

Quality of Protection Modeling Language: User Manuals

Automated Quality of Protection Analysis Tool v0.8.1
User Manual

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QOP-ML
AQOPA



Contents

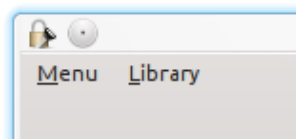
- 1 AQoPA's Overview** **2**
- 1.1 Interface Guide 2
 - 1.1.1 Main Menu 2
 - 1.1.2 Library 3
 - 1.1.3 Tabs 4

AQoPA's Overview

1.1 Interface Guide

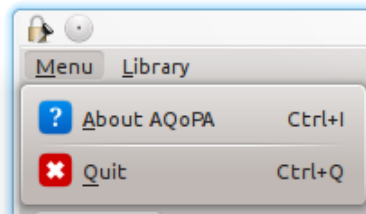
1.1.1 Main Menu

On a Mac, if you are running the application, the menu bar is located at the top of the screen. On other platforms, the menu bar is found at the top of the applications window.



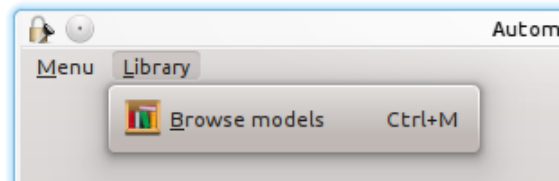
Menu items:

- Menu



About AQoPA (CTRL+I) Shows the information window.
Quit (CTRL+E) Quits the application.

- Library

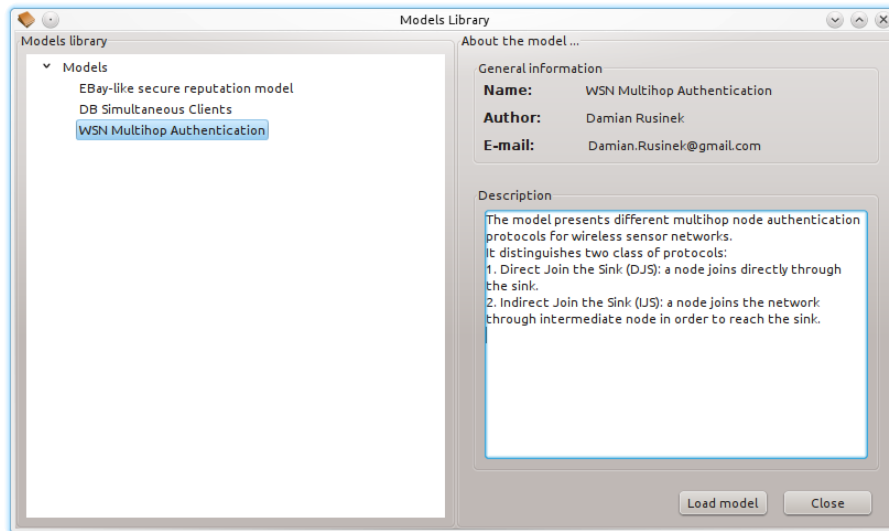


Browse models (CTRL+M) Opens up a new window with the list of the included QoP-ML models, that can be automatically loaded.

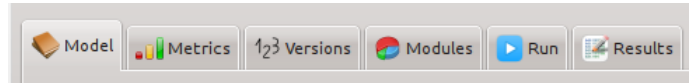
1.1.2 Library

Library includes already created QoP-ML models that can be easily loaded to the AQoPA.

In the left column all available models are listed. One-click loads the information about the selected model to the panel on the right side. To load the model into the AQoPA you have to double-click selected model in the left list or click the Load Model button at the bottom.



