

Harbor 新版本环境搭建

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harbor 简介

Harbor 是一个用于存储 Docker 镜像的企业级 Registry 服务。是 Vmware 中国团队开发的开源 registry 仓库，相比 docker 官方拥有更丰富的权限权利和完善的架构设计，适用大规模 docker 集群部署提供仓库服务。

harbor 安装

Harbor 项目分为 [在线版](#) 和 [离线版](#)，网络状态良好的话，可以选择 [在线版](#) 安装。

前置条件

- Linux 发行版
- docker
- docker-compose

harbor 安装包下载

```
1 # 下载
2 $ wget https://github.com/goharbor/harbor/releases/download/v2.3.4/harbor-
  online-installer-v2.3.4.tgz
3 # 解压
4 $ tar zxvf harbor-online-installer-v2.3.4.tgz
5
6 $ tree harbor
7 harbor
8 |— common.sh
9 |— harbor.yml.tpl
10 |— install.sh
11 |— LICENSE
12 |— prepare
```

HTTPS 证书准备

准备受信任证书，这里使用我司阿里云的 `harbor.anxinyun.cn`，下载至 harbor 主机即可。

修改 harbor 配置项

复制默认模版文件 `harbor.yml.tpl` 并重命名为 `harbor.yml`，并按照自己需求更新该配置文件。

```
1 | cp harbor.yml.tpl harbor.yml
```

配置 `hostname` 和 `https` 证书：

```
1 # The IP address or hostname to access admin UI and registry service.
2 # DO NOT use localhost or 127.0.0.1, because Harbor needs to be accessed by
  external clients.
3 hostname: harbor.anxinyun.cn # yourdomain.com
4
5 # https related config
6 https:
7   # https port for harbor, default is 443
8   port: 443
9   # The path of cert and key files for nginx
10  # certificate: /your/certificate/path
11  # private_key: /your/private/key/path
12  certificate: /etc/docker/certs.d/harbor.anxinyun.cn/harbor.anxinyun.cn.pem
13  private_key: /etc/docker/certs.d/harbor.anxinyun.cn/harbor.anxinyun.cn.key
```

执行安装

```
1 | dragon@test-pc:~/julin/harbor$ sudo ./install.sh
```

harbor 生命周期管理

停止 harbor

```
1 dragon@test-pc:~/julin/harbor$ sudo docker-compose down
2 [+] Running 10/10
3  :: Container registryctl      Removed          12.4s
4  :: Container harbor-jobservice Removed          12.3s
5  :: Container nginx           Removed          1.7s
6  :: Container harbor-portal    Removed          1.5s
7  :: Container harbor-core      Removed          11.6s
8  :: Container registry         Removed          11.5s
9  :: Container redis            Removed          3.1s
10 :: Container harbor-db        Removed          3.4s
11 :: Container harbor-log       Removed          11.5s
12 :: Network harbor_harbor      Removed          0.3s
```

启动 harbor

```
1 dragon@test-pc:~/julin/harbor$ sudo docker-compose up -d
2 [+] Running 10/10
3  :: Network harbor_harbor      Created          0.2s
4  :: Container harbor-log       Started          12.4s
5  :: Container harbor-portal    Started          21.2s
6  :: Container redis            Started          18.7s
7  :: Container harbor-db        Started          21.4s
8  :: Container registryctl      Started          16.3s
9  :: Container registry         Started          20.0s
10 :: Container harbor-core      Started          19.7s
11 :: Container nginx            Started          20.1s
12 :: Container harbor-jobservice Started          20.0s
```

