



Cisco Prime Network Registrar 8.1.3 Release Notes

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These release notes provide an overview of the release and describe how to access bugs for Cisco Prime Network Registrar 8.1.3.



Note

You can access the most current Cisco Prime Network Registrar documentation, including these release notes, online at

http://www.cisco.com/en/US/products/ps11808/tsd_products_support_series_home.html.

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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.

Before you Begin

Before installing Cisco Prime Network Registrar 8.1.3, 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 8.1.3 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.

Before Cisco Prime Network Registrar 8.0, Cisco Network Registrar was licensed as a single system with a single license type called ip-node. With the introduction of Cisco Prime Network Registrar 8.0 and later releases, the licensing is done according to the services that you require. Cisco Prime Network Registrar 8.0 and later releases provide separate licenses for Authoritative DNS, Caching DNS, DHCP, and IPAM services or for combinations of these services.

**Note**

Licenses for Cisco Network Registrar 6.x and 7.x are not valid for Cisco Prime Network Registrar 8.x.

Cisco Prime Network Registrar DHCP, Authoritative DNS, and Caching DNS components are licensed and managed from the Regional server. All services in the local clusters are licensed through the regional cluster. Only a regional install asks for a license file, and only the regional server accepts new license files. Then the regional server can authorize individual local clusters based on available licenses.

Cisco Prime Network Registrar IPAM is licensed separately from Cisco Prime Network Registrar DHCP, DNS, and Caching DNS. When installing IPAM you will be asked to install as a separate process using a separate license key. To receive the IPAM license, you must purchase Cisco Prime Network Registrar IPAM either individually or as part of a Cisco Prime Network Registrar suite.

For more details on the Licensing, see the “License Files” section in the Overview chapter of the *Installation Guide for Cisco Prime Network Registrar 8.x*.

The Cisco Prime Network Registrar 8.1.3 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

Market Segment Specific Licensing

Cisco Prime Network Registrar introduced separate licenses for components (System, DHCP, DNS, and CDNS) in Release 8.0. For information on the Cisco Prime Network Registrar component based license set, see the License Files section of *Cisco Prime Network Registrar Installation Guide*.

From releases 8.1.2 and 8.1.3, Cisco Prime Network Registrar license types are offered specific to market segments. Market specific licensing generates license keys for use by market segments, that is, Service Provider, Smart Grid, and so on. Cisco Prime Network Registrar features are enabled based on the market segment specific license you choose. For example, the PNR license offers features designed for the Service Provider market segment whereas the PNR-SG license offers features designed for the Smart Grid market segment.

Cisco Prime Network Registrar currently offers the following two sets of market segment based licenses:

- PNR
- PNR-SG



Note

If the licenses for both market segments are installed, then only the PNR license will be active.

The regional server which uses the PNR-SG license can be converted to PNR by installing the PNR license. Local cluster licenses will be converted automatically at the next compliance check, or can be manually updated by resynchronizing the local cluster.

For a given market segment license, only the counts from corresponding market segment license will apply. For example, if the PNR count license is applied when the PNR-SG base license is active, the Right to Use count will not be updated. If the PNR-SG count license is applied when the PNR base license is active, the Right to Use count will not be updated.

PNR Licenses

The PNR license provides all the features available for the Cisco Prime Network Registrar release you install. If you are using the license set for releases before 8.1.2 and 8.1.3, it means you are using the PNR license.

PNR-SG Licenses

The PNR-SG license disables the following PNR features which have been identified as not necessary for Smart Grid implementations:

- Tenants
- External Authentication

The DHCP service PNR-SG license offers you the PNR features with the exception of:

- Extensions
- Lightweight Directory Access Protocol (LDAP)
- TCP Listeners (client notification)
- Trivial File Transfer Protocol (TFTP)
- Router Interface Configuration (RIC)
- Virtual Private Networks (VPNs)—(Enabled in Cisco Prime Network Registrar version 8.1.3)
- Regional lease history and subnet utilization



Note

Before installing Cisco Prime Network Registrar 8.1.3, review the system requirements and licensing in the *Cisco Prime Network Registrar 8.1 Installation Guide*.

Interoperability

Cisco Prime Network Registrar 8.1.3 uses individual component licenses first introduced for version 8.0. Licenses issued for 8.0 or 8.1 or 8.1.1 or 8.1.2 are also valid for 8.1.3. 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 8.1.3 is interoperable with 8.0 and later releases. External SDK clients using version 8.0 or later can be used to connect to 8.1.3 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 8.1.3 and pre-8.1.3 local clusters should also be done from an 8.1.3 regional or the 8.1.3 local cluster.

