



Cisco Prime Network Registrar 8.2 Release Notes

November 21, 2013

These release notes provide an overview of the new and changed features in Cisco Prime Network Registrar 8.2, and describe how to access information about the known problems in Cisco Prime Network Registrar 8.2.



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

Contents

These release notes contain the following sections:

- [Introduction, page 2](#)
- [Before you Begin, page 2](#)
- [Market Segment Specific Licensing, page 3](#)
- [Interoperability, page 4](#)
- [New Features and Enhancements, page 4](#)
- [Limitations and Restrictions, page 9](#)
- [Cisco Prime Network Registrar Bugs, page 10](#)
- [Command Line Interface Enhancements, page 14](#)
- [Related Documentation, page 22](#)
- [Accessibility Features in Cisco Prime Network Registrar 8.2, page 23](#)
- [Obtaining Documentation and Submitting a Service Request, page 23](#)



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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:

- A Domain Name System (DNS) protocol service
- A Caching DNS service
- A Dynamic Host Configuration Protocol (DHCP) service.

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

In addition, for IP address management application Cisco Prime Network Registrar IPAM can be deployed as a standalone application or can be integrated with the DHCP and DNS server components of Cisco Prime Network Registrar.

Before you Begin

Before you install Cisco Prime Network Registrar 8.2, review the system requirements and licensing information available in the *Cisco Prime Network Registrar 8.2 Installation Guide*.

**Note**

If you are migrating to Cisco Prime Network Registrar 8.2 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.

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 requires 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.

**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 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 about Licensing, see the License Files section in the Overview chapter of the *Cisco Prime Network Registrar 8.2 Installation Guide*.

The Cisco Prime Network Registrar 8.2 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 the *Cisco Prime Network Registrar 8.2 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 others. 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 your license set was issued for a release before 8.1.2, it is a PNR license.

PNR-SG Licenses

The PNR-SG license offers the following PNR features with the exception of (identified as not necessary for Smart Grid implementations):

- Tenants
- External Authentication
- Extensions
- Lightweight Directory Access Protocol (LDAP)
- TCP Listeners (client notification)
- Trivial File Transfer Protocol (TFTP)
- Router Interface Configuration (RIC)
- Regional lease history and subnet utilization

**Note**

Before you install Cisco Prime Network Registrar 8.2, review the system requirements and licensing in the *Cisco Prime Network Registrar 8.2 Installation Guide*.

Interoperability

Cisco Prime Network Registrar 8.2 uses individual component licenses. This allows users to purchase and install DHCP services, DNS services and IPAM services individually, or as a suite.

When you purchase the full set of Cisco Prime Network Registrar components, you receive a license package for IPAM and a separate license for Cisco Prime Network Registrar DHCP and DNS components.

To install and manage DHCP, DNS, and Caching DNS licenses, you must establish a regional server. The regional server is used to install, count, and manage licensing for these components. The Cisco Prime Network Registrar IPAM license is installed separately and does not use the regional server.

The synchronization between 8.2 and pre-8.2 local clusters must be done from an 8.2 regional cluster. Cisco Prime Network Registrar 8.2 protocol servers interoperate with versions 8.1.3 and 7.2.3.2.

- Cisco Prime Network Registrar 8.2 DHCPv4 failover servers do not interoperate with Cisco Network Registrar 8.0, 8.1, 7.2, 7.1.x, 7.0.x, and 6.3.x failover servers.

**Caution**

The DHCP failover does not interoperate with Cisco Prime Network Registrar 8.1 or earlier DHCP failover. You must upgrade both the main and backup servers in the same maintenance window.

- By the nature of the EDNS0 protocol, Cisco Prime Network Registrar 8.2 DNS servers interoperate with earlier versions of Cisco Prime Network Registrar DNS (and third party DNS vendors). EDNS0 defines the interoperability with DNS servers that do not support EDNS0; Cisco Prime Network Registrar 8.2 DNS adheres to the RFC and consequently interoperate with earlier versions of Cisco Prime Network Registrar.
- Cisco Prime Network Registrar 8.2 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 8.0 and communications with earlier versions is not supported.
- Cisco Prime Network Registrar 8.2 does not interoperate with Cisco Prime Network Registrar IPAM 8.1.1 or 8.1.2. An updated version of Cisco Prime Network Registrar IPAM is required to interoperate with Cisco Prime Network Registrar 8.2.

New Features and Enhancements

This section describes the features added in Cisco Prime Network Registrar 8.2.

- [Caching DNS Redirect](#)
- [DHCPv6 Dynamic Lease Notification](#)
- [DHCP Failover \(DHCPv4 and DHCPv6\)](#)
- [DHCID RR Support](#)

- [DNS Zone Views](#)
- [DNS DB Restructure](#)
- [Web User Interface Enhancements](#)
- [SNMP Server Configuration Database Deprecated](#)

Caching DNS Redirect

Cisco Prime Network Registrar supports DNS domain and non-existing domain (NXDOMAIN) redirect that provide you an option to override the caching DNS server response to A or AAAA resource record queries. DNS domain redirect enables Internet Service Providers (ISP), enterprises, or organizations to redirect the resolution of DNS name away from known bad domains or non-existing domains (NXDOMAIN) for a specified ACL and/or a domain list.

For more information, see the Managing Caching DNS Server Properties chapter of *Cisco Prime Network Registrar 8.2 User Guide*.

