

Working with DHCP Groups

DHCP Groups

The screenshot shows the 'DHCP' tab in a network management interface. The main navigation bar includes 'Dashboard', 'Resources', 'DNS', 'DHCP', 'Servers', 'IPAM', 'Peering', 'Reporting', and 'Global Commander'. Below the navigation bar, there are subtab buttons for 'DHCP', 'DHCP Groups', 'DHCP Servers', 'DHCP Pools', 'DHCP Classes', and 'DHCP Logging'. The 'DHCP Groups List' section is active, showing a description: 'DHCP Groups help you to organize all of your Groups and Servers together into a single place. With Groups, you are able to push whole group configurations.' Below this, there are two group cards: 'Default Group' (ID: 4130) and 'Test Group' (ID: 15717). The 'Test Group' card is expanded, showing a 'DHCP Pools' section with buttons for 'Add Pool', 'Push Group', and 'Schedule Push'. Below the buttons, there are tabs for 'Subnet Pools' and 'Host Pools'. A table lists the pools with columns for 'Pool Name', 'Last Modified', 'Subnet', 'Range Min', 'Range Max', and 'Actions'. The table contains five rows of data for 'smartsub2' through 'smartsub5'.

Pool Name	Last Modified	Subnet	Range Min	Range Max	Actions
smartsub2	11/15/2023 09:04:07	2600:450::/127	2600:450::	2600:450::1	Delete Push
smartsub3	12/11/2023 08:59:16	14.0.0.0/27	0.0.0.0	0.0.0.0	Delete Push
smartsub4	12/11/2023 09:05:45	2600:450::4/126	2600:450::4	2600:450::7	Delete Push
smartsub5	11/15/2023 09:33:29	172.16.3.0/24	172.16.3.0	172.16.3.255	Delete Push

The **DHCP** tab **DHCP Groups List** allows you to create, view, and manage groups of DHCP servers and pools. Using groups, you can configure and push selected combinations of zones at one time.

- DHCP Groups List Interface

Working with DHCP Groups

- Add a Group
- Edit a Group
 - Edit a Group Name:
 - Edit a Group's Settings:
 - Edit Parent Resource
 - Edit Failover Name
- Add Pools to a Group
 - Add a Subnet Pool
 - Smart Assign
 - Direct Assign
 - Add a Host Pool
 - Smart Assign
 - Direct Assign
- Pushing a DHCP Group
 - Manual Group Push
 - Scheduled Group Push
- Delete a Group
- Additional Information

DHCP Groups List Interface

Navigation: Move between the DHCP Groups, DHCP Servers, DHCP Pools, DHCP Classes, and DHCP Logging pages via the subtab buttons below the main navigation bar.

1) **Add Group Button:** Opens a dialog for creating a DHCP group

2) **Group Container:** The group container header shows the group name. Expand or close the group container by clicking on the expansion arrow (>) on the far right of the header. Clicking on the X will delete the group and all zones included in the group. Rename the group by clicking on the name, then typing the desired changes and clicking outside of the name.

Pool Name	Last Modified	Subnet	Range Min	Range Max	Actions
Pool 1	06/22/2018 19:12:46	192.168.80.0/20	192.168.80.1	192.168.95.254	Delete Push
Pool 2	06/22/2018 19:13:30	16.5.0.12/30	16.5.0.13	16.5.0.14	Delete Push

Group Pool Actions:

3) **Add Pool Button:** Opens a dialog for creating a DHCP pool under that group.

4) **Push Group Button:** Pushes all pools in the group to the associated DHCP server.

5) **Schedule Push Button:** Schedules a push of all pools in the group to the selected day and time. Requires the scheduler tab / cron tasks to be enabled.

6) **Pool List:** Subnet and host pools included in the group.

Subnet Pools					
Host Pools					
Pool Name	Last Modified	Subnet	Range Min	Range Max	Actions
Pool 1	06/22/2018 19:12:46	192.168.80.0/20	192.168.80.1	192.168.95.254	Delete Push
Pool 2	06/22/2018 19:13:30	16.5.0.12/30	16.5.0.13	16.5.0.14	Delete Push

7) **Subnet / Host Pools Tabs:** Shows zone list containing only forward or reverse zones, respectively.

