# **Thread Dump - Intelligence Report**

① Timestamp: 2023-10-22 22:46:56

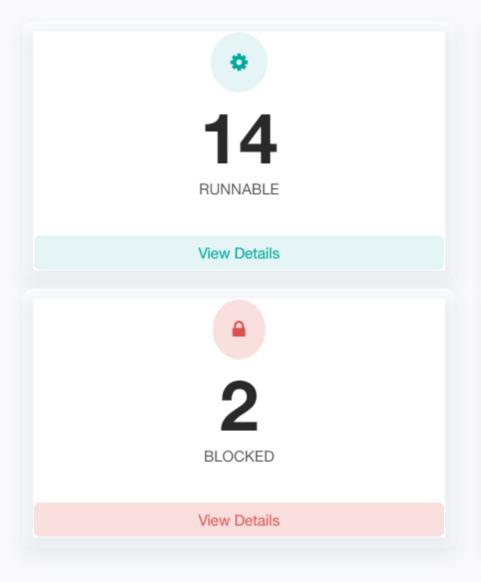
Our machine learning (ML) algorithms have detected problems in your application which can cause application unresponsiveness. Below are the problems detected by our ML algorithms:

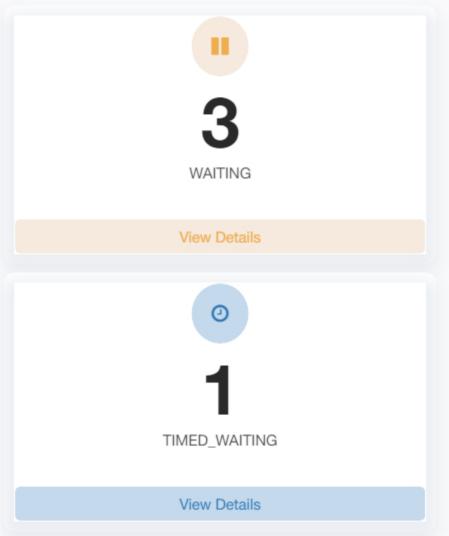
The application is suffering from deadlock. Here are the threads that are causing the deadlock

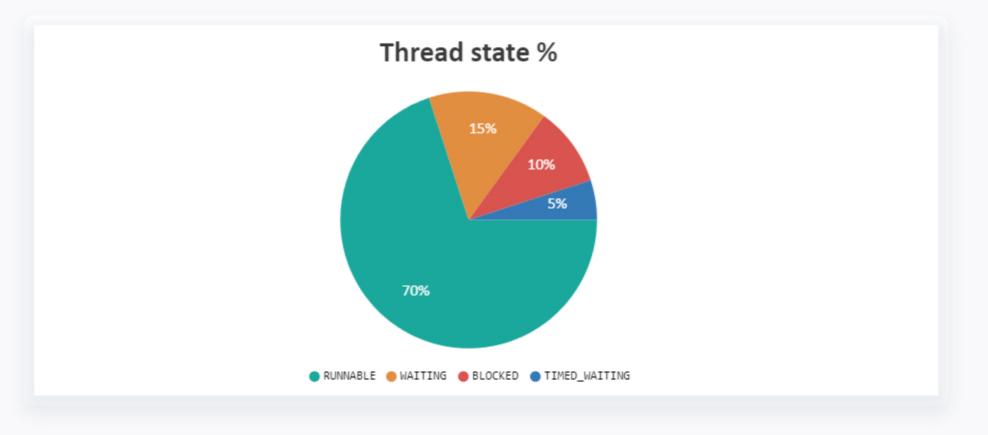
# **Thread Count Summary**

■ To learn about different thread states through real-life example, check out this video tutorial

