

How to Run MISRA-QAC batch files

There are several forms of MISRA support that are included in the build of the project. These include:

1. Run QAC analysis batch files manually
2. Run CI scripts to produce MISRA summary information
3. ***EXPERTS*** Run the QAC GUI project as an expert and view the results. This can be helpful for detailed reviewing.

HOWTO: Run the QAC analysis batch files manually

1.0 Create QAC batch files

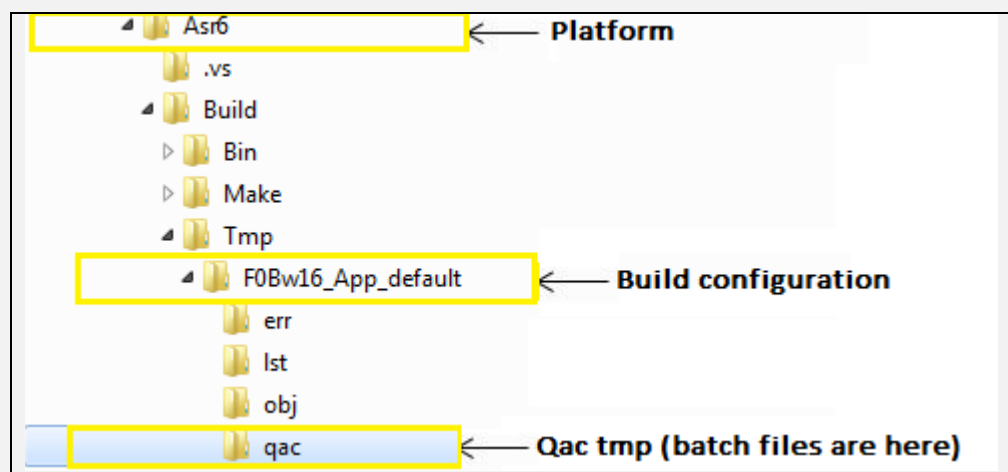
After we build the project, three batch files are created below the path.

Our example in this documentation will be **Asr6**.

The path of the batch files depends on the build configuration.

Example:

...\Asr6\Build\Tmp\F0Bw16_App_default\qac



There are three (optional) batch files example based on F0Bw16_App_default):

- `._F0Bw16_App_default_qac_QAC-8.1.2-R_analyze.bat`
- `._F0Bw16_App_default_qac_QAC-8.1.2-R_report.bat`
- `._F0Bw16_App_default_qac_QAC-8.1.2-R_view.bat`

Each one of these batch files has a different purposes and can be used for expert analyses. See the descriptions below.

2.0 Run: `._F0Bw16_App_default_qac_QAC-8.1.2-R_analyze.bat`

This batch file runs QAC analysis on all source files in the configuration. This batch file should be run as first, because this makes the analysis and generates some summary, which include warnings, dataflow problems, software defects, and language implementation errors.

3.0	Run: _F0Bw16_App_default_qac_QAC-8.1.2-R_report.bat
	This batch file creates QAC MISRA reports. (You must first run *_analyze.bat shown above). These reports help to find problems, showing where to get a better look and identifying areas where the most work is needed. Compliance Report: Shows areas that need more improvement to get a higher level of compliance. Code Review Report: suitable for peer-review enabling design, optimization and requirements Metric Data Report: Provides an XML file as a source for quality metrics. Suppression Report: shows discrete information about diagnostic messages that were suppressed throughout the analysis
4.0	Run: _F0Bw16_App_default_qac_QAC-8.1.2-R_view.bat
	(You must first run *_analyze.bat shown above). This batch file calls the message browser, which is shown into three panes: Warning Summary View: shows various groupings of encountered messages. Source View: shows annotated source code for the first or highlighted messages occurrence, and, in a second tab, the HTML explanation file for the selected message. Warnings List View: details the listing of messages instances according to the summary View selection.

HOWTO: Run CI scripts to produce MISRA summary information

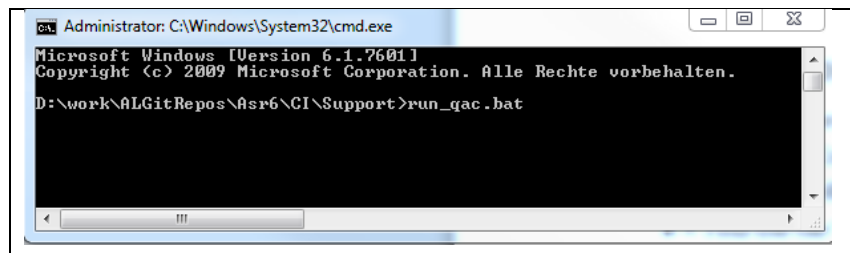
- Consider the Directory “CI”
CI means “Continuous Integration”
- Here you will find a subdirectory called “Support”
- Are you interested in MISRA and Test Statistics?
Then run “run_qac.bat” and “report_integration.bat”
- These will generate summary information for QAC analysis and unit tests.
These batch files analyzes the existing builds that have been run on the machine.

Example of:

Running run_qac.bat” and “report_integration.bat”

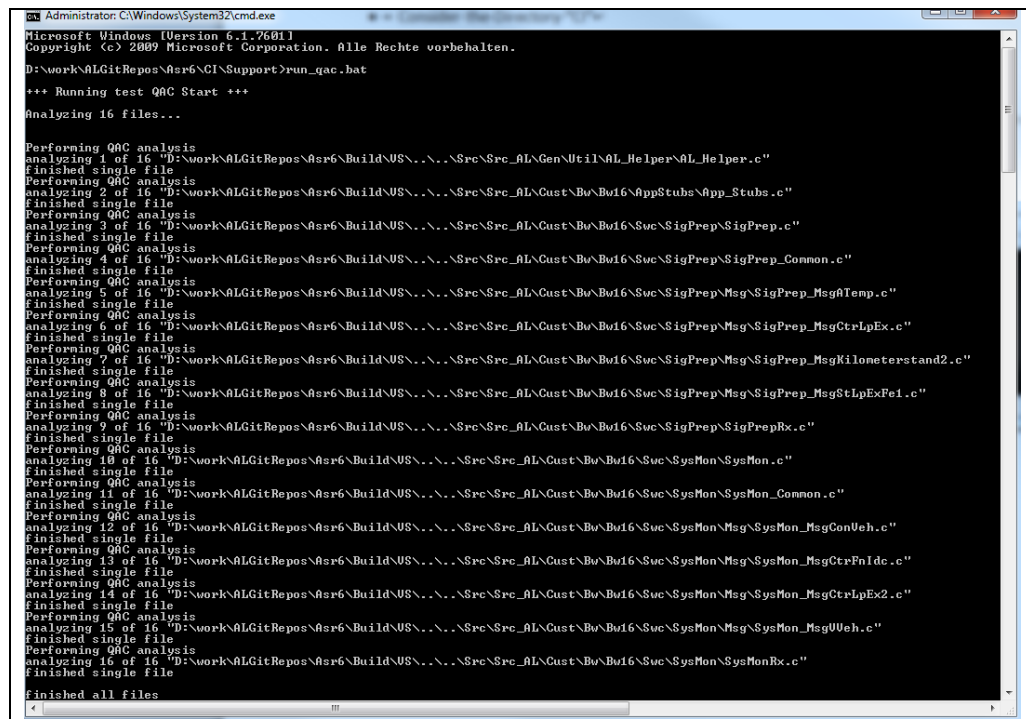
- Find the file “CI\Support\run_qac.bat
- And run it.

