Working with DHCP Pools

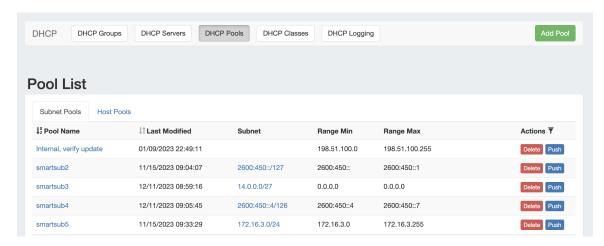
DHCP Pool Management

DHCP Pool specific tasks are managed from two main areas - the DHCP Pools list, and the Pool Details page.

The DHCP Pools List is accessed from the DHCP tab, then clicking on the DHCP Pools subtab button.

Clicking on the Pool name from any DHCP Pool List will open the Pool Details page for the specific pool.

DHCP Pools List



The **DHCP Pools** list provides the same pool-level functionality as the DHCP Groups pool lists, but includes all pools regardless of Group attachment

From this page, you may create, view, edit, and push subnet or host pools.

Clicking on the pool name will open the Pool Details page, and clicking on the Subnet will open IPAM Mange for the assigned pool block.

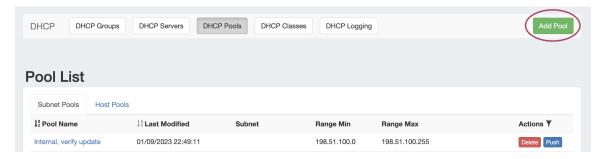
The Pool Details page allows you to view, add, delete, and push individual DHCP Host and Subnet Pools. Under a pool, you may specify and update IP assignments, ranges, reservations and optionally set BOOTP Vendor Extensions / DHCP Options to send to the DHCP server.

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Add a DHCP Pool

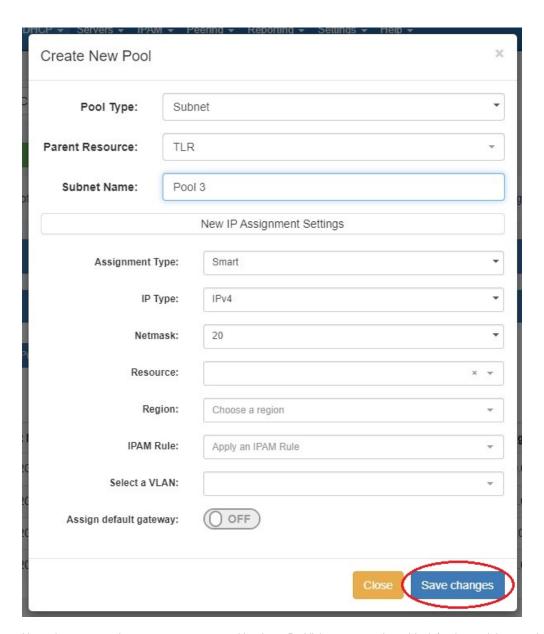
Add a new DHCP Pool from the Pool List by clicking the "Add Pool" button at the top of the page.



When the "Create New Pool" dialog appears, you may choose to create either a Subnet or Host Pool. Either pool type may have a block smart assigned or manually direct assigned.

Create 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.



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

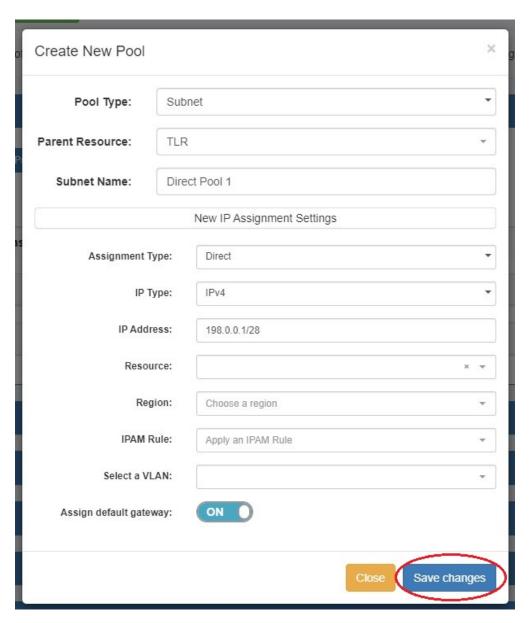
To Smart Assign a DHCP pool, select "Smart" for the Assignment type, choose IPv4 or IPv6 for the IP type, then select a netmask.

