

Working with Managed Servers

Working with Managed Servers

Managed Servers

Managed Servers List Refresh Table

items per page 20 Search by name...

Server Name	Requests (2 min)	Monitor	Backup	DNS	DHCP	State
Centos DHCP	4 requests	v0.23	-	-	IPv4: v0.22 - IPv6: v0.22	Running
RHEL Backup	0 requests	-	-	-	-	Stopped
RHEL8 6cDNS Server	0 requests	-	-	-	-	Stopped
Ubuntu DNS	4 requests	v0.23	-	v0.21	IPv4: v0.13 - IPv6: v0.13	Running

Displaying 1 to 4 of 4 items.

Previous 1 Next

The Managed Server page is where you can add a new server, view the list of existing servers, and view monitoring data on each server. From here, you may also access server settings and details for each server.

Requirements

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

- Working with Managed Servers
 - The Managed Server List Interface
 - Working with the Managed Server List
 - Add New Managed Server (Setup Wizard)
 - Step 1: Common Settings
 - Step 2: Communication Settings
 - Step 3: Monitoring Settings
 - Step 4: Service Settings
 - Step 5: Confirmation
 - View or Edit Managed Server Details
 - Settings
 - Services
 - Add Service
 - Monitoring
 - RPS (requests per second)
 - Update / Install Managed Server (Existing Component)
 - Requirements
 - Automatic (Recommended)
 - Manual (from the command line)
 - Without root
 - Update Managed Server
 - Managed Server Diagnostics / Debug
 - Automatic - GUI
 - Manual - Command Line Scripts
 - Local
 - Delete Managed Server
 - Additional Information

The Managed Server List Interface

The Managed Server Section List provides server and monitoring data for each managed DNS / DHCP / Backup server.

Managed Servers Add Server

Managed Servers List Refresh Table

Items per page 20 Search by name...

Server Name	Requests (2 min)	Monitor	Backup	DNS	DHCP	State
Centos DHCP	4 requests	v0.23	-	-	IPv4: v0.22 - IPv6: v0.22	Running ⚙
RHEL Backup	0 requests	-	-	-	-	Stopped ⚙
RHEL8 6cDNS Server	0 requests	-	-	-	-	Stopped ⚙
Ubuntu DNS	4 requests	v0.23	-	v0.21	IPv4: v0.13 - IPv6: v0.13	Running ⚙

Displaying 1 to 4 of 4 items.

Previous 1 Next

The list provides the following information:

Server Name: The server display name, set by the user during server creation. You may click on the server name link to view server details

Requests: Requests are the heartbeat notifications received in the last 2 minutes. Requests are sent every 30 seconds, so a display of 4 or 5 requests represents a satisfactory request connection, and the request bar will show in green. For any lower value, the color of the bar will show in red.

Monitor / Backup / DNS / DHCP: The version of the component running. If the server is not running, no version will display.

State: State shows the overall state of the server - the server may be running, but without any components started. "Running" will show in green, whereas "Stopped" will display as an orange bar.

Action Menu (gear icon): Right click on the action menu (or anywhere on the row) to display available server actions

Managed Servers

Managed Servers List Refresh Table

items per page 20 Search by name...

Server Name	Requests (2 min)	Monitor	Backup	DNS	DHCP	State
Centos DHCP	5 requests	v0.23	-	-	IPv4: v0.22 - IPv6: v0.22	Running ⚙
RHEL Backup	0 requests	-	-	-	-	Stopped ⚙
RHEL8 6cDNS Server	0 requests	-	-	-	-	Stopped ⚙
Ubuntu DNS	4 requests	v0.23	-	-	-	Stopped ⚙

Displaying 1 to 4 of 4 items.

Previous 1 Next

Stop Service

Start Service

Restart Service

DNS Actions

DHCP Actions

Backup Actions

Remove Server

Working with the Managed Server List

The following actions may be performed when interacting with the server list:

Sort the list by clicking on the "Server Name" column, to view by Ascending / Descending order

Search / Filter the list for specific servers by entering a full or partial server name into the search box at the upper right of the list

Display more/fewer servers per page by clicking on the "Items per page" selector at the top right of the list, next to the search box

Refresh the list to check for updated information by clicking the "Refresh Table" button (rotating arrows)

Click on a server name to view / edit server details

Add New Managed Server (Setup Wizard)

Before you begin, you will need to know following connection information for the new managed server:

- Server FQDN or IP (only required for automatic installation)
- Desired server OS
- SSH credentials and port

To set up a new managed server, click "Add Server" at the top right of the Managed Server Tab.



From there, proceed through each of the five steps of the Add New Server wizard, below:

Step 1: Common Settings

Manage Options

Go To List

Server Section

1

Common Settings

2

Communication Settings

3

Monitoring Settings

4

Service Settings

5

Confirmation

Display Name *

Demo Server

This is the server name that will appear in the DNS interface.

Installation Type

☒ Automatic Installation ☐ Manual Installation

The Management Service will connect to the Managed Server then install and configure any required services.

Server OS *

Ubuntu

The operating system that will run on the server.

FQDN or IP *

192.168.0.77

The IP address that ProVision will use to connect to this server.

SSH Key Auth

☐

SSH UserName *

root

For SSH connection. Need write access to the zone folder and Bind settings.