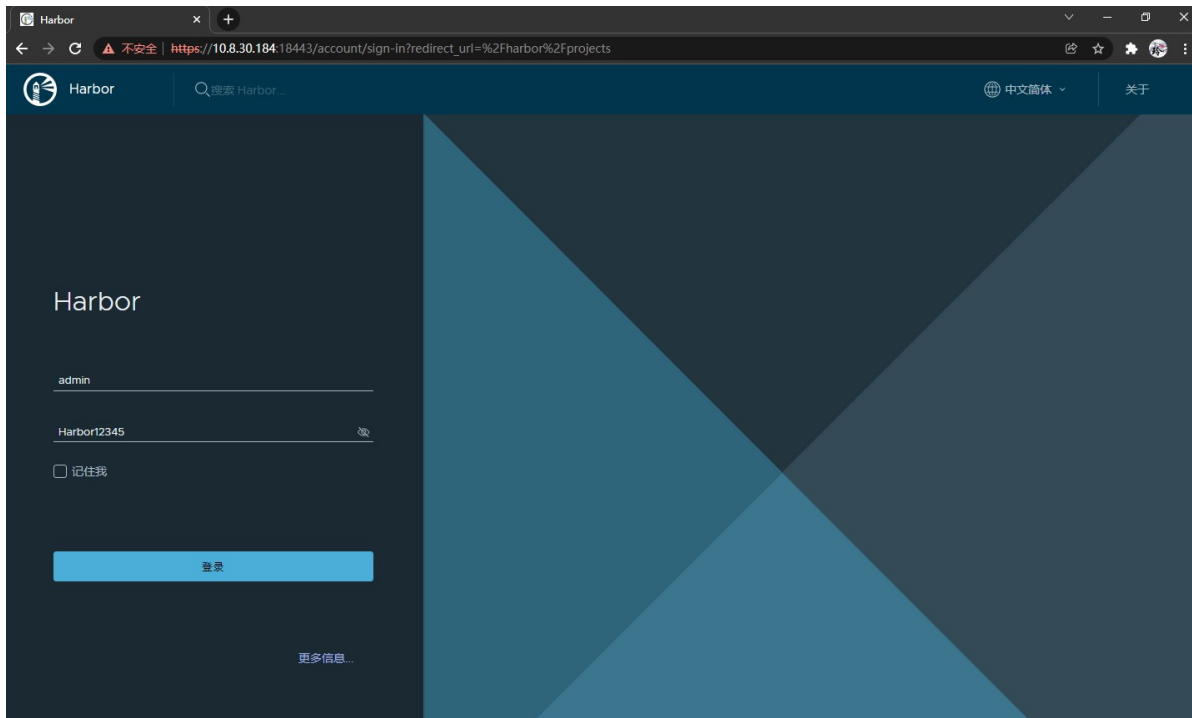
harbor 仓库登录 (HTTPS)

harbor 登录 (HTTPS)