1.1.3 Tabs



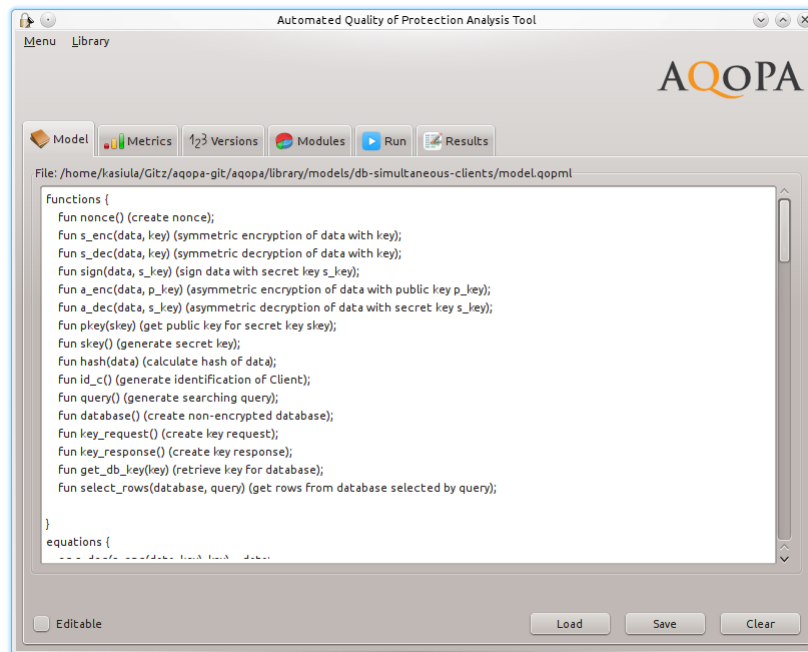
The analysis process needs to use each tab in the order presented below:

1. Model - Loading the QoP-ML model. Additionally, you can change and save it.
2. Metrics - Loading the metrics. Additionally, you can change and save it.
3. Versions - Loading the configuration of analysed versions. Additionally, you can change and save it.
4. Modules - Selecting (and configuring if needed) the modules (eg. Time Analysis module, Energy Analysis module). New modules are waiting to be added.
5. Run - This tab includes two actions: Parsing the model, metrics and versions from the first three tabs and Running the simulation when parsing finished successfully.
6. Results - In this tab you can view the results of finished simulation.

Model

In this tab you can load the QoP-ML model. If you use Library, the model will be loaded automatically. Otherwise, you should click the *Load Model* button and select the file with the model.

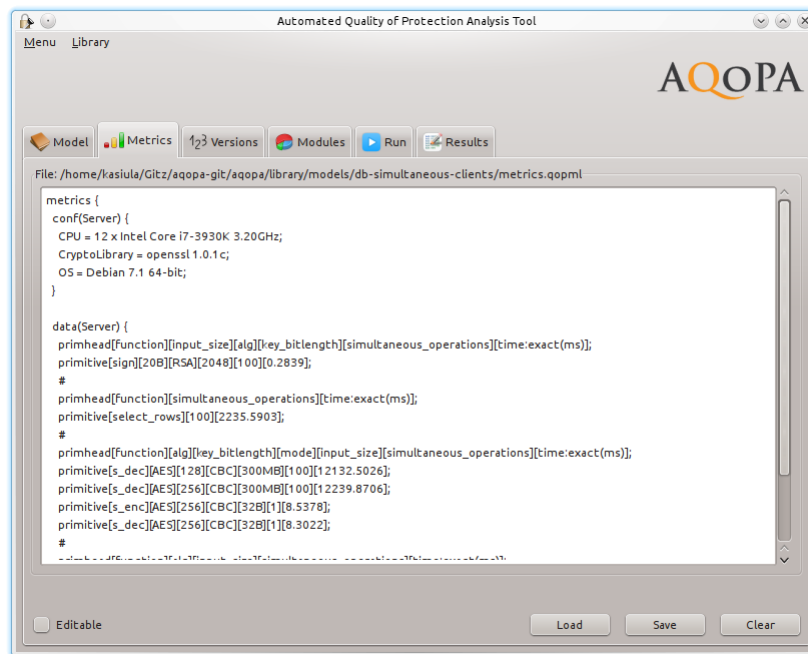
When the model is loaded, you can change it in the textarea and save to the file using *Save Model* button.



Metrics

In this tab you can load the metrics used by your model. If you use Library, the metrics will be loaded automatically. Otherwise, you should click the *Load Metrics* button and select the file with the metrics.

