About Shared Record Groups

A shared record group is a set of resource records that you can add to multiple zones. You can create resource records in a group and share the group among multiple zones. The zones handle the shared resource records as any other resource record. You can include the following types of DNS resource records in a shared record group: A, SRV, MX, AAAA, CNAME, and TXT.

Using shared record groups simplifies and expedites the administration of resource records. When you create or update a shared record, the appliance automatically updates it in all associated zones. In addition, shared resource records reduce the object count in the NIOS database; instead of the creating the same record in multiple zones, you can use only one shared record. For example, for 10 zones and 500 records per zone, the object count decreases from 5278 objects to 781 objects.

Figure 20.7 shows an example of how to create and use shared records.

In this example, there are two shared record groups. One group—group1—contains the A records ftp and printer1 and the MX record mx1, and the other group—group2—contains the A record web and the MX record mx2. The resource records in group1 are shared with the internal view zones sales.corpxyz.com and finance.corpxyz.com and the external view zone sales.corpxyz.com. The resource records in group2 are shared with the internal view zone marketing.corpxyz.com and the external view zones sales.corpxyz.com and marketing.corpxyz.com.

Figure 20.7 Creating Shared Records

Shared Records Guidelines

The following are guidelines for using shared records:

- You can include multiple shared A, AAAA, CNAME, SRV, MX and TXT resource records in a group. You cannot include NS, DNAME, PTR, host and bulk host records.
- You can add shared records to authoritative zones only. You cannot add shared records to forward zones, stub zones, or reverse mapping zones.
- Zones that contain shared records can also contain regular DNS records (not shared).
- When you change or delete a shared resource record, it changes the canonical source of the shared record and impacts all the zones that contain the record.
- You cannot copy shared records from a zone.
- You do not need to restart the appliance when you create, delete, or modify shared records.

Configuring Shared Record Groups

Before you can create shared resource records, you must first create the group to which they belong. The shared record group serves as a container for the shared resource records. The following are the tasks to configure a shared record group:

1. Create a shared record group and associate it with the appropriate zones. See Creating a Shared Record Group.
2. Create shared A, CNAME, SRV, MX, AAAA, and TXT resource records, and add them into the shared record group. See Managing Shared Resource Records.
Creating a Shared Record Group

When you create a shared record group, the only requirement is that you give it a name. You can associate it with one or multiple zones when you first create the group or at a later time, by editing the shared record group. You can associate a shared record group with authoritative zones only. Associating the shared record group with a zone adds the shared records to the zone. The zone handles the shared records like any other resource records.

To create a shared record group:

1. From the Data Management tab, select the DNS tab -> Shared Record Groups tab, and then click the Add icon.
2. In the Shared Record Group wizard, specify the following:
   - **Name:** Enter the name of the shared record group. It can be up to 64 characters long and can contain any combination of printable characters. You can change the shared record group name even after you create the group. It does not impact the shared records in the group.
   - **Hostname Policy:** Click Override to supersede the hostname restriction policy set at the zone level or click Inherit to use the zone policy. This sets the hostname policy for the shared records in the group. See Specifying Hostname Policies.
   - **Comment:** Optionally, enter additional information about the shared record group.
3. Click **Next** to associate the shared record group with at least one zone.
4. Click the Add icon in the Associated Zones panel.
5. In the Zone Selector dialog box, select a zone by clicking the zone name. You can add multiple zones.
6. Click **Next** to define extensible attributes. For information, see Using Extensible Attributes.
7. Save the configuration.

Viewing Shared Record Groups

You can view the configured shared record groups by navigating to the Data Management tab -> DNS tab -> Shared Record Groups tab. Grid Manager displays the following information about each shared record group:

- **Name:** The shared record group name.
- **Comment:** Comments that were entered for the shared record group.
- **Site:** Values that were entered for this pre-defined attribute.

You can do the following:

- List the shared resource records and associated zones in a shared record group.
- Click a shared record group name.
- Use filters and the Go to function to narrow down the list. With the autocomplete feature, you can just enter the first few characters of an object name in the Go to field and select the object from the possible matches.
- Create a quick filter to save frequently used filter criteria. For information, see Using Quick Filters.
- Modify some of the data in the table. Double click a row of data, and either edit the data in the field or select an item from a drop-down list. Note that some fields are read-only. For more information about this feature, see Modifying Data in Tables.
- Edit the properties of a shared record group.
  - Click the check box beside a shared record group, and then click the Edit icon.
- Delete a shared record group.
  - Click the check box beside a shared record group, and then click the Delete icon. Note that you must remove the zone associations in a shared record group before you delete it.
- Export the list of shared record groups to a .csv file.
  - Click the Export icon.
- Print the list of shared record groups.
  - Click the Print icon.

