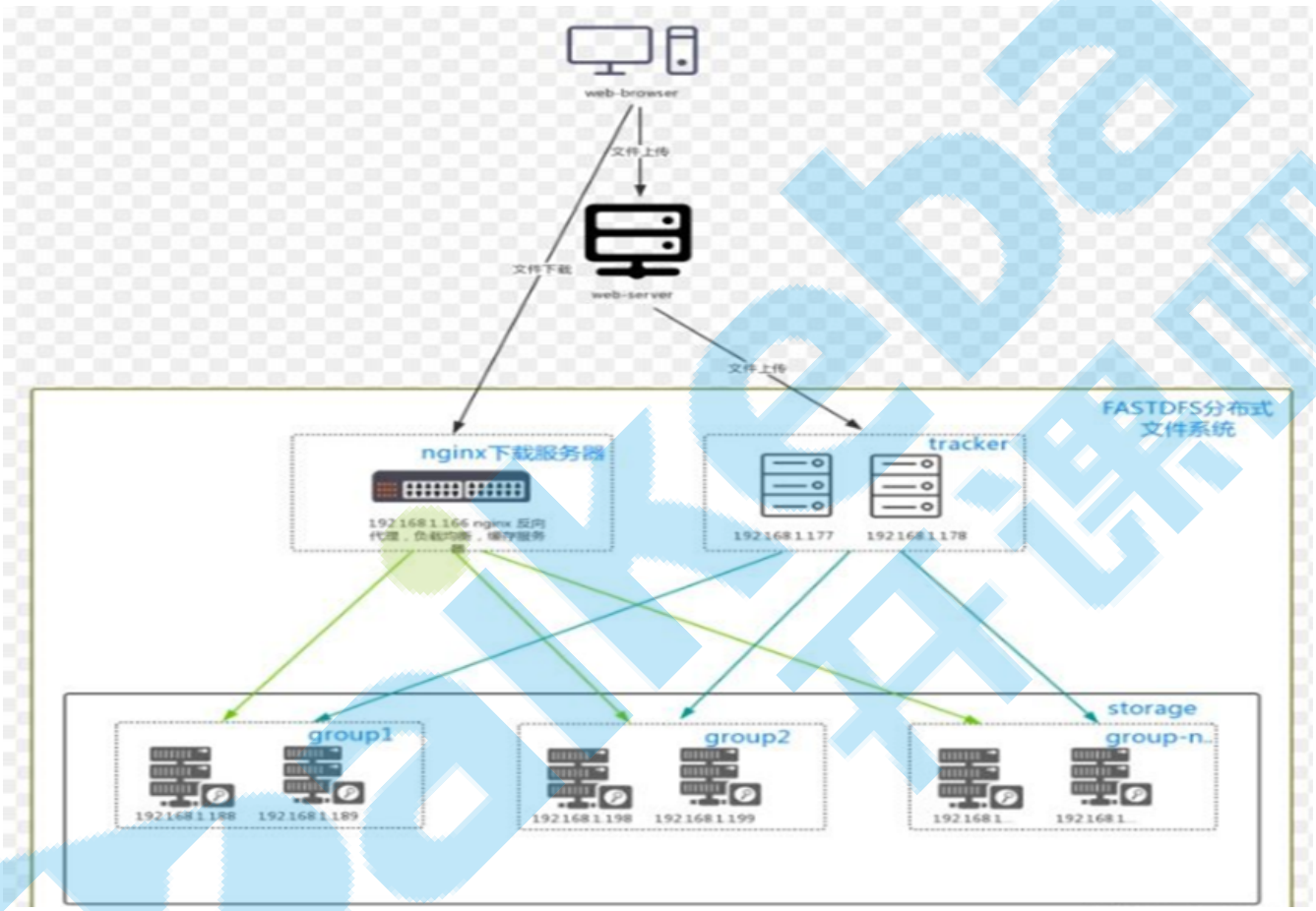
FastDFS集群（使用docker构建）

一、集群架构图示



2个tracker服务器，4台storage服务器，分为2组 tracker服务器：

172.17.0.3

172.17.0.4

storage存储服务器：

group1（第一组）：

172.17.0.5

172.17.0.6

group2（第二组）：

172.17.0.7

172.17.0.8

```
[root@jackhu ~]# docker ps
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS              PORTS                                    NAM
ES
c09d269b8008        kkb_fastdfs         "/bin/bash"         2 hours ago         Up 2 hours          8080/tcp, 0.0.0.0:86->80/tcp             fas
tdfs-storage-04
fb5e5d5395da        kkb_fastdfs         "/bin/bash"         2 hours ago         Up 2 hours          8080/tcp, 0.0.0.0:85->80/tcp             fas
tdfs-storage-03
9b7fe4d586e9        kkb_fastdfs         "/bin/bash"         2 hours ago         Up 2 hours          8080/tcp, 0.0.0.0:84->80/tcp             fas
tdfs-storage-02
de63d084484c        kkb_fastdfs         "/bin/bash"         2 hours ago         Up 2 hours          8080/tcp, 0.0.0.0:83->80/tcp             fas
tdfs-storage-01
354146825c6f        kkb_fastdfs         "/bin/bash"         2 hours ago         Up 2 hours          8080/tcp, 0.0.0.0:82->80/tcp             fas
tdfs-tracker-02
d5ceec8570ac        kkb_fastdfs         "/bin/bash"         2 hours ago         Up 2 hours          8080/tcp, 0.0.0.0:81->80/tcp             fas
tdfs-tracker-01
4a6a76794722        centos:7            "/bin/bash"         45 hours ago        Up 4 hours          0.0.0.0:80->80/tcp, 0.0.0.0:8080->8080/tcp   fas
tdfs
```

如图所示，共创建6台服务器。基于单机的FastDFS容器机器

二、Tracker配置（tracker.conf)

base_path:

```
network_timeout=60

# the base path to store data and log files
base_path=/kkb/fastdfs

# max concurrent connections this server supported
```

保持不变，基础路径

轮询策略：

```
# 1: specify group
# 2: load balance, select the max free space group to upload file
store_lookup=2

# which group to upload file
```

修改为0，轮询策略
默认：2为负载均衡策略

集群访问策略：

0：轮询策略（修改成2，方便进行测试，最终还是要改回到2的）

1：固定访问某一台机器

2：负载均衡，默认策略

```
# the method of selecting group to upload files
# 0: round robin
# 1: specify group
# 2: load balance, select the max free space group to upload file
store_lookup=0
```

三、Storage配置（修改IP）

修改nginx.conf: group1,group2配置一样

```
server {
    listen       80;
    server_name  localhost;

