

Pellet Code Gridification – Report

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Pellet Code

The binary is compiled and can run on an UI machine.

Constant input files:

- general.in – global switches
- diagnostics.in – describes the output
- perpex.in, prllex.in – setting for the main subroutines
- ctot.in, h_plt.in, h_prb.in – atom-physical data

Input file that changes during PS:

- shot.in – describes the pellet and the plasma

Output:

There are can be several hundred output files.

Total output size: 1 MB - 100 MB.

- output.dat – ablation rate, penetration depth
- tube001.dat, tube002.dat, ...
- cloud_length001.dat, cloud_length002.dat, ...
- tube001_en_cons.dat, ...

IO

The number of output files are not known in advance.



The output is compressed into one file

A shell script starts the pellet code and then compresses the output (Pellet.sh).

The constant input files are also packed to one file (input.tar).

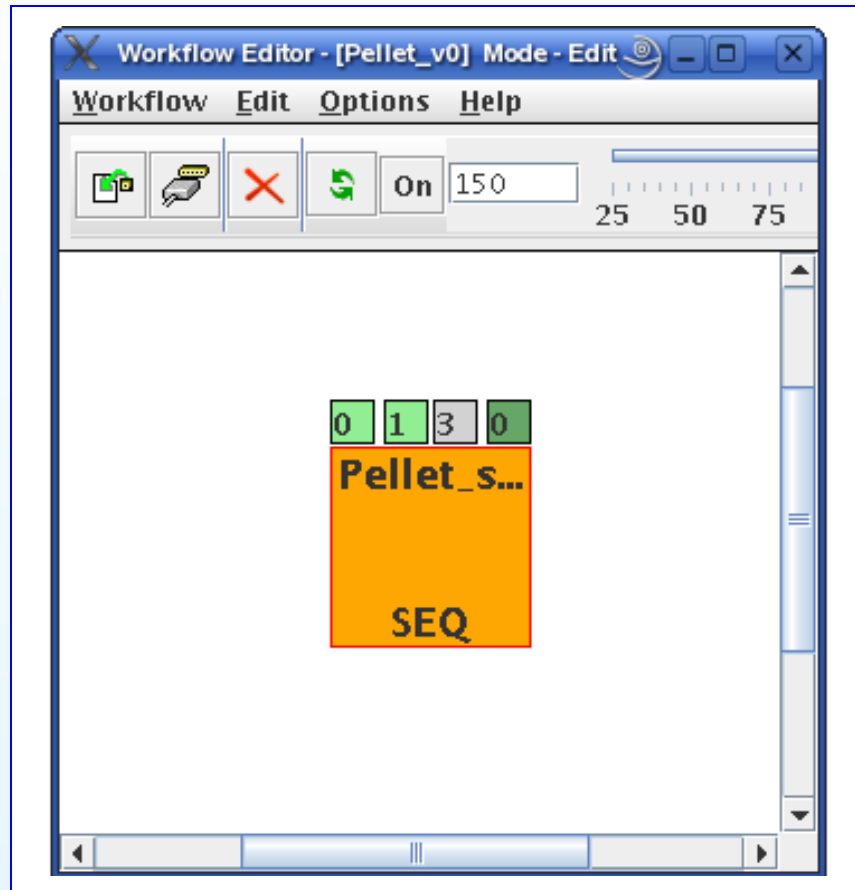
Large output file size



The output data have to be stored on a storage element.

P-GRADE portal is used

Job description



The executable is the Pellet.sh script.

Ports:

- 0 input.tar
- 1 Pellet.exe
- 3 Pellet_Output.tar.gz (remote)
- 0 PS input directory for the shot.in files

PS directory must be remote → a script (transfer.sh) is used to upload the files.

Parameter Study

The screenshot shows the P-Grade Grid portal interface. At the top, there is a navigation bar with tabs for Welcome, Workflow, Certificates, Settings, Information System, and Help. Below this is a sub-navigation bar with links for Workflow Manager, Storage, and Upload. The main content area is titled "Workflow Manager" and contains several sections:

- PS workflow details:** A table showing the status of a workflow named "Pellet_v0".
- eWorkflow list:** A table listing multiple workflow instances (Pellet_v0.1 to Pellet_v0.5) and their statuses.
- Statistics:** A summary table showing the total number of workflows and their current states.

The browser window title is "PGrade Grid portal - Opera" and the address bar shows the URL: <https://n41.hpcc.sztaki.hu:8443/gridsphere/gridsphere?cid=77&g>. The page also features logos for P-Grade, GILDA, and MTA SZTAKI.

PS Workflow	Status	[Output]	[Logs]	[Action]
Pellet_v0	submitted	N/A	-	Abort Attach Delete

eWorkflow list Statistics					
Total	Init	Submitted	Rescue	Error	Finished
9	4	5	0	0	0

Workflow	Status	[Output]	[View]	[Action]
Pellet_v0.1	submitted	N/A	Details	Suspend Abort
Pellet_v0.2	submitted	N/A	Details	Suspend Abort
Pellet_v0.3	submitted	N/A	Details	Suspend Abort
Pellet_v0.4	submitted	N/A	Details	Suspend Abort
Pellet_v0.5	submitted	N/A	Details	Suspend Abort

Results

- The input file are uploaded succesfully to a remote directory.
- eWorkflows are started
- There are some problems with the output files.