

1. 在pom.xml下加入依赖

```
<dependency>
  <groupId>ch.qos.logback</groupId>
  <artifactId>logback-classic</artifactId>
  <version>1.2.3</version>
</dependency>

<dependency>
  <groupId>ch.qos.logback</groupId>
  <artifactId>logback-core</artifactId>
  <version>1.2.3</version>
</dependency>
```

2. resources目录下新建logback.xml，加入以下内容（部分内容）

注意，部分地方结合自己项目修改

- 倒数第六行的 `<logger name="com.middle.lftp" level = "INFO"/>`，修改name属性

```
<?xml version="1.0" encoding="UTF-8"?>
<configuration debug="false">

  <property name="LOG_HOME" value="logs" />

  <!-- 控制台输出 -->
  <appender name="STDOUT" class="ch.qos.logback.core.ConsoleAppender">
    <encoder class="ch.qos.logback.classic.encoder.PatternLayoutEncoder">
      <!-- 格式化输出：%d表示日期，%thread表示线程名，%-5level：级别从左显示5个字符宽度%msg：日志消息，%n是换行符-->
      <pattern>%d{yyyy-MM-dd HH:mm:ss.SSS} [%thread] %-5level %logger{50} - %msg%n</pattern>
      <charset>UTF-8</charset>
    </encoder>
  </appender>

  <!-- 按照每天生成日志文件 -->
  <appender name="FILE" class="ch.qos.logback.core.rolling.RollingFileAppender">
    <rollingPolicy class="ch.qos.logback.core.rolling.TimeBasedRollingPolicy">
      <!-- 日志文件输出的文件名-->
      <fileNamePattern>${LOG_HOME}/lftp.log.%d{yyyy-MM-dd}.log</fileNamePattern>
      <!-- 日志文件保留天数-->
      <maxHistory>30</maxHistory>
    </rollingPolicy>
    <encoder class="ch.qos.logback.classic.encoder.PatternLayoutEncoder">
      <!-- 格式化输出：%d表示日期，%thread表示线程名，%-5level：级别从左显示5个字符宽度%msg：日志消息，%n是换行符-->
      <pattern>%d{yyyy-MM-dd HH:mm:ss.SSS} [%thread] %-5level %logger{50} - %msg%n</pattern>
      <charset>UTF-8</charset>
    </encoder>
    <!-- 日志文件最大的大小-->
    <triggeringPolicy class="ch.qos.logback.core.rolling.SizeBasedTriggeringPolicy">
      <maxFileSize>10MB</maxFileSize>
```

```

        </triggeringPolicy>
    </appender>

    <logger name="com.alibaba.druid.filter.stat.StatFilter" level="ERROR">
        <appender-ref ref="STDOUT" />
    </logger>

    <!-- 日志输出级别 -->
    <logger name="com.middle.lftp" level = "INFO"/>
    <root level="ERROR">
        <appender-ref ref="STDOUT" />
        <appender-ref ref="FILE" />
    </root>
</configuration>

```

3. 在需要的类中引入Logger (以Server类为例)

1. 添加Logger属性

```
private final static Logger logger = LoggerFactory.getLogger(Server.class);
```

2. 在需要进行记录的地方, 使用logger.info、logger.error等方法进行输出 (INFO、ERROR为日志输出等级, 其余还有DEBUG、WARN等)

```

// 逐个检测端口池中的端口是否可用
for (int i = portPoolStart; i < portPoolStart + clientCount; i++) {
    if (!isPortAvailable(i)) {
        logger.error("端口" + i + "不可用, 请更换起始端口地址");
        return;
    }
}
logger.info("服务器占用端口池: " + portPoolStart + " - " + (portPoolStart + clientCount - 1));

```

4. 输出样例

- logs下文件内输出

```

2022-05-26 23:42:16.351 [main] INFO com.middle.lftp.cmd.Server - 服务器启动端口: 3000
2022-05-26 23:47:27.104 [main] INFO com.middle.lftp.cmd.Server - 服务器启动端口: 3000
2022-05-26 23:47:27.106 [main] INFO com.middle.lftp.cmd.Server - 端口池起始端口: 20480
2022-05-26 23:48:30.111 [main] INFO com.middle.lftp.cmd.Server - 服务器启动端口: 3000
2022-05-26 23:48:30.113 [main] INFO com.middle.lftp.cmd.Server - 端口池起始端口: 20480
2022-05-26 23:48:30.116 [main] INFO com.middle.lftp.cmd.Server - 服务器占用端口池:
20480 - 20499
2022-05-26 23:48:56.196 [main] INFO com.middle.lftp.cmd.Server - 服务器启动端口: 3000
2022-05-26 23:48:56.198 [main] INFO com.middle.lftp.cmd.Server - 端口池起始端口: 220
2022-05-26 23:48:56.202 [main] INFO com.middle.lftp.cmd.Server - 服务器占用端口池: 220
- 239
2022-05-26 23:49:26.178 [main] INFO com.middle.lftp.cmd.Server - 服务器启动端口: 3000
2022-05-26 23:49:26.180 [main] INFO com.middle.lftp.cmd.Server - 端口池起始端口: 130
2022-05-26 23:49:26.181 [main] ERROR com.middle.lftp.cmd.Server - 端口135不可用, 请更换起
始端口地址

```

- 控制台CONSOLE输出

```

"C:\Program Files\Java\jdk-11.0.11\bin\java.exe" "-javaagent:E:\Intellij IDEA
2021.1.2\lib\idea_rt.jar=6086:E:\Intellij IDEA 2021.1.2\bin" -Dfile.encoding=UTF-8 -classpath
E:\java\MiddleWare\target\classes;E:\java\m2\repository\info\picocli\picocli\4.6.1\picocli-
4.6.1.jar;E:\java\m2\repository\ch\qos\logback\logback-classic\1.2.3\logback-classic-
1.2.3.jar;E:\java\m2\repository\org\slf4j\slf4j-api\1.7.25\slf4j-api-
1.7.25.jar;E:\java\m2\repository\ch\qos\logback\logback-core\1.2.3\logback-core-1.2.3.jar
com.middle.lftp.cmd.Main server -s 130
2022-05-26 23:49:26.178 [main] INFO com.middle.lftp.cmd.Server - 服务器启动端口: 3000
2022-05-26 23:49:26.180 [main] INFO com.middle.lftp.cmd.Server - 端口池起始端口: 130
2022-05-26 23:49:26.181 [main] ERROR com.middle.lftp.cmd.Server - 端口135不可用, 请更换起始端口地
址

Process finished with exit code 0

```