    #charset koi8-r;

    #access_log  logs/host.access.log  main;

    location ~/group[0-9]/ {
            ngx_fastdfs_module;
    }
```

监听的端口必须和
storage.conf配置文件中http.port 一致
http.port 默认端口为8888---> 修改为80即可

storage.conf修改：

组名：

group1：

172.17.0.5

172.17.0.6

```
# in this case, use_storage_id must set to true in tracker.conf,
# and storage_ids.conf must be configed correctly.
group_name=group1

# bind an address of this host
```

group2：

172.17.0.7

172.17.0.8

```
# in this case, use_storage_id must set to true in tracker.conf,
# and storage_ids.conf must be configed correctly.
group_name=group2

# bind an address of this host
```

连接tracker地址：group1,group2配置相同

```
# tracker_server can ocur more than once, and tracker_server format is
#   "host:port", host can be hostname or ip address
tracker_server=172.17.0.3:22122
tracker_server=172.17.0.4:22122
```

连接2台tracker服务

http端口：

```
# the port of the web server on this storage server
http.server_port=80
```

mod_fastdfs.conf修改：

group1：

```
# the group name of the local storage server
group_name=group1

# if the url / uri including the group name
# set to false when uri like /M00/00/00/xxx
```

group2:

```
# the group name of the local storage server
group_name=group2

# if the url / uri including the group name
# set to false when uri like /M00/00/00/xxx
```

必须设置好mod_fastdfs，否则nginx无法访问。

四、启动测试

```
e_time_base=02:00, trunk_create_file_interval=86400, trunk_create_file_space_threshold=20 GB, trunk_init_check_occu
inlog=0, trunk_compress_binlog_min_interval=0, store_slave_file_use_link=0
 INFO - file: storage_func.c, line: 257, tracker_client_ip: 172.17.0.5, my_server_id_str: 172.17.0.5, g_server_id_i

 INFO - file: tracker_client_thread.c, line: 310, successfully connect to tracker server 172.17.0.3:22122, as a tra

 INFO - file: tracker_client_thread.c, line: 1947, tracker server: #0. 172.17.0.3:22122, my_report_status: -1
 INFO - file: tracker_client_thread.c, line: 310, successfully connect to tracker server 172.17.0.4:22122, as a tra

 INFO - file: tracker_client_thread.c, line: 1947, tracker server: #0. 172.17.0.3:22122, my_report_status: -1
 INFO - file: tracker_client_thread.c, line: 1263, tracker server 172.17.0.3:22122, set tracker leader: 172.17.0.3:
gsl#
```

