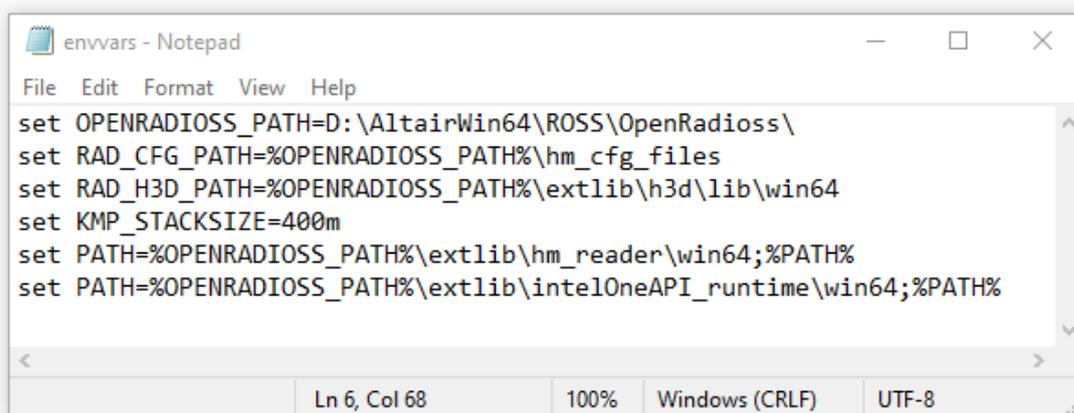

Notes on Running Openradioss on Windows

14th March 2023

Getting Openradioss running on windows is not well documented. Here are the steps I used to get it running on my system, with the help of Paul Sharp from Altair, who supplied a number of scripts.

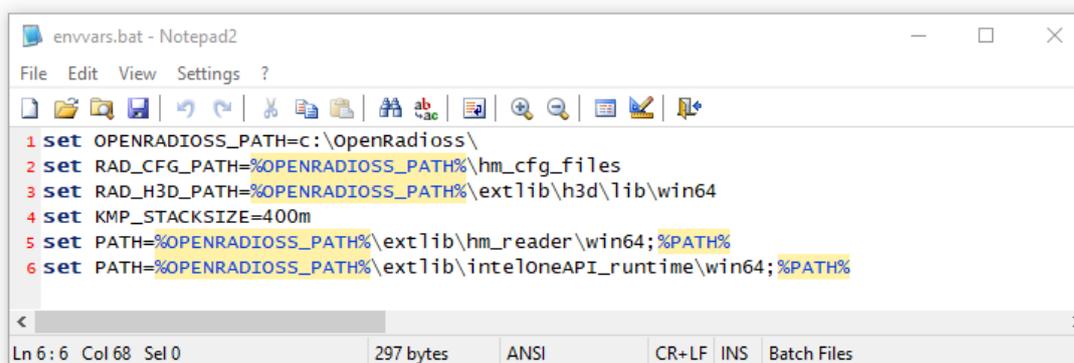
Environment variables

Obviously Openradioss has to be able to find files, resources etc. Sample envvars.bat file looks like this.



```
envvars - Notepad
File Edit Format View Help
set OPENRADIOSS_PATH=D:\AltairWin64\ROSS\OpenRadioss\
set RAD_CFG_PATH=%OPENRADIOSS_PATH%\hm_cfg_files
set RAD_H3D_PATH=%OPENRADIOSS_PATH%\extlib\h3d\lib\win64
set KMP_STACKSIZE=400m
set PATH=%OPENRADIOSS_PATH%\extlib\hm_reader\win64;%PATH%
set PATH=%OPENRADIOSS_PATH%\extlib\intelOneAPI_runtime\win64;%PATH%
Ln 6, Col 68 100% Windows (CRLF) UTF-8
```