Cisco Prime Network Registrar 8.1.3 protocol servers interoperate with versions 7.0 through 8.1.2. Cisco Prime Network Registrar 8.1.3 will not support interoperability with the versions before 7.0.x.

- Cisco Prime Network Registrar 8.1.3 DHCPv4 failover servers interoperate with Cisco Network Registrar 7.0 through 8.1.3 failover servers.
- By the nature of the EDNS0 protocol, Cisco Prime Network Registrar 8.1.3 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 8.1.3 DNS adhere to the RFC and consequently interoperate with earlier versions of Cisco Prime Network Registrar.
- Cisco Prime Network Registrar 8.1.3 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 not be able to synchronize configurations with clusters running older clusters if the feature is not supported in the older cluster.

Limitations and Restrictions

This section describes limitations and restrictions you might encounter using Cisco Prime Network Registrar 8.1.3.

- 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.

Cisco Prime Network Registrar Bugs

For more information on a specific bug or to search all bugs in a particular Cisco Prime Network Registrar release, see [Using the Bug Toolkit, page 6](#).

This section contains the following information:

- [Resolved Bugs, page 6](#)
- [Enhancement Features Added in Release 8.1.3, page 6](#)
- [Using the Bug Toolkit, page 6](#)

Resolved Bugs

[Table 1](#) lists the issues resolved in the Cisco Prime Network Registrar 8.1.3 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 8.1.3 Release

Bug ID	Description
CSCuf90124	DNS delete may not happen if load-balancing is enabled on failover
CSCue92933	Deprecate subnet utilization polling attributes on failover pair
CSCue87704	Deprecate poll-lease-hist attributes from failover-pair

For the complete list of bugs for this release, see the [cpnr_8_1_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 8.1.3

For the list of enhancement features added for this release, see the [cpnr_8_1_3-enhancement_list.pdf](#) file available at the product download site. Refer to this list especially for information about fixes to customer-reported issues.

Using the Bug Toolkit

This section explains how to use the Bug Toolkit to search for a specific bug or to search for all bugs in a release.

Step 1 Go to <http://tools.cisco.com/Support/BugToolKit>.

Step 2 At the Log In screen, enter your registered Cisco.com username and password; then, click **Log In**. The Bug Toolkit page opens.



Note If you do not have a Cisco.com username and password, you can register for them at <http://tools.cisco.com/RPF/register/register.do>.

Step 3 To search for a specific bug, click the **Search Bugs** tab, enter the bug ID in the Search for Bug ID field, and click **Go**.

Step 4 To search for bugs in the current release, click the **Search Bugs** tab and specify the following criteria:

- Select Product Category—**Cloud and Systems Management**.
- Select Products—**Cisco Network Registrar**.

- Software Version—8.1.3.
- Search for Keyword(s)—Separate search phrases with boolean expressions (AND, NOT, OR) to search within the bug title and details.
- Advanced Options—You can either perform a search using the default search criteria or define custom criteria for an advanced search. To customize the advanced search, click **Use custom settings for severity, status, and others** and specify the following information:
 - Severity—Choose the severity level.
 - Status—Choose **Terminated**, **Open**, or **Fixed**.
 Choose **Terminated** to view terminated bugs. To filter terminated bugs, uncheck the Terminated check box and select the appropriate suboption (Closed, Junked, or Unreproducible) that appears below the Terminated check box. Select multiple options as required.
 Choose **Open** to view all open bugs. To filter the open bugs, uncheck the Open check box and select the appropriate suboptions that appear below the Open check box. For example, if you want to view only new bugs in Prime Optical 9.5, choose only **New**.
 Choose **Fixed** to view fixed bugs. To filter fixed bugs, uncheck the Fixed check box and select the appropriate suboption (Resolved or Verified) that appears below the Fixed check box.
 - Advanced—Check the **Show only bugs containing bug details** check box to view only those bugs that contain detailed information, such as symptoms and workarounds.
 - Modified Date—Choose this option to filter bugs based on the date when the bugs were last modified.
 - Results Displayed Per Page—Specify the number of bugs to display per page.

Step 5 Click **Search**. The Bug Toolkit displays the list of bugs based on the specified search criteria.



Tip To export the results to a spreadsheet, click the **Export All to Spreadsheet** link.

Important Notes

This section contains important information related to this software release that was unavailable when the user documentation was completed. This section describes:

- [Moving a Regional Cluster to a New Machine, page 7](#)
- [Troubleshooting Local Cluster Licensing Issues, page 8](#)
- [Deprecated Attributes for Failover Pair, page 9](#)
- [Upgrading a DHCP Failover Pair, page 9](#)

Moving a Regional Cluster to a New Machine

License management is done from the regional cluster when Cisco Prime Network Registrar is installed. The regional server is installed first and all licenses are loaded in the regional server. When the local cluster is installed, it registers with the regional server to obtain its license.