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



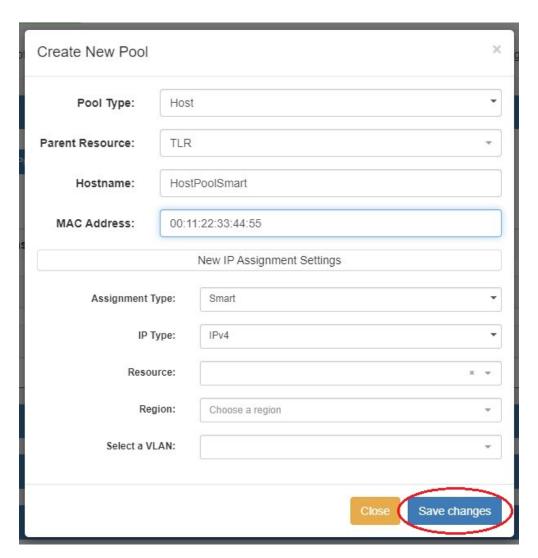
To Direct Assign a DHCP pool, select "Direct" for the Assignment type, choose IPv4 or IPv6 for the IP type, then type in the desired IP Address.

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.

Create 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.



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

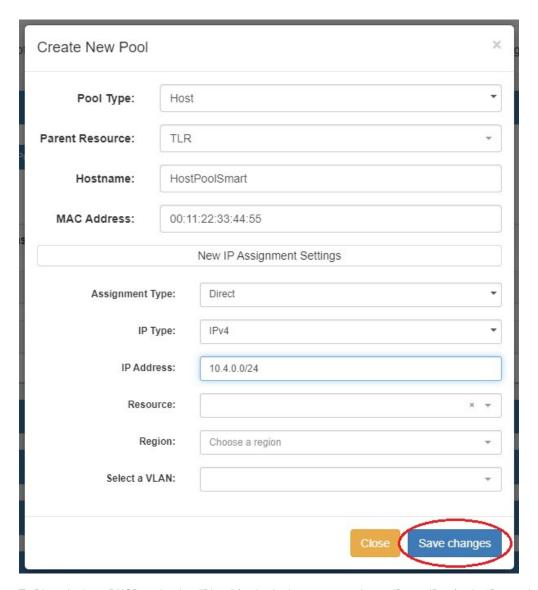
To Smart Assign a DHCP pool, select "Smart" for the Assignment type and choose IPv4 or IPv6 for the IP type.

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



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.

The Pool Details Page

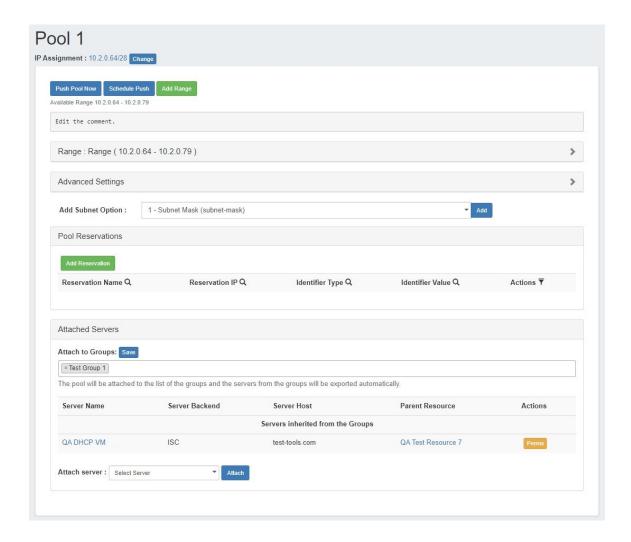
Additional Pool Management options are available from the **Pool Details** page. Pools may be edited by clicking on the Pool name in any **DHCP Pools** list in which it appears.

