Table of Contents

Tomcat catalina.out........................................................................................................................................1
   Error..........................................................................................................................................................1
   Warning or SEVERE or Failed..................................................................................................................2
   Normal operation messages....................................................................................................................2
   Explanation of message components.......................................................................................................3
Tomcat catalina.out

The `catalina.out` log records events and conditions that affect Tomcat's operation. The fields in this log are as follows:

- Application or resource that produced this log entry
- Timestamp of entry
- Tag for related entries -- Entries from the same operation will share the same tag
- Message detail

The following provides interpretations of some of the messages in the log.

**Error**

1. **Error while processing payload 0**
   1. **ORA-00904: invalid identifier**: This generally means a user error trying to read something that doesn't exist, nothing for operators to worry about.

   ```
   FrontierProd 11/17/09 09:49:59.120 CET +0100 id=169212 Error while processing payload 0: java.lang.Exception: While querying "CMS_COND_21X_ALIGNMENT"."POOL_OR_MAPPING_ELEMENTS": ORA-00904: "VARIABLE_PAR_INDEX": invalid identifier
   at oracle.jdbc.driver.DatabaseError.throwSqlException(DatabaseError.java:145)
   at oracle.jdbc.driver.T4CTTIoer.processError(T4CTTIoer.java:331)
   ```

2. **ClientAbortException**: This means the client dropped the connection, also a pretty common occurrence and nothing to worry about, most likely the client timed out. The cause for the timeout might be a problem but the abort exception isn't.

   ```
   FrontierProd 10/30/09 05:46:49.925 CET +0100 id=9316185 Error while processing payload 0: ClientAbortException: java.net.SocketException: Broken pipe
   at org.apache.catalina.connector.OutputBuffer.realWriteBytes(OutputBuffer.java:366)
   ```

3. **ORA-00942: table or view does not exist**: This is also a user error, asking for a table that doesn't exist, usually nothing for operators to be concerned about.

   ```
   FrontierInt 11/09/09 17:04:25.121 CET +0100 id=793335 Error while processing payload 0: java.lang.Exception: While querying "CMS_COND_30X_HCAL"."POOL_OR_CLASS_VERSIONS": ORA-00942: table or view does not exist
   at oracle.jdbc.driver.DatabaseError.throwSqlException(DatabaseError.java:145)
   at oracle.jdbc.driver.T4CTTIoer.processError(T4CTTIoer.java:331)
   ```

2. **Error getting last-modified time | table not found in CMS_FRONTIER_MODS.LAST_MODIFIED**: This usually means that the schema/username doesn't exist yet. Usually nothing for operators to worry about unless a user asks what it means.

   ```
   FrontierInt 11/06/09 09:27:16.950 CET +0100 id=674587 Error getting last-modified time: java.lang.Exception: While querying "CMS_COND_31X_GLOBALTAG.ALL_TABLES" not found in CMS_FRONTIER_MODS.LAST_MODIFIED
   at gov.fnal.frontier.SQLTimes.getLastModified(SQLTimes.java:87)
   ```

3. **Error initializing Frontier object**
   1. **X-frontier-id header missing**: Real frontier clients always insert X-frontier-id http header, so this means someone is using wget or something like that without adding that header. Operators don't need to be concerned unless there's a lot of them or a user asks what it means.

   ```
   FrontierProd 10/20/09 23:00:54.513 CEST +0200 id=571056 servlet_version:3.18 start threads:1 query ... raddr 127.0.0.1 frontier-id: missing via: 1.1 vocms63.cern.ch:8000 (squid/2.7.STABLE5) x-forwarded-for: 128.141.136.42
   FrontierProd 10/20/09 23:00:54.513 CEST +0200 id=571056 Error initializing Frontier object: java.lang.Exception: X-frontier-id header missing
   at gov.fnal.frontier.Frontier.logClientDesc(Frontier.java:260)
   ```

2. **no query**: This also means a user is not using a real frontier client, although they did know enough to put in X-frontier-id.

   ```
   dwdtest 11/12/09 03:00:00.371 CET +0100 id=1 Error initializing Frontier object:
   ```
Warning or SEVERE or Failed

1. **DB acquire keepalive giving up:** This means that it took too long (typically more than 5 minutes) to acquire a connection. There can be a lot of different reasons, requires log analysis to find out the root cause.

2. **SEVERE:** That means the server was too busy. Requires log analysis to find out the root cause.

3. **Failed:** As long as tomcat has indeed stopped, it doesn’t really matter.

4. **Request for a non-existent file.** Missing file prevents checking if-modified-since time.

Normal operation messages

1. **Successful initialization of data source**

2. **Successful query that reads from cache that is up-to-date.**

3. **Successful query to DB that is needed because cache was out-of-date.**
4. Successful query that has to fetch last-modified time and finds up-to-date cache it can use.

    PromptProd 08/13/22 00:01:41.023 CEST +0200 id=59902125 servlet_version:3.41 start threads:1 query ... 1.1 vocms0219.cern.ch/0 (squid/frontier-squid-4.17-1.1) x-forwarded-for: 128.142.240.108, 188.184.18.5

    FrontierProd 08/13/22 00:01:41.023 CEST +0200 id=59902125 modified at time: Fri, 12 Aug 2022 21:57:05 GMT (cached)

5. Successful query that has to fetch last-modified time and finds up-to-date cache it can use.

    FrontierProd 08/13/22 00:01:41.023 CEST +0200 id=59902125 modified at time: Wed, 10 Aug 2022 21:57:05 GMT (cached)

6. Query that returns no rows. It is up to the user to interpret the result.

    PromptProd 08/12/22 00:05:02.103 CEST +0200 id=107308651 servlet_version:3.41 start threads:1 query ... 1.1 vocms0279.cern.ch/0 (squid/frontier-squid-4.17-1.1) x-forwarded-for: 2001:1458:301:cb::100:2ce, 188.184.48.91

Explanation of message components

The "start" message for a request, that begins with servlet_version has its most useful information in these three sections:
1. **frontier-id**, which is composed of several fields:
   1. CMSSW version or WMAgent ID string
   2. Frontier client API version number
   3. Frontier process ID
   4. User ID, both string and number, for request
   5. Distinguished Name of user or user name string

2. **via** is a standard HTTP header that shows protocol and proxy information in a comma-separated list, with each element of the list having this format:
   1. Protocol version number
   2. Public proxy URL and port number
   3. Frontier-Squid version string for proxy

3. **x-forwarded-for** is a standard HTTP header that shows the IP addresses of:
   1. The client
   2. First proxy
   3. Second or final proxy, if any

Explanation of some non-intuitive fields:

1. **threads**: The number of servlet threads performing parallel requests at that time
2. **active**: The current number of active parallel DB connections when connection acquired
3. **remaining**: The remaining number of active parallel DB connections when a connection finishes
4. **DB connection acquired msecs**: The number of milliseconds it took to acquire the DB connection lock and DB connection
5. **DB query finished msecs**: The number of milliseconds it took to execute the DB query
6. **DB data transferred msecs**: The number of milliseconds it took to transfer query data after execution
7. **rows**: The number of database rows returned from the query
8. **full size**: The number of uncompressed bytes returned from the query
9. **stop msecs**: The total number of milliseconds that the request took

-- CarlVuosal - 2022-08-10