

# Working with IP Blocks

## IP Block Management

IPAMv2

IPAM

VLAN

Logging

Manage aggregate

5.5.5.0/24 - 1918

Switch to Parent view

Netblock Tree

export to CSV

actions +

Search within this aggregate...

Q

clear

filter >

| IP Address   | IP Mask | IP Region     | IP Tags            | IP Assigned to | IP VLAN | IP LIR        | IP Updated       | IP ASN | IP NAT | IP Code |  |
|--------------|---------|---------------|--------------------|----------------|---------|---------------|------------------|--------|--------|---------|--|
| 5.5.5.0/30   | 30      | St. Louis, MO | Customer,Example   | 03 Telecom     | 1       | -             | 2022-09-12 16... | -      | -      | -       |  |
| 5.5.5.4/30   | 30      | St. Louis, MO | Customer,Example   | 01 Telecom     | 1       | -             | 2022-09-12 17... | -      | -      | -       |  |
| 5.5.5.8/29   | 29      | St. Louis, MO | Customer,Example   | QA Test Res... | 1       | 1918 Test LIR | 2022-10-03 14... | 1234   | -      | -       |  |
| 5.5.5.16/28  | 28      | St. Louis, MO | Customer,Example   | Weyland-Yu...  | 1       | -             | 2022-09-19 11... | -      | -      | test    |  |
| 5.5.5.32/27  | 27      | St. Louis, MO | Customer,Example   | available      | 1       | -             | 2022-10-03 14... | -      | -      | -       |  |
| 5.5.5.64/26  | 26      | St. Louis, MO | Backbone,Custom... | available      | 1       | -             | 2022-09-19 16... | -      | -      | -       |  |
| 5.5.5.128/25 | 25      | St. Louis, MO | Customer,Example   | available      | 1       | -             | 2022-09-15 12... | -      | -      | -       |  |

Displaying 1 to 7 of 7 blocks

### Managing IP Blocks

IP Blocks are edited and managed in either [IPAM Manage](#) or the [IPAM Gadget](#).

From either area, you can perform standard block-level actions such as assign, unassign, split, merge, edit attributes, track NAT associations, and more.

The primary difference between the two areas is that IPAM Manage shows all blocks (or all blocks under an aggregate), regardless of assignment or status, where the IPAM Gadget shows only the blocks assigned to the specific resource that you are currently viewing on the [Resource Entry Page](#). However, the IPAM Gadget has more advanced assignment options and criteria available (Direct Assign, Smart Assign, Smart Browse).

### IPAM Manage Features

Manage aggregate

5.5.5.0/24 - 1918

Switch to Parent view

Netblock Tree

export to CSV

actions +

Search within this aggregate...

Q

clear

filter >

| IP Address   | IP Mask | IP Region     | IP Tags            | IP Assigned to | IP VLAN | IP LIR        | IP Updated       | IP ASN | IP NAT | IP Code |  |
|--------------|---------|---------------|--------------------|----------------|---------|---------------|------------------|--------|--------|---------|--|
| 5.5.5.0/30   | 30      | St. Louis, MO | Customer,Example   | 03 Telecom     | 1       | -             | 2022-09-12 16... | -      | -      | -       |  |
| 5.5.5.4/30   | 30      | St. Louis, MO | Customer,Example   | 01 Telecom     | 1       | -             | 2022-09-12 17... | -      | -      | -       |  |
| 5.5.5.8/29   | 29      | St. Louis, MO | Customer,Example   | QA Test Res... | 1       | 1918 Test LIR | 2022-10-03 14... | 1234   | -      | -       |  |
| 5.5.5.16/28  | 28      | St. Louis, MO | Customer,Example   | Weyland-Yu...  | 1       | -             | 2022-09-19 11... | -      | -      | test    |  |
| 5.5.5.32/27  | 27      | St. Louis, MO | Customer,Example   | available      | 1       | -             | 2022-10-03 14... | -      | -      | -       |  |
| 5.5.5.64/26  | 26      | St. Louis, MO | Backbone,Custom... | available      | 1       | -             | 2022-09-19 16... | -      | -      | -       |  |
| 5.5.5.128/25 | 25      | St. Louis, MO | Customer,Example   | available      | 1       | -             | 2022-09-15 12... | -      | -      | -       |  |

Displaying 1 to 7 of 7 blocks

IPAM Manage is accessed from:

- [IPAM](#) Tab open aggregate / edit aggregate links
- [IPAM](#) Tab Advanced button
- Most block CIDR Links in ProVision

In IPAM Manage, you can:

- Sort, Filter, and Export the block list
- Auto-Split and Clean-up templates available for aggregates
- View all blocks (IPAM Advanced), or all blocks under an aggregate, regardless of assignment
- See blocks by Blocks List, Parent View, or Netblock Tree view
- Shows blocks from all statuses - available, in holding, assigned, subassignable
- Perform Single and Multi-block assignments and edits
- Click on an assigned region link for a block to generate or view a region resource

## IPAM Gadget Features

The screenshot shows the IPAMv2 interface. At the top, there are two buttons: 'Direct Assign' and 'Smart Assign'. Below these is the 'IP Blocks' section, which includes a search bar and a table of IP blocks. The table has the following columns: IP Address, IP Mask, IP Tags, IP LIR, IP ASN, IP Region, IP VLAN, IP Updated, IP ID Code, and IP Host Count. The table displays 10 blocks, with a pagination bar at the bottom indicating 'Displaying 1 to 10 of 10 blocks'.