8) **Pool Name (Sortable):** The name of the pool. Clicking on the pool name will open the pool details page. Clicking on the "Pool Name" header will sort the zone list by ascending or descending by name.

9) **Last Modified (Sortable):** The date and time the pool was last modified. Clicking on the "Last Modified" header will sort the list by most / least recent modification date.

10) **Subnet (or IP):** The subnet or IP of the subnet/host pool, respectively.

11) Range Min (or MAC): The starting range address for subnet pools, or the MAC for host pools.

12) Range Max: For the subnet list, the ending range address for the pool.

13) Actions: Clicking on the "Actions" header will reveal sortable filters for selected fields. Buttons under the Actions column indicate actions that may be performed on each pool:

14) Delete: Deletes the pool from ProVision.

15) Push: Pushes the pool to the associated server.

16) Attached Servers: Click on the header title or > to expand or collapse. View, attach, or detach a DHCP server from the group.

Attached Servers

Server Name	Server Backend	Server Host	Parent Resource	Actions
QA DHCP VM	ISC	test-tools.com	QA Test Resource 7	<div>Detach</div> <div>Perms</div>

Attach server :

Select Server

Attach

17) Group Settings: Click on the header title or > to expand or collapse. Edit default group settings including the Parent Resource and Failover name.

Group Settings

The following settings are having direct impact on the group.

Parent Resource:

TLR

The group resource will be a child of the Parent Resource.

Failover name:

(ISC BIND only) If Failover name is not empty, the pools will be exported in Failover mode.

Save Settings

18) Save Settings Button: Saves any changes made to the DHCP Group Settings options.

22) Scheduled Tasks: If a scheduled push has been set up for the group, the task information will show in a "Scheduled Tasks" module. Click on the header title or > to expand or collapse.

Scheduled Tasks

Task Name	Last Run	Repeat Time	Actions
Scheduled Push: Default Group		One time on 2018-06-22 at 18:15 PDT	<div>Delete</div>

From here, you may review or delete scheduled group pushes.

Working with DHCP Groups

DHCP groups allow for organizing multiple pools together and linking those pools with one or more servers. Pools may be pushed individually, as a group, or at the server level.

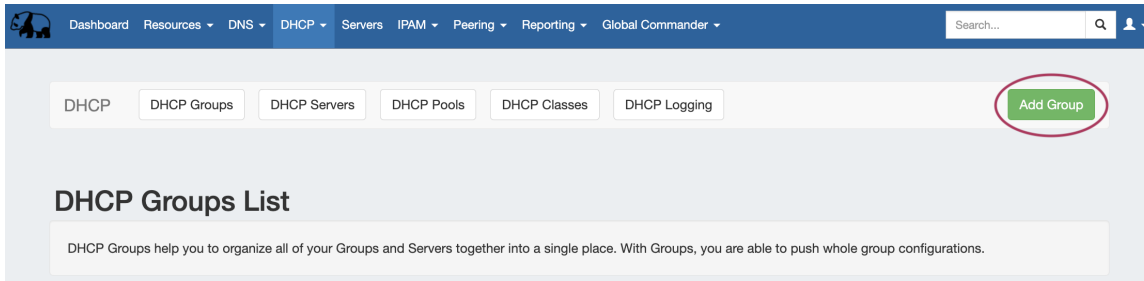
A Default Group for pools to be imported or added into is automatically designated. Creating additional groups is completely optional.

Add a Group

Create DHCP groups by clicking the "Add Group" Button, then add subnet or host pools under the group by clicking "Add Pool" for the desired group.

Pools may be pushed individually, as a part of a DHCP group, or through pushing an entire DHCP server.

