

第一步：下载elastic search 5.3.0

```
wget https://artifacts.elastic.co/downloads/elasticsearch/elasticsearch-5.3.0.tar.gz
mv elasticsearch-5.3.0.tar.gz /opt
cd /opt
tar -xzf elasticsearch-5.3.0.tar.gz
cd elasticsearch-5.3.0/
```

第二步：启动ES

```
cd /bin
./elasticsearch
./elasticsearch -d      #后台运行es
tail -f logs/elasticsearch.log    #查看日志
```

遇到的问题：

问题一：错误1： `error='Cannot allocate memory' (errno=12)`

```
[root@jdu4e00u53f7 bin]# ./elasticsearch
Java HotSpot(TM) 64-Bit Server VM warning: INFO: os::commit_memory(0x0000000085330000, 2060255232, 0) failed; error='Cannot allocate memory' (errno=12)
#
# There is insufficient memory for the Java Runtime Environment to continue.
# Native memory allocation (mmap) failed to map 2060255232 bytes for committing reserved memory.
# An error report file with more information is saved as:
# /opt/elasticsearch-5.3.0/bin/hs_err_pid14108.log
[root@jdu4e00u53f7 bin]#
```

solutions:

由于elasticsearch5.0默认分配jvm空间大小为2g，需要改小一点。

```
vim config/jvm.options
-Xms2g → -Xms512m
-Xmx2g → -Xmx512m
```

问题二：错误2： can not run elasticsearch as root

```
[root@jdu4e00u53f7 bin]# ./elasticsearch
[2018-01-08T16:39:39,449][WARN ][o.e.b.ElasticsearchUncaughtExceptionHandler] [] uncaught exception in thread [main]
org.elasticsearch.bootstrap.StartupException: java.lang.RuntimeException: can not run elasticsearch as root
    at org.elasticsearch.bootstrap.Elasticsearch.init(Elasticsearch.java:127) ~[elasticsearch-5.3.0.jar:5.3.0]
    at org.elasticsearch.bootstrap.Elasticsearch.execute(Elasticsearch.java:114) ~[elasticsearch-5.3.0.jar:5.3.0]
    at org.elasticsearch.cli.EnvironmentAwareCommand.execute(EnvironmentAwareCommand.java:58) ~[elasticsearch-5.3.0.jar:5.3.0]
    at org.elasticsearch.cli.Command.mainWithoutErrorHandling(Command.java:122) ~[elasticsearch-5.3.0.jar:5.3.0]
    at org.elasticsearch.cli.Command.main(Command.java:88) ~[elasticsearch-5.3.0.jar:5.3.0]
    at org.elasticsearch.bootstrap.Elasticsearch.main(Elasticsearch.java:91) ~[elasticsearch-5.3.0.jar:5.3.0]
    at org.elasticsearch.bootstrap.Elasticsearch.main(Elasticsearch.java:84) ~[elasticsearch-5.3.0.jar:5.3.0]
Caused by: java.lang.RuntimeException: can not run elasticsearch as root
    at org.elasticsearch.bootstrap.Bootstrap.initializeNatives(Bootstrap.java:106) ~[elasticsearch-5.3.0.jar:5.3.0]
    at org.elasticsearch.bootstrap.Bootstrap.setup(Bootstrap.java:204) ~[elasticsearch-5.3.0.jar:5.3.0]
    at org.elasticsearch.bootstrap.Bootstrap.init(Bootstrap.java:360) ~[elasticsearch-5.3.0.jar:5.3.0]
    at org.elasticsearch.bootstrap.Elasticsearch.init(Elasticsearch.java:123) ~[elasticsearch-5.3.0.jar:5.3.0]
    ... 6 more
```

solutions:

在 Linux 环境中，elasticsearch 不允许以 root 权限来运行！所以需要创建一个非root用户，以非root用户来起es。

groupadd elk # 创建用户组elk

useradd elk -g elk -p 111111 # 创建新用户elk, -g elk 设置其用户组为 elk, -p 111 设置其密码6个1

chown -R elk:elk /opt # 更改 /opt 文件夹及内部文件的所属用户及组为 elk:elk

su elk # 切换到非root用户elk下来

问题三：错误3： max virtual memory areas vm.max_map_count [65530] is too low, increase to at least [262144]

```
[elk@jdu4e00u53f7 bin]$ ./elasticsearch
[2018-01-08T17:00:38,306][INFO ][o.e.n.Node               ] [] initializing ...
[2018-01-08T17:00:38,419][INFO ][o.e.e.NodeEnvironment ] [o0UW3Zv] using [1] data paths, mounts [[] (rootfs),
ace [29.9gb], spins? [unknown], types [rootfs]
[2018-01-08T17:00:38,420][INFO ][o.e.e.NodeEnvironment ] [o0UW3Zv] heap size [503.6mb], compressed ordinar
[2018-01-08T17:00:38,428][INFO ][o.e.n.Node               ] node name [o0UW3Zv] derived from node ID [o0UW3Zv]
de
[2018-01-08T17:00:38,429][INFO ][o.e.n.Node               ] version[5.3.0], pid[15375], build[3adb13b/2017-03
.el7.x86_64/amd64], JVM[Oracle Corporation/Java HotSpot(TM) 64-Bit Server VM/1.8.0_141/25.141-b15]
[2018-01-08T17:00:40,098][INFO ][o.e.p.PluginsService       ] [o0UW3Zv] loaded module [aggs-matrix-stats]
[2018-01-08T17:00:40,099][INFO ][o.e.p.PluginsService       ] [o0UW3Zv] loaded module [ingest-common]
[2018-01-08T17:00:40,099][INFO ][o.e.p.PluginsService       ] [o0UW3Zv] loaded module [lang-expression]
[2018-01-08T17:00:40,099][INFO ][o.e.p.PluginsService       ] [o0UW3Zv] loaded module [lang-groovy]
[2018-01-08T17:00:40,099][INFO ][o.e.p.PluginsService       ] [o0UW3Zv] loaded module [lang-mustache]
[2018-01-08T17:00:40,099][INFO ][o.e.p.PluginsService       ] [o0UW3Zv] loaded module [lang-painless]
[2018-01-08T17:00:40,099][INFO ][o.e.p.PluginsService       ] [o0UW3Zv] loaded module [percolator]
[2018-01-08T17:00:40,099][INFO ][o.e.p.PluginsService       ] [o0UW3Zv] loaded module [reindex]
[2018-01-08T17:00:40,099][INFO ][o.e.p.PluginsService       ] [o0UW3Zv] loaded module [transport-netty3]
[2018-01-08T17:00:40,099][INFO ][o.e.p.PluginsService       ] [o0UW3Zv] loaded module [transport-netty4]
[2018-01-08T17:00:40,100][INFO ][o.e.p.PluginsService       ] [o0UW3Zv] no plugins loaded
[2018-01-08T17:00:43,997][INFO ][o.e.n.Node               ] initialized
[2018-01-08T17:00:43,998][INFO ][o.e.n.Node               ] [o0UW3Zv] starting ...
[2018-01-08T17:00:44,243][WARN ][i.n.u.i.MacAddressUtil    ] Failed to find a usable hardware address from the
:d7:c6:00:a4:a7:6d:9c
[2018-01-08T17:00:44,365][INFO ][o.e.t.TransportService   ] [o0UW3Zv] publish_address {192.168.0.3:9300}, bo
[2018-01-08T17:00:44,381][INFO ][o.e.b.BootstrapChecks    ] [o0UW3Zv] bound or publishing to a non-loopback c
ap checks
ERROR: bootstrap checks failed
max virtual memory areas vm.max_map_count [65530] is too low, increase to at least [262144]
[2018-01-08T17:00:44,458][INFO ][o.e.n.Node               ] [o0UW3Zv] stopping ...
[2018-01-08T17:00:44,515][INFO ][o.e.n.Node               ] [o0UW3Zv] stopped
[2018-01-08T17:00:44,515][INFO ][o.e.n.Node               ] [o0UW3Zv] closing ...
[2018-01-08T17:00:44,529][INFO ][o.e.n.Node               ] [o0UW3Zv] closed
[elk@jdu4e00u53f7 bin]$
```

solutions:

先要切换到root用户;

