Python Zun Client Documentation

Release 4.6.1.dev2

Zun development team

Feb 22, 2023

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CHAPTER

ONE

CONTENTS

1.1 Installation Guide

At the command line:

```
$ pip install python-zunclient
```

Or, if you have virtualenvwrapper installed:

```
$ mkvirtualenv python-zunclient
$ pip install python-zunclient
```

1.2 Contributors Guide

If you would like to contribute to the development of OpenStack, you must follow the steps in this page:

> https://docs.openstack.org/infra/manual/developers.html

If you already have a good understanding of how the system works and your OpenStack accounts are set up, you can skip to the development workflow section of this documentation to learn how changes to OpenStack should be submitted for review via the Gerrit tool:

> https://docs.openstack.org/infra/manual/developers.html#development-workflow

Pull requests submitted through GitHub will be ignored.

Bugs should be filed on Launchpad, not GitHub:

> https://bugs.launchpad.net/python-zunclient

1.3 User Documentation

1.3.1 Zun CLI man page

SYNOPSIS

Zun operation use *zun* command, and also support use *openstack* command.

zun [options] <command> [command-options]

openstack appcontainer <command> [command-options]

DESCRIPTION

The **zun** command line utility interacts with OpenStack Containers Service (Zun).

In order to use the CLI, you must provide your OpenStack username, password, project (historically called tenant), and auth endpoint. You can use configuration options *os-username*, *os-password*, *os-tenant-name* or *os-tenant-id*, and *os-auth-url* or set corresponding environment variables:

```
export OS_USERNAME=user
export OS_PASSWORD=pass
export OS_PROJECT_NAME=myproject
export OS_AUTH_URL=http://auth.example.com:5000/v3
export OS_USER_DOMAIN_ID=default
export OS_PROJECT_DOMAIN_ID=default
```

OPTIONS

To get a list of available commands and options run:

```
zun help
```

To get usage and options of a command:

```
zun help <command>
```

You can also use openstack command as follow.

To get a list of available commands run:

```
openstack help appcontainer
```

To get usage and options of a command:

```
openstack appcontainer <command> --help
```

EXAMPLES

List all the containers:

```
zun list
```

Create new container:

```
zun run --name container01 IMAGE01
```

Describe a specific container:

```
zun show container01
```

You can also use openstack command as follow.

List all the containers:

```
openstack appcontainer list
```

Create new container:

```
openstack appcontainer run --name container01 IMAGE01
```

Describe a specific container:

```
openstack appcontainer show container01
```

1.3.2 Command List

appcontainer action

An **appcontainer action** specifies the action details for a container.

appcontainer action list

List actions on a container

```
openstack appcontainer action list [-h]
                                   [-f {csv,json,table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--fit-width] [--print-empty]
                                   [--noindent]
                                   [--quote {all,minimal,none,nonnumeric}]
                                   [--sort-column SORT_COLUMN]
                                   <container>
```

<container>

ID or name of the container to list actions.

-h, --help

show this help message and exit

-f {csv,json,table,value,yaml}, --format {csv,json,table,value,yaml}

the output format, defaults to table

-c COLUMN, --column COLUMN

specify the column(s) to include, can be repeated

--sort-column SORT_COLUMN

specify the column(s) to sort the data (columns specified first have a priority, non-existing columns are ignored), can be repeated

--max-width <integer>

Maximum display width, <1 to disable. You can also use the CLIFF_MAX_TERM_WIDTH environment variable, but the parameter takes precedence.

--fit-width

Fit the table to the display width. Implied if max-width greater than 0. Set the environment variable CLIFF_FIT_WIDTH=1 to always enable

--print-empty

Print empty table if there is no data to show.

--noindent

whether to disable indenting the JSON

--quote {all,minimal,none,nonnumeric}

when to include quotes, defaults to nonnumeric

appcontainer action show

Shows action

```
openstack appcontainer action show [-h]
                                   [-f {json,shell,table,value,yaml}]
                                   [-c COLUMN] [--max-width <integer>]
                                   [--fit-width] [--print-empty]
                                   [--noindent] [--prefix PREFIX]
                                   <container> <request_id>
```

<container>

ID or name of the container to show.

<request_id>

request ID of action to describe.

-f {json,shell,table,value,yaml}, **--format** {json,shell,table,value,yaml}

the output format, defaults to table

-c COLUMN, **--column** COLUMN

specify the column(s) to include, can be repeated

--max-width <integer>

Maximum display width, <1 to disable. You can also use the CLIFF_MAX_TERM_WIDTH environment variable, but the parameter takes precedence.

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--print-empty

Print empty table if there is no data to show.

