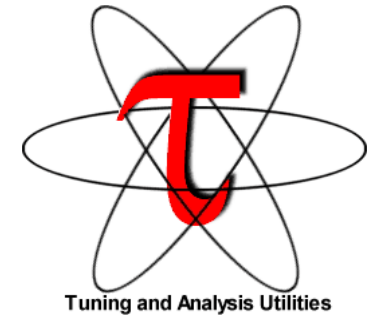


TAU Performance System® Hands-On



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University of Oregon
sameer@uoregon.edu
https://tau.uoregon.edu/TAU_TW50_HandsOn.pdf

Login to GWDG using <https://jupyter.hpc.gwdg.de>

The screenshot shows the JupyterHub interface for 'jupyter.hpc.gwdg.de'. The 'Server Options' section is active, showing the 'Standard' tab. The 'HPC Project (Username)' is 'VI-HPS Tuning Workshop (08/2)'. Under 'HPC Type', 'Jupyter' is selected, but 'Desktop' is highlighted with a blue arrow and the text 'Choose Desktop'. Under 'Desktop Environment', 'Xfce' is selected, but 'GNOME' is highlighted with a blue arrow and the text 'Choose GNOME'. Under 'HPC Device', 'CPU' is selected, but 'GPU' is highlighted with a blue arrow and the text 'Choose GPU'. At the bottom, a blue arrow points to the 'Start' button with the text 'Click Start'. A 'Logout' button is visible in the top right corner.

Server Options

HPC Project (Username)
VI-HPS Tuning Workshop (08/2)

Standard Profiles

HPC Type

Jupyter Desktop

Desktop Environment

Xfce GNOME KDE

HPC Device

CPU GPU

Advanced

[Documentation](#)
JupyterHPC resources are limited and shared between all users. Please shut down your jupyter server via the hub control panel if you don't need it anymore, or it will continue running until the time limit of your compute job is reached! Dedicated resources and profiles for courses are available upon request by lecturers.

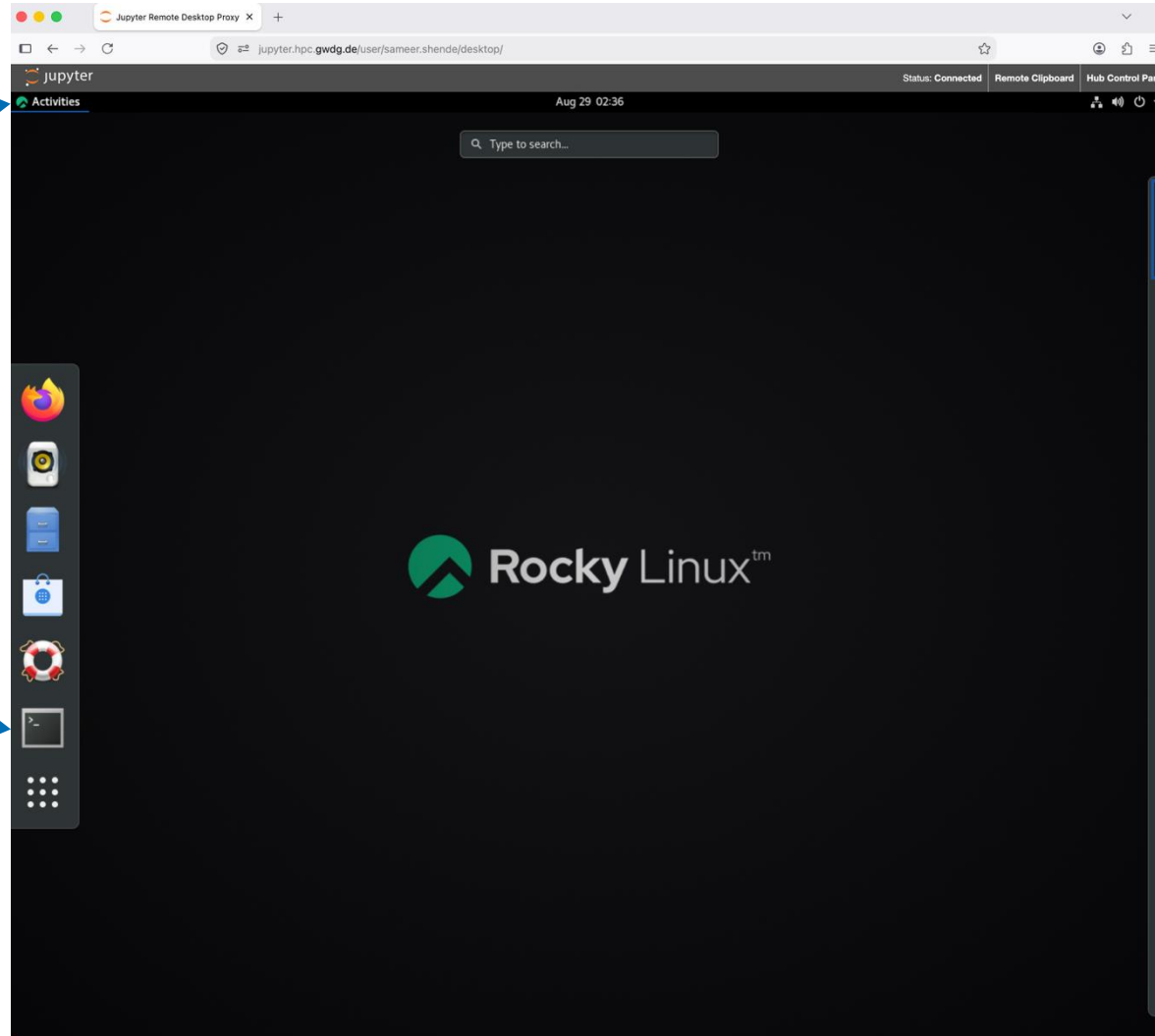
Start

Jupyter.hpc.gwdg.de Remote Desktop

Click Activities



Open Terminal



Jupyter.hpc.gwdg.de Remote Desktop Terminal Window

```
% ls $PROJECT/training-materials/tau/workshop.tgz
/projects/intern/gwdg_training/tr_20260831-vi-hps-tuning/dir.project/training-materials/tau/workshop.tgz
```

```
% tar xf $PROJECT/training-materials/tau/workshop.tgz
% cd workshop; cat README
```

TAU workshop on Grete

1. Allocate a node:

```
salloc -N 1 -n 8 -G A100:4 -t 0:50:00 -p grete:shared --reservation=vi-hps-tuning --x11
module use $PROJECT/modules; module load tau
```

2. See examples/mm

```
cd examples/mm; cat README
```

3. See petsc-cpu

```
cd petsc-cpu; cat README
```

4. Try E4S container [<https://e4s.io>] for this PETSc example with CUDA support

```
cd petsc-cuda
```