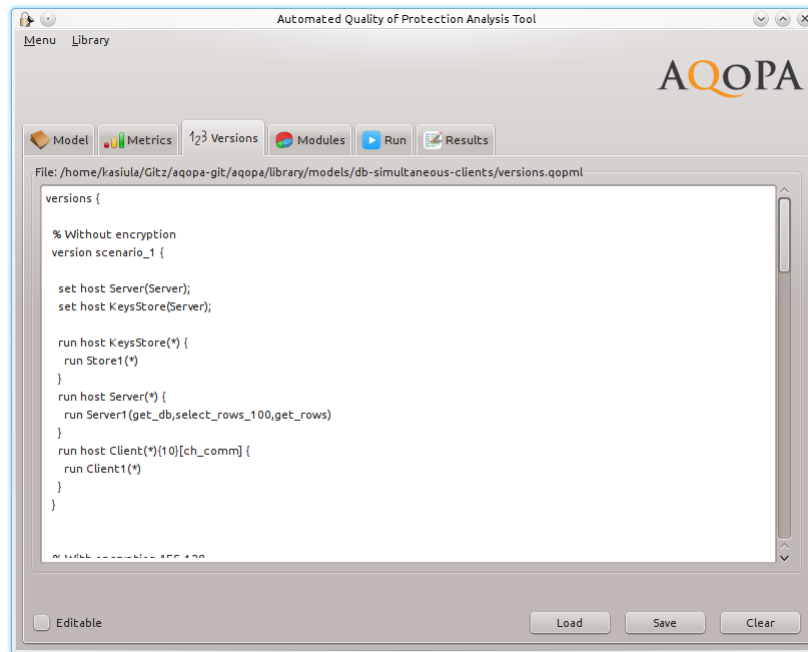
When the metrics are loaded, you can change them in the textarea and save to the file using *Save Metrics* button.



Versions

In this tab you can load the analysed versions that use the hosts from your model. If you use Library, the versions will be loaded automatically. Otherwise, you should click the *Load Versions* button and select the file with the analysed versions.

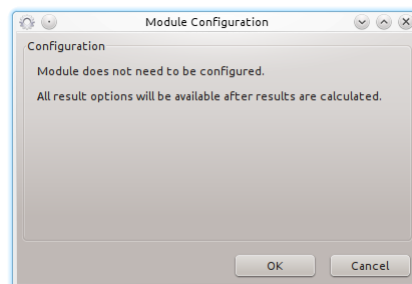
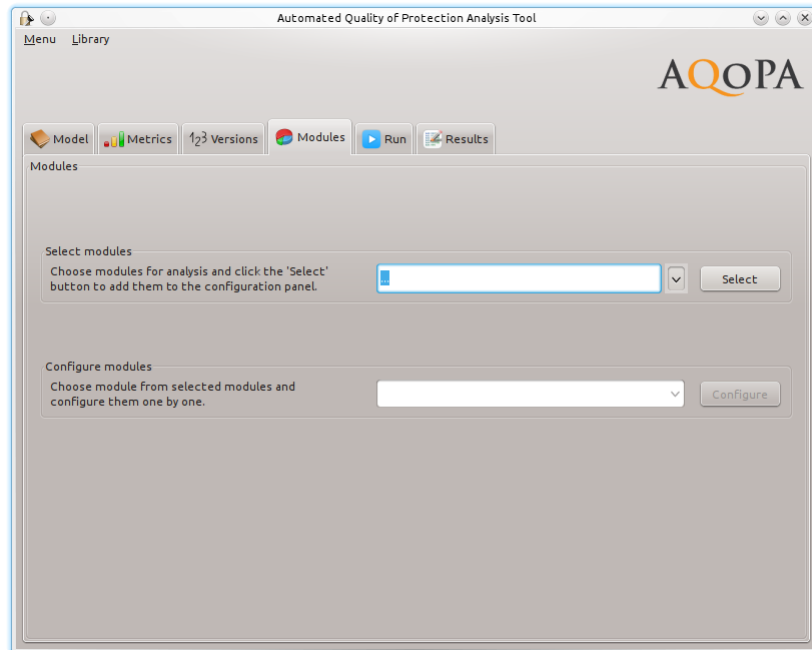
When the versions are loaded, you can change them in the textarea and save to the file using *Save Versions* button.



