

---

# Requests Documentation

*Release 0.4*

**Kenneth Reitz**

**Aug 06, 2022**



---

## Contents

---

<b>1</b>	<b>Features</b>	<b>3</b>
<b>2</b>	<b>Underground</b>	<b>5</b>
<b>3</b>	<b>The User Guide</b>	<b>7</b>
3.1	Installation of CyBorgBackup . . . . .	7
3.2	CyBorgBackup ScreenShots . . . . .	9
3.3	Quickstart . . . . .	15
3.4	Configuration . . . . .	18
3.5	VM Module Provider . . . . .	19
<b>4</b>	<b>The API Documentation / Guide</b>	<b>21</b>
4.1	CyBorgBackup API . . . . .	21
<b>5</b>	<b>The Community Guide</b>	<b>39</b>
5.1	Support . . . . .	39
<b>6</b>	<b>The Contributor Guide</b>	<b>41</b>
6.1	How to Help . . . . .	41
	<b>HTTP Routing Table</b>	<b>43</b>



Release v0.4. (*Installation*)

**CyBorgBackup** is a Web and API Interface to manage Borg Backup solution on multiple servers based on Django and AngularJS frameworks.

---



# CHAPTER 1

---

## Features

---

- Borg Backup system
- SSH Connection
- Scheduled job
- Local and Remote Borg Repository
- Catalog based on Borg Archive
- Restore Test
- Archive Size statistics
- Client and Repository preparation
- VM Backup Modules
- E-mail notification
- Auto-prune
- Logs system
- REST API





## CHAPTER 2

---

### Underground

---

CyBorgBackup using the following tools

- PostgreSQL database
- ElasticSearch
- RabbitMQ messaging system
- Django framework
- Django REST Framework
- Celery **and** Beat
- AngularJS framework
- BorgBackup

CyBorgBackup have been separated in two project

- CyBorgBackup => The main API system
- CyBorgBackup-UI => The Web Interface who can manage multiple CyBorgBackup servers



### 3.1 Installation of CyBorgBackup

The following covers three different installation methods of CyBorgBackup.

#### 3.1.1 Debian Package

The latest release of CyBorgBackup is available as a Debian package and can be downloaded from [github releases page](#):

```
# apt install git postgresql-all rabbitmq-server python3-pip python3-virtualenv_
↪python3-setuptools python3-venv systemd nginx
# wget https://api.github.com/repos/cyborgbackup/cyborgbackup/releases/latest -O -
↪|grep -oP '"browser_download_url": "\K(.*) (?=)"' |wget -i -
# dpkg -i cyborgbackup_X.X.X_all.deb
```

To add UI system:

```
# wget https://api.github.com/repos/cyborgbackup/cyborgbackup-ui/releases/latest -O -
↪|grep -oP '"browser_download_url": "\K(.*) (?=)"' |wget -i -
# dpkg -i cyborgbackup-ui_X.X.X_all.deb
```

*Note* : MongoDB is not provided by the Debian repository, you need to follow [mongodb documentation](#).

#### 3.1.2 Docker Install

To install CyBorgBackup under Docker, run this command in your terminal of choice:

```
$ wget https://raw.githubusercontent.com/cyborgbackup/cyborgbackup/master/docker-
↪compose.full.yml -O docker-compose.yml
$ cat > .env <<EOF
```

(continues on next page)

(continued from previous page)

```
POSTGRES_PASSWORD=cyborgbackup
POSTGRES_USER=cyborgbackup
POSTGRES_NAME=cyborgbackup
POSTGRES_HOST=postgres
RABBITMQ_DEFAULT_USER=cyborgbackup
RABBITMQ_DEFAULT_PASS=cyborgbackup
RABBITMQ_DEFAULT_VHOST=cyborgbackup
SECRET_KEY=$(openssl rand -base64 47|sed 's/=//g')
EOF
$ docker-compose up
$ docker-compose exec api /bin/bash
api$ python3 /cyborgbackup/manage.py loaddata settings
api$ echo "from django.contrib.auth import get_user_model; User = get_user_model();
↪User.objects.create_superuser('admin@cyborg.local', 'admin')" | python3 /
↪cyborgbackup/manage.py shell
api$ exit
```

If you don't have `docker-compose` or `docker` installed, head over to the website for installation instructions.

### 3.1.3 Install from Source Code

CyBorgBackup is developed on GitHub, where the code is [always available](#).

You can either clone the public repository:

```
$ git clone https://github.com/cyborgbackup/cyborgbackup.git
```

Or, download the [tarball](#):

```
$ curl -OL https://github.com/cyborgbackup/cyborgbackup/tarball/master
# optionally, zipball is also available (for Windows users).
```

The UI interface can be found on Github, the the code is [always available](#). And the public repository can be found at the following address:

```
$ git clone https://github.com/cyborgbackup/cyborgbackup-ui.git
```

To build the UI docker image run the following:

```
$ docker build --no-cache --pull -t cyborgbackup/cyborgbackup-ui:latest .
```

Depending of your system, CyBorgBackup needs the following dependencies :

- python3
- python3-pip
- postgresql-server
- rabbitmq-server
- nginx

To use the CyBorgBackup container with Docker, launch the following command:

```
$ make cyborgbackup-docker-build
$ make docker-compose-up
```

