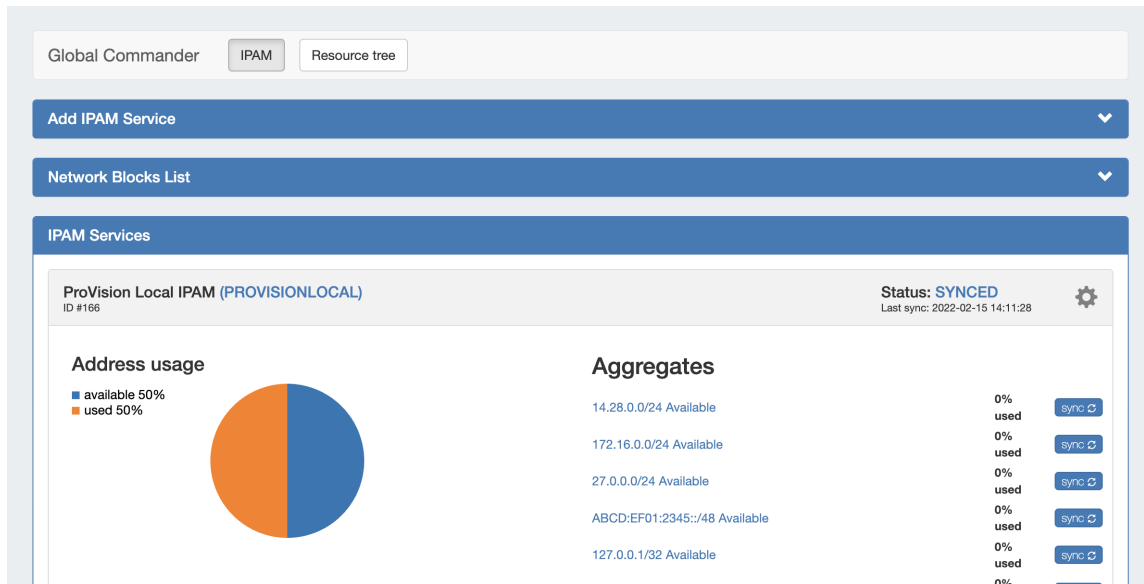# Global Commander

Global Commander

6connect Global Commander (GC) is a ProVision add-on module which allows for remote monitoring & control of distributed IP management systems. Global Commander can be enabled by procuring a license key from 6connect ProVision Support. Once you have the key, apply it to ProVision using the "Manage Licenses" area on the ProVision Admin page. This will enable the Global Commander navigation tab, containing two Global Commander sub-tabs: **IPAM** and **Resource Tree.**

Use Case

6connect Global Commander (GC) is a ProVision add-on module which allows for remote monitoring & control of distributed IP management systems. The core use-case for Global Commander is a large organization whose departments all operate independently, and have developed their own internal IT systems, standards, and practices. This scenario is common for companies whose growth is driven by acquisition, and it is often very difficult to justify a departure from established, known-good practices to impose a single methodology company-wide. With so many actors working with mutually-incompatible systems it can be a challenge to know what is truly going on within an organization.

With this in mind, we present 6connect Global Commander to address the following problems:

- You want a single overview of all IPAM activity in an organization regardless of what IPAM technologies are being used.
- You want a central location from which all IP information can be queried now matter how many IPAM systems manage fragments of the total landscape.
- You want to standardize IT systems, standards, and practices across a disparate internal landscape and need a bridge technology.
- You want to establish a centralized IP authority from which downstream groups request IP resources from, and return IP resources to.
- Your organization has a limited amount of public IP space distributed across many departments and you want identify where it is being used inefficiently.

