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davidebasile now



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Name	Name	Last commit date
 ..		
 README.md	folder spec updated	now
 RunnableOrchestratedContr...	updating svg models	14 minutes ago
 RunnableOrchestration.svg	updating svg models	14 minutes ago
 SocketTimeout.svg	updating svg models	14 minutes ago
 model_allbuffers.xml	folder spec updated	now
 model_configurable.xml	folder spec updated	now
 model_exhaustive.xml	folder spec updated	now
 model_statistical.xml	folder spec updated	now
 model_traceability.xml	folder spec updated	now

README.md



Formal Model of the Contract Automata Runtime Environment

This folder contains different versions of the Uppaal model of CARE (we used the version of Uppaal 4.1.26-1, February 2022).

The files `model_exhaustive.xml` and `model_statistical.xml` contain the same model. They contain, respectively, the formulae for exhaustive and statistical model checking (with different set-ups). The other models are variations of this base version. In `model_configurable` the configuration options are also parameters of the templates. In `model_allbuffers` each pair of services has its own buffers for communicating.

It is also included a version `model_traceability.xml` where each transition is traced back to the corresponding source code instructions. The model is slightly polished to improve readability.

In this case the used source code version is b1a6954, navigable here

<https://github.com/contractautomataproject/CARE/tree/b1a695469fbb5a4d212a96dd95bffa0ed39b71b8>.

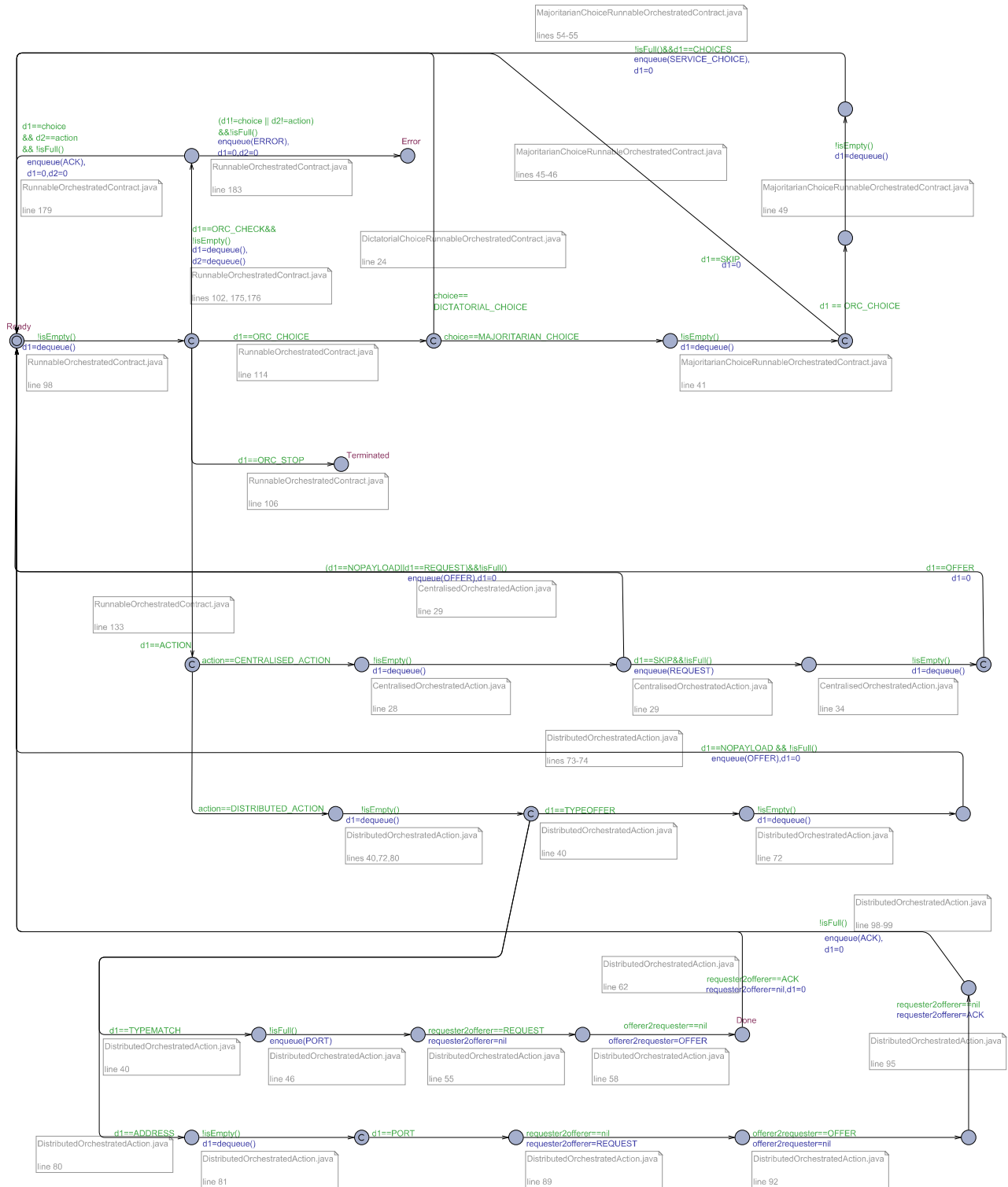
Traceability

Traceability information is related to the source code version b1a6954, navigable here

<https://github.com/contractautomataproject/CARE/tree/b1a695469fbb5a4d212a96dd95bffa0ed39b71b8>.

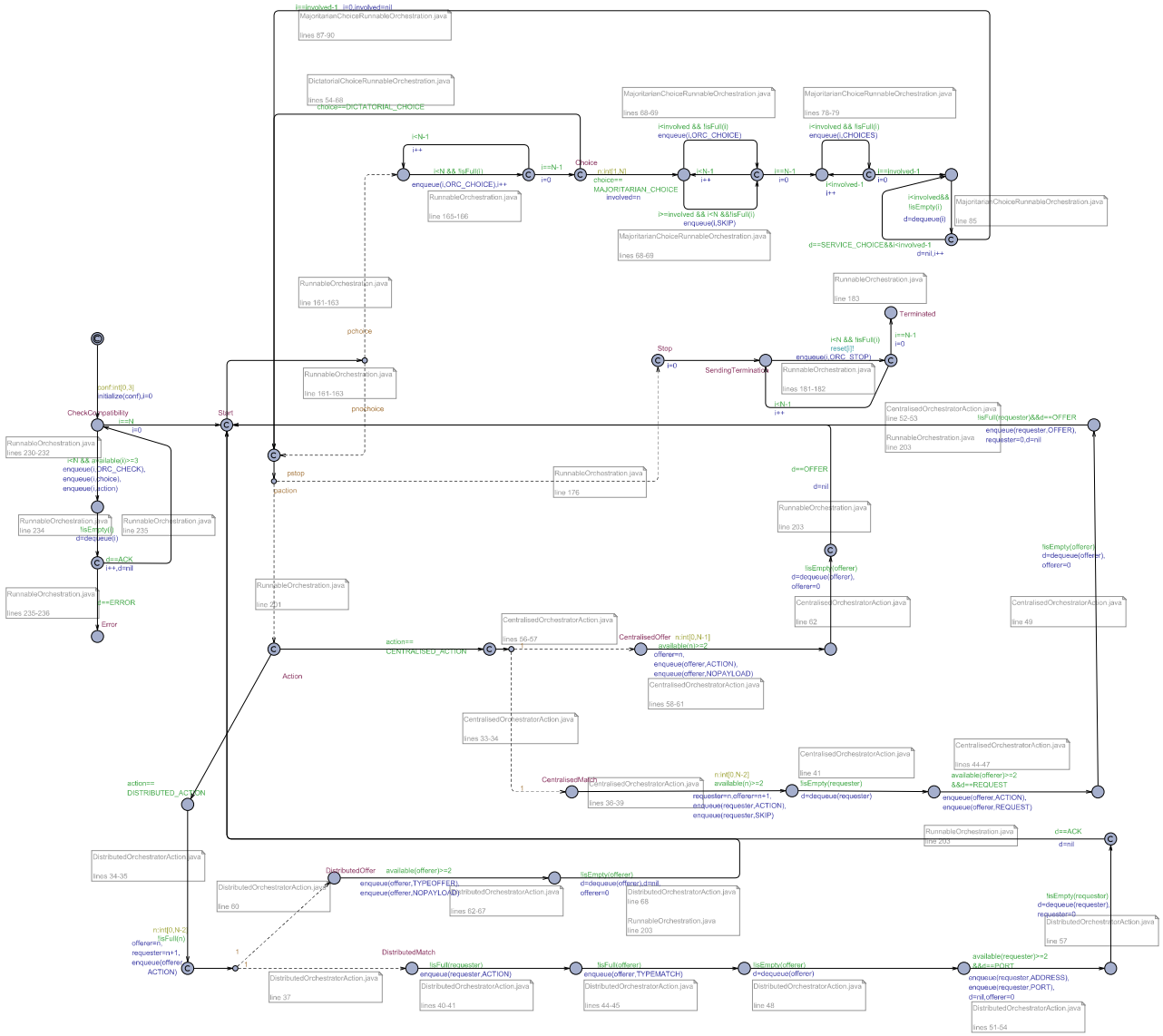
The `RunnableOrchestratedContract` automaton with traceability is displayed below.

RunnableOrchestratedContract



The `RunnableOrchestration` automaton with traceability is displayed below.

RunnableOrchestration

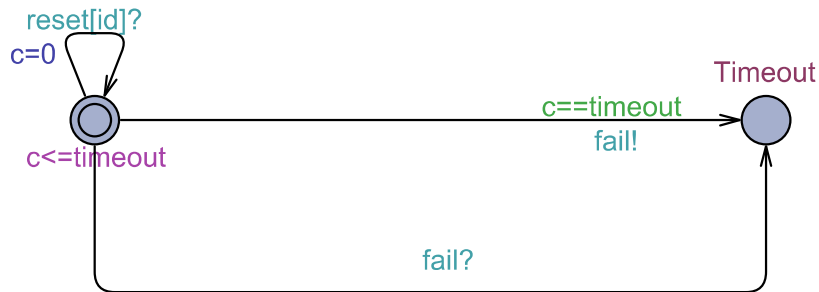


The SocketTimeout automaton with traceability is displayed below.

```

java.net.ServerSocket, java.net.Socket, java.net.SocketTimeoutException
RunnableOrchestration.java          lines 44,140,206-210
RunnableOrchestratedContract.java   lines 37,82,146-150

```



SocketTimeout