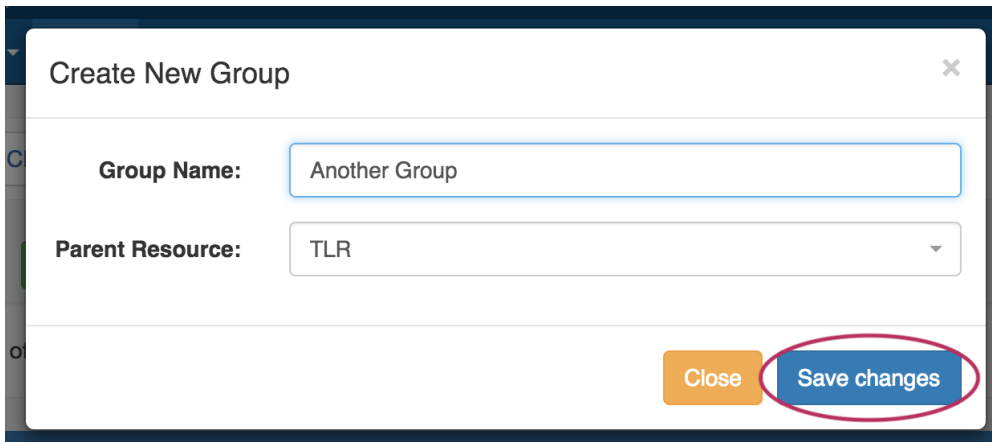
To create a new group, from the [DHCP](#) Tab, select the DHCP Groups sub menu. Then, click the "Add Group" button at the top right of the page.



This will open the "Create New Group" dialog.

Enter the desired group name and select a parent resource.

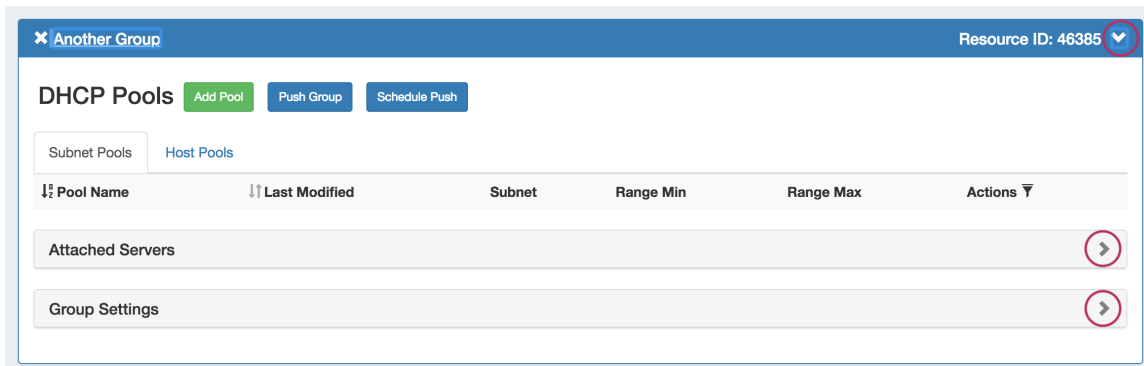
Click the "Save Changes" button when complete.



The new group will be added to the DHCP Groups List.

Open the group container for the new group by clicking on the expansion arrow at the top right corner of the header.

Information for Attached Servers and Group Settings may also be viewed and edited by clicking on the expansion arrows for each section.



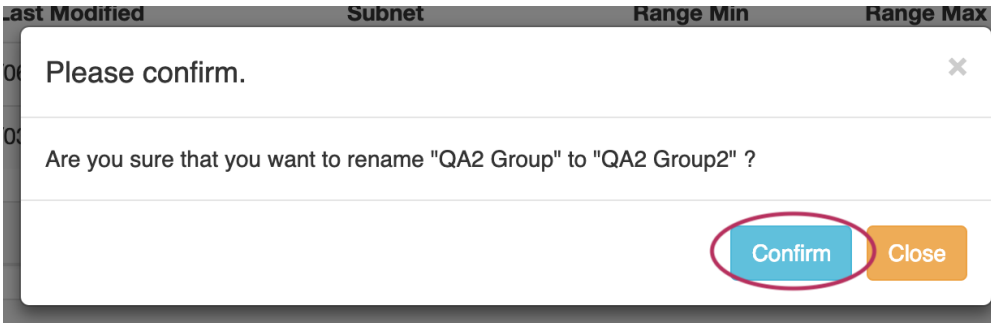
Edit a Group

Edit a Group Name:

Edit the name for a group by clicking inside the group's name. A highlight box will appear around the name, and a cursor inside the box.



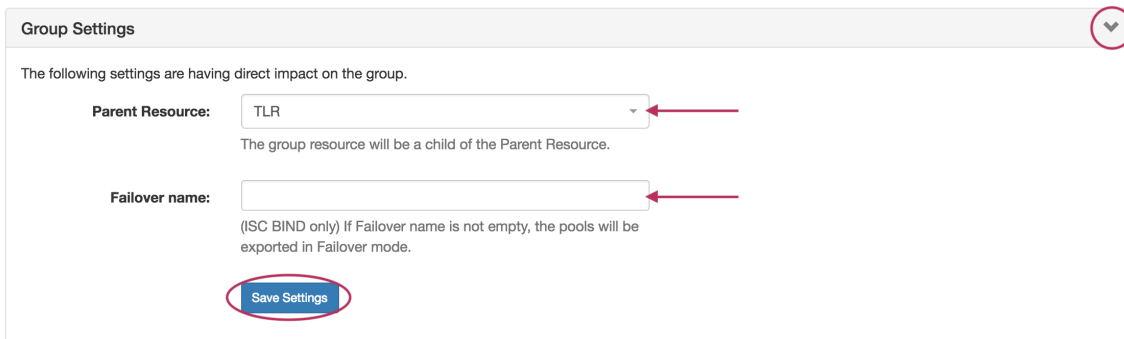
Edit the text as desired using your mouse or arrow keys to navigate through the text. When complete, click anywhere outside of the name box, and a confirmation dialog will appear.



Click "Confirm" to save your changes, or "Close" to exit without saving.

Edit a Group's Settings:

Under the desired group, expand the "Group Settings" module by clicking on the expansion arrow in the upper right corner of the header.



Edit Parent Resource

Change the parent resource for the DHCP group by searching and selecting the desired resource from the dropdown box.

Edit Failover Name

Edit the Failover name by typing the name directly in the Failover Name input. If the Failover name is not empty, the pools will be exported in Failover mode. NOTE: This is for ISC BIND only.

When done with your edits, be sure to click the "Save Settings" button.

Add Pools to a Group

To add a new pool to a DHCP group, click the "Add Pool" button inside the desired group.

Default Group

Resource ID: 46363

DHCP Pools

Add Pool

Push Group

Schedule Push

Subnet Pools

Host Pools

Pool Name	Last Modified	Subnet	Range Min	Range Max	Actions
Pool 1	06/22/2018 19:12:46	192.168.80.0/20	192.168.80.1	192.168.95.254	<div>Delete</div> <div>Push</div>
Pool 2	06/22/2018 19:13:30	16.5.0.12/30	16.5.0.13	16.5.0.14	<div>Delete</div> <div>Push</div>

Attached Servers

Group Settings

Add a Subnet Pool

To add a new subnet pool to a DHCP group, select "Subnet" as the Pool Type. Select the parent resource and type in a subnet name.

Create New Pool

Pool Type:

Subnet

Parent Resource:

TLR

Subnet Name:

Pool 3

New IP Assignment Settings

Assignment Type:

Smart

IP Type:

IPv4

Netmask:

20

Resource:

Region:

Choose a region

IPAM Rule:

Apply an IPAM Rule

Select a VLAN:

Assign default gateway:

OFF

Close

Save changes

Next, choose an assignment type - you may either have ProVision smart assign a block for the pool that matches your provided criteria, or directly assign a specific block.

Smart Assign

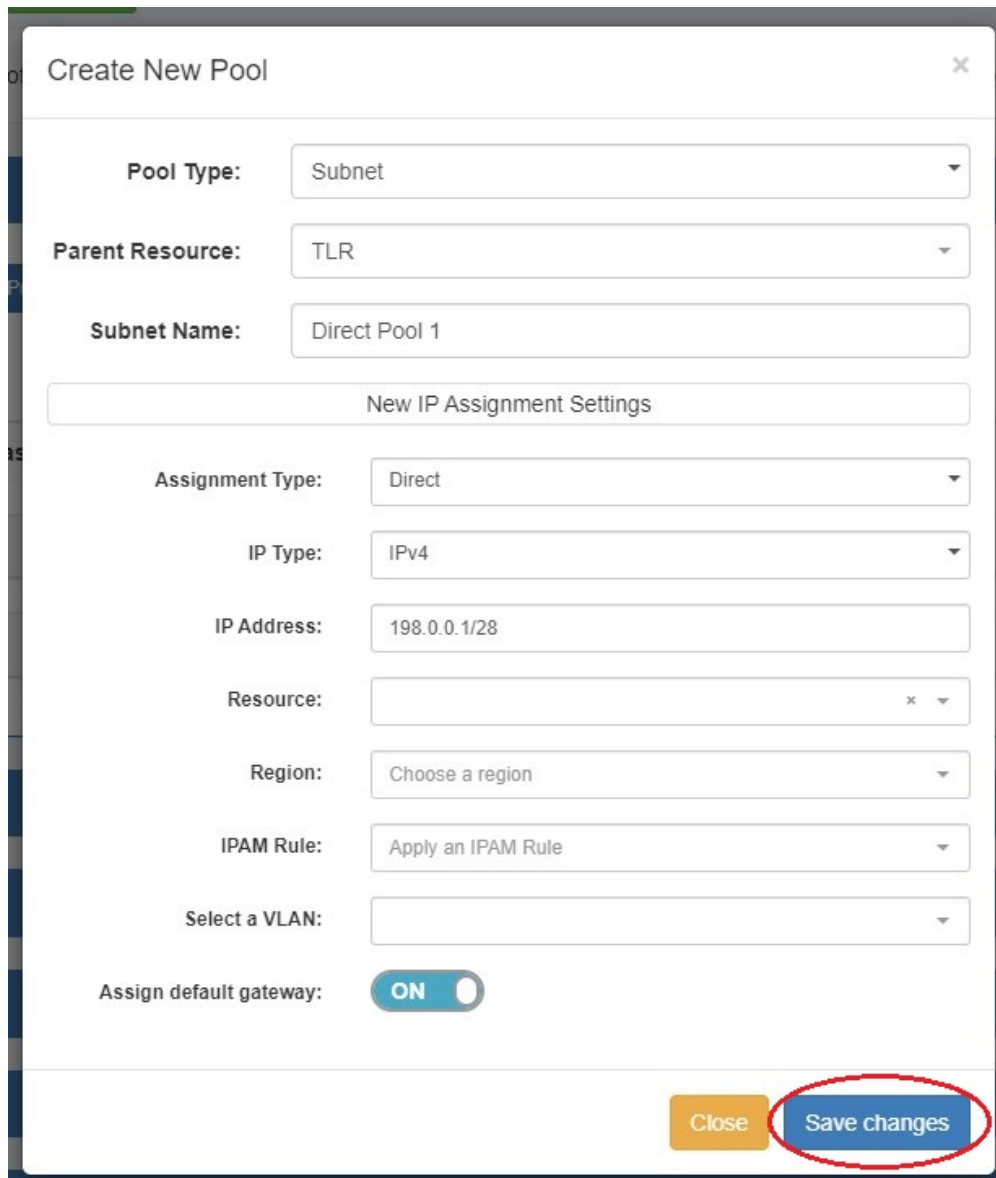
To Smart Assign a DHCP pool, select "Smart" for the Assignment type, choose IPv4 or IPv6 for the IP type, then select a netmask.

All other fields are optional - Resource, Region, IPAM Rules, and VLAN may be selected to further narrow the block criteria. If desired, toggle "Assign Default Gateway" on.

When done, click "Save Changes". ProVision will choose the first block matching all criteria to assign to the pool.

If no block matches the given criteria, a message will state so. Try either removing some criteria, or ensure that blocks exist in IPAM (with subassignments enabled!) with the given attributes.

Direct Assign



The screenshot shows a 'Create New Pool' dialog box with the following fields and settings:

- Pool Type:** Subnet (dropdown)
- Parent Resource:** TLR (dropdown)
- Subnet Name:** Direct Pool 1 (text input)
- New IP Assignment Settings:**
 - Assignment Type:** Direct (dropdown)
 - IP Type:** IPv4 (dropdown)
 - IP Address:** 198.0.0.1/28 (text input)
 - Resource:** (empty dropdown with a close button 'x')
 - Region:** Choose a region (dropdown)
 - IPAM Rule:** Apply an IPAM Rule (dropdown)
 - Select a VLAN:** (empty dropdown)
 - Assign default gateway:** ON (toggle switch)
- Buttons:** Close (orange) and Save changes (blue, circled in red)

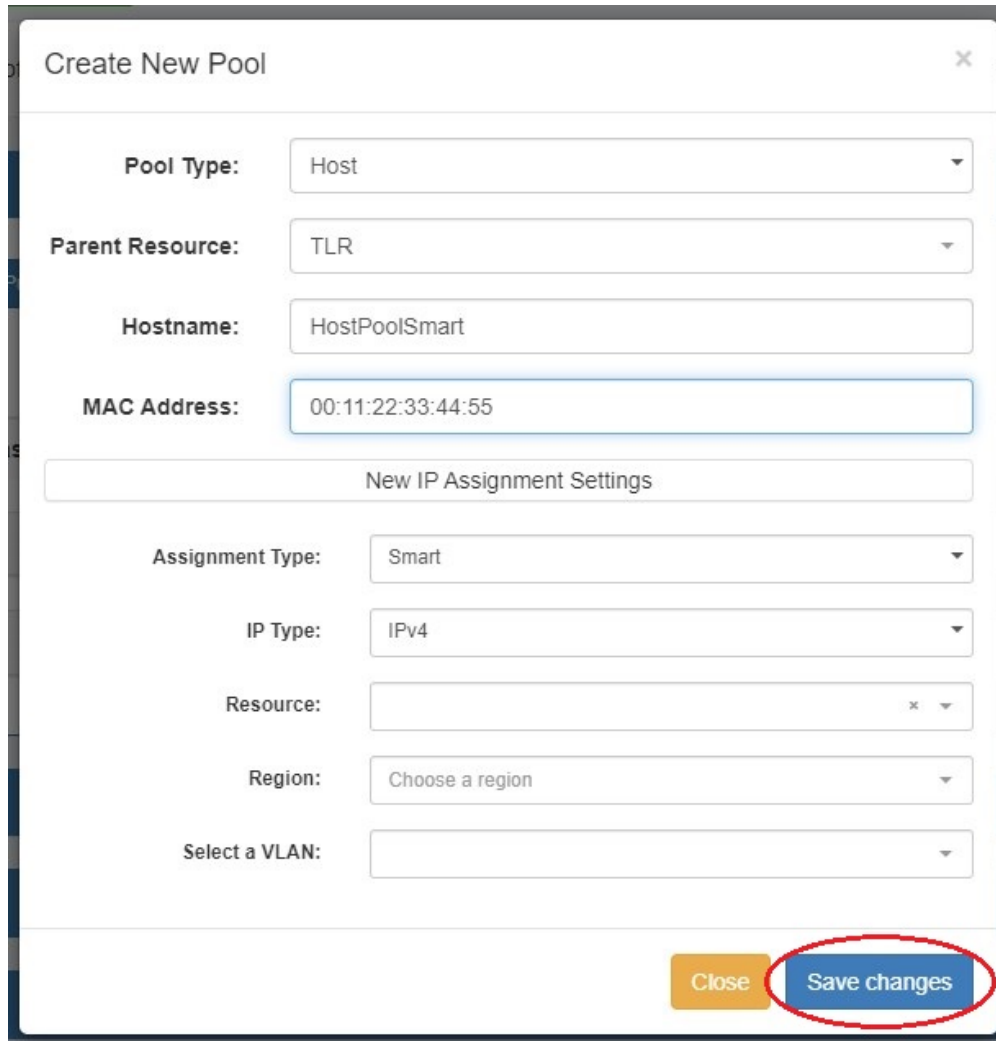
To Direct Assign a DHCP pool, select "Direct" for the assignment type, choose IPv4 or IPv6 for the IP type, then type in the desired IP address.

All other fields are optional - Resource, Region, IPAM Rules, and VLAN may be selected to further narrow the block criteria, if duplicate blocks exist. If desired, toggle "Assign Default Gateway" on.

When done, click "Save Changes". If the typed block exists, with subassignments enabled, and meets any additional criteria, that block will be assigned to the pool.

Add a Host Pool

To add a new host pool to a DHCP group, select "Host" as the pool type. Select the parent resource, and add a hostname and MAC address.



The screenshot shows a 'Create New Pool' dialog box. It contains the following fields:

- Pool Type:** A dropdown menu with 'Host' selected.
- Parent Resource:** A dropdown menu with 'TLR' selected.
- Hostname:** A text input field containing 'HostPoolSmart'.
- MAC Address:** A text input field containing '00:11:22:33:44:55'.
- New IP Assignment Settings:** A section header for the following fields:
 - Assignment Type:** A dropdown menu with 'Smart' selected.
 - IP Type:** A dropdown menu with 'IPv4' selected.
 - Resource:** An empty dropdown menu with a close button (x) and a dropdown arrow.
 - Region:** A dropdown menu with 'Choose a region' selected.
 - Select a VLAN:** An empty dropdown menu with a dropdown arrow.

At the bottom right, there are two buttons: 'Close' (yellow) and 'Save changes' (blue). The 'Save changes' button is circled in red.

Next, choose an assignment type - you may either have ProVision smart assign a block for the pool that matches your provided criteria, or directly assign a specific block.

Smart Assign

To Smart Assign a DHCP pool, select "Smart" for the assignment type and choose IPv4 or IPv6 for the IP type.

All other fields are optional - Resource, Region, IPAM Rules, and VLAN may be selected to further narrow the block criteria.

When done, click "Save Changes". ProVision will choose the first block matching all criteria to assign to the pool.

If no block matches the given criteria, a message will state so. Try either removing some criteria, or ensure that blocks exist in IPAM (with subassignments enabled!) with the given attributes.

Direct Assign

Create New Pool

Pool Type:

Host

Parent Resource:

TLR

Hostname:

HostPoolSmart

MAC Address:

00:11:22:33:44:55

New IP Assignment Settings

Assignment Type:

Direct

IP Type:

IPv4

IP Address:

10.4.0.0/24

Resource:

Region:

Choose a region

Select a VLAN:

Close

Save changes

To Direct Assign a DHCP pool, select "Direct" for the assignment type, choose IPv4 or IPv6 for the IP type, then type in the desired IP address.

All other fields are optional - Resource, Region, IPAM Rules, and VLAN may be selected to further narrow the block criteria, if duplicate blocks exist.

When done, click "Save Changes". If the typed block exists, with subassignments enabled, and meets any additional criteria, that block will be assigned to the pool.

Pushing a DHCP Group

Before pushing a group, expand the "Attached Servers" section and verify that the correct server is attached to the DHCP group.

Default Group

Resource ID: 46363

DHCP Pools

Add Pool

Push Group

Schedule Push

Subnet Pools

Host Pools

Pool Name	Last Modified	Subnet	Range Min	Range Max	Actions
Pool 1	06/22/2018 17:12:46	192.168.80.0/20	192.168.80.1	192.168.95.254	<div>Delete</div> <div>Push</div>
Pool 2	06/22/2018 17:31:36	10.140.93.80/30	10.140.93.81	10.140.93.82	<div>Delete</div> <div>Push</div>
Pool 3	06/22/2018 17:56:09	10.10.16.0/20	10.10.16.1	10.10.31.254	<div>Delete</div> <div>Push</div>

Attached Servers

Server Name

Server Backend

Server Host

Parent Resource

Actions

DHCP - DHCP Test Server - QA test

ISC

dhcp1-sfo.6.com

Entry 2

Detach

Attach server :

Select Server

Attach

Verify Attached DHCP Server

Group Settings

Scheduled Tasks

Manual Group Push

After verifying the attached server, manually push the group by clicking the "Push Group" button under the desired DHCP group.