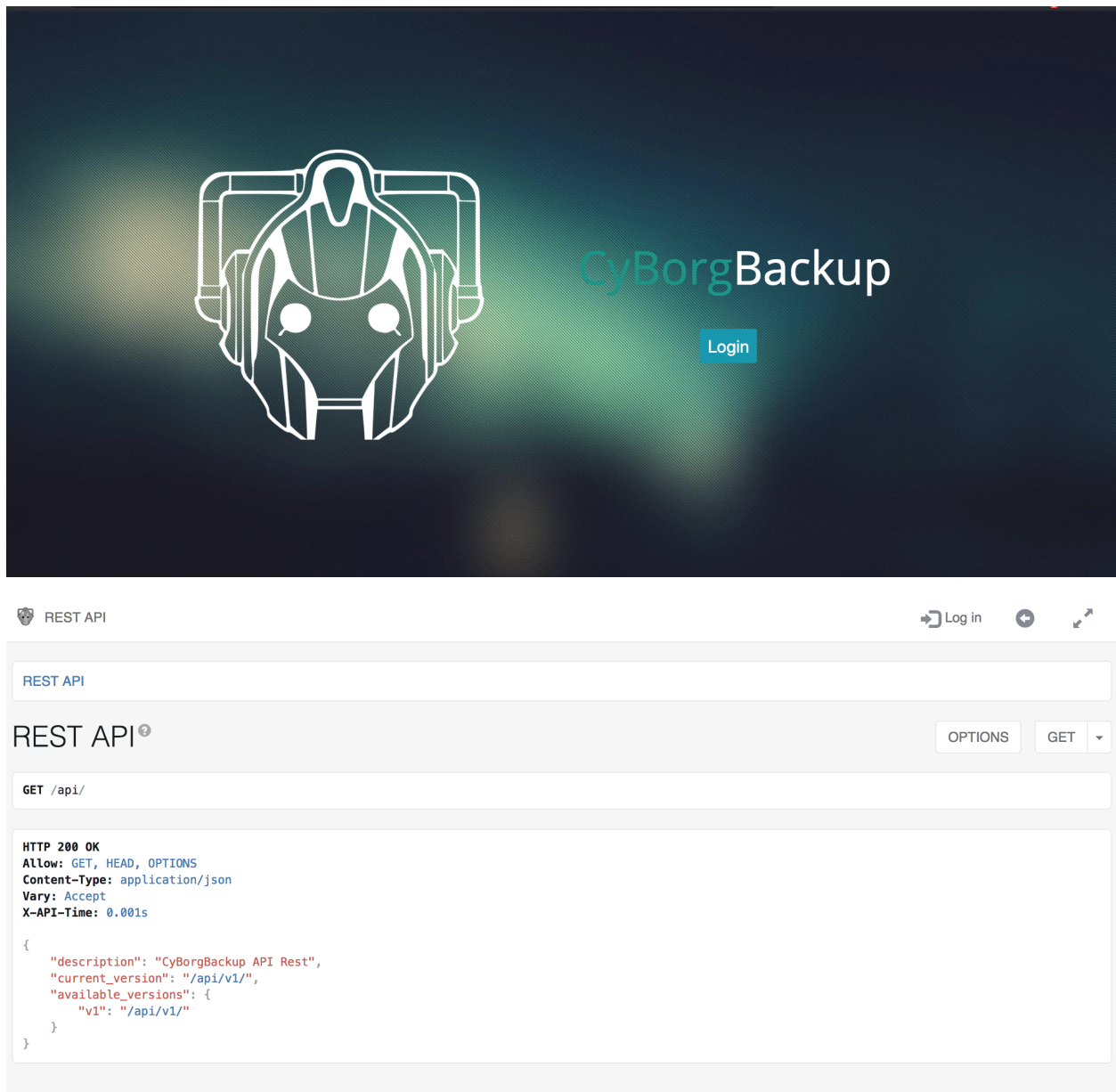
### 3.1.4 Connecting to the interface

You can connect to the CyBorgBackup interface at : <http://localhost:8000>

Default account is :

- Login : `admin@cyborg.local`
- Password : `admin`

## 3.2 CyBorgBackup ScreenShots



[←](#)

### Login

Hello! Log in with your email.

Email address:

Password: [Forgot Password?](#)

☒ Specific CyBorg server

CyBorg Server Address :

**LOG IN**

[Don't have an account? Register](#)

CyBorgBackup

Dashboard

Jobs

Catalog

Client

List Client

Add Client

Policy

List Policy

Add Policy

Repository

Schedule

User

List User

Add User

Settings

Clients0

Tasks0

Policies0

Errors0

Backup Statistics

Backups

Size

Failed

Success

Original Size

Duplicated Size

Backup Schedules

October 2020

today < >

Sun	Mon	Tue	Wed	Thu	Fri	Sat
27	28	29	30	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31
1	2	3	4	5	6	7

Archives Catalog

▼ folders

▼ 127.0.0.1

▶ 2020-05-09\_14-41

▶ 2020-05-08\_13-44

▶ 2020-04-19\_14-26

Archive Detail

Name : folders-127.0.0.1-2020-05-09\_14-41

Client : 127.0.0.1

Type : folders

Original size : 2350000

Compressed size : 1030000

Deduplicated size : 84560

Started : 5/9/2020 4:41:48 PM

Duration : 00:00

Item Detail

Filename :

File mode :

Healthy :

Owner :

Group :

Size :

Mtime :

DETAILS

STATUS successful

LAUNCH MODEmanual

JOB TYPEjob

POLICY NAMEExtended Proxmox

POLICY TYPEproxmox

SCHEDULEEach 1 minutes

REPOSITORYTest

STARTED5/17/2020 2:10:29 PM

FINISHED5/17/2020 2:16:51 PM

Backup Job Extended Proxmox cassini.milkywan.space

ELAPSED 00:00:00

1 Identity added: /tmp/cyborgbackup\_712\_sooir3og/credential\_cyborgbackup\_ssh\_key (cyborgbackup@testgf)

2

3 Warning: Permanently added ' ' (ECDSA) to the list of known hosts

4

5 Warning: Permanently added ' ' (ECDSA) to the list of known hosts

6

7 Remote: Warning: Permanently added ' ' (ECDSA) to the list of known hosts

8

9 INFO: starting new backup job: vzdump 165 --mode snapshot

10 INFO: Starting Backup of VM 165 (qemu)

11 INFO: Backup started at 2020-05-17 14:10:33

12 INFO: status = running

13 INFO: update VM 165: -lock backup

14 INFO: VM Name: kepler

15 INFO: include disk 'virtio0' 'NASTitan:165/vm-165-base-disk.qcow2' 30G

16 INFO: include disk 'virtio1' 'NASTitan:165/vm-165-cloud-seed.raw' 368K

17 INFO: backup mode: snapshot

Client Information

Hostname

127.0.0.1

☒ Limit Bandwidth

100

Associated Policies

× Test

×

☒ Enabled

SAVE

CyBorgBackup

Super Admin

Dashboard

Jobs

Catalog

Client

Policy

Repository

Schedule

User

Settings

+ ADD POLICY

#	Name	Schedule	Repository	Next Run	Enabled	
3	Extended Proxmox	Each 1 minutes	Test	5/18/2020 8:00:00 AM	<input checked="" type="checkbox"/>	<div></div>
2	Root Backup on Every Day	Each 1 minutes	Test	5/8/2020 8:00:00 PM	<input checked="" type="checkbox"/>	<div></div>
1	Test	Each 1 minutes	Test	5/11/2020 8:00:00 AM	<input checked="" type="checkbox"/>	<div></div>

3 total

Policy Information

Name

Extended Proxmox

Type

Proxmox

Schedule

Each 1 minutes

Repository

Test

Clients

hypervisor1

Pre-Hook

Enter Pre-Hook Script Name

Post-Hook

Enter Post-Hook Script Name

KEEP HOURLY

KEEP DAILY

KEEP WEEKLY

KEEP MONTHLY

KEEP YEARLY

☒ Keep Hourly

Keep Hourly

☐ Enabled

☐ Mode Pull

SAVE

Repository Information

Name

Test

Path

cyborgbackup@rephost:/mnt/repo

Repository Key

abcdef1234567890

☒ Enabled

SAVE



Schedule Information

Name

Each 1 minutes

Minutes

Hourly

Daily

Weekly

Monthly

Yearly

☐ Every

Day(s)

