

## Lab: 建立 docker 映像檔-修改現有映像檔

### 方式 1 修改現有的映像檔

觀察 container

```
# docker ps
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
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```
# docker ps -a
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
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首先對之前下的指令進行解釋

```
# docker run --rm -i -t opensuse/leap /bin/bash
```

- run 執行 docker
- --rm Automatically remove the container when it exits
- -i Keep STDIN open even if not attached
- -t Allocate a pseudo-TTY

在 container 內

```
bash-4.2# echo $HOSTNAME
```

```
272dfd16c792
```

請另外啟動終端機觀察(如果是在自己機器上面)

```
# docker ps
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
272dfd16c792	opensuse	"/bin/bash"	About a minute ago	Up About a minute		mad_poitras

在 container 內

```
bash-4.2# exit
```

觀察 container

```
# docker ps
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
--------------	-------	---------	---------	--------	-------	-------

```
# docker ps -a
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
--------------	-------	---------	---------	--------	-------	-------

接下來嘗試 沒有 --rm 的差異 (這次不加上 --rm, 也就是說 exit 之後不刪除)

```
# docker run -i -t opensuse/leap /bin/bash
```

在 container 內

```
bash-4.2# exit
```

觀察 container

```
# docker ps
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
--------------	-------	---------	---------	--------	-------	-------

```
# docker ps -a
```

1dd047e1ec6b	opensuse	"/bin/bash"	36 seconds ago	Exited (0) 29 seconds ago		thirsty_archimedes
--------------	----------	-------------	----------------	---------------------------	--	--------------------

再次執行一個新的 container

```
# docker run -i -t opensuse/leap /bin/bash
```

```
bash-4.2# rpm -qa | grep ssh
```

```
libssh2-1-1.4.3-15.1.x86_64
```

```
bash-4.2# zypper -n install openssh
```

```
Retrieving repository 'NON-OSS' metadata .....[done]
Building repository 'NON-OSS' cache .....[done]
Retrieving repository 'OSS' metadata .....[done]
Building repository 'OSS' cache .....[done]
Retrieving repository 'OSS Update' metadata .....[done]
Building repository 'OSS Update' cache .....[done]
Retrieving repository 'Update Non-Oss' metadata .....[done]
Building repository 'Update Non-Oss' cache .....[done]
Loading repository data...
Reading installed packages...
Resolving package dependencies...
```

The following 3 NEW packages are going to be installed:  
libedit0 libncurses6 openssh

The following 3 packages are recommended, but will not be installed (only required packages will be installed):  
audit openssh-helpers xauth

3 new packages to install.

Overall download size: 1.2 MiB. Already cached: 0 B. After the operation, additional 5.7 MiB will be used.

Continue? [y/n/? shows all options] (y): y

Retrieving package libncurses6-5.9-53.4.x86\_64 (1/3), 349.5 KiB (1020.7 KiB unpacked)

Retrieving: libncurses6-5.9-53.4.x86\_64.rpm .....[done]

Retrieving package libedit0-3.1.snap20140620-3.2.x86\_64 (2/3), 94.9 KiB (247.1 KiB unpacked)

Retrieving: libedit0-3.1.snap20140620-3.2.x86\_64.rpm .....[done]

Retrieving package openssh-6.6p1-11.1.x86\_64 (3/3), 830.7 KiB ( 4.5 MiB unpacked)

Retrieving: openssh-6.6p1-11.1.x86\_64.rpm .....[done]

Checking for file conflicts: .....[done]

(1/3) Installing: libncurses6-5.9-53.4.x86\_64 .....[done]

(2/3) Installing: libedit0-3.1.snap20140620-3.2.x86\_64 .....[done]

(3/3) Installing: openssh-6.6p1-11.1.x86\_64 .....[done]

Additional rpm output:

Updating /etc/sysconfig/ssh...

```
bash-4.2# rpm -qa | grep ssh
```

```
libssh2-1-1.4.3-15.1.x86_64
```

```
openssh-6.6p1-11.1.x86_64
```

這樣這個映像檔就跟之前不一樣了

觀察 container ( 如果是用 play with docker, 請 exit container )

```
# docker ps -a
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
f4b981edb1e5	opensuse	"/bin/bash"	5 minutes ago	Up 5 minutes		sleepy_bhabha

接下來透過 docker commit 來建立新的

```
# docker commit -m "Add openssh" -a "sakana" f4b981edb1e5 testrepo/testimage:vTEST
c840a5f6ade64751dc26036af4ff6bd79dc42738f7cb3cd32385dc3d8aaee55a
```

- commit 提交一個新的 image
- m 訊息 Commit message
- a 作者 Author

- f4b981edb1e5 是 container ID
- testrepo/testimage:vTEST 是 Repository 名稱/映像檔名稱:TAG

觀察映像檔

# docker images

REPOSITORY	TAG	IMAGE ID	CREATED	VIRTUAL SIZE
testrepo/testimage	vTEST	c840a5f6ade6	56 seconds ago	168.9 MB
opensuse	42.1	80bd0f661aef	5 weeks ago	97.74 MB
opensuse	latest	80bd0f661aef	5 weeks ago	97.74 MB
busybox	latest	b41c5284db84	7 weeks ago	1.093 MB