

# DMP Implementation Status of IPP

2024-03-27

# Found a fix for the initial 30s UDA time penalty!

- Following the suggestion in [https://bugzilla.redhat.com/show\\_bug.cgi?id=56279](https://bugzilla.redhat.com/show_bug.cgi?id=56279), I changed the xinetd.conf log\_on\_\* lines to have HOST rather than USERID in the docker server
- With this change I now see

```
./uda.py -u
```

```
'imas://uda.ipp.mpg.de:56565/uda?path=/root/public/imasdb/test/3/1000/1000&backend=hdf5'
```

Accessing data from

```
imas://uda.ipp.mpg.de:56565/uda?path=/root/public/imasdb/test/3/1000/1000&backend=hdf5
```

Time data for IDS edge\_profiles

```
[0. 1. 2. 3. 4. 5. 6. 7. 8. 9.]
```

Timing information

```
DBentry = 0.516
```

```
open = 0.123
```

```
get = 17.582
```

```
close = 0.037
```

- Issue created <https://gitlab.eufus.psnc.pl/containerization/imas/uda-demo/-/issues/1>
  - Fix issued by PSNC

# Updating SUMMARY IDS

- Meeting with Garrard Conway (author of cview) on Tuesday
  - Got some suggestions, and some questions (next slide)
- Might also schedule a meeting with Giovanni Tardini (author of trview)
  - Dug into trview:

```
■ diagsigs = {'ip': 'FPC:IpiFP', 'bt': 'FPC:BTf', 'uloop': 'TOT:u_loop' , \
■          'prad': 'BPD:Pradtot', 'nrates': 'ENR:NRATE_II', \
■          'betpol': 'GQH:betpol', 'wmhd': 'GQH:Wmhd', 'vol': 'GQH:Vol', \
■          'perim': 'GQH:Circumf', 'R0': 'GQH:Rgeo', 'Rin': 'GQH:Rin', \
■          'Rout': 'GQH:Raus', 'li': 'GQH:li'}
■ ...
■          li3 = 2 * self.li.data_ds * self.vol.data_ds/(self.R0.data_ds * self.perim.data_ds**2)
■          summ.ids_properties.homogeneous_time = 1
■          summ.time = self.t_ds
■          summ.global_quantities.beta_pol.value = self.betpol.data_ds
■          summ.global_quantities.ip.value = self.ip.data_ds
■          summ.global_quantities.b0.value = self.bt.data_ds
■          summ.global_quantities.v_loop.value = self.uloop.data_ds
■          summ.global_quantities.li.value = li3
■          summ.global_quantities.energy_mhd.value = self.wmhd.data_ds
■          if hasattr(self, 'prad'):
■              summ.global_quantities.power_radiated.value = self.prad.data_ds
■          if hasattr(self, 'nrates'):
■              summ.fusion.neutron_rates.total.value = self.nrates.data_ds
```

# New tracker

- <https://jira.iter.org/browse/IMAS-5237> “Is there more documentation on the line\_average structure of the summary IDS?” opened
  - Within the summary ids, there is a structure "line\_average". Is there documentation somewhere about which line the average should be based on?
  - Most devices, I think, have a number of such lines for producing integrals or averages. What should be chosen for filling this set of fields for an experiment?
  - There is also the possibility that (experimentally) different lines might be used for different signals ...
- Do we want to discuss this in this meeting, or (my suggestion) in the tracker?

# UDA release/2.7.5 branch compiled [internal]

- UDA release/2.7.5 branch (as of today) compiled on the Citrix system
- Formal releases are imminent (I think)
  - Once tags are available I will recompile
  - Then start looking at plugins ...
  -

# UDA access to SPC works from ITER but not from Gateway

```
./uda.py -u
'imas://spcimasdata.epfl.ch:443/uda?path=/data/imas/public/imasdb/tcv/3/61010/1/&backend=mdspl
us' --case summary
Accessing data from
imas://spcimasdata.epfl.ch:443/uda?path=/data/imas/public/imasdb/tcv/3/61010/1/&backend=mdsplu
s
Time data for IDS summary
[0.00350001 0.00700002 0.01050003 0.01400003 0.01750004
0.02100005 0.02450006 0.02800007 0.03150008 0.03500009 0.05171273
0.06842537 0.08513802 0.10185066 0.1185633 0.13527595 0.15198859
0.16870123 0.18541388 0.20212652 0.21883917 0.23555181 0.25226445
0.2689771 0.28568974 0.30240238 0.31911503 0.33582767 0.35254031
0.36925296 0.3859656 0.40267825 0.41939089 0.43610353 0.45281618
0.46952882 0.48624146 0.50295411 0.51966675 0.53637939 0.55309204
0.56980468 0.58651733 0.60322997 0.61994261 0.63665526 0.6533679
0.67008054 0.68679319 0.70350583 0.72021847 0.73693112 0.75364376
0.77035641 0.78706905 0.80378169 0.82049434 0.83720698 0.85391962
0.87063227 0.88734491 0.90405755 0.9207702 0.93748284 0.95419549
0.97090813 0.98762077 1.00433342 1.02104606 1.0377587 1.05447135
1.07118399 1.08789663 1.10460928 1.12132192 1.13803457 1.15474721
1.17145985 1.1881725 1.20488514 1.22159778 1.23831043 1.25502307
1.27173571 1.28844836 1.305161 1.32187365 1.33858629 1.35529893
1.37201158 1.38872422 1.40543686 1.42214951 1.43886215 1.45557479
1.47228744 1.48900008 1.48979998]
```

```
Timing information
DBentry = 0.272
open = 0.073
get = 12.972
close = 0.020
```

```
./uda.py -u
'imas://spcimasdata.epfl.ch:443/uda?path=/data/imas/public/imasdb/tcv/3/61010/1/&
backend=mdsplus' --case summary
Accessing data from
imas://spcimasdata.epfl.ch:443/uda?path=/data/imas/public/imasdb/tcv/3/61010/1/&b
ackend=mdsplus
ERROR:root:b'al_begin_dataentry_action: [AException = [createConnection]: No
route to host\n[idamClient]: No Socket Connection to Server\n']
ERROR:root:b'al_begin_dataentry_action: [AException = [createConnection]: No
route to host\n[idamClient]: No Socket Connection to Server\n']
ERROR:root:b'al_close_pulse: [AException = [createConnection]: No route to
host\n[idamClient]: No Socket Connection to Server\n']
Time data for IDS summary
[]
```

```
Timing information
DBentry = 38.665
open = 38.199
get = 19.096
close = 19.082
```