ProVision 6.0.0

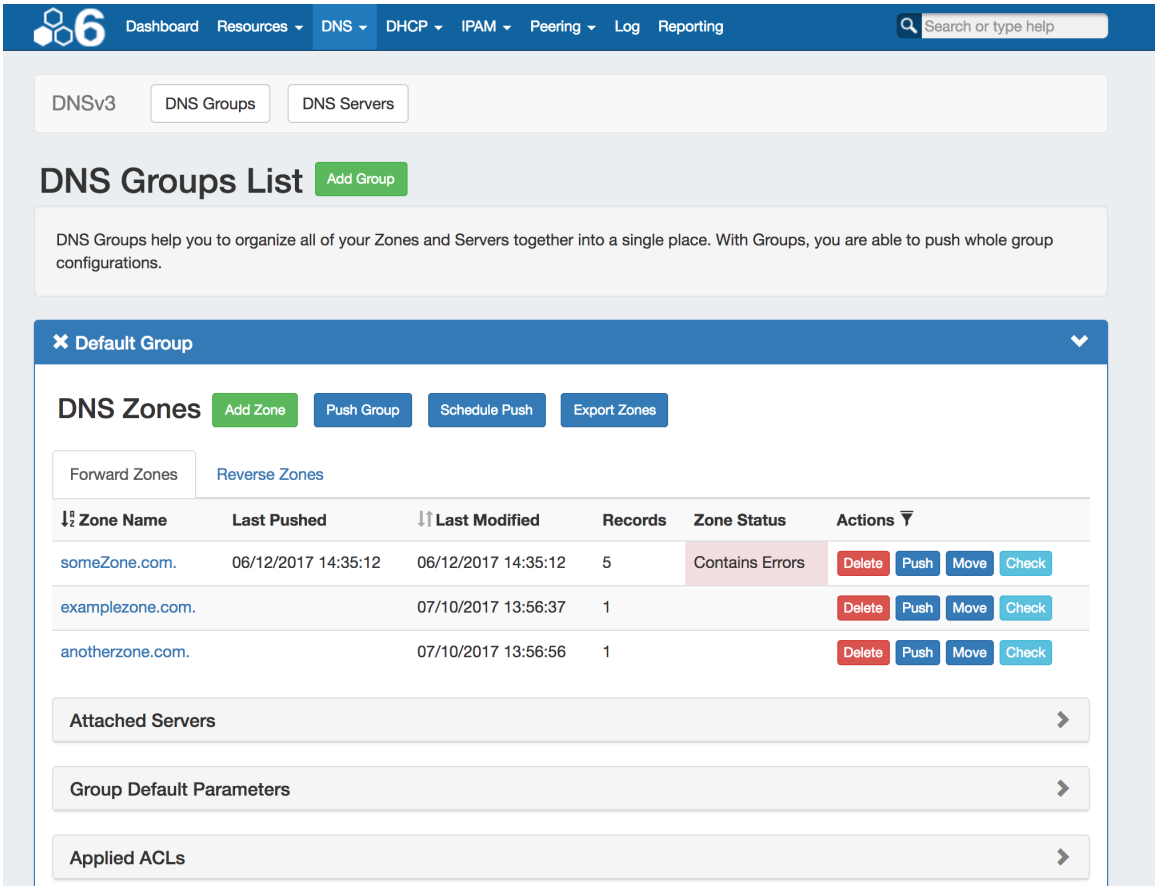
ProVision 6.0 is a major release with new features.

New Features

(CFR denotes customer requested)

DNSv3

IM -2552: Updated and replaced the DNS Admin and DNS Tabs with DNSv3 - featuring a more efficient backend, new user interface, and a DNS "Group" system.



DNSv3 restructures ProVision's DNS tab to organize DNS zones into "DNS Groups". Zones are gathered under Groups, default parameters and servers are set per Group, and pushes may be done on a per Group level. A "Default Group" is automatically provided in ProVision, but other Groups may be desired to organize zones and default values. See the updated workflow for DNSv3 at DNSv3 Workflow Concepts.

DNSv3 changes ProVision's approach to Admin-level DNS tasks, integrating them under the **DNS** tab rather than a separate "Admin" tab. Server management has been integrated into the DNS Tab, under "DNS Servers" (accessible only to admin-level users), default parameters, SOA, ACLs, and exports are incorporated into each DNS Group.

Permissions for interacting with DNS elements in DNSv3 have been adjusted, incorporating DNS items under the "Resource" system when setting User Group Permissions. This allows for fine-tuned settings on individual DNS Groups, servers, and zones within the Permissions Group.

For an overview flowchart of working in DNSv3, see the updated workflow for DNSv3 at DNSv3 Workflow Concepts.

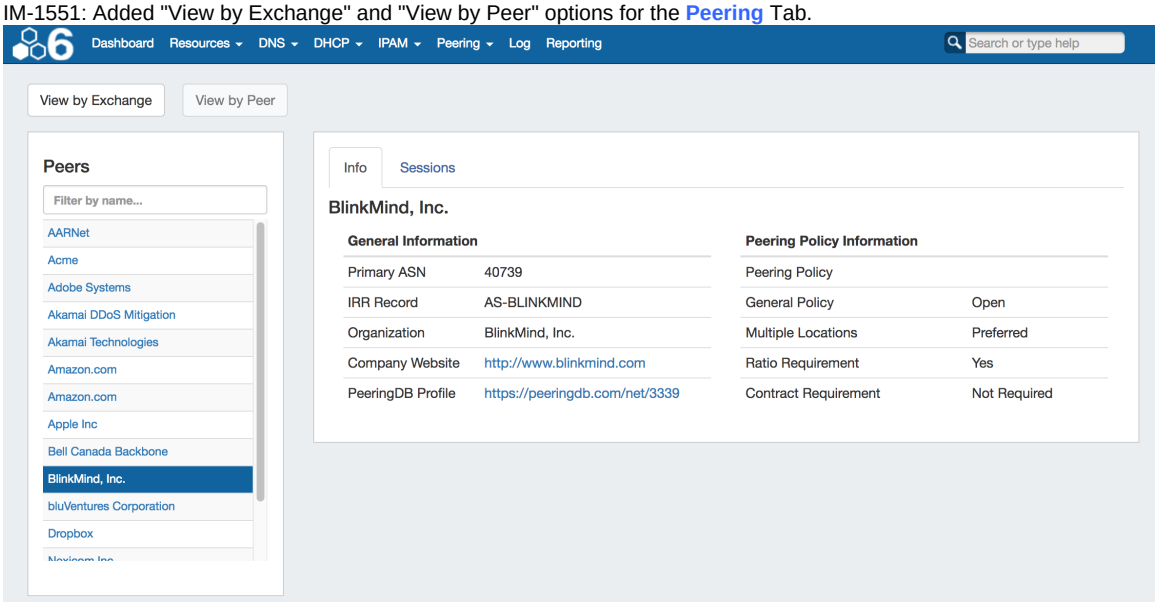
DNSv3 Related changes include:

- Access DNS Servers, Groups, and Zones from the same ProVision **DNS** tab.
  - See: DNS Tab

- Removed the **DNS-Admin** tab. Functionality previously in **DNS-Admin** is now contained under the **DNS** tab "DNS Servers" area (Admin only), with SOA and Nameserver defaults set per-Group.
    - See: DNS Administration and Working with DNS Servers
- Introducing "DNS Groups" - Organize your Zones and Servers together into a single place. With Groups, you are able to organize groups and push whole group configurations at the same time.
    - See: Working with DNS Groups
- Updated Zone list interface and View Zone pages.
    - See: Working with DNS Zones and Editing DNS Zones
- Zone Error Monitoring - Check zones for errors, and receive detailed feedback.
    - See: Working with DNS Zones
- Schedule Pushes at the server, group, or individual zone level.
    - See: Working with DNS Groups, Working with DNS Zones, DNS Administration
- DNS Templates have been removed and replaced with an option to "Clone Existing Zone" when creating a new zone.
    - "Template" Zones may be created under a "Template" DNS Group, and given an appropriate name (templateABC.com.) to reference when cloning. Any existing DNS Templates with automatically be migrated to a new "Template" DNS Group during the 6.0 upgrade.
    - See Working with DNS Groups and Working with DNS Zones for more information on creating new Groups and zones, respectively.
- Incorporated ACLs / Views into a DNS Group module.
    - See Configuring Split Horizon and Views
- Enabling and configuring DNSSEC has been revised to work within the DNSv3 server / Groups system.
    - See Configuring DNSSEC
- The Users tab Group Permissions have been updated to remove "DNS" as a separate permissions area, as DNS entities (servers, groups, zones) are now considered "Resource" items.
    - In order to push a DNS Group or zone, Users without global or admin permissions will need to have resources permissions specifically added for that server, DNS Group, or zone.
    - See Users & Permissions
- Revised the Data Import -> BIND DNS Zone Upload / Import tool to be compatible with DNSv3 and ProVision-exported DNS Group export .zip files. Imports may now associate a DNS Group to import zones under, and server mapping has been removed (as servers are now associated at the DNS Group level).
    - See BIND DNS Zone Upload and Import

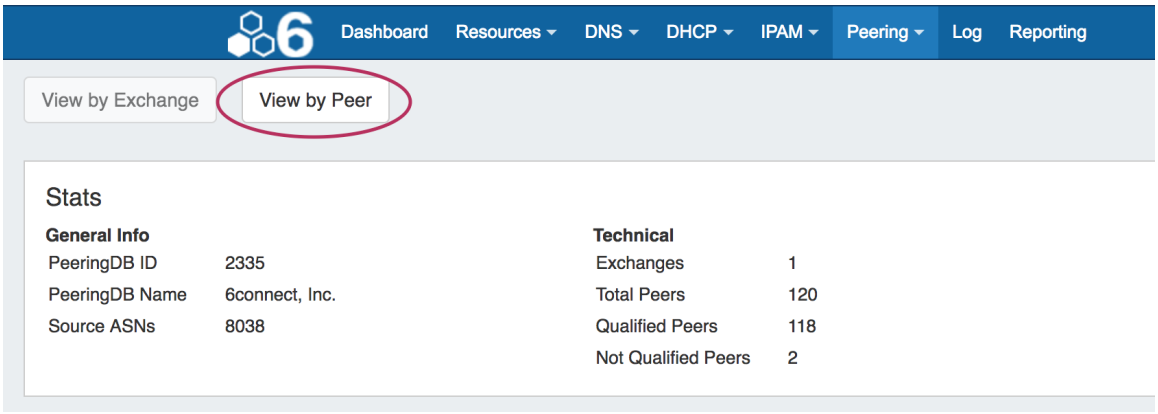
Peering "View By Peer" tab

IM-1551: Added "View by Exchange" and "View by Peer" options for the **Peering** Tab.



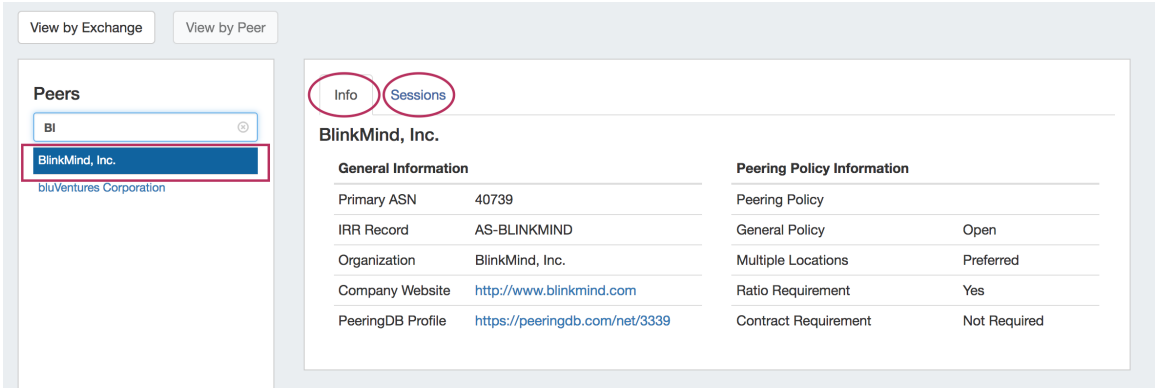
"View by Peer" allows you to select a peer, and view Peering DB information and all ProVision sessions for that Peer.
"View by Exchange" returns you to the standard Peering Tab view, with Peer sessions organized under each exchange.

To see "View by Peer", navigate to the ProVision Peering Tab. At the top left of the page, click the "View by Peer" button.



On the "View by Peer" page, click on a Peer from the list on the left. You may also filter the list by typing a few characters from the Peer name into the filter box.

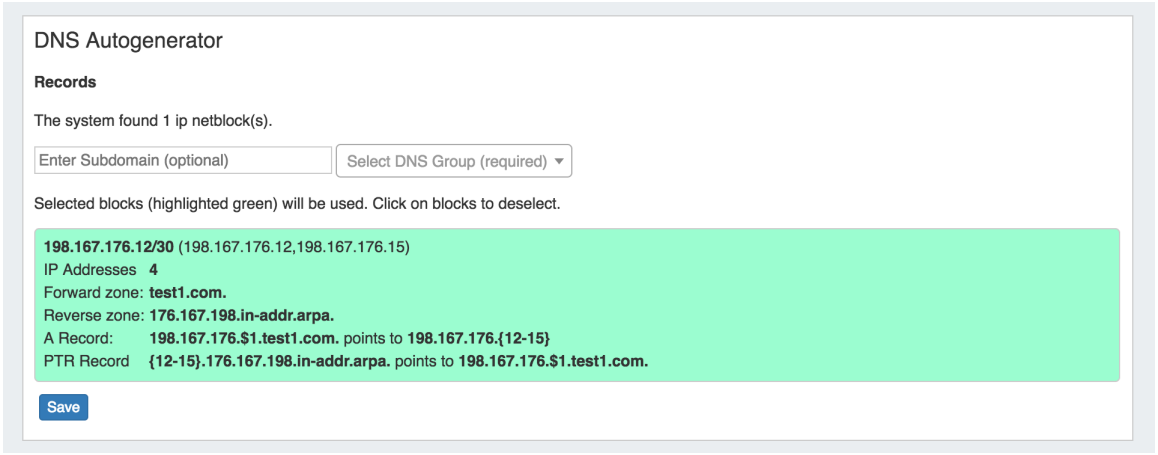
Once a Peer is selected, View information and sessions for that peer by clicking on the "Info" and "Sessions" tabs at the top of the center information panel.