DHCPv6 Dynamic Lease Notification

The DHCPv6 dynamic lease notification allows an external client application to receive updates about the IPv6 binding activity of the DHCP server. This can be used to update an external database with lease activity or trigger actions, such as lawful intercept, when specific lease activity takes place. It extends the DHCP server to support additional capabilities and includes a sample client (Java based), which demonstrates the features by storing the lease state information into a MySQL database. The dynamic lease notification requests are done using Active leasequery and Active leasequery with catchup. For more information, see the Dynamic Lease Notification section in the Managing Leases chapter of *Cisco Prime Network Registrar 8.2 User Guide*.

DHCID RR Support

In Cisco Prime Network Registrar 8.1 or earlier, DHCPv4 uses TXT RRs and DHCPv6 uses DHCID RRs to make the DNS updates. To avoid conflicts in the client-requested names the dual-stack clients cannot use a single forward FQDN. These conflicts are primarily applied to the client-requested names and not to the generated names, which are generally unique. To avoid these conflicts, different zones were used for the DHCPv4 and DHCPv6 names.

In Cisco Prime Network Registrar 8.2 and later, DHCPv4 uses TXT RR or DHCID RR and DHCPv6 uses DHCID RR for DNS updates. The default value of DHCP server-wide settings attribute *dns-client-identity* is *txt* and the attribute is not configured for individual DNS update config objects.

DHCP Failover (DHCPv4 and DHCPv6)

Cisco Prime Network Registrar 8.2 supports DHCPv6 failover. The DHCPv6 failover is built on the same basic failover pair configuration that is used to configure the DHCPv4 failover. The DHCP failover protocol is TCP-based and supports both DHCPv4 and DHCPv6 (earlier to 8.2, the protocol was UDP based and only supported DHCPv4). The DHCP failover supports the following features:

- DHCPv4 addresses
- DHCPv6 addresses (non-temporary and temporary)
- DHCPv6 prefix delegation

There are several significant changes with respect to DHCP failover support in Cisco Prime Network Registrar 8.2, which might have an impact on the upgrade procedures.

- Only simple failover configuration is operational and supported (symmetrical and back office are not supported). There is only one failover partner for any Cisco Prime Network Registrar 8.2 or later and the failover partner is the failover partner for both DHCPv4 and DHCPv6 failover.
- The DHCP failover does not interoperate with Cisco Prime Network Registrar 8.1 or earlier DHCP failover. You must upgrade both the main and backup servers in the same maintenance window.
- If you use DHCPv4 failover, it will also apply to DHCPv6 prefixes.
- Since DHCPv6 failover is supported in Cisco Prime Network Registrar 8.2, release 8.1 and earlier configurations using failover alternatives require special upgrade steps.
- The memory requirements and the footprint of the DHCP server have changed. Review the memory usage of DHCP servers before you upgrade, to ensure that the servers are running within the limits.

Depending on your setup, multiple upgrade considerations may apply to your configuration. Before you upgrade to Cisco Prime Network Registrar 8.2, you must review the Upgrade Considerations for DHCP Failover chapter in the *Cisco Prime Network Registrar 8.2 Installation Guide*.

The following is a high level summary of the DHCP failover behavior changes in this release:

- **Safe Period**—The *use-safe-period* attribute is enabled by default for the failover pair and the default *safe period* is now four hours. This ensures that if the failover partner is in COMMUNICATIONS-INTERRUPTED state for four hours, it will enter PARTNER-DOWN state automatically after the safe period elapses.

If the failover safe period length is more than the length of the MCLT and the failover server enters into PARTNER-DOWN state because of the safe-period, the server can start allocating its partner other-available leases to DHCP clients immediately. The advantage of this is that the server has additional leases to allocate. In case of network communications failure, the operator intervention is required within the safe period. Either the failover server needs to be taken offline or the *use-safe-period* attribute needs to be disabled on both the servers before the safe period elapses. Without operator intervention both failover servers will transition to PARTNER-DOWN state and start allocating its partner addresses to new DHCP clients.

- **DHCP Failover Pair Communication over TCP**—Starting with Cisco Prime Network Registrar 8.2, TCP is used for DHCP failover pair communication. You may need to adjust the firewall rules, if applicable, to allow TCP-based traffic on port 647 (default port) between the servers.
- **Lease History**—The detailed lease history feature is no longer supported starting from Cisco Prime Network Registrar 8.2. The DHCP server no longer generates detailed lease history records and the regional cluster does not collect detailed lease history from 8.2 clusters. The regional cluster supports collection of detailed lease history from Cisco Prime Network Registrar 8.1 or earlier.
- **Backup Percentage**—The default value for the failover pair *backup-pct* is 50%.
- **Load Balancing**—Cisco Prime Network Registrar 8.2 supports more responsive load balancing. While the failover partners periodically balance the available leases on the backup failover pair or do so shortly after a scope or prefix is detected to be out of leases, enabling this feature results in more dynamic balancing.
- **DHCPv6 Revoked Lease State**—The DHCPv6 revoked lease state is deprecated and is replaced with the revoked flag on the lease (flags attribute).
- **Moving Servers into PARTNER-DOWN State**—In Cisco Prime Network Registrar 8.2, if you use **setPartnerDown** in the CLI and specify the date and time when the partner was last known to be operational, then the failover server calculates the MCLT from the time specified in the **setPartnerDown** command.

If the date and time is not specified for the **setPartnerDown** command, then the failover server calculates the MCLT from the time the failover server moved to the COMMUNICATIONS-INTERRUPTED state. In case of network communications failure, it is important that you specify the actual time the partner was last known to be operational in the setPartnerDown command.