然后可以执行以下命令, 设置 vm.max_map_count , 但是重启后又会恢复为原值。

sysctl -w vm.max_map_count=262144

持久性的做法是在 /etc/sysctl.conf 文件中修改 vm.max_map_count 参数:


echo "vm.max_map_count=262144" > /etc/sysctl.conf

sysctl -p

问题四：外网访问

修改/conf/elasticsearch.yml

```
# Set the bind address to a specific IP (IPv4 or IPv6):
#
# network.host: 192.168.0.1
network.host: 192.168.66.100
#
# Set a custom port for HTTP:
# http.port: 9200
```



绑定本机ip

<http://blog.csdn.net/yellowcong>

插件: elasticsearch-head

1、下载head插件源码

<https://github.com/mobz/elasticsearch-head>

2、下载nodejs

nodejs官网下载地址<https://nodejs.org/dist/>

wget <https://nodejs.org/dist/v6.9.2/node-v6.9.2-linux-x64.tar.xz>

3、配置node环境变量

```
xz -d node-v6.9.2-linux-x64.tar.xz
tar -xvf node-v6.9.2-linux-x64.tar
mv node-v6.9.2-linux-x64 /data/PRG/node
```

vim /etc/profile

```
export NODE_HOME=/data/PRG/node
export PATH=$PATH:$NODE_HOME/bin
source /etc/profile
```

```
# node -v
v6.9.2
# npm -v
3.10.9
```

grunt安装

```
npm install -g grunt-cli
```

进入 elasticsearch-head-master目录

如果你的网速较快，可以使用这个命令，推荐使用后面一个命令

```
npm install
```

使用国内镜像

```
npm install -g cnpm --registry=https://registry.npm.taobao.org
```

修改Elasticsearch配置文件

这个是 另一个 程序，如果只是安装看看，这步可以忽略

编辑 vim elasticsearch-5.3.0/config/elasticsearch.yml

1.加入以下内容：

1. http.cors.enabled: true
2. http.cors.allow-origin: "*"

修改 Gruntfile.js

修改 elasticsearch-head-master/Gruntfile.js，在connect属性中，增加hostname:
'0.0.0.0'

```
cd elasticsearch-head-master/  
vim Gruntfile.js
```

修改为

```
connect: {  
  server: {  
    options: {  
      hostname: '0.0.0.0',  
      port: 9100,  
      base: '.',  
      keepalive: true  
    }  
  }  
}
```

启动 elasticsearch-head

进入elasticsearch-head-master目录

```
cd elasticsearch-head-master
```

#执行

```
grunt server
```

输出

```
>> Local Npm module "grunt-contrib-jasmine" not found. Is it installed?  
Running "connect:server" (connect) task  
Waiting forever...  
Started connect web server on http://localhost:9100
```

浏览器访问

http://域名:9100

elasticsearch-head 设置后台启动和关闭

启动

进入elasticsearch-head-master目录

vim elasticsearch-head_start.shcd 、

加入

```
#!/bin/bash
```

```
echo "START elasticsearch-head "
```

```
nohup grunt server &exit
```

关闭

```
#!/bin/bash
```

```
echo "STOP elasticsearch-head "
```

```
ps -ef |grep head|awk '{print $2}'|xargs kill -9
```

其他

[npm、grunt、bower实现前端项目自动化](http://blog.csdn.net/wangnantjobj/article/details/53739409)

<http://blog.csdn.net/wangnantjobj/article/details/53739409>

[案例部分 \(Elasticsearch 5.1.1 head插件安装\) 参考](http://blog.csdn.net/napoay/article/details/53896348)

<http://blog.csdn.net/napoay/article/details/53896348>

Q&A

grunt-cli: The grunt command line interface (v1.2.0)

Fatal error: Unable to find local grunt.

If you're seeing this message, grunt hasn't been installed locally to your project. For more information about installing and configuring grunt, please see the Getting Started guide:

<http://gruntjs.com/getting-started>

解决方法：安装 grunt

```
npm install -g grunt
```

Failed at the phantomjs-prebuilt@2.1.15 install script 'node install.js' .

npm ERR! phantomjs-prebuilt@2.1.15 install: `node install.js`

npm ERR! Exit status 1

npm ERR!

npm ERR! Failed at the phantomjs-prebuilt@2.1.15 install script 'node install.js'.

npm ERR! Make sure you have the latest version of node.js and npm installed.

npm ERR! If you do, this is most likely a problem with the phantomjs-prebuilt package,

解决方法

```
sudo npm install phantomjs-prebuilt@2.1.15 --ignore-scripts
```