1

at

Hour(s)

1

Minute(s)

0

☐ Week Day (MON-FRI) at

Hour(s)

1

Minute(s)

0

☒ Enabled

SAVE

Settings

Mail Server

localhost

☒ Auto Restore Test

Ssh Key

Replace

ENCRYPTED

Backup User

root

Mail From

cyborg@cyborg.local

Ssh Password

undefined

Replace

Job Cleaning

90

Url

http://cyborg

☒ Auto Prune

☒ Catalog Enabled

☒ Web Enabled

☐ Mail System

SAVE

User Information

Email

admin@cyborg.local

First Name

Super

Last Name

Admin

Password

Password

Password Confirmation

☒ Super Admin

SAVE

Notification

☐ Notify Backup Daily

☐ Notify Backup Weekly

☐ Notify Backup Monthly

☐ Notify Backup Success

☐ Notify Backup Failed

☐ Notify Backup Summary

SAVE

## Restore Job

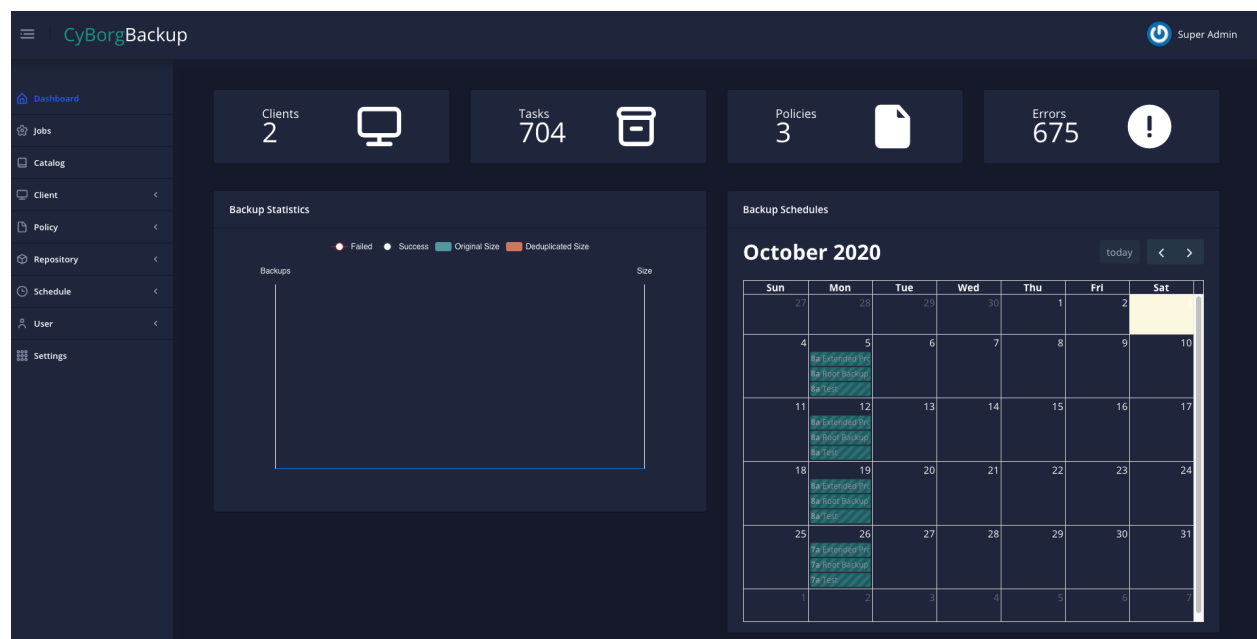
Restore archive **"folders-127.0.0.1-2020-05-09\_14-41"**

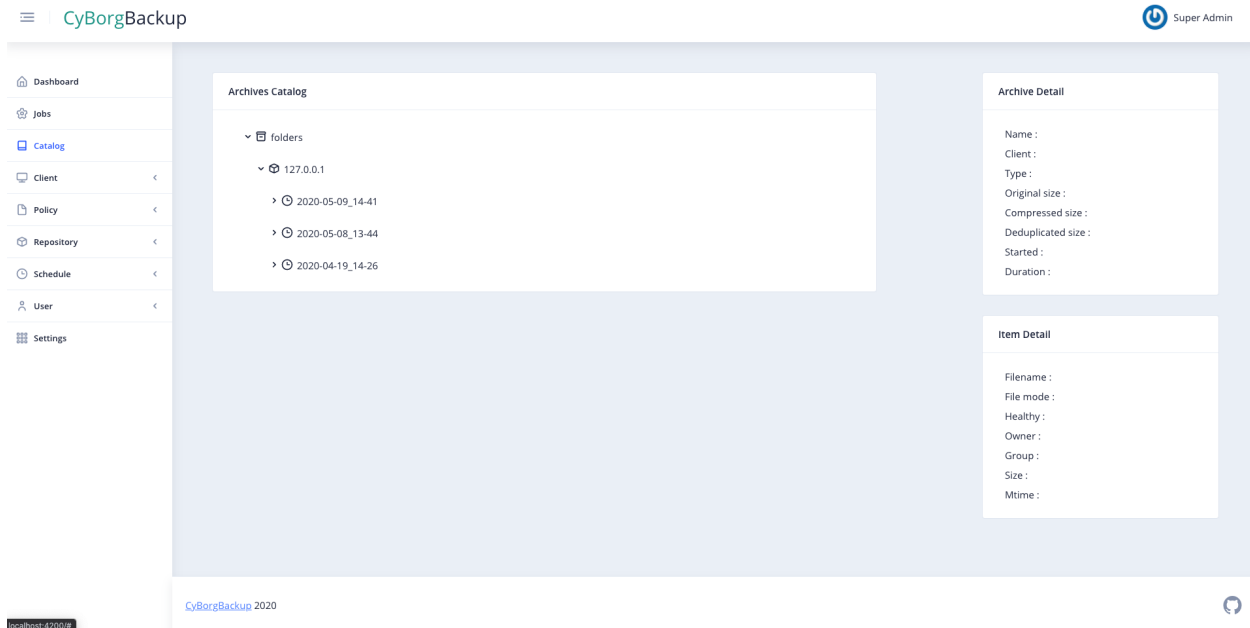
Select Destination Host

Destination folder

☐ Dry-run

**CANCEL** **RESTORE**





## 3.3 Quickstart

Eager to get started? This page gives a good introduction in how to get started with CyBorgBackup.

### 3.3.1 CyBorgBackup System

CyBorgBackup use some framework to give a system with capabilities of backup system based on BorgBackup with ease.

