# 登录（使用公网IP）

使用ssh工具。华为云提供了线上的ssh工具**https://shell.huaweicloud.com**。也可以使用自己的工具，比如MobaXterm。

```
1  ssh root@XX.XX.XX.xx
```

密码统一是：Ooad1234

hcss-ecs-7edf 服务器A：管理机

公网：120.46.65.216

私网：192.168.4.126

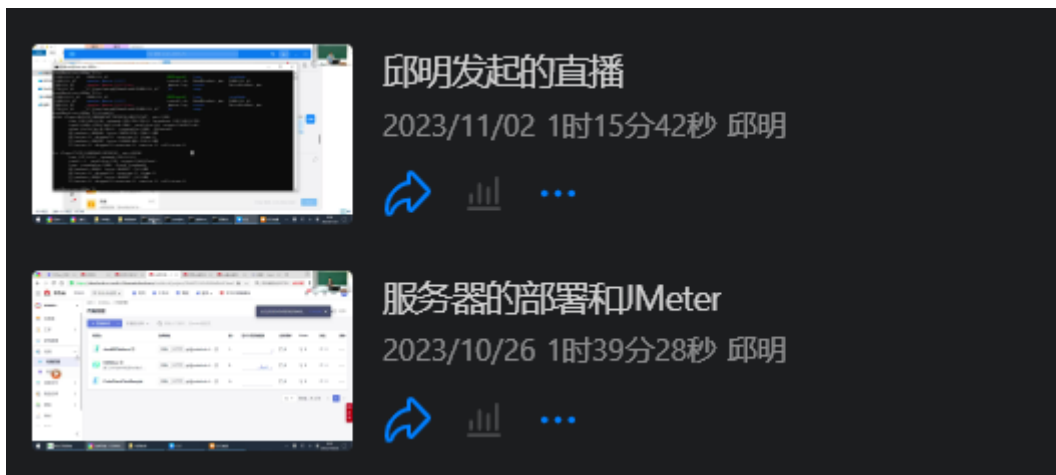hcss-ecs-aa2d 服务器B：有jmeter，用来执行测试的机子

公网：124.70.53.157

私网：192.168.15.147

hcss-ecs-dfb7 服务器C：有mysql，有数据库

公网：120.46.62.239

私网：192.168.13.241

# 参考资料：

邱明发起的直播

2023/11/02 1时15分42秒 邱明

服务器的部署和JMeter

2023/10/26 1时39分28秒 邱明

# （已完成）建一个集群

```
1  root@hcss-ecs-7edf:~# docker swarm init
2  Swarm initialized: current node (7bml07nbyerw332r1odxm9iy9) is now a
   manager.
3
4  To add a worker to this swarm, run the following command:
5
6      docker swarm join --token SWMTKN-1-
   2rvrv4r3cfz7lxagnti41au0jn8tfiiuehvoynzq9fh9f4ojc6-doa7ymqv1xlor7onnvzuelxd4
   192.168.4.126:2377
7
8  To add a manager to this swarm, run 'docker swarm join-token manager' and
   follow the instructions.
```

```
1  root@hcss-ecs-aa2d:~# docker swarm join --token SWMTKN-1-
   2rvrv4r3cfz7lxagnti41au0jn8tfiiuehvoynzq9fh9f4ojc6-doa7ymqv1xlor7onnvzuelxd4
   192.168.4.126:2377
2  This node joined a swarm as a worker.
```

```
1  root@hcss-ecs-dfb7:~# docker swarm join --token SWMTKN-1-
   2rvrv4r3cfz7lxagnti41au0jn8tfiiuehvoynzq9fh9f4ojc6-doa7ymqv1xlor7onnvzuelxd4
   192.168.4.126:2377
2  This node joined a swarm as a worker.
```

```
root@hcss-ecs-7edf:~# docker node ls
ID                            HOSTNAME        STATUS   AVAILABILITY   MANAGER STATUS   ENGINE VERSION
7bml07nbyerw332r1odxm9iy9 *   hcss-ecs-7edf   Ready    Active         Leader           20.10.24
hjfqtqv3w59pa8lqrsopqr5qk     hcss-ecs-aa2d   Ready    Active                          20.10.24
os0bqqrmo0jf3r4itkj5zp91y     hcss-ecs-dfb7   Ready    Active                          20.10.24
```

```
1  root@hcss-ecs-7edf:~# docker node ls
2  ID                              HOSTNAME          STATUS     AVAILABILITY
   MANAGER STATUS   ENGINE VERSION
3  7bml07nbyerw332r1odxm9iy9 *   hcss-ecs-7edf     Ready      Active
   Leader           20.10.24
4  hjfqtqv3w59pa8lqrsopqr5qk     hcss-ecs-aa2d     Ready      Active
                    20.10.24
5  os0bqqrmo0jf3r4itkj5zp91y     hcss-ecs-dfb7     Ready      Active
                    20.10.24
```

