

《数据中心技术》课程 实验报告

姓名 董梁

学号 M202173870

学院 计算机科学与技术

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实验一：系统搭建

服务端：

从官网下载 windows 版本的 minio。将其与 run-minio.cmd 放置在同一个文件夹。运行 run-minio.Cmd 脚本

```
命令提示符 - run-minio.cmd
2022/01/07 15:03 <DIR> .
2022/01/07 15:03 <DIR> ..
2022/01/07 14:43 <DIR> .minio.sys
2022/01/07 15:00      22,599,400 mc.exe
2022/01/07 14:39     121,801,960 minio.exe
2022/01/07 15:03 <DIR> obs-tutorial
2022/01/07 13:49      650 run-minio.cmd
2022/01/07 13:49      646 run-minio.sh
2022/01/07 13:49      742 run-s3bench.cmd
2022/01/07 13:49      1,297 run-s3bench.sh
6 个文件 144,404,695 字节
4 个目录 174,095,228,928 可用字节

E:\lab>run-minio.cmd
API: http://10.21.225.7:9000 http://192.168.56.1:9000 http://127.0.0.1:9000
RootUser: hust
RootPass: hust_obs

Console: http://10.21.225.7:9090 http://192.168.56.1:9090 http://127.0.0.1:9090
RootUser: hust
RootPass: hust_obs

Command-line: https://docs.min.io/docs/minio-client-quickstart-guide
$ mc.exe alias set myminio http://10.21.225.7:9000 hust hust_obs

Documentation: https://docs.min.io
```

客户端：

下载 mc.exe，打开一个 cmd 窗口，输入 mc.exe alias set myminio http://10.21.225.7:9000 hust hust_obs，也即启动服务器端后的页面中所给出的命令。执行成功后截图如下

```
命令提示符
E:\lab>dir
驱动器 E 中的卷是 新加卷
卷的序列号是 6CF0-BF2E

E:\lab 的目录
2022/01/07 15:07 <DIR> .
2022/01/07 15:07 <DIR> ..
2022/01/07 14:43 <DIR> .minio.sys
2022/01/07 15:07 <DIR> certs
2022/01/07 15:00      22,599,400 mc.exe
2022/01/07 14:39     121,801,960 minio.exe
2022/01/07 15:03 <DIR> obs-tutorial
2022/01/07 15:07 <DIR> root
2022/01/07 13:49      650 run-minio.cmd
2022/01/07 13:49      646 run-minio.sh
2022/01/07 13:49      742 run-s3bench.cmd
2022/01/07 13:49      1,297 run-s3bench.sh
6 个文件 144,404,695 字节
6 个目录 174,094,860,288 可用字节

E:\lab> mc.exe alias set myminio http://10.21.225.7:9000 hust hust_obs
mc.exe: Configuration written to 'C:\Users\lenovo\mc\config.json'. Please update your access credentials.
mc.exe: Successfully created 'C:\Users\lenovo\mc\share'.
mc.exe: Initialized share uploads 'C:\Users\lenovo\mc\share\uploads.json' file.
mc.exe: Initialized share downloads 'C:\Users\lenovo\mc\share\downloads.json' file.
Added myminio successfully.

E:\lab>
```

实验二：性能观测

选择 s3 bench 评测工具，在命令行中运行 run-s3bench.cmd

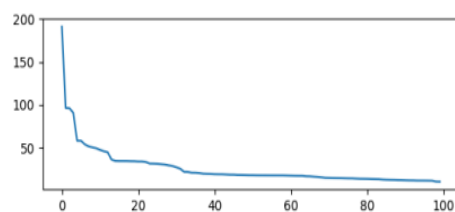
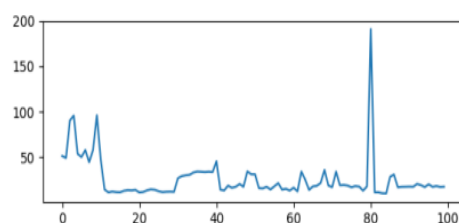
```
Results Summary for Write Operation(s)
Total Transferred: 1.000 MB
Total Throughput: 0.06 MB/s
Total Duration: 16.090 s
Number of Errors: 0
-----
Write times Max: 0.641 s
Write times 99th %ile: 0.590 s
Write times 90th %ile: 0.305 s
Write times 75th %ile: 0.274 s
Write times 50th %ile: 0.241 s
Write times 25th %ile: 0.218 s
Write times Min: 0.121 s

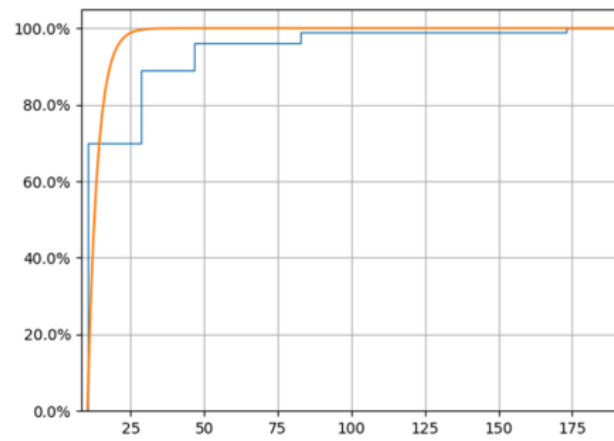
Results Summary for Read Operation(s)
Total Transferred: 1.000 MB
Total Throughput: 2.92 MB/s
Total Duration: 0.342 s
Number of Errors: 0
-----
Read times Max: 0.020 s
Read times 99th %ile: 0.011 s
Read times 90th %ile: 0.008 s
Read times 75th %ile: 0.006 s
Read times 50th %ile: 0.005 s
Read times 25th %ile: 0.004 s
Read times Min: 0.002 s

Cleaning up 512 objects...
Deleting a batch of 512 objects in range {0, 511}... Succeeded
Successfully deleted 512/512 objects in 1.0458005s
```

得到如下运行结果

实验三：尾延迟





实验总结：

本次实验对于对象存储有了初步的认识，实验中我配置了一些之前并没有使用过的软件，也从实验中学习了一部分以前不了解的内容。总之这门课程让我对存储这一部分有了一点了解，也开拓了一些视野。