--noindent

whether to disable indenting the JSON

--prefix PREFIX

add a prefix to all variable names

appcontainer host

An **appcontainer host** specifies the compute host for running containers.

appcontainer host list

List available hosts

```
openstack appcontainer host list [-h] [-f {csv,json,table,value,yaml}]
                                 [-c COLUMN] [--max-width <integer>]
                                 [--fit-width] [--print-empty]
                                 [--noindent]
                                 [--quote {all,minimal,none,nonnumeric}]
                                 [--sort-column SORT_COLUMN]
                                 [--marker <marker>] [--limit <limit>]
                                 [--sort-key <sort-key>]
                                 [--sort-dir <sort-dir>]
```

-h, --help

show this help message and exit

--marker <marker>

The last host UUID of the previous page; displays list of hosts after marker.

--limit <limit>

Maximum number of hosts to return

--sort-key <sort-key>

Column to sort results by

--sort-dir <sort-dir>

Direction to sort. asc or desc.

-f {csv,json,table,value,yaml}, **--format** {csv,json,table,value,yaml}

the output format, defaults to table

-c COLUMN, **--column** COLUMN

specify the column(s) to include, can be repeated

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--print-empty
Print empty table if there is no data to show.

--noindent
whether to disable indenting the JSON

--quote {all,minimal,none,nonnumeric}
when to include quotes, defaults to nonnumeric

appcontainer host show

Show a host

```
openstack appcontainer host show [-h]
                                 [-f {json,shell,table,value,yaml}]
                                 [-c COLUMN] [--max-width <integer>]
                                 [--fit-width] [--print-empty]
                                 [--noindent] [--prefix PREFIX]
                                 <host>
```

<host>
ID or name of the host to show.

-h, --help
show this help message and exit

-f {json,shell,table,value,yaml}, **--format** {json,shell,table,value,yaml}
the output format, defaults to table

-c COLUMN, **--column** COLUMN
specify the column(s) to include, can be repeated

--max-width <integer>
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--print-empty
Print empty table if there is no data to show.

--noindent
whether to disable indenting the JSON

--prefix PREFIX
add a prefix to all variable names

appcontainer image

An **appcontainer image** specifies the image for a host.

appcontainer image list

List available images

```
openstack appcontainer image list [-h] [-f {csv,json,table,value,yaml}]
                                  [-c COLUMN] [--max-width <integer>]
                                  [--fit-width] [--print-empty]
                                  [--noindent]
                                  [--quote {all,minimal,none,nonnumeric}]
                                  [--sort-column SORT_COLUMN]
                                  [--marker <marker>] [--limit <limit>]
                                  [--sort-key <sort-key>]
                                  [--sort-dir <sort-dir>]
```

-h, --help
show this help message and exit

--marker <marker>
The last host UUID of the previous page; displays list of hosts after marker.

--limit <limit>
Maximum number of hosts to return

--sort-key <sort-key>
Column to sort results by

--sort-dir <sort-dir>
Direction to sort. asc or desc.

-f {csv,json,table,value,yaml}, **--format** {csv,json,table,value,yaml}
the output format, defaults to table

-c COLUMN, **--column** COLUMN
specify the column(s) to include, can be repeated

--sort-column SORT_COLUMN
specify the column(s) to sort the data (columns specified first have a priority, non-existing columns are ignored), can be repeated

--max-width <integer>
Maximum display width, <1 to disable. You can also use the CLIFF_MAX_TERM_WIDTH environment variable, but the parameter takes precedence.

--fit-width
Fit the table to the display width. Implied if max- width greater than 0. Set the environment variable CLIFF_FIT_WIDTH=1 to always enable

--print-empty

Print empty table if there is no data to show.

--noindent

whether to disable indenting the JSON

--quote {all,minimal,none,nonnumeric}

when to include quotes, defaults to nonnumeric

appcontainer image show

Describe a specific image

```
openstack appcontainer image show [-h]
                                  [-f {json,shell,table,value,yaml}]
                                  [-c COLUMN] [--max-width <integer>]
                                  [--fit-width] [--print-empty]
                                  [--noindent] [--prefix PREFIX]
                                  <uuid>
```

<uuid>

UUID of image to describe

-h, --help

show this help message and exit

-f {json,shell,table,value,yaml}, **--format** {json,shell,table,value,yaml}

the output format, defaults to table

-c COLUMN, **--column** COLUMN

specify the column(s) to include, can be repeated

--max-width <integer>

Maximum display width, <1 to disable. You can also use the CLIFF_MAX_TERM_WIDTH environment variable, but the parameter takes precedence.

--fit-width

Fit the table to the display width. Implied if max- width greater than 0. Set the environment variable CLIFF_FIT_WIDTH=1 to always enable

--print-empty

Print empty table if there is no data to show.