## （已完成）创建Overlay网络

```
1  root@hcss-ecs-7edf:~# docker network create -d overlay my-net
2  mmj8a0yxahgrdz7ies775lsjs
```

## （已完成）安装mySql镜像和服务

```
1  root@hcss-ecs-dfb7:~# docker images
2  REPOSITORY     TAG         IMAGE ID        CREATED        SIZE
3  mysql          latest      a3b6608898d6    2 weeks ago    596MB
```

```
1  root@hcss-ecs-7edf:~# docker node update --label-add server=mysql hcss-ecs-
   dfb7
2  hcss-ecs-dfb7
```

```
1  root@hcss-ecs-7edf:~# docker service create --name mysql --constraint
   node.label.service==mysql --network my-net -e MYSQL_ROOT_PASSWORD=123456 -d
   mysql:latest
2  rwvxorgsqc270mgk3vkgib51j
```

```
1  root@hcss-ecs-dfb7:~/JavaEEPlatform/7.SpringAOP/productdemoaop/mysql/sql#
   docker exec -it 42169eba296f bash bash-4.4# mkdir sql
2  bash-4.4# exit
3  exit
4  root@hcss-ecs-dfb7:~/JavaEEPlatform/7.SpringAOP/productdemoaop/mysql/sql#
   docker cp database.sql 42169eba296f:/sql
5  Successfully copied 2.05kB to 42169eba296f:/sql
6  root@hcss-ecs-dfb7:~/JavaEEPlatform/7.SpringAOP/productdemoaop/mysql/sql#
   docker cp product.sql 42169eba296f:sql
7  Successfully copied 1.05MB to 42169eba296f:sql
8  root@hcss-ecs-dfb7:~/JavaEEPlatform/7.SpringAOP/productdemoaop/mysql/sql#
   docker exec -it 42169eba296f bash bash-4.4# ls
```

```
 9  bin                              home    opt    sql   var
10  boot                             lib     proc   srv
11  dev                              lib64   root   sys
12  docker-entrypoint-initdb.d  media   run    tmp
13  etc                              mnt     sbin   usr
14  bash-4.4# ls sql
15  database.sql  product.sql
16  bash-4.4# mysql -u root -p
17  Enter password:
18  Welcome to the MySQL monitor.  Commands end with ; or \g.
19  Your MySQL connection id is 8
20  Server version: 8.2.0 MySQL Community Server - GPL
21
22  Copyright (c) 2000, 2023, Oracle and/or its affiliates.
23
24  Oracle is a registered trademark of Oracle Corporation and/or its
25  affiliates. Other names may be trademarks of their respective
26  owners.
27
28  Type 'help;' or '\h' for help. Type '\c' to clear the current input
    statement.
29
30  mysql> source /sql/database.sql
31  Query OK, 1 row affected (0.01 sec)
32
33  Query OK, 0 rows affected (0.01 sec)
34
35  Query OK, 0 rows affected (0.02 sec)
36
37  Query OK, 0 rows affected, 1 warning (0.00 sec)
38
39  Query OK, 0 rows affected (0.00 sec)
40
41  Query OK, 0 rows affected (0.02 sec)
42
43  Query OK, 0 rows affected (0.00 sec)
44
45  mysql> use oomall_demo
46  Database changed
47  mysql> source /sql/product.sql
48  Query OK, 0 rows affected (0.00 sec)
49
50  Query OK, 0 rows affected (0.00 sec)
51
52  Query OK, 0 rows affected (0.00 sec)
53
54  Query OK, 0 rows affected (0.00 sec)
55
56  Query OK, 0 rows affected (0.00 sec)
57
58  Query OK, 0 rows affected (0.00 sec)
59
```

```
 60  Query OK, 0 rows affected (0.00 sec)
 61
 62  Query OK, 0 rows affected (0.00 sec)
 63
 64  Query OK, 0 rows affected (0.00 sec)
 65
 66  Query OK, 0 rows affected (0.00 sec)
 67
 68  Query OK, 0 rows affected (0.00 sec)
 69
 70  Query OK, 0 rows affected (0.00 sec)
 71
 72  Query OK, 0 rows affected (0.00 sec)
 73
