

Working with DHCP Gadgets

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For an overview of gadgets and how to attach them to resource pages, see [Gadgets](#) and [Adding a Gadget to a Section](#) .

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Working with the DHCP Customer Configuration Gadget

DHCP Customer configuration

Configuration

Assign IP

Direct Assign:

ex. 192.168.0.3/32

Assign

Smart Assign

IPv4

Select Region

Select domain

Select DHCP Group

Choose tags

Vlan

Select DHCP Server

Tag selection mode

☐ Standard – match all selected tags

☒ Strict – match exactly the selected tags

☐ Exclude – match blocks not tagged with any selected tags

Smart Assign

Smart Browse

Linked IP Blocks

Block	VLAN	Resource	Tags	
26.0.0.7/32		Reservation	DHCP Available QA Test	Unassign
1008:4568::/128	27 (Test VLAN 27)	Reservation	DHCP Available QA Test	Unassign

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

Setting up the DHCP Customer Configuration Gadget

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

- The associated DHCP server should be created in ProVision and set up in the DHCP Tab - DHCP servers list (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 APNIC Aggregates for DHCP use from the [IPAM](#) Tab with the desired IP space type, Region(s), Tags, and any desired VLAN criteria, and have that aggregate / block allocated as a subnet pool. Regions are a required field when assigning IPs from the DHCP Customer Configuration Gadget. Any APNIC aggregate (once allocated as a subnet pool) may be used for DHCP, so you may want to create a "DHCP" IPAM tag to help denote the desired aggregate(s).
- If you are planning on Direct Assigning the DHCP blocks in the Customer Configuration Gadget, ensure that the desired blocks in the DHCP are split to individual /32 or /128 size. Smart Assign and Smart Browse will automatically split the block to assign the correct size.

A Note on DHCP Aggregates

ProVision versions prior to 7.0.0 required creating or identifying specific IPAM blocks as "DHCP Aggregates" using the "DHCP Available" status to assign DHCP pools from.

As of 7.0.0, these statuses have been removed, and any IPAM block may be used to assign DHCP pools from, as long as they are subassignable and meet the assignment criteria provided by the user.

This applies to all DHCP Management functions - the DHCP Customer Configuration Gadget, and all DHCP Tab areas.

Set Up APNIC Aggregate & Subnet

The following steps must be completed to prepare an aggregate for use with the DHCP Customer Configuration Gadget:

1. Have or create (Via IPAM Add Aggregate) an APNIC IPAM Aggregate with an associated region. You may wish to add tags, vlan, or other associated information as well.

The screenshot shows the 'Add aggregate' form in the ProVision interface. The form is titled 'Add aggregate' in a blue header bar. It contains several input fields and buttons. The 'Subnet *' field has the value '3.0.0.0/20'. The 'RIR *' field has a dropdown menu with 'APNIC' selected, highlighted by a red arrow. The 'Region' field has a dropdown menu with 'St. Louis, MO' selected, also highlighted by a red arrow. The 'Tags' field has a dropdown menu with 'Select...' selected. The 'Resource' field has a dropdown menu with 'Select...' selected and a 'Create & Assign' button. The 'Domain' field has a dropdown menu with 'Select...' selected. The 'VLAN' field has a dropdown menu with 'Select...' selected. At the bottom, there is a 'Clear' button, a blue 'Add aggregate' button (circled in red), and a 'Back' button.

2. Go to DHCP Tab Add Pool. Direct assign a new subnet pool to that CIDR, selecting the region and other filter criteria associated with the APNIC aggregate. Click "Save Changes" to create the pool.

DHCP ▾ Servers ▾ IPAM ▾ Peering ▾ Reporting ▾

Create New Pool

×

Pool Type:

Subnet

Parent Resource:

TLR

Subnet Name:

Example Customer Config Subnet

New IP Assignment Settings

Assignment Type:

Direct

IP Type:

IPv4

IP Address:

3.0.0.0/20

Resource:

Region:

St. Louis, MO

IPAM Rule:

Apply an IPAM Rule

Select a VLAN:

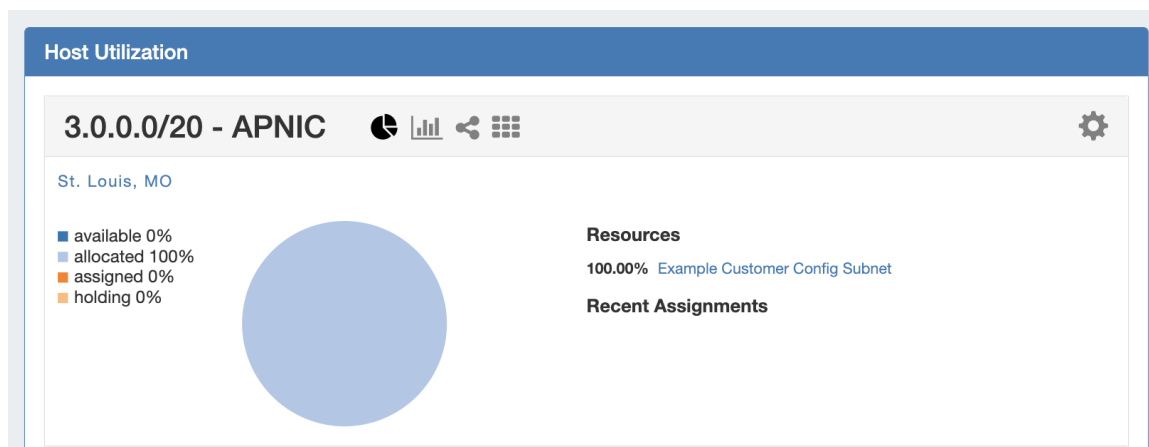
Assign default gateway:

OFF

Close

Save changes

3. If viewed in the IPAM tab, the aggregate will display as allocated to the subnet pool you just created - at this point the aggregate is available for use in the DHCP Customer Config Gadget



Using the DHCP Customer Configuration Gadget

Step 1) Link the Gadget with the desired DHCP server

DHCP Customer configuration

The customer resource is not assigned to a DHCP Module

Linkage with DHCP Server
QA DHCP 6c VM

Continue

Step 2) Assign IP's for pools from DHCP aggregates

Remember, the aggregate must be APNIC, have an associated region, and be allocated as a subnet pool to be assignable in the gadget.

Once assigned, a pool name will be automatically generated under "Resource". Pools may be unassigned by clicking the "Unassign" button.

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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".

DHCP Customer configuration

Configuration

Assign IP

Premium DNS

☒ BIND QA Server (bind-test.com)

☐ Test 2 (1.1.1.2)

☐ testaddapproval (1.1.1.1)

[View all DNS Servers](#)

Option 82 Elements:

abc123

Circuit ID:

Circuit ID...

Preview:

host testpool3_416_60458 {
 host-identifier option agent.circuit-id "abc123";
 fixed-address 100.64.0.129;
 option domain-name-servers bind-test.com;
}

Status:

Activate

Notes:

Some Note Here

Update configuration

Step 4) An admin user may manually push the updated configuration from the DHCP tab, or use a [scheduled DHCP push task](#) to automate the pushes.

See [Gadgets - DHCP Customer Configuration](#) for more details.

Additional Information

For more detail on advanced DHCP topics and the DHCP API, see [API Module - DHCP](#).