Overview

Global Commander allows you to establish a single, centralized IP Management plane whose purpose is the orchestration and distribution of large IP blocks throughout the organization. Global Commander utilizes a stable of API connectors to popular IPAM systems (6connect ProVision, BlueCat, Infoblox, Netbox, Device42, etc.) to import and integrate IP data to present a unified view of IP utilization across the entire landscape. Global Commander can also act as an IP broker for the organization and use its connectors to either push or pull IP blocks on the daughter IPAMs to allow for effective management by IP Architects. Additionally, once established Global Commander can act as a bridge technology to transition departments onto a centrally-approved IPAM solution.
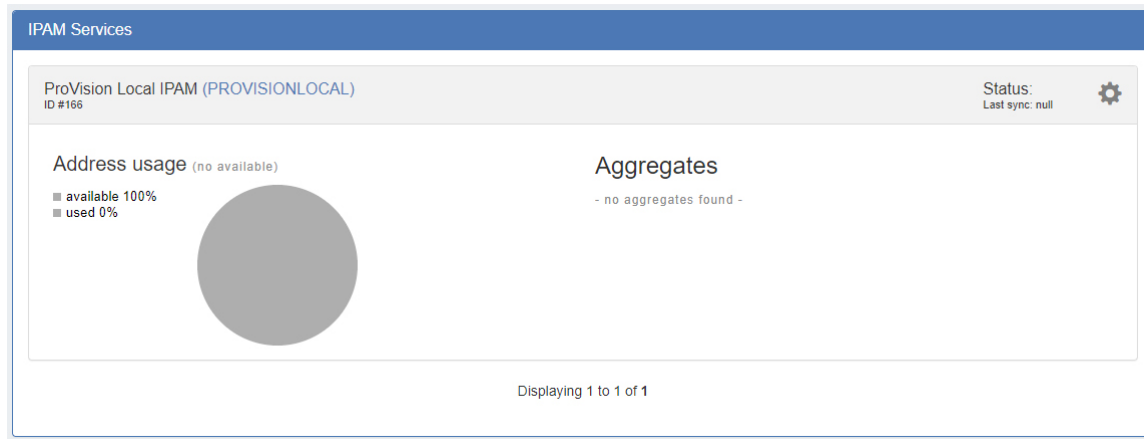
Enabling Global Commander

Once you have the have applied the license key for Global Commander to the Manage Licenses area, the Global Commander navigation tab will be enabled. There are two Global Commander sub-tabs: **IPAM** and **Resource Tree.**
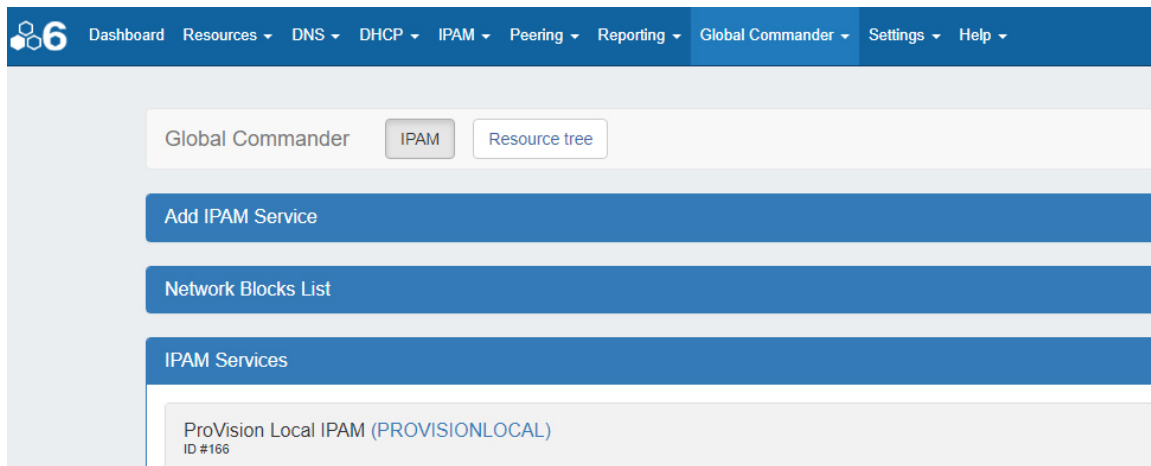
Synchronizing Global Commander

Global Commander comes pre-loaded with a "ProVision Local" IPAM Service which represents the IPAM Module of the local ProVision instance.

This is initially blank. Global Commander must synchronize itself with a daughter IPAM in order to pull in its IP state and detect changes.
The 'Sync' command can be found under the gear wheel in the upper-left hand corner of the services card.
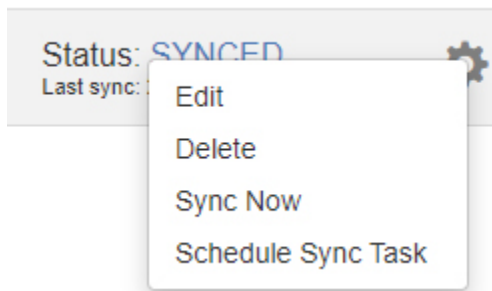
Here you can also Edit the connector to rename it, change its connector type, or connection credentials. You can also use the ProVision Scheduler system to queue up automatic synchronization tasks. Triggering an immediate Sync starts a synchronization job which pulls in IP information from the daughter system.

Syncing: **ProVision Local IPAM**

Syncing started with pid 10002...

Umbrella Sync started...

Initializing the connection to IPAM "ProVision Local IPAM"...

Start the syncing...