Example:



```
Administrator: C:\Windows\System32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. Alle Rechte vorbehalten.
D:\work\ALGitRepos\Asr6\CI\Support>run_qac.bat
```

Example output:



```
Administrator: C:\Windows\System32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. Alle Rechte vorbehalten.
D:\work\ALGitRepos\Asr6\CI\Support>run_qac.bat
+++ Running test QAC Start +++
Analyzing 16 files...
Performing QAC analysis
analyzing 1 of 16 "D:\work\ALGitRepos\Asr6\Build\US\...\Src\Src_AL\GenUtil\AL_Helper\AL_Helper.c"
finished single file
Performing QAC analysis
analyzing 2 of 16 "D:\work\ALGitRepos\Asr6\Build\US\...\Src\Src_AL\Cust\Bv\Bv16\AppStubs\App_Stubs.c"
finished single file
Performing QAC analysis
analyzing 3 of 16 "D:\work\ALGitRepos\Asr6\Build\US\...\Src\Src_AL\Cust\Bv\Bv16\Svc\SigPrep\SigPrep.c"
finished single file
Performing QAC analysis
analyzing 4 of 16 "D:\work\ALGitRepos\Asr6\Build\US\...\Src\Src_AL\Cust\Bv\Bv16\Svc\SigPrep\SigPrep_Common.c"
finished single file
Performing QAC analysis
analyzing 5 of 16 "D:\work\ALGitRepos\Asr6\Build\US\...\Src\Src_AL\Cust\Bv\Bv16\Svc\SigPrep\Msg\SigPrep_Msg0Temp.c"
finished single file
Performing QAC analysis
analyzing 6 of 16 "D:\work\ALGitRepos\Asr6\Build\US\...\Src\Src_AL\Cust\Bv\Bv16\Svc\SigPrep\Msg\SigPrep_MsgCtrlPEx.c"
finished single file
Performing QAC analysis
analyzing 7 of 16 "D:\work\ALGitRepos\Asr6\Build\US\...\Src\Src_AL\Cust\Bv\Bv16\Svc\SigPrep\Msg\SigPrep_MsgKilometerstand2.c"
finished single file
Performing QAC analysis
analyzing 8 of 16 "D:\work\ALGitRepos\Asr6\Build\US\...\Src\Src_AL\Cust\Bv\Bv16\Svc\SigPrep\Msg\SigPrep_MsgStLpExFe1.c"
finished single file
Performing QAC analysis
analyzing 9 of 16 "D:\work\ALGitRepos\Asr6\Build\US\...\Src\Src_AL\Cust\Bv\Bv16\Svc\SigPrep\SigPrepRx.c"
finished single file
Performing QAC analysis
analyzing 10 of 16 "D:\work\ALGitRepos\Asr6\Build\US\...\Src\Src_AL\Cust\Bv\Bv16\Svc\SysMon\SysMon.c"
finished single file
Performing QAC analysis
analyzing 11 of 16 "D:\work\ALGitRepos\Asr6\Build\US\...\Src\Src_AL\Cust\Bv\Bv16\Svc\SysMon\SysMon_Common.c"
finished single file
Performing QAC analysis
analyzing 12 of 16 "D:\work\ALGitRepos\Asr6\Build\US\...\Src\Src_AL\Cust\Bv\Bv16\Svc\SysMon\Msg\SysMon_MsgConVeh.c"
finished single file
Performing QAC analysis
analyzing 13 of 16 "D:\work\ALGitRepos\Asr6\Build\US\...\Src\Src_AL\Cust\Bv\Bv16\Svc\SysMon\Msg\SysMon_MsgCtrlPndc.c"
finished single file
Performing QAC analysis
analyzing 14 of 16 "D:\work\ALGitRepos\Asr6\Build\US\...\Src\Src_AL\Cust\Bv\Bv16\Svc\SysMon\Msg\SysMon_MsgCtrlPEx2.c"
finished single file
Performing QAC analysis
analyzing 15 of 16 "D:\work\ALGitRepos\Asr6\Build\US\...\Src\Src_AL\Cust\Bv\Bv16\Svc\SysMon\Msg\SysMon_MsgUveh.c"
finished single file
Performing QAC analysis
analyzing 16 of 16 "D:\work\ALGitRepos\Asr6\Build\US\...\Src\Src_AL\Cust\Bv\Bv16\Svc\SysMon\SysMonRx.c"
finished single file
finished all files
```