 74  Query OK, 0 rows affected (0.00 sec)
 75
 76  Query OK, 0 rows affected (0.00 sec)
 77
 78  Query OK, 0 rows affected (0.00 sec)
 79
 80  Query OK, 0 rows affected (0.00 sec)
 81
 82  Query OK, 0 rows affected (0.00 sec)
 83
 84  Query OK, 0 rows affected (0.00 sec)
 85
 86  Query OK, 0 rows affected (0.00 sec)
 87
 88  Query OK, 0 rows affected (0.00 sec)
 89
 90  Query OK, 0 rows affected (0.00 sec)
 91
 92  Query OK, 0 rows affected (0.00 sec)
 93
 94  Query OK, 0 rows affected (0.00 sec)
 95
 96  Query OK, 0 rows affected (0.03 sec)
 97
 98  Query OK, 0 rows affected (0.00 sec)
 99
100  Query OK, 0 rows affected (0.00 sec)
101
102  Query OK, 0 rows affected (0.00 sec)
103
104  Query OK, 0 rows affected (0.00 sec)
105
106  Query OK, 0 rows affected (0.01 sec)
107
108  Query OK, 0 rows affected (0.00 sec)
109
110  Query OK, 500 rows affected (0.01 sec)
111  Records: 500  Duplicates: 0  Warnings: 0
```

```
112
113 Query OK, 0 rows affected (0.00 sec)
114
115 Query OK, 0 rows affected (0.00 sec)
116
117 Query OK, 0 rows affected (0.00 sec)
118
119 Query OK, 0 rows affected (0.00 sec)
120
121 Query OK, 0 rows affected (0.00 sec)
122
123 Query OK, 0 rows affected (0.00 sec)
124
125 Query OK, 0 rows affected (0.00 sec)
126
127 Query OK, 0 rows affected (0.00 sec)
128
129 Query OK, 0 rows affected (0.02 sec)
130
131 Query OK, 0 rows affected (0.00 sec)
132
133 Query OK, 0 rows affected (0.00 sec)
134
135 Query OK, 0 rows affected (0.00 sec)
136
137 Query OK, 0 rows affected (0.00 sec)
138
139 Query OK, 0 rows affected (0.00 sec)
140
141 Query OK, 0 rows affected (0.01 sec)
142
143 Query OK, 3914 rows affected (0.15 sec)
144 Records: 3914  Duplicates: 0  Warnings: 0
145
146 Query OK, 0 rows affected (0.00 sec)
147
148 Query OK, 0 rows affected (0.00 sec)
149
150 Query OK, 0 rows affected (0.00 sec)
151
152 Query OK, 0 rows affected (0.00 sec)
153
154 Query OK, 0 rows affected (0.00 sec)
155
156 Query OK, 0 rows affected (0.01 sec)
157
158 Query OK, 0 rows affected (0.00 sec)
159
160 Query OK, 0 rows affected (0.00 sec)
161
162 Query OK, 0 rows affected (0.03 sec)
163
```

```
164  Query OK, 0 rows affected (0.00 sec)
165
166  Query OK, 0 rows affected (0.00 sec)
167
168  Query OK, 0 rows affected (0.00 sec)
169
170  Query OK, 0 rows affected (0.00 sec)
171
172  Query OK, 0 rows affected (0.00 sec)
173
174  Query OK, 0 rows affected (0.00 sec)
175
176  Query OK, 3912 rows affected (0.24 sec)
177  Records: 3912  Duplicates: 0  Warnings: 0
178
179  Query OK, 0 rows affected (0.00 sec)
180
181  Query OK, 0 rows affected (0.00 sec)
182
183  Query OK, 0 rows affected (0.00 sec)
184
185  Query OK, 0 rows affected (0.00 sec)
186
187  Query OK, 0 rows affected (0.00 sec)
188
189  Query OK, 0 rows affected (0.00 sec)
190
191  Query OK, 0 rows affected (0.00 sec)
192
193  Query OK, 0 rows affected (0.00 sec)
194
195  Query OK, 0 rows affected (0.00 sec)
196
197  Query OK, 0 rows affected (0.00 sec)
198
199  mysql> exit
200  Bye
201  bash-4.4# exit
202  exit
```

```
1  root@hcss-ecs-dfb7:~# git clone https://codehub.devcloud.cn-north-
   4.huaweicloud.com/OOMALL00024/JavaEEPlatform.git
```

```
1  mvn pre-integration-test -Dmaven.test.skip=true
```