When done, return to the main Peering Tab by clicking on the "View by Exchange" toggle at the top of the page.

DNS Autogenerator Gadget

The DNS Autogenerator Gadget uses the Hostname field (6c-hostname-fqdn) of the Resource to generate a list of DNS forward and reverse zone entries based on the blocks assigned to the Resource in the IPAM Gadget It will generate a list of potential zone records - just select the ones you want to create, save the changes and you are ready to push the zones. See Gadgets - DNS Autogenerator for more details.



Enabling the DNS Autogenerator

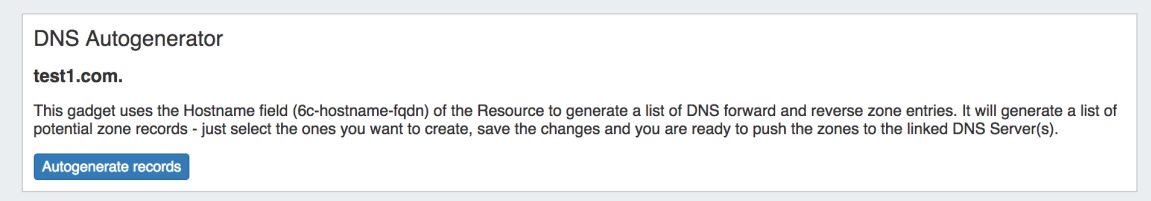
To set up this Gadget, ensure that the Section of the Resource (typically, "Resource Holder"), has the "Hostname" field (6c-hostname-fqdn) and the DNS Autogenerator Gadget added to the Section. (See: Customizing Sections and Customizing Fields).

Then, check that the Resource itself has information entered into the "Hostname" field. If the field is already filled out, it will show in the "Fields" information area at the bottom of the Resource Entry page. To add or edit the hostname, click "Edit" at the bottom of the resource entry page, add the information to the Hostname field, and click "Save".

Once a hostname has been associated with a Resource, and the page refreshed, the DNS Autogenerator Gadget will be visible.

Working with the DNS Autogenerator

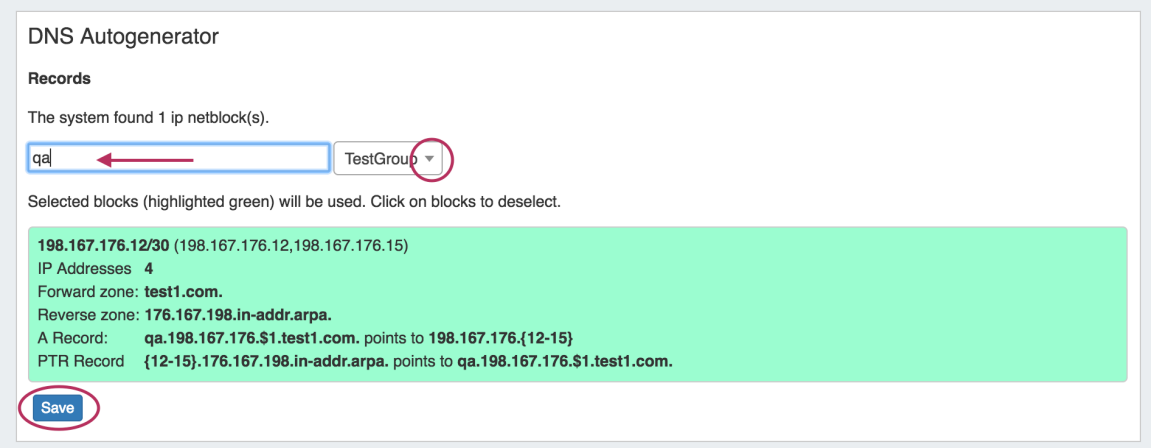
One enabled and visible, the DNS Autogenerator Gadget will initially show a short description, the hostname, and a button to "Autogenerate Records".



Before starting, check that the blocks assigned to the Resource in the IPAM Gadget are correct and up-to-date - the Autogenerator uses these blocks to create the records. If using a DNS Group other than "Default" to hold zones, ensure that the desired DNS Group to hold the generated records has been set up. (See: Working with DNS Groups).

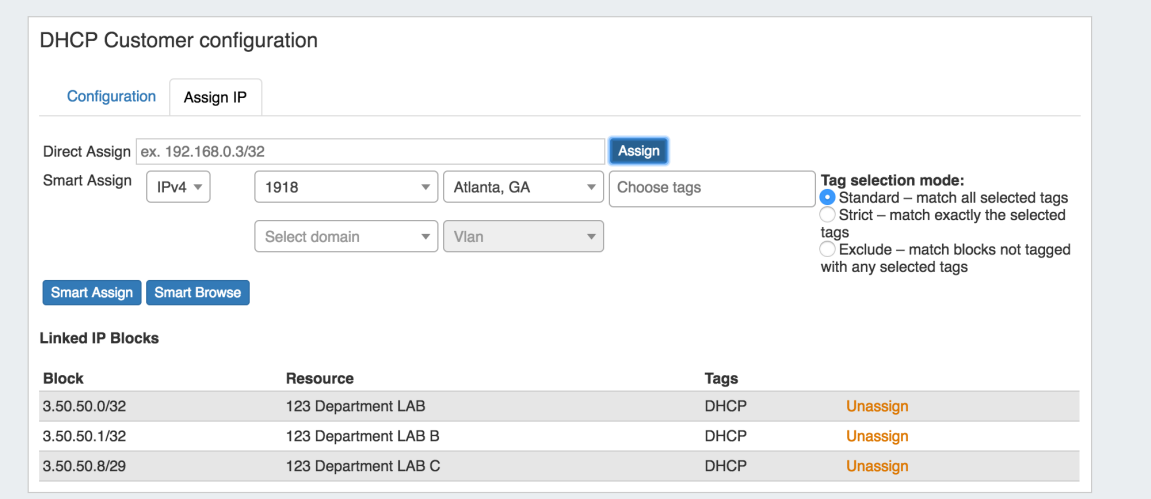
When ready, click the "Autogenerate Records" button. The Gadget will search through the blocks in the IPAM gadget and provide a list of found blocks.

Next, add in a subdomain if desired (optional), and select the DNS Group to hold the records (required). Click on the listed blocks to select (highlighted green) or deselect (grey) for DNS zone / record creation.