Finished Syncing Request

Close

After, the IPAM Service card will show up-to-date information on the IP space managed by this service and its current utilization state.

IPAM Services

ProVision Local IPAM (PROVISIONLOCAL)
ID #166

Status: SYNCED
Last sync: 2022-02-14 14:48:59

Address usage

■ available 92%
■ used 8%

Aggregates

192.168.0.0/16 Available   56.3% used   sync ⟳
10.0.0.0/8 Available   8.2% used   sync ⟳

Displaying 1 to 2 of **2** aggregates

Prev   Next

Displaying 1 to 1 of **1**
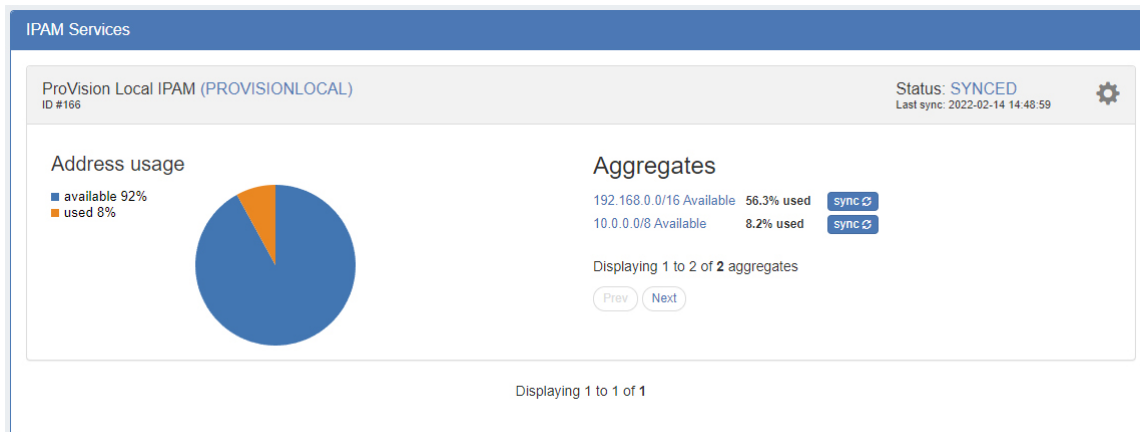
Notice the "Status:" area has changed to "SYNCED", alongside a date of the last Sync. The service card now shows the Aggregates available in the IPAM system. For convenience we also offer the ability to sync individual aggregates on demand.

Viewing an Aggregate

Clicking on an aggregate will allow you to see its details:

Manage IPAM service

192.168.0.0/16 - Available
Parent: ProVision Local IPAM

Attributes

Last modification	Start address
2022-02-14 14:49:06	192.168.0.0

Type	End address
	192.168.255.255

Data	RIR
{}	1918

Set as aggregate

ProVision Local IPAM

Set this block as an aggregate of another Umbrella Module

[Update] [Delete] [Sync] [Schedule Task]

Linked resources [Add]

ID	Resource Name	Link Type	Options
		No associated resources were found	

Filtering options

Netblocks

ID	Name	Type	RIR	Utilization	Associated Resources	Options
207	192.168.0.0/17 - Available	ipv4	1918	13%	-	remove assign sync split merge
214	192.168.128.0/17 - Department A	ipv4	1918	100%	-	remove assign sync split merge

Displaying 1 to 2 of **2** blocks

Here we can see that an entire /17 has been assigned to "Department A" by the daughter IPAM. Clicking on the /17 allows you to explore further. Depending on the functions provided by the daughter IPAM, you can use Global Commander to split, merge, assign, or reclaim this IP block from the daughter IPAM. This allows a central IP administrator to push IP resources directly to the departments that will be using them, or recall the same blocks when they are no longer needed.

Additional IPAM Services can be added with the "Add IPAM Service" tab on the main Global Commander page:

Each IPAM service has their own distinct method of communication and will require different credentials to properly connect. Once connection is established and Syncronization enabled, Global Commander will show a thorough listing of the IP resources on each service.