# （已完成）把服务编译为镜像，添加到docker的服务

```
>_ root@hcss-ecs-7edf: ~/JavaEEPlatform/7.SpringAOP/productdemoaop   ×

[INFO]   ---> Running in bbdcd5114422
[INFO] Removing intermediate container bbdcd5114422
[INFO]   ---> bdb9d14db4e5
[INFO] Step 14/17 : ADD ${JAR_FILE} /app/app.jar
[INFO]
[INFO]   ---> 93f9098f377f
[INFO] Step 15/17 : EXPOSE 8080
[INFO]
[INFO]   ---> Running in 5e47ee5d2c86
[INFO] Removing intermediate container 5e47ee5d2c86
[INFO]   ---> 67ca0bcb8793
[INFO] Step 16/17 : ENTRYPOINT ["java", "-jar", "app.jar"]
[INFO]
[INFO]   ---> Running in 9e1d657f1f67
[INFO] Removing intermediate container 9e1d657f1f67
[INFO]   ---> 0add1fdc676f
[INFO] Step 17/17 : CMD ["--spring.datasource.url=jdbc:mysql://mysql:3306/oomall_demo?ser
er", "--spring.datasource.password=123456"]
[INFO]
[INFO]   ---> Running in aba1ef9072ee
[INFO] Removing intermediate container aba1ef9072ee
[INFO]   ---> 234be396adcf
[INFO] Successfully built 234be396adcf
[INFO] Successfully tagged xmu-javaee/productdemoaop:0.0.1-SNAPSHOT
[INFO]
[INFO] Detected build of image with id 234be396adcf
[INFO] Building jar: /root/JavaEEPlatform/7.SpringAOP/productdemoaop/target/productdemoa
[INFO] Successfully built xmu-javaee/productdemoaop:0.0.1-SNAPSHOT
[INFO] ------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------
[INFO] Total time:  27:02 min
[INFO] Finished at: 2023-11-13T21:25:22+08:00
[INFO] ------------------------------------------------------------
root@hcss-ecs-7edf:~/JavaEEPlatform/7.SpringAOP/productdemoaop# []
```

```
root@hcss-ecs-7edf:~/JavaEEPlatform/7.SpringAOP/productdemoaop# docker images
REPOSITORY                    TAG                IMAGE ID            CREATED              SIZE
xmu-javaee/productdemoaop     0.0.1-SNAPSHOT     234be396adcf        About a minute ago   984MB
ubuntu                        20.04              bf40b7bc7a11        5 weeks ago          72.8MB
```

```
root@hcss-ecs-7edf:~/JavaEEPlatform/7.SpringAOP/productdemoaop# docker service
 create --name product --network my-net -p8080:8080 -d 234be396adcf
image 234be396adcf:latest could not be accessed on a registry to record
 its digest. Each node will access 234be396adcf:latest independently,
 possibly leading to different nodes running different
 versions of the image.

 j8chg66atk9edqotuqc231jwz
```

```
root@hcss-ecs-7edf:~/JavaEEPlatform/7.SpringAOP/productdemoaop# docker service create --name product --network my-net -p8080:8080 -d xmu-javaee/productd
emoaop:0.0.1-SNAPSHOT
image xmu-javaee/productdemoaop:0.0.1-SNAPSHOT could not be accessed on a registry to record
 its digest. Each node will access xmu-javaee/productdemoaop:0.0.1-SNAPSHOT independently,
 possibly leading to different nodes running different
 versions of the image.

up0vq4xpcvizxm8rdk2f5ulhx
root@hcss-ecs-7edf:~/JavaEEPlatform/7.SpringAOP/productdemoaop# docker service ls
ID              NAME       MODE         REPLICAS    IMAGE                                    PORTS
xre63v2ebyrt    mysql      replicated   1/1         mysql:latest
up0vq4xpcviz    product    replicated   1/1         xmu-javaee/productdemoaop:0.0.1-SNAPSHOT  *:8080->8080/tcp
root@hcss-ecs-7edf:~/JavaEEPlatform/7.SpringAOP/productdemoaop# []
```