View / Edit / Manage a Pool

To view, edit, or manage the details for a pool, open the Pool Details page by clicking on the pool name from any DHCP Pools list.

From this page, users may edit assignment, range, settings, reservations, options, or servers for the pool.

To push the pool, click the "Push Pool Now" or "Schedule Push" buttons at the top of the pool details.



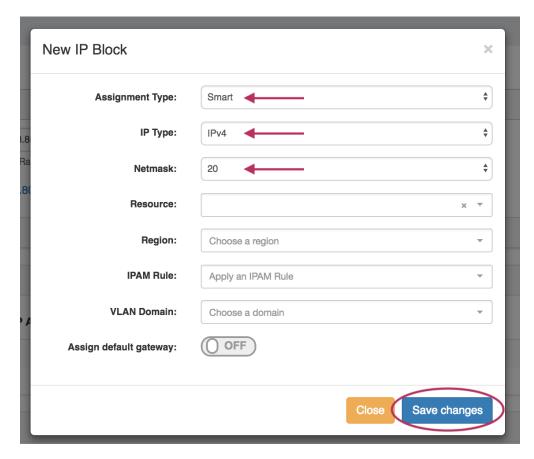
Edit IP Assignment

The current IP assignment displays at the top of the Pool Details page. Clicking the CIDR will take you to IPAM manage for the assigned block / aggregate.

To change the current IP assignment for the pool, click the "Change" button next to "IP Assignment".



In the "New IP Block" dialog, select the Assignment Type, IP Type, and Netmask. Optional fields include Resource, Region, IPAM Rule, and VLAN as filtering criteria if desired.



When complete, click "Save changes".

If no block meets the selected criteria, an error message will appear - try removing filter criteria, or verify that subassignable blocks meeting the criteria have been created in IPAM.

If successful, the IP assignment will change to a block meeting the provided attributes.

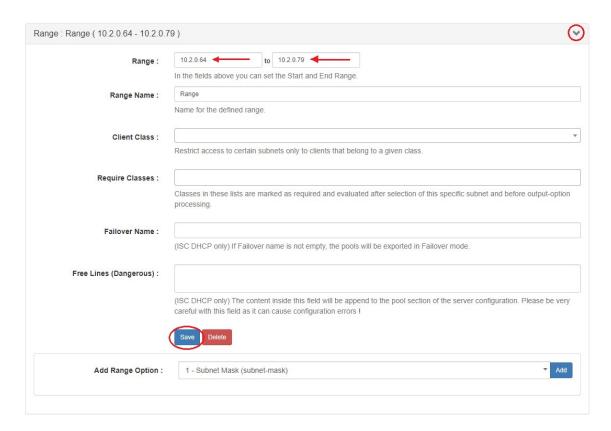
Add / Edit a comment:

To add a comment to a pool, click anywhere inside the comment area and begin typing. The comment will be saved when an area outside of the comment box is clicked, deselecting the comment area.



Edit / Add a Pool Range

The pool range may be manually edited by expanding the "Range" module and typing the desired range start and end values into the "Range" fields, then clicking the "Save" button. From here, you may also edit the Range Name, Class and other settings, or add an option to a range.



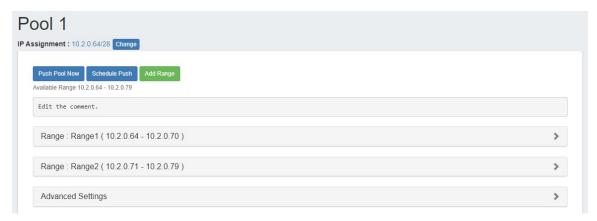
To add a range, click the "Add Range" button at top.



Enter a Range Name, Range Start, and Range End and click "Save changes".

