSCua29264	Active/Bulk Lease query with extensions can cause out of memory issues
CSCtz26459	Privacy protection causes DHCP server performance issues
CSCty04204	Lease expiration, binding-end-time change to forever with privacy protection

Table 1 Issues Resolved in Cisco Prime Network Registrar 8.1.1 Release (continued)

Bug ID	Description
CSCty86236	Potential problem in semaphore function
CSCty92063	Stack Trace on Regional when Viewing Replica Class List for some classes
CSCtz05838	No sync icon for reverse zone on adding host from hosts page in fwd zone
CSCtz07879	DHCP server may log large values for response latency
CSCtz18948	Issues with handling of deleted RR's across sessions in Web UI
CSCtz26404	DNS HA may not sync all zones or become unresponsive
CSCtz47216	Possible concurrency issue due to DHCPv6 Prefix Stability
CSCtz53134	Failover sync may report ConsistencyDetail issues with dhcp-listeners
CSCtz54672	Existing Host or RR error messages may be misleading
CSCtz54876	Host configuration allows/reflects invalid RR data
CSCtz81330	DHCPv6 lease query by client-id can crash server
CSCua09838	Local cluster registration should edit pre-existing regional object
CSCua14346	Incorrect server response on Zone transfer request for nonexistant zone
CSCua24052	cnr_tactool appears to hang looking for DHCP Extensions on Linux OS
CSCua25205	Retrieving a list of lists may result in a memory leak
CSCua34725	CDNS does not honor forwarders or exceptions for RFC1918 and special zones
CSCua73657	DHCPv6 defer-lease-extensions may result in very short lifetimes

Enhancement Features Added in Release 8.1.1

Table 2 lists the enhancement features added in the Cisco Prime Network Registrar 8.1.1 release. Click on the bug ID to view the bug details. This information is displayed in the Bug Toolkit.

Table 2 Enhancement Features Added in Cisco Prime Network Registrar 8.1.1 Release

Bug ID	Description
CSCtz67163	Ignore A Queries from IPv6 clients
CSCua07685	Ignore AAAA queries from IPv4 clients
CSCua68710	Update to OpenSSL 1.0.1
CSCua68760	CDNS update to use the latest 3rd party sources
CSCua79322	All domains ending in .arpa should be recognized as reverse zones
CSCua88711	Support DHCPv6 Prefix Exclude Option (RFC 6603)

Limitations and Restrictions

This section describes limitations and restrictions you might encounter using Cisco Prime Network Registrar 8.1.1.

- 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.

- Some distributions of Red Hat provide incompatible versions of OpenLDAP libraries. If the expected version of the libraries does not exist, the DHCP server is unable to start.

  To know the required version of the OpenLDAP library, run:

  `ldd /opt/nwreg2/local/bin/dhcp`

  To determine whether the DHCP server is failing to start:

  – Review the logs/agent_server_1_log file. If it shows frequent "`... 08012 server agent loading 'dhcp' ...`" messages and there are no name_dhcp_1_log files (or new entries in the log file), then there could be an OpenLDAP version mismatch.

  – Enter the following commands:

  ```
  bash

  export ld_library_path=/opt/nwreg2/local/lib

  /opt/nwreg2/local/bin/dhcp -v
  ```

  If the **`dhcp -v`** command displays a message that libraries (ldap and lber) cannot be found, then you have a Red Hat release with different LDAP libraries.

  There are two workarounds for this issue:

  – If the DHCP server is not needed in your environment, you should disable the DHCP server from starting. To do this, use the **`nrcmd dhcp disable start-on-reboot`** command, and restart Cisco Prime Network Registrar.

  – If the DHCP server is needed, create symbolic links to the OpenLDAP libraries available on your system. For example:

  ```
  ln -s /lib/libldap_r-2.4.so.2.5.6 /lib/libldap_r-2.3.so.0

  ln -s /lib/liblber-2.4.so.2.5.6 /lib/liblber-2.3.so.0
  ```

  Depending on the Red Hat version, you must replace the first file path in the example, with the proper version for the libraries.

  `ldd /opt/nwreg2/local/bin/dhcp` shows the version that DHCP expects (these are the second file path in the above **`ln`** commands):

libldap_r-2.3.so.0 => /lib/libldap_r-2.3.so.0 (0x00a81000)

liblber-2.3.so.0 => /lib/liblber-2.3.so.0 (0x04e65000)

Defects

For the complete list of bugs and enhancements for this release, see the cnr_8_1_1-buglist.pdf and the cnr_8_1_1-enhancement_list.pdf files available at the product download site. Refer to this list especially for information about fixes to customer-reported issues.

Product Documentation

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

You can view the marketing and user documents for Cisco Prime Network Registrar 8.1 at: http://www.cisco.com/en/US/products/ps11808/tsd_products_support_series_home.html.

The following document lists the documents available for Cisco Prime Network Registrar 8.1: http://www.cisco.com/en/US/docs/net_mgmt/prime/network_registrar/8.1/doc_overview/guide/CNR81DocGuide.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, at:

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

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