

How to use test-environment-manager

1.Introduction

This document describes how to use *test-environment manager* in which creates base containers, clones base containers and setup each container. *test-environment-manager* includes two tools and is written by python3.

2. Recommended environment

Interpreter: python 3.4

Number of machine : 1

Spec:

CPU : Core i7 3.5GHz

Memory : 8GB

HDD : 500GB

OS : Ubuntu 14.04 LTS

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

3. Required packages

You must install some packages to use the following command.

```
$sudo apt-get install lxc lxcctl python3-yaml yum
```

4. How to use

4.1. creator

You get base containers that is mounted middlewares when you use the following command.

```
$sudo ./creator.py
```

Note1:The middlewares are Zabbix, Nagios, Nedmine and Hatohol.

Note2: You can check if make container successfully with the following command.

```
$sudo ./checker.py
```

4.2. clone_config

You can clone the container from base container and configuration.yml with the following command.

```
$sudo ./start_clone_setup.py configuration.yml
```

Note: You can check whether container was cloned and setuped correctly with the following commands.

```
$sudo ./clone_test.py configuration.yml
```

```
$sudo ./setup_test.py configuration.yml
```

5. How to write configuration yml file

The configuration yml file consists of three blocks. First block has 1 item that is a container name. Second block has at least 6 items that are base_container, ip_address, container_path, monitor_group, auto_start and setup functions. The above items are summerized in Table 1. Third block items depend on setup functions and are summerized in Table 2. A configuration yml file is shown in Table 3 as example.

Blue: First block item

Red: Second block items

Purple: Third block items

Table1 Explanation of each item

Mandatory/ Optionl (M/O)	key	explanation
M	container name	container name
M	container_path	container location
M	ip_address	IP addres of container
M	base_container	name of base container
M	auto_start	whether use auto start (0: auto start, 1: not auto start)
O	monitor_group	number of monitor group
O	one of the followings zabbix-server: zabbix-agent: nagios3: nagios4: nrpe: Redmine: fluentd: hatohol-rpm: hatohol-build:	You can specifies one or multiple the setup function.

Table2 Explanation of setup functions

setup function	key	explanation
zabbix-server	target:{host:}	Host name of target container
	target:{ip: }	IP address of target container
zabbix-agent	server_ipaddress	IP address of Zabbix server
	host_name	Host name of Zabbix agent
nagios3	username	User name that need to access to Nagios web interface
	password	Password that need to access to Nagios web interface
	target: {host: }	host: <Host name of watch target>
	target: {ip: }	ip: <IP address of watch target>
nagios4	username	User name that need to access to Nagios web interface
	password	Password that need to access to Nagios web interface
	target: {host: }	host: <Host name of watch target>
	target: {ip: }	ip: <IP address of watch target>
nrpe	N/A	N/A
Redmine	project_name	name of generate project
	project_id	identifier of generate project
fluentd	N/A	N/A
hatohol-rpm	N/A	N/A
hatohol-build	N/A	N/A

Table3 example.yml

```

zabbix-server20:
  base_container: env_zabbix_server20
  container_path: /var/lib/lxc/zabbix-server20
  ip_address: 172.16.0.11
  auto_start: 0
  monitor_group: 1

```

zabbix-agent:

server_ipaddress: 172.16.0.11
host_name: Zabbix server20 1 1

zabbix-server:

target: [{host: Zabbix agent20-1-1, ip: 172.16.0.12},
{host: Zabbix agent20-1-2, ip: 172.16.0.13}]

zabbix-agent20-1-1:

base_container: env_zabbix_agent20
container_path: /var/lib/lxc/zabbix-agent20-1-1
ip_address: 172.16.0.12
auto_start: 0
monitor_group: 1

zabbix-agent:

server_ipaddress: 172.16.0.11
host_name: Zabbix agent20

nagios-server4:

base_container: env_nagios_server4
container_path: /var/lib/lxc/nagios-server4
ip_address: 172.16.0.21
auto_start: 0
monitor_group: 2

nagios4:

username: admin
password: hatohol
target: [{host: nagios-nrpe-4-1, ip: 172.16.0.22},
{host: nagios-nrpe-4-2, ip: 172.16.0.23}]

nagios-nrpe-4-1:

base_container: env_nagios_nrpe
container_path: /var/lib/lxc/nagios-nrpe-4-1
ip_address: 172.16.0.22
auto_start: 0
monitor_group: 2

nrpe:

redmine:

base_container: env_redmine
container_path: /var/lib/lxc/redmine
ip_address: 172.16.0.31
auto_start: 0

redmine:

project_name: hatohol

project_id: hatohol

fluentd:

base_container: env_fluentd

container_path: /var/lib/lxc/fluentd

ip_address: 172.16.0.41

auto_start: 0

fluentd:

hatohol-rpm:

base_container: env_hatohol_rpm

container_path: /var/lib/lxc/hatohol-rpm

ip_address: 172.16.0.51

auto_start: 0

hatohol-build:

base_container: env_hatohol_build

container_path: /var/lib/lxc/hatohol-build

ip_address: 172.16.0.61

auto_start: 0