Modifying a Shared Record Group

When you edit a shared record group, you can do the following:

1. Perform a global search to retrieve the shared record group you want to modify.
   or
   From the Data Management tab, select the DNS tab -> Shared Record Groups tab -> shared_record_group check box, and then click the Edit icon.
2. The Shared Record Group editor contains the following tabs from which you can modify information:
   - **General:** You can change any of the information you entered when you created it, including its name. Changing the shared
Deleting Shared Record Groups

Before you delete a shared record group, you must remove the zone associations in the group; otherwise, an error message appears when you delete. For information, see Deleting Associated Zones.

To delete a shared record group:

1. Perform a global search to retrieve the shared record group you want to modify.  
or  
From the Data Management tab, select the DNS tab -> Shared Record Groups tab -> shared_record_group check box, and then click the Delete icon.
2. In the Delete Confirmation dialog box, click Yes.

Grid Manager moves the shared record group to the Recycle Bin, if enabled. Use the Recycle Bin feature to recover a deleted shared record group and retrieve the deleted zones. For information, see Using the Recycle Bin.

Managing Shared Resource Records

You can create shared A, AAAA, CNAME, MX, SRV and TXT records. These resource records are similar to the non-shared resource records. The DNS server uses them to respond to queries in the same way as any other resource record. A shared resource record can belong to only one shared record group. This section describes how to add shared resource records to a group and how to modify and delete them. It includes the following sections:

- Creating Shared Records
- Viewing Shared Records
- Modifying Shared Records
- Deleting Shared Records

NIOS allows superusers to add shared A and AAAA records with a blank name. Limited-access users must have read/write permission to Adding a blank A/AAAA record to add shared A and AAAA records with a blank name. You can assign global permission for specific admin groups and roles to allow limited-access users to add shared A and AAAA records with a blank name. For more information, see Administrative Permissions for Adding Blank A or AAAA Records.

Creating Shared Records

After you create a shared record group, you can create its resource records.

To create a shared A, AAAA, CNAME, MX, SRV or TXT record and add it to a group:

1. From the Data Management tab, select the DNS tab. Expand the Toolbar and click Add -> Shared Record.
   or
   From the Data Management tab, select the DNS tab -> Shared Record Groups tab -> shared_record_group. Expand the Shared Records tab and click the Add icon.
2. Select one of the following:
   - Shared A Record
   - Shared AAAA Record
   - Shared CNAME Record
   - Shared MX Record
   - Shared SRV Record
   - Shared TXT Record
3. Enter information in the Shared Record wizard. See the online Help or the following for information about each resource record:
   - For information about A records, see Managing A Records.
   - For information about AAAA records, see Managing AAAA Records.
   - For information about CNAME records, see Managing CNAME Records.
   - For information about MX records, see Managing MX Records.
   - For information about SRV records, see Managing SRV Records.
   - For information about TXT records, see Managing TXT Records.
4. Save the configuration, or click Next to define extensible attributes for the shared record. For information, see Using Extensible Attributes.
5. Click Restart if it appears at the top of the screen.

Viewing Shared Records

You can view the shared records in a group and in a zone. To edit the shared record properties, click the shared record name and select the Edit
To view the shared records in a group:

- From the Data Management tab, select the DNS tab -> Shared Record Groups tab -> shared_record_group -> Shared Records tab.

To view the shared records in a zone:

- From the Data Management tab, select the DNS tab -> Zones tab and select a zone. Grid Manager lists the following information about each shared record by default:
  - **Name**: The shared record name.
  - **Type**: Indicates the type of resource record, such as A, AAAA, CNAME, MX, SRV or TXT records. Shared records are identified as (Shared).
  - **Data**: The data the shared resource record provides.
  - **Comment**: Comments that were entered in the resource record.
  - **Site**: Displays values that were entered for this pre-defined attribute.

You can display the following additional columns:

- **TTL**: The TTL value of the shared resource record.
- **Disabled**: Indicates whether the record is disabled.

You can do the following:

- Use filters and the Go to function to narrow down the list. With the autocomplete feature, you can just enter the first few characters of an object name in the Go to field and select the object from the possible matches.
- Create a quick filter to save frequently used filter criteria. For information, see Using Quick Filters.
- Modify some of the data in the table. Double click a row of data, and either edit the data in the field or select an item from a drop-down list. Note that some fields are read-only. For more information about this feature, see Modifying Data in Tables.
- Edit the properties of a shared resource record.
  - Select the shared resource record, and then click the Edit icon.
- Delete a shared resource record.
  - Select the shared resource record, and then click the Delete icon.
- Export the list of shared resource records to a .csv file.
  - Click the Export icon.
- Print the list of shared resource records.
  - Click the Print icon.