可以看到现在已经有一个product的服务了。

```
⊞ 121.36.59.153
root@hcss-ecs-aa2d:~# curl http://192.16
8.0.41:8080/products/1553
curl: (7) Failed to connect to 192.168.0
.41 port 8080 after 3052 ms: No route to
 host
root@hcss-ecs-aa2d:~# curl http://192.16
8.4.126:8080/products/1553
{"errmsg":"成功","data":{"id":1553,"name
":"欢乐家岭南杂果罐头","originalPrice":3
036,"weight":700,"price":1027,"barcode":
"6924254673381","unit":"瓶","originPlace
":"广东","quantity":32,"maxQuantity":50,
"otherProduct":[{"id":1580,"name":"博益
蚊子药","originalPrice":37987,"weight":7
50,"barcode":"6925083631962","unit":"桶"
,"originPlace":"广州","otherProduct":[]}
,{"id":2014,"name":"尖叫纤维运动饮料","o
riginalPrice":86733,"weight":550,"barcod
e":"6921168504022","unit":"瓶","originPl
ace":"浙江","otherProduct":[]},{"id":207
6,"name":"松花鸭皮蛋(六枚)","originalPri
ce":12628,"weight":300,"barcode":"694391
8900298","unit":"盒","originPlace":"尉氏
","otherProduct":[]},{"id":2213,"name":"
海天黄豆酱","originalPrice":15827,"weigh
```

使用另一台机子访问，可以得到数据。

# jmeter测试（使用私网IP）

看邱明视频学一下jmeter怎么用，设计一下请求量范围。应该要能体现出从刚开始的无压力到后期的阻塞。

get 加索引至少五次不同请求量

不加索引至少五次不同请求量

post 加索引至少五次不同请求量

不加索引至少五次请求量