*Finally, hit the "Save" button at the bottom of the gadget - the selected forward and reverse DNS records will be created and added into the DNS Group, viewable in the **DNS** Tab. From there, you can choose to push / schedule push the newly generated zones, or re-run the generation if desired.*

DHCP Customer Configuration Gadget



The DHCP Customer Configuration Gadget allows users to assign IP aggregates to the DHCP server pools and generate DHCP Server Configuration changes.

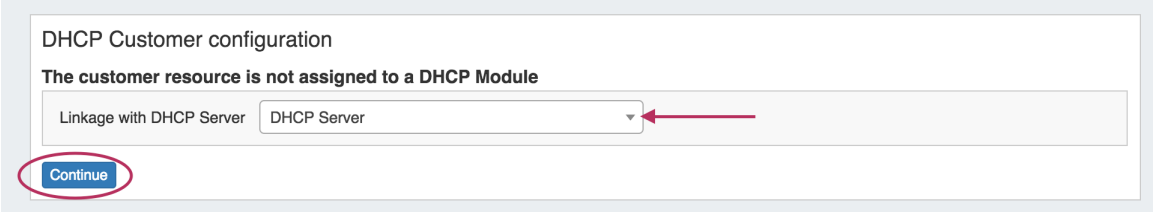
These configurations are then sent to the associated DHCP server Management Gadget as "Unpushed Configurations", where they may be held until a manual or schedule push occurs.

Before using the DHCP Customer Configuration Gadget, the following should be set up in ProVision:

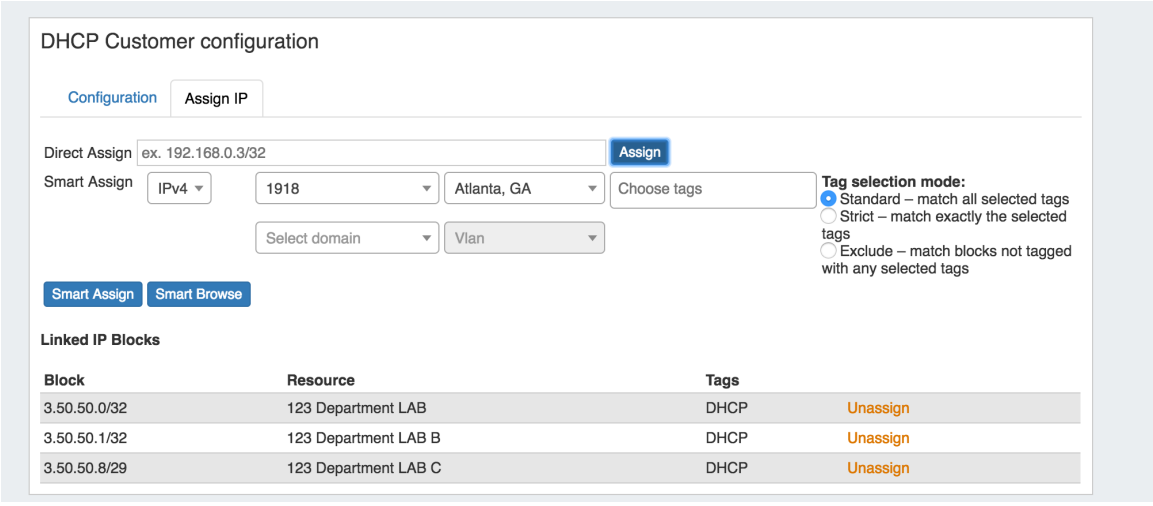
- *The associated DHCP server should be created in ProVision and set up in the DHCP Management Gadget (See: DHCP Tab).*
- *Add the DHCP Customer Configuration Gadget to the desired Section. You may want to create a specific "DHCP Customer" Section for DHCP customer entries (See: Customizing Sections).*
- *Have, or set up DHCP Aggregates from the **IPAM** Tab with the desired IP space type, RIR, Region(s), Tags, and any desired VLAN criteria. Regions are a required field when assigning IPs from the DHCP Customer Configuration Gadget.*

Using the DHCP Customer Configuration Gadget

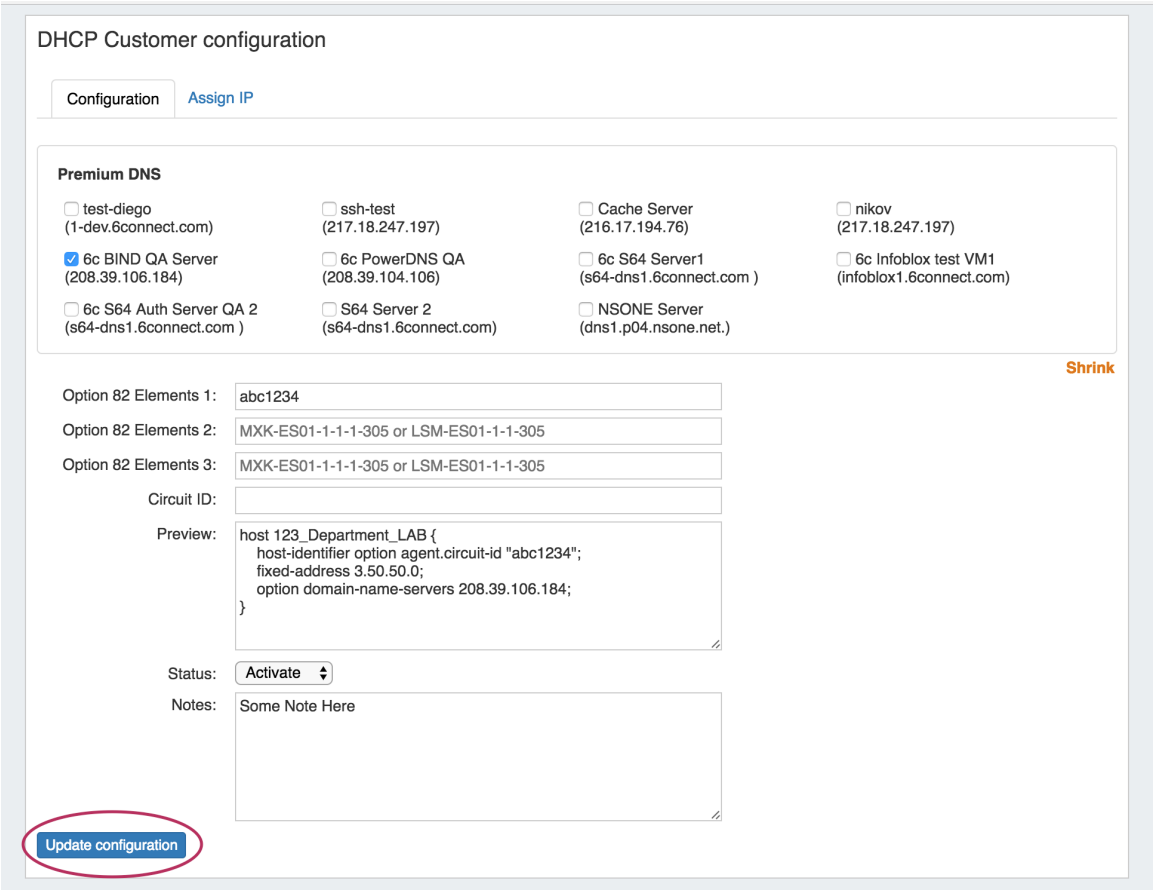
- *Step 1) Link the Gadget with the desired DHCP Server*



- *Step 2) Assign IP's for Pools from DHCP Aggregates*



- *Step 3) Set up configuration information - add Option 82 Elements, Circuit ID, and notes. Use the "Preview" field to confirm the accuracy of the data, and select the status as "Activate" or "Terminate".*
  Once saved, the updated configuration will be sent to the DHCP Management Gadget.