### Modifying Shared Records

You can modify, disable, or delete any shared record. When physical repair or relocation of a network device occurs, you can disable a record instead of deleting it. This alleviates having to delete, and then add the shared record again. When the changes to the physical device are complete, you can simply enable the shared record.

To modify or disable a shared record:

1. Perform a global search to retrieve the host or resource record you want to modify.
   - From the Data Management tab, select the DNS tab -> Shared Record Groups tab -> shared_record_group -> Shared Records tab.
2. Select the shared record you want to modify and click the Edit icon.
3. The Shared Records editor contains the following tabs from which you can modify information:
   - **General**: You can change most of the information, except for the read-only fields, such as the Host Name Policy. You can also select the Disable check box to disable the record.
   - **TTL**: You can modify the TTL setting. For information, see About Time To Live Settings.
   - **Extensible Attributes**: You can modify the attributes. For information, see Using Extensible Attributes.
   - **Permissions**: This tab displays if you logged in as a superuser. For information, see About Administrative Permissions.
4. Save the configuration and click Restart if it appears at the top of the screen.

### Deleting Shared Records

To delete shared resource records:

1. Perform a global search to retrieve the record you want to delete.
   - From the Data Management tab, select the DNS tab -> Shared Record Groups tab -> shared_record_group -> Shared Records tab.
2. Select the shared record you want to delete and click the Delete icon.
3. When the confirmation dialog box displays, select Yes.

Grid Manager moves the shared records to the Recycle Bin, from which you can restore or permanently delete the records.
Managing Associated Zones

Typically, you associate a zone with a shared record group when you create the group. You can also add an associated zone to a shared record group after you create the group.

Creating Associated Zones

To associate a zone with a shared record group:

1. From the Data Management tab, select the DNS tab -> Shared Record Groups tab -> shared_record_group -> Associated Zones tab, and then click the Add icon.
2. In the Zone Selector dialog box, select a zone by clicking the zone name.

The appliance adds the zone to the Associated Zones tab.

Viewing Associated Zones

To view the associated zones in a shared record group:

- From the Data Management tab, select the DNS tab -> Shared Record Groups tab -> shared_record_group -> Associated Zones tab.

Grid Manager lists the following information about each associated zone by default:

- **Zone**: The zone associated with the shared record group.
- **DNS View**: The DNS view to which the zones belong.
- **Network View**: The network view associated with the DNS view.
- **Comment**: Comments that were entered for the shared record group. You can do the following:
  - Use filters and the Go to function to narrow down the list. With the autocomplete feature, you can just enter the first few characters of an object name in the Go to field and select the object from the possible matches.
  - Create a quick filter to save frequently used filter criteria. For information, see Using Quick Filters.
  - Associate another zone with the shared record group.
  - Click the Add icon and select a zone.
  - Delete an associated zone.
  - Export the list of associated zones to a .csv file.
    - Click the Export icon.
  - Print the list of shared associated zones.
    - Click the Print icon.

Deleting Associated Zones

To delete an associated zone:

1. From the Data Management tab, select the DNS tab -> Shared Record Groups tab -> shared_record_group -> Associated Zones tab.
2. Select the associated zone and click the Delete icon.
3. When the confirmation dialog box displays, select Yes.

Grid Manager removes the zone from the shared record group.

Configuration Example: Configuring Shared Records

The following example shows you how to configure shared records. In this example, you do the following:

- Create a shared record group: **group1**.
- Associate it with three zones: eng.com, sales.com, and marketing.com.
- Create an A record www and an MX record mx1.

1. Create a shared record group called **group1** and associate it with eng.com, sales.com, and marketing.com.
   a. From the Data Management tab, select the DNS tab -> Shared Record Groups tab, and then click the Add icon.
   b. In the first step of the Shared Record Group wizard, specify the following Name: Enter **group1**.
   c. Click Next.
   d. Click the Add icon in the Associated Zones panel.
e. Select eng.com from the list of zones and click the select icon. Do the same for the sales.com, and marketing.com zones.
f. Save the configuration and click Restart if it appears at the top of the screen.

2. Add an A record www to group1.
   a. Expand the Toolbar and click Add -> Shared Record > Shared A Record.
   b. In the Shared A Record wizard, specify the following:
      Name: Enter www.
      Shared Record Group: Select group1 from the drop-down list.
      IP Address: Enter the IP address 10.9.1.1.
   c. Save the configuration and click Restart if it appears at the top of the screen.

3. Add an MX record mx1 into group1.
   a. Expand the Toolbar and click Add -> Shared Record > Shared MX Record.
   b. In the Shared MX Record wizard, specify the following:
      Mail Destination: Enter mx1.
      Shared Record Group: Select group1 from the drop-down list.
      Comment: Enter mail exchanger record for shared record group1.
   c. Save the configuration and click Restart if it appears at the top of the screen.