

# Assignment 4 - Introduction to Apache Zookeeper

Name – B Pravena

Sec – B

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Activities Terminal Apr 13 21:27 • pes2ug19cs076@PES2UG19CS076: /opt/apache-zookeeper-3.8.0-bin
pes2ug19cs076@PES2UG19CS076: /opt/apache-zookeeper-3.8.0-bin$ bin/zkServer.sh start
/usr/bin/java
ZooKeeper JMX enabled by default
Using config: /opt/apache-zookeeper-3.8.0-bin/bin/./conf/zoo.cfg
Starting zookeeper ... STARTED
pes2ug19cs076@PES2UG19CS076: /opt/apache-zookeeper-3.8.0-bin$ bin/zkCli.sh
/usr/bin/java
Connecting to localhost:2181
2022-04-13 21:26:45,158 [myId:] - INFO [main:io.a.z.Environment@98] - Client environment:zookeeper.version=3.8.0-5a02a05edd59aee6ac762f7ea82e92a68eb9c0f, built on 2022-02-25 08:49 UTC
2022-04-13 21:26:45,168 [myId:] - INFO [main:io.a.z.Environment@98] - Client environment:host.name=PES2UG19CS076
2022-04-13 21:26:45,169 [myId:] - INFO [main:io.a.z.Environment@98] - Client environment:java.version=1.8.0_312
2022-04-13 21:26:45,169 [myId:] - INFO [main:io.a.z.Environment@98] - Client environment:java.vendor=Private Build
2022-04-13 21:26:45,178 [myId:] - INFO [main:io.a.z.Environment@98] - Client environment:java.home=/usr/lib/jvm/java-8-openjdk-and64/jre
2022-04-13 21:26:45,171 [myId:] - INFO [main:io.a.z.Environment@98] - Client environment:java.class.path=/opt/apache-zookeeper-3.8.0-bin/bin/./build/classes:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/zookeeper-server/target/lib/*:/opt/apache-zookeeper-3.8.0-bin/bin/./build/lib/*:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/zookeeper-3.8.0-bin/bin/./lib/zookeeper-jute-3.8.0.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/zookeeper-3.8.0-bin/bin/./lib/zookeeper-3.8.0-bin/bin/./lib/snappy-java-1.1.7.7.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/slf4j-api-1.7.36.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/simpleclient-servlet-0.9.0.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/simpleclient-hotspot-0.9.0.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/simpleclient-common-0.9.0.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/simpleclient-0.9.0.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/netty-transport-native-unix-common-4.1.73.Final.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/netty-transport-native-epoll-4.1.73.Final.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/netty-transport-classes-epoll-4.1.73.Final.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/netty-transport-4.1.73.Final.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/netty-tcnative-classes-2.0.48.Final.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/netty-tcnative-2.0.48.Final.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/netty-resolver-4.1.73.Final.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/netty-handler-4.1.73.Final.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/netty-common-4.1.73.Final.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/netty-codec-4.1.73.Final.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/netty-buffer-4.1.73.Final.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/metrics-core-4.1.12.1.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/logback-core-1.2.10.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/logback-classic-1.2.10.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/jline-2.14.0.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/jetty-util-9.4.43.v20210629.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/jetty-servlet-9.4.43.v20210629.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/jetty-server-9.4.43.v20210629.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/jetty-io-9.4.43.v20210629.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/jetty-http-9.4.43.v20210629.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/javax.servlet-api-3.1.0.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/jackson-databind-2.13.1.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/jackson-core-2.13.1.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/jackson-annotations-2.13.1.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/commons-io-2.11.0.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/commons-lang3-3.12.0.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/audience-annotations-0.12.0.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/zookeeper-*.jar:/opt/apache-zookeeper-3.8.0-bin/bin/./lib/zookeeper-server/src/main/resources/lib/*:/opt/apache-zookeeper-3.8.0-bin/bin/./conf:
2022-04-13 21:26:45,171 [myId:] - INFO [main:io.a.z.Environment@98] - Client environment:java.library.path=/usr/java/packages/lib/amd64:/usr/lib/x86_64-linux-gnu/jni:/lib/x86_64-linux-gnu:/usr/lib/x86_64-linux-gnu:/usr/lib/jni:/lib:/usr/lib
2022-04-13 21:26:45,172 [myId:] - INFO [main:io.a.z.Environment@98] - Client environment:java.io.tmpdir=/tmp
2022-04-13 21:26:45,173 [myId:] - INFO [main:io.a.z.Environment@98] - Client environment:java.compiler=NA
2022-04-13 21:26:45,173 [myId:] - INFO [main:io.a.z.Environment@98] - Client environment:os.name=Linux
2022-04-13 21:26:45,173 [myId:] - INFO [main:io.a.z.Environment@98] - Client environment:os.arch=amd64
2022-04-13 21:26:45,174 [myId:] - INFO [main:io.a.z.Environment@98] - Client environment:os.version=5.13.0-39-generic
2022-04-13 21:26:45,174 [myId:] - INFO [main:io.a.z.Environment@98] - Client environment:user.name=pes2ug19cs076
2022-04-13 21:26:45,175 [myId:] - INFO [main:io.a.z.Environment@98] - Client environment:user.home=/home/pes2ug19cs076
2022-04-13 21:26:45,176 [myId:] - INFO [main:io.a.z.Environment@98] - Client environment:user.dir=/opt/apache-zookeeper-3.8.0-bin
2022-04-13 21:26:45,176 [myId:] - INFO [main:io.a.z.Environment@98] - Client environment:os.memory.free=42MB
2022-04-13 21:26:45,177 [myId:] - INFO [main:io.a.z.Environment@98] - Client environment:os.memory.max=228MB
2022-04-13 21:26:45,177 [myId:] - INFO [main:io.a.z.Environment@98] - Client environment:os.memory.total=56MB
2022-04-13 21:26:45,187 [myId:] - INFO [main:io.a.z.ZooKeeper@637] - Initiating client connection, connectString=localhost:2181 sessionTimeout=30000 watcher=org.apache.zookeeper.ZooKeeperMain$MyWatcher@5c7fa833
2022-04-13 21:26:45,211 [myId:] - INFO [main:io.a.z.c.XS09Util@77] - Setting -D jdk.tls.rejectClientInitiatedRenegotiation=true to disable client-initiated TLS renegotiation
2022-04-13 21:26:45,220 [myId:] - INFO [main:io.a.z.ClientCnxnSocket@239] - jute.maxbuffer value is 1048575 Bytes
2022-04-13 21:26:45,243 [myId:] - INFO [main:io.a.z.ClientCnxn@1732] - zookeeper.request.timeout value is 0. Feature enabled=false
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pes2ug19cs076@PES2UG19CS076: /opt/apache-zookeeper-3.8.0-bin
listquota path
ls [-s] [-w] [-R] path
printwatches on/off
quit
reconfig [-s] [-v version] [[-file path] | [-members serverID:host:port1:port2:port3[,...
]*]] | [-add serverId=host:port1:port2:port3[,...]]* [-remove serverId[,...]]*
redo cmdno
removewatches path [-c|-d|-a] [-l]
set [-s] [-v version] path data
setAcl [-s] [-v version] [-R] path acl
setquota -n|-b|-N|-B val path
stat [-w] path
sync path
version
whoami
Command not found: Command not found ls/
[zk: localhost:2181(CONNECTED) 2] ls /
[zk: localhost:2181(CONNECTED) 3] create -s /pes2ug19cs076_seq "a sequential node"
Created /pes2ug19cs076_seq0000000000
[zk: localhost:2181(CONNECTED) 4] create -e /pes2ug19cs076_eph "an ephemeral node"
Created /pes2ug19cs076_eph
[zk: localhost:2181(CONNECTED) 5] ls /
[pes2ug19cs076_eph, pes2ug19cs076_seq0000000000, zookeeper]
[zk: localhost:2181(CONNECTED) 6]
```

