



Managing DNS Views

DNS 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 can 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 that zone contents. In some cases, the zone contents may only vary slightly between views.

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DNS Views Processing

DNS Views allow a name server to segregate the data and provide a different view of the data based on the clients accessing it. When DNS receives a DNS request, the request is processed to automatically associate it with a view for Cisco Prime IP Express servers.



Note

The auto-view detection is only applicable for Cisco Prime IP Express.

Views for the DNS client servers such as Caching DNS, Secondary DNS, Primary for Notifies, DHCP and so on are easily defined with minimal configuration.

Key Points to Remember When you Work on DNS Views

Following are some of the key points or attributes you should know when you work on DNS Views:

- **View ID**—Defines a unique integer identifier for the view that is assigned by the CCM server or the user while creating DNS views.
- **View Priority**—Each DNS View will be assigned a unique priority to determine its order in the view list. The lowest non-zero priority value will have the highest priority and will be processed first. A zero priority is reserved for the default view, which will always be last. The web UI will provide an option to reorder views without explicitly setting the priority.
- **Default View**—The default view is created with view-id=0, priority=0, and client and destination ACLs set to any. Requests that do not match a named view will always fall into the default view. By default, zones will be created with a view-id=0, which will automatically place them in the default view. The default view cannot be modified or deleted.
- **acl-match-clients attribute**—Specifies the ACLs that maps clients to this view based on the source address (subnet or prefix) or TSIG key.

Managing DNS Views

You can create, edit, and delete DNS Views from local or regional cluster. You can also push or pull views and ACLs in Ensure, Replace, and Exact modes from or to the regional CCM server.



Note

You can create a maximum of 100 views.

Local Basic or Advanced and Regional Web UI

To create DNS Views:

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- Step 1** From the **Design** menu, choose **Views** under the **Auth DNS** submenu.
 - Step 2** On the **Views** pane, click the **Add View** icon.
 - Step 3** Specify the name for the DNS views.
 - Step 4** Specify the view id. If you do not specify, the application automatically assigns a view id to the view.
 - Step 5** You can specify the ACL that maps the client to this view in the *acl-match-clients* field.
 - Step 6** Click the **Add DNS View** button.
 - Step 7** To edit a DNS View, click its name in the Views pane on the left.
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Reorder DNS Views

When you create a set of DNS Views, you can specify the priority order. To specify the priority order:

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- Step 1** From the **Design** menu, choose **View** under the **Auth DNS** submenu to open the List/Add Zone Views page.
- Step 2** Click the **Reorder Views** icon in the Views pane to open the Reorder dialog box.
- Step 3** Set the priority for the DNS Views rules by either of the following methods:
- Select the view and click the **Move up** or **Move down** icon to reorder the rules.
 - Select the view and click the **Move to** button, and enter the row number to move the view.
- Step 4** Click **Save** to save the reordered list.
If you delete a view, you get a choice to delete all zones.
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CLI Commands

Use `dns-view name create` to add DNS Views (see the `dns-view` command in the CLIGuide.html file in the install-path/docs directory for syntax and attribute descriptions).

Synchronizing DNS Views

Zone distribution sync, single zone sync, and HA DNS zone sync will always sync associated views and named ACLs for both primary and secondary zones. The synchronization modes applied while running zone distribution or HA DNS sync vary. When you run:

- **Zone Distribution Sync**—views will be synchronized in Replace mode for all zone distribution sync types (Update, Complete, and Exact), while ACLs will use Ensure mode. If caching DNS servers are included in the zone distribution, the associated views and named ACLs will be synchronized to these servers and the masters list will be configured as exceptions for the unique set of domain names in the distribution. The user must exclude secondaries and/or caching servers.
- **HA DNS Sync**—views will be updated in Replace mode for both Update and Complete sync, while Exact sync will sync views in Exact mode.

Pushing and Pulling DNS Views

You can also push views and ACLs to and pull views and ACLs from the regional cluster in Ensure, Replace, and Exact modes.

Pushing DNS Views to Local Clusters

You can push the views you create from the regional cluster to any of the local clusters.

Regional Web UI

- Step 1** From the **Design** menu, choose **Views** under the **Auth DNS** submenu.
- Step 2** On the **Views** pane, click the **Push All** icon in the left pane, or select a **DNS View** and click **Push** at the top of the Edit Zone View page. This opens the Push Data to Local Clusters or Push Zone View page.
- Step 3** Choose a push mode using one of the Data Synchronization Mode radio buttons.
- If you are pushing all the DNS Views, you can choose Ensure, Replace, or Exact.
 - If you are pushing a DNS View, you can choose Ensure or Replace.

In both the above cases, Ensure is the default mode.

Choose Replace only if you want to replace the existing DNS View data at the local cluster. Choose Exact only if you want to create an exact copy of the DNS View at the local cluster, thereby deleting all DNS Views that are not defined at the regional cluster.

- Step 4** Choose one or more local clusters in the Available field of the Destination Clusters and move it or them to the Selected field.
- Step 5** Click **Push Data to Clusters**.
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Pulling DNS Views from Local Clusters

Instead of explicitly creating views, you can pull them from the local clusters. In the regional web UI, you may first want to update the view replica data by clicking the Replica icon next to the cluster name.

Regional Web UI

- Step 1** From the **Design** menu, choose **Views** under the **Auth DNS** submenu.
- Step 2** On the **List/Add Zone Distribution** page, click the **Pull Replica** icon in the **Views** pane.
- Step 3** Choose the data synchronization mode (**Update**, **Complete**, or **Exact**). These modes are described in the table on that page.
- Step 4** Click **Report** at the bottom of the dialog box.
- Step 5** Click **Run**.
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