安装fastDFS需要分别安装fastdfs-nginx-module，fastdfs，nginx，libfastcommon

1，安装gcc(编译时需要)

```
yum install -y gcc gcc-c++
```

2，安装libevent(运行时需要)

```
yum -y install libevent
```

3，安装创建目录上传所有文件

```
mkdir -p /fileservice/fast
cd /fileservice/fast
```

```
[root@JD fast]# ll *.gz
-rw-r--r-- 1 root root  336939 Dec 17 23:45 fastdfs-5.11.tar.gz
-rw-r--r-- 1 root root   19825 Dec 17 23:45 fastdfs-nginx-module-1.20.tar.gz
-rw-r--r-- 1 root root  434734 Dec 17 23:45 libfastcommon-1.0.35.tar.gz
-rw-r--r-- 1 root root 1025746 Dec 17 23:45 nginx-1.15.2.tar.gz
[root@JD fast]#
```

4，安装libfastcommon

```
进入fast目录：cd /fileservice/fast
解压文件： tar -zxvf libfastcommon-1.0.35.tar.gz
进入libfast文件目录：cd libfastcommon-1.0.35
执行编译：./make.sh
```

```
安装：./make.sh install
```

```
[root@JD local]# cd libfastcommon/
[root@JD libfastcommon]# ll
total 32
drwxr-xr-x 2 root root   114 Dec  6 11:49 doc
-rw-r--r-- 1 root root 10179 Dec  6 11:49 HISTORY
-rw-r--r-- 1 root root   674 Dec  6 11:49 INSTALL
-rw-r--r-- 1 root root  1607 Dec  6 11:49 libfastcommon.spec
-rwxr-xr-x 1 root root  3253 Dec  6 11:49 make.sh
drwxr-xr-x 2 root root   191 Dec  6 11:49 php-fastcommon
-rw-r--r-- 1 root root  2776 Dec  6 11:49 README
drwxr-xr-x 3 root root  4096 Dec  6 11:49 src
```

安装完成之后

```
[root@JD libfastcommon-1.0.35]# ./make.sh install
mkdir -p /usr/lib64
mkdir -p /usr/lib
install -m 755 libfastcommon.so /usr/lib64
install -m 755 libfastcommon.so /usr/lib
mkdir -p /usr/include/fastcommon
install -m 644 common_define.h hash.h chain.h logger.h base64.h shared_func.h pthread_func.h ini_file_reader.h _os_defin
e.h sockopt.h sched_thread.h http_func.h md5.h local_ip_func.h avl_tree.h ioevent.h ioevent_loop.h fast_task_queue.h fas
t_timer.h process_ctrl.h fast_mblock.h connection_pool.h fast_mpool.h fast_allocator.h fast_buffer.h skiplist.h multi_sk
iplist.h flat_skiplist.h skiplist_common.h system_info.h fast_blocked_queue.h php7_ext_wrapper.h id_generator.h char_con
verter.h char_convert_loader.h /usr/include/fastcommon
[root@JD libfastcommon-1.0.35]#
```

5、安装fastdfs

5.1，下载

https://sourceforge.net/projects/fastdfs/files/

网官下载很慢，看我准备的安装文件

5.2，安装相关依赖库

```
yum install perl
yum install pcre
yum install pcre-devel
yum install zlib
yum install zlib-devel
yum install openssl
yum install openssl-devel
```

5.3，安装fastdfs

```
进入fast目录：cd /fileservice/fast
解压文件：tar -zxvf fastdfs-5.11.tar.gz
进入解压后的目录：cd fastdfs-5.11
执行编译：./make.sh
安装：./make.sh install
```

成功之后

```
[root@JD FastDFS]# ./make.sh install
mkdir -p /usr/bin
mkdir -p /etc/fdfs
cp -f fdfs_trackerd /usr/bin
if [ ! -f /etc/fdfs/tracker.conf.sample ]; then cp -f ../conf/tracker.conf /etc/fdfs/tracker.conf.sample; fi
mkdir -p /usr/bin
mkdir -p /etc/fdfs
cp -f fdfs_storaged  /usr/bin
if [ ! -f /etc/fdfs/storage.conf.sample ]; then cp -f ../conf/storage.conf /etc/fdfs/storage.conf.sample; fi
mkdir -p /usr/bin
mkdir -p /etc/fdfs
mkdir -p /usr/lib64
cp -f fdfs_monitor fdfs_test fdfs_test1 fdfs_crc32 fdfs_upload_file fdfs_download_file fdfs_delete_file fdfs_file_info f
dfs_appender_test fdfs_appender_test1 fdfs_append_file fdfs_upload_appender /usr/bin
if [ 0 -eq 1 ]; then cp -f libfdfsclient.a /usr/lib64; cp -f libfdfsclient.a /usr/lib;fi
if [ 1 -eq 1 ]; then cp -f libfdfsclient.so /usr/lib64; cp -f libfdfsclient.so /usr/lib;fi
mkdir -p /usr/include/fastdfs
cp -f ../common/fdfs_define.h ../common/fdfs_global.h ../common/mime_file_parser.h ../common/fdfs_http_shared.h ../track
er/tracker_types.h ../tracker/tracker_proto.h ../tracker/fdfs_shared_func.h ../storage/trunk_mgr/trunk_shared.h tracker_
client.h storage_client.h storage_client1.h client_func.h client_global.h fdfs_client.h /usr/include/fastdfs
if [ ! -f /etc/fdfs/client.conf.sample ]; then cp -f ../conf/client.conf /etc/fdfs/client.conf.sample; fi
```

5.4，查看tracker和storage的可执行脚本(后面有用)

```
ll /etc/init.d/ | grep fdfs
```

```
[root@JD fast]# ll /etc/init.d/ | grep fdfs
-rwxr-xr-x  1 root root   961 Dec 17 23:47 fdfs_storaged
-rwxr-xr-x  1 root root   963 Dec 17 23:47 fdfs_trackerd
[root@JD fast]#
```

5.5，准备配置文件 默认在/etc/fdfs/下面

```
cd /etc/fdfs/
```

```
[root@JD fdfs]# ll *sample
-rw-r--r-- 1 root root 1461 Dec 17 23:34 client.conf.sample
-rw-r--r-- 1 root root 7927 Dec 17 23:47 storage.conf.sample
-rw-r--r-- 1 root root  105 Dec 17 23:34 storage_ids.conf.sample
-rw-r--r-- 1 root root 7389 Dec 17 23:34 tracker.conf.sample
[root@JD fdfs]#
```

先把配置文件名中的sample去了。[可以复制一份]

```
cp client.conf.sample client.conf
cp storage.conf.sample storage.conf
cp storage_ids.conf.sample storage_ids.conf
cp tracker.conf.sample tracker.conf
```

```
-rw-r--r-- 1 root root 1469 Dec 18 00:16 client.conf
-rw-r--r-- 1 root root 7940 Dec 17 23:57 storage.conf
-rw-r--r-- 1 root root  105 Dec 17 23:48 storage_ids.conf
-rw-r--r-- 1 root root 7396 Dec 17 23:51 tracker.conf
[root@JD fdfs]#
```

然后修改tracker的存放数据和日志的目录。

```
mkdir -p /home/leige/fastdfs/tracker
```

6、配置和启动tracker

6.1，切换目录到： /etc/fdfs/ 目录下；

```
cd /etc/fdfs/
```

6.2，修改tracker.conf

```
vim tracker.conf
```

base_path=/home/yuqing/fastdfs 改为: base_path=/home/leige/fastdfs/tracker

```
# the base path to store data and log files
base_path=/home/leige/fastdfs/tracker
```

6.3，启动tracker，运行如下命令：

```
service fdfs_trackerd  start
```

注意：在/home/leige/fastdfs/tracker 目录下生成两个目录， 一个是数据，一个是日志；

```
[root@JD fdfs]# cd /home/leige/fastdfs/tracker
[root@JD tracker]# ll
total 0
drwxr-xr-x 2 root root 178 Dec 17 23:57 data
drwxr-xr-x 2 root root  26 Dec 17 23:53 logs
[root@JD tracker]#
```

7、配置和启动storage

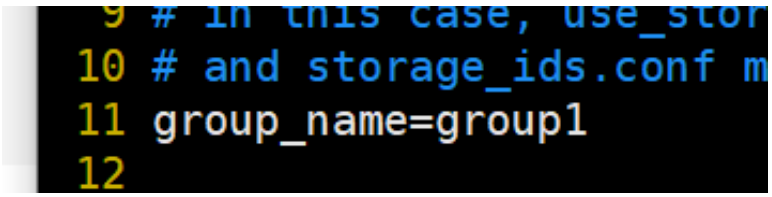
由于上面已经安装过FastDFS，这里只需要配置storage就好了；

7.1，切换目录到： /etc/fdfs/ 目录下；

```
cd /etc/fdfs/
```

7.2，修改storage.conf ; vim storage.conf

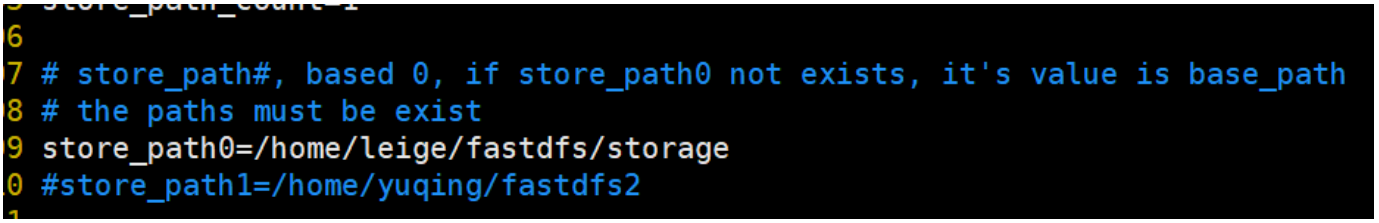
group_name=group1 #配置组名



base_path=/home/yuqing/fastdfs 改为: base_path=/home/leige/fastdfs/storage

#store存放文件的位置(store_path)

store_path0=/home/yuqing/fastdfs 改为： store_path0=/home/leige/fastdfs/storage



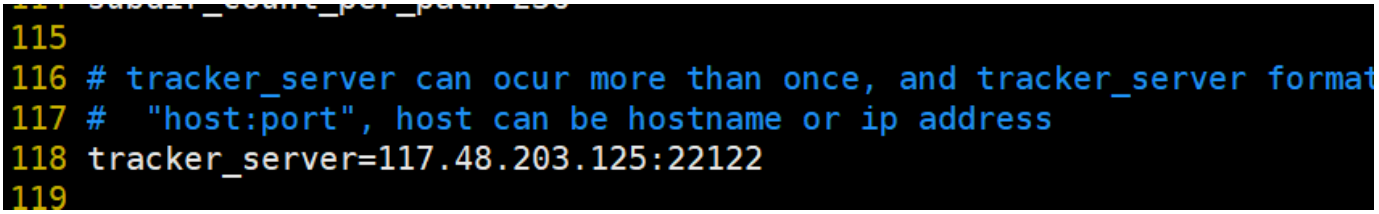
#如果有多个挂载磁盘则定义多个store_path，如下

#store_path1=.....

#store_path2=.....

#配置tracker服务器:IP

tracker_server=117.48.203.125:22122



#如果有多个则配置多个tracker

#tracker_server=117.48.203.126:22122

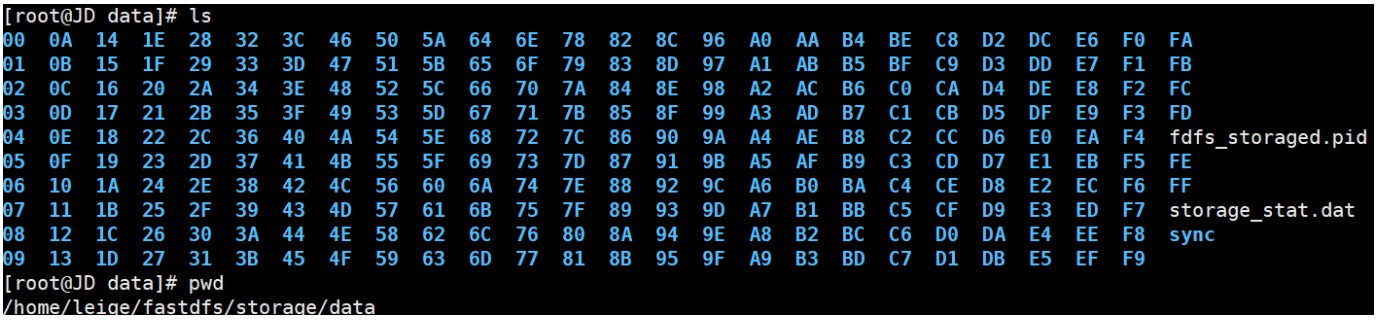
7.3，创建/home/leige/fastdfs/storage 目录

```
mkdir -p /home/leige/fastdfs/storage
```

7.4，启动storage， 运行命令如下：

```
service fdfs_storaged start
```

启动完成后进入 /home/leige/fastdfs/storage/data 目录下，显示目录如下：



7、使用FastDFS自带工具测试

7.1，切换目录到 /etc/fdfs/ 目录下；

```
cd /etc/fdfs/cd
```

7.2，修改client.conf ; vim client.conf，修改基本路径和tracker_server如下：

```
# the base path to store log files
base_path=/home/leige/fastdfs/storage

# tracker_server can ocur more than once, and tracker_server format is
#  "host:port", host can be hostname or ip address
tracker_server=117.48.203.125:22122

```

注意：若tracker有多个，可以配置多个，如下:

#tracker_server=.....

#tracker_server=.....

7.3，拷贝一张图片baobao.png到Centos服务器上的 /root/目录下；

```
total 185292
-rw-r--r-- 1 root root   3521259 Dec 17 00:16 baobao.png
-rw-r--r-- 1 root root    344620 Feb  4  2016 FastDFS_v5.08.tar.gz
-rw-r--r-- 1 root root 185646832 Nov 21 00:05 jdk-8u181-linux-x64.tar.gz
-rw-r--r-- 1 root root    218881 Dec 16 23:30 master.zip
[root@JD download]#
```

7.4,进行测试

运行如下（运行测试程序，读取/etc/fdfs/client.conf 文件，上传/root/目录下的baobao.png文件）

```
/usr/bin/fdfs_upload_file /etc/fdfs/client.conf /root/baobao.png
```

结果如下，表示搭建成功；

```
[root@JD fdfs]# /usr/bin/fdfs_upload_file /etc/fdfs/client.conf /root/baobao.png

group1/M00/00/00/wKgAA135BdKAEOs1ADW668UZmDM218.png
[root@JD fdfs]#
[root@JD fdfs]#
```

以上图中的文件地址：
http://117.48.203.125/group1/M00/00/00/wKgAA135BdKAEOs1ADW668UZmDM218.png
对应storage服务器上
的/home/leige/fastdfs/storage/data/00/00/wKgAA135BdKAEOs1ADW668UZmDM218.png文件；

由于现在还没有和nginx整合无法使用http下载。

8、FastDFS 和nginx整合

8.1 在tracker上安装 nginx

在每个tracker上安装nginx，的主要目的是做负载均衡及实现高可用。如果只有一台tracker可以不配置nginx。

一个tracker对应多个storage，通过nginx对storage负载均衡；

8.2 在storage 上安装nginx

（1）上传fastdfs-nginx-module-1.20.tar.gz 到Centos服务器上；

```
-rw-r--r--  1 root root   19825 Dec 17 23:45 fastdfs-nginx-module-1.20.tar.gz
```

（2）解压fastdfs-nginx-module-1.20.tar.gz 并移动到 /usr/local目录下；

```
tar -zxvf  fastdfs-nginx-module-1.20.tar.gz   解压
```

（3）切换目录到： fastdfs-nginx-module-1.20/src 目录下

```
cd fastdfs-nginx-module-1.20/src
```

（4）修改config文件，将文件中的所有 /usr/local/ 路径改为 /usr/

修改之后

```
ngx_addon_name=ngx_http_fastdfs_module

if test -n "${ngx_module_link}"; then
    ngx_module_type=HTTP
    ngx_module_name=$ngx_addon_name
    ngx_module_incs="/usr/include/fastdfs /usr/include/fastcommon/"
    ngx_module_libs="-lfastcommon -lfdfsclient"
    ngx_module_srcs="$ngx_addon_dir/ngx_http_fastdfs_module.c"
    ngx_module_deps=
    CFLAGS="$CFLAGS -D_FILE_OFFSET_BITS=64 -DFDFS_OUTPUT_CHUNK_SIZE='256*1024' -DFDFS_MOD_CONF_FILENAME='\"/etc/fdfs/m
_fastdfs.conf\"'"
    . auto/module
else
    HTTP_MODULES="$HTTP_MODULES ngx_http_fastdfs_module"
    NGX_ADDON_SRCS="$NGX_ADDON_SRCS $ngx_addon_dir/ngx_http_fastdfs_module.c"
    CORE_INCS="$CORE_INCS /usr/include/fastdfs /usr/include/fastcommon/"
    CORE_LIBS="$CORE_LIBS -lfastcommon -lfdfsclient"
    CFLAGS="$CFLAGS -D_FILE_OFFSET_BITS=64 -DFDFS_OUTPUT_CHUNK_SIZE='256*1024' -DFDFS_MOD_CONF_FILENAME='\"/etc/fdfs/m
_fastdfs.conf\"'"
fi
~
```