```

pes2ug19cs076@PES2UG19CS076: /opt/apache-zookeeper-3.8.0-bin
entInitiatedRenegotiation=true to disable client-initiated TLS renegotiation
2022-04-13 21:43:38,301 [myid:] - INFO [main:o.a.z.ClientCnxnSocket@239] - jute.maxbuffer value
is 1048575 Bytes
2022-04-13 21:43:38,321 [myid:] - INFO [main:o.a.z.ClientCnxn@1732] - zookeeper.request.timeout
value is 0. feature enabled=false
Welcome to ZooKeeper!
JLine support is enabled
2022-04-13 21:43:38,347 [myid:localhost:2181] - INFO [main-SendThread(localhost:2181):o.a.z.Clie
ntCnxn$SendThread@1171] - Opening socket connection to server localhost/127.0.0.1:2181.
2022-04-13 21:43:38,347 [myid:localhost:2181] - INFO [main-SendThread(localhost:2181):o.a.z.Clie
ntCnxn$SendThread@1173] - SASL config status: Will not attempt to authenticate using SASL (unknow
n error)
2022-04-13 21:43:38,366 [myid:localhost:2181] - INFO [main-SendThread(localhost:2181):o.a.z.Clie
ntCnxn$SendThread@1005] - Socket connection established, initiating session, client: /127.0.0.1:4
2140, server: localhost/127.0.0.1:2181
2022-04-13 21:43:38,382 [myid:localhost:2181] - INFO [main-SendThread(localhost:2181):o.a.z.Clie
ntCnxn$SendThread@1444] - Session establishment complete on server localhost/127.0.0.1:2181, sess
ion id = 0x1000020cf2c0001, negotiated timeout = 30000