| IP Address          | IP Mask | IP Tags              | IP LIR        | IP ASN | IP Region           | IP VLAN    | IP Updated | IP ID Code | IP Host Count |
|---------------------|---------|----------------------|---------------|--------|---------------------|------------|------------|------------|---------------|
| 50.100.0.16/28      | 28      | BB.WEBHOST           | ARIN Test LIR | 1234   | Cairo, Egypt        | VLAN 5     | 2023-12-11 | 12345      | 16            |
| 50.100.0.32/28      | 28      | BB.WEBHOST           | -             | -      | -                   | -          | 2023-12-11 | -          | 16            |
| 50.100.0.48/28      | 28      | BB.WEBHOST           | -             | -      | -                   | -          | 2023-12-11 | -          | 16            |
| 208.123.96.96/27    | 27      | -                    | -             | -      | -                   | -          | 2023-06-09 | -          | 32            |
| 2001:102::/128      | 128     | -                    | -             | -      | Rio de Janeiro, ... | Test VL... | 2024-01-12 | -          | 1             |
| 2405:D800::/32      | 32      | -                    | -             | -      | Reykjavik, Iceland  | -          | 2023-12-12 | -          | 2^96          |
| 2600:450::/128      | 128     | Another QA Tag,DH... | -             | -      | Saskatoon, Sask...  | -          | 2023-12-12 | -          | 1             |
| 2604:5680:100::/41  | 41      | -                    | -             | -      | Boston, MA          | -          | 2023-12-12 | -          | 2^87          |
| 2604:5680:3002::/48 | 48      | -                    | -             | -      | -                   | -          | 2023-12-12 | -          | 2^80          |
| 2607:FAE0:4000::/48 | 48      | Another QA Tag       | ARIN Test LIR | 1234   | Hebbronville        | 2          | 2023-12-11 | -          | 2^80          |

The IPAM Gadget is accessed from the [Resource Entry Page](#) IPAM Gadget, once it has been enabled for the section.

Here, you can:

- View only the blocks assigned or assigned-and-subassignable for the resource that you are currently viewing
- Sort and Filter the block list
- Advanced assignment functions - Direct Assign, Smart Assign, and Smart browse with additional field criteria available.
- Perform single and multi-block edit, and assign subassignable blocks.
- Autogenerate reverse zones from block CIDR

Both IPAM Manage and the IPAM Gadget have customizable column names, order, and visibility, as well as options for user-defined meta columns (for details on setting up customization of the IPAM Manage / IPAM Gadget block list, see [IPAM Lists Management](#) Edit Columns).

## Aggregate-Level Actions

Some aggregate-level actions are performed in IPAM Manage, such as setting IPAM alerts and using Aggregate Templates.

These actions are detailed on the [IPAM Tab](#) page under *Working with IPAM Aggregates*. This page will focus primarily on block-level actions and management.

- [IP Block Management](#)
- [Working in IPAM Manage](#)
  - [Open IPAM Manage for a specific Aggregate](#)
  - [Open IPAM Manage for all Aggregates/Blocks](#)

- IPAM Manage Views
  - Block View (Default)
  - Parent View / Blocks Tree
  - Netblock Tree
- Working in IPAM Manage Views
  - Sort Blocks
  - Filter / Search Blocks
  - Important Blocks
- Working with IP Blocks - Common Tasks
- Additional Information

## Working in IPAM Manage

| Manage aggregate  |         |               |                    |                       |               |               |                  |                                 |        |         |  |
|-------------------|---------|---------------|--------------------|-----------------------|---------------|---------------|------------------|---------------------------------|--------|---------|--|
| 5.5.5.0/24 - 1918 |         |               |                    | Switch to Parent view | Netblock Tree | export to CSV | actions +        | Search within this aggregate... |        |         |  |
|                   |         |               |                    |                       |               |               |                  | Q                               |        |         |  |
|                   |         |               |                    |                       |               |               |                  | clear                           |        |         |  |
|                   |         |               |                    |                       |               |               |                  | filter >                        |        |         |  |
| IT Address        | IT Mask | IT Region     | IT Tags            | IT Assigned to        | IT VLAN       | IT LIR        | IT Updated       | IT ASN                          | IT NAT | IT Code |  |
| 5.5.5.0/30        | 30      | St. Louis, MO | Customer,Example   | 03 Telecom            | 1             | -             | 2022-09-12 16... | -                               | -      | -       |  |
| 5.5.5.4/30        | 30      | St. Louis, MO | Customer,Example   | 01 Telecom            | 1             | -             | 2022-09-12 17... | -                               | -      | -       |  |
| 5.5.5.8/29        | 29      | St. Louis, MO | Customer,Example   | QA Test Res...        | 1             | 1918 Test LIR | 2022-10-03 14... | 1234                            | -      | -       |  |
| 5.5.5.16/28       | 28      | St. Louis, MO | Customer,Example   | Weyland-Yu...         | 1             | -             | 2022-09-19 11... | -                               | -      | test    |  |
| 5.5.5.32/27       | 27      | St. Louis, MO | Customer,Example   | available             | 1             | -             | 2022-10-03 14... | -                               | -      | -       |  |
| 5.5.5.64/26       | 26      | St. Louis, MO | Backbone,Custom... | available             | 1             | -             | 2022-09-19 16... | -                               | -      | -       |  |
| 5.5.5.128/25      | 25      | St. Louis, MO | Customer,Example   | available             | 1             | -             | 2022-09-15 12... | -                               | -      | -       |  |