注意: `harbor.yml` 中修改初始密码后, 无效, 登录 Harbor 的初始密码仍然是 Harbor12345。

ip:port 访问

使用浏览器访问 私服仓库: <https://10.8.30.184:18443/>, 默认用户名/密码: admin/Harbor12345。

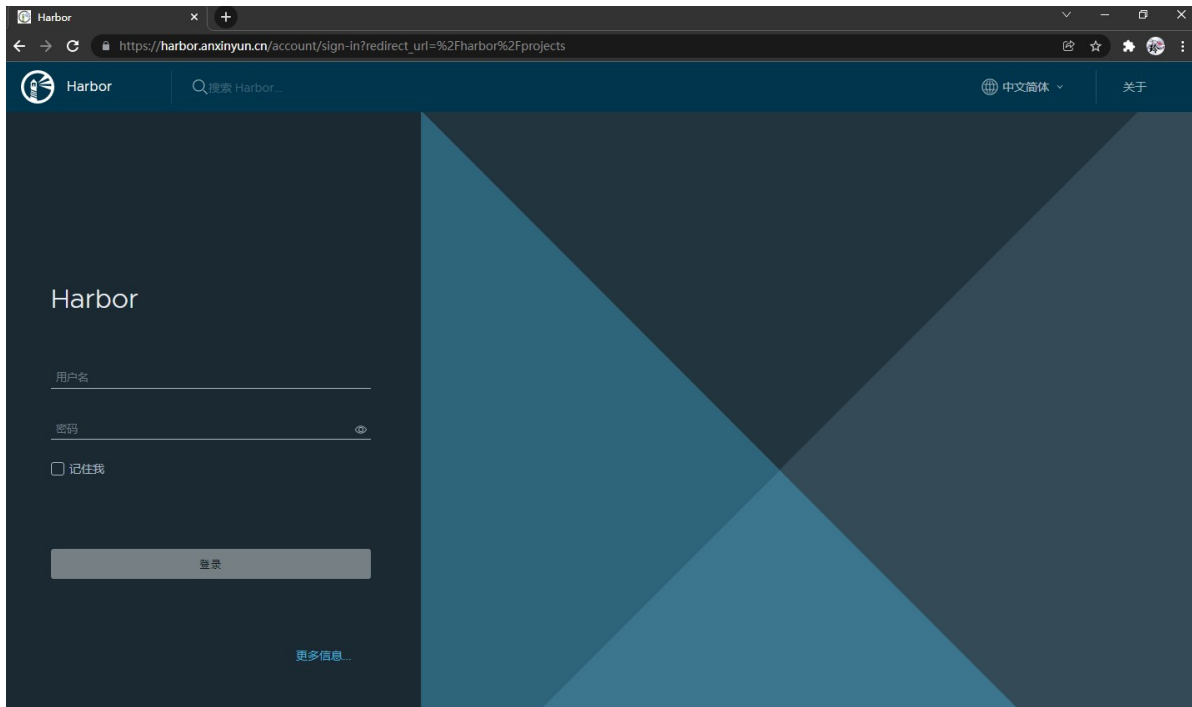


相关配置如下：

```
1 # harbor.yml
2 dragon@test-pc:~/julin/harbor$ vi harbor.yml
3 hostname: 10.8.30.184
4 https:
5   port: 443
6   certificate: /etc/docker/certs.d/yourdomain.com/yourdomain.com.cert
7   private_key: /etc/docker/certs.d/yourdomain.com/yourdomain.com.key
8
9 # docker-compose.yml
10 dragon@test-pc:~/julin/harbor$ vi docker-compose.yml
11   ports:
12     - 18080:8080
13     - 18443:8443
14
15 # nginx 代理配置
16 dragon@test-pc:~/julin/harbor$ sudo vi common/config/nginx/nginx.conf
17   server {
18     listen 8080;
19     return 308 https://$host:443$request_uri; # nginx 重定向 8080 端口至
20     $host:443
21   }
```

domain 访问

使用浏览器访问 私服仓库：<https://harbor.anxinyun.cn/>，默认用户名/密码：admin/Harbor12345。



相关配置如下：

```
1 # harbor.yml
2 dragon@test-pc:~/julin/harbor$ vi harbor.yml
3 hostname: yourdomain.com
4 https:
5   port: 443
6   certificate: /etc/docker/certs.d/yourdomain.com/yourdomain.com.cert
7   private_key: /etc/docker/certs.d/yourdomain.com/yourdomain.com.key
8
9 # docker-compose.yml
10 dragon@test-pc:~/julin/harbor$ vi docker-compose.yml
11   ports:
12     - 80:8080
13     - 443:8443
14
15 # nginx 代理配置
16 dragon@test-pc:~/julin/harbor$ sudo vi common/config/nginx/nginx.conf
17 server {
18     listen 8443 ssl;
19     server_tokens off;
20     ssl_certificate /etc/cert/server.crt;
21     ssl_certificate_key /etc/cert/server.key;
22     ...
23 }
24
25 server {
26     listen 8080;
27     return 308 https://$host:443$request_uri; # nginx 重定向 8080 端口至
28     $host:443
29 }
```

docker 客户端验证

在另外一台主机上安装 docker 服务，验证私服可用性。

登陆私服

配置 hosts

客户端 `/etc/hosts` 中配置 harbor 服务的 ip。

```
1 anxin@node38:~$ vi /etc/hosts
2 10.8.30.184 harbor.anxinyun.cn # 10.8.30.184 为 harbor 服务主机 ip
```

docker login

```
1 anxin@node38:~$ docker login -u admin -p Harbor12345 harbor.anxinyun.cn
2 WARNING! Using --password via the CLI is insecure. Use --password-stdin.
3 WARNING! Your password will be stored unencrypted in
  /home/anxin/.docker/config.json.
4 Configure a credential helper to remove this warning. See
5 https://docs.docker.com/engine/reference/commandline/login/#credentials-store
6
7 Login Succeeded
```