WATCHER::

WatchedEvent state:SyncConnected type:None path:null
[zk: localhost:2181(CONNECTED) 0] ls /
[pes2ug19cs076_seq0000000000, zookeeper]
[zk: localhost:2181(CONNECTED) 1]

```

```

pes2ug19cs076@PES2UG19CS076: /opt/apache-zookeeper-3.8.0-bin
ntCnxn$SendThread@1005] - Socket connection established, initiating session, client: /127.0.0.1:4
2140, server: localhost/127.0.0.1:2181
2022-04-13 21:43:38,382 [myid:localhost:2181] - INFO [main-SendThread(localhost:2181):o.a.z.Clie
ntCnxn$SendThread@1444] - Session establishment complete on server localhost/127.0.0.1:2181, sess
ion id = 0x1000020cf2c0001, negotiated timeout = 30000

WATCHER::

WatchedEvent state:SyncConnected type:None path:null
[zk: localhost:2181(CONNECTED) 0] ls /
[pes2ug19cs076_seq0000000000, zookeeper]
[zk: localhost:2181(CONNECTED) 1] get -s /pes2ug19cs076_seq0000000000
a sequential node
cZxid = 0x4
ctime = Wed Apr 13 21:35:33 IST 2022
mZxid = 0x4
mtime = Wed Apr 13 21:35:33 IST 2022
pZxid = 0x4
cversion = 0
dataVersion = 0
aclVersion = 0
ephemeralOwner = 0x0
dataLength = 17
numChildren = 0
[zk: localhost:2181(CONNECTED) 2]

```



