

DMP Implementation Status of IPP

2025-08-20

IMAS versions updated on the TOK and Citrix systems

DD	AL	TOK cluster	Citrix system
3.38.1	4.11.4		2023-06-08
3.39.0	4.11.5	2023-07-26	2023-07-31
3.39.0	5.0.0	2023-10-10	
3.41.0	4.11.10	2024-04-17	
3.41.0	2024.07-foss-2023b		2024-08-11
3.42.0	2024.08-foss-2023b		2024-08-13
3.42.0	2024.08.1-foss-2023b	2024-08-23	2024-08-22
3.42.0	2024.08.1-intel-2023b	2024-08-23	2024-08-22
3.42.0	4.11.10		2024-10-09
3.42.0	2024.09-foss-2023b	2024-10-21	2024-10-21
3.42.0	2024.09-intel-2023b	2024-10-21	2024-10-21
4.0.0	2024.12-foss-2023b	2025-01-22	2025-01-22
4.0.0	2024.12-intel-2023b	2025-01-22	2025-01-22

- Entries in red have a problem after the cluster upgrade
 - Underlying python changed, together with numpy
 - Remove?

Continued to fight UDA

- Got it to compile!
 - --- a/source/CMakeLists.txt
 - +++ b/source/CMakeLists.txt
 - - add_definitions(-Wall -Werror -Wextra -Wno-unused-parameter -Wno-missing-field-initializers)
 - + add_definitions(-Wall -Werror -Wextra -Wno-unused-parameter -Wno-missing-field-initializers **-Wno-ignored-attributes**)
- Multiple efforts on multiple machines compiling and running
 - UDA server (directly)
 - UDA client
- failed – they didn't seem to see be able to talk
- Finally got it working on the Gateway but only after using xinetd to start the server on demand
 - xinetd has a selinux security context of
 - system_u:object_r:inetd_exec_t:s0
 - defined which leads me to believe I have been fighting selinux the whole time
- The other systems I was trying on don't have xinetd available
 - And I'm not sure whether trying to get the systemd stuff to work will pay off

Hardened uda.ipp.mpg.de

- On the server, set /opt/uda/etc/plugins.d/bytesPlugin.cfg to
 - export UDA_BYTES_PLUGIN_ALLOWED_PATHS=/root/public/imasdb/
- Perhaps this should be the default on the UDA VMs created by PSNC?

Continued to fight UDA

- “And I’m not sure whether trying to get the systemd stuff to work will pay off”
 - Got it to work – eventually
 - Needed to **ln** the `uda@.service` and `uda.socket` files to `~/.config/systemd/user/`
 - Needed to create an ENV file with `PATH` and `LD_LIBRARY_PATH` (probably only the latter)
 - Needed to modify the `uda@.service` file to include the ENV
 - Then needed to
 - `systemctl --user enable uda@dpc.service`
 - `systemctl --user enable uda.socket`
 - `systemctl --user start uda.socket`

systemd: Changes to uda@.service (maybe not all needed)

```
*** ../build/etc/uda@.service    2025-08-14 09:54:45.773360000 +0200
--- /uda@.service                2025-08-19 14:54:05.867235000 +0200
*****

*** 2,10 ***
Description=dpc-uda service

[Service]
! ExecStart=/home/IPP-AD/dpc/dpc-work/GIT_noinherit/UDA/install/etc/udaserver.sh
Type=exec
! User=dpc
#Group=yes
UMask=002
StandardInput=socket
--- 2,11 ----
Description=dpc-uda service

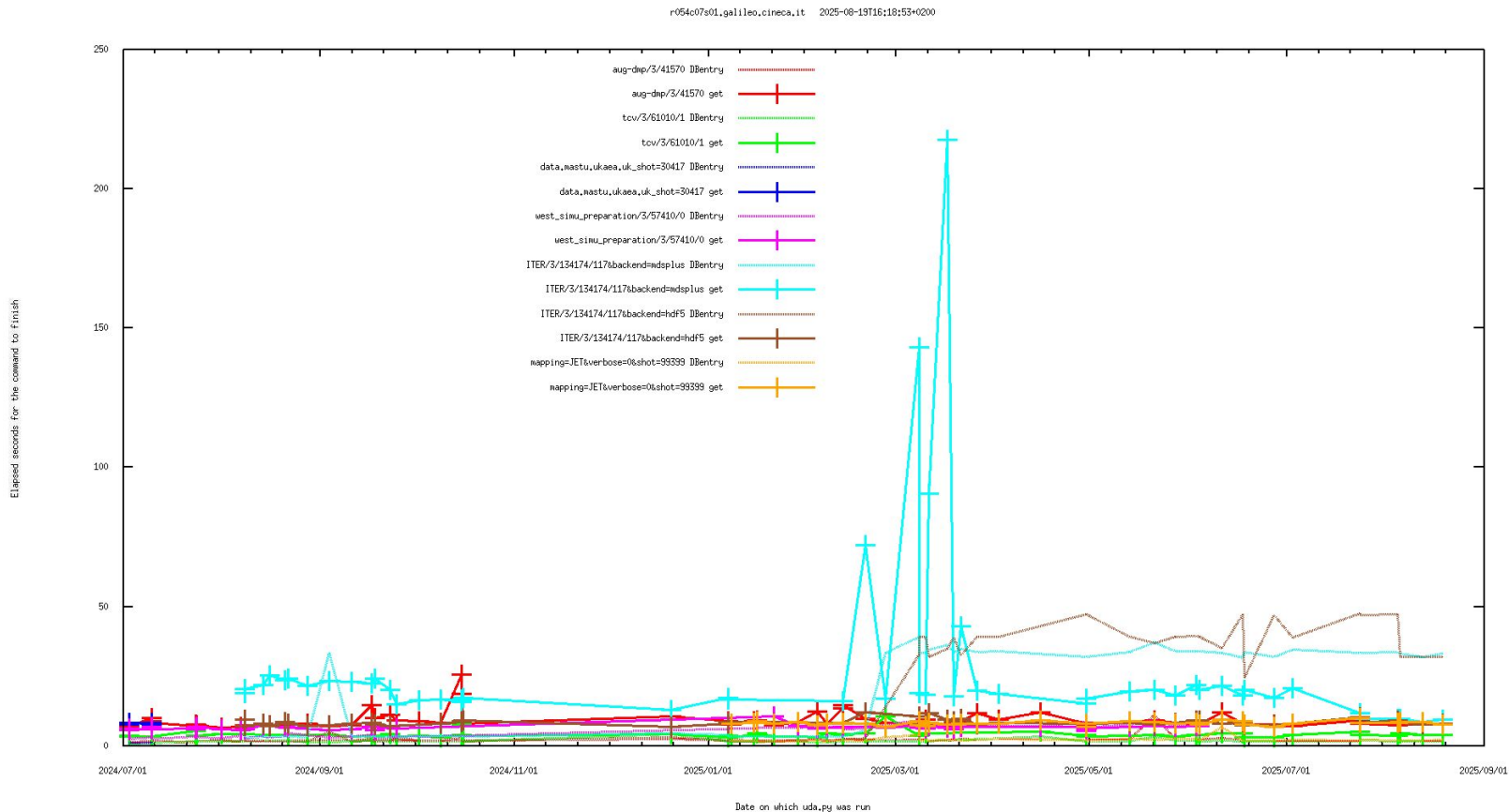
[Service]
! EnvironmentFile=/home/IPP-AD/dpc/dpc-work/GIT_noinherit/UDA/install/etc/ENV
! ExecStart=/bin/bash /home/IPP-AD/dpc/dpc-work/GIT_noinherit/UDA/install/etc/udaserver.sh
Type=exec
! #User=dpc
#Group=yes
UMask=002
StandardInput=socket
*****

*** 14,16 ***
--- 15,20 ----
StandardError=inherit
SuccessExitStatus=0
LogLevelMax=info
+
+ [Install]
+ WantedBy=default.target
```

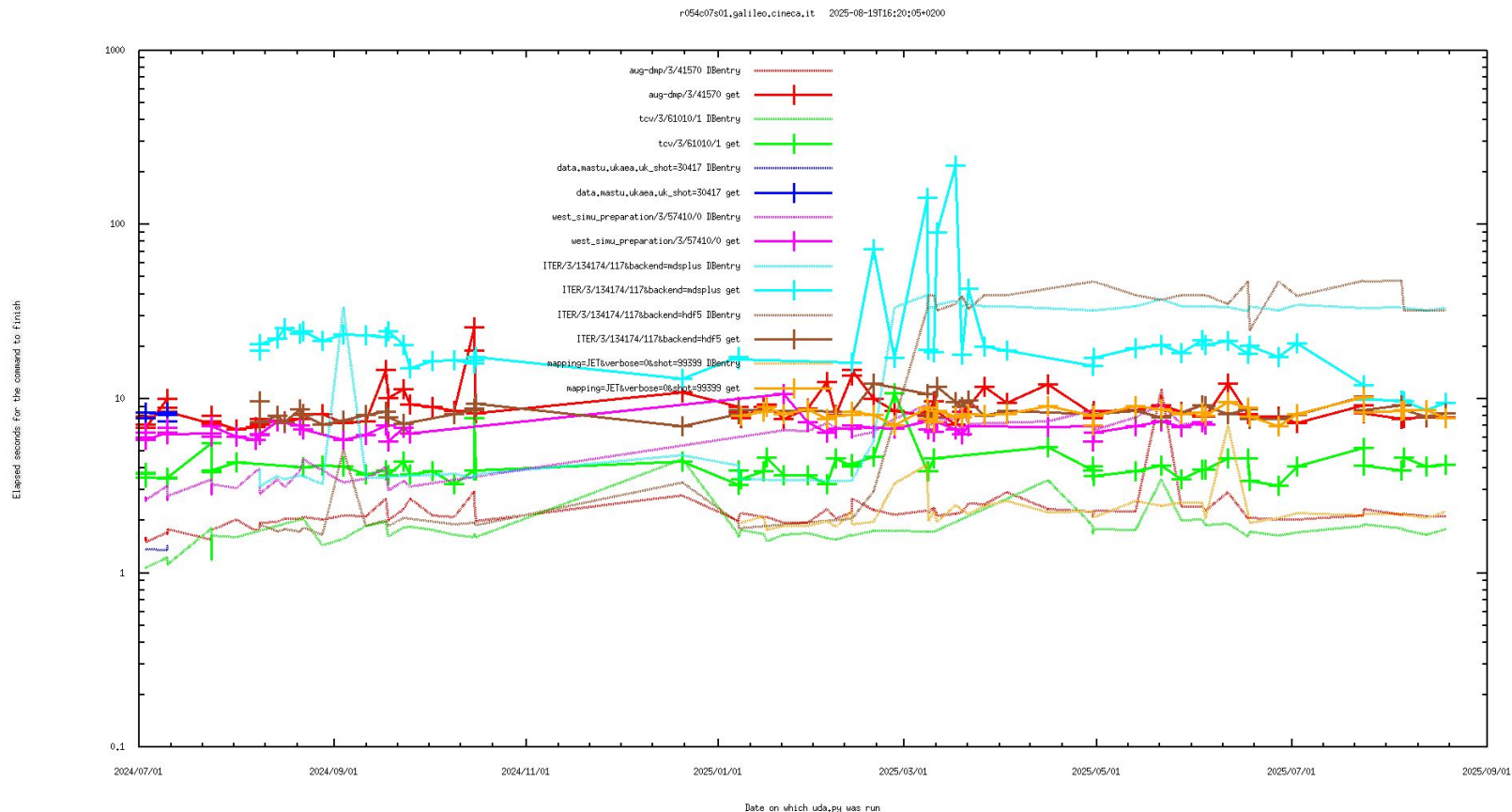
Moving to plugins

- I'm now where I wanted to be 10 days ago ...
- Deviating from the workshop notes
(https://ukaea.github.io/imas_mapping_workshop/installation_handson/index.html#/25)
 - git clone [git@github.com:iterorganization/UDA-Plugins.git](https://github.com/iterorganization/UDA-Plugins.git)
- Notes:
 - Needed to manually add
 - IMAS_JSON_MAP, function, jsonMappingPlugin, libJSON_mapping_plugin.so, *, 1, 1, 1, MAP
IMAS element name to TOKAMAK data using JSON mapping files, IMAS_JSON_MAP::read()
 - to plugins/udaPlugins.conf
 - Needed to change
 - result = client.get("IMAS_JSON_MAP::get(path=magnetics/ids_properties/homogeneous_time, mapping=DRAFT)")
 - to
 - result = client.get("IMAS_JSON_MAP::get(path=magnetics/ids_properties/homogeneous_time, mapping=DRAFT, datatype=int, rank=0)")

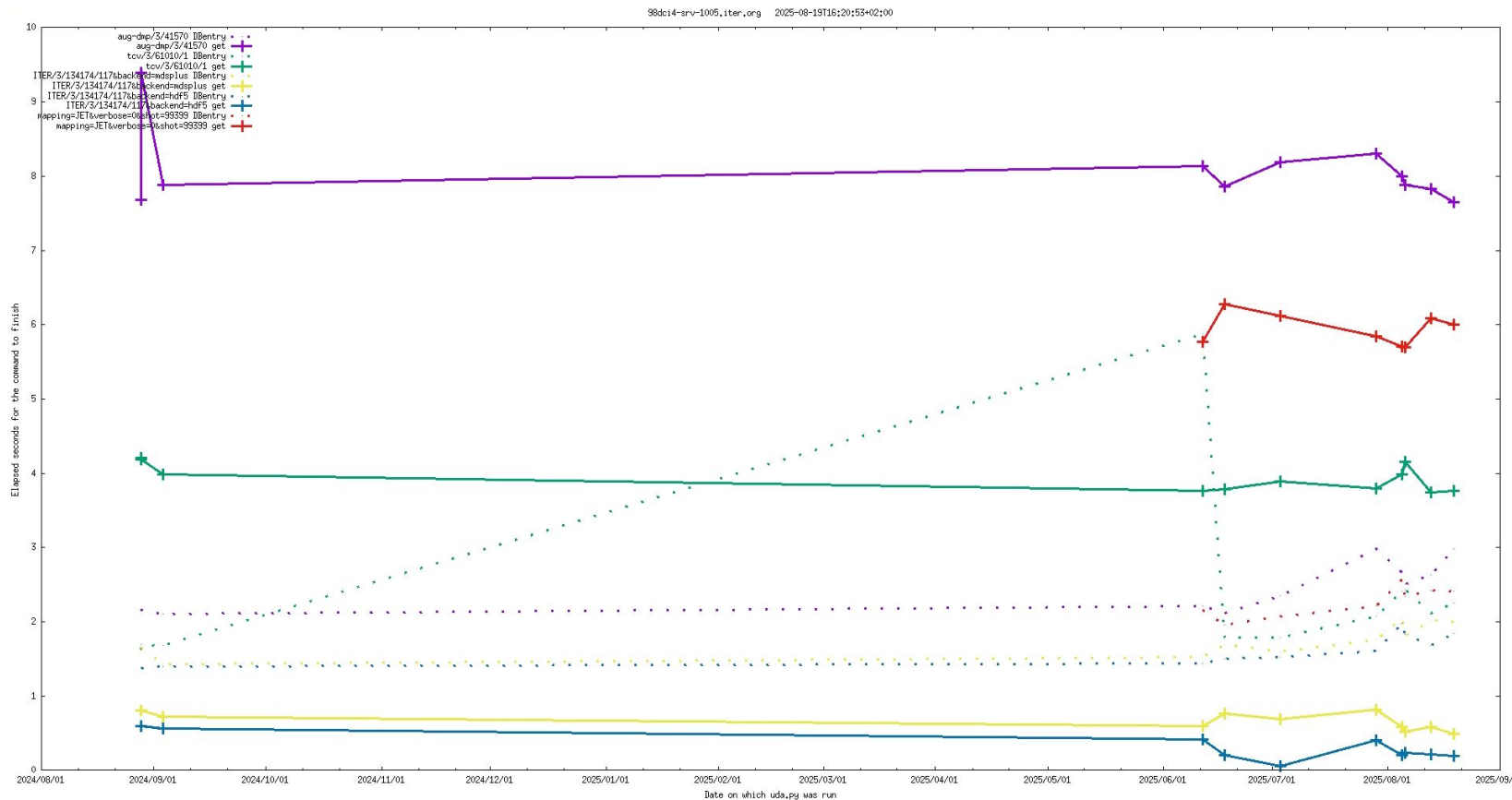
Data access times: run on Gateway



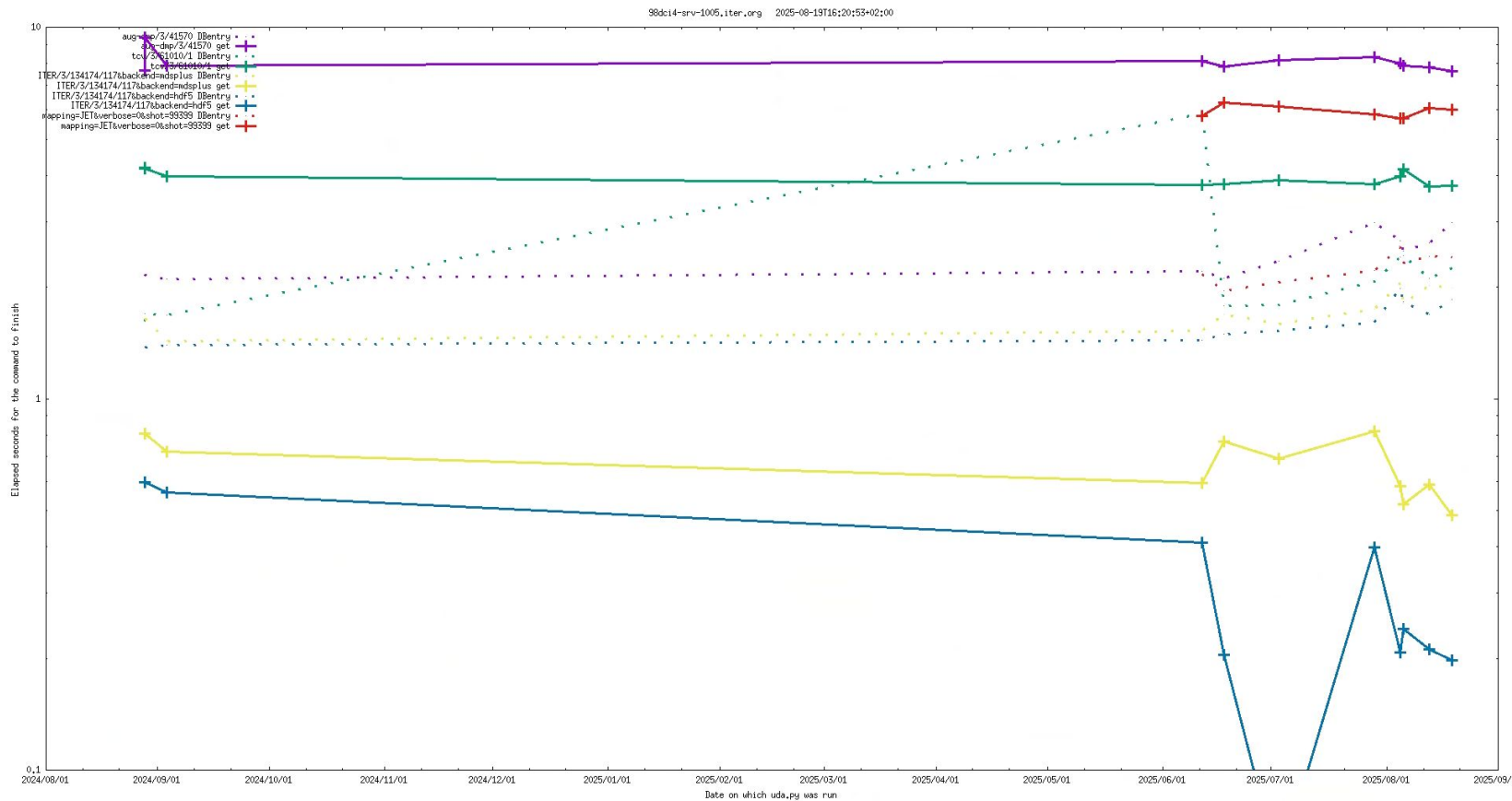
Data access times: run on Gateway



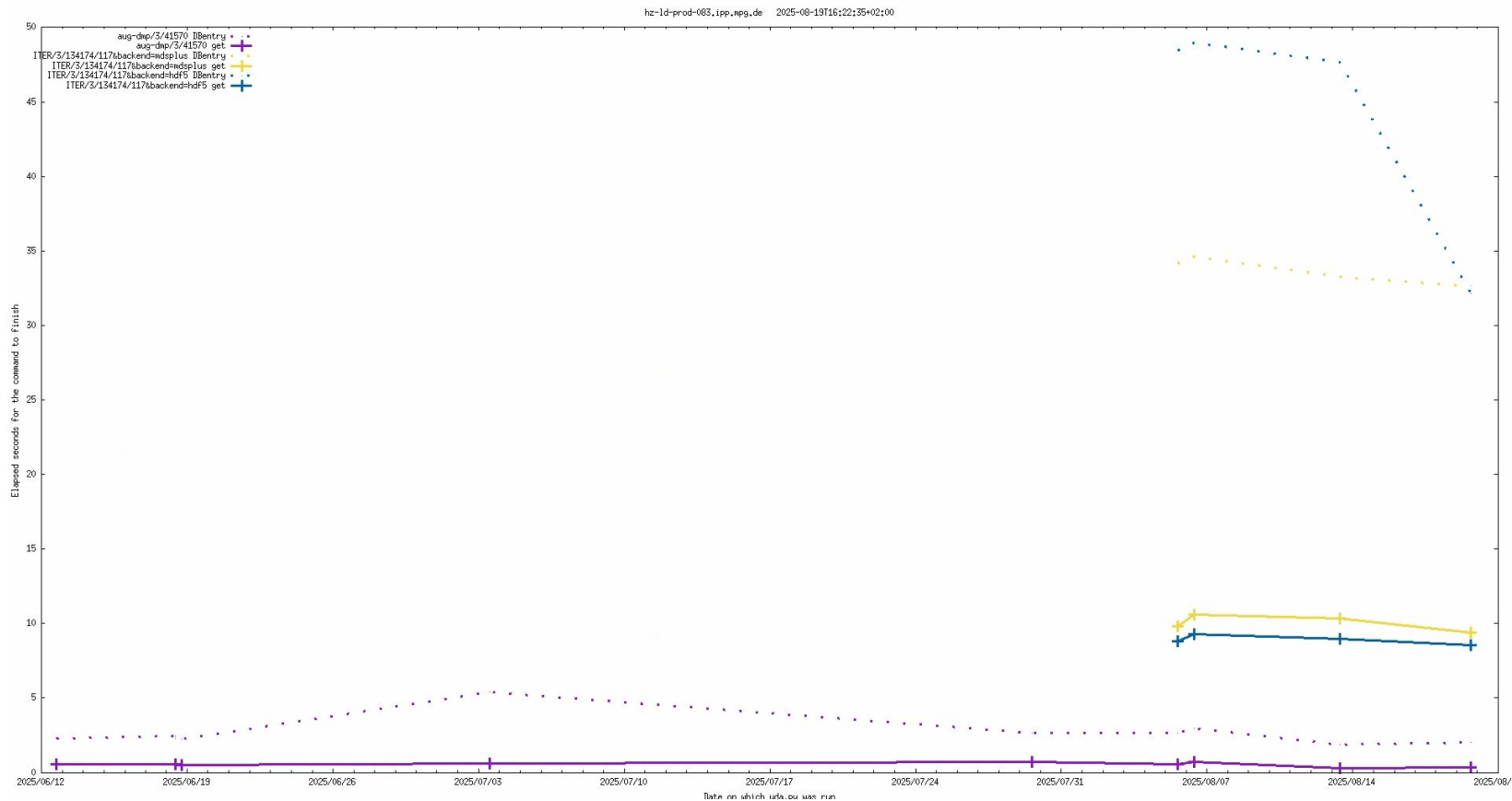
Data access times: run at ITER



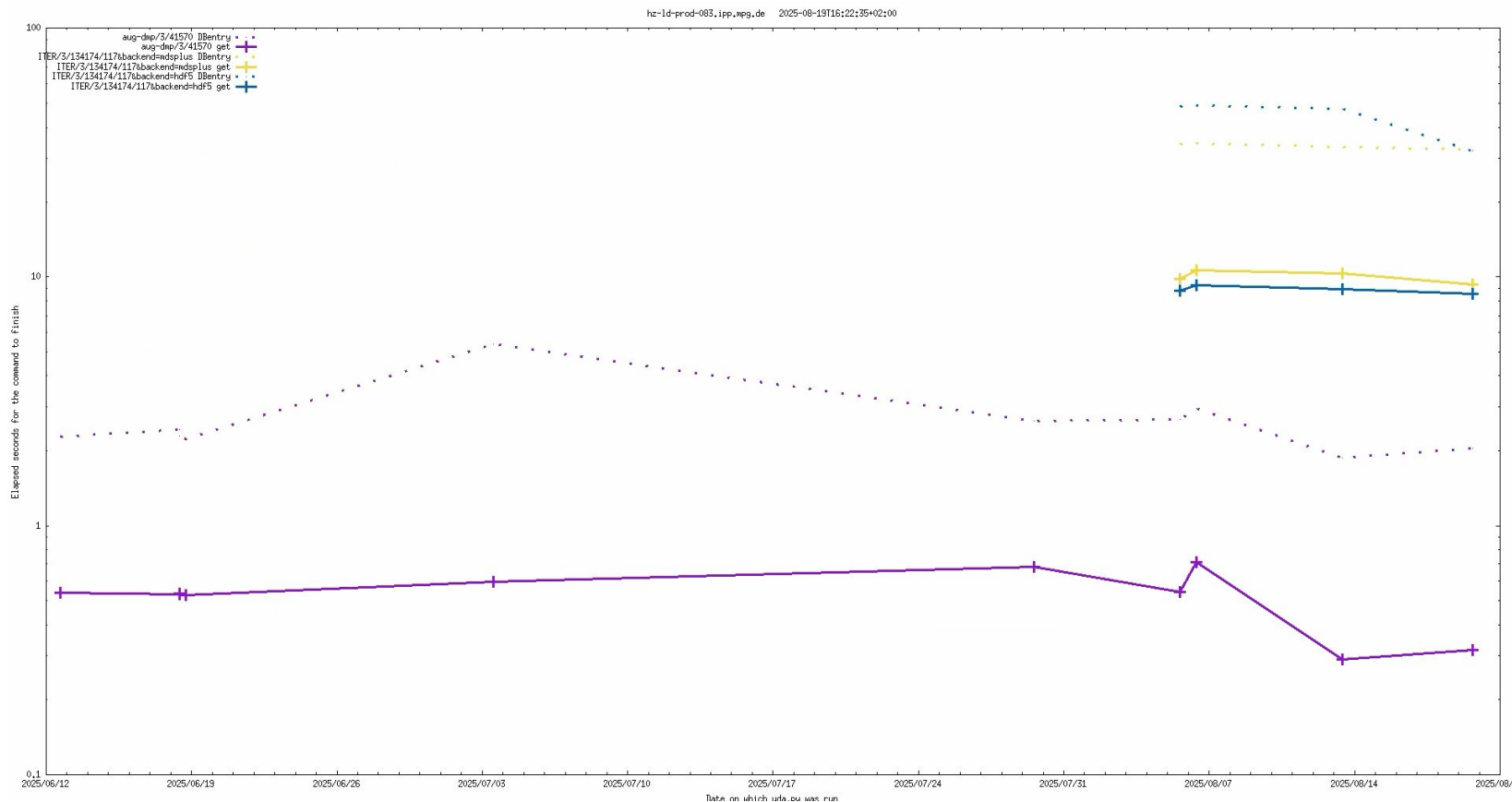
Data access times: run at ITER



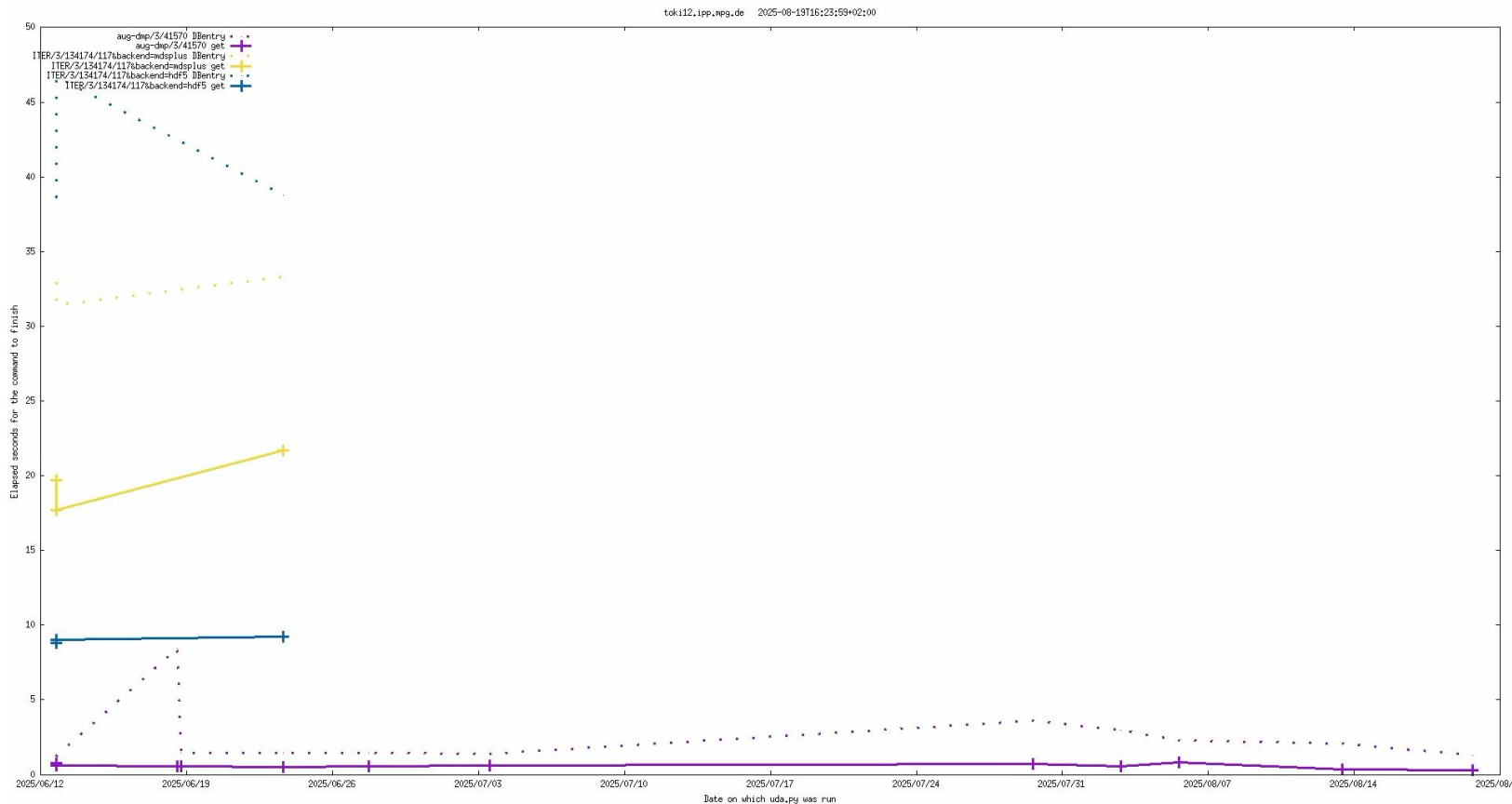
Data access times: run at IPP (horizon)



Data access times: run at IPP (horizon)



Data access times: run at IPP (TOK cluster)



Data access times: run at IPP (TOK cluster)

