8.创建docker私有仓库

1.在公司内部为了提高分享的速度，需要在公司内部自己搭建一个本地的仓库，供私人使用。

2.docker官方提供了一个工具docker-registry,我们可以借助这个工具构建私有镜像仓库

- 首先，使用docker search命令查找registry

```
[root@bigdata-4 ~]# docker search registry
INDEX        NAME                                      DESCRIPTION                              STARS     OFFICIAL     AUTO
ATED
docker.io    docker.io/registry                        The Docker Registry 2.0 implementation for...   2651     [OK]
docker.io    docker.io/distribution/registry           WARNING: NOT the registry official image!!...   57                    [OK]
docker.io    docker.io/stefanscherer/registry-windows  Containerized docker registry for Windows ...   26
docker.io    docker.io/budry/registry-arm              Docker registry build for Raspberry PI 2 a...   18
docker.io    docker.io/deis/registry                   Docker image registry for the Deis open so...   12
docker.io    docker.io/anoxis/registry-cli             You can list and delete tags from your pri...   7                     [OK]
docker.io    docker.io/vmware/registry                                                                  5
docker.io    docker.io/allingeek/registry              A specialization of registry:2 configured ...   4                     [OK]
docker.io    docker.io/pallet/registry-swift           Add swift storage support to the official ...   4                     [OK]
docker.io    docker.io/jc21/registry-ui                A nice web interface for managing your Doc...   2
docker.io    docker.io/conjurinc/registry-oauth-server Docker registry authn/authz server backed ...   1
docker.io    docker.io/goharbor/registry-photon                                                         1
docker.io    docker.io/ibmcom/registry                 Docker Image for IBM Cloud private-CE (Com...   1
docker.io    docker.io/metadata/registry               Metadata Registry is a tool which helps yo...   1                     [OK]
docker.io    docker.io/webhippie/registry              Docker images for Docker Registry               1                     [OK]
docker.io    docker.io/concourse/registry-image-resource                                                0
docker.io    docker.io/convox/registry                                                                  0
docker.io    docker.io/deepsecurity/registryviews      Deep Security Smart Check                        0
docker.io    docker.io/ghmlee/registrybot              registrybot                                      0                     [OK]
docker.io    docker.io/gisjedi/registry-proxy          Reverse proxy of registry mirror image gis...   0
docker.io    docker.io/kontena/registry                Kontena Registry                                0
docker.io    docker.io/lorieri/registry-ceph           Ceph Rados Gateway (and any other S3 compa...   0
docker.io    docker.io/upmcenterprises/registry-creds                                                   0
docker.io    docker.io/vmware/registry-photon                                                           0
docker.io    docker.io/zoined/registry                 Private Docker registry based on registry:2     0
[root@bigdata-4 ~]#
```

- docker pull registry

```
[root@bigdata-4 ~]# docker pull registry
Using default tag: latest
Trying to pull repository docker.io/library/registry ...
latest: Pulling from docker.io/library/registry
c87736221ed0: Downloading [=====================>          ] 957.2 kB/2.207 MB
1cc8e0bb44df: Download complete
54d33bcb37f5: Downloading [=======>                        ] 1.014 MB/6.824 MB
e8afc091c171: Waiting
b4541f6d3db6: Waiting
```

- 运行registry：docker run -d -p 5000:5000 -v /root/docker/registry:/tmp/registry registry，默认情况下，仓库会创建在容器中的/tmp/registry目录下，通过-v 指定将镜像文件存放在本地的目录中。

```
[root@bigdata-4 ~]# ll
total 318328
-rw-------.  1 root     root          1500 Dec  3  2018 anaconda-ks.cfg
drwxr-xr-x   2 root     root            48 Aug 12 17:11 centos
-rw-r--r--   1 root     root     318273536 Aug 13 10:39 centos.tar.gz
drwxr-xr-x   3 root     root            22 Aug 13 11:35 docker
drwxr-xr-x.  3 root     root            27 Jan 19  2019 spark-warehouse
drwxrwxr-x  25 laowang  laowang       4096 Aug 13 10:05 util-linux-2.24
-rw-r--r--   1 root     root       7630306 Oct 21  2013 util-linux-2.24.tar.gz
-rw-r--r--.  1 root     root         51409 May 24 22:04 zookeeper.out
[root@bigdata-4 ~]# cd docker
[root@bigdata-4 docker]# ll
total 0
drwxr-xr-x 2 root root 6 Aug 13 11:35 registry
[root@bigdata-4 docker]# cd registry/
[root@bigdata-4 registry]# ll
total 0
[root@bigdata-4 registry]#
```