--noindent

whether to disable indenting the JSON

--prefix PREFIX

add a prefix to all variable names

appcontainer image delete

Delete specified image from a host

```
openstack appcontainer image delete  [-h] <uuid> <host>
```

<uuid>
UUID of image to describe

<host>
Name or UUID of the host

-h, --help
show this help message and exit

appcontainer image pull

Pull specified image into a host

```
openstack appcontainer image pull [-h]
                                  [-f {json,shell,table,value,yaml}]
                                  [-c COLUMN] [--max-width <integer>]
                                  [--fit-width] [--print-empty]
                                  [--noindent] [--prefix PREFIX]
                                  <image> <host>
```

<image>
Name of the image

<host>
Name or UUID of the host

-h, --help
show this help message and exit

-f {json,shell,table,value,yaml}**,**
--format {json,shell,table,value,yaml}
the output format, defaults to table

-c COLUMN**, --column** COLUMN
specify the column(s) to include, can be repeated

--max-width <integer>
Maximum display width, <1 to disable. You can also use the CLIFF_MAX_TERM_WIDTH environment variable, but the parameter takes precedence.

--fit-width
Fit the table to the display width. Implied if max- width greater than 0. Set the environment variable CLIFF_FIT_WIDTH=1 to always enable

--print-empty
Print empty table if there is no data to show.

--noindent

whether to disable indenting the JSON

--prefix PREFIX

add a prefix to all variable names

appcontainer image search

Search the image repository for images

```
openstack appcontainer image search [-h]
                                    [-f {csv,json,table,value,yaml}]
                                    [-c COLUMN] [--max-width <integer>]
                                    [--fit-width] [--print-empty]
                                    [--noindent]
                                    [--quote {all,minimal,none,nonnumeric}]
                                    [--sort-column SORT_COLUMN]
                                    [--image-driver <image-driver>]
                                    [--exact-match]
                                    <image_name>
```

<image_name>

Name of the image

-h, --help

show this help message and exit

--image-driver <image-driver>

Name of the image driver

--exact-match

exact match image name

-f {csv,json,table,value,yaml}, **--format** {csv,json,table,value,yaml}

the output format, defaults to table

-c COLUMN, **--column** COLUMN

specify the column(s) to include, can be repeated

--sort-column SORT_COLUMN

specify the column(s) to sort the data (columns specified first have a priority, non-existing columns are ignored), can be repeated

--max-width <integer>

Maximum display width, <1 to disable. You can also use the CLIFF_MAX_TERM_WIDTH environment variable, but the parameter takes precedence.

--fit-width

Fit the table to the display width. Implied if max- width greater than 0. Set the environment variable CLIFF_FIT_WIDTH=1 to always enable

--print-empty

Print empty table if there is no data to show.

--noindent

whether to disable indenting the JSON

--quote {all,minimal,none,nonnumeric}

when to include quotes, defaults to nonnumeric

appcontainer service

An **appcontainer service** specifies the zun services.

appcontainer service list

Print a list of zun services

```
openstack appcontainer service list [-h]
                                    [-f {csv,json,table,value,yaml}]
                                    [-c COLUMN] [--max-width <integer>]
                                    [--fit-width] [--print-empty]
                                    [--noindent]
                                    [--quote {all,minimal,none,nonnumeric}]
                                    [--sort-column SORT_COLUMN]
```

-h, --help

show this help message and exit

-f {csv,json,table,value,yaml}, **--format** {csv,json,table,value,yaml}

the output format, defaults to table

-c COLUMN, **--column** COLUMN

specify the column(s) to include, can be repeated

--sort-column SORT_COLUMN

specify the column(s) to sort the data (columns specified first have a priority, non-existing columns are ignored), can be repeated

--max-width <integer>

Maximum display width, <1 to disable. You can also use the CLIFF_MAX_TERM_WIDTH environment variable, but the parameter takes precedence.

--fit-width

Fit the table to the display width. Implied if max- width greater than 0. Set the environment variable CLIFF_FIT_WIDTH=1 to always enable

--print-empty

Print empty table if there is no data to show.

--noindent

whether to disable indenting the JSON

--quote {all,minimal,none,nonnumeric}

when to include quotes, defaults to nonnumeric

appcontainer service delete

Delete the Zun binaries/services.

```
openstack appcontainer service delete [-h] <host> <binary>
```

<host>

Name of host

<binary>

Name of the binary to delete

-h, --help

show this help message and exit

appcontainer service forcedown

Force the Zun service to down or up.

```
openstack appcontainer service forcedown [-h]
                                         [-f {json,shell,table,value,yaml}]
                                         [-c COLUMN]
                                         [--max-width <integer>]
                                         [--fit-width] [--print-empty]
                                         [--noindent] [--prefix PREFIX]
                                         [--unset]
                                         <host> <binary>
```

<host>

Name of host

<binary>

Name of the binary to forcedown

-h, --help

show this help message and exit

--unset

Unset the force state down of service

-f {json,shell,table,value,yaml}, **--format** {json,shell,table,value,yaml}

the output format, defaults to table

-c COLUMN, **--column** COLUMN

specify the column(s) to include, can be repeated

--max-width <integer>

Maximum display width, <1 to disable. You can also use the CLIFF_MAX_TERM_WIDTH environment variable, but the parameter takes precedence.