The Web Interface and API populate the Policy, Schedule, Repository, Client and Job object.

We use Celery Beat to manage the schedule of internal task of CyBorgBackup like task\_manager and to notify celery to start task. Task\_manager is responsible to launch job if he's ready and not blocked by another job.

Celery is responsible to execute task like task\_manager or other. It's the element who execute ssh connection and execute borg backup.

Channels Workers is responsible of the websocket message between each element and the web interface.

Callback receivers all stdout messages from celery program output to put them in database and emit signal under the websocket.

### 3.3.2 Object Relation

A schedule describe the policy schedule. They can be affected to multiple policies. The schedule is describe using the crontab format.

A repository describe the borg backup repository with the path and the repository encryption key. The path must be a valid uri like SCP uri.

A client describe a backup client with their hostname only. IP and Borg Version are filled by the preparation script.

A policy is the element who made the relation between each element. A policy have a schedule, a repository, a type, and some clients. We can also define the retention policy of each client backup. They can also launch post ou pre hook.

A job is the backup job based on a policy and a client. When you launch a backup job, the system create as many jobs as there are client defined in the policy.

Depending of the settings value, some job are created in dependencies of them like catalog job, prepare job and prune job.

### 3.3.3 Enabled object

Each object have a enabled/disabled field. This field enable the object in each relation. For example, if you disable a schedule, each policies who used this schedule will be unusable. The same for the client or the repository.

### 3.3.4 Preparation job

Client and repository came with a preparation job to install and prepare borg. On the preparation script, the final step is to prevent CyBorgBackup system that the object is ready to be used. If the hook didn't work, the job stdout show the curl command to launch to enable the object. Or you can use the API to set the ready field to true.

**Warning:** The URL settings must be defined correctly with an accessible URL of each client of repository nodes.

### 3.3.5 Policy Type

At this time, 9 policy types has been defined in CyBorgBackup.

#### rootfs

The rootfs policy backup all files present in the root directory of the server except some useless file like /dev, /proc and other.

#### vm

The vm policy type backup directly the Virtual Machine using the hypervisor. They will backup the hard drive device of the virtual machine.

#### mysql

The mysql policy type will create a mysql dump and backup them using Borg.

You can to specify user,password and database/s in extra vars:

```
{ "user": "backupuser", "password": "backupass" }
```

By default, mysql policy type will backup all databases. To specify a database, you need to add database entry in extra\_vars:

```
{ "databases": "mydb" }
```

To specify multiple databases, you need to add databases list in extra\_vars:

```
{"databases": ["mydb1", "mydb2"]}
```

Command to create backup user on MySQL:

```
GRANT LOCK TABLES, SELECT ON *.* TO 'backupuser'@'%' identified by 'backuppass';
FLUSH PRIVILEGES
```

## postgresql

The postgresql policy type will create a postgresql dump and backup them using Borg.

You can to specify database in extra vars:

```
{"database": "mydb"}
```

Command to create backup user on PostgreSQL:

```
CREATE USER backupuser SUPERUSER password 'backuppass';
ALTER USER cyborgbackup set default_transaction_read_only = on;
```

## piped

The piped policy type permit to launch a command on the client and backup the output of the command to Borg.

You need to specify extra vars with piped command:

```
{"command": "mypipedcommand"}
```

## config

The config policy type will backup only the /etc folder of the server.

## mail

The mail policy type will backup only the /var/mail or /var/lib/mail folder of the server.

## folders

The folders policy type will backup specified folder of the server. You need to specify extra vars with piped command:

```
{"folders": ["folder1", "folder2"]}
```

## proxmox

The folders policy type will backup specified folder of the server. You need to specify extra vars with piped command:

```
{"folders": ["folder1", "folder2"]}
```

## 3.4 Configuration

CyBorgBackup need some configuration before be ready to use. They will be defined in the next section.

### 3.4.1 Settings

Under the settings page, you must configure the following element :

- URL => Contains the CyBorgBackup accessible URL. It will be use by client or repository node for the preparation step.
- Mail Server => You must configure the Mail server to use the mail report of CyBorgBackup
- SSH Key => An ssh key pair must be configured in CyBorgBackup. CyBorgBackup can generate them for you. He will use them to connect on each client and on each repository. The public key must also be configured on each authorized\_keys ssh file manually.

**Warning:** The SSH Key must be protected with a password. The password will be encrypted before stored under CyBorgBackup database.

**Warning:** The SSH Public Key must be configured on the “Backup User” authorized\_keys file. If backup user is different of “root”, CyBorgBackup will use ‘sudo’ command for the backup

---

**Note:** If you have a specific configuration for SSH, different port or ciphers for example. You can use the **.ssh/config** file on the CyBorgBackup folder.

---

### 3.4.2 Repositories

A repository must be defined to start backup. The path must be in URI format as the following : **user@fqdn:path**

**Warning:** Same as the SSH Key configuration, the user defined in the path must have the CyBorgBackup SSK Key configured in authorized\_keys file.

### 3.4.3 Schedules

The schedule system use the CRON format.

### 3.4.4 Clients

To use the CyBorgBackup system, you must create your first client. The hostname must be a resolvable hostname by CyBorgBackup. It will use them to connect using SSH protocol.

### 3.4.5 Policies

The policy is the element for permit to CyBorgBackup to backup client. It's a relation between a schedule, a repository and clients.

Pre-hook and post-hook entries are script or command launch of each client. The script or command must be exist on them. CyBorgBackup will not pull or install them.

The “Keep” section is used to specify on many archive will be keep by the system before pruning. For example, if you configure 7 Keep Daily and 4 Keep Weekly, CyBorgBackup will keep archives of the last 7 days made each day and one archive each week for the last 4 weeks.

By default, CyBorgbackup will connect on each client and each client will push the backup to the repository using ssh connection. The “Pull Mode” permit to change the method, CyBorgBackup will connect on the repository node and from them, connect to each client. Be careful, the client need to connect to the repository node.

### 3.4.6 Ready ?

Settings, Schedule, Repository, Client and Policy are configured ? CyBorgBackup is now ready to backup them. For each new repository or client, CyBorgBackup will launch a preparation script before backup them.

You can now launch a policy to launch the backup workflow or wait for the schedule.

## 3.5 VM Module Provider

CyBorgBackup can use custom VM module provider to backup virtual machine based on hypervisor.

The module need to respect some prerequisites to be used by CyBorgBackup.

