Troubleshooting

MATLAB HEC-RAS Interface Documentation, IMTLD

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This document gathers avenues and advices, which can help you, if you encounter any problem before making your first automation with the MATLAB HEC-RAS interface.

If everything worked before when you added your own scripts in the input and output functions. Please refer to the input and output scripts documentation. Or the internal documentation of MATLAB and HEC-RAS.

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Advices

In HEC-RAS

To choose the number of variables in a user defined table, you can click once on the decimal number of the variable, and then you can write the new number. It is perhaps a bug, but there is no editor with a flashing cursor '|'.

Frequent errors

During automation, MATLAB side

If there is a fopen error in MATLAB

Double check that the Ras project you choose in settings.ini exists and contains every required file to work well.

If MATLAB asks to buy / install a add-on or extra MATLAB app

The MATLAB HEC-RAS interface does not require any plugin, add-on or extra app, excepts the ones mentioned in table below.

Interface version	**MATLAB app or add-on required**
BETA 1_0_2 and previous versions	Not one
Later versions	Parallel Computing Toolbox, will be always optional

Warning : if a MATLAB error occurs, MATLAB could ask you to buy or install a add-on or extra MATLAB app. It is an error due to the fact, that variable which causes the error has a name used in this add-on or extra MATLAB app. Installing such an app will not solve the issue encountered.

False positive in Ras error detection

It is possible that error detector stops computation, despite the Ras computation was successful, without any Ras error. In this case, it is a false positive. You can answer N (no) to the question “do you want to stop simulation”, and the simulation will continue without any issue.

To avoid false positive in the future, the easy solution is to disable error detection by disabling RAS_error_management in settings.ini. See Settings paper to learn how to do so.

Warning : if RAS error management is disabled, and if a blocking error occurs in HEC-RAS, all results obtained, since starting of the master function, will be lost.

A more advanced way is to improve or edit the detect_RAS_error MATLAB function in RAS process folder. See Dev Doc paper to learn how to do so.

During automation, HEC-RAS side

Hydrograph blocked, always reading the firsts values

Definition: a hydrograph is a Ras object structured like the Flow Hydrograph

Note: the hydrograph in Ras .u file is filled horizontally toward right and vertically toward down

When a simulation runs and pauses HEC-RAS at each time step, the beginning date of the simulation increments itself at each time step. Also, if the hydrograph is set to begin at the date of simulation. Then, always the firsts values will be read.

It is necessary to set the beginning date of the hydrograph on Fixed Start Time, to avoid running into any trouble.

Interpolated cross section

If you call in MATLAB an interpolated cross section, do not forget that its name is like 500.00* and not like 500. If you write 500 instead of 500.00*, the cross section will be not found in HEC-RAS and MATLAB will throw an error.

Hidden errors

If HEC-RAS encounters an error during simulation launch, it will not always throw an error to MATLAB. In the case it does not throw an error, there is different possible behaviors:

- HEC-RAS opens a dialog box, which contains an error message. This window is not always foreground. If MATLAB is busy during a long time, check if a little window is hidden behind one the windows currently open on your desktop.
- The HEC-RAS Controller object can stay in an infinite loop. Often, HEC-RAS has written an error message in the TXT file "[…] compute msgs'', if error detection is enabled, MATLAB will detect the erro. But if error detection does not work, MATLAB will endlessly wait for HEC-RAS.