验证拉取镜像

push 镜像到私服

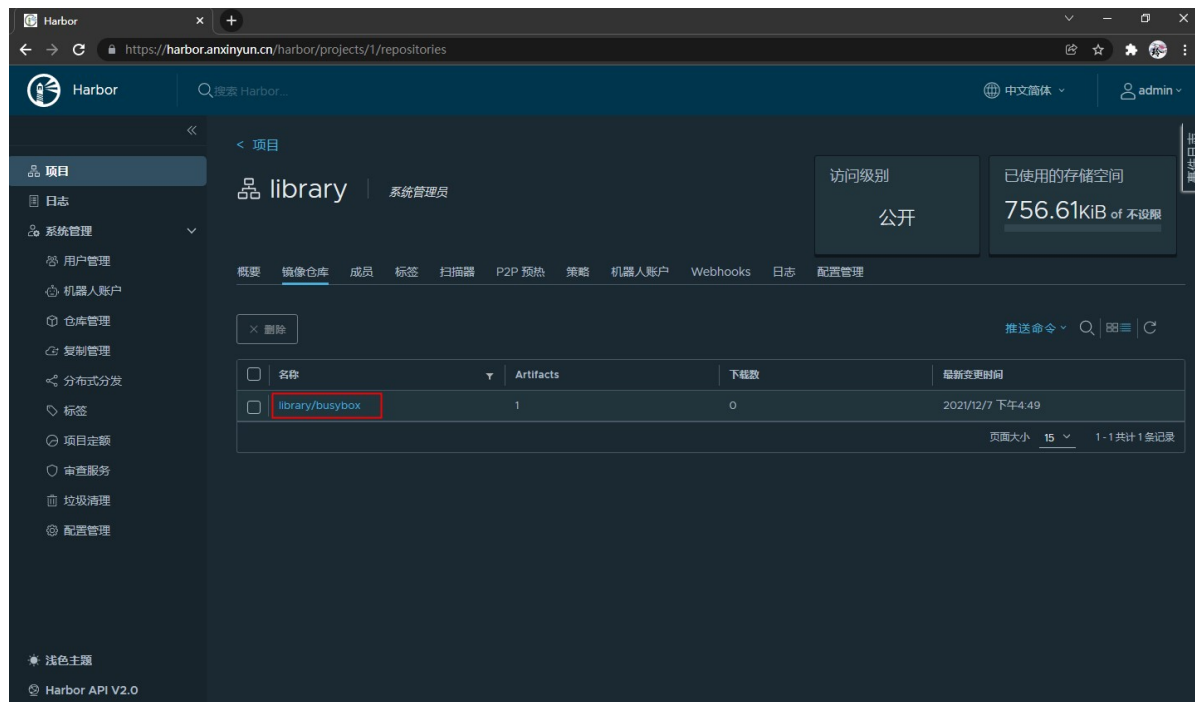
先本地 pull 一个镜像。

```
1 # 拉镜像
2 anxin@node38:~$ docker pull busybox
3 Using default tag: latest
4 latest: Pulling from library/busybox
5 3aab638df1a9: Pull complete
6 Digest:
  sha256:52817dece4cfe26f581c834d27a8e1bcc82194f914afe6d50afad5a101234ef1
7 Status: Downloaded newer image for busybox:latest
8 docker.io/library/busybox:latest
9
10 # 查看 image
11 anxin@node38:~$ docker images busybox
12 REPOSITORY TAG IMAGE ID CREATED SIZE
13 busybox latest d23834f29b38 7 days ago 1.24MB
```

更改一下 tag, 测试一下 push。

```
1 # 打 tag
2 anxin@node38:~$ docker tag busybox harbor.anxinyun.cn/library/busybox:1
3
4 # 推送 image
5 anxin@node38:~$ docker push harbor.anxinyun.cn/library/busybox:1
6 The push refers to repository [harbor.anxinyun.cn/library/busybox]
7 9f2549622fec: Pushed
8 1: digest:
  sha256:d5c6e74e3115b55dce759c1b3a52b1d2db60dc6929681de2f76cdc5d6f4d7412 size:
  527
```

可以在私服当中看到这个镜像：



从私服 pull 镜像

本地删除镜像，然后测试一下 pull。

```
1 # 查看 busybox 相关镜像
2 anxin@node38:~$ docker images
3 REPOSITORY          TAG      IMAGE ID      CREATED      SIZE
4 busybox              latest   d23834f29b38  7 days ago  1.24MB
5 harbor.anxinyun.cn/library/busybox 1        d23834f29b38  7 days ago  1.24MB
6
7 # 删除本地镜像
8 anxin@node38:~$ docker rmi -f d23834f29b38
9 Untagged: busybox:latest
10 Untagged:
11 busybox@sha256:52817dece4cfe26f581c834d27a8e1bcc82194f914afe6d50afad5a101234
12 ef1
13 Untagged: harbor.anxinyun.cn/library/busybox:1
14 Deleted:
15 sha256:d23834f29b3875b6759be00a48013ba523c6a89fcbaeaa63607512118a9c4c19
16 Deleted:
17 sha256:9f2549622fec760f90ed0383b7ca50e23c12254accf9cb2bc0db705454de852a
18
19 # 从本地私服 pull 镜像
20 anxin@node38:~$ docker pull harbor.anxinyun.cn/library/busybox:1
21 1: Pulling from library/busybox
22 3aab638df1a9: Pull complete
23 Digest:
24 sha256:d5c6e74e3115b55dce759c1b3a52b1d2db60dc6929681de2f76cdc5d6f4d7412
25 Status: Downloaded newer image for harbor.anxinyun.cn/library/busybox:1
26 harbor.anxinyun.cn/library/busybox:1
27
28 # 再次查看镜像
29 anxin@node38:~$ docker images
30 REPOSITORY          TAG      IMAGE ID      CREATED      SIZE
```

26 harbor.anxinyun.cn/library/busybox 1 d23834f29b38 7 days ago
1.24MB