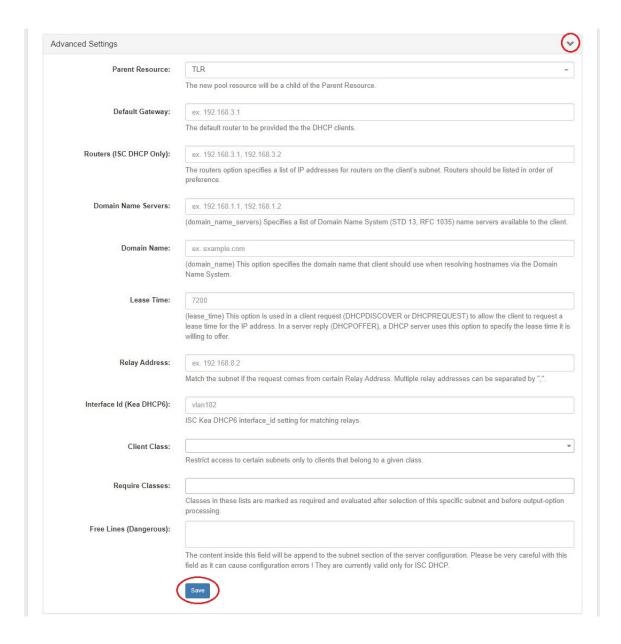


The range will then be added to the pool and available for editing.



Edit Advanced Settings:

Open the zone "Advanced Settings" section by clicking on the header or the expansion arrow (>). Edit fields as needed, and click "Save" when complete.

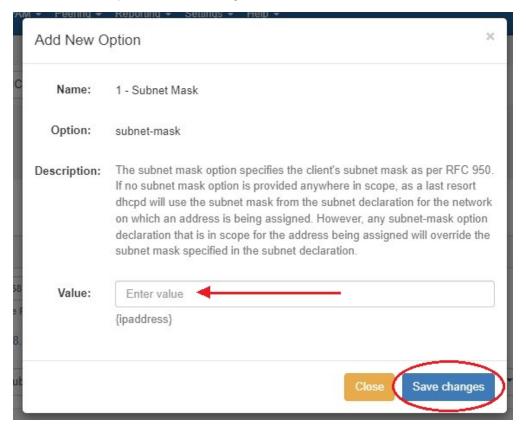


Add / Remove a DHCP Subnet Option

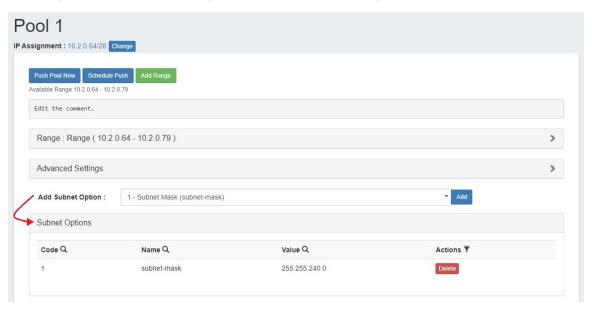
To add a DHCP Subnet Option to a subnet pool, select an option from the dropdown and click "Add".



Enter a value for the option and hit "Save changes".



When an option is added a new "Subnet Options" module will be added to the pool view.



To delete an option click the "Delete" button next to it.



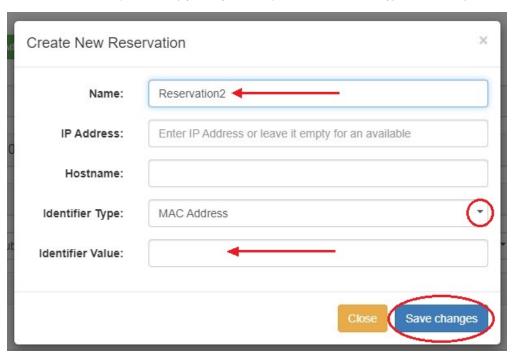
Add / Remove a Pool Reservation or Pool Reservation Option

DHCP Pool Reservations allow for a permanent address to be reserved for the pool assignment.