可以发现集群连接成功

五、集群同步

在任一一台存储服务器上测试上传：

```
# tracker_server can ocur more than once, and tracker_server format is
#   "host:port", host can be hostname or ip address
tracker_server=172.17.0.3:22122
tracker_server=172.17.0.4:22122

#standard log level as syslog, case insensitive, value list:
```

修改client.conf配置文件，连接tracker地址

```
[root@9b7fe4d586e9 fdfs]# /usr/bin/fdfs_test client.conf upload anti-steal.jpg
This is FastDFS client test program v5.11

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Public License V3, which may be found in the FastDFS source kit.
Please visit the FastDFS Home Page http://www.csource.org/
for more detail.

[2019-06-19 08:42:26] DEBUG - base_path=/kkb/fastdfs, connect_timeout=30, network_timeout=60, tracker_server_count=2, anti_steal_token=
_secret_key length=0, use_connection_pool=0, g_connection_pool_max_idle_time=3600s, use_storage_id=0, storage server id count: 0

tracker_query_storage_store_list_without_group:
        server 1. group_name=, ip_addr=172.17.0.5, port=23000
        server 2. group_name=, ip_addr=172.17.0.6, port=23000

group_name=group1, ip_addr=172.17.0.5, port=23000
storage_upload_by_filename
group_name=group1, remote_filename=M00/00/00/rBEABV0J9XKAObYIAABdrSqbHGQ407.jpg
source ip address: 172.17.0.5
file timestamp=2019-06-19 08:42:26
file size=23981
file crc32=714808420
example file url: http://172.17.0.5/group1/M00/00/00/rBEABV0J9XKAObYIAABdrSqbHGQ407.jpg
storage_upload_slave_by_filename
group_name=group1, remote_filename=M00/00/00/rBEABV0J9XKAObYIAABdrSqbHGQ407_big.jpg
source ip address: 172.17.0.5
```

测试上传图片

检测到2台服务器

发现图片被上传到5服务器，那么6服务器是否自动同步成功呢?

```
total 224
-rw-r--r--. 1 root root 23981 Jun 17 11:09 rBEAAl0HdQGAMOiLAABdrSqbHGQ549.jpg
-rw-r--r--. 1 root root    49 Jun 17 11:09 rBEAAl0HdQGAMOiLAABdrSqbHGQ549.jpg-m
-rw-r--r--. 1 root root 23981 Jun 17 11:09 rBEAAl0HdQGAMOiLAABdrSqbHGQ549_big.jpg
-rw-r--r--. 1 root root    49 Jun 17 11:09 rBEAAl0HdQGAMOiLAABdrSqbHGQ549_big.jpg-m
-rw-r--r--. 1 root root 23981 Jun 18 02:06 rBEAAl0IRzqANtZKAABdrSqbHGQ817.jpg
-rw-r--r--. 1 root root    49 Jun 18 02:06 rBEAAl0IRzqANtZKAABdrSqbHGQ817.jpg-m
-rw-r--r--. 1 root root 23981 Jun 18 02:06 rBEAAl0IRzqANtZKAABdrSqbHGQ817_big.jpg
-rw-r--r--. 1 root root    49 Jun 18 02:06 rBEAAl0IRzqANtZKAABdrSqbHGQ817_big.jpg-m
-rw-r--r--. 1 root root 23981 Jun 19 06:23 rBEABV0J1MuAfFmZAABdrSqbHGQ275.jpg
-rw-r--r--. 1 root root    49 Jun 19 06:23 rBEABV0J1MuAfFmZAABdrSqbHGQ275.jpg-m
-rw-r--r--. 1 root root 23981 Jun 19 06:23 rBEABV0J1MuAfFmZAABdrSqbHGQ275_big.jpg
-rw-r--r--. 1 root root    49 Jun 19 06:23 rBEABV0J1MuAfFmZAABdrSqbHGQ275_big.jpg-m
-rw-r--r--. 1 root root 23981 Jun 19 08:42 rBEABV0J9XKAObYIAABdrSqbHGQ407.jpg
-rw-r--r--. 1 root root    49 Jun 19 08:42 rBEABV0J9XKAObYIAABdrSqbHGQ407.jpg-m
-rw-r--r--. 1 root root 23981 Jun 19 08:42 rBEABV0J9XKAObYIAABdrSqbHGQ407_big.jpg
-rw-r--r--. 1 root root    49 Jun 19 08:42 rBEABV0J9XKAObYIAABdrSqbHGQ407_big.jpg-m
```

发现，图片在同一个group1下面，已经同步成功。

六、轮询策略

Gaikeba
开课吧