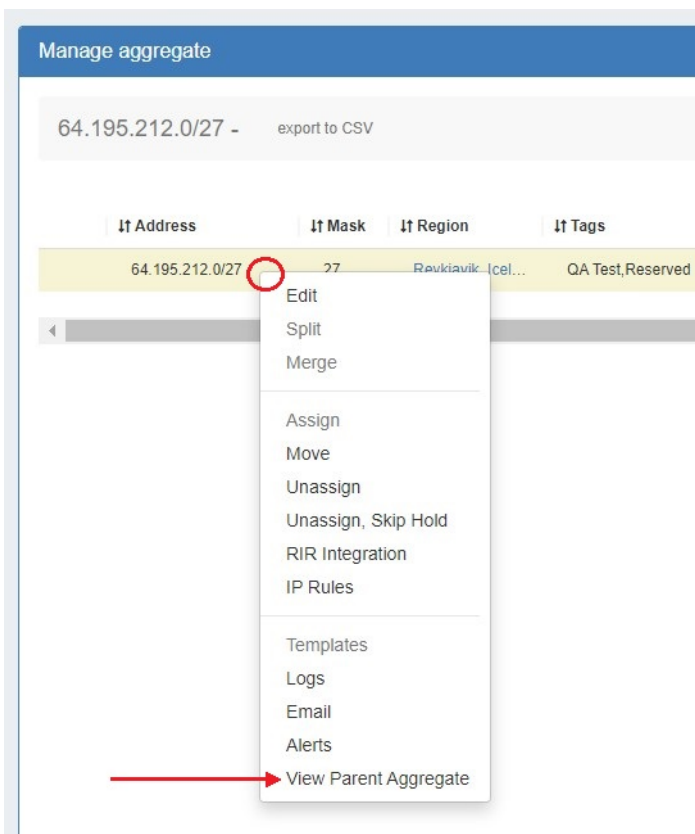
Displaying 1 to 7 of 7 blocks

In IPAM Manage, you can manage aggregate level actions, such as Split , Clean Up, Alerts, and Export, as well as viewing and managing individual blocks. In IPAM Manage - Advanced, aggregate-level actions are not available.

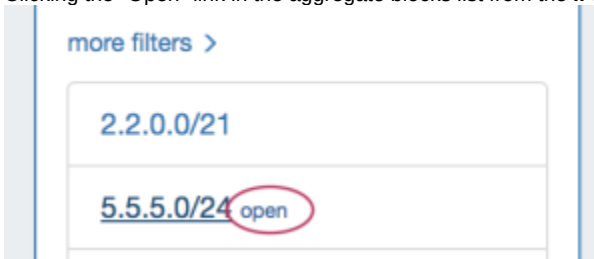
## Open IPAM Manage for a specific Aggregate

Open the IPAM Manage screen for a block or aggregate by:

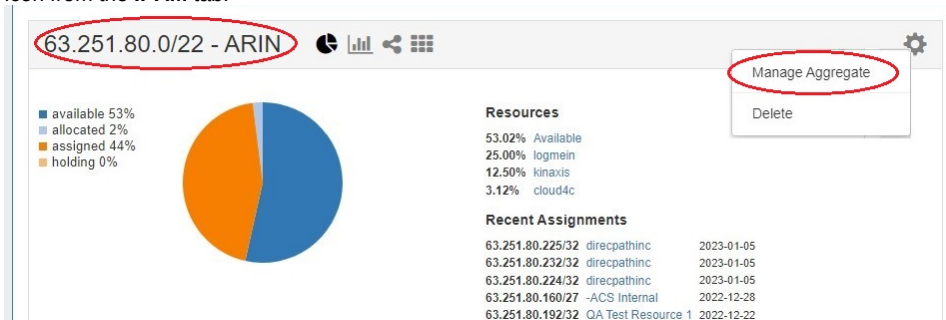
- Searching for the block in the Global search, and clicking on the resulting CIDR
- View the parent aggregate for a Global search / IPAM search result by right clicking to open the action menu for the block, then select "View Parent Aggregate".



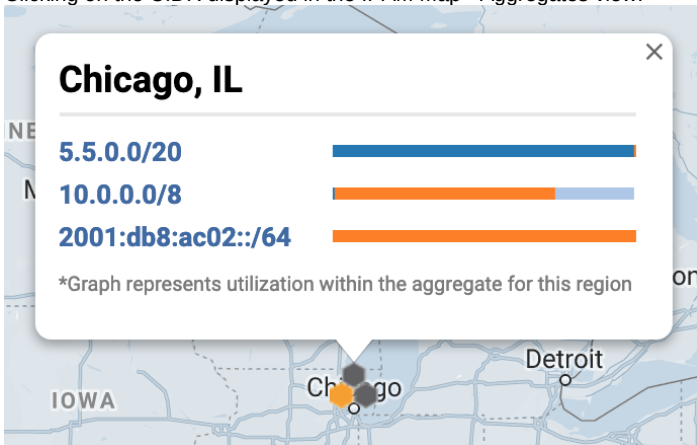
- Clicking the "Open" link in the aggregate blocks list from the **IPAM** tab.



- Clicking on the CIDR header of the Aggregate Block Host Utilization module, or selecting "Manage Aggregate" from the module's Gear Icon from the **IPAM** tab.

