

General The first form under the ‘General’ tab is used to provide the following general information controlling the name and different options of the generated macro file:

- *Macro name:* The name of the generated test macro, which is used to run the macro in the DAB tool. One can enter the name ‘start’ here to have the test macro be invoked automatically when loading the macro file.
- *Macro file:* The name of the generated macro file.
- *Log file:* The name of the log file to be created when the test macro is run.
- *Test ID:* A numeric key identifying the test run. This key allows to extract a specific test run from the database.
- *Remark:* A comment describing the test run.
- *Options:* Currently two options are available which control whether the macro should be executed in batch mode, and whether the running times of algorithms should be reported in the log file.
- *Random seed:* An integer value specifying the random seed, which is used to initialize the random number generator for this test run. The random seed controls the particular sequence of pseudorandom graphs and requirements which are generated during execution of the test macro. This makes it possible to reproduce the same sequence any time the test macro is run. If this field is left empty then the random number generator will not be initialized, and hence each invocation of the test macro generates a new sequence of instances.

Graph This form is used to specify the graphs to be generated. One can select the type of graph (and specify corresponding parameters), as well as the range of node numbers (given by beginning and end of the range and the increment) and the number of graphs to generate for each number of nodes in the range. Multiple types of graphs can be selected, so that, e.g., it is possible to work with both disk and planar graphs in a single test run.

Unit Requirements This form allows to select the graph coloring and clique algorithms (along with the corresponding node orders) which are to be applied to the generated graph itself via unit requirements (see the description of the ‘Unit requirements’ option in the ‘Create Services’ submenu). Multiple node orders can be specified. Note that here the ordinary and the regular coloring and clique algorithms are essentially the same since for unit requirements and ensembles the ordinary and the regular ensemble graphs are isomorphic. Nevertheless, both types of algorithms are provided for consistency with the *Coloring* form (see below).