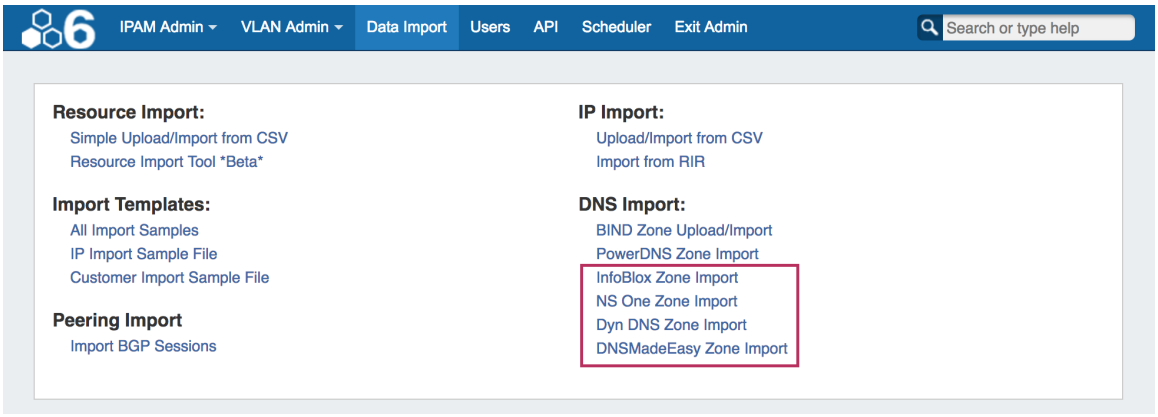


- *Step 4) an admin user may manually push the updated configuration from the DHCP Management Gadget, or use a scheduled DHCP push task to automate the pushes.*

See Gadgets - DHCP Customer Configuration for more details.

Additional Features / Improvements

New DNS Import Options

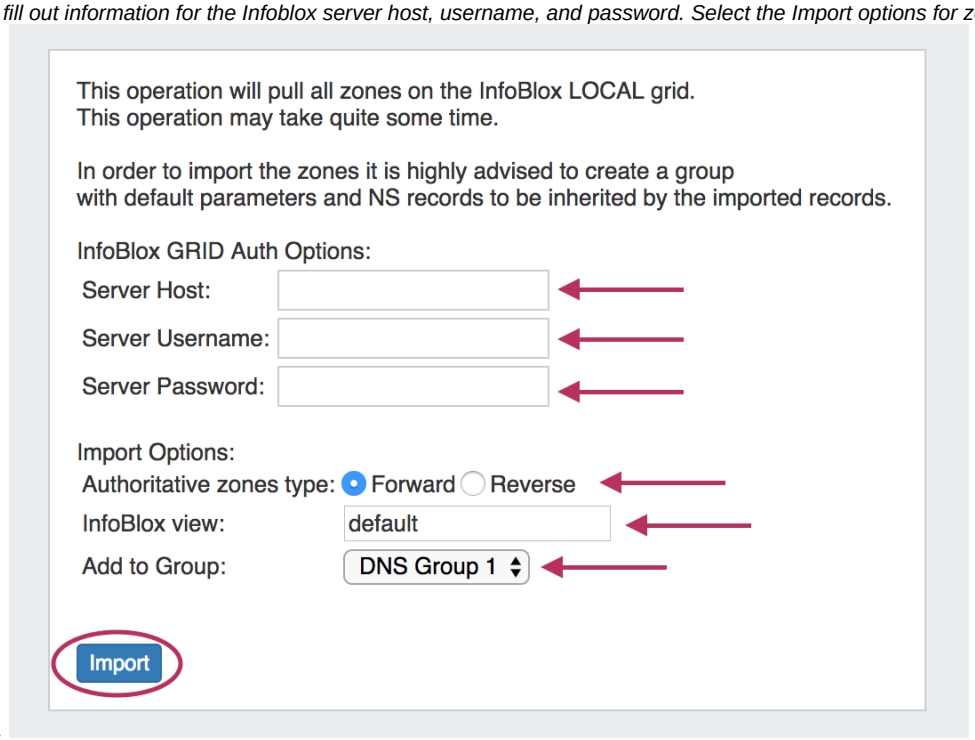


Provision DNSv3 supports the addition of four new DNS Zone Import options to the Admin **Data Import** Tab:

- **InfoBlox DNS Zone Import**

  *To import zones from an Infoblox server, navigate to the Admin area **Data Import** Tab, and click on "InfoBlox Zone Import".*

  From there, fill out information for the Infoblox server host, username, and password. Select the Import options for zone type, view, and DNS Group.



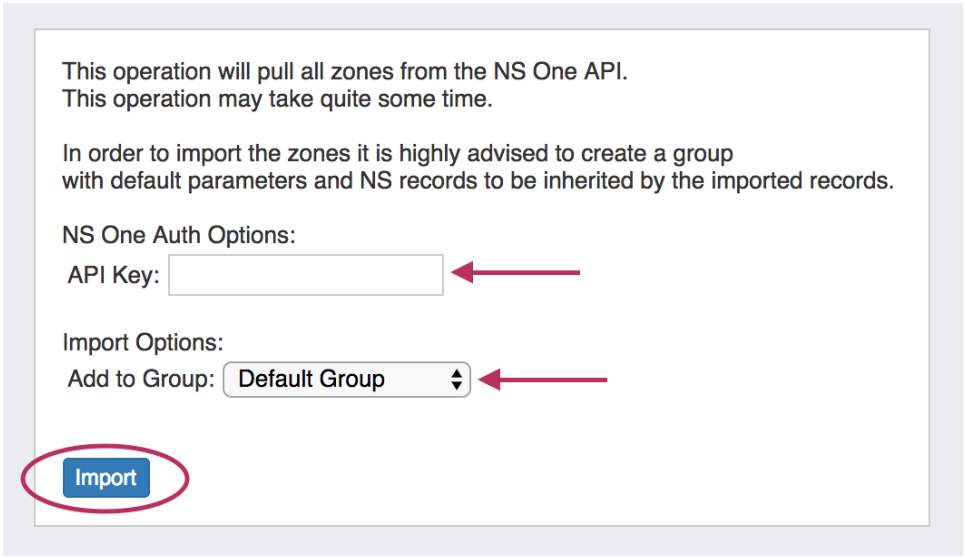
  When done, click the "Import" button.