--fit-width

Fit the table to the display width. Implied if max- width greater than 0. Set the environment variable CLIFF_FIT_WIDTH=1 to always enable

--print-empty

Print empty table if there is no data to show.

--noindent

whether to disable indenting the JSON

--prefix PREFIX

add a prefix to all variable names

appcontainer service enable

Enable the Zun service.

```
openstack appcontainer service enable [-h]
                                      [-f {json,shell,table,value,yaml}]
                                      [-c COLUMN]
                                      [--max-width <integer>]
                                      [--fit-width] [--print-empty]
                                      [--noindent] [--prefix PREFIX]
                                      <host> <binary>
```

<host>

Name of host

<binary>

Name of the binary to enable

-h, --help

show this help message and exit

-f {json,shell,table,value,yaml}, **--format** {json,shell,table,value,yaml}

the output format, defaults to table

-c COLUMN, **--column** COLUMN

specify the column(s) to include, can be repeated

--max-width <integer>

Maximum display width, <1 to disable. You can also use the CLIFF_MAX_TERM_WIDTH environment variable, but the parameter takes precedence.

--fit-width

Fit the table to the display width. Implied if max- width greater than 0. Set the environment variable CLIFF_FIT_WIDTH=1 to always enable

--print-empty
Print empty table if there is no data to show.

--noindent
whether to disable indenting the JSON

appcontainer service disable

Disable the Zun service.

```
openstack appcontainer service disable [-h]
                                       [-f {json,shell,table,value,yaml}]
                                       [-c COLUMN]
                                       [--max-width <integer>]
                                       [--fit-width] [--print-empty]
                                       [--noindent] [--prefix PREFIX]
                                       [--reason <reason>]
                                       <host> <binary>
```

<host>
Name of host

<binary>
Name of the binary to disable

-h, --help
show this help message and exit

--reason <reason>
Reason for disabling service

-f {json,shell,table,value,yaml}, **--format** {json,shell,table,value,yaml}
the output format, defaults to table

-c COLUMN, **--column** COLUMN
specify the column(s) to include, can be repeated

--max-width <integer>
Maximum display width, <1 to disable. You can also use the CLIFF_MAX_TERM_WIDTH environment variable, but the parameter takes precedence.

--fit-width
Fit the table to the display width. Implied if max- width greater than 0. Set the environment variable CLIFF_FIT_WIDTH=1 to always enable

--print-empty
Print empty table if there is no data to show.

--noindent
whether to disable indenting the JSON

--prefix PREFIX
add a prefix to all variable names

1.4 Reference

1.4.1 The zunclient Python API

Usage

First create a client instance with your credentials:

```
>>> from zunclient import client
>>> zun = client.Client(VERSION, auth_url=AUTH_URL, username=USERNAME,
...                     password=PASSWORD, project_name=PROJECT_NAME,
...                     user_domain_name='default',
...                     project_domain_name='default')
```

Here VERSION can be a string or zunclient.api_versions.APIVersion obj. If you prefer string value, you can use 1 or 1.X (where X is a microversion).

Alternatively, you can create a client instance using the keystoneauth session API:

```
>>> from keystoneauth1 import loading
>>> from keystoneauth1 import session
>>> from zunclient import client
>>> loader = loading.get_plugin_loader('password')
>>> auth = loader.load_from_options(auth_url=AUTH_URL,
...                                 username=USERNAME,
...                                 password=PASSWORD,
...                                 project_name=PROJECT_NAME,
...                                 user_domain_name='default',
...                                 project_domain_name='default')
>>> sess = session.Session(auth=auth)
>>> zun = client.Client(VERSION, session=sess)
```

If you have PROJECT_NAME instead of a PROJECT_ID, use the project_name parameter. Similarly, if your cloud uses keystone v3 and you have a DOMAIN_NAME or DOMAIN_ID, provide it as *user_domain_(name|id)* and if you are using a PROJECT_NAME also provide the domain information as *project_domain_(name|id)*.

Then call methods on its managers:

```
>>> zun.containers.list()
[<Container {...}>]

>>> zun.containers.run(name="my-container", image='nginx')
<Container {...}>
```