

Flink作业

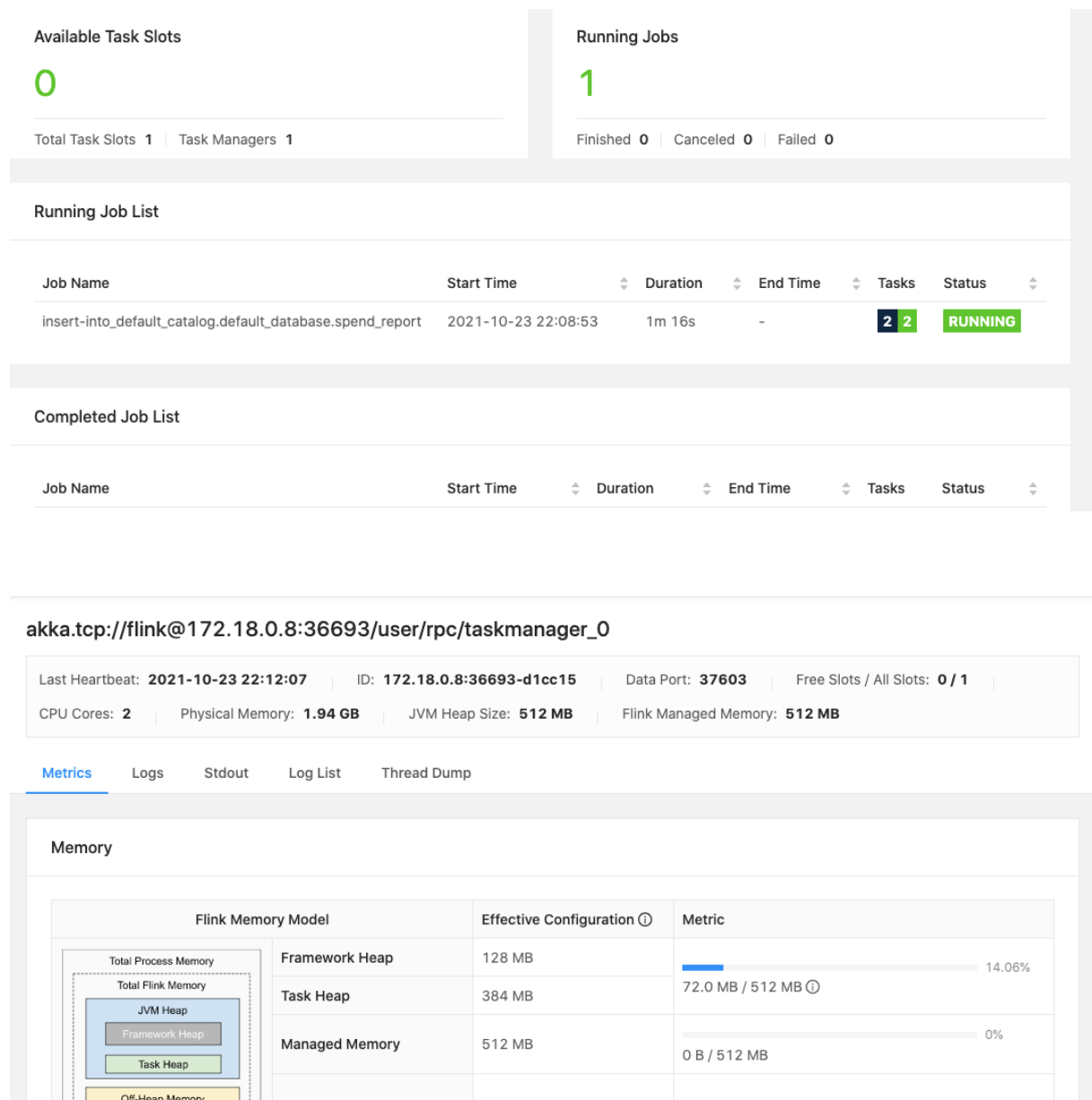
实现SpendReport.java中report功能的代码

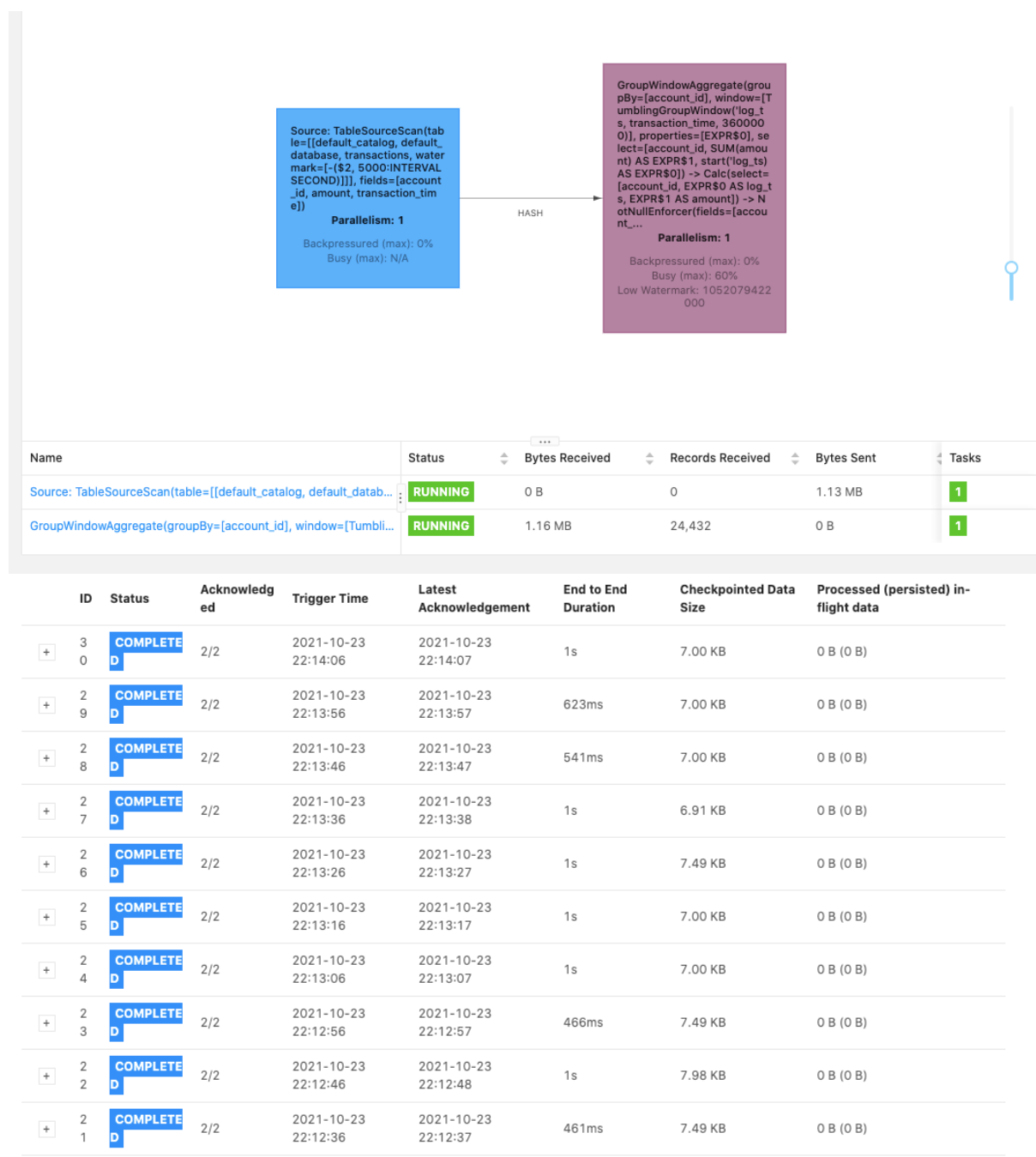
```
public static Table report(Table transactions) {  
    return transactions  
        .window(Tumble.over(1L.hour()).on($  
("transaction_time")).as("log_ts"))  
        .groupBy($"account_id", $"log_ts")  
        .select(  
            $"account_id",  
            $"log_ts".start().as("log_ts"),  
            $"amount".sum().as("amount"));  
}
```