Corporate Office (BLUECAT)
ID #213

Status: SYNCED
Last sync: 2022-02-13 17:00:01

Address usage

- available 46%
- used 54%

Aggregates [Add +]

10.181.146.0/23 Office	0% used	sync ⟳	✓
10.178.160.0/20 Office	100.0% used	sync ⟳	✓
10.178.152.0/21 Office	100.0% used	sync ⟳	✓
10.177.242.0/23 Office	0% used	sync ⟳	✓
10.176.128.0/17 Office	100.0% used	sync ⟳	✓
10.98.128.0/17 Office	0% used	sync ⟳	✓
10.24.0.0/13 Corp Office - Maintained - EMEA	99.2% used	sync ⟳	✓
10.171.0.0/16 Office	90.6% used	sync ⟳	✓
10.15.0.0/16 Office	100.0% used	sync ⟳	✓
10.12.0.0/16 Office	100.0% used	sync ⟳	✓

Displaying 1 to 10 of **59** aggregates

[Prev] [Next]

QR DEPT (NETBOX)
ID #215

Status: SYNCED
Last sync: 2022-02-13 21:00:02

Address usage

- available 37%
- used 63%

Aggregates [Add +]

127.204.216.0/21 CCEE	0% used	sync ⟳	✓
127.204.212.0/22 CCEE	0% used	sync ⟳	✓
127.204.208.0/22 CCEE	28.1% used	sync ⟳	✓
127.204.192.0/20 CCEE	40.6% used	sync ⟳	✓
127.204.228.0/22 CCEE	0% used	sync ⟳	✓
127.204.32.0/22 CCEE	100.0% used	sync ⟳	✓
127.204.9.0/24 CCEE	100.0% used	sync ⟳	✓
171.91.108.0/23 CCEE	25.0% used	sync ⟳	✓
171.91.106.0/23 CCEE	25.0% used	sync ⟳	✓
171.91.104.0/23 CCEE	10.9% used	sync ⟳	✓

Displaying 1 to 10 of **113** aggregates

[Prev] [Next]

Each daughter IPAM can be put on its own synchronization schedule, or manual-only if needed. Additionally, the Global Commander system can be configured so that only manually-added IP Aggregates are tracked. This will allow you to track critical IP blocks in Global Commander, but allow departments to manage their own 1918 space without it cluttering the central control plane.

Network Blocks List

The Network Blocks List provides a centralized view of all the IPAM blocks organized by the system. It can be used to filter for a specific IP or range regardless of what IPAM system directly controls it.

Network Blocks List

Filtering options

ID	⇅ Name	⇅ Type	⇅ RIR	Utilization	⇅ IPAM Connector	⇅ Associated Resources	Options
217	10.0.0.0/8 - Available	ipv4	1918	75%	ProVision Local IPAM	-	remove assign sync
219	100.64.0.0/10 - Available	ipv4	1918	100%	ProVision Local IPAM	-	remove assign sync
221	169.145.0.0/16 - Available	ipv4	ARIN	36%	ProVision Local IPAM	-	remove assign sync
223	172.16.0.0/12 - Available	ipv4	1918	9%	ProVision Local IPAM	-	remove assign sync
225	192.168.0.0/16 - Available	ipv4	1918	0%	ProVision Local IPAM	-	remove assign sync
229	10.0.0.0/9 - Available	ipv4	1918	95%	ProVision Local IPAM	-	remove assign sync
231	10.0.0.0/10 - Available	ipv4	1918	92%	ProVision Local IPAM	-	remove assign sync
233	10.0.0.0/11 - Available	ipv4	1918	85%	ProVision Local IPAM	-	remove assign sync
235	10.0.0.0/12 - Available	ipv4	1918	69%	ProVision Local IPAM	-	remove assign sync
237	10.0.0.0/13 - Available	ipv4	1918	88%	ProVision Local IPAM	-	remove assign sync
251	10.8.0.0/13 - Available	ipv4	1918	50%	ProVision Local IPAM	-	remove assign sync
255	10.32.0.0/11 - Available	ipv4	1918	100%	ProVision Local IPAM	-	remove assign sync
257	10.64.0.0/10 - Available	ipv4	1918	99%	ProVision Local IPAM	-	remove assign sync
259	10.128.0.0/9 - Available	ipv4	1918	54%	ProVision Local IPAM	-	remove assign sync
261	10.64.0.0/11 - Available	ipv4	1918	100%	ProVision Local IPAM	-	remove assign sync
263	10.96.0.0/11 - Available	ipv4	1918	97%	ProVision Local IPAM	-	remove assign sync
265	10.96.0.0/12 - Available	ipv4	1918	100%	ProVision Local IPAM	-	remove assign sync
267	10.112.0.0/12 - Available	ipv4	1918	95%	ProVision Local IPAM	-	remove assign sync
269	10.96.0.0/13 - Available	ipv4	1918	100%	ProVision Local IPAM	-	remove assign sync
271	10.104.0.0/13 - Available	ipv4	1918	100%	ProVision Local IPAM	-	remove assign sync

Displaying 1 to 20 of **92691** blocks

« ‹ 1 2 3 4 5 6 7 ... 4635 › »

The relationship between aggregates, IPAMs, and the Global Commander system can also be visualized as a tree by clicking the "Resource Tree" button: