

FLIP-103: Better Taskmanager Log Display

Previous Web: [LINK](#)

POC Web: [LINK](#)

Related JIRA: [FLINK-13987](#)

Background

There is one problem in the current task manager logs Web UI design, the logs only display the taskmanager.log and taskmanager.out, but there may exist other log files created by the user or GC log files.

Proposal

We should add a log list tab in the task manager page, In frontend part, the logs should support reload, download and the fullscreen view.

Frontend Design

The log list page

The screenshot displays the Flink Task Manager Web UI. On the left is a dark sidebar with navigation icons. The top header shows the URL 'akka.tcp://flink@192.168.0.247:38364/user/taskmanager_0' and system information: 'Version: 1.10-SNAPSHOT | Commit: 36e477c @ 27.12.2019 @ 14:13:49 CST | Message: 0'. Below the URL, a summary box contains the following data:

ID	: ee5a028dbce6f821017b37cf82205873	Physical CPU Cores	: 2
Last Heartbeat	: 2019-12-31 15:12:53	Physical Memory	: 7.64 GB
Data Port	: 45512	Used / All Slots	: 5 / 8

Below this is a tabbed interface with 'Metrics' and 'Log' tabs. The 'Log' tab is active, showing a table of log files:

Log Name	Size (KB)
flink-root-taskexecutor-1-yantian-flip-75-tm.out	4,662,900.08
flink-root-taskexecutor-1-yantian-flip-75-tm.log	2,680.74

The log detail page

Version: 1.10-SNAPSHOT | Commit: 36e477c @ 27.12.2019 @ 14:13:49 CST | Message: 0

akka.tcp://flink@192.168.0.247:38364/user/taskmanager_0

ID	: ee5a028dbce6f821017b37cf82205873	Physical CPU Cores	: 2
Last Heartbeat	: 2019-12-31 15:13:33	Physical Memory	: 7.64 GB
Data Port	: 45512	Used / All Slots	: 5 / 8

Metrics
Log

Log List / flink-root-taskexecutor-1-yantian-flip-75-tm.log
[Reload](#)
[Download](#)
[FullScreen](#)

1	2019-12-31 10:38:04,658	INFO	org.apache.flink.runtime.taskexecutor.TaskManagerRunner	-
2	2019-12-31 10:38:04,660	INFO	org.apache.flink.runtime.taskexecutor.TaskManagerRunner	- Starting TaskManager (Version: 1.10-SNAPSHOT, Rev:36e477c, Date:27.12.2019 @ 14:13:49 CST)
3	2019-12-31 10:38:04,660	INFO	org.apache.flink.runtime.taskexecutor.TaskManagerRunner	- OS current user: root
4	2019-12-31 10:38:04,661	INFO	org.apache.flink.runtime.taskexecutor.TaskManagerRunner	- Current Hadoop/Kerberos user: <no hadoop dependency found>
5	2019-12-31 10:38:04,661	INFO	org.apache.flink.runtime.taskexecutor.TaskManagerRunner	- JVM: OpenJDK 64-Bit Server VM - Oracle Corporation - 1.8/25.232-b09
6	2019-12-31 10:38:04,661	INFO	org.apache.flink.runtime.taskexecutor.TaskManagerRunner	- Maximum heap size: 730 MiBytes
7	2019-12-31 10:38:04,661	INFO	org.apache.flink.runtime.taskexecutor.TaskManagerRunner	- JAVA_HOME: (not set)
8	2019-12-31 10:38:04,661	INFO	org.apache.flink.runtime.taskexecutor.TaskManagerRunner	- No Hadoop Dependency available
9	2019-12-31 10:38:04,661	INFO	org.apache.flink.runtime.taskexecutor.TaskManagerRunner	- JVM Options:
10	2019-12-31 10:38:04,661	INFO	org.apache.flink.runtime.taskexecutor.TaskManagerRunner	- -XX:+UseG1GC
11	2019-12-31 10:38:04,662	INFO	org.apache.flink.runtime.taskexecutor.TaskManagerRunner	- -Xmx765041036
12	2019-12-31 10:38:04,662	INFO	org.apache.flink.runtime.taskexecutor.TaskManagerRunner	- -Xms765041036
13	2019-12-31 10:38:04,662	INFO	org.apache.flink.runtime.taskexecutor.TaskManagerRunner	- -XX:MaxDirectMemorySize=314069485
14	2019-12-31 10:38:04,662	INFO	org.apache.flink.runtime.taskexecutor.TaskManagerRunner	- -XX:MaxMetaspaceSize=134217728
15	2019-12-31 10:38:04,662	INFO	org.apache.flink.runtime.taskexecutor.TaskManagerRunner	- -Dlog.file=/home/yantian/log/flink-root-taskexecutor-1-yantian-flip-75-tm.log
16	2019-12-31 10:38:04,662	INFO	org.apache.flink.runtime.taskexecutor.TaskManagerRunner	- -Dlog4j.configuration=file:/home/yantian/conf/log4j.properties
17	2019-12-31 10:38:04,662	INFO	org.apache.flink.runtime.taskexecutor.TaskManagerRunner	- -Dlogback.configurationFile=file:/home/yantian/conf/logback.xml
18	2019-12-31 10:38:04,662	INFO	org.apache.flink.runtime.taskexecutor.TaskManagerRunner	- Program Arguments:
19	2019-12-31 10:38:04,662	INFO	org.apache.flink.runtime.taskexecutor.TaskManagerRunner	- --configDir

REST API Design

- read log
 - url: /taskmanagers/:taskmanagerid/log/:filename
 - response: same as taskmanager's log
- list taskmanager all log file
 - url: /taskmanagers/:taskmanagerid/logs
 - response:

```
{
  "logs": [
    {
      "type": "array",
      "id": "urn:jsonschema:org:apache:flink:runtime:rest:messages:LogsInfo",
      "properties": {
        "name": {
          "type": "string"
        },
        "size": {
          "type": "long"
        }
      }
    }
  ]
}
```