在flink-playgrounds/table-walkthrough下进行编译和启动。

```
Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them  
chenhao@chenhaodeMacBook-Air table-walkthrough % docker-compose up -d  
Creating network "table-walkthrough_default" with the default driver  
Creating table-walkthrough_zookeeper_1 ... done  
Creating table-walkthrough_mysql_1 ... done  
Creating table-walkthrough_grafana_1 ... done  
Creating table-walkthrough_kafka_1 ... done  
Creating table-walkthrough_jobmanager_1 ... done  
Creating table-walkthrough_data-generator_1 ... done  
Creating table-walkthrough_taskmanager_1 ... done  
chenhao@chenhaodeMacBook-Air table-walkthrough %  
chenhao@chenhaodeMacBook-Air table-walkthrough % docker-compose ps  
-----  
Name                                Command                                State                                Ports  
-----  
table-walkthrough_data-generator_1  /docker-entrypoint.sh                Up                                  
table-walkthrough_grafana_1         /run.sh                               Up                                0.0.0.0:3000->3000/tcp, :::3000->3000/tcp  
table-walkthrough_jobmanager_1      /docker-entrypoint.sh stan ...       Up                                6123/tcp, 0.0.0.0:8082->8081/tcp, :::8082->8081/tcp  
table-walkthrough_kafka_1           start-kafka.sh                       Up                                0.0.0.0:9092->9092/tcp, :::9092->9092/tcp  
table-walkthrough_mysql_1           docker-entrypoint.sh --def ...       Up                                3306/tcp, 33060/tcp  
table-walkthrough_taskmanager_1     /docker-entrypoint.sh task ...       Up                                6121/tcp, 6122/tcp, 6123/tcp, 8081/tcp  
table-walkthrough_zookeeper_1       /bin/sh -c /usr/sbin/sshd ...       Up                                0.0.0.0:2181->2181/tcp, :::2181->2181/tcp, 22/tcp, 2888/tcp, 3888/tcp  
chenhao@chenhaodeMacBook-Air table-walkthrough %  
chenhao@chenhaodeMacBook-Air table-walkthrough % pwd  
/Users/chenhao/github_code/flink-playgrounds/table-walkthrough  
chenhao@chenhaodeMacBook-Air table-walkthrough %
```

通过访问localhost:8082打开Flink WebUI界面，观察作业运行情况。





通过命令进入mysql查询spend_report表的数据

docker-compose exec mysql mysql -Dsql-demo -usql-demo -pdemo-sql

在mysql命令行中查询表spend_report的结果

```
mysql> select * from spend_report
-> limit 100;
```

account_id	log_ts	amount
1	2000-01-19 19:00:00.000	888
1	2000-01-19 20:00:00.000	1723
1	2000-01-19 21:00:00.000	476
1	2000-01-19 22:00:00.000	1654
1	2000-01-19 23:00:00.000	1021
1	2000-01-20 00:00:00.000	1840
1	2000-01-20 01:00:00.000	559
1	2000-01-20 02:00:00.000	1104
1	2000-01-20 03:00:00.000	676
1	2000-01-20 04:00:00.000	909
1	2000-01-20 05:00:00.000	1560
1	2000-01-20 06:00:00.000	1002
1	2000-01-20 07:00:00.000	2197
1	2000-01-20 08:00:00.000	986
1	2000-01-20 09:00:00.000	910
1	2000-01-20 10:00:00.000	781
1	2000-01-20 11:00:00.000	1364
1	2000-01-20 12:00:00.000	832
1	2000-01-20 13:00:00.000	2154
1	2000-01-20 14:00:00.000	829
1	2000-01-20 15:00:00.000	1039
1	2000-01-20 16:00:00.000	1616
1	2000-01-20 17:00:00.000	728
1	2000-01-20 18:00:00.000	2007

通过SQL命令查询account_id的amount汇总

```
mysql> select account_id, sum(amount) as amount from
spend_report group by account_id order by account_id asc;
```

account_id	amount
1	9753596
2	9814922

	3	9752390	
	4	9775318	
	5	9712801	
+-----+-----+			

在grafana中查询walkthrough的dashboard，两者一致。