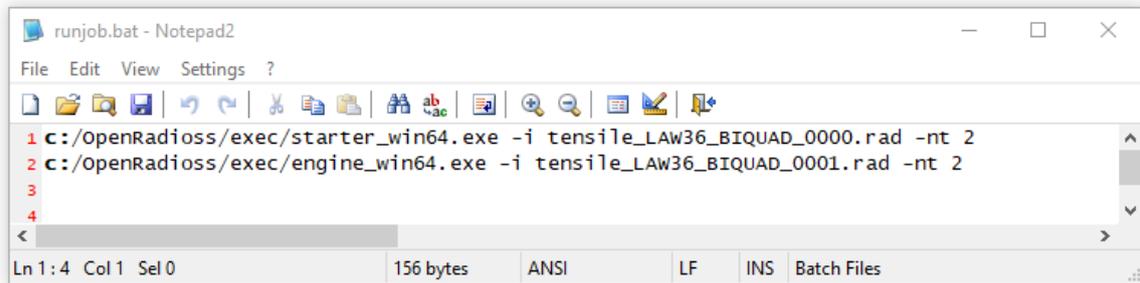
Ony my system I edited to be like this.



```
envvars.bat - Notepad2
File Edit View Settings ?
1 set OPENRADIOSS_PATH=c:\OpenRadioss\
2 set RAD_CFG_PATH=%OPENRADIOSS_PATH%\hm_cfg_files
3 set RAD_H3D_PATH=%OPENRADIOSS_PATH%\extlib\h3d\lib\win64
4 set KMP_STACKSIZE=400m
5 set PATH=%OPENRADIOSS_PATH%\extlib\hm_reader\win64;%PATH%
6 set PATH=%OPENRADIOSS_PATH%\extlib\intelOneAPI_runtime\win64;%PATH%
Ln 6 : 6 Col 68 Sel 0 297 bytes ANSI CR+LF INS Batch Files
```

