

vcluster Command Structure

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Abstract

This report provides the command scheme for `vcluster`.

1 TODO List

- Need to articulate this article
- Need to add outputs of commands

2 Overall View of Commands

A `vcluster` command consists of **Command Category** and **Real Command**. Command category indicates where a real command is belonging to. For example, we have to use `plugman` as a command category when handling plugin related works. Following shows command categories implemented (or to be implemented) in `vcluster`.

<code>cloudman</code>	<code>command</code>
<code>plugman</code>	<code>command</code>
<code>vmman</code>	<code>command</code>

*Additional authors will be listed later depending on their contributions.

[vclman]	command
...	...

There is a special command category called `vclman` which can be omitted. Types of commands belonging to this category are including configurations, start and stop of `vcluster`.

3 Commands of **plugman** Category

All commands after `plugman` are plugin related ones. Such commands are including load, unload, list of plugins. There are two types of plugins which are batch plugin and cloud plugin, respectively. We will discuss plugin related commands in the following subsections.

Like a general Linux command, `-h` or `--help` option shows the usages of `plugman` and commands.

<code>plugman</code>	
<code>-h, --help</code>	list up all options and usages

3.1 **load**

This command loads a plugin or a bunch of plugins. Since one batch system plugin is only allowed at the same time, the structure of `load` command depends on the type of plugin.

<code>plugman</code>	
<code>load</code>	
<code>-c PLUGIN... --type=cloud PLUGIN...</code>	
<code>-b BATCH_PLUGIN --type=batch PLUGIN</code>	

The options `-c` and `--type=cloud` are identical. These options are saying that we are about to load cloud type plugin(s). Like the cloud type options, we can use `-b` and `--type=batch` options for a batch type plugin. Please note that unlike a cloud type plugin, only one batch plugin should be provided.

Examples for this command are as below:

```
vcluster> plugman load -c plugin-1
vcluster> plugman load --type=cloud plugin-1

vcluster> plugman load -c plugin-1 plugin-2 plugin-3
vcluster> plugman load --type=cloud plugin-1 plugin-2 plugin-3

vcluster> plugman load -b plugin-1
vcluster> plugman load --type=batch plugin-1

vcluster> plugman load -b plugin-1 plugin-2 plugin-3
vcluster> plugman load --type=batch plugin-1 plugin-2 plugin-3
```

3.2 unload

This command unloads a plugin or a bunch of plugins. This command unlike load command does not indicate the type of plugin(s) to be unloaded.

```
plugman
  unload PLUGIN...
```

Below shows an example of this command.

```
vcluster> plugman unload plugin-1
vcluster> plugman unload plugin-1 plugin-2
```

3.3 list

This command lists up all designated plugins. Since vcluster does not have register command, it retrieves all plugins under a specified plugin directory.

```
plugman
  list
```

```
-c | --type=cloud  
-b | --type=batch
```

Below shows an example of this command.

```
vcluster> plugman list -c  
vcluster> plugman list --type=cloud  
  
vcluster> plugman list -b  
vcluster> plugman list --type=batch
```

3.4 info

This command prints the information about a plugin. It will be used to retrieve detail information about the plugin. **TODO: plugin interface needs to provide this feature. We may need to introduce a structure containing required fields for this command.**

```
plugman  
  info PLUGIN
```

Below shows an example of this command.

```
vcluster> plugman info plugin-1
```