### 3.5.1 Module Name

This function return the module name displayed by CyBorgBackup:

```
def module_name():
    return 'Proxmox'
```

### 3.5.2 Module Type

This function return the policy type code used by CyBorgBackup to identify the utility of this module. For VM backup provider, it must be set to ‘vm’:

```
def module_type():
    return 'vm'
```

### 3.5.3 Get Client

This function return the hostname of the hypervisor of the VM. It will be used to connect them and launch backup script

```
def get_client(client):
    return 'hypervisor.example.com'
```

### 3.5.4 Get Script

This function return a string that represent the script send to the hypervisor and used to backup the virtual machine. The script must return data on stdout. Data received will be directly send to borg create:

```
def get_script():
    return '''#!/bin/bash
echo "Hello World"
'''
```

### 3.5.5 Example Proxmox Script

You will find bellow an example script used to backup Proxmox VirtualMachine from her hypervisor



---

## The API Documentation / Guide

---

If you are looking for information on a specific function, class, or method, this part of the documentation is for you.

### 4.1 CyBorgBackup API

Actually, only the V1 version of the API is available. They can be access on the url /api of the webserver and the V1 api on the url /api/v1.

#### 4.1.1 Main API V1

##### **GET /api/v1**

Retrieve all available submodule of the API.

##### **Example request:**

```
$ curl https://cyborgbackup.local/api/v1/
```

##### **Example response:**

```
{
  "ping": "/api/v1/ping",
  "config": "/api/v1/config/",
  "me": "/api/v1/me/"
}
```

##### **GET /api/v1/ping**

Test the api and get the version

```
{
  "version": "1.0"
  "ping": "pong"
}
```

### GET /api/v1/config

Retrieve some configuration of the CyBorgBackup instance.

```
{
  "version": "1.0"
  "debug": true,
  "allowed_hosts": ["127.0.0.1"]
}
```

### GET /api/v1/me

Retrieve information about the current logged user.

```
{
  "count": 1,
  "next": null,
  "previous": null,
  "results": [
    {
      "id": 1,
      "type": "user",
      "url": "/api/v1/users/1/",
      "related": {},
      "summary_fields": {},
      "created": "2018-11-08T16:13:29.370148Z",
      "first_name": "",
      "last_name": "",
      "email": "admin@milkywan.fr",
      "is_superuser": true
    }
  ]
}
```

## 4.1.2 Users API V1

### GET /api/v1/users/

Retrieve a list of all users.

```
{
  "count": 1,
  "next": null,
  "previous": null,
  "results": [USERS]
}
```

#### Response JSON Object

- **next** (*string*) – URI for next set of Users.
- **previous** (*string*) – URI for previous set of Users.
- **count** (*integer*) – Total number of Users.
- **results** (*array*) – Array of Users objects.

### GET /api/v1/users/(int: id) /

Retrieve details of a single user.

```
{
  "id": 3,
  "type": "user",
  "url": "/api/v1/users/3/",
  "related": {},
  "summary_fields": {},
  "created": "2018-11-11T19:43:24.261706Z",
  "first_name": "",
  "last_name": "",
  "email": "cyborg@agent.local",
  "is_superuser": true
}
```

### Response JSON Object

- **id** (*integer*) – The ID of the user
- **type** (*string*) – The object type under cyborgbackup system.
- **url** (*string*) – The URL access of the user object.
- **related** (*dict*) – Related property of mapped object
- **summary\_fields** (*dict*) – Some summary field of object relation
- **created** (*string*) – The creation date of the user
- **first\_name** (*string*) – First name of the user
- **last\_name** (*string*) – Last name of the user
- **email** (*string*) – Email of the user
- **is\_superuser** (*boolean*) – Super User

### Status Codes

- **200 OK** – no error
- **404 Not Found** – There is no User with this ID

**POST /api/v1/users/**  
Create a single user.

```
{
  "first_name": "",
  "last_name": "",
  "email": "cyborg@agent.local",
  "is_superuser": true
}
```

### Response JSON Object

- **first\_name** (*string*) – First name of the user
- **last\_name** (*string*) – Last name of the user
- **email** (*string*) – Email of the user
- **is\_superuser** (*boolean*) – Super User

### Status Codes

- **200 OK** – no error

- **404 Not Found** – There is no User with this ID

**PATCH** `/api/v1/users/(int: id) /`

Update a single user.

```
{
  "first_name": "",
  "last_name": "",
  "email": "cyborg@agent.local",
  "is_superuser": true
}
```

### Response JSON Object

- **id** (*integer*) – The ID of the user
- **first\_name** (*string*) – First name of the user
- **last\_name** (*string*) – Last name of the user
- **email** (*string*) – Email of the user
- **is\_superuser** (*boolean*) – Super User

### Status Codes

- **200 OK** – no error
- **404 Not Found** – There is no User with this ID

**DELETE** `/api/v1/users/(int: id) /`

Delete a single user.

### Status Codes

- **200 OK** – no error
- **404 Not Found** – There is no User with this ID

## 4.1.3 Clients API V1

**GET** `/api/v1/clients/`

Retrieve a list of all clients.

```
{
  "count": 1,
  "next": null,
  "previous": null,
  "results": [CLIENTS]
}
```

### Response JSON Object

- **next** (*string*) – URI for next set of Clients.
- **previous** (*string*) – URI for previous set of Clients.
- **count** (*integer*) – Total number of Clients.
- **results** (*array*) – Array of Clients objects.

**GET** `/api/v1/clients/(int: id) /`  
 Retrieve details of a single client.

```
{
  "id": 1,
  "type": "client",
  "url": "/api/v1/clients/1/",
  "related": {},
  "summary_fields": {},
  "created": "2018-11-22T18:17:51.831221Z",
  "modified": "2018-11-22T19:21:16.011127Z",
  "created_by": null,
  "modified_by": null,
  "hostname": "lab.example.com",
  "ip": "",
  "version": "",
  "ready": false,
  "hypervisor_ready": false,
  "hypervisor_name": "",
  "enabled": true,
  "uuid": "fa3462e3-57da-430e-bca5-3bc60d4ba5a2"
}
```

#### Response JSON Object

- **id** (*integer*) – The ID of the client
- **type** (*string*) – The object type under cyborgbackup system.
- **url** (*string*) – The URL access of the client object.
- **related** (*dict*) – Related property of mapped object
- **summary\_fields** (*dict*) – Some summary field of object relation
- **created** (*string*) – The creation date of the client
- **modified** (*string*) – The modification date of the client
- **created\_by** (*string*) – User responsible of the creation of the client
- **modified\_by** (*string*) – User responsible of the last modification
- **hostname** (*string*) – Client Hostname
- **ip** (*string*) – IP Addresses of the client
- **version** (*string*) – Borg Client Version
- **ready** (*boolean*) – Client prepared to be use with borg
- **hypervisor\_name** (*string*) – Hypervisor name of the client
- **hypervisor\_ready** (*boolean*) – Hypervisor prepared to be use with borg
- **enabled** (*boolean*) – Client enabled
- **uuid** (*string*) – Auto generated UUID

