IMAS environment setup and introduction to the infrastructure tools

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Environment setup (users)

- If you did not take part in ETS5 training or did not run the preparation scripts:
  - *cp -r ~g2diy/public/ets_training_20 $HOME/public*
  - *cd $HOME/public/ets_training_20*
  - *./access.sh get*
  - (optionally, if you do not allow other group to access your pfs) *./access.sh setpfs*
  - *./additional_setup.sh imas*
- Since this week the *imasenv* setup is similar to the one for *itmenv*
  - *module load ets6* (this will load *imasenv*, we are going to use stable version)
  - *ets6* (this will: a) install/load dressed kepler; b) launch´autoGui; c) load the released version of the ETS6 workflow)
  - *ets6-kepler* (a), c) as above; b) Kepler canvas is launched)

  I suggest to create a link to your *$ETS_HOME* in your *$HOME* by doing

  ln -s $ETS6_HOME $HOME/ets6home to make easier loading of the parameter files

Environment setup (backup)

If instructions on the previous page did not work

- Environment
  - **echo $0** (check your shell, *bash* or *tcsh*), next steps are described for bash, let me know if you have tcsh
  - **cp ~g2diy/public/ets_training_20/set_imasenv_bash.sh $HOME**
  - open your *.bashrc* in text editor you prefer
  - add the line at the end:
    - **alias imas='source $HOME/set_imasenv_bash.sh'**
  - open new terminal and do **imas**
- Dressed kepler:
  - load environment as described above
  - **module switch kepler/2.5p5-3.1.1_ETS_6.3.0_3.29.0**
  - **kepler_install 630**
  - **kepler_load 630** (**imas** and this command you should repeat each time you open new terminal)
- Worklfow
  - try **svn co https://gforge6.eufus.eu/svn/keplerworkflows/tags/ETS_6.3.0_3.29.0 $ITMWORK/ETS6wf**
  - if above does not work do **cp -r ~g2diy/public/ETS6wf $ITMWORK/ETS6wf**

Check this page: https://users.euro-fusion.org/iterphysicswiki/index.php/Installing_and_starting_the_ETS-6 for more information about environment setup

Infrastructure concepts

- The following concepts are important when working with the ETS5/6 workflow:
    - Kepler canvas - Kepler GUI interface for the workflow management (is launched issuing **kepler** in the terminal after loading kepler)
    - ***autoGui*** - front end to the Kepler that loads the workflow and the set of parameters that are annotated in the workflow in a specific way and can be modified in autoGui (including code parameters). Kepler is not launched at the point when autoGui is launched
    - Parameter file: custom set of the parameters that can be loaded/saved in the Kepler canvas and autoGui and is modified in the workflow when loaded. Parameters are saved in the text format (.txt extension is necessary to be able to modify the file in the autoGui). Parameters can be loaded only after the workflow is loaded either in the Kepler canvas or in the autoGui

Infrastructure tools

- The following tools can be used to check your database/pulse file contents:

  - *imasdbs* - list of the available shots/runs in your database
  - *idsdump* - dumps the contents of the specific IDS to the text format (to the terminal or to the file) to be controlled

  (use -h option for both tools to get the list of available options)

Infrastructure tools

- The following tools can be used for data visualisation:
  - *viz* - launches the GUI interface of *IMASviz*, package developed to visualise IDSs.
  - *ETSViz* - plugin for *IMASviz* developed for ETS6; mimics the *ETSviz* tool developed for ETS5; still under development, some signals/panels are missing
  - number of python scripts in the *$ETS6_HOME/kplots* folder:
    - *simpleCompare** scripts allow to compare two cases (shots, runs, users,..) and calculate difference between them; IDS to be compared are given as part of the name of the script; GUI interface for the scripts is available *simpleCompareInterface.py*
    - hcd* scripts to visualize hcd data (both hardware setup and power profiles in the plasma)