



# CHAPTER 1

## Introducing the Setup Web UI

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The local cluster Cisco Prime Network Registrar web UI provides a setup environment in Basic user mode. The setup is in the form of a series of interview pages, very much like a wizard, based only on the selections you make.

License management is done from the regional cluster when Cisco Prime Network Registrar is installed. You must install the regional server first, and load all licenses in the regional server. When you install the local cluster, it registers with regional to obtain its license. See the *Cisco Prime Network Registrar 8.1 Installation Guide* for details.

## Setup Functions

The setup pages provide these functions:

- User password change
- Dynamic host configuration:
  - Enable the Dynamic Host Configuration (DHCP) service
  - Set up DHCP failover between two servers
  - Set up classes of service
  - Choose the server logging mode
  - Enable Simple Network Management Protocol (SNMP) traps
- Caching DNS configuration:
  - Enable Caching Domain Name System (CDNS) service
  - Set up CDNS access control
  - Set up CDNS traps
- Authoritative (Auth) DNS configuration:
  - Enable the Auth DNS service
  - Set up High-Availability (HA) DNS servers
  - Set up zone distributions to coordinate primary and secondary servers
  - Manage forward and reverse zones
  - Configure access controls
  - Enable SNMP traps

- DNS Update for dynamic hosts
- Simple Network Management Protocol (SNMP) trap recipients
- Trivial File Transport Protocol (TFTP) server

## Setup Features and Navigation

The setup pages:

- Take you out of Basic and Advanced user modes and into special Setup mode. Basic and Advanced modes are for more specialized configuration after you set up the environment using the setup interview. These modes (and the server concepts) are described in detail in the *User Guide for Cisco Prime Network Registrar*.
- Include a Set up this Server page where you can enable and disable functions and which is the point of departure for all enabled function pages.
- Include <<**Back**, **Next**>>, and **Finish** buttons on pages so that you can step through sequentially, except that the <<**Back** button is not on the Set up this Server page and both <<**Back** and **Next**>> buttons are not on the Setup Interview Tasks page. The **Finish** button takes you directly to the Setup Interview Tasks page.




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**Caution** Do not use the **Back** and **Forward** buttons of your browser to navigate through the setup process. Using the **Back** and **Forward** buttons of the browser can cause erratic failures.

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- Includes the **Next>>** button that opens further pages depending on the criteria you set. For example, if the DNS server is enabled, but the server is not indicated as primary, the setup pages bypass the High-Availability (HA) DNS server, zone distribution, and forward and backward zone configuration pages.
- Provide the **Services**, **DHCP**, **CDNS**, **DNS**, **DNS Update**, **Traps**, and **Finish** tabs so that you can access functions despite their enabled or disabled status on the Set up this Server page. However, if a function is disabled on the Set up this Server page, the function appears disabled on its setup page. You can change the status on the particular setup page, which resets the status on the Set up this Server page.
- Is sometimes transactional and sometimes not. In some cases (such as with creating clusters and keys), writes to the database occur immediately when you enter a value. In other cases, writes to the database occur only when you click **Next>>** or **Finish**.
- Keep track of database writes and summarizes them on a report page when you click **Finish**.
- Provide initial selection defaults, and persist changes to the next setup. (For subsequent setups, the previously configured values become the new defaults.)

# Configuration Options

The sample configuration shown in this guide is based on the typical use cases described in the following sections.

## Mixed DHCP and DNS Scenarios

You can set up Cisco Prime Network Registrar for a mixed DHCP and DNS configuration with different numbers of machines.

### One-Machine Mixed Configuration

Configure both DHCP and Auth DNS servers on a single machine, initially enabling the servers as primaries, and enabling the TFTP server and SNMP traps. Then configure at least one forward zone and corresponding reverse zone, at least one scope, and DNS Update.

Configure both DHCP and Caching DNS servers on a single machine, initially enabling the servers as primaries, and enabling the TFTP server and SNMP traps. Then you can configure forwarders and exception lists.

### Two-Machine Mixed Configuration

A mixed DHCP configuration on two machines offers a few alternatives:

- Configure one machine as primary DHCP and Auth DNS servers, and the second machine as a secondary Auth DNS server. Then configure a zone distribution and DNS access controls on the first machine and optionally access controls on the second machine.
- Configure one machine as DHCP and Auth DNS main servers and the second machine as DHCP and Auth DNS backup servers. Perform minimal configuration on the backup machine (changing the password, enabling DHCP and Auth DNS, and selecting partner backup roles). On the main machine, build the configuration, creating server pairs and scheduling synchronization tasks with the backup machine.
- Configure one machine as a DHCP server and the second machine as a Auth DNS primary, then configure either machine with DNS Update and push the configuration to the other machine.
- Configure one machine with both DHCP server and Auth DNS and the second machine as a Caching DNS server, with the Auth DNS server as the Forwarder.

### Three-Machine Mixed Configuration

A mixed configuration on three machines offers a few additional alternatives:

- Configure one machine as a DHCP server, the second machine as an Auth DNS primary, and the third machine as an Auth DNS secondary. Optionally revisit the machines to make the DHCP main the Auth DNS backup, and make the Auth DNS main the DHCP backup.
- Configure one machine as DHCP failover and Auth DNS High-Availability (HA) main servers, the second machine as DHCP failover and Auth DNS HA backup servers, and the third machine as a Auth DNS secondary server.
- Configure one machine as a DHCP server, the second machine as an Auth DNS and the third machine as a Caching DNS, with the Auth DNS as the Forwarder.

- Configure one machine as a DHCP primary server and Auth DNS primary, the second machine as a DHCP secondary + Auth DNS secondary and the third machine as a Caching DNS, with the primary Auth DNS of the first machine as the Forwarder.

## Four-Machine Mixed Configuration

A mixed configuration on four machines can include:

- DHCP and Auth DNS main and backup pairs, with the first machine as a DHCP main, the second machine as a DHCP backup, the third machine as an Auth DNS main configured with DNS Update, and the fourth machine as an Auth DNS backup.
- An add-on to the three-machine scenario, with the first machine as a DHCP main, the second machine as an Auth DNS main, the third machine as DHCP and Auth DNS backups, and the fourth machine as an Auth DNS secondary.
- Configure the first machine as DHCP main, second machine as DHCP backup, third machine as Auth DNS, and Caching in fourth, with Auth DNS as Forwarder.

## DHCP-Only Scenarios

A DHCP-only configuration can be on a single machine or two machines.

### One-Machine DHCP Configuration

Initially configure just DHCP, skip the class-of-service and failover options, and revisit the setup to enable class-of-service and policy options.

### Two-Machine DHCP Configuration

Configure the first machine as a DHCP main and the second machine as a backup, with minimal backup configuration (changing password, enabling DHCP, and selecting the backup role), and set up the first machine with failover load balancing, optionally scheduling failover synchronization tasks.

## DNS-Only Scenarios

A DNS-only configuration can be on one, two, or three machines.

### One-Machine DNS Configuration

Initially configure DNS as an Auth primary, Auth secondary, or caching server.

### Two-Machine DNS Configuration

Configure the first machine as a Auth DNS primary and the second machine as a secondary, or the first machine as a main primary and the second machine as a backup primary.

Configure the first machine as an Auth DNS and the second machine as Caching DNS.

## Three-Machine DNS Configuration

Configure the first machine as a Auth DNS main primary, the second machine as a backup primary, and the third machine as a secondary server.

Configure the first machine as Auth DNS primary, the second machine as secondary, and the third machine as Caching DNS.