#### Status Codes

- **200 OK** – no error
- **404 Not Found** – There is no Client with this ID

### POST /api/v1/clients/

Create a single client.

```
{
  "hostname": "lab.example.com",
  "ip": "",
  "version": "",
  "ready": false,
  "hypervisor_ready": false,
  "hypervisor_name": "",
  "enabled": true,
}
```

#### Response JSON Object

- **hostname** (*string*) – Client Hostname
- **ip** (*string*) – IP Addresses of the client
- **version** (*string*) – Borg Client Version
- **ready** (*boolean*) – Client prepared to be use with borg
- **hypervisor\_name** (*string*) – Hypervisor name of the client
- **hypervisor\_ready** (*boolean*) – Hypervisor prepared to be use with borg
- **enabled** (*boolean*) – Client enabled

#### Status Codes

- 200 OK – no error
- 404 Not Found – There is no Client with this ID

### PATCH /api/v1/clients/(int: id) /

Update a single client.

```
{
  "hostname": "lab.example.com",
  "ip": "",
  "version": "",
  "ready": false,
  "hypervisor_ready": false,
  "hypervisor_name": "",
  "enabled": true
}
```

#### Response JSON Object

- **id** (*integer*) – The ID of the client
- **hostname** (*string*) – Client Hostname
- **ip** (*string*) – IP Addresses of the client
- **version** (*string*) – Borg Client Version
- **ready** (*boolean*) – Client prepared to be use with borg
- **hypervisor\_name** (*string*) – Hypervisor name of the client
- **hypervisor\_ready** (*boolean*) – Hypervisor prepared to be use with borg

- **enabled** (*boolean*) – Client enabled

#### Status Codes

- **200 OK** – no error
- **404 Not Found** – There is no Client with this ID

**DELETE** `/api/v1/clients/(int: id) /`

Delete a single client.

#### Status Codes

- **200 OK** – no error
- **404 Not Found** – There is no Client with this ID

### 4.1.4 Schedules API V1

**GET** `/api/v1/schedules/`

Retrieve a list of all schedules.

```
{
  "count": 1,
  "next": null,
  "previous": null,
  "results": [SCHEDULES]
}
```

#### Response JSON Object

- **next** (*string*) – URI for next set of Schedules.
- **previous** (*string*) – URI for previous set of Schedules.
- **count** (*integer*) – Total number of Schedules.
- **results** (*array*) – Array of Schedule objects.

**GET** `/api/v1/schedules/(int: id) /`

Retrieve details of a single schedule.

```
{
  "id": 1,
  "type": "schedule",
  "url": "/api/v1/schedules/1/",
  "related": {},
  "summary_fields": {},
  "created": "2018-11-22T18:17:51.831221Z",
  "modified": "2018-11-22T19:21:16.011127Z",
  "created_by": null,
  "modified_by": null,
  "name": "Every Minutes",
  "crontab": "* / 1 * * * * *",
  "enabled": true,
  "uuid": "fa3462e3-57da-430e-bca5-3bc60d4ba5a2"
}
```

#### Response JSON Object

- **id** (*integer*) – The ID of the schedule
- **type** (*string*) – The object type under cyborgbackup system.
- **url** (*string*) – The URL access of the schedule object.
- **related** (*dict*) – Related property of mapped object
- **summary\_fields** (*dict*) – Some summary field of object relation
- **created** (*string*) – The creation date of the schedule
- **modified** (*string*) – The modification date of the schedule
- **created\_by** (*string*) – User responsible of the creation of the schedule
- **modified\_by** (*string*) – User responsible of the last modification
- **name** (*string*) – Schedule name
- **crontab** (*string*) – Crontab schedule
- **enabled** (*boolean*) – Schedule enabled
- **uuid** (*string*) – Auto generated UUID

### Status Codes

- **200 OK** – no error
- **404 Not Found** – There is no Schedule with this ID

### POST /api/v1/schedules/

Create a single schedule.

```
{
  "name": "Every Minutes",
  "crontab": "*/1 * * * *",
  "enabled": true
}
```

### Response JSON Object

- **name** (*string*) – Schedule name
- **crontab** (*string*) – Crontab schedule
- **enabled** (*boolean*) – Schedule enabled

### Status Codes

- **200 OK** – no error
- **404 Not Found** – There is no Schedule with this ID

### PATCH /api/v1/schedules/ (int: id) /

Update a single schedule.

```
{
  "name": "Every Monday",
  "crontab": "0 5 * * MON *",
  "enabled": true
}
```

### Response JSON Object



- **id** (*integer*) – The ID of the schedule
- **name** (*string*) – Schedule name
- **crontab** (*string*) – Crontab schedule
- **enabled** (*boolean*) – Schedule enabled

#### Status Codes

- 200 OK – no error
- 404 Not Found – There is no Schedule with this ID

**DELETE** /api/v1/schedules/ (int: id) /

Delete a single schedule.

#### Status Codes

- 200 OK – no error
- 404 Not Found – There is no Schedule with this ID

### 4.1.5 Repositories API V1

**GET** /api/v1/repositories/

Retrieve a list of all repositories.

```
{
  "count": 1,
  "next": null,
  "previous": null,
  "results": [REPOSITORIES]
}
```

#### Response JSON Object

- **next** (*string*) – URI for next set of Repositories.
- **previous** (*string*) – URI for previous set of Repositories.
- **count** (*integer*) – Total number of Repositories.
- **results** (*array*) – Array of Repository objects.

**GET** /api/v1/repositories/ (int: id) /

Retrieve details of a single repository.

```
{
  "id": 1,
  "type": "repository",
  "url": "/api/v1/repositories/1/",
  "related": {},
  "summary_fields": {},
  "created": "2018-11-22T18:17:51.831221Z",
  "modified": "2018-11-22T19:21:16.011127Z",
  "created_by": null,
  "modified_by": null,
  "name": "Main Repo",
  "path": "cyborgbackup@backup:/repository",
}
```

(continues on next page)

(continued from previous page)

```
"repository_key": "0123456789abcdef",
"original_size": 722,
"compressed_size": 747,
"deduplicated_size": 747,
"ready": true,
"enabled": true,
"uuid": "fa3462e3-57da-430e-bca5-3bc60d4ba5a2"
}
```