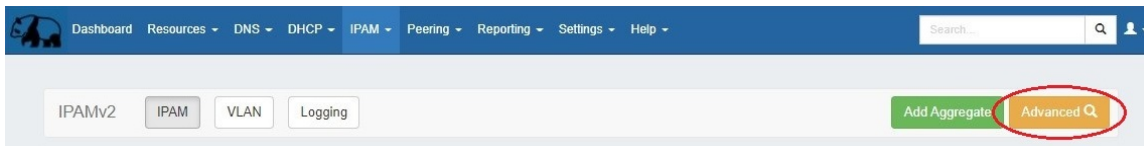


- Clicking on the CIDR displayed in the IPAM Map - Aggregates view.



## Open IPAM Manage for all Aggregates/Blocks

Open IPAM Manage for all blocks under all aggregates by clicking the "Advanced" button at the top of the **IPAM** tab.



This will open IPAM Manage for all blocks in ProVision, with all the same filters, block edit functions, and search capabilities as in 'standard' IPAM Manage for an aggregate, but with no aggregate-level actions available.

When working in IPAM Manage - Advanced, be aware of the following:

- Due to the large volume of combined data that may be available, filter/search results may take slightly longer than load than a standard aggregate level view.
- Users should take care to ensure that they are working with the correct block(s), as duplicate 1918 space is permitted and blocks may be difficult to distinguish.

## IPAM Manage Views

There are multiple view options in IPAM Manage to view and/or edit blocks: **Block View**, **Parent View**, and **Netblock Tree**.

### **Block View (Default)**

**Block View** is the default IPAM Manage Aggregate screen. Block View displays only the lowest level leaf nodes of aggregates / blocks that exist in ProVision. In this view, all blocks displayed are ProVision objects able to be edited or managed.

| Manage aggregate       |         |                       |               |                |           |                                 |                  |        |        |          |  |
|------------------------|---------|-----------------------|---------------|----------------|-----------|---------------------------------|------------------|--------|--------|----------|--|
| 19.20.30.0/24 - LACNIC |         | Switch to Parent view | Netblock Tree | export to CSV  | actions + | Search within this aggregate... |                  | Q      | clear  | filter > |  |
| IT Address             | IT Mask | IT Region             | IT Tags       | IT Assigned to | IT VLAN   | IT LIR                          | IT Updated       | IT ASN | IT NAT | IT Cod   |  |
| 19.20.30.0/26          | 26      | -                     |               | 01 Telecom     | -         | -                               | 2022-10-04 12... | -      | -      | -        |  |
| 19.20.30.64/27         | 27      | -                     |               | 01 Telecom 2   | -         | -                               | 2022-10-04 12... | -      | -      | -        |  |
| 19.20.30.96/27         | 27      | -                     |               | available      | -         | -                               | 2022-10-04 12... | -      | -      | -        |  |
| 19.20.30.128/25        | 25      | -                     |               | available      | -         | -                               | 2022-10-04 12... | -      | -      | -        |  |

Displaying 1 to 4 of 4 blocks

## Parent View / Blocks Tree

**Parent View** shows both low level child blocks and the parent blocks that contain them.

While in Manage aggregate, view parent blocks / IP block hierarchy, click on "Switch to Parent View" at the top of the block list.

| Manage aggregate  |         |                       |                  |                |           |                                 |                  |        |        |          |  |
|-------------------|---------|-----------------------|------------------|----------------|-----------|---------------------------------|------------------|--------|--------|----------|--|
| 5.5.5.0/24 - 1918 |         | Switch to Parent view | Netblock Tree    | export to CSV  | actions + | Search within this aggregate... |                  | Q      | clear  | filter > |  |
| IT Address        | IT Mask | IT Region             | IT Tags          | IT Assigned to | IT VLAN   | IT LIR                          | IT Updated       | IT ASN | IT NAT | IT Code  |  |
| 5.5.5.0/30        | 30      | St. Louis, MO         | Customer,Example | 03 Telecom     | 1         | -                               | 2022-09-12 16... | -      | -      | -        |  |
| 5.5.5.4/30        | 30      | St. Louis, MO         | Customer,Example | 01 Telecom     | 1         | -                               | 2022-09-12 17... | -      | -      | -        |  |

You may also enter Parent View via the "Filter" menu, by checking the "Select All Masks" checkbox and clicking "Apply", to show all masks and parent blocks.

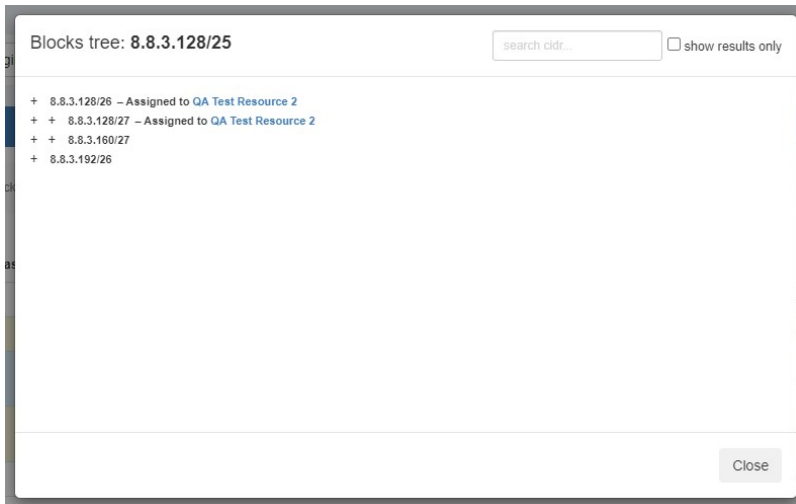
Parent Blocks are distinguished by having a CIDR address link, and displaying a blue bar denoting "Has Children" under the "Assigned to" column.