  For more information, see InfoBlox Zone Import.

- **NS One DNS Zone Import**

  *To import zones from a NS One server, navigate to the Admin area **Data Import** Tab, and click on "NS One Zone Import".*

  From there, enter the NS One API Key and select the desired DNS Group to add the zones under.



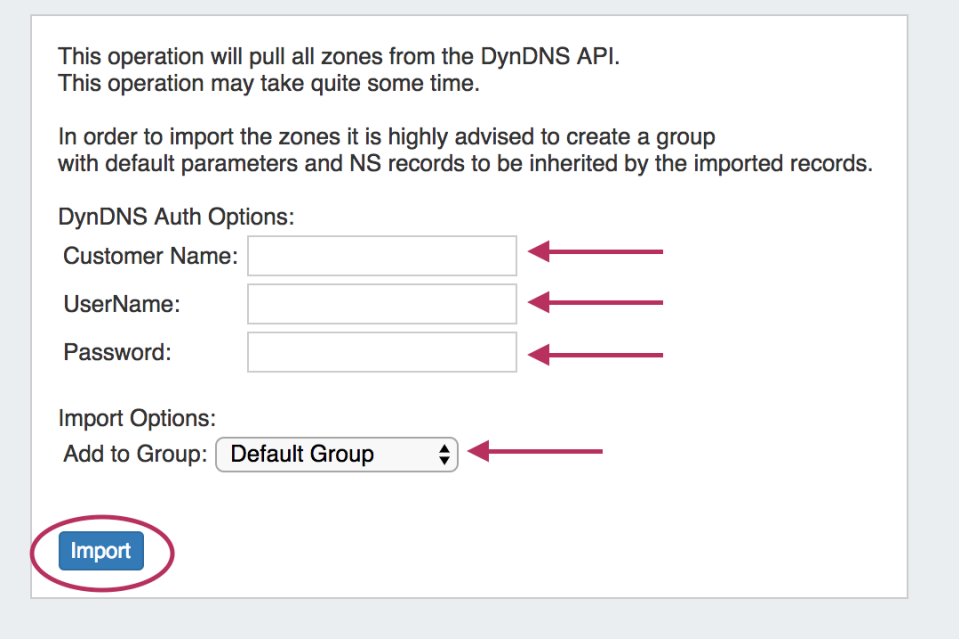
  When done, click the "Import" button.

  For more information, see NS One Zone Import.

- **DynDNS Zone Import**

*To import zones from a Dyn DNS server, navigate to the Admin area **Data Import** Tab, and click on "Dyn DNS Zone Import".*

From there, enter the DynDNS Customer Name, UserName, and Password, then select the desired DNS Group to add the zones under.



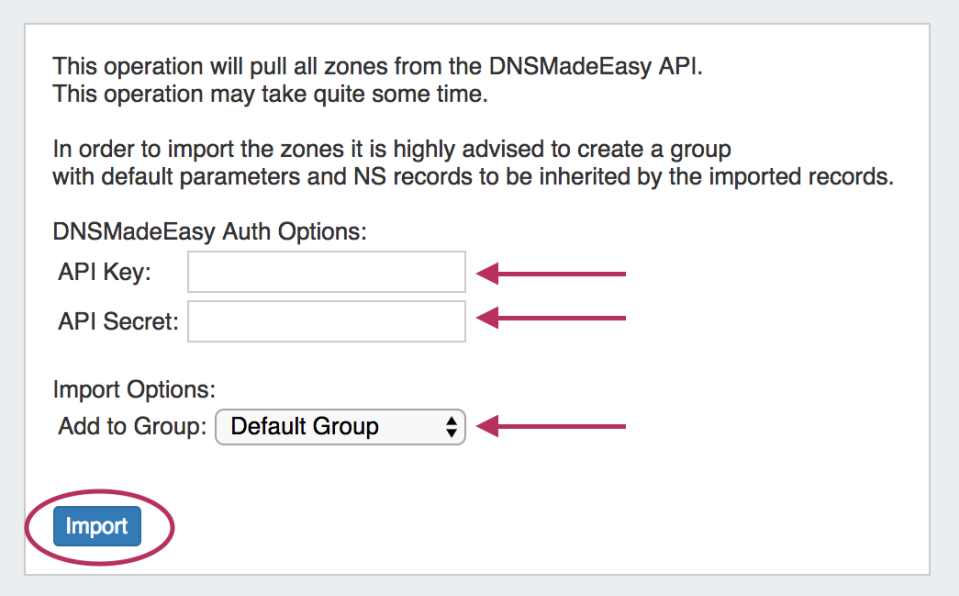
When done, click the "Import" button.

For more information, see Dyn DNS Zone Import.

- **DNSMadeEasy Zone Import**

*To import zones from a DNSMadeEasy server, navigate to the Admin area **Data Import** Tab, and click on "DNSMadeEasy Zone Import".*

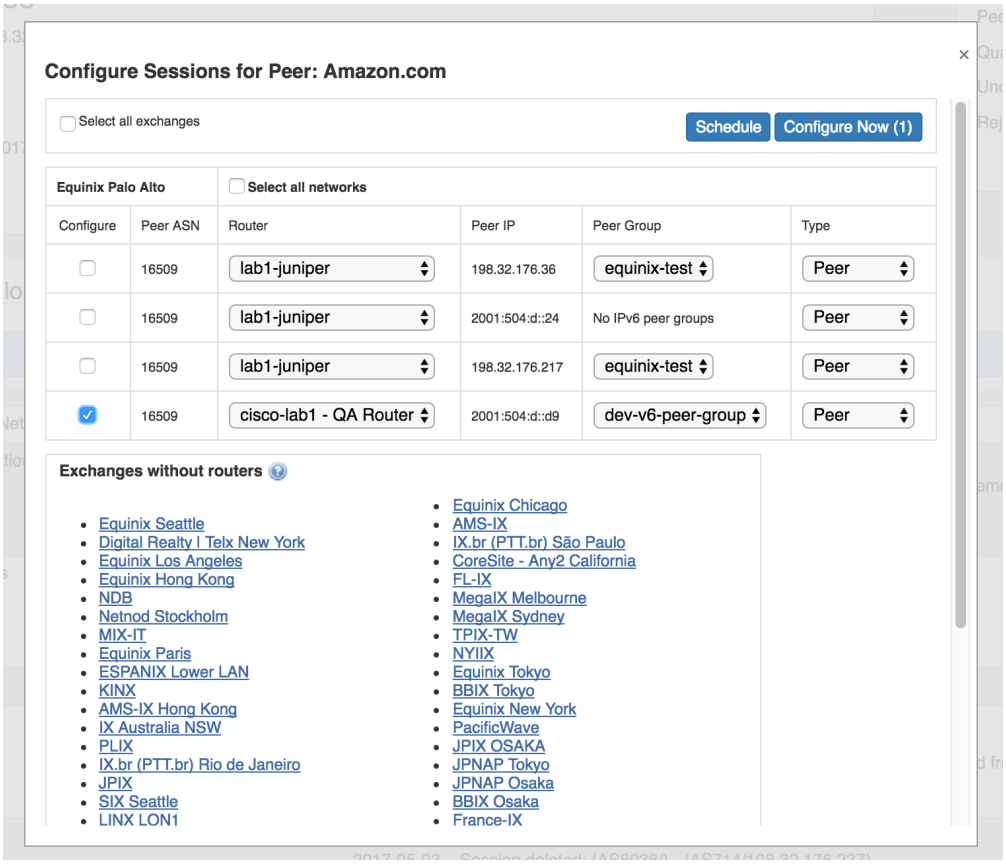
From there, enter the DNSMadeEasy API Key and API Secret, then select the desired DNS Group to add the zones under.