### **Total Threads count: 20**

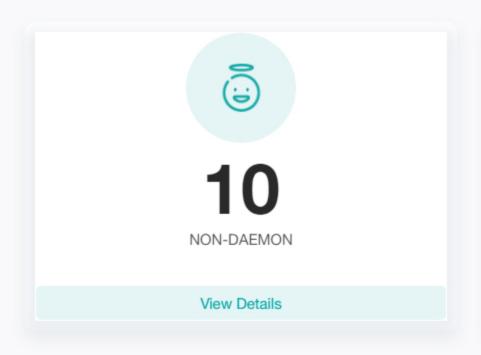


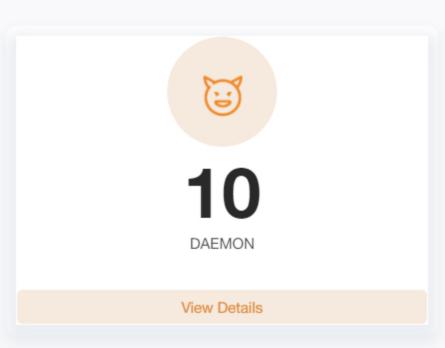


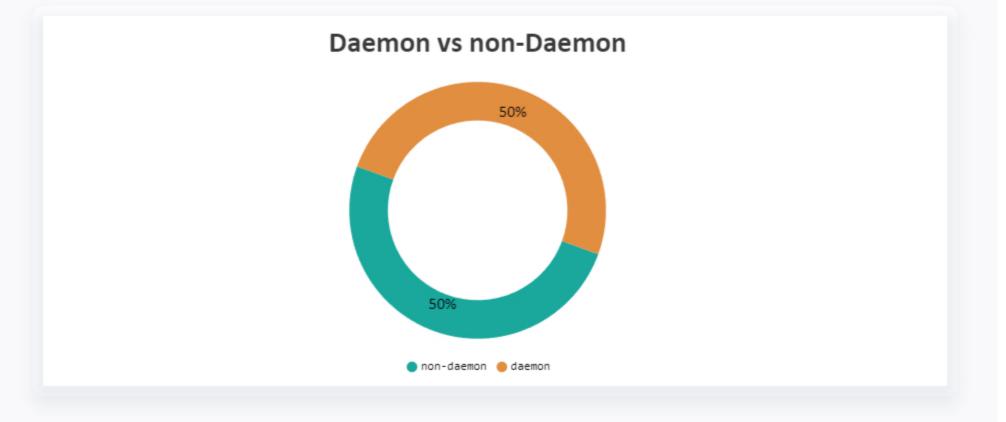


## Daemon vs non-Daemon

Learn more about daemon and non-daemon (i.e. user threads)







## **Dead Lock**

Learn more about **Deadlock** 



Thread Thread-0 is in deadlock with thread Thread-1

### Thread-0

PRIORITY: 5

THREAD ID: 0X000001B576D9C800

NATIVE ID: 0X3368

stackTrace:

java.lang.Thread.State: BLOCKED (on object monitor)

at org.example.Threaddeadlock.lambda\$main\$0(Threaddeadlock.java:13)

- waiting to lock <0x00000007110ee670> (a java.lang.Object)

- locked <0x0000007110ee660> (a java.lang.Object)

at org.example.Threaddeadlock\$\$Lambda\$14/0x0000000800066840.run(Unknown Source)

at java.lang.Thread.run(java.base@11.0.15.1/Thread.java:834)

Locked ownable synchronizers:

None

#### Thread-1

PRIORITY: 5

THREAD ID: 0X000001B576D5D800

NATIVE ID: 0X2C88

stackTrace:

java.lang.Thread.State: BLOCKED (on object monitor)

at org.example.Threaddeadlock.lambda\$main\$1(Threaddeadlock.java:24)

waiting to lock <0x0000007110ee660> (a java.lang.Object)

- locked <0x0000007110ee670> (a java.lang.Object)

at org.example.Threaddeadlock\$\$Lambda\$15/0x0000000800066c40.run(Unknown Source)

at java.lang.Thread.run(java.base@11.0.15.1/Thread.java:834)

Locked ownable synchronizers:

- None

NATIVE ID (DECIMAL): 13160

STATE: BLOCKED

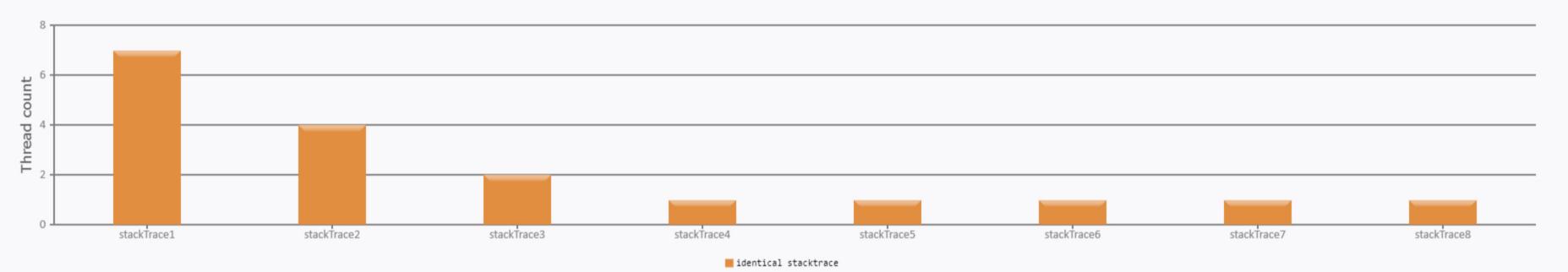
NATIVE ID (DECIMAL): 11400

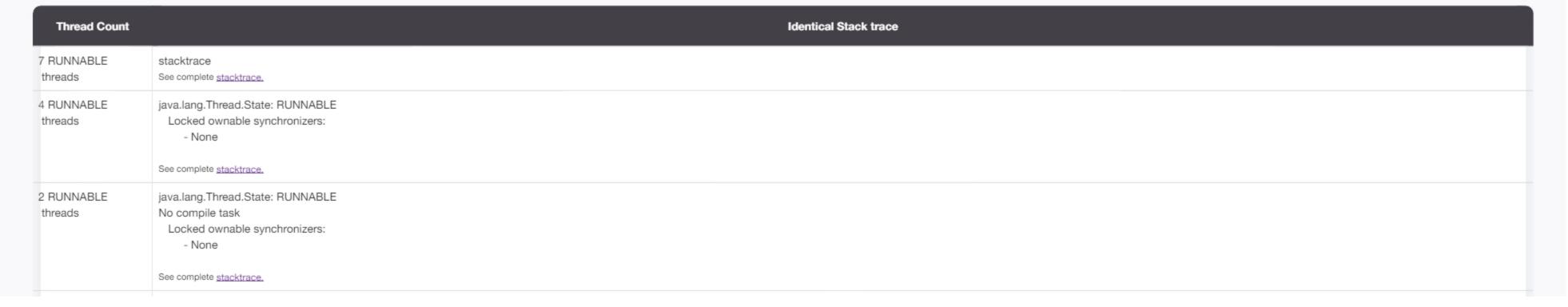
STATE: BLOCKED

## Threads with identical stack trace

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Threads with identical stack traces are grouped here. If lot of threads start to exhibit identical stack trace it might be a concern, learn RSI Pattern





1 TIMED_WAITING threads	java.lang.Thread.State: TIMED_WAITING (on object monitor) at java.lang.Object.wait(java.base@11.0.15.1/Native Method) - waiting on <0x00000007110064d0> (a java.lang.ref.ReferenceQueue\$Lock) at java.lang.ref.ReferenceQueue.remove(java.base@11.0.15.1/ReferenceQueue.java:155) - waiting to re-lock in wait() <0x00000007110064d0> (a java.lang.ref.ReferenceQueue\$Lock) See complete stacktrace.
1 RUNNABLE threads	java.lang.Thread.State: RUNNABLE at java.net.SocketInputStream.socketRead0(java.base@11.0.15.1/Native Method) at java.net.SocketInputStream.socketRead(java.base@11.0.15.1/SocketInputStream.java:115) at java.net.SocketInputStream.read(java.base@11.0.15.1/SocketInputStream.java:168) at java.net.SocketInputStream.read(java.base@11.0.15.1/SocketInputStream.java:140) See complete stacktrace.
1 BLOCKED threads	java.lang.Thread.State: BLOCKED (on object monitor) at org.example.Threaddeadlock.lambda\$main\$1(Threaddeadlock.java:24) - waiting to lock <0x00000007110ee660> (a java.lang.Object) - locked <0x00000007110ee670> (a java.lang.Object) at org.example.Threaddeadlock\$\$Lambda\$15/0x0000000800066c40.run(Unknown Source) See complete stacktrace.
1 RUNNABLE threads	java.lang.Thread.State: RUNNABLE at java.lang.ref.Reference.waitForReferencePendingList(java.base@11.0.15.1/Native Method) at java.lang.ref.Reference.processPendingReferences(java.base@11.0.15.1/Reference.java:241) at java.lang.ref.Reference\$ReferenceHandler.run(java.base@11.0.15.1/Reference.java:213) Locked ownable synchronizers: See complete stacktrace.
1 BLOCKED threads	java.lang.Thread.State: BLOCKED (on object monitor) at org.example.Threaddeadlock.lambda\$main\$0(Threaddeadlock.java:13) - waiting to lock <0x00000007110ee670> (a java.lang.Object) - locked <0x00000007110ee660> (a java.lang.Object) at org.example.Threaddeadlock\$\$Lambda\$14/0x0000000800066840.run(Unknown Source) See complete stacktrace.