- **IPv6 Lease States**—The following new IPv6 states are added:
 - pending-delete
 - other-available
 - pending-available
- **Network Match List**—In Cisco Prime Network Registrar 8.2, the *network-match-list* attribute is deprecated for the 8.2 clusters. This attribute is still available in the Expert mode for pre-8.2 clusters only.
- **Extension data dictionary**—The *failover-role* and *failover-state* extension data dictionary items are available in the request and response dictionary.
- **iphist Utility**—The command options for iphist utility are modified. The options `-4`, `-b`, `-m`, and `-V` are deprecated and the following new command options are added:
 - `-s`—Restricts the leases to the self or partner.
 - `-i`—Displays output for delegated prefix that includes specified IPv6 address (only with `-6`).
- **SNMP Traps**—The following new SNMP traps are added:
 - **Address6ConflictEvent (ciscoNetRegDhcpv6AddressConflict)**—An event representing the DHCP failover IPv6 address conflict event.
 - **Prefix6ConflictEvent (ciscoNetRegDhcpv6PrefixConflict)**—An event representing the DHCP failover IPv6 prefix delegation conflict event.

The following SNMP traps are modified:

- **FailoverConfigErrEvent (ciscoNetRegFailoverConfigMismatch)**—A new InetAddressIPv6 object is added to identify the IPv6 address of the server.
- **OtherServerDownEvent (ciscoNetRegOtherServerNotResp)**—A new InetAddressIPv6 object is added to identify the IPv6 address of the server.
- **OtherServerUpEvent (ciscoNetRegOtherServerResp)**—A new InetAddressIPv6 object is added to identify the IPv6 address of the server.

DNS Zone Views

DNS Zone Views let you present alternate versions of zone data to different communities of clients using a single name server. For example, a DNS server for example.com could maintain two views of the zone, where the view of example.com that can be queried internally includes many hosts that do not exist in the external view. Each zone view is treated as an independent copy of the zone.

The DNS server, when answering queries on the zone, uses the match criteria defined in each view to determine the matching zone for the client. The query is answered based on the zone contents. In some cases, the zone contents may only vary slightly between views. For more information, see the Configuring DNS Views chapter of *Cisco Prime Network Registrar 8.2 User Guide*.

DNS DB Restructure

Cisco Prime Network Registrar 8.2 incorporates substantial changes to the DNS database. When you upgrade to Cisco Prime Network Registrar 8.2, the DNS authoritative database is replaced with three new databases. With this enhancement, Cisco Prime Network Registrar eases the server failure recovery, backup, and restore process. When you upgrade to Cisco Prime Network Registrar 8.2 from an earlier release, the DNS databases are restructured after the upgrade as follows:

- DNS resource record database and resource record index database are generated from the DNS authoritative zone database.
- DNS zone state database is generated from the information available in the DNS authoritative zone database and zone configuration.
- DNS authoritative zone database, checkpoint files, and DNS zone configuration database (configdb) are removed from the DNS data operational directory.



Note

When you upgrade from a pre-7.2 cluster to Cisco Prime Network Registrar 8.2, a platform-specific tool `cnr_mcdexport` is required. This tool can be downloaded from Cisco.com as an archive file. The archive contains a README file with specific instructions on the process to be followed.

Web User Interface Enhancements

Cisco Prime Network Registrar 8.2 supports a new user friendly web User Interface (web UI) that includes:

- **New Menu Structure**—The navigation menus are changed to align with the Cisco Prime product portfolio and the tasks are grouped under Design, Deploy, Operate, and Administration.
- **Navigation Pane and Edit Page**—The web UI provides a navigation pane on the left of the main pages. This navigation pane provides access to objects that are added as part of the various categories. You can click the object to edit the properties in the main page.
- **Quick View Icon**—Each object is displayed under a category in the Navigation pane, which is activated when you move the mouse pointer over the object. The Quick View icon expands to open a dialog box that displays the main details about the object, and provides links (if any) to perform the main actions associated with the object.
- **Global Search**—The Global Search widget in the web UI provides the option to search for keywords of type IP Address or DNS names.

SNMP Server Configuration Database Deprecated

The separate SNMP server configuration database is deprecated in Cisco Prime Network Registrar 8.2. The Cisco Prime Network Registrar SNMP server configuration information is now stored in the primary CCM configuration database with other Cisco Prime Network Registrar configuration data.

When you upgrade to Cisco Prime Network Registrar 8.2, the SNMP configuration database content is migrated to the main CCM configuration database. The upgrade process does not delete the standalone SNMP database. However, it remains in its earlier location (*install-path*/data/cnrsnmp on Solaris and Linux systems; *install-path*\data\cnrsnmp on Windows).

After the upgrade, you may choose to manually delete the SNMP database files, including:

On Windows:

- *install-path\data\cnrsnmp\ndb\class.db*
- *install-path\data\cnrsnmp\ndb\config.db*
- *install-path\data\cnrsnmp\ndb\index.db*
- *install-path\data\cnrsnmp\ndb\obj.db*

On Linux and Solaris:

- *install-path/data/cnrsnmp/ndb/class.db*
- *install-path/data/cnrsnmp/ndb/config.db*
- *install-path/data/cnrsnmp/ndb/index.db*
- *install-path/data/cnrsnmp/ndb/obj.db*

Deleting only these files preserves the SNMP configuration database change history (stored in *install-path/data/cnrsnmp/ndb/changelog.db* and *DB_CONFIG* files on Linux and Solaris, and in *install-path\data\cnrsnmp\ndb\changelog.db* and *DB_CONFIG* files on Windows) and the SNMP database operations log files stored in the *install-path/data/cnrsnmp/ndb/logs* directory (on Linux and Solaris) or *install-path\data\cnrsnmp\ndb\logs* directory (on Windows).