SSH Password *

SSH Port *

22

Server SSH Port.

SSH Route

Search SSH-Route

Test Connection

Next

Enter the common settings for the new server:

Display Name: The display name for the server

Installation Type: You may choose either an automatic installation, where ProVision handles the installation, or perform a manual installation.

After selecting the installation type, enter the required fields for the server, depending on the selected install type:

Display Name (always required)

Server OS (always required)

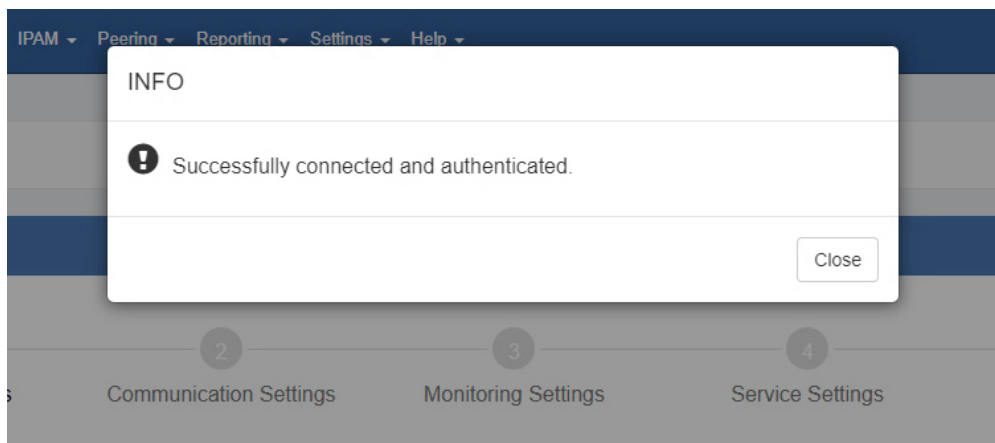
FQDN or IP (required for automatic installations)

SSH Username / Password (required for automatic installations)

SSH Port (required for automatic installations)

SSH Route (optional)

After entering in the common settings, click "Test Connection" to verify the connection and authentication.



Once a connection has been confirmed, click "Next".

Step 2: Communication Settings

Manage Options

Go To List

Server Section

1

2

3

4

5

Common Settings

Communication Settings

Monitoring Settings

Service Settings

Confirmation

This section has to do with the way in which the managed server communicates with the provision system for configuration, data collection and metrics that will be showed in the charts area.

Provision UserName

Enter Username...

ProVision username for server updates. If it is empty, it will be created automatically.

Provision Password

Enter password...

ProVision password for server updates. If it is empty, it will be created automatically.

IP Api Address *

192.168.0.63

Previous

Next

Managed servers require a ProVision user account and API IP in order to communicate configuration, data, and monitoring information.

ProVision Username / Password: You may enter a specific ProVision username and password, or allow one to be automatically generated. If you enter an existing ProVision user, please ensure that the user is included under the 6cservers group and/or has full C/R /U/D resource permissions on the "6c server" resource.

IP API Address: The API address the managed server should use. There are cases when the DNS servers are in different networks and should communicate with ProVision on different IPs.

Click "Next" to proceed.

Step 3: Monitoring Settings

Select the desired monitoring settings for the server. You may either accept the default settings, or click on the toggle for **Custom Monitoring Settings** to override default settings.

Manage Options
Go To List

Server Section

1
2
3
4
5

Common Settings
Communication Settings
Monitoring Settings
Service Settings
Confirmation

On this page you can configure monitoring settings of the Managed Services that you will add later, you can enable/disable the metrics collection, the type of metrics you want to gather, the collection intervals and the data retention period.

☒ Custom Monitoring Settings

☒ System Monitoring

System Monitoring Interval
5
System monitoring interval in seconds.

☒ Dns Monitoring

DNS Monitoring Interval
60
DNS monitoring interval in seconds.

Raw Data Retention
60
The period to keep the raw/detailed monitoring data in minutes.

Aggregate Data Retention
60
The period to keep the aggregated monitoring data in days.

Communication Type
Push-based

Previous
Next

Options include:

System Monitoring: Enable / Disable monitoring for system statistics. If enabled, enter the desired **System Monitoring Interval** (in seconds). More frequent intervals require larger storage, but generates more data in cases where investigation is needed.

DNS Monitoring: Enable / Disable monitoring for DNS statistics. If enabled, enter the desired **DNS Monitoring Interval** (in seconds). DNS requests are collected for the set time interval, and then sent as an aggregated result.

Raw Data Retention: How long to keep the raw data, in minutes. This affects how far back you could investigate an incident using the detailed data. Raw data requires sizable storage needs; so the default setting is 1440 min (1 day).

Aggregated Data Retention: How long to keep the aggregated data, in days.

Communication type: Select either Push-based (when the server pushes data to ProVision) or Pull-based (when ProVision connects to the server and pulls the data). Push-based is the preferred method, but Pull-based may be desirable in cases where a firewall would not allow inbound connections to ProVision.

Click "Next" to continue.

Step 4: Service Settings

Here you can select which components to install linked to the current server. If you prefer not to add a service, both toggles may be disabled.