```
pes2ug19cs076@PES2UG19CS076: /opt/apache-zookeeper-3.8.0-bin

delquota [-n|-b|-N|-B] path
get [-s] [-w] path
getAcl [-s] path
getAllChildrenNumber path
getEphemerals path
history
listquota path
ls [-s] [-w] [-R] path
printwatches on|off
quit
reconfig [-s] [-v version] [[-file path] | [-members serverID:host:port1:port2;port3[,...
*]]] | [-add serverID:host:port1:port2;port3[,...]]* [-remove serverID[,...]]*
redo cmdno
removewatches path [-c|-d|-a] [-l]
set [-s] [-v version] path data
setAcl [-s] [-v version] [-R] path acl
setquota -n|-b|-N|-B val path
stat [-w] path
sync path
version
whoami
Command not found: Command not found cd
[zk: localhost:2181(CONNECTED) 15] ls /pes2ug19cs076
["balasubramanian", "pravena"]
[zk: localhost:2181(CONNECTED) 16]
```

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Activities Terminal Apr 16 15:06
pes2ug19cs089@bhavanaravishanker-VirtualBox: /opt/apache-zookeeper-3.8.0-...
2022-04-16 15:04:23,114 [myid:localhost:2181] - INFO [main-SendThread(localhost:2181):o.a.z.ClientCn
xn$SendThread@1173] - SASL config status: Will not attempt to authenticate using SASL (un
known error)
2022-04-16 15:04:23,176 [myid:localhost:2181] - INFO [main-SendThread(localhost:2181):o.a.z.ClientCn
xn$SendThread@1005] - Socket connection established, initiating session, client: /127.0.0
.1:44694, server: localhost/127.0.0.1:2181
JLine support is enabled
2022-04-16 15:04:23,333 [myid:localhost:2181] - INFO [main-SendThread(localhost:2181):o.a.z.ClientCn
xn$SendThread@1444] - Session establishment complete on server localhost/127.0.0.1:2181, session
id = 0x1000095dd410002, negotiated timeout = 30000
WATCHER::
WatchedEvent state:SyncConnected type:None path:null
[zk: localhost:2181(CONNECTED) 0] create /pes2ug19cs076
Created /pes2ug19cs076
[zk: localhost:2181(CONNECTED) 1] create -s -e /pes2ug19cs076/candidate
Created /pes2ug19cs076/candidate0000000000
[zk: localhost:2181(CONNECTED) 2] ls /pes2ug19cs076
[candidate0000000000, candidate0000000001, candidate0000000002]
[zk: localhost:2181(CONNECTED) 3]

pes2ug19cs089@bhavanaravishanker-VirtualBox: /opt/apache-zookeeper-3.8.0-bin
e is 0. feature enabled=false
Welcome to ZooKeeper!
2022-04-16 15:04:28,076 [myid:localhost:2181] - INFO [main-SendThread(localhost:2181):o.a.z.ClientCn
xn$SendThread@1171] - Opening socket connection to server localhost/127.0.0.1:2181.
2022-04-16 15:04:28,079 [myid:localhost:2181] - INFO [main-SendThread(localhost:2181):o.a.z.ClientCn
xn$SendThread@1173] - SASL config status: Will not attempt to authenticate using SASL (unknown error)
2022-04-16 15:04:28,178 [myid:localhost:2181] - INFO [main-SendThread(localhost:2181):o.a.z.ClientCn
xn$SendThread@1005] - Socket connection established, initiating session, client: /127.0.0.1:44696, se
rver: localhost/127.0.0.1:2181
JLine support is enabled
2022-04-16 15:04:28,214 [myid:localhost:2181] - INFO [main-SendThread(localhost:2181):o.a.z.ClientCn
xn$SendThread@1444] - Session establishment complete on server localhost/127.0.0.1:2181, session id =
0x1000095dd410001, negotiated timeout = 30000
WATCHER::
WatchedEvent state:SyncConnected type:None path:null
[zk: localhost:2181(CONNECTED) 0] create -s -e /pes2ug19cs076/candidate
Created /pes2ug19cs076/candidate0000000001
[zk: localhost:2181(CONNECTED) 1] ls /pes2ug19cs076
[candidate0000000000, candidate0000000001, candidate0000000002]
[zk: localhost:2181(CONNECTED) 2]

pes2ug19cs089@bhavanaravishanker-VirtualBox: /opt/apache-zookeeper-3.8.0-bin
e-zookeeper-3.8.0-bin/data/version-2/snapshot.1c
2022-04-16 15:04:09,122 [myid:] - INFO [main:o.a.z.s.DataTree@1705] - The digest in the snapshot
has digest version of 2, with zxid as 0x1c, and digest value as 2790088154
2022-04-16 15:04:09,167 [myid:] - INFO [main:o.a.z.a.ZKAuditProvider@42] - ZooKeeper audit is dis
abled.
2022-04-16 15:04:09,171 [myid:] - INFO [main:o.a.z.s.p.FileTxnSnapLog@372] - 13 txns loaded in 25
ms
2022-04-16 15:04:09,172 [myid:] - INFO [main:o.a.z.s.ZKDatabase@289] - Snapshot loaded in 104 ms,
highest zxid is 0x29, digest is 6768082154
2022-04-16 15:04:09,193 [myid:] - INFO [main:o.a.z.s.p.FileTxnSnapLog@479] - Snapshotting: 0x29 t
o /opt/apache-zookeeper-3.8.0-bin/data/version-2/snapshot.29
2022-04-16 15:04:09,207 [myid:] - INFO [main:o.a.z.s.ZooKeeperServer@547] - Snapshot taken in 4 m
s