| Manage aggregate       |         |                      |               |                |           |                                 |                  |        |        |            |          |          |
|------------------------|---------|----------------------|---------------|----------------|-----------|---------------------------------|------------------|--------|--------|------------|----------|----------|
| 19.20.30.0/24 - LACNIC |         | Switch to Block view | Netblock Tree | export to CSV  | actions + | Search within this aggregate... |                  | Q      | clear  | filter 1 > |          |          |
| IT Address             | IT Mask | IT Region            | IT Tags       | IT Assigned to | IT VLAN   | IT LIR                          | IT Updated       | IT ASN | IT NAT | IT Code    | IT Notes | IT Hosts |
| 19.20.30.0/24          | 24      | -                    |               | has children   | -         | -                               | 2022-10-04 12:35 | -      | -      | -          | -        | 256      |
| 19.20.30.0/25          | 25      | -                    |               | has children   | -         | -                               | 2022-10-04 12:36 | -      | -      | -          | -        | 128      |
| 19.20.30.0/26          | 26      | -                    |               | 01 Telecom     | -         | -                               | 2022-10-04 12:36 | -      | -      | -          | -        | 64       |
| 19.20.30.64/26         | 26      | -                    |               | has children   | -         | -                               | 2022-10-04 12:39 | -      | -      | -          | -        | 64       |
| 19.20.30.64/27         | 27      | -                    |               | 01 Telecom 2   | -         | -                               | 2022-10-04 12:40 | -      | -      | -          | -        | 32       |
| 19.20.30.96/27         | 27      | -                    |               | available      | -         | -                               | 2022-10-04 12:47 | -      | -      | -          | -        | 32       |
| 19.20.30.128/25        | 25      | -                    |               | available      | -         | -                               | 2022-10-04 12:47 | -      | -      | -          | -        | 128      |

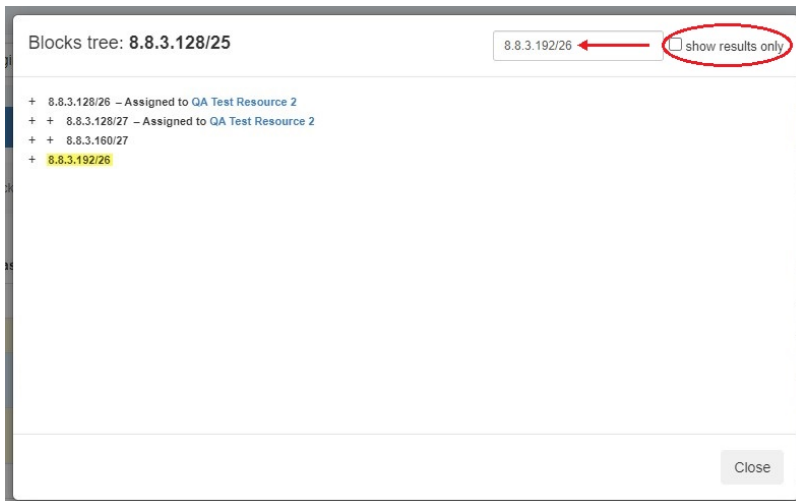
Displaying 1 to 7 of 7 blocks

Both Parent and Child blocks may be edited in this view.

Clicking on the Parent Block blue CIDR link will display the Parent View **Blocks Tree**, providing a simplified hierarchy view.



To search blocks by CIDR use the searchbox at upper right. This will highlight the specific block. For larger trees, you can limit the view to search results only by enabling the checkbox for "show results only".



## Netblock Tree

**Netblock Tree View** displays the hierarchy organization of Parent / Child blocks under a Top Level Aggregate, but eliminates intermediate "bookkeeping" / allocated blocks, and prioritizes masks with assigned blocks. This provides a more effective view at the specific hierarchy levels used for assignments and management.

The Netblock Tree view detects which subnet masks have changes in assignments applied, and then automatically builds branches or displays individual addresses at those levels. This view includes the display of theoretical blocks which do not currently exist as ProVision objects, providing a more holistic working overview of the netblock structure.

While in Netblock Tree View, click on the expansion caret to expand / close a hierarchy branch parent block. Only blocks which exist in ProVision will be able to be edited or expanded.

| Manage aggregate       |         |                       |               |                |           |                                 |                  |        |        |          |
|------------------------|---------|-----------------------|---------------|----------------|-----------|---------------------------------|------------------|--------|--------|----------|
| 19.20.30.0/24 - LACNIC |         | Switch to Parent view | Netblock Tree | export to CSV  | actions + | Search within this aggregate... |                  | Q      | clear  | filter > |
| IT Address             | IT Mask | IT Region             | IT Tags       | IT Assigned to | IT VLAN   | IT LIR                          | IT Updated       | IT ASN | IT NAT |          |
| ▶ 19.20.30.0/26        | 26      | -                     |               | 01 Telecom     | -         | -                               | 2022-10-04 12:36 | -      | -      |          |
| ▶ 19.20.30.64/26       | 26      | -                     |               | has children   | -         | -                               | 2022-10-04 12:39 | -      | -      |          |
| 19.20.30.128/26        | 26      | -                     |               | available      | -         | -                               | 2022-10-04 12:47 | -      | -      |          |
| 19.20.30.192/26        | 26      | -                     |               | available      | -         | -                               | 2022-10-04 12:47 | -      | -      |          |