If the deprecated SNMP configuration database change history and SNMP configuration database operations log files are no longer required, they may also be deleted, either individually or by deleting the *install-path/data/cnrsnmp* directory (on Linux and Solaris) or the *install-path\data\cnrsnmp* directory (on Windows).

The SNMP server log file, which maintains a record of SNMP server operations, remains in its earlier storage location—*install-path/logs/cnrsnmp_log* (on Linux and Solaris) or *install-path\logs\cnrsnmp_log* (on Windows).

DNS ENUM Domains and Numbers

In this release, new web UI pages are added to simplify the setup and management of NAPTR electronic number (ENUM) zones, resource records, and the corresponding services that are available for the E.164 numbers. When an ENUM zone and the corresponding E.164 resource record are added in the new web UI, the corresponding forward zone and the respective NAPTR resource records get added automatically.

For more information, see the Managing DNS ENUM Domain section of the *Cisco Prime Network Registrar 8.2 User Guide*.

Limitations and Restrictions

This section describes limitations and restrictions you might encounter using Cisco Prime Network Registrar 8.2.

- 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 Search Tool, page 13](#).

This section contains the following information:

- [Resolved Bugs, page 10](#)
- [Enhancement Features, page 12](#)
- [Open Bugs, page 13](#)
- [Using the Bug Search Tool, page 13](#)

Resolved Bugs

[Table 1](#) lists the key issues resolved in the Cisco Prime Network Registrar 8.2 release.

Table 1 *Resolved Bugs in Cisco Prime Network Registrar 8.2*

Bug ID	Description
CSCti04897	CCM sync should exclude the mcd-major attribute
CSCtr12390	DNS may incorrectly log warning message about missing delegation records
CSCtr91150	Filtered Lease Cursors general, hasMoreElements(), first() issues
CSCts66710	Issues with Zone Sync icon and staged RR change detection
CSCtt22871	Installer should remove deprecated images if they exist
CSCtu10319	Scope re-subnetting causes failover sync failure
CSCtw54450	Input data truncate for sub option 241 '241 xx.xx.xx.227'
CSCtw81444	Cluster sync fails to unset tenant cluster
CSCtw81471	Core administrators cannot be viewed on a tenant cluster
CSCtx29629	Negative RR counter and RR counter mismatch between HA Main and Backup
CSCtx32582	Push button is not shown for prefix with pending changes

Table 1 **Resolved Bugs in Cisco Prime Network Registrar 8.2 (continued)**

Bug ID	Description
CSCtx46837	HA DNS pair becomes inconsistent after communication interruption
CSCtx53453	Manage server link not working if HADNS or Failover in interrupted state
CSCtx68316	Consistency in convert to MAC address validate-client-name-as-mac=true
CSCtx87702	DHCP Failover Sync may report failure when server reload required
CSCtx88072	Recreate scope without reload causes "302 Not Found"
CSCty04393	Incorrect client-domain-name not cleared after upgrade
CSCty09388	CNR Dashboard fails after upgrade from CNR 6.x
CSCty14517	DHCP reloads can cause the server to abort with ENOMEM
CSCty16726	DNS keeps restarting when it cannot start because of configuration error
CSCty34817	DHCP server may crash during server reload/stop if DLN active
CSCty47576	HA DNS Sync Report may unexpectedly change Host entries
CSCty57797	'Host list is empty' may be erroneously shown in Web GUI
CSCty86236	Potential problem in semaphore function
CSCtz03847	Changes in RR protection can create a protection mismatch between zones
CSCtz05838	No sync icon for reverse zone on adding host from hosts page in fwd zone
CSCtz18948	Issues with handling of deleted RR's across sessions in Web UI
CSCtz26459	Privacy protection causes DHCP server performance issues
CSCtz54672	Existing Host or RR error messages may be misleading
CSCtz54876	Host configuration allows/reflects invalid RR data
CSCtz63434	Issues in web UI for Host Zone selection with only one zone
CSCua02301	CPNR 8.1 User Guide and Cmd Line Ref not clear for CDNS addException
CSCua24052	cnr_tactool appears to hang looking for DHCP Extensions on Linux OS
CSCua29264	Active/Bulk Leasequery with extensions can cause out of memory issues
CSCuc52453	Inhibit-renews-at-reboot does not work for DHCPv6
CSCuc77137	nrcmd cannot import root zone in bind format
CSCuc93029	Secondary server sending AXFR request in busy loop on REFUSED Error code
CSCud09457	DHCP may offer leases that already expired
CSCud14765	Install does not properly create cluster object
CSCud31734	Documentation how to add multiple master-servers secondary zone via CLI
CSCud48842	Unable to add additional Cisco/CableLabs vendor options
CSCud51448	Solicit updates client last transaction time for existing leases
CSCue06509	Regional CCM can be slow when lease history trim in progress
CSCue09613	CCM address tree functions leak memory
CSCue26106	CCM leaks memory when running DHCP failover sync
CSCue48204	Need specific error message on Regional for the authentication problem
CSCue54167	Reconfigure-via-relay does not construct multi-hop relayed request