2022-04-16 15:04:09,271 [myid:] - INFO [main:o.a.z.s.RequestThrottler@75] - zookeeper.request_thr
ottler.shutdownTimeout = 10000 ms
2022-04-16 15:04:09,272 [myid:] - INFO [ProcessThread(sid:0 cport:2181)::o.a.z.s.PreRequestProce
ssor@138] - PreRequestProcessor (sid:0) started, reconfigEnabled=false
2022-04-16 15:04:09,346 [myid:] - INFO [main:o.a.z.s.ContainerManager@84] - Using checkIntervalMs
=60000 maxPerMinute=10000 maxNeverUsedIntervalMs=0
2022-04-16 15:04:23,216 [myid:] - INFO [SyncThread:0:o.a.z.s.p.FileTxnLog@285] - Creating new log
file: log.2a
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Activities Terminal Apr 16 15:08

pes2ug19cs089@bhavanaravishanker-VirtualBox: /opt/apache-zookeeper-3.8.0-...

WATCHER::

WatchedEvent state:SyncConnected type:None path:null
[zk: localhost:2181(CONNECTED) 0] create /pes2ug19cs076
Created /pes2ug19cs076
[zk: localhost:2181(CONNECTED) 1] create -s -e /pes2ug19cs076/candidate
Created /pes2ug19cs076/candidate0000000000
[zk: localhost:2181(CONNECTED) 2] ls /pes2ug19cs076
[candidate0000000000, candidate0000000001, candidate0000000002]
[zk: localhost:2181(CONNECTED) 3] quit

WATCHER::

WatchedEvent state:Closed type:None path:null
2022-04-16 15:08:06,466 [myid:] - INFO [main-EventThread:o.a.z.ClientCnxn$EventThread@568] - EventThread shut down for session: 0x1000095dd410000
2022-04-16 15:08:06,467 [myid:] - INFO [main:o.a.z.ZooKeeper@1232] - Session: 0x1000095dd410000 closed
2022-04-16 15:08:06,470 [myid:] - ERROR [main:o.a.z.u.ServiceUtils@42] - Exiting JVM with code 0
pes2ug19cs089@bhavanaravishanker-VirtualBox: /opt/apache-zookeeper-3.8.0-bin$

pes2ug19cs089@bhavanaravishanker-VirtualBox: /opt/apache-zookeeper-3.8.0-bin

WATCHER::

WatchedEvent state:SyncConnected type:None path:null
[zk: localhost:2181(CONNECTED) 0] create -s -e /pes2ug19cs076/candidate
Created /pes2ug19cs076/candidate0000000001
[zk: localhost:2181(CONNECTED) 1] ls /pes2ug19cs076
[candidate0000000000, candidate0000000001, candidate0000000002]
[zk: localhost:2181(CONNECTED) 2] get -s -w /pes2ug19cs076/candidate0000000001
null
cZxid = 0x2f
ctime = Sat Apr 16 15:05:32 IST 2022
mZxid = 0x2f
mtime = Sat Apr 16 15:05:32 IST 2022
pZxid = 0x2f
cversion = 0
dataVersion = 0
aclVersion = 0
ephemeralOwner = 0x1000095dd410001
dataLength = 0
numChildren = 0
[zk: localhost:2181(CONNECTED) 3]

pes2ug19cs089@bhavanaravishanker-VirtualBox: /opt/apache-zookeeper-3.8.0-bin

Created /pes2ug19cs076/candidate0000000002
[zk: localhost:2181(CONNECTED) 1] ls /pes2ug19cs076
[candidate0000000000, candidate0000000001, candidate0000000002]
[zk: localhost:2181(CONNECTED) 2] get -s -w /pes2ug19cs076/candidate0000000000
null
cZxid = 0x2e
ctime = Sat Apr 16 15:05:24 IST 2022
mZxid = 0x2e
mtime = Sat Apr 16 15:05:24 IST 2022
pZxid = 0x2e
cversion = 0
dataVersion = 0
aclVersion = 0
ephemeralOwner = 0x1000095dd410000
dataLength = 0
numChildren = 0
[zk: localhost:2181(CONNECTED) 3]
WATCHER::

WatchedEvent state:SyncConnected type:NodeDeleted path:/pes2ug19cs076/candidate0000000000

2022-04-16 15:04:09,272 [myid:] - INFO [ProcessThread(sid:0 cport:2181)::o.a.z.s.PreRequestProcessor@138] - PreRequestProcessor (sid:0) started, reconfigEnabled=false
2022-04-16 15:04:09,346 [myid:] - INFO [main:o.a.z.s.ContainerManager@84] - Using checkIntervalMs=60000 maxPerMinute=10000 maxNeverUsedIntervalMs=0
2022-04-16 15:04:23,216 [myid:] - INFO [SyncThread:0:o.a.z.s.p.FileTxnLog@285] - Creating new log file: log.2a
2022-04-16 15:08:06,366 [myid:] - WARN [NIOWorkerThread-1:o.a.z.s.NIOServerCnxn@371] - Unexpected exception
org.apache.zookeeper.server.ServerCnxn$EndOfStreamException: Unable to read additional data from client, it probably closed the socket: address = /127.0.0.1:44694, session = 0x1000095dd410000
    at org.apache.zookeeper.server.NIOServerCnxn.handleFailedRead(NIOServerCnxn.java:170)
    at org.apache.zookeeper.server.NIOServerCnxn.doIO(NIOServerCnxn.java:333)
    at org.apache.zookeeper.server.NIOServerCnxnFactory$IOWorkRequest.doWork(NIOServerCnxnFactory.java:508)
    at org.apache.zookeeper.server.WorkerService$ScheduledWorkRequest.run(WorkerService.java:153)
    at java.base/java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:113)
    at java.base/java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:63)
    at java.base/java.lang.Thread.run(Thread.java:833)
```