### Netblock Tree Logic:

- The top level at which an assignment exists denotes the top starting mask of the Netblock Tree View
- Proceeding down the tree, if one of the following conditions are detected, a new branch is created showing all blocks with a prefix at that level - regardless of whether they exist as editable ProVision block objects.
  - A change in assignment is detected (a block is assigned to a different resource than its parent )
  - A manual split has been performed at the assignment level of a sibling/cousin block
- If no more changes in assignment are detected down the block tree, the lowest branch will display as containing individual addresses ( /32s or /128s). The addresses may be both theoretical and those existing in ProVision.
- Expandable branches display with blue arrows, and denote that the block with that prefix also exists in ProVision Block View
- Blocks and addresses which exist in ProVision will be editable in Netblock Tree View, but theoretical blocks at any level are not editable unless created in ProVision.

### Example Walkthrough:

For a simplified example of the how Netblock Tree View displays compared to Block View, we will be using an example aggregate of 19.20.30.0 /24 (assigned to 'Available').

The standard Block View for this aggregate shows it has been split to contain a /25, a /26, and two /27s. The /26 and one of the /27s have been assigned to different resources.

In Block View, we only see the lowest child blocks that exist in ProVision:

| Manage aggregate       |         |                       |               |                |           |                                 |                  |        |        |          |
|------------------------|---------|-----------------------|---------------|----------------|-----------|---------------------------------|------------------|--------|--------|----------|
| 19.20.30.0/24 - LACNIC |         | Switch to Parent view | Netblock Tree | export to CSV  | actions + | Search within this aggregate... |                  | Q      | clear  | filter > |
| IT Address             | IT Mask | IT Region             | IT Tags       | IT Assigned to | IT VLAN   | IT LIR                          | IT Updated       | IT ASN | IT NAT | IT Cod   |
| 19.20.30.0/26          | 26      | -                     |               | 01 Telecom     | -         | -                               | 2022-10-04 12... | -      | -      | -        |
| 19.20.30.64/27         | 27      | -                     |               | 01 Telecom 2   | -         | -                               | 2022-10-04 12... | -      | -      | -        |
| 19.20.30.96/27         | 27      | -                     |               | available      | -         | -                               | 2022-10-04 12... | -      | -      | -        |
| 19.20.30.128/25        | 25      | -                     |               | available      | -         | -                               | 2022-10-04 12... | -      | -      | -        |

Displaying 1 to 4 of 4 blocks

When we switch to Netblock Tree View (by clicking "Netblock Tree") we see only /26s in the top level of the view. This is because 19.20.30.0/26, assigned to '01 Telecom', is the first assigned block encountered.

Netblock Tree View will ignore 19.20.30.0/25 and 19.20.30.128/25 because they are assigned to the same resource as 19.20.30.0/24 ('Available').



| Manage aggregate       |         |                       |               |                |           |                                 |                  |        |        |          |
|------------------------|---------|-----------------------|---------------|----------------|-----------|---------------------------------|------------------|--------|--------|----------|
| 19.20.30.0/24 - LACNIC |         | Switch to Parent view | Netblock Tree | export to CSV  | actions + | Search within this aggregate... |                  | Q      | clear  | filter > |
| IT Address             | IT Mask | IT Region             | IT Tags       | IT Assigned to | IT VLAN   | IT LIR                          | IT Updated       | IT ASN | IT NAT |          |
| ▶ 19.20.30.0/26        | 26      | -                     |               | 01 Telecom     | -         | -                               | 2022-10-04 12:36 | -      | -      |          |
| ▶ 19.20.30.64/26       | 26      | -                     |               | has children   | -         | -                               | 2022-10-04 12:39 | -      | -      |          |
| 19.20.30.128/26        | 26      | -                     |               | available      | -         | -                               | 2022-10-04 12:47 | -      | -      |          |
| 19.20.30.192/26        | 26      | -                     |               | available      | -         | -                               | 2022-10-04 12:47 | -      | -      |          |

You can edit and expand 19.20.30.0/26 and 19.20.30.64/26 because these netblocks exist in the ProVision IPAM tree. You can verify this by switching to Block View, where you see only blocks which exist in ProVision.

There are no different assignments under this 19.20.30.0/26. Thus, when you expand it you will see only /32 addresses. As these /32s have not yet been created in ProVision Block View, they only exist as "theoretical" blocks and are not editable, but aid in viewing the totality of available addresses under that prefix.

| Manage aggregate       |         |                       |               |                |           |                                 |                  |        |        |          |
|------------------------|---------|-----------------------|---------------|----------------|-----------|---------------------------------|------------------|--------|--------|----------|
| 19.20.30.0/24 - LACNIC |         | Switch to Parent view | Netblock Tree | export to CSV  | actions + | Search within this aggregate... |                  | Q      | clear  | filter > |
| IT Address             | IT Mask | IT Region             | IT Tags       | IT Assigned to | IT VLAN   | IT LIR                          | IT Updated       | IT ASN | IT NAT |          |
| ▼ 19.20.30.0/26        | 26      | -                     |               | 01 Telecom     | -         | -                               | 2022-10-04 12:36 | -      | -      |          |
| 19.20.30.0/32          | 32      | -                     |               | 01 Telecom     | -         | -                               | 2022-10-04 12:36 | -      | -      |          |
| 19.20.30.1/32          | 32      | -                     |               | 01 Telecom     | -         | -                               | 2022-10-04 12:36 | -      | -      |          |
| 19.20.30.2/32          | 32      | -                     |               | 01 Telecom     | -         | -                               | 2022-10-04 12:36 | -      | -      |          |
| 19.20.30.3/32          | 32      | -                     |               | 01 Telecom     | -         | -                               | 2022-10-04 12:36 | -      | -      |          |
| 19.20.30.4/32          | 32      | -                     |               | 01 Telecom     | -         | -                               | 2022-10-04 12:36 | -      | -      |          |
| 19.20.30.5/32          | 32      | -                     |               | 01 Telecom     | -         | -                               | 2022-10-04 12:36 | -      | -      |          |