（5）将fastdfs-nginx-module/src下的mod_fastdfs.conf拷贝至/etc/fdfs/下

```
cp mod_fastdfs.conf /etc/fdfs/
```

（6）并修改 /etc/fdfs/mod_fastdfs.conf 的内容；

```
vi /etc/fdfs/mod_fastdfs.conf
```

tracker_server=117.48.203.125:22122

```
36
37 # FastDFS tracker_server can ocur more than once, and t
38 #  "host:port", host can be hostname or ip address
39 # valid only when load_fdfs_parameters_from_tracker is
40 tracker_server=117.48.203.125:22122
41
```

#tracker_server=192.168.172.20:22122 #(多个tracker配置多行)

url_have_group_name=true #url中包含group名称

```
49 # if the url / uri including the group
50 # set to false when uri like /M00/00/00
51 # set to true when uri like ${group_nam
52 # default value is false
53 url_have_group_name = true
54
```

store_path0=/home/fdfs_storage #指定文件存储路径（上面配置的store路径)

```
58
59 # store_path#, based 0, if store_path0 not exists, it's value is base_path
60 # the paths must be exist
61 # must same as storage.conf
62 store_path0=/home/leige/fastdfs/storage
```

8.3 进入之前解压的fastdfs目录下，把http.conf、mime.conf移动至/etc/fdfs

```
total 84
-rw-rw-r-- 1 root root 23981 Jun  3  2017 anti-steal.jpg
-rw-rw-r-- 1 root root  1461 Jun  3  2017 client.conf
-rw-rw-r-- 1 root root   955 Jun  3  2017 http.conf
-rw-rw-r-- 1 root root 31172 Jun  3  2017 mime.types
-rw-rw-r-- 1 root root  7927 Jun  3  2017 storage.conf
-rw-rw-r-- 1 root root   105 Jun  3  2017 storage_ids.conf
-rw-rw-r-- 1 root root  7389 Jun  3  2017 tracker.conf
[root@JD conf]# pwd
/fileservice/fast/fastdfs-5.11/conf
[root@JD conf]#
```

```
1 cp http.conf mime.types /etc/fdfs/
```

9， Nginx的安装

9.1，上传 nginx-1.15.2.tar.gz 到Centos服务器上；

9.2，解压 nginx-1.15.2.tar.gz

```
cd /fileservice/fast/
tar -zxvf nginx-1.15.2.tar.gz
```

9.3，进入nginx解压的目录下

```
cd nginx-1.15.2/
```

9.4，加入模块命令配置

```
./configure --prefix=/opt/nginx --sbin-path=/usr/bin/nginx --add-module=/filese
```

9.5，编译并安装

```
make && make install
```

9.6，修改nginx配置

```
cd /opt/nginx/conf
vim nginx.conf
```

```
server {
    listen       80;
    server_name  img.leige.com;

    #charset koi8-r;

    #access_log  logs/host.access.log  main;

    location ~/group([0-9]) {
        # root   html;
         #index  index.html index.htm;
         ngx_fastdfs_module;
    }
```

9.6，启动nginx

```
cd /usr/bin/
./nginx   #启动
```

10、在浏览器中访问上传到fastDFS的图片

因为Centos系统有防火墙，需要先关闭掉，才可以在浏览器中访问；

（1）CentOS 7.0默认使用的是firewall作为防火墙；若没有启用iptables 作为防火墙，则使用以下方式关闭防火墙：

systemctl stop firewalld.service #停止firewall

systemctl disable firewalld.service #禁止firewall开机启动

firewall-cmd --state #查看默认防火墙状态（关闭后显示notrunning，开启后显示running）

（2）若已经启用iptables作为防火墙，则使用以下方式关闭：

service iptables stop #临时关闭防火墙

chkconfig iptables off #永久关闭防火墙

（3）在谷歌浏览器中访问刚才上传的图片：

刚才上传的图片地址为：http://117.48.203.125/group1/M00/00/00/wKgAA135BdKAEOs1ADW668UZmDM218.png

宝宝镇楼，可爱不