When done, click the "Import" button.

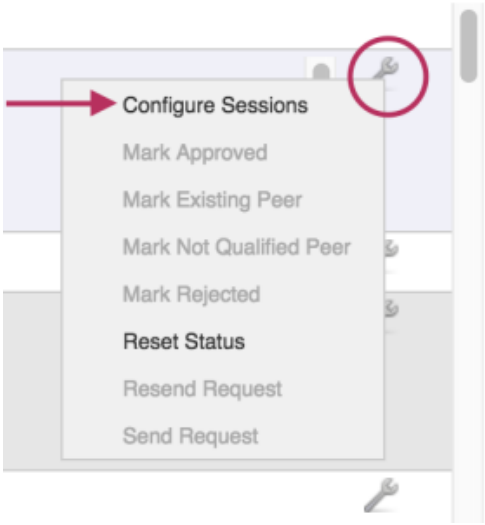
For more information, see DNSMadeEasy Zone Import.

Peering - Configure Sessions for Existing / Approved Peers:

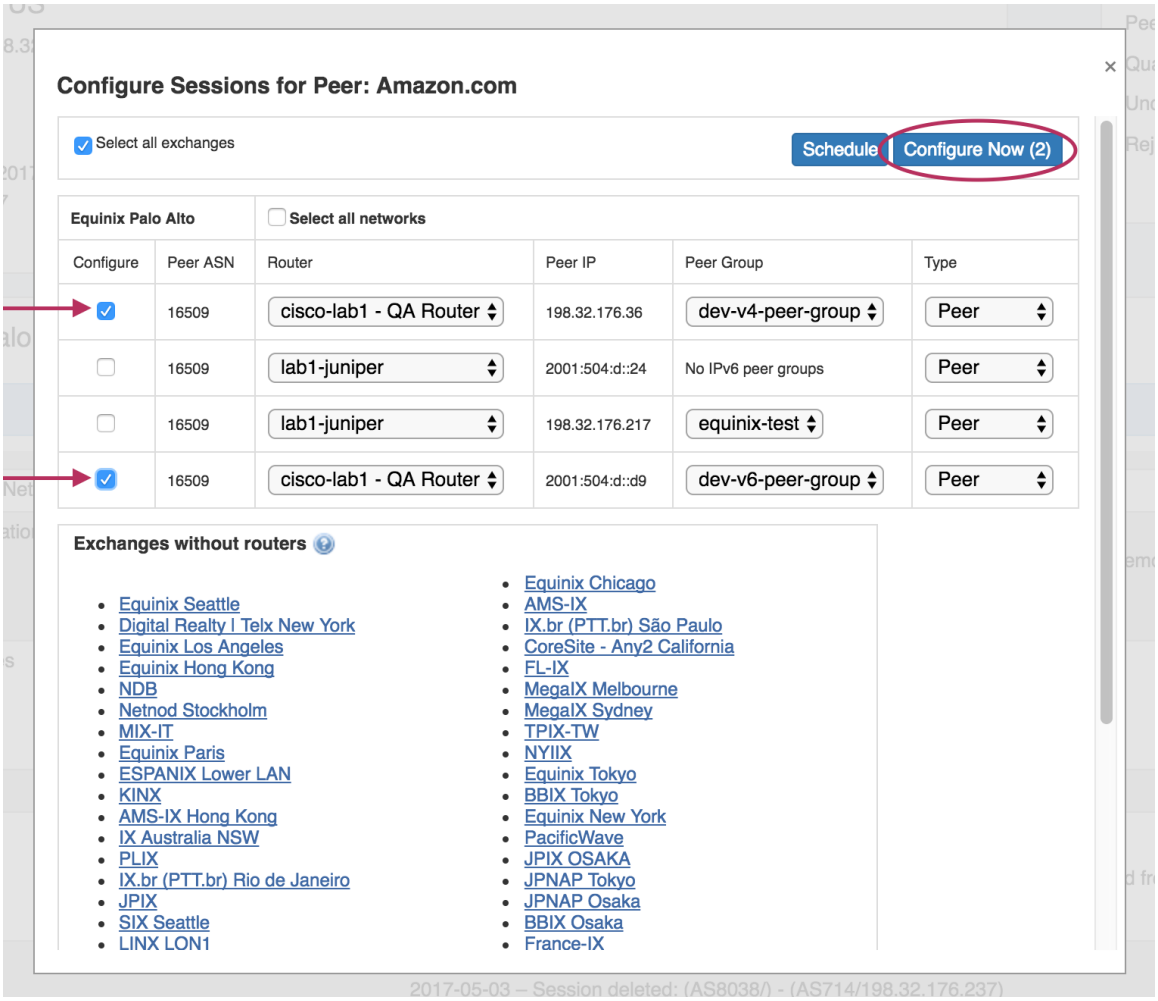


An option has been added to the Peering Communications action menu to "Configure Sessions" for that Peer. With this option, you can view and configure all sessions, from any or all exchanges, for that Peer from one menu. "Configure Sessions" becomes available once a peer has been marked "Existing" or "Approved" in the Communications Action Menu. For more information, see Peering Sessions.

Clicking on "Configure Sessions" opens a modal showing the available exchanges with routers, sessions for that Peer under those exchanges, and options to change the router, peer group, and Peer type.