If you would like these addresses to be assigned or editable in ProVision, you may split the /26 down to the desired number of /32 addresses using templates or manual splits. This will create the addresses in ProVision and allow those addresses to be edited.

Now, go back up and try to expand 19.20.30.64/26. You will see expandable branches with mask /27, because 19.20.30.64/27 is assigned to '01 Telecom 2'. Since a change in assignment was detected at this level, branches were created for both the assigned block and its available sibling block.

| Manage aggregate       |         |                       |               |                |           |                                 |                  |        |        |          |
|------------------------|---------|-----------------------|---------------|----------------|-----------|---------------------------------|------------------|--------|--------|----------|
| 19.20.30.0/24 - LACNIC |         | Switch to Parent view | Netblock Tree | export to CSV  | actions + | Search within this aggregate... |                  | Q      | clear  | filter > |
| IT Address             | IT Mask | IT Region             | IT Tags       | IT Assigned to | IT VLAN   | IT LIR                          | IT Updated       | IT ASN | IT NAT |          |
| ▶ 19.20.30.0/26        | 26      | -                     |               | 01 Telecom     | -         | -                               | 2022-10-04 12:36 | -      | -      |          |
| ▼ 19.20.30.64/26       | 26      | -                     |               | has children   | -         | -                               | 2022-10-04 12:39 | -      | -      |          |
| ▶ 19.20.30.64/27       | 27      | -                     |               | 01 Telecom 2   | -         | -                               | 2022-10-04 12:40 | -      | -      |          |
| ▶ 19.20.30.96/27       | 27      | -                     |               | available      | -         | -                               | 2022-10-04 12:47 | -      | -      |          |
| 19.20.30.128/26        | 26      | -                     |               | available      | -         | -                               | 2022-10-04 12:47 | -      | -      |          |
| 19.20.30.192/26        | 26      | -                     |               | available      | -         | -                               | 2022-10-04 12:47 | -      | -      |          |

Under those branches display individual /32 addresses, because the /27 is assigned.

| Manage aggregate       |         |                       |               |                |           |                                 |                  |                |
|------------------------|---------|-----------------------|---------------|----------------|-----------|---------------------------------|------------------|----------------|
| 19.20.30.0/24 - LACNIC |         | Switch to Parent view | Netblock Tree | export to CSV  | actions + | Search within this aggregate... |                  | clear filter > |
| I1 Address             | I1 Mask | I1 Region             | I1 Tags       | I1 Assigned to | I1 VLAN   | I1 LIR                          | I1 Updated       |                |
| ▶ 19.20.30.0/26        | 26      | -                     |               | 01 Telecom     | -         | -                               | 2022-10-04 12:36 |                |
| ▼ 19.20.30.64/26       | 26      | -                     |               | has children   | -         | -                               | 2022-10-04 12:39 |                |
| ▼ 19.20.30.64/27       | 27      | -                     |               | 01 Telecom 2   | -         | -                               | 2022-10-04 12:40 |                |
| 19.20.30.64/32         | 32      | -                     |               | 01 Telecom 2   | -         | -                               | 2022-10-04 12:40 |                |
| 19.20.30.65/32         | 32      | -                     |               | 01 Telecom 2   | -         | -                               | 2022-10-04 12:40 |                |
| 19.20.30.66/32         | 32      | -                     |               | 01 Telecom 2   | -         | -                               | 2022-10-04 12:40 |                |
| 19.20.30.67/32         | 32      | -                     |               | 01 Telecom 2   | -         | -                               | 2022-10-04 12:40 |                |
| 19.20.30.68/32         | 32      | -                     |               | 01 Telecom 2   | -         | -                               | 2022-10-04 12:40 |                |
| 19.20.30.69/32         | 32      | -                     |               | 01 Telecom 2   | -         | -                               | 2022-10-04 12:40 |                |
| 19.20.30.70/32         | 32      | -                     |               | 01 Telecom 2   | -         | -                               | 2022-10-04 12:40 |                |

As far as the remaining /26 blocks: In 'Netblock tree view' you can't edit or expand 19.20.30.128/26 and 19.20.30.194/26 because they don't exist in ProVision - because 19.20.30.128/25 is not split, so both /26s are "theoretical".

However, if 19.20.30.128/25 is split into two /26s in ProVision, the previously theoretical blocks of 19.20.30.128/26 and 19.20.30.194/26 become 'real' objects, and will display as expandable and editable.

## Working in IPAM Manage Views

### Sort Blocks

Sort the IPAM Manage blocks list by clicking on any column name the in list with the up-down arrows icon ().

