



Metric Thresholds in QA-C and QA-C++

Code Metrics are a useful way of determining maintainability and testability.

QA-C and QA-C++ can be configured to generate a message when a metric threshold is exceeded, so that key metrics can be kept within limits during the development cycle. The tools produce many metrics - here we will look at just three of them:

Cyclomatic Complexity (STCYC)
Estimated Static Program Path Count (STPTH)
Level of Nesting (STMIF)

With your project open in the GUI, edit the Analyser Personality and click the Metrics Tab.
Click Add... and enter the following mnemonics and thresholds:

STCYC>10
STPTH>200
STMIF>5

Edit the Message Personality to enable message 4700 and analyse.

Message 4700 (Level 2 Metric Thresholds in QA-C; Level 7 Complexity in QA-C++) will be produced when any of these metrics exceed their thresholds for any function, with message text against the function definition reading, e.g. "Msg(2:4700) Metric value out of threshold range: diag() : SYCYC = 27."

Analyse your code and see if any metrics are over the threshold. You can now take action to reduce the values and thus improve your code testability and reliability (and thus code quality).

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