

# 实验课程5-2 使用docker运行一个容器

## 1、docker客户端的使用方法可以通过help命令来查看：

```
$ docker-h
...
Commands:
attach      Attach local standard input, output, and error streams to a running container
build       Build an image from a Dockerfile
commit      Create a new image from a container's changes
cp          Copy files/folders between a container and the local filesystem
create      Create a new container
diff        Inspect changes to files or directories on a container's filesystem
events      Get real time events from the server
exec        Run a command in a running container
export      Export a container's filesystem as a tar archive
history     Show the history of an image
images      List images
import      Import the contents from a tarball to create a filesystem image
info        Display system-wide information
inspect     Return low-level information on Docker objects
kill        Kill one or more running containers
load        Load an image from a tar archive or STDIN
login       Log in to a Docker registry
logout      Log out from a Docker registry
logs        Fetch the logs of a container
pause       Pause all processes within one or more containers
...
```

## 2、接下来我们尝试使用docker运行一个nginx应用：

(1) 当运行容器时，需要使用本地存储的容器镜像，查找[Dockerhub](https://hub.docker.com/_/nginx/)上的nginx镜像

```
$ docker search nginx
```

NAME	STARS	OFFICIAL	DESCRIPTION
nginx	9828	[OK]	Official build of Nginx.
jwilder/nginx-proxy			Automated Nginx reverse proxy for
docker con...	1427		[OK]
richarvey/nginx-php-fpm			Container running Nginx + PHP-FPM
capable of...	619		[OK]
jrcs/letsencrypt-nginx-proxy-companion			LetsEncrypt container to use with
nginx as p...	423		[OK]
kong			Open-source Microservice & API
Management la...	230	[OK]	
webdevops/php-nginx			Nginx with PHP-FPM
	113		[OK]
kitematic/hello-world-nginx			A light-weight nginx container that
demonstr...	111		
zabbix/zabbix-web-nginx-mysql			Zabbix frontend based on Nginx web-
server wi...	72		[OK]
bitnami/nginx			Bitnami nginx Docker Image
	58		[OK]
land1internet/ubuntu-16-nginx-php-phpmyadmin-mysql-5			ubuntu-16-nginx-php-phpmyadmin-
mysql-5	45		[OK]
...			

我们拉取官方提供的nginx镜像:

```
$ docker pull nginx:latest
Using default tag: latest
latest: Pulling from library/nginx
802b00ed6f79: Pull complete
5291925314b3: Pull complete
bd9f53b2c2de: Pull complete
Digest: sha256:9ad0746d8f2ea6df3a17ba89eca40b48c47066dfab55a75e08e2b70fc80d929e
Status: Downloaded newer image for nginx:latest
```

(2) 使用nginx镜像运行容器

```
$ docker run -itd -p 30080:80 --name mynginx nginx:latest
3b4cb53b72b8482c85d332e936fc01a5f68eef5f137d589e9ebc41ba9d2ff104
```

(3) 查看当前环境运行的容器

```
$ docker ps
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS
3b4cb53b72b8	nginx	"nginx -g 'daemon of...'"	3 seconds ago	Up 2 seconds	0.0.0.0:30080->80/tcp
				mynginx	

(4) 访问nginx服务, <http://localhost:30080>