### Response JSON Object

- **id** (*integer*) – The ID of the repository
- **type** (*string*) – The object type under cyborgbackup system.
- **url** (*string*) – The URL access of the repository object.
- **related** (*dict*) – Related property of mapped object
- **summary\_fields** (*dict*) – Some summary field of object relation
- **created** (*string*) – The creation date of the repository
- **modified** (*string*) – The modification date of the repository
- **created\_by** (*string*) – User responsible of the creation of the repository
- **modified\_by** (*string*) – User responsible of the last modification
- **name** (*string*) – Repository name
- **path** (*string*) – URI path to access the repository from each client
- **repository\_key** (*string*) – Key used to encrypt the repository
- **original\_size** (*integer*) – Calculated size of all archives
- **compressed\_size** (*integer*) – Calculated compressed size of all archives
- **deduplicated\_size** (*integer*) – Calculated deduplicated size of all archives
- **ready** (*boolean*) – Repository prepared to be use with borg
- **enabled** (*boolean*) – Repository enabled
- **uuid** (*string*) – Auto generated UUID

### Status Codes

- **200 OK** – no error
- **404 Not Found** – There is no Repository with this ID

### POST /api/v1/repositories/

Create a single repository.

```
{
  "name": "Main Repo",
  "path": "cyborgbackup@backup:/repository",
  "repository_key": "0123456789abcdef",
  "ready": true,
  "enabled": true
}
```

**Response JSON Object**

- **name** (*string*) – Repository name
- **path** (*string*) – URI path to access the repository from each client
- **repository\_key** (*string*) – Key used to encrypt the repository
- **ready** (*boolean*) – Repository prepared to be use with borg
- **enabled** (*boolean*) – Repository enabled

**Status Codes**

- 200 OK – no error
- 404 Not Found – There is no Repository with this ID

**PATCH** /api/v1/repositories/ (int: id) /

Update a single repository.

```
{
  "name": "Main Repo",
  "path": "cyborgbackup@backup:/repository",
  "repository_key": "0123456789abcdef",
  "ready": true,
  "enabled": true
}
```

**Response JSON Object**

- **id** (*integer*) – The ID of the repository
- **name** (*string*) – Repository name
- **path** (*string*) – URI path to access the repository from each client
- **repository\_key** (*string*) – Key used to encrypt the repository
- **ready** (*boolean*) – Repository prepared to be use with borg
- **enabled** (*boolean*) – Repository enabled

**Status Codes**

- 200 OK – no error
- 404 Not Found – There is no Repository with this ID

**DELETE** /api/v1/repositories/ (int: id) /

Delete a single repository.

**Status Codes**

- 200 OK – no error
- 404 Not Found – There is no Repository with this ID

**4.1.6 Policies API V1**

**GET** /api/v1/policies/

Retrieve a list of all policies.

```
{
  "count": 1,
  "next": null,
  "previous": null,
  "results": [POLICIES]
}
```

### Response JSON Object

- **next** (*string*) – URI for next set of Policies.
- **previous** (*string*) – URI for previous set of Policies.
- **count** (*integer*) – Total number of Policies.
- **results** (*array*) – Array of Policy objects.

**GET** `/api/v1/policies/(int: id) /`  
Retrieve details of a single policy.

```
{
  "id": 1,
  "type": "policy",
  "url": "/api/v1/policies/1/",
  "related": {
    "launch": "/api/v1/policies/1/launch/",
    "calendar": "/api/v1/policies/1/calendar/",
    "schedule": "/api/v1/schedules/1/",
    "repository": "/api/v1/repositories/1/"
  },
  "summary_fields": {
    "repository": {
      "id": 1,
      "name": "Main Repo",
      "path": "cyborgbackup@backup:/repository"
    },
    "schedule": {
      "id": 1,
      "name": "Each Monday",
      "crontab": "0 5 * * MON *"
    }
  },
  "created": "2018-11-22T18:51:22.894984Z",
  "modified": "2018-11-23T20:54:51.013495Z",
  "created_by": null,
  "modified_by": null,
  "uuid": "3a67b010-bbc4-43de-937e-11270c710aad",
  "name": "Full Features",
  "extra_vars": "",
  "clients": [
    1
  ],
  "repository": 1,
  "schedule": 1,
  "policy_type": "vm",
  "keep_hourly": 1,
  "keep_yearly": null,
  "keep_daily": null,
}
```

(continues on next page)

(continued from previous page)

```

"keep_weekly": null,
"keep_monthly": null,
"vmprovider": "proxmox",
"next_run": "2018-11-26T05:00:00Z",
"mode_pull": false,
"enabled": true
}

```

### Response JSON Object

- **id** (*integer*) – The ID of the policy
- **type** (*string*) – The object type under cyborgbackup system.
- **url** (*string*) – The URL access of the policy object.
- **related** (*dict*) – Related property of mapped object
- **summary\_fields** (*dict*) – Some summary field of object relation
- **created** (*string*) – The creation date of the policy
- **modified** (*string*) – The modification date of the policy
- **created\_by** (*string*) – User responsible of the creation of the policy
- **modified\_by** (*string*) – User responsible of the last modification
- **name** (*string*) – Policy name
- **extra\_vars** (*string*) – JSON Dictionnary of variable used by the system
- **clients** (*array*) – Array of Client ID
- **repository** (*integer*) – Repository ID
- **schedule** (*integer*) – Schedule ID
- **policy\_type** (*string*) – Policy Backup Type
- **keep\_hourly** (*integer*) – Number of hourly archives to keep
- **keep\_daily** (*integer*) – Number of daily archives to keep
- **keep\_weekly** (*integer*) – Number of weekly archives to keep
- **keep\_monthly** (*integer*) – Number of monthly archives to keep
- **keep\_yearly** (*integer*) – Number of yearly archives to keep
- **vmprovider** (*string*) – Name of the VM module provider
- **next\_run** (*string*) – Date of the next run of the backup job
- **mode\_pull** (*boolean*) – Backup in pull mode
- **enabled** (*boolean*) – Policy enabled
- **uuid** (*string*) – Auto generated UUID

### Status Codes

- **200 OK** – no error
- **404 Not Found** – There is no Policy with this ID

**POST /api/v1/policies/**

Create a single policy.

```
{
  "name": "Full Features",
  "extra_vars": "",
  "clients": [
    1
  ],
  "repository": 1,
  "schedule": 1,
  "policy_type": "vm",
  "keep_hourly": 1,
  "keep_yearly": null,
  "keep_daily": null,
  "keep_weekly": null,
  "keep_monthly": null,
  "vmprovider": "proxmox",
  "mode_pull": false,
  "enabled": true
}
```

**Response JSON Object**

- **name** (*string*) – Policy name
- **extra\_vars** (*string*) – JSON Dictionnary of variable used by the system
- **clients** (*array*) – Array of Client ID
- **repository** (*integer*) – Repository ID
- **schedule** (*integer*) – Schedule ID
- **policy\_type** (*string*) – Policy Backup Type
- **keep\_hourly** (*integer*) – Number of hourly archives to keep
- **keep\_daily** (*integer*) – Number of daily archives to keep
- **keep\_weekly** (*integer*) – Number of weekly archives to keep
- **keep\_monthly** (*integer*) – Number of monthly archives to keep
- **keep\_yearly** (*integer*) – Number of yearly archives to keep
- **vmprovider** (*string*) – Name of the VM module provider
- **mode\_pull** (*boolean*) – Backup in pull mode
- **enabled** (*boolean*) – Policy enabled

