

1. Introduction

This document describes about how to use lxc container manager tools that display containers information and toggle containers state. Lxc container manager includes two tools and written by python3.

2. Recommended distribution and interpreter

Distribution: Ubuntu 14.04

Interpreter: python 3.4

Note: These may work when you use more than 3 but less than 3.4

3. How to use

3.1. machine_info.py

This tool displays Number, Group, Name, HostName, IP and State of each container.

Execution example

```
$ sudo python3 machine_info.py
```

| No | Group | Name | HostName | IP | State |
|----|-------|------------|------------|-----------|---------|
| 1 | 1 | machine1_1 | machine1_1 | 10.0.3.11 | STOPPED |
| 2 | 1 | machine1_2 | machine1_2 | 10.0.3.12 | STOPPED |
| 3 | 1 | machine1_3 | machine1_3 | 10.0.3.13 | STOPPED |
| 4 | 1 | machine1_4 | machine1_4 | 10.0.3.14 | STOPPED |
| 5 | 1 | machine1_5 | machine1_5 | 10.0.3.15 | STOPPED |
| 6 | 2 | machine2_1 | machine2_1 | 10.0.3.21 | STOPPED |
| 7 | 2 | machine2_2 | machine2_2 | 10.0.3.22 | STOPPED |
| 8 | 2 | machine2_3 | machine2_3 | 10.0.3.23 | STOPPED |
| 9 | 2 | machine2_4 | machine2_4 | 10.0.3.24 | STOPPED |

3.2. machine_switcher.py

This tool toggles running status(STOPPED or RUNNING) of each container that is designated by the following way.

3.2.1. Designate containers by container ID

To designate containers by ID (shown in "no" column), give "m" followed by list of IDs separated by spaces.

Ex. Command to toggle the containers state of number 1,2,5 and 8

```
$ sudo python3 machine_switcher.py m 1 2 5 8
```

3.2.2. Designate containers by container group ID

You can toggle state of containers that belong to the designate group when you give a “g” as first argument.

Ex. Command to toggle the state of containers that belong to the group number 1 and 2.

```
$ sudo python3 machine_switcher.py g 1 2
```

3.2.3. Designate range by using “-”

You can toggle range state of containers that are designate range when you use a “-”.

Ex. Command to toggle range state of containers that are number 1,2,3,4 and 5.

```
$ sudo python3 machine_switcher.py m 1-5
```

In addition, you can use both “-” and space.

Ex. Command to toggle range state of containers that are in Group number 1,2,3 and 5.

```
$ sudo python3 machine_switcher.py g 1-3 5
```

4. Note

Each tool needs root privileges because it displays container information under the directory that is /var/lib/lxc. You must become root or execute command with sudo.

Appendix. Unit test

test_machine_info.py and test_machine_switcher.py find out if each tool's function is properly working. We recommend python3.4 as interpreter too.

You must install python3-pip. Then you must install pytest using pip3 command when you run these unit tests.

How to test:

You execute the following commands.

```
$ python3 -m pytest test_machine_info.py
$ python3 -m pytest test_machine_switcher.py
```

If any function doesn't work correctly, terminal outputs “*failed*” by the characters of the red. If all tests passed, terminal outputs “*passed*” by the characters of the green.