

# Managed Servers

## Managed Servers

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Server Section

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Server Name	Requests (2 min)	DNS	Monitor	DHCP	State
DNS Master	4 requests	v0.17	v0.20	-	Running
DNS Cache 1	4 requests	v0.17	v0.20	-	Running
DNS Cache 2	0 requests	v0.17	v0.20	-	Stopped
DNS Cache 3	4 requests	v0.17	v0.20	-	Running
DNS Cache 4	4 requests	v0.17	v0.20	-	Running
DHCP Zone A	4 requests	-	v0.20	IPv4: v0.12 - IPv6: v0.12	Running
DHCP Zone B	4 requests	-	v0.20	IPv4: v0.12 - IPv6: v0.12	Running
DHCP Zone C	4 requests	-	v0.20	IPv4: v0.12 - IPv6: v0.12	Running
DHCP Zone A Failover	4 requests	-	v0.20	IPv4: v0.12 - IPv6: v0.12	Running
DHCP Zone B Failover	4 requests	-	v0.20	IPv4: v0.12 - IPv6: v0.12	Running
DHCP Zone C Failover	4 requests	-	v0.20	IPv4: v0.12 - IPv6: v0.12	Running

Displaying 1 to 11 of 11 items.

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The Managed Servers tab allows for servers to be created, installed, managed, and monitored from within ProVision.

Managed Servers is handled via two main areas of the GUI: the **Managed Servers** Tab and in Admin **Admin Settings - Managed Servers** sub-tab. Managed servers actions are also available via APIv2 and the command line.

### Requirements

Note: Managed Servers requires Python3 and Docker to be installed to support this feature.

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## Overview

ProVision's Managed Servers tab allows for DNS (Knot-based) and DHCP(Kea-based) VMs to be created, managed and monitored from within ProVision, either from the GUI or command line.

Managed Server Features include:

- VM creation, management, and monitoring from within ProVision
- Minimal requirements - Managed Servers only requires Python3 and Docker as dependencies

- OS options include CentOS and Ubuntu
- Supports both remote and manual setups
- Supports both root and non-root installations (for the latter, some root steps may be required)
- Installation and upgrade may be performed either via internet connection or locally:
  - Remote internet install/upgrade connects to 6connect's servers to get new versions
  - Local installs/upgrades will require users to upload the new version locally into their ProVision instance
  - No kernel updates or other system updates are required for local updates - only the Docker container will be updated.
- Pre-defined Pre-and-Post Commands

Monitoring Features include:

- DNS Monitoring includes hit count for given period for each host/resource, total hit count, and last access time
- System monitoring Includes CPU load, Disk usage, connection information, swap memory, and virtual memory monitoring.
- Monitoring is available via GUI or API.
- Both "Push" and "Pull" options for statistics data are available
- Heartbeat service independent of Docker to provide monitoring data

## Permissions

Managed Servers uses a "6c servers" user group, under which automatic or manual "server users" are created. The "6c servers" user group gives permissions to all 6c server resources.

The "server users" are necessary to allow access and permissions for the managed server(s). When new server is created with an empty user (instead of a user-provided existing user) a random new user is automatically created under that group. Only that server user has permission to update the associated managed server.

## Administration

The "Managed Servers" sub-tab under Admin Settings includes modules for global setup of Monitoring Settings, Update Settings, Monitoring Services, and RabbitMQ settings.

The screenshot displays the 'Managed Servers' section within the 'Admin Settings' menu. It features two main panels: 'Monitoring Settings' and 'Update Settings'.

**Monitoring Settings:**

- Monitoring API settings:** A note states 'the servers will make requests to this IP as it is highly possible they will not be able to resolve ProVision's host'. It includes a 'Default Monitoring API IP' dropdown and a 'Verify CA' toggle (currently OFF).
- Communication type:** A dropdown menu set to 'Push-based'.
- Monitoring intervals settings:**
  - Monitoring of the system:** A toggle (ON) for 'System load - CPU, RAM, etc.'.
  - System monitoring interval:** A text input set to '5', with a note 'System monitoring interval in seconds.'
  - Monitoring of the DNS:** A toggle (OFF) for 'Request/response count, etc.'
  - DNS monitoring interval:** A text input with 'ex: 60', with a note 'DNS data will be collected and send (seconds).'

**Update Settings:**

- A note: 'Update settings and how managed servers are updated.'
- API timeout:** A text input set to '300', with a note 'Timeout for the API calls in milliseconds.'
- Update Mode:** A dropdown menu set to 'Docker Update (Internet)', with a note 'Specify the source for updates.'
- Update username:** A text input, with a note 'Username for the updates.'
- DNS update token:** A text input, with a note 'Token for DNS repository.'
- DHCP update token:** A text input, with a note 'Token for DHCP repository.'
- Monitoring update token:** A text input, with a note 'Token for Monitoring repository.'
- At the bottom right are two buttons: 'Test Tokens' and 'Save Changes'.

After making any settings updates, be sure to click "Save Changes" under the updated module.

For additional details, see [Managed Servers Settings](#).

# Managed Servers API

APIv2 endpoints are available for Managed Servers and Managed Server Monitoring.

To view these endpoints from your instance, go to the API Tab APIv2 Swagger Documentation, then click the Swagger links for the family categories "PVServers" and "Monitoring". For information on using the API, see [APIv2](#).

## Managed Servers Endpoints:

default		
GET	/pvservers	Get pvserver resources
POST	/pvservers/addDHCPService	Add DHCP Service to Managed Server
POST	/pvservers/addDNSService	Add DNS Service to Managed Server
GET	/pvservers/config/{id}	GET setup bundle for PVserver
GET	/pvservers/downloaddebug/{id}	Download debug bundle from PVserver
GET	/pvservers/imgversions	List the versions of given docker image
POST	/pvservers/manageService	Manage service of PVserver
POST	/pvservers/pushAllZones	Push all DNS zones to PVserver
POST	/pvservers/pushconfig	Push configuration and install PVserver
POST	/pvservers/pushupdate	Execute update on PVServer
POST	/pvservers/runDiagnostics	Run diagnostics on PVserver
POST	/pvservers/testdockercred	Test Docker Credentials

## Monitoring Endpoints:

## default

**GET** **/monitoring/dns/aggregate** Get aggregated dns monitoring data

**GET** **/monitoring/dns/raw** Get dns monitoring data

**GET** **/monitoring/dns/rps** Get dns requests per second

**POST** **/monitoring/heartbeat** PVServers heartbeat

**GET** **/monitoring/heartbeat** PVServers heartbeat

**GET** **/monitoring/pvips** ProVision IPs

**GET** **/monitoring/system/aggregate** Get aggregated system monitoring data

**GET** **/monitoring/system/raw** Get system monitoring data

**POST** **/monitoring/testrabbitmqcred** Test RabbitMQ Credentials

## Working with Managed Servers

For information on creating a new managed server, working with the managed server list, and viewing monitoring, see the following sections:

- [Working with Managed Servers](#)

## Additional Information

For Admin-level managed server setting information, see:

- [Managed Servers Settings](#)