Table 1 *Resolved Bugs in Cisco Prime Network Registrar 8.2 (continued)*

Bug ID	Description
CSCue56020	Permissions for groups with multiple roles may be incomplete
CSCue71764	CCM DB deadlock error may trigger DB panic
CSCue77219	Client database could be corrupted
CSCue77485	Corrupted CCM DB OID can result in loss of data
CSCue97182	Policy's reverse-dnsupdate host name generator expression is never used
CSCue98885	Failover partners don't reintegrate right when failover turned back on
CSCug19298	Unconfiguring a lease while leasequery active on lease may crash server
CSCug19477	Regional lease history by IP6Address search fails to find lease
CSCug31656	Application upgrade on OVF inhibits autostart on reboot
CSCug49167	Updating CPNR 8.1.1 to CPNR 8.1.2.1 - unable to license/login to server
CSCug54801	CCM fails to handle double AX_ETIME failure in server communication
CSCug58066	Unnecessary error message during cnr_shadow_backup
CSCug97562	V6 Network cursor may trigger DB Panic
CSCuh36673	8.1.2 local cluster rejects license set by 8.1.1 regional server
CSCuh39913	leaseadmin utility limited to 2147483647 bytes files
CSCuh50732	IPv6 leasequery not working with Prefix stability
CSCui60240	Installation fails when space in installation path
CSCui63386	DNS may crash when receiving a truncated TCP response
CSCte68926	Value of total-rrs in name_dns_1_log file is 4294967295
CSCub97225	Allow locating active/historic PD lease by an address contained therein
CSCuc32354	Improve DHCP client cache handling

For the complete list of bugs for this release, see the `cpnr_8_2-buglist.pdf` file available at the product download site. See this list especially for information about fixes to customer-reported issues.

Enhancement Features

[Table 2](#) lists the key enhancement features added in the Cisco Prime Network Registrar 8.2 release.

Table 2 *Enhancement Features Added in Cisco Prime Network Registrar 8.2*

Bug ID	Description
CSCsi42339	Secondary zones should be able to be optimized for MS/HA multimaster
CSCty37076	Host entries shouldn't be allowed to be changed in HA Backup when NORMAL
CSCua62983	Ensure offered T1/T2 times don't exceed configured T1/T2 times
CSCud62992	Automatic configuration of Embedded Policy Options
CSCue45200	Push admins from regional should push associated groups and roles

Table 2 *Enhancement Features Added in Cisco Prime Network Registrar 8.2 (continued)*

Bug ID	Description
CSCue95969	Enhancement request for 1 Ipv6 leases per mac per Allocation Group
CSCsy10817	Enhance dhcp option-60 processing

For the complete list of enhancement features added in this release, see the [cprn_8_2-enhancements.pdf](#) file available at the product download site.

Open Bugs

[Table 3](#) lists the open issues in the Cisco Prime Network Registrar 8.2 release.

Table 3 *Open Bugs in Cisco Prime Network Registrar 8.2*

Bug ID	Description
CSCuj88660	DNS won't refresh the TTL of an expired A record on requery
CSCul47444	DNS HA main may stop communicating with its partner under load
CSCul47430	Large incremental zone transfers use a lot of memory
CSCul27705	BNDUPD6 is triggered when lease retention limits are applied

For the complete list of bugs for this release, see the [cprn_8_2-buglist.pdf](#) file available at the product download site. See this list especially for information about fixes to customer-reported issues.

Using the Bug Search Tool

Use the Bug Search tool to search for a specific bug or to search for all bugs in a release.

-
- Step 1** Go to <http://tools.cisco.com/bugsearch>.
- Step 2** At the Log In screen, enter your registered Cisco.com username and password; then, click **Log In**. The Bug Search 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, enter the bug ID in the Search For field and press **Return**.
- Step 4** To search for bugs in the current release:
- Click the **Search Bugs** tab and specify the following criteria:
 - In the Search For field, enter Prime Network Registrar 8.2 and press **Return**. (Leave the other fields empty.)
 - When the search results are displayed, use the filter tools to find the types of bugs you are looking for. You can search for bugs by status, severity, modified date, and so forth.



Tip

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

Command Line Interface Enhancements

The following commands were added and attributes modified or deprecated in the CLI (see the *Cisco Prime Network Registrar 8.2 CLI Reference Guide*).

New Commands

The following new commands were added to the CLI:

- **cdns-redirect** command (see the “[Caching DNS Redirect](#)” section)—Manages redirect rules.
- **dns-enum-config** command—Specifies the default DNS ENUM settings.
 - **dns-enum-config addService** *service*—Registers the set of ENUM services.
 - **dns-enum-config removeService** *service*—Removes the registered set of ENUM services.
 - **dns-enum-config set number-prefix**—Specifies the E.164 number prefix for local domains.
 - **dns-enum-config set top-level-domain**—Specifies the top-level domain to use when creating e164 zones.
 - **dns-enum-config set zone-template**—Specifies the default zone template to use when creating e164.arpa reverse zones.
- **dns-enum-domain** command (see the “[DNS ENUM Domains and Numbers](#)” section)—Controls and configures DNS ENUM domains.
 - **dns-enum-domain prefix create nameservers person**—Creates DNS ENUM domains.
 - **dns-enum-domain prefix set description**—Provides additional descriptive information.
 - **dns-enum-domain prefix set domain-prefix**—Specifies the E.164 number prefix for this domain.
 - **dns-enum-domain prefix set nameservers**—Lists the nameservers for this domain.
 - **dns-enum-domain prefix set person**—Identifies the mailbox of the person responsible for this domain.
 - **dns-enum-domain prefix set serial**—Sets the initial serial number for the domain.
 - **dns-enum-domain prefix set tenant-id**—Identifies the tenant owner of this domain.
 - **dns-enum-domain prefix set ttl**—Sets the time-to-live (ttl) value for the domain.
 - **dns-enum-domain prefix set view-id**—Specifies the view identifier for this domain.
 - **dns-enum-domain prefix set zone-template**—Specifies the zone template to use when creating the associated zone.
- **dns-enum-number** command (see the “[DNS ENUM Domains and Numbers](#)” section)—Controls and configures DNS ENUM numbers.
 - **dns-enum-number number create services**—Creates DNS ENUM numbers.
 - **dns-enum-number number set description**—Provides additional descriptive information.

- **dns-enum-number number set domain-prefix**—Specifies the E.164 number prefix for the parent domain.
- **dns-enum-number number set number**—Specifies the E.164 number for this entry.
- **dns-enum-number number set ported-nameserver**—Specifies the nameserver for a ported number that has been delegated.
- **dns-enum-number number set ported-number**—Indicates whether this number has been ported to or from another carrier.
- **dns-enum-number number set services**—Specifies the services for this number.
- **dns-enum-number number set tenant-id**—Identifies the tenant owner of this domain.
- **dns-enum-number number set view-id**—Specifies the view identifier for this domain.
- **dns-enum-number number set zone-template**—Specifies the zone template to use when creating the associated zone.
- **dns-view** or **view** command (see the “DNS Zone Views” section)—Controls and configures DNS views in the DNS Authoritative and Caching servers.
 - **view name set acl-match-clients**—Specifies the access control list that maps clients to this view based on the source address or TSIG key.
 - **view name set name**—Specifies the name of the view.
 - **view name set priority**—Specifies the view priority relative to other views.
 - **view name set tenant-id**—Identifies the tenant owner of the view.
 - **view name set view-id**—Defines a unique integer identifier for the view that is assigned by the CCM server.
- **session set current-view** command—Allows you to specify the current view.
- **zone name create from view-name**—Creates a copy of a zone in a different view.

New or Modified Attributes

New attributes were added to, or definitions modified for, the following commands:

- **cdns** command:
 - **cdns addexception domain [prime=on/off] [views=on/off] [address...]**—Specifies the resolution exception domains and the IP addresses of the associated servers.
- **dhcp** command:
 - **dhcp name set dns-client-identity**—Specifies the type of resource record (RR) the server uses to identify clients in DNS updates.
 - **dhcp setPartnerDown partner-server-name [date] (Used only for 8.1 or earlier clusters)**—Notifies the DHCP server that the safe failover partner servers is down.
 - **dhcp getScopeCount [vpn <name> | all]**—Displays the scopes, networks, and VPNs for the current VPN, all VPNs, or a specific VPN.
- **dhcp getStats** command:
 - **active-leasequeries**—Shows the number of ACTIVELEASEQUERY packets received.
 - **active-leasequery-data**—Shows the number of LEASEQUERY-DATA packets sent.
 - **active-leasequery-done**—Shows the number of LEASEQUERY-DONE packets sent.
 - **active-leasequery-replies**—Shows the number of LEASEQUERY-REPLY packets sent.

- **tcp-current-connections**—Shows the number of currently open TCP connections.
- **tcp-lq-status-catch-up-complete**—Shows the number of LEASEQUERY-DATA packets with a status code of CatchUpComplete.
- **tcp-lq-status-data-missing**—Shows the number of LEASEQUERY-REPLY packets with a status code of DataMissing.
- **tcp-total-connections**—Shows the number of TCP connections.
- **dhcp-dns-update** command:
 - **dhcp-dns-update** *name* **set dns-client-identity**—Specifies the type of resource record (RR) the server uses to identify clients in DNS updates.
 - **dhcp-dns-update** *name* **set v4-synthetic-name-generator**—Controls what the DHCP server appends to the synthetic name stem when synthesizing the fully-qualified domain name for a client.
 - **dhcp-dns-update** *name* **set view-id**—Identifies the view associated with the forward and reverse zones used for DNS update.
- **dhcp-listener** command:
 - **dhcp-listener** *name* **enable leasequery-send-all**—Specifies whether to send a message to active leasequery clients for every write to the DHCP lease state database.
 - **dhcp-listener** *name* **set leasequery-backlog-time**—Specifies the number of seconds of active leasequery updates that the DHCP server will hold in memory when a connection is blocked.
- **dns** command:
 - **dns set max-dns-requests**—Specifies the maximum number of dynamic update requests that will be buffered for processing.
 - **dns findRR [-zoneType forward|reverse]**—Returns RRs from only primary zones.
- **failover-pair** command:
 - **failover-pair** *name* **set backup-ip6address**—Specifies the IPv6 address to use for the failover communication at the backup server.
 - **failover-pair** *name* **set backup-pct**—Controls the percentage of available addresses that the main server sends to the backup server. Default value has been changed from 10 to 50%.
 - **failover-pair** *name* **set main-ip6address**—Specifies the IPv6 address to use for the failover communication at the main server.
 - **failover-pair** *name* **setPartnerDown** [*date*]—Notifies the DHCP server that the failover partner server is down.
- **failover-pair** *name* **getStatus** command:
 - **binding-acks-received-total**—Specifies the number of v4 binding acknowledgements (BNDACK) messages received.
 - **binding-acks-sent-total**—Specifies the number of v4 binding acknowledgements (BNDACK) messages sent.
 - **binding-updates-received**—Shows the number of v4 binding updates (BNDUPD) messages received. The *binding-update-received* attribute was renamed to *binding-updates-received*.
 - **binding-updates-received-total**—Specifies the number of v4 binding updates (BNDUPD) messages received.
 - **binding-updates-sent-total**—Specifies the number of v4 binding updates (BNDUPD) messages sent.

- **connection-end-time**—Specifies the time at which the most recent connection ended.
- **connection-start-time**—Specifies the time at which the most recent connection started.
- **current-binding-updates-in-flight**—Displays the current number of binding updates (both v4 and v6) that are currently in-flight (sent).
- **current-binding-updates-queued**—Displays the current number of binding updates (both v4 and v6) that are queued at present.
- **decaying-max-request-buffers-in-use**—Shows the maximum number of failover request buffers that have recently been in use.
- **failover-pair-name**—Identifies the name of the failover pair object used to manage this server.
- **ip6address**—Specifies the IPv6 address of the partner server.
- **last-binding-ack-received-time**—Displays the time the last v4 or v6 binding acknowledgement (whether NAKed or not) was received.
- **last-binding-ack-sent-time**—Displays the time the last v4 or v6 binding acknowledgement (whether NAKed or not) was sent.
- **last-binding-update-received-time**—Displays the time the last binding update (either v4 or v6) was received.
- **last-binding-update-sent-time**—Displays the time the last binding update (either v4 or v6) was sent.
- **maximum-binding-updates-in-flight**—Displays the maximum number of binding updates (both v4 and v6) that were in-flight (sent) at one time.
- **maximum-binding-updates-queued**—Displays the maximum number of binding updates (both v4 and v6) that were queued at one time.
- **other-server-down-time**—Specifies the time at which the partner server was considered to be really down.
- **our-ip6address**—Specifies the IPv6 address of our end of the connection.
- **request-buffers-allocated**—Shows the number of request buffers that the server has allocated.
- **request-buffers-in-use**—Displays the number of failover request buffers the DHCP server is using at the time the statistics are calculated.
- **v6-binding-acks-received**—Specifies the number of v6 binding acknowledgements (BNDACK6) messages received.
- **v6-binding-acks-received-total**—Specifies the number of v6 binding acknowledgements (BNDACK6) messages received.
- **v6-binding-acks-sent**—Specifies the number of v6 binding acknowledgements (BNDACK6) messages sent.
- **v6-binding-acks-sent-total**—Specifies the number of v6 binding acknowledgements (BNDACK6) messages sent.
- **v6-binding-updates-received**—Specifies the number of v6 binding updates (BNDUPD6) messages received.
- **v6-binding-updates-received-total**—Specifies the number of v6 binding updates (BNDUPD6) messages received.
- **v6-binding-updates-sent**—Specifies the number of v6 binding updates (BNDUPD6) messages sent.

- **v6-binding-updates-sent-total**—Specifies the number of v6 binding updates (BNDUPD6) messages sent.
- **v6-update-request-done-time**—Specifies the time at which the last v6 update request (if any) was completed.
- **v6-update-request-outstanding**—If unset or zero, then the server does not have a v6 update request queued for its partner. If set, then it does have a v6 update request queued for its failover partner.
- **v6-update-request-start-time**—Specifies the time at which the v6-update-request-outstanding update request (if any) was started.
- **v6-update-response-done-time**—Specifies the time that the most recent v6 update response sent an update done to the partner server.
- **v6-update-response-in-progress**—Gives information about the type of and origin of the response.
- **v6-update-response-percent-complete**—Specifies the percent complete of the current v6 update response.
- **v6-update-response-start-time**—Specifies the time that the v6 update response mentioned in v6-update-response-in-progress was started.
- **lease** command:
 - **failover-expiration-time**—The *acked-to-partner-time* attribute is renamed to *failover-expiration-time*. It is no longer an Expert mode attribute.
- **lease6** command:
 - **data-source**—Specifies the original source of the lease data and the machine from which the data was retrieved.
 - **failover-expiration-time**—Specifies the lifetime that this server has acknowledged to the failover partner.
 - **list**—From Cisco Prime Network Registrar 8.2 onwards, the **lease6 list** command also lists available and other-available prefix delegation leases that are not bound to any client.
- **option-set** command:
 - **option-set name create [8-bit|16-bit] vendor-option-regex**—Contains the vendor option regex string to match with vendor class identifier string provided by the DHCP client device vendor in DHCPv4 option-60.
- **policy** command:
 - **policy name set max-leases-per-binding**—Specifies the maximum number of leases that a client may use per binding from an allocation group.
 - **policy name set view-id**—Identifies the view associated with the forward and reverse zones used for DNS update.
- **prefix** or **prefix-template** command:
 - **prefix name set max-pd-balancing-length** or **prefix-template name set max-pd-balancing-length**—Specifies the maximum prefix-delegation prefix length that the failover pool balancing will consider in balancing a prefix-delegation prefix.
- **session** command:
 - **session listProcesses**—Returns a list of the Network Registrar processes running on the local cluster, provided statistics history is enabled.

- **session** [**set**|**enable**|**disable**|**unset**] *attribute* **-save**—If **-save** is specified when changing a parameter that can be saved, and you are connected to a cluster that supports this feature, the setting is saved in your user preferences.
- **zone** command (primary zone):
 - **zone name ixfr**—Enables incremental transfer requests for this zone.
 - **zone name listRR** [**-protected** | **-unprotected**]—Filters protected or unprotected RRs.
 - **zone name set restrict-query-acl**—Specifies the zone access control list used to restrict the queries that the DNS server for this zone accepts.
 - **zone name set restrict-xfer-acl**—Identifies the access control list designating who can receive zone transfers from this zone.
 - **zone name set update-acl**—Specifies the access control list for DNS updates to the zone, given as an address match element list.
 - **zone name set view-id**—Specifies the view identifier for this zone.
 - **zone name set view-qualified-name**—Specifies the view-qualified name for this zone.
- **zone-dist** command:
 - **zone-dist name addCachingServer**—Adds caching servers to the zone distribution list.
 - **zone-dist name listCachingServers**—Lists caching servers in the zone distribution list.
 - **zone-dist name removeCachingServer**—Removes caching servers from the zone distribution list.
 - **zone-dist name set caching-server-list**—Lists the caching DNS servers associated with this zone distribution map.
- **zone-template** command:
 - **zone-template name apply-to** [**all** | <[*view*]/*zone*>[,...]]—Refers to all zones in the current session view.
 - **zone-template name set view-id**—Specifies the view identifier. This view-id is only used when applying a zone template in the Default View.

Deprecated or Removed Commands

The following commands were deprecated from the CLI:

- **ccm sync-from-dns zoneData**
- **sync-from-dns**
- **zone zone chkpt**
- **zone zone dumpchkpt**

The **ccm sync-from-dns Hosts** command is retained to sync hosts from the RR list.



Note

The **Hosts** subcommand is retained as an optional argument to maintain syntax compatibility, but it has no effect since only **hosts sync** is available.

Deprecated or Removed Attributes

Attributes were deprecated or removed from the following commands:

- **dhcp** command:
 - failover
 - failover-control-retry-count
 - failover-control-retry-time
 - failover-poll-interval
 - failover-poll-timeout
 - failover-remote-port
 - failover-update-retry-count
 - failover-update-retry-time
 - ip-history-detail
 - udp-send-packet-size
- **dns** command:
 - activity-counter-interval
 - activity-sample-interval
 - auth-db-cache-kbytes
 - auth-reconnect
 - changeset-db-cache-partitions
 - changeset-db-cache-size
 - changeset-db-checkpoint-interval
 - changeset-db-err-log-enabled
 - changeset-db-heap-size
 - changeset-db-log-buffer-size
 - changeset-db-log-size
 - changeset-db-logs-trimming-interval
 - changeset-db-max-rr-size
 - changeset-db-reads-per-transaction
 - checkpoint-interval
 - checkpoint-min-interval
 - chset-db-lock-count
 - collect-sample-counters
 - config-db-checkpoint-interval
 - config-db-purge-logs-interval
 - enforce-min-ttl
 - full-reload-recovery-options

- ha-dns
- ha-dns-backup-server
- ha-dns-comm-timeout
- ha-dns-db-checkpoint-interval
- ha-dns-db-purge-logs-interval
- ha-dns-error-handling
- ha-dns-failure-detection-timeout
- ha-dns-main-server
- ha-dns-max-batch-count
- ha-dns-max-cached-names
- ha-dns-max-connect-timeout
- ha-dns-max-frame-size
- ha-dns-max-interrupted-errors
- ha-dns-max-records
- ha-dns-max-retries
- ha-dns-min-zone-size
- ha-dns-poll-interval
- ha-dns-port
- ha-dns-serial-gap-delay
- ha-dns-wait-between-retries
- ha-dns-zonesync-check-interval
- ha-dns-zonesync-failed-timeout
- hide-subzones
- hierarchical-alphabetic-rr-ordering
- htrim-zone-max-hist-allowed
- htrim-zone-size-to-travel
- optimistic-ddns-responses
- optimize-zone-lookup
- relax-cname-rules
- round-trip-time-limit
- synthesize-aaaa-records
- use-update-optimization
- zone-checkpoint-file-buf-ksize
- zone-db-cache-kbytes
- **dns getStats** command:
 - counter-auth-ans
 - counter-auth-no-data-resps
 - counter-auth-no-names

- counter-eel-names
- counter-errors
- counter-other-errors
- counter-referrals
- counter-req-refusals
- counter-req-unparses
- stats-categories
- **failover-pair** command:
 - poll-lease-hist-interval
 - poll-lease-hist-retry
 - poll-lease-hist-offset
 - poll-lease-hist-server-first
 - poll-subnet-util-interval
 - poll-subnet-util-offset
 - poll-subnet-util-retry
 - poll-subnet-util-server-first
- **zone** command:
 - checkpoint-interval
 - checkpoint-min-interval
 - dynamic
 - full-reload-recovery-options
 - name-protection
 - scvg-ignore-restart-interval
 - scvg-interval
 - scvg-max-records
 - scvg-max-records-searched
 - scvg-no-refresh-interval
 - scvg-pause-interval
 - scvg-refresh-interval
 - zone-list
 - zones

Related Documentation

See [Cisco Prime Network Registrar Documentation Overview](#) for a list of Cisco Prime Network Registrar 8.2 guides.

Accessibility Features in Cisco Prime Network Registrar 8.2

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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