Add a new pool reservation by clicking the "Add Reservation" button under "Pool Reservations".



Enter the Name and IP (or leave empty for any available). Choose an Identifier Type from the dropdown, enter a value, and hit "Save Changes".



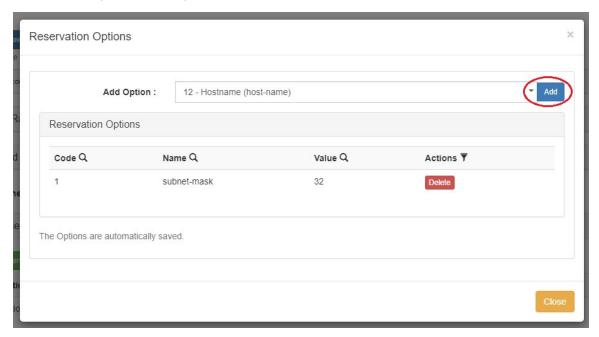
Once created, a reservation may be removed by clicking the "Delete" button next to it.



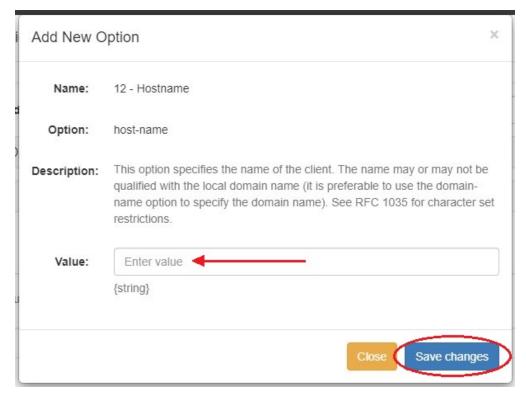
DHCP Options may be added to a reservation, if desired, by clicking the "Options" button next to it.



Choose a DHCP option from the dropdown menu and click "Add".



Enter a value for the chosen option and click "Save changes".

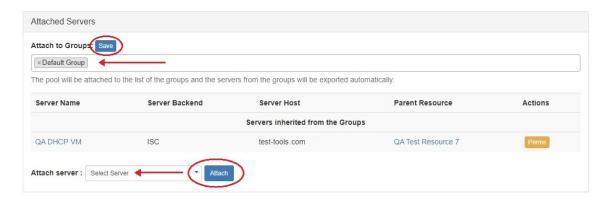


Attach Group / Server to a Pool

Servers may be attached to a pool either from a DHCP Group association, or directly from the Pool Details Page.

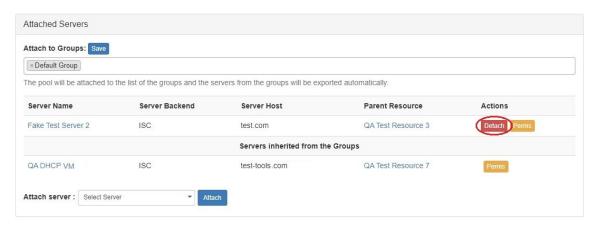
Attach the pool to a DHCP Group by clicking in the DHCP Group search box, selecting a Group, then clicking "Save" next to "Attach to Groups". The pool will inherit the DHCP server associated with that group.

To directly attach a DHCP server to a pool, select the server from the "Attach server" dropdown, then click the "Attach" button.



Detach Server from a Pool

To detach a server from a pool, look for the server under the "Attached Servers" list, then click "Detach" under actions for that server.



To detach a server inherited from a Group, the pool must be removed from the group. To do that, click the "x" next to the group name in the "Attach to Groups" box, then click "Save".

Delete a Pool

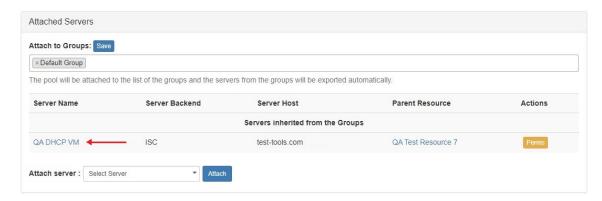
Users with delete permissions over the pool may delete it by clicking the "Delete" button under "Actions" from any DHCP Pool List.