Default Group

Resource ID: 46363

DHCP Pools

Add Pool

Push Group

Schedule Push

Subnet Pools

Host Pools

Pool Name	Last Modified	Subnet	Range Min	Range Max	Actions
Pool 1	06/22/2018 17:12:46	192.168.80.0/20	192.168.80.1	192.168.95.254	<div>Delete</div> <div>Push</div>
Pool 2	06/22/2018 17:31:36	10.140.93.80/30	10.140.93.81	10.140.93.82	<div>Delete</div> <div>Push</div>
Pool 3	06/22/2018 17:56:09	10.10.16.0/20	10.10.16.1	10.10.31.254	<div>Delete</div> <div>Push</div>

Attached Servers

A DHCP Push Status window appears. If successful, a green "Finished DHCP Pushing Request" will appear as the final message.

If errors occur, an error message will show with details on the issue. When complete, hit the "Close" button.

DHCP Push Status

Last status messages :

DHCP Pushing started... id: 46363

Close

Scheduled Group Push

Scheduled pushes may be set up through the "Schedule Push" button for the group.

Default Group

Resource ID: 46363

DHCP Pools

Add Pool

Push Group

Schedule Push

Subnet Pools

Host Pools

Pool Name	Last Modified	Subnet	Range Min	Range Max	Actions
Pool 1	06/22/2018 17:12:46	192.168.80.0/20	192.168.80.1	192.168.95.254	Delete Push
Pool 2	06/22/2018 17:31:36	10.140.93.80/30	10.140.93.81	10.140.93.82	Delete Push
Pool 3	06/22/2018 17:56:09	10.10.16.0/20	10.10.16.1	10.10.31.254	Delete Push

Attached Servers

Click "Schedule Push" for the group, then select a date, time (24 hour), add a notification email address, and click "Save changes".

Push Scheduler

×

Pick date and time (UTC):

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January 2022

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Time

19:28

19:29

19:30

19:31

19:32

19:33

19:34

Notification Email:

something@example.com

Close

Save changes

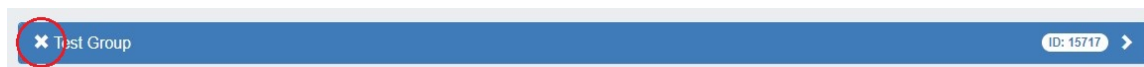
The scheduled task will be shown in both the group details (under "Scheduled Tasks") and the [Admin Scheduler](#) task list.

Scheduled Tasks			
Task Name	Last Run	Repeat Time	Actions
Scheduled Push: Default Group		One time on 2017-05-31 at 14:00 PDT	Delete

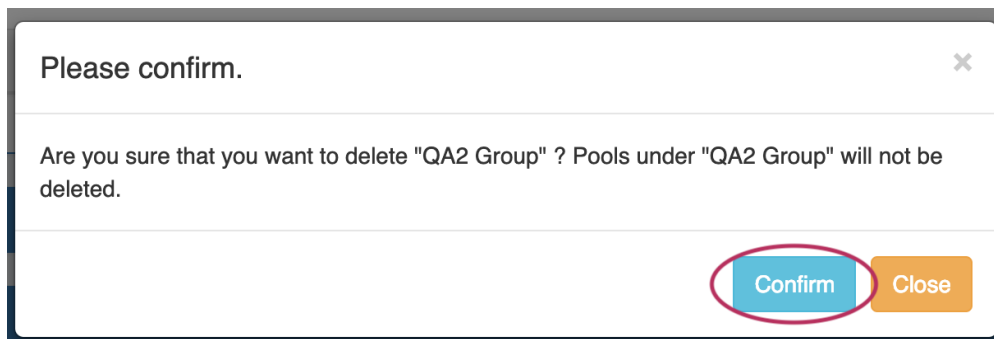
The task may be deleted prior to running by clicking the "delete" button, but will automatically be removed once completed.

Delete a Group

Delete a non-Default Group by clicking on the "X" to the left of the group's name in the DHCP Groups List. When you delete a DHCP group, pools under the group will not be deleted. They will no longer be associated with a DHCP group, and can be managed from the DHCP Pools List.



A confirmation message will appear, click "Confirm" to save your changes, or "Close" to exit without saving.



The Default Group may not be deleted.

Additional Information

For more information on DHCP tasks, see:

- [DHCP Tab](#)
- [Working with DHCP Pools](#)
- [Working with DHCP Gadgets](#)

Administrative Tasks:

- [DHCP Administration](#)
- [Working with DHCP Servers](#)