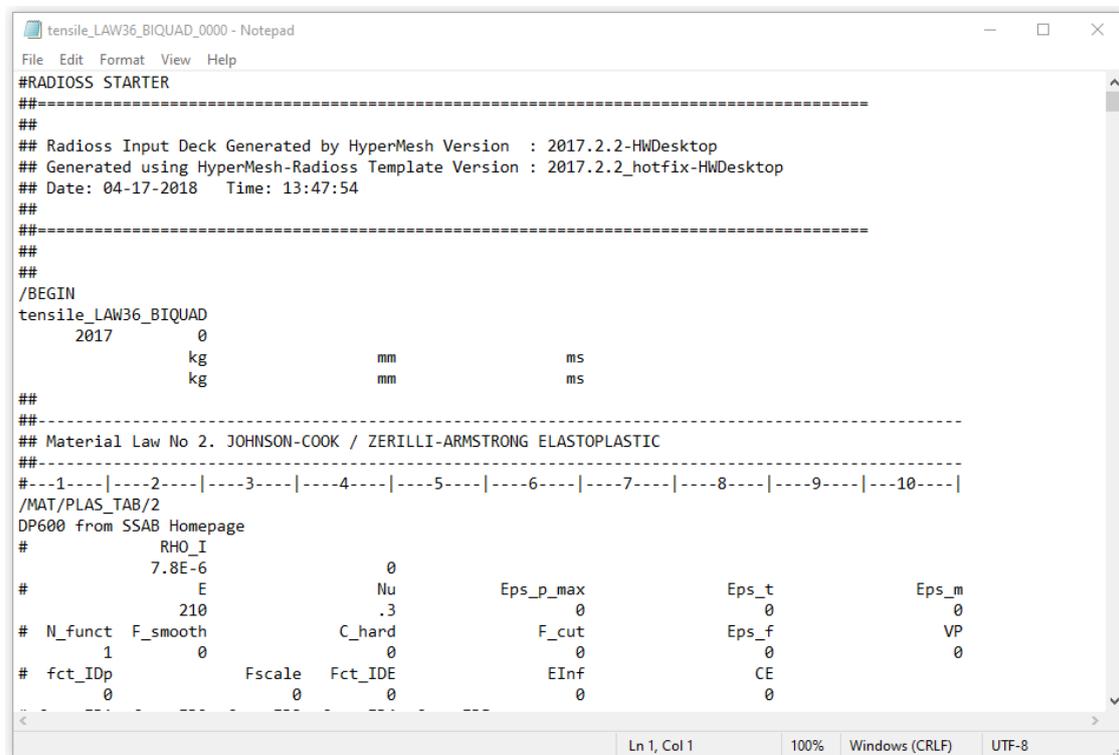


When you run Openradioss you need to specify two files. One has the model in it and one has a bunch of control data. (Unless you run with LSDyna data, which will be covered later.) This is a sample.



```
runjob.bat - Notepad2
File Edit View Settings ?
1 c:/OpenRadioss/exec/starter_win64.exe -i tensile_LAW36_BIQUAD_0000.rad -nt 2
2 c:/OpenRadioss/exec/engine_win64.exe -i tensile_LAW36_BIQUAD_0001.rad -nt 2
3
4
Ln 1:4 Col 1 Sel 0 156 bytes ANSI LF INS Batch Files
```

Tensile_LAW36_BIQUAD_0000.rad contains the standard FE model input data. In this case the model was written in hypermesh.



```
tensile_LAW36_BIQUAD_0000 - Notepad
File Edit Format View Help
#RADIOSS STARTER
#####
##
## Radioss Input Deck Generated by HyperMesh Version : 2017.2.2-HWDesktop
## Generated using HyperMesh-Radioss Template Version : 2017.2.2_hotfix-HWDesktop
## Date: 04-17-2018 Time: 13:47:54
##
#####
##
##
/BEGIN
tensile_LAW36_BIQUAD
  2017      0
           kg          mm          ms
           kg          mm          ms
##
#####
## Material Law No 2. JOHNSON-COOK / ZERILLI-ARMSTRONG ELASTOPLASTIC
##
#---1---|---2---|---3---|---4---|---5---|---6---|---7---|---8---|---9---|---10---|
/MAT/PLAS_TAB/2
DP600 from SSAB Homepage
#
  RHO_I      7.8E-6      0
#
  E          210      Nu      .3      Eps_p_max      0      Eps_t      0      Eps_m      0
# N_funct F_smooth      C_hard      F_cut      Eps_f      VP
  1          0          0          0          0          0
# fct_IDp      Fscale      Fct_IDE      EInf      CE
  0          0          0          0          0
```

Tensile_law36_BIQUAD_00001.rad contains out data controls. This writes out the results file in Radioss ann format. To create a VTK file the converter needs the ann file.



```
tensile_LAW36_BIQUAD_0001 - Notepad
File Edit Format View Help
/VERS/2017
/RUN/tensile_LAW36_BIQUAD/1/
40.00000000000000
/ANIM/VECT/VEL
/ANIM/SHELL/TENS/STRESS/ALL
/ANIM/SHELL/TENS/STRAIN/ALL
/ANIM/ELEM/EPSP/ALL
/ANIM/DT
0.000000000000000 0.500000000000000
/PRINT/-500
/TFILE/0
0.010000000000000
/STOP
0.000000000000000 0.000000000000000 0.000000000000000 1 1
/MON/ON
/DT/NODA/CST/0
0.900000000000000 0.000000000000000
```

This version of the file creates a Hypermesh H3D output file that can't be read by paraview.

```
tensile_LAW36_BIQUAD_0001 - Notepad
File Edit Format View Help
/VERS/2017
/RUN/tensile_LAW36_BIQUAD/1/
40.00000000000000
/H3D/NODA/VEL
/H3D/SHELL/TENS/STRESS/NPT=ALL
/H3D/SHELL/TENS/STRAIN/NPT=LOWER
/H3D/SHELL/TENS/STRAIN/NPT=UPPER
/H3D/ELEM/EPSP/NPT=UPPER
/H3D/ELEM/EPSP/NPT=LOWER
/H3D/COMPRESS
0.01
/H3D/DT
0.000000000000000 0.500000000000000
/PRINT/-500
/TFILE/0
0.010000000000000
/STOP
0.000000000000000 0.000000000000000 0.000000000000000 1 1
/MON/ON
/DT/NODA/CST/0
0.900000000000000 0.000000000000000
```



Results plotted in Paraview.