Pool List					
Subnet Pools Host Pools					
↓ ^a ₂ Pool Name	↓↑ Last Modified	Subnet	Range Min	Range Max	Actions ₹
Internal, verify update	01/09/2023 22:49:11		198.51.100.0	198.51.100.255	Delete Push
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

Pushing DHCP Pools

Pools may be pushed manually ("Push", "Push Pool Now"), as a scheduled future push ("Schedule Push"), or pushed as part of a DHCP Group or DHCP Server Push.

Before pushing a pool for the first time, view the "Attached Servers" section in the **Pool Details** page and verify that the correct server is attached to the DHCP Pool, either directly or via a DHCP Group.



Manual Pool Push (DHCP Pools List)

Pools may be manually pushed by clicking the "Push" button for the pool from any DHCP Pools list.



The "DHCP Push Status" modal will appear, showing status and any errors that occur.



When a successful push is complete, a green "Finished DHCP Pushing Request" message will appear, and the window may be closed.

Manual Pool Push (Pool Details page):

The Pool Details page, accessed from clicking on the zone name in the Group zone list, includes a "Push Pool Now" button that immediately attempts to push the pool to the attached server(s).

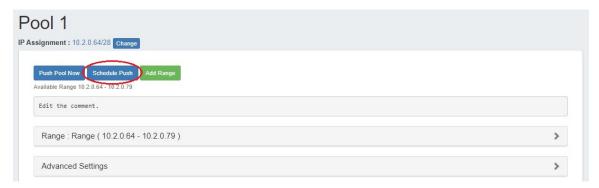


Click on "Push Pool Now", and the "DHCP Push Status" modal will appear, showing status and any errors that occur.

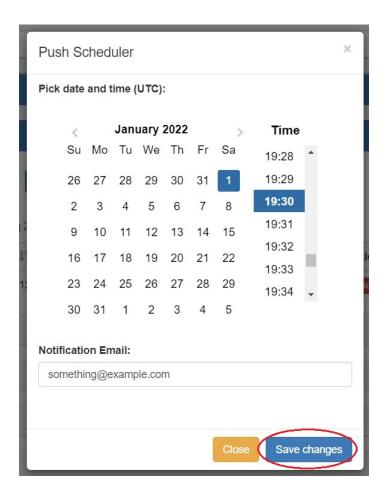
When a successful push is complete, a green "Finished DHCP Pushing Request" message will appear, and the window may be closed.

Schedule Push (from Pool Details page):

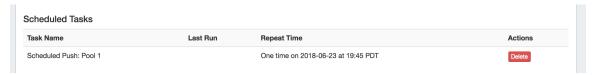
The Pool Details page includes an option to schedule a push, similar to scheduling a Group push.



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



The Scheduled task will be shown in both the Pool Details page (under "Scheduled Tasks") and the Admin Scheduler task list.



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

Schedule Push (Admin Scheduler):

Pools may also be pushed via scheduled DHCP Group or DHCP Server pushes. Server pushes may be set up by Admin users from either the **DHCP Servers** section, or the **Scheduler** tab.

For more information, see the Working with DHCP Servers or Scheduler Tab documentation.

DHCP Group Push:

All pools contained in a DHCP Group may be pushed at the same time, by pushing the DHCP Group.

For information on working with DHCP Groups, including performing a manual or scheduled Group push, see Working with DHCP Groups - Pushing a Group.

DHCP Server Push:

Admin users may push all pools on a DHCP server from the DHCP Tab -> DHCP Servers page.

For information on working with DHCP Servers, including performing a manual or scheduled server push, see Working with DHCP Servers - Pushing a Server.

Additional Information:

For more information on working with DHCP Pools, Groups, and Servers, see the following sections:

- DHCP Tab
- Working with DHCP GroupsWorking with DHCP GadgetsDHCP Administration
- DHCP Settings