Manage Options
Go To List

Server Section

1
2
3
4
5

Common Settings
Communication Settings
Monitoring Settings
Service Settings
Confirmation

In this section you can set if you want to add a Managed Service linked to the current Server. If you prefer not to add any service leave the toggles OFF.

☒ Add DNS Service

Max DNS Upgrade Version
latest
Limit the max upgrade version. Empty or latest for the most up to date.

☒ Add DHCP Service

Max DHCP Upgrade Version
latest
Limit the max upgrade version. Empty or latest for the most up to date.

Server Type
☒ Child ☐ Parent

Server Parent *
Select parent...

Previous
Next

Add DNS Service: Enable / Disable to add a DNS Managed Service link. Options include:

Max DNS Upgrade Version: Select either "latest", or select a specific version to install and not upgrade beyond, in case of known issues or incompatibility.

Add DHCP Service: Enable / Disable to add a DNS Managed Service link (Kea / MySQL DB). Multiple DHCP instances can connect to one database, organized as one parent with multiple children.

In ProVision, "1 database" = "1 dhcpmodule resource", and only a "parent" DHCP can have address and credentials for the database. The children don't store any information about the database and the necessary data is taken from the parent; no "dhcpmodule resource" are created for the children.

Options include:

Max DHCP Upgrade Version: Select either "latest", or select a specific version to install and not upgrade beyond, in case of known issues or incompatibility.

Server Type: Select "Child" or "Parent".

- Child: If "Child" is selected, then the parent server must be selected. On the managed server there will be an attribute to note that it will have DHCP component, but it would be a child one and which one is the parent. In this case the pv_mysql component is not installed as it is not needed - the DHCP will connect to another database
- Parent (Default Configuration): By default, if "Parent" is selected then ProVision will set up pv_dhcp and pv_mysql components on the server and pv_dhcp will be configured to use this pv_mysql as database. The server will offer both IPv4 and IPv6 addresses.
- Parent (Advanced Configuration): The main use case is when you don't want to put further load to the server by hosting the database or a database in a container might not perform good enough, you have this option to provide another MySQL instance. Using this the user can also modify the database name, user, password and if the server should serve IPv4, IPv6 or both. The user can also select the location of the database - local with pv_mysql component with the provided credentials or remote, which is completely remote database and no pv_mysql component will be set up.

Managed Servers

1 Common Settings 2 Communication Settings 3 Monitoring Settings 4 Service Settings 5 Confirmation

In this section you can set if you want to add a Managed Service linked to the current Server. If you prefer not to add any service leave the toggles OFF.

☐ Add DNS Service

☐ Add DHCP Service

☒ Add Backup Service

Max Backup Upgrade Version

latest

Limit the max upgrade version. Empty or latest for the most up to date.

Web UserName *

Enter Web username...

Username for the web interface.

Web Password *

Enter Web Password...

Username for the web interface.

DB UserName

Enter DB Username...

Username for the database. If empty, the system will create one for you.

DB Password

Enter DB Password...

Password for the database. If empty, the system will create one for you.

Notification Email *

Previous Next

Add Backup Service: Enable / Disable to add a Backup Managed Service link. Options include:

Max DNS Upgrade Version: Select either "latest", or select a specific version to install and not upgrade beyond, in case of known issues or incompatibility.

Web Username / Password: Enter the Username and password for the ProVision Backup web interface.

DB Username / Password: You may enter a specific ProVision username and password, or allow one to be automatically generated. If you enter an existing ProVision user, please ensure that the user is included under the 6cservers group and/or has full C/R/U/D resource permissions on the "6c server" resource.

Notification Email: Enter an email to receive email about low disk space.

When you are done setting up service and database settings, click "Next".

Step 5: Confirmation

The last step to setting up a new managed server is review and confirmation.

Manage Options

Go To List

Server Section

1

2

3

4

5

Common SettingsCommunication SettingsMonitoring SettingsService SettingsConfirmation

Common Settings

Display Name *

Demo Server

FQDN or IP *

192.168.0.77

Server OS *

ubuntu

Authentication Type

password

Communication Settings

Provision UserName

Autogenerated

Provision Password

Autogenerated

IP Api Address *

192.168.0.63

SSH Port *

22

Monitoring Settings

Custom Monitoring Settings

true

System Monitoring

true

System Monitoring Interval

5

Raw Data Retention

60

Communication Type

push-based

Dns Monitoring

true

DNS Monitoring Interval

60

Aggregate Data Retention

60

Service Settings

Add DNS Service

Will be added

Max DNS Upgrade Version

latest

Add DHCP Service

Will not be added

Max DHCP Upgrade Version

Previous

Create Server

Options selected in previous steps will display on the page - review and confirm all settings, utilizing the "Previous" button if changes are needed.

Once settings are verified, click "Create Server" to complete the setup wizard.

The new Managed Server will display in the Managed Server list.

After a new server has been created, you may edit it by clicking on the server name, or view monitoring data from the Managed Server list.

View or Edit Managed Server Details

Click on a server name, or open the server action menu to view details for a managed server.

The details of a server are organized into tabs: Settings, Services, Monitoring, and RPS.

Managed Servers

Go To ListAdd Server

Managed Servers

SettingsServicesMonitoringRPS

Display Name *

CentOS

This is the server name that will appear in the DNS interface.

Server OS *

Centos

The operating system that will run on the server.

FQDN or IP *

exampleserver.com.

The IP address that ProVision will use to connect to this server.

Show Advanced Settings

Custom Monitoring Settings

Run ActionsDownload SetupTest ConnectionSave Changes

Settings

By default, only "Display Name", "Server OS" and "FQDN or IP" fields are shown.

Toggle on "Show Advanced Settings" to see the ssh credentials, "IP Api Address" and the max versions for each component:

Show Advanced SettingsSSH Key Auth

Provision UserName

pv_4119_g30W@ProVision.test

ProVision username for server updates. If it is empty, it will be created automatically.

SSH UserName *

root

For SSH connection. Need write access to the zone folder and Bind settings.

SSH Port *

22

Server SSH Port.

IP Api Address *

194.24.189.120

Server SSH Port.

Max DNS Upgrade Version

latest

Limit the max upgrade version. Empty or latest for the most up to date.

Provision Password

SSH Password *

SSH Route

Search SSH-Route

Max DHCP Upgrade Version

latest

Limit the max upgrade version. Empty or latest for the most up to date.

Custom Monitoring Settings

Toggle on "Custom Monitoring Settings" to view/edit the monitoring settings:

☐ Show Advanced Settings

☒ Custom Monitoring Settings

☒ Syst. Monitoring

System Monitoring Interval

 System monitoring interval in seconds.

☒ Dns Monitoring

DNS Monitoring Interval

 DNS monitoring interval in seconds.

Raw Data Retention

 The period to keep the raw/detailed monitoring data in minutes.

Aggregate Data Retention

 The period to keep the aggregated monitoring data in days.

Communication Type

 Direction of the communication Pull/Push

This will be toggled if the user has set custom settings earlier or during the setup. The fields are the same as in the Monitoring Settings step during setup and are described there.

At the bottom left of the settings module, two buttons are available: "Run Actions" (including Push Install, Push Update, and Run Diagnostic options) and "Download Setup".

On the bottom right, you may click "Test Connection" to test the SSH connection to the server.

Push Install
 Push Update
 Run Diagnostic

Settings
 ng Settings

When any edits are complete, click "Save Changes".

Services

Under Services, you can view the enabled components for this server.

Server Section

SettingsServicesMonitoringRPS

Managed Services

Service Name	Service	Server Type	Max Version	Port
Contabo1 Managed DNS	pv_dns	master	latest	Edit 22
Contabo1 Managed DHCP	pv_dhcp	parent	latest	Edit 68

Click on a component to open a new tab with component details. In case of a "child" DHCP service, the link will lead to its parent.

Server Section

Settings

Services

Monitoring

RPS

Managed Services

Service Name	Service	Server Type	Max Version	Port
Contabo2 Managed DNS	pv_dns	master	latest <a>Edit	53
Child of Contabo1 Managed DHCP	pv_dhcp	child	latest <a>Edit	68

Add Service

The "Add Service" button shows a popup to choose the service.

Add Service

Service Type *

DNS Service

DNS Service

DHCP Service

Close

Save

For DNS there is nothing to select:

Add Service

Service Type *

DNS Service

Max DNS Upgrade Version

latest

Close

Save

For DHCP, the interface is the same as during the setup wizard:

Add Service

Service Type *

DHCP Service

Server Type

☐ Child ☒ Parent

Server Parent *

Select parent...

Close

Save

Here, you may edit your settings if changes are needed.

Add Service

Service Type *

DHCP Service

Server Type

☒ Child ☐ Parent

Configuration Type

☒ Default ☐ Advanced

Max DHCP Upgrade Version

latest

DB Location *

Select DB Location...

DB Host *

Enter DB Host Name...

DB Database *

Enter DB Name...

DB UserName *

Enter DB Username...

DB Password *

Enter DB Password...

DB Port *

Enter DB Port...

IP Server Type *

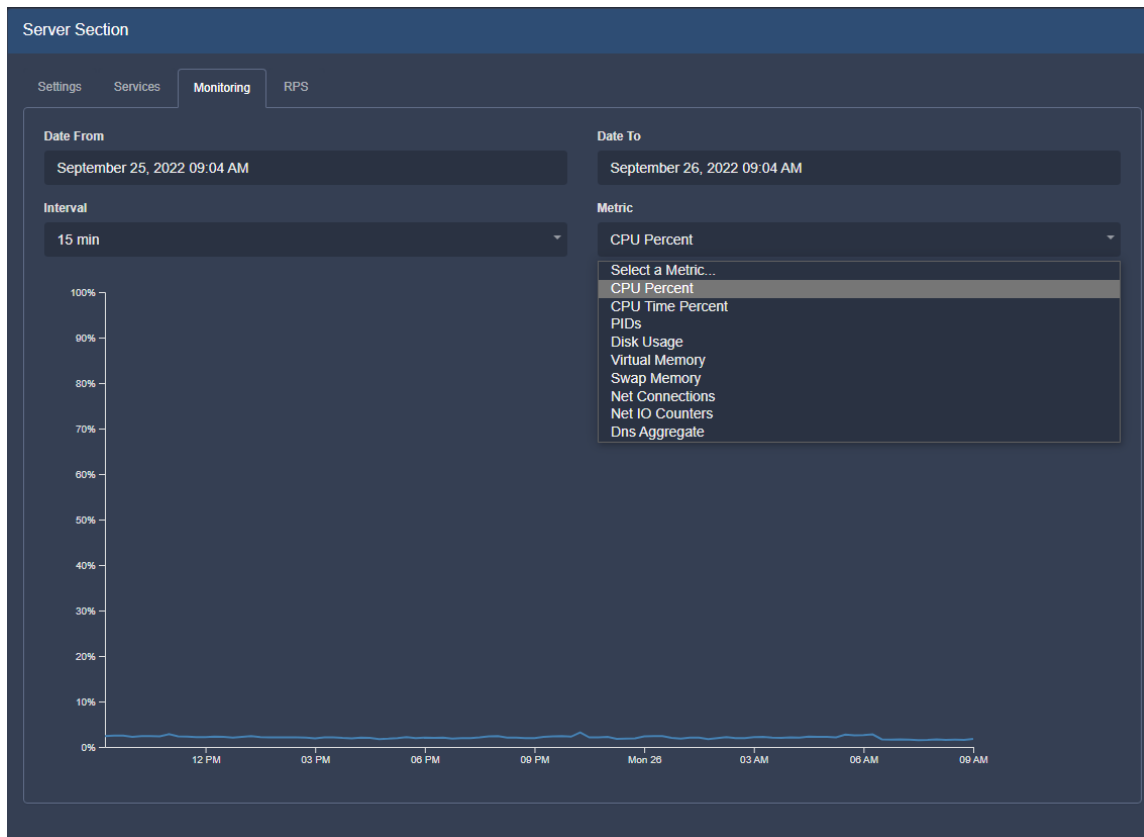
Close

Save

When done, click "Save" to ensure any changes are saved, or click "Close" to exit without saving.

Monitoring

Under Monitoring, you can see the aggregated system statistics + "DNS aggregate":



Select a certain time interval (by default, the last 24h) and aggregation interval (5 min, 15 min, 30 min, 1 hour). Note - the charts are different for the different metrics.

For example, selecting "Dns Aggregate" shows a different set of information:

Server Section

Settings

Services

Monitoring

RPS

Date From

September 25, 2022 09:16 AM

Date To

September 26, 2022 09:16 AM

Interval

15 min

Metric

Dns Aggregate

DNS Monitoring

Items per page 20

Search by name...

DNS Record Id	Host Name	↕ Last Access	↕ Total Hits
0	version.bind.	2022-09-26 07:04:43	675
0	testip.internet-census.org.	2022-09-26 06:31:42	96
0	dnsscan.shadowserver.org.	2022-09-26 09:05:26	86
0	id.server.	2022-09-26 07:04:43	54
0	hostname.bind.	2022-09-25 23:51:35	49
0	a.gtld-servers.net.	2022-09-26 08:57:45	46
0	amazon.com.	2022-09-26 05:17:40	43
0	239.166.163.194.in-addr.arpa.	2022-09-26 05:17:40	43
0	google.com.	2022-09-25 14:37:47	31
0	ampereinnovatech.com.	2022-09-26 07:04:43	14
0	clients1.google.com.	2022-09-25 10:08:02	12
4134	pvverify.test.	2022-09-26 09:15:46	5
0	194-163-166-239-6330f991.spiderprobe.com.	2022-09-26 05:17:40	1
4189	pvverify.test.	2022-09-26 09:15:26	1

Displaying 1 to 14 of 14 items.

Previous

1

Next

For the DNS records, we aggregate the overall total hits and the last time it was accessed. This is in order to be able to see the most/least used records and the ones which haven't been used for a long time and could be deleted. "Date From" and "Date To" here refer to the "Last Access".

If the request is for a record, for which we don't have resource, the ID will be 0. We have "pvverify.test" two times, because one of them is for "A" request and the other is for "TXT".

RPS (requests per second)

Under RPS, you can search for data for a given dns record.

Server Section

Settings

Services

Monitoring

RPS

Date From *

September 25, 2022 09:26 AM

Date To *

September 26, 2022 09:26 AM

Action *

Request

Host

E.g. example.com

DNS Record

Search Resource

Type

Select type...

Description	Values
Request Per Second	0
Date From	2022-09-25 9:26
Date To	2022-09-26 9:26
Total	38
Time Delta	86400

The following search filters are available:

Date From/ Date To: Time interval to search

Action: Request or response

DNS Record: Search for a specific resource

Host: Search by host

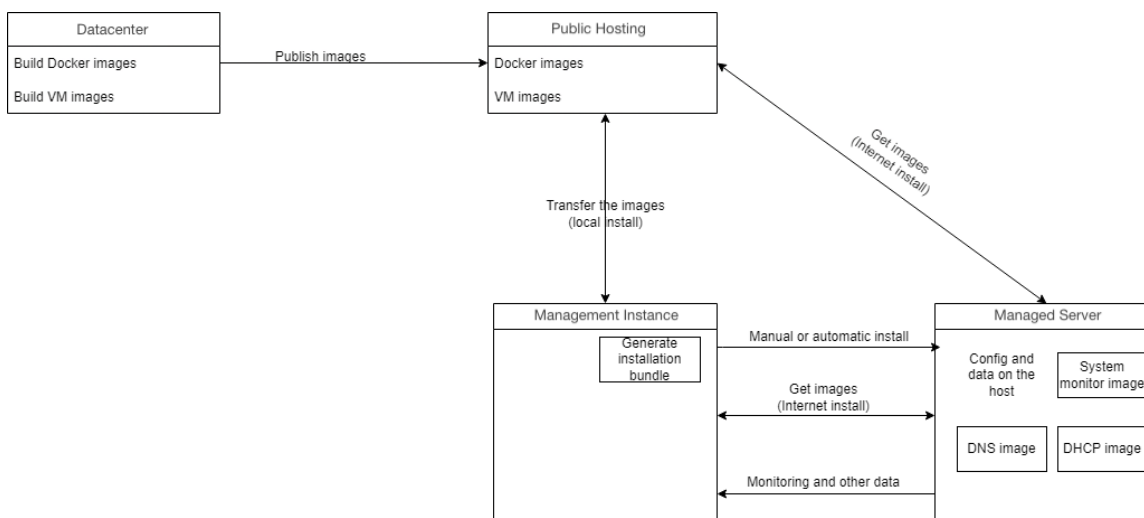
Type: DNS request type (A, AAAA, CNAME, MX, TXT etc.)

Update / Install Managed Server (Existing Component)

The installation can be run more than once. If we already have running components, they will be stopped before the real installation continues.

If there is newer version of any component, it will be downloaded and used.

The overall process is:



Requirements

Python 3.6+ and Docker are the only requirements. If we run the installation with root (see below) and we have internet access, the installation process will install Docker.

The overall process is always the same - ProVision generates an install bundle, it is transferred to the server, extracted there and run some scripts from it. This can be done by ProVision (automatic install) or by the user (manual). In case of automatic install ProVision will automate the steps, which the user would do manually. All the components can run without root access, but we need it for user creation, folders creation, network and heartbeat service setup.

Automatic (Recommended)

This is the recommended and easiest setup method. If you have root access, ProVision can do all the necessary actions.

Go to the details page Settings tab "Run Actions" "Push Install"

Confirmation dialog will be shown:

Popup with the progress will be shown.:

Push Status

✓ Finished Config Pushing Request

✓ (2022-09-26T13:13:22+00:00) Executing activate(12/12)

✓ (2022-09-26T13:13:22+00:00) Executing change_dir_owner 11/12

✓ (2022-09-26T13:10:48+00:00) Executing setup_dhcp(10/12)

✓ (2022-09-26T13:10:47+00:00) Executing setup_dns(9/12)

✓ (2022-09-26T13:09:46+00:00) Executing setup_monitoring(8/12)

✓ (2022-09-26T13:09:45+00:00) Executing setup_heartbeat(7/12)

✓ (2022-09-26T13:09:45+00:00) Executing create_dir_struct(6/12)

Download Log File

Close

Each command/step is shown together with the overall progress.

Manual (from the command line)

This case is usually when the user doesn't want to input the root user in ProVision, but he has root access. The setup bundle should be downloaded and saved on your local computer:

Server Section

Settings Services Monitoring RPS

Display Name *

Contabo2

This is the server name that will appear in the DNS interface.

Server OS *

Ubuntu

The operating system that will run on the server.

FQDN or IP *

161.97.167.192

The IP address that ProVision will use to connect to this server.

Show Advanced Settings

Custom Monitoring Settings

Run Actions

Download Setup

Test Connection

Save Changes

The setup bundle name will be in format "setup-XXX.tar" where XXX is the resource ID of the managed server. The rest of the process is:

- copy the file to the managed server (with SCP or any other suitable way)
- extract it with **"tar -xf setup-XXX.tar"**
- execute **"sudo /bin/bash install_python3.sh"** - this should finish with "PVOK"

Without root

This is the used if root access to the server is not available. In this case, an admin with root access should first do the following:

- Install docker with the relevant commands for the OS. This can be done by running "**install_docker.sh**" from the setup bundle with root or any other suitable way

Install docker CentOS

```
yum update -y
yum install -y yum-utils bind-utils

yum-config-manager \
  --add-repo \
  https://download.docker.com/linux/centos/docker-ce.repo

yum install -y docker-ce docker-ce-cli containerd.io docker-compose-plugin

systemctl enable docker
systemctl start docker

docker run hello-world
```

Install docker Ubuntu

```
sudo apt-get update

sudo apt-get install -y \
  ca-certificates \
  curl \
  gnupg \
  lsb-release

# default start
KEYRING_FILE=/usr/share/keyrings/docker-archive-keyring.gpg
[ -f "$KEYRING_FILE" ] && rm $KEYRING_FILE

curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo gpg --dearmor -o $KEYRING_FILE

echo \
  "deb [arch=$(dpkg --print-architecture) signed-by=$KEYRING_FILE] https://download.docker.com/linux/ubuntu \
  $(lsb_release -cs) stable" | sudo tee /etc/apt/sources.list.d/docker.list > /dev/null

sudo apt-get update
sudo apt-get -y install docker-ce docker-ce-cli containerd.io
sudo docker run hello-world
```

- Create the relevant user, add it to "docker" group, create **/provision** directory and make the created user owner of this directory.

User and directory setup

```
useradd -m <user>
passwd <user>
usermod -a -G docker <user>
mkdir -p /provision
chown -R <user>:<user> /provision
```

- Make the necessary network changes. This can be done by running "**network_config.sh**" from the install bundle

Network config CentOS

```
yum update -y
yum install -y yum-utils bind-utils iptables-services

systemctl enable iptables
#iptables -I INPUT -p udp -m udp --dport 53 -j ACCEPT
#service iptables save

iptables -P INPUT ACCEPT
iptables -P FORWARD ACCEPT
iptables -P OUTPUT ACCEPT
iptables -t nat -F
iptables -t mangle -F
iptables -F
iptables -X
ip6tables -P INPUT ACCEPT
ip6tables -P FORWARD ACCEPT
ip6tables -P OUTPUT ACCEPT
ip6tables -t nat -F
ip6tables -t mangle -F
ip6tables -F
ip6tables -X
service iptables save
```

Network config Ubuntu

```
#!/usr/bin/sh
if [ "$(readlink /etc/resolv.conf)" != "/run/systemd/resolve/resolv.conf" ]; then
    ln -sf /run/systemd/resolve/resolv.conf /etc/resolv.conf
fi

sed -i 's/^#DNSStubListener/DNSStubListener;/s/DNSStubListener=yes/DNSStubListener=no/' /etc/systemd/resolved.conf

systemctl stop systemd-resolved
systemctl start systemd-resolved
```

- Create service file and edit user with the correct system user.

pv_heartbeat.service

```
# https://www.cloudsavvyit.com/3092/how-to-add-your-own-services-to-systemd-for-easier-management/
# https://www.opentechguides.com/how-to/article/centos/169/systemd-custom-service.html
# https://computingforgeeks.com/how-to-run-systemd-service-without-root-sudo/
# https://unix.stackexchange.com/a/497011

[Unit]
Description=pv_heartbeat Service, which reports the current status.
After=network.target
# StartLimitIntervalSec=0

[Service]
Type=simple
Restart=always
RestartSec=1
User=<user>
ExecStart=/usr/bin/python3 /provision/libs/pv_heartbeat.py

[Install]
# WantedBy=multi-user.target
WantedBy=default.target
Alias=pv_heartbeat.service
```

- Make symlink to this file (replace /provision/libs/pv_heartbeat.service with the correct file path):

pv_heartbeat symlink

```
ln -s /etc/systemd/system/pv_heartbeat.service /provision/libs/pv_heartbeat.service
```

- Create sudoers file (user with the correct system user) and place it in /etc/sudoers.d:

CentOS sudoers

```
# https://unix.stackexchange.com/a/497011

Cmnd_Alias MANAGE_PV_HEARTBEAT = \
    /bin/systemctl enable  pv_heartbeat, \
    /bin/systemctl disable pv_heartbeat, \
    /bin/systemctl start   pv_heartbeat, \
    /bin/systemctl stop    pv_heartbeat, \
    /bin/systemctl restart pv_heartbeat, \
    /bin/systemctl status  pv_heartbeat

<user> ALL = (root) NOPASSWD: MANAGE_PV_HEARTBEAT
```

Ubuntu sudoers

```
# https://unix.stackexchange.com/a/497011

Cmnd_Alias MANAGE_PV_HEARTBEAT = \
    /usr/bin/systemctl enable  pv_heartbeat, \
    /usr/bin/systemctl disable pv_heartbeat, \
    /usr/bin/systemctl start   pv_heartbeat, \
    /usr/bin/systemctl stop    pv_heartbeat, \
    /usr/bin/systemctl restart pv_heartbeat, \
    /usr/bin/systemctl status  pv_heartbeat

<user> ALL = (root) NOPASSWD: MANAGE_PV_HEARTBEAT
```

- Reload the systemctl daemon:

Reload services

```
systemctl daemon-reload
```

From this point automatic or manual setup can be done with the non-root user.

Update Managed Server

In ProVision's Managed Servers page, open the server details. Then, under the settings tab, click "Run Actions, and select "Push Update". ProVision will automatically create a backup file in /provision/backups/.

Server Section

Settings
Services
Monitoring
RPS

Display Name *
Contabo2

Server OS *
Ubuntu

This is the server name that will appear in the DNS interface.
The operating system that will run on the server.

FQDN or IP *
161.97.167.192

The IP address that ProVision will use to connect to this server.

Push Install
Push Update
Run Diagnostic

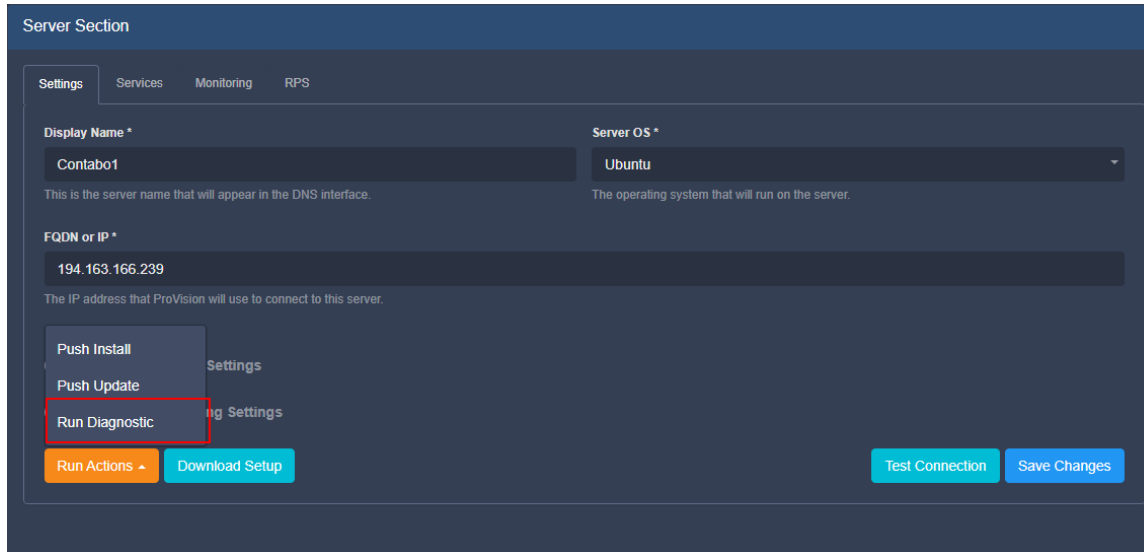
Settings
ng Settings

Run Actions
Download Setup
Test Connection
Save Changes

Managed Server Diagnostics / Debug

Automatic - GUI

The user can run some basic diagnostics from the Managed Serve details page, under the Settings tab. Click "Run Actions", then "Run Diagnostics":



The screenshot shows the 'Server Section' interface with the 'Settings' tab selected. The 'Display Name' is 'Contabo1' and the 'Server OS' is 'Ubuntu'. The 'FQDN or IP' is '194.163.166.239'. A dropdown menu is open under 'Run Actions', with 'Run Diagnostic' highlighted. Other buttons include 'Push Install', 'Push Update', 'Download Setup', 'Test Connection', and 'Save Changes'.

Server Section

Settings Services Monitoring RPS

Display Name *
Contabo1
This is the server name that will appear in the DNS interface.

Server OS *
Ubuntu
The operating system that will run on the server.

FQDN or IP *
194.163.166.239
The IP address that ProVision will use to connect to this server.

Push Install
Push Update
Run Diagnostic
Run Actions
Download Setup
Test Connection
Save Changes

All the debug and diagnostic tools are in the monitoring component, thus it needs to be running in order to function.

After clicking the button, a confirmation dialog will be shown with the results:

Push Status

OK
Checking remote rabbit queue monitor_servers
OK
Remote queue length: 0
Remote queue consumer count: 1

Testing push event to test_debug
Create test_debug
OK
Debug queue initial length: 1
Publish to test_debug
OK
Debug queue current length: 2
End of diagnostics

✓ (2022-09-27T13:56:34+00:00) Run diagnostics

✓ (2022-09-27T13:56:34+00:00) Verify pv_monitor container is running

Download Log File

Close

We verify if we have docker running, if the monitoring component is running and the RabbitMQ connection.

You may download the results by clicking "Download Log File", and "Close" when done.

Manual - Command Line Scripts

All the scripts are in `/provision/libs/`.

All the scripts can be started with `-h` parameter to show relevant help.

- `pv_install.py` - used for the whole setup. The process itself is broken into separate steps, which can be executed individually with `-e/--exec-only=`. The steps can be seen from the help `(-h)`. This should be used by developers and for debugging purposes
- `start_pv_*.sh` - all these scripts are used to start given component. All of them support `-v/--version` to specify the version of the component to start and `-b/--bash` to start the container in debug mode. In debug mode the user will be logged into the container but without starting `/start.sh` (the entrypoint).
- `stop_pv_*.sh` - all these scripts are used to properly stop given component/container

Local



In addition to logging into any of the containers (starting the relevant script with `-b/--bash`) few other files are included into the monitoring component:





- mysql client for browsing the database
- `dhtest` ([link](#)) for DHCP testing
- `dnsutils` - `dig`, `nslookup`, `nsupdate`
- `telnet`

Delete Managed Server

To delete a managed server, right click on the action menu/ row for the server, and select "Remove Server".

Managed Servers

Managed Servers List Refresh Table  Items per page 20 Search by name... 

Server Name	Requests (2 min)	Monitor	Backup	DNS	DHCP	State	
Centos DHCP	5 requests	v0.23	-	-	IPv4: v0.22 - IPv6: v0.22	Running	
RHEL Backup	0 requests	-	-	-	-		
RHEL8 6cDNS Server	0 requests	-	-	-	-		
Ubuntu DNS	4 requests	v0.23	-	v0.21	IPv4: v0.13 - If		

Displaying 1 to 4 of 4 items.

Previous 1 Next

DNS Actions

DHCP Actions

Backup Actions

Remove Server

A modal will pop up to confirm the deletion. You may also delete the associated user.

Please confirm

Are you sure that you want to **remove** service for **RHEL8 6cDNS Server**?

The current element will be deleted permanently.

☒ Delete associated user?

Accept Close

Use the "Delete associated user" function carefully! If the associated user is a standard ProVision user, not an automatically generated user, deleting it could cause problems. Be sure you know which user will be deleted.

Additional Information

- Managed Backups Web Interface
- Managed Servers Settings