**Status Codes**

- **200 OK** – no error
- **404 Not Found** – There is no Policy with this ID

**PATCH /api/v1/policies/(int: id) /**

Update a single repository.

```
{
  "name": "Main Repo",
  "path": "cyborgbackup@backup:/repository",
  "repository_key": "0123456789abcdef",
  "ready": true,
  "enabled": true
}
```

### Response JSON Object

- **name** (*string*) – Policy name
- **extra\_vars** (*string*) – JSON Dictionary of variable used by the system
- **clients** (*array*) – Array of Client ID
- **repository** (*integer*) – Repository ID
- **schedule** (*integer*) – Schedule ID
- **policy\_type** (*string*) – Policy Backup Type
- **keep\_hourly** (*integer*) – Number of hourly archives to keep
- **keep\_daily** (*integer*) – Number of daily archives to keep
- **keep\_weekly** (*integer*) – Number of weekly archives to keep
- **keep\_monthly** (*integer*) – Number of monthly archives to keep
- **keep\_yearly** (*integer*) – Number of yearly archives to keep
- **vmprovider** (*string*) – Name of the VM module provider
- **mode\_pull** (*boolean*) – Backup in pull mode
- **enabled** (*boolean*) – Policy enabled

### Status Codes

- **200 OK** – no error
- **404 Not Found** – There is no Policy with this ID

**DELETE /api/v1/policies/ (int: id) /**

Delete a single repository.

### Status Codes

- **200 OK** – no error
- **404 Not Found** – There is no Policy with this ID

**POST /api/v1/policies/ (int: id) /launch/**

Launch a backup job based on the policy.

### Status Codes

- **200 OK** – no error
- **404 Not Found** – There is no Policy with this ID

**GET /api/v1/policies/ (int: id) /calendar/**

Get all datetime of the current month for each run of the policy

[DATETIME]

#### Status Codes

- 200 OK – no error
- 404 Not Found – There is no Policy with this ID

### 4.1.7 Catalogs API V1

#### GET /api/v1/catalogs/

Retrieve a list of all catalogs entries.

```
{
  "count": 1,
  "next": null,
  "previous": null,
  "results": [CATALOGS]
}
```

#### Response JSON Object

- **next** (*string*) – URI for next set of Catalogs.
- **previous** (*string*) – URI for previous set of Catalogs.
- **count** (*integer*) – Total number of Catalogs.
- **results** (*array*) – Array of Catalog objects.

#### GET /api/v1/catalogs/(int: id) /

Retrieve details of a single catalog entry.

```
{
  "id": 1,
  "url": "/api/v1/catalogs/1/",
  "archive_name": "vm-lab.example.com-2018-11-23_22-02",
  "path": "stdin",
  "job": 1,
  "mode": "-rw-rw----",
  "mtime": "2018-11-23T23:03:52Z",
  "owner": "root",
  "group": "root",
  "size": 12,
  "healthy": true
}
```

#### Response JSON Object

- **id** (*integer*) – The ID of the catalog entry
- **url** (*string*) – The URL access of the repository object.
- **archive\_name** (*string*) – The Borg Backup archive name
- **path** (*string*) – Full path of the file in the archive
- **job** (*integer*) – Job ID catalog entry related



- **mode** (*string*) – Unix mode of the file
- **mtime** (*string*) – Latest modification date of the file
- **owner** (*string*) – Owner of the file
- **group** (*string*) – Group of the file
- **size** (*integer*) – Size of the file in Bytes
- **healthy** (*boolean*) – Healthy state of the file

#### Status Codes

- 200 OK – no error
- 404 Not Found – There is no Repository with this ID



This part of the documentation details the CyBorgBackup community.

### 5.1 Support

If you have questions or issues about CyBorgBackup:

#### 5.1.1 Send a Tweet

If your question is less than 280 characters, feel free to send a tweet to [@Gaetan\\_F](#),

#### 5.1.2 File an Issue

If you notice some unexpected behaviour in CyBorgBackup, [file an issue on GitHub](#).

#### 5.1.3 Mailing Lists

Current Mailing Lists :

- Developers : [developers@lists.cyborgbackup.dev](mailto:developers@lists.cyborgbackup.dev)
- Users : [users@lists.cyborgbackup.dev](mailto:users@lists.cyborgbackup.dev)



If you want to contribute to the project, this part of the documentation is for you.

### 6.1 How to Help

CyBorgBackup is under active development, and contributions are more than welcome!

1. Check for open issues or open a fresh issue to start a discussion around a bug.
2. Fork [the repository](#) on GitHub and start making your changes to a new branch.
3. Send a pull request and bug the maintainer until it gets merged and published. :)

#### 6.1.1 Runtime Environments

CyBorgBackup currently supports the following versions of Python:

- Python 3.5
- Python 3.6
- Python 3.7



### /api

```
GET /api/v1,21
GET /api/v1/catalogs/,36
GET /api/v1/catalogs/(int:id)/,36
GET /api/v1/clients/,24
GET /api/v1/clients/(int:id)/,24
GET /api/v1/config,21
GET /api/v1/me,22
GET /api/v1/ping,21
GET /api/v1/policies/,31
GET /api/v1/policies/(int:id)/,32
GET /api/v1/policies/(int:id)/calendar/,
    35
GET /api/v1/repositories/,29
GET /api/v1/repositories/(int:id)/,29
GET /api/v1/schedules/,27
GET /api/v1/schedules/(int:id)/,27
GET /api/v1/users/,22
GET /api/v1/users/(int:id)/,22
POST /api/v1/clients/,25
POST /api/v1/policies/,33
POST /api/v1/policies/(int:id)/launch/,
    35
POST /api/v1/repositories/,30
POST /api/v1/schedules/,28
POST /api/v1/users/,23
DELETE /api/v1/clients/(int:id)/,27
DELETE /api/v1/policies/(int:id)/,35
DELETE /api/v1/repositories/(int:id)/,
    31
DELETE /api/v1/schedules/(int:id)/,29
DELETE /api/v1/users/(int:id)/,24
PATCH /api/v1/clients/(int:id)/,26
PATCH /api/v1/policies/(int:id)/,34
PATCH /api/v1/repositories/(int:id)/,
    31
PATCH /api/v1/schedules/(int:id)/,28
PATCH /api/v1/users/(int:id)/,24
```