dy

```
-rw-r--r--. 1 root    root     31409 May 24 22:04 zookeeper.out
[root@bigdata-4 ~]# docker images
REPOSITORY                  TAG         IMAGE ID         CREATED          SIZE
my/centos                   v1.1        bfa30befa38e     57 minutes ago   309 MB
dockerlaowang/centos        latest      44a31a354680     21 hours ago     338 MB
my/centos                   v1.0        106fafeb1c43     23 hours ago     332 MB
my/centos_with_python       v1.0        106fafeb1c43     23 hours ago     332 MB
docker.io/centos            latest      9f38484d220f     5 months ago     202 MB
docker.io/registry          latest      f32a97de94e1     5 months ago     25.8 MB
[root@bigdata-4 ~]# docker ps
CONTAINER ID       IMAGE            COMMAND            CREATED          STATUS          PORTS                      NA
MES
06287e3d09be       registry         "/entrypoint.sh /e..."   5 minutes ago    Up 5 minutes    0.0.0.0:5000->5000/tcp     st
oic_lamport
[root@bigdata-4 ~]# netstat -lnp |grep 5000
tcp6       0      0 :::5000            :::*                        LISTEN          9086/docker-proxy-c
[root@bigdata-4 ~]#
```

- 搭建好了私有仓库之后，就可以上传、下载、搜索镜像了。

  - 查看本机IP是192.168.72.14
  - 然后是修改名称

```
[root@bigdata-4 ~]# docker tag 106fafeb1c43 192.168.72.14:5000/centos
[root@bigdata-4 ~]# docker images
REPOSITORY                      TAG         IMAGE ID         CREATED              SIZE
my/centos                       v1.1        bfa30befa38e     About an hour ago    309 MB
dockerlaowang/centos            latest      44a31a354680     21 hours ago         338 MB
192.168.72.14:5000/centos       latest      106fafeb1c43     23 hours ago         332 MB
my/centos                       v1.0        106fafeb1c43     23 hours ago         332 MB
my/centos_with_python           v1.0        106fafeb1c43     23 hours ago         332 MB
docker.io/centos                latest      9f38484d220f     5 months ago         202 MB
docker.io/registry              latest      f32a97de94e1     5 months ago         25.8 MB
[root@bigdata-4 ~]# docker push 192.168.72.14:5000/centos
```

  - 上传镜像 docker push 192.168.72.14:5000/centos ，报错

```
[root@bigdata-4 ~]# docker push 192.168.72.14:5000/centos
The push refers to a repository [192.168.72.14:5000/centos]
Get https://192.168.72.14:5000/v1/_ping: http: server gave HTTP response to HTTPS client
[root@bigdata-4 ~]#
```

  - 解决办法：解决方法是在/etc/docker目录下新建 daemon.json, 文件中写入：{ "insecure-registries": ["192.168.72.14:5000"] }

  - 然后重启docker :systemctl restart docker 重新运行docker run -d -p 5000:5000 -v /root/docker/registry:/tmp/registry registry，启动registry服务，再次运行docker push 192.168.72.14:5000/centos上传镜像到私有仓库。

```
Get https://192.168.72.14:5000/v1/_ping: http: server gave HTTP response to HTTPS client
[root@bigdata-4 ~]# cd /etc/docker
[root@bigdata-4 docker]# vi daemon.json
[root@bigdata-4 docker]# systemctl restart docker
[root@bigdata-4 docker]# docker run -d -p 5000:5000 -v /root/docker/registry:/tmp/registry registry
b3af7de1751cbd319ffa503894b2106a2343a367024bb62c2eb610d448a05e54
[root@bigdata-4 docker]# docker push 192.168.72.14:5000/centos
The push refers to a repository [192.168.72.14:5000/centos]
eb70294ab7b6: Pushed
d69483a6face: Pushing [=========================================>    ] 186.6 MB/201.8 MB
```

  - 接下来，我们可以到另一台机器192.168.72.14下载这个镜像了：

```
docker.io/registry        latest        f32a97de94e1        5 months ago        25
[root@bigdata-4 ~]# docker pull 192.168.72.14:5000/centos
Using default tag: latest
Trying to pull repository 192.168.72.14:5000/centos ...
latest: Pulling from 192.168.72.14:5000/centos
Digest: sha256:1a94c894b2510f3491684632b09a55c016056338c872be20a2afc589d0dddf1a
Status: Image is up to date for 192.168.72.14:5000/centos:latest
```