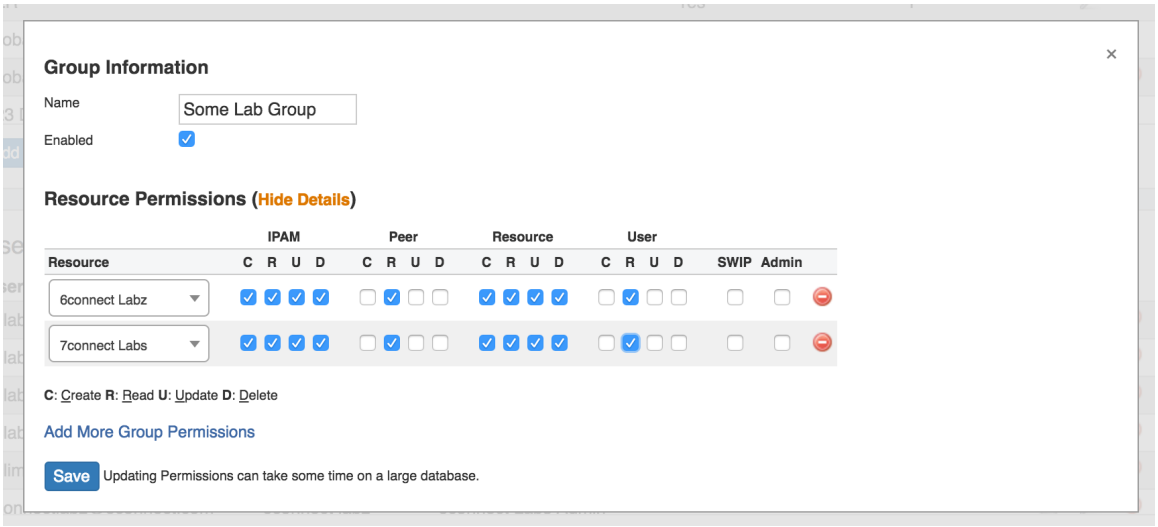
Select the checkmarks for the desired sessions to configure. As a shortcut, you may also check the "Select all exchanges" option to select all sessions under all exchanges, or, check "Select all networks" next to the exchange header to select all sessions in that exchange. From there, deselect items as needed.



*When your selections have been made, click "Configure Now" to immediately configure all selected sessions, or you may schedule the configuration through the **Scheduler** Tab.*

Users Tab/ Permissions Updates:

The Users tab in the Admin area of ProVision has been updated to reflect DNSv3 changes for permissions groups. Changes include removing "DNS" as a separate permissions area and incorporating DNS items under the "Resource" permissions area. DNS Groups, Zones, and Servers may now be selected as "Resource" items when settings up permissions groups.



CPNR Updates:

CPNR Updates include:

- Added a check to ensure CPNR modules in ProVision are reachable prior to Push
- Option 43 is now integrated
  scope_upsert call now is taking 2 new parameters "option_43_name" and "option_43_value".
  - The "option_43_name" must be predefined inside CPNR (Design->Options)
  - "option_43_value" should be the value that is going to be set for the Scope for example "241 11.22.33.44" (typically 241 followed by the IP).

DNS APIv1 Updates

To support the release of DNSv3, the following updates have been made to DNS APIv1 endpoints:

- As of DNSv3, zones are now considered their own resource. Thus, DNS APIv1 zone parameters "zoneResourceId", "updateZoneResourceId", and "deleteZoneResourceId" now refer to (and equal) the zone ID instead of the parent resource ID, and are no longer editable values.
- The DNS Zone Control "GET" optional parameters "selectOffset" and "sortArray" have been removed.
- DNS Zone Tags are no longer supported. Zone Tag parameters under target=zone and target=record have been removed.

IPAM APIv1 Updates:

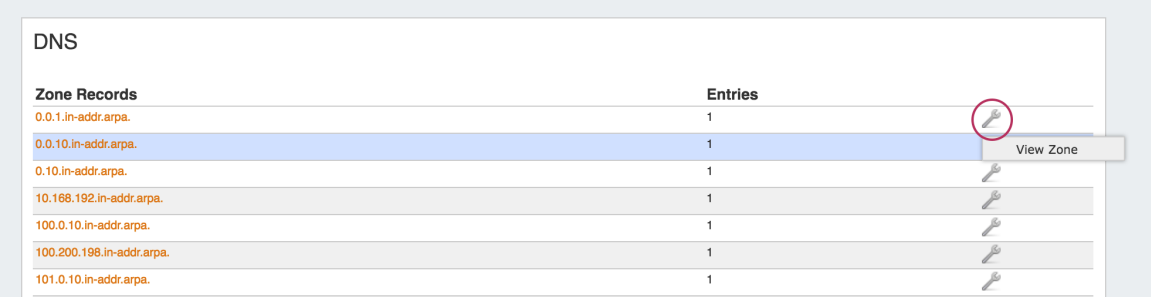
Get:The following updates have been made to IPAM APIv1 "get" endpoint. Valid tagsMode options are now "strict", "exclude", "intersection", and "union". See API Module - IPAM for additional details.

- If tagsMode is omitted from an IPAM Get request, the mode defaults to 'intersection'
- tagsMode=union has been implemented for IPAM Get. It selects any block which has any one of the tags.
- tagsMode=intersection matches any blocks which has all of the tags.
- tagsMode=strict and tagsMode=exclude remain unchanged.

smartAssign: if the phrase "assignedResourceId=ignore" is supplied, then a matching IP block is selected from the Available pool or any sub-assignable block on any resource.

DNS Gadget Updates:

The DNS Gadget has been simplified to support DNSv3 changes.



- Zone creation, editing, and deletion has moved into DNSv3, under the **DNS** Tab.
- The action menu has been simplified to a "View Zone" option, which links to the DNSv3 view zone page (also accessible from clicking on the zone name).
- Zone delegation has been removed.

Bug Fixes/Improvements

IM - 1719: Removed "Edit" link on Contact Gadget for read-only users.

IM - 1948: Added a "Clear Search" function to DHCP Pool searches in the DHCP Management Gadget.

IM - 2089: Added the ability to deselect Domain and VLAN from "Create a New Pool" in the DHCP Management Gadget.

IM - 2380: When adding a Peering session, the Router selector will now correctly reset to the appropriate router list if the selected exchange is changed.

IM - 2385: Resolved an issue where "Invalid Date" would show in the Document Manager "Date" column.

IM - 2387: Fixed an issue where IP Rules would not reserver the first address in an IPv6 block.

IM - 2440: Updated the "Resource Tree" widget on the Dashboard to show text as angled while in vertical mode.

IM - 2456: Updated error message(s) in LIR Manager to show the correct color.

IM - 2458: Resolved an issue where the "Add Session" modal would populate a different router list between multiple modal instances.

IM - 2460: Improved the Resource Linkage Gadget to use the resource_linkage table instead of resource_attr, improving API access.

IM - 2469: Peering import BGP sessions will now detect router sessions in cases where no local sessions currently exist in ProVision.

IM - 2472: Resolved an API issue where a parent block could be direct assigned if specified by ID.

IM - 2487: Resolved an issue that occurred when a non-address string was provided for a Region's Address field. Non-address addresses will now default to global zero positioning on the IPAM Map.

IM - 2486: IPAM APIv1, the parameter tags_mode="strict" has been updated return only blocks with no tags, if no tags are specified in the call.

IM - 2517: Read only users will no be able to view the "Delete" button for RIR Contacts.

IM - 2535: Mobile navigation search box now correctly returns search results.

IM - 2544: Resolved an issue in the DHCP Management Gadget - Create Pool where selecting a Domain / VLAN would prevent selection of an IP Rule.

IM - 2595: Removed "Audit DNS" link from the IPAM Manage Action Menu.

IM - 2599: Resource API fields "category__in" and "category__not_in" are once again returning responses.

IM - 2604: The IPAM Aggregate "Clean Up" function now respects subassignable blocks as assigned when used in conjunction with the "ignore assignments" flag.