Modules

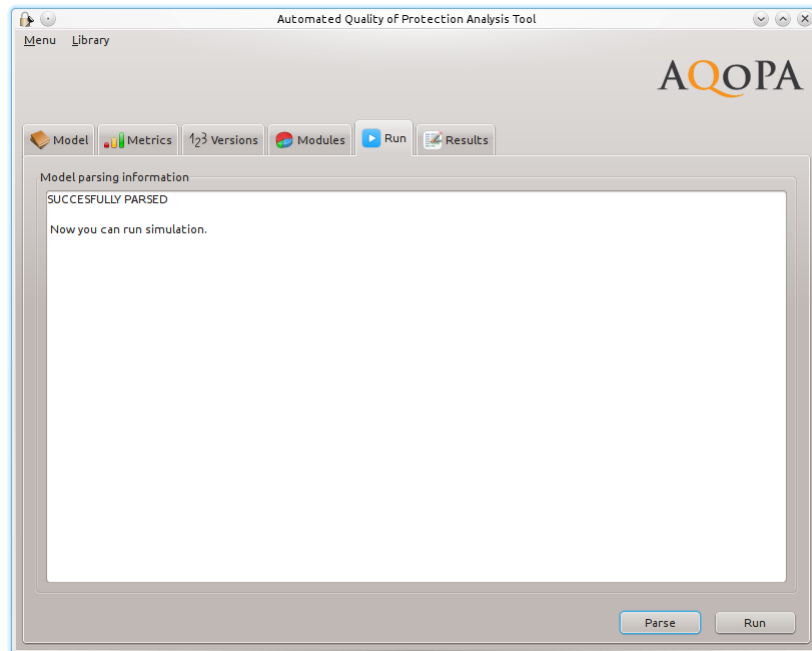
Modules tab is divided into two separate rows. The first row contains the list of all available analysis modules (eg. Time Analysis module). To use the module, check the checkbox on the left side the of module title (it is available when you click the module's combo box). After selecting the modules, you need to click the *Select* button to actually select them.

The second row is activated when the *Configure* button belonging to the particular module is clicked. Some models may need to be configured before used. To configure the module, select one from the combo box, and simply click the *Configure* button. Module configuration panel will show up in a new window.



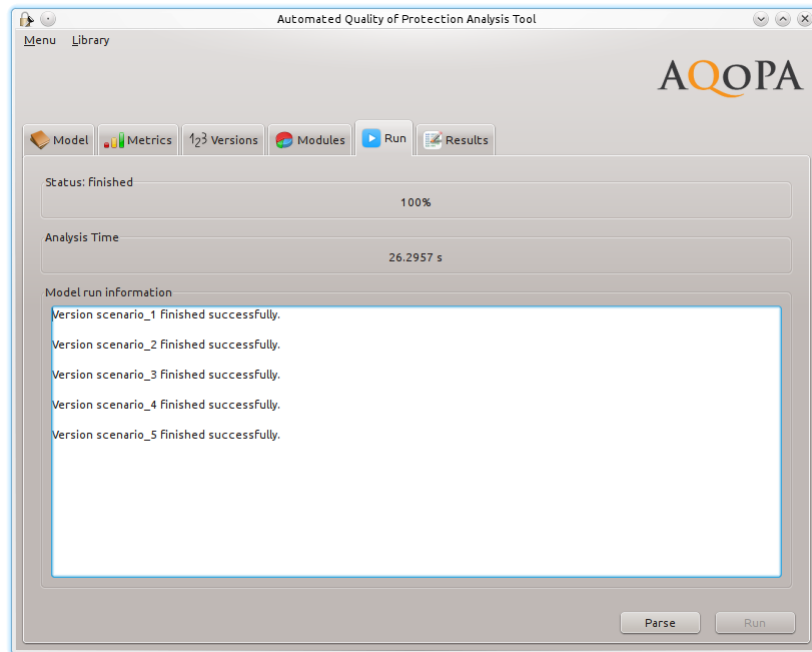
Parsing & Running

When the model is ready and modules are selected you can parse the model using the Parse button. If there are any syntax errors in the model, metrics or versions, they will be enumerated in the textarea on the right side. When the model is correct, the *SUCCESSFULLY PARSED* message will be shown (like on the picture below) and the simulation can be started using the *Run* button.



When the simulation is started, the Status bar is shown which presents the progress of the simulation.

When the simulation of particular version is finished the message is added to the Run Info textarea and the results for this version are ready. When all versions are finished, the analysis time is show which indicates how long the simulation took.



Results

The last tab is used to view the results of modules selected in the Modules tab.

You have to choose the module in the left column and its results are presented in the panel on the right side.

For example, in the picture below the Time Analysis module has been selected. Later, the version must be selected from the choice field and the results options are available below. The first result is the *Total time* of selected version. Below you can check the *Total time* of one host, *Average*, *Minmal* and *Maximal* times of selected set of hosts. Hosts are selected using the checkbox in front of its name in *Host(s)* panel. If the host is repeated you can choose many hosts indexes separated with comma or their range using a dash.