- Find the file “C:\Support\report_integration.bat
- And run it.

```
Administrator: C:\Windows\System32\cmd.exe
D:\work\ALGitRepos\Asr6\C\Support>report_integration.bat
List of failed test UT cases:
List of failed test IT cases:
List of functions where CO coverage less than 100:
CO_percent  function_name
-----
88          CddShc9471_WriteClearReg
75          CddShc9471_CbkGetSupState0
75          CddShc9471_Init
67          CddShc9471_ValidateCanMode
60          CddShc9471_GetCanWakeUpReason
0           CddRdc_Dummy
0           CddLed_Dummy
List of functions with QAC or HIS warnings:
-----
filename                                     misra_0 misra_1 misra_2 misra_3 misra_4 misra_5 misra_6 misra_7 misra_8 misra_9 his
-----
Src_AL\Gust\Bu\Bu16\AppStubs\App_Stubs.c    0        0        0        0        0        0        0        9        0        0        9
Src_AL\Gust\Bu\Bu16\Svc\SigPrep\Msg\SigPrep_MsgCtrlLpEx.c 0        0        0        0        0        0        0       17        0        0        2
Src_AL\Gust\Bu\Bu16\Svc\SigPrep\Msg\SigPrep_MsgKilometerstand2.c 0        0        0        0        0        0        0        4        0        0        0
Src_AL\Gust\Bu\Bu16\Svc\SigPrep\SigPrep.c    0        0        0        0        0        0        0        1        0        0        0
Src_AL\Gust\Bu\Bu16\Svc\SigPrep\SigPrepRx.c  0        0        0        0        0        0        0        1        0        0        0
Src_AL\Gust\Bu\Bu16\Svc\SysMon\Msg\SysMon_MsgConVeh.c  0        0        0        0        0        1        0        5        0        0        0
Src_AL\Gust\Bu\Bu16\Svc\SysMon\Msg\SysMon_MsgCtrlFnIdc.c 0        0        0        0        0        1        0        1        0        0        3
Src_AL\Gust\Bu\Bu16\Svc\SysMon\Msg\SysMon_MsgCtrlLpEx2.c 0        0        0        0        0        1        0        0        0        0        2
Src_AL\Gust\Bu\Bu16\Svc\SysMon\Msg\SysMon_MsgUUeh.c  0        0        0        0        0        0        0        1        0        0        0
Src_AL\Gust\Bu\Bu16\Svc\SysMon\SysMon.c     0        0        0        0        0        0        0        1        0        0        0
Src_AL\Gust\Bu\Bu16\Svc\SysMon\SysMonRx.c   0        0        0        0        0        0        0        1        0        0        0
List of compiler warnings:
-----
filename                                     line  type  error_id
-----
Src_AL\Gust\Bu\Bu16\Svc\SigPrep\SigPrepRx.c 28    warning #550-D
Src_AL\Gust\Bu\Bu16\Svc\SysMon\Msg\SysMon_MsgCtrlFnIdc.c 24    warning #177-D
Src_AL\Gust\Bu\Bu16\Svc\SysMon\SysMonRx.c    23    warning #550-D
D:\work\ALGitRepos\Asr6\C\Support>
```

HOWTO: *EXPERTS* Run the QAC GUI project as an expert and view the results

- Experts might want to run QAC themselves to look at analysis of MISRA.
- Run the QAC GUI.
- Open the project file “...\Build\Tmp\F0Bw16_App_default\qac_qac_gui.prj”

Example of:

Running QAC GUI with “_qac_gui.prj”