The list will sort between ascending and descending order for that field.

| Manage aggregate  |         |                       |                  |                |           |                                 |                  |        |          |         |    |
|-------------------|---------|-----------------------|------------------|----------------|-----------|---------------------------------|------------------|--------|----------|---------|----|
| 5.5.5.0/24 - 1918 |         | Switch to Parent view | Netblock Tree    | export to CSV  | actions + | Search within this aggregate... |                  | clear  | filter > |         |    |
| I1 Address        | I1 Mask | I1 Region             | I1 Tags          | I1 Assigned to | I1 VLAN   | I1 LIR                          | I1 Updated       | I1 ASN | I1 NAT   | I1 Code | I1 |
| 5.5.5.0/30        | 30      | St. Louis, MO         | Customer,Example | 03 Telecom     | 1         | -                               | 2022-09-12 16... | -      | -        | -       |    |
| 5.5.5.4/30        | 30      | St. Louis, MO         | Customer,Example | 01 Telecom     | 1         | -                               | 2022-09-12 17... | -      | -        | -       |    |

### Filter / Search Blocks

Filter the block list in IPAM Manage by toggling the "Filter +" link in the top right corner of the aggregate header.

A flyout will appear with filter criteria options. Select or type the option under your desired field, and hit "Apply". A red filter flag indicates the number of filters applied to the list. When done, click "clear". To hide the filter flyout, just click the "filter -" link again.

Manage aggregate

4.4.0.0/16 - LACNIC   Switch to Parent view   Netblock Tree   export to CSV   actions +   Search within this aggregate...   clear   filter 2 <

| IT Address   | IT Mask | IT Location     | IT Block ... | IT Tags             | IT ASN | IT Assigned to  | IT VLA... | IT Updated |
|--------------|---------|-----------------|--------------|---------------------|--------|-----------------|-----------|------------|
| 4.4.128.0/20 | 20      | Zaragoza, Spain | -            | Backbone.High-se... | -      | Ally Bridge ... | -         | 2022-09-11 |
| 4.4.160.0/20 | 20      | St. Louis, MO   | -            | Backbone.High-se... | -      | Ally Bridge ... | -         | 2022-06-29 |

Displaying 1 to 2 of 2 blocks

Filtering options:   apply   clear   Make Default

☒ Show important blocks only

Mask  
# 20   x

☐ Select all masks  
☐ Show Leaf Nodes only

LIR Test  
click to select...

RIR  
click to select...

ASN  
click to select...

Tags  
click to select...

Location  
click to select...

Once a filter(s) has been applied, click on "Make Default" and the filtered block list will be saved as the default view for that aggregate. When a filtered view is saved as the default the filter flag will continue to display.

You may also search for a specific block entering a full or partial CIDR, assigned resource name, or other search term into the search box at the top of the list.

## Important Blocks

"Important" IP blocks display with a yellow background highlight. By default, any block that has been manually assigned, unassigned, or had other high-level manual interactions performed will be automatically marked as "Important".

|             |    |               |                    |                |   |               |                  |      |   |      |
|-------------|----|---------------|--------------------|----------------|---|---------------|------------------|------|---|------|
| 5.5.5.8/29  | 29 | St. Louis, MO | Customer,Example   | QA Test Res... | 1 | 1918 Test LIR | 2022-10-03 14... | 1234 | - | -    |
| 5.5.5.16/28 | 28 | St. Louis, MO | Customer,Example   | Weyland-Yü...  | 1 | -             | 2022-09-19 11... | -    | - | test |
| 5.5.5.32/27 | 27 | St. Louis, MO | Customer,Example   | available      | 1 | -             | 2022-10-03 14... | -    | - | -    |
| 5.5.5.64/26 | 26 | St. Louis, MO | Backbone,Custom... | available      | 1 | -             | 2022-09-19 16... | -    | - | -    |

Blocks may be manually marked or unmarked as "Important" from either the "Edit Block" interface or from the API.

To edit the important flag, open Edit block, then select / deselect the toggle for "Mark this block as important", and save your changes.

Edit Attributes: 2.2.3.0/24 (2.2.3.0 - 2.2.3.255)
Assigned to: omg\_ponies

RIR:
APNIC
LIR :

Domain:
Default 6c
VLAN:
2 - QA VLAN

Custom Generic Code:
ASN:

Region:
Washington, D.C

Tags:
Select tags...

Notes:

Allow sub assignments for this block:
OFF

Propagate attributes to all children:
OFF

Mark this block as important:
ON

NAT:
x.x.x.x/yy or x:x:x:x:x:x/yy

Close
Save

If multiple blocks are selected with mixed "important" statuses, then the toggle will display in the "Off" position.

To update all selected blocks to flag as important, switch the toggle to "On", and save changes. To switch all to the "Off" position, you may either toggle all blocks to "On", save changes, then switch all blocks back to "Off" and re-save, or adjust your selection to only include the blocks that need the Important Flag removed. (Tip: Use the list filter to show only "important" blocks!)

## Working with IP Blocks - Common Tasks

Individual Blocks may be managed from either IPAM Manage, or the IPAM Gadget. (if assigned to a resource, and the IPAM Gadget is enabled on the Resource's Entry Page).

In general, standard actions from the Action Menu will be performed the same in either area, with "Assign" being the exception.

For details on some common tasks to perform with IP Blocks, see the next section: [Working with IP Blocks - Common Tasks](#):

## Additional Information

For additional information on working with the IPAM system, see the following areas:

- [IPAM Gadgets](#)
- [Working with IP Rules](#)
- [IPAM Administration](#)
- [Working with NAT Blocks](#)