When you want to move a regional cluster to a new machine, you need to back up the data on the old regional cluster and copy the data to the same location on the new machine.

**Note**

When the regional server goes down or is taken out of service, the local cluster is not aware of this action. If the outage lasts for less than 24 hours it results in no impact on the functioning of the local clusters. However, if the regional cluster is not restored for more than 24 hours, the local cluster will get warning messages that the local cluster is not properly licensed (in the web UI, CLI, or SDK). This does not impact the operation of the local clusters and the local clusters continue to work and service requests.

To move an existing Cisco Prime Network Registrar installation to a new machine:

Step 1 Stop the server agent on the old regional server:

- Windows:
net stop nwregregion
- Solaris and Linux:
/etc/init.d/nwregregion stop

Step 2 Zip up the data directory on the old regional server.

Step 3 Copy the zip file over to the same location on the new server.

Step 4 Install Cisco Prime Network Registrar (regional cluster) on the new server. For more information, see Installation and Upgrade Procedure section of the *Cisco Prime Network Registrar 8.1 Installation Guide*.

The installation will detect an upgrade and will do so based on the copied data. This procedure preserves your original data from the old regional server.

**Note**

When you install Cisco Prime Network Registrar on the new machine, you must choose the data directory on which you have copied the data from the old regional server.

Step 5 Start the Cisco Prime Network Registrar web UI or CLI. For more information, see Starting Cisco Prime Network Registrar section of the *Cisco Prime Network Registrar 8.1 Installation Guide*.

Step 6 Log in as superuser to the CLI for the new regional cluster.

Step 7 To list the local clusters:

```
nrcmd-R>cluster listnames
```

Step 8 To synchronize the data as well as the license information:

```
nrcmd-R>cluster <name of local cluster> sync
```

Troubleshooting Local Cluster Licensing Issues

If your regional cluster and local cluster are located in isolated networks, are separated by a firewall, or the time skew between the regional and local clusters is more than five minutes, then the local cluster may be unable to register with the regional server. The firewall may block the return connection used to validate the local cluster admin credentials that are sent from the local cluster to the regional cluster.

To register a local cluster with the regional cluster:

-
- Step 1** Install Cisco Prime Network Registrar (local cluster) on the server and create the admin user for the local cluster. For more information, see Installation and Upgrade Procedure section of the *Cisco Prime Network Registrar 8.1 Installation Guide*.
- When you install Cisco Prime Network Registrar on the local cluster, you can skip the registration of the local cluster with the regional cluster.
- Step 2** Log into the regional cluster, and add the new local cluster to the regional cluster with the admin credentials. For more information, see Adding Local Clusters section of the *Cisco Prime Network Registrar 8.1 User Guide*.
- Step 3** To synchronize the data as well as the license information, click the Resynchronize icon next to the cluster name on the List/Add.
-

Deprecated Attributes for Failover Pair

In Cisco Prime Network Registrar 8.1 or earlier, you can configure automatic polling for subnet utilization and lease history on a regional cluster at the failover pair, cluster, and CCM server. In Cisco Prime Network Registrar 8.1.3, the polling attributes can be set only at the cluster and CCM server.

The failover pair attributes related to lease history polling that are deprecated (**CSCue87704**) are as follows:

- poll-lease-hist-interval
- poll-lease-hist-retry
- poll-lease-hist-server-first
- poll-lease-hist-offset

The failover pair attributes related to subnet utilization polling that are deprecated (**CSCue92933**) are as follows:

- poll-subnet-util-interval
- poll-subnet-util-retry
- poll-subnet-util-server-first
- poll-subnet-util-offset

Upgrading a DHCP Failover Pair

In Cisco Prime Network Registrar 8.1 or earlier, when load balancing is enabled on the DHCP failover pair, the records created by dynamic DNS updates from DHCP server do not get deleted from the DNS server even after the lease expires (**CSCuf90124**).

In the current release, the DHCP failover pair performance is enhanced and the DNS records are deleted when the lease expires. You must upgrade both the main and the backup servers in the same maintenance window to enable this feature. We recommend upgrading the DHCP backup server first and then the DHCP main server.

Related Documentation

See [Cisco Prime Network Registrar Documentation Overview](#) for a list of Cisco Prime Network Registrar 8.1.3 guides.

Accessibility Features in Cisco Prime Network Registrar 8.1.3

All product documents are accessible except for images, graphics, and some charts. If you would like to receive the product documentation in audio format, braille, or large print, contact accessibility@cisco.com.

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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This document is to be used in conjunction with the documents listed in the “[Related Documentation](#)” section.

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