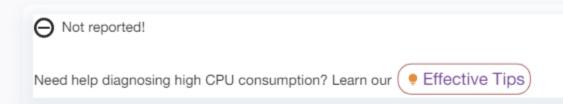
## Last executed methods

Methods that threads were executing when thread dump was captured is reported. Learn All roads lead to Rome pattern

Thread Count	Method	Percentage
3 threads	java.lang.Object.wait(java.base@11.0.15.1/Native Method) To see stack trace click here.	15%
1 threads	org.example.Threaddeadlock.lambda\$main\$0(Threaddeadlock.java:13) To see stack trace click here.	5%
1 threads	java.lang.ref.Reference.waitForReferencePendingList(java.base@11.0.15.1/Native Method)  To see stack trace click here.	5%
1 threads	java.net.SocketInputStream.socketRead0(java.base@11.0.15.1/Native Method)  To see stack trace click here.	5%
1 threads	org.example.Threaddeadlock.lambda\$main\$1(Threaddeadlock.java:24) To see stack trace click here.	5%

# **CPU** consuming threads

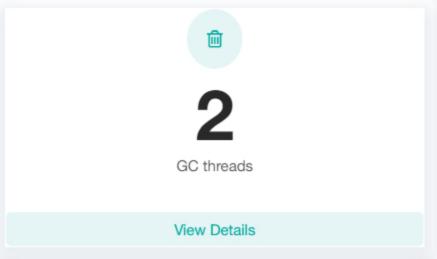
If application is consuming high CPU, investigate below threads. Learn <u>Athlete pattern</u>



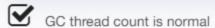
# **Blocking Threads - Transitive Graph**

Threads that block other threads are displayed here. Blocking threads makes application unresponsive, learn <u>Traffic Jam pattern</u>





GC Thread type	Count
Concurrent GC	1
GC Worker Thread	1
Total	2

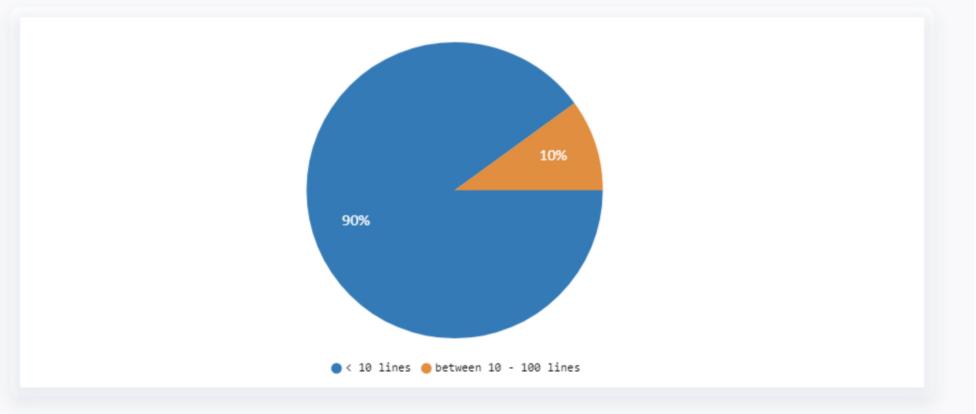


# **Threads Stack Length**

Lengthy stacks can cause StackOverflowError. Learn more



Stack Length	Thread count
< 10 lines	18
between 10 - 100 lines	2



# **Complex DeadLocks**

Learn more about Complex Deadlock



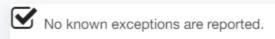
## **Finalizer Thread**

If finalizer thread is BLOCKED or WAITING for a prolonged period, it can result in OutOfMemoryError, to learn more visit <u>Leprechaun Trap pattern</u>



# **Exception**

Threads throwing commonly known Exceptions/Errors are reported here. Learn more



# **Bottom up Call Stack Tree**

→ Reverse Call stack

All threads stacktrace are combined in to one single tree. Learn  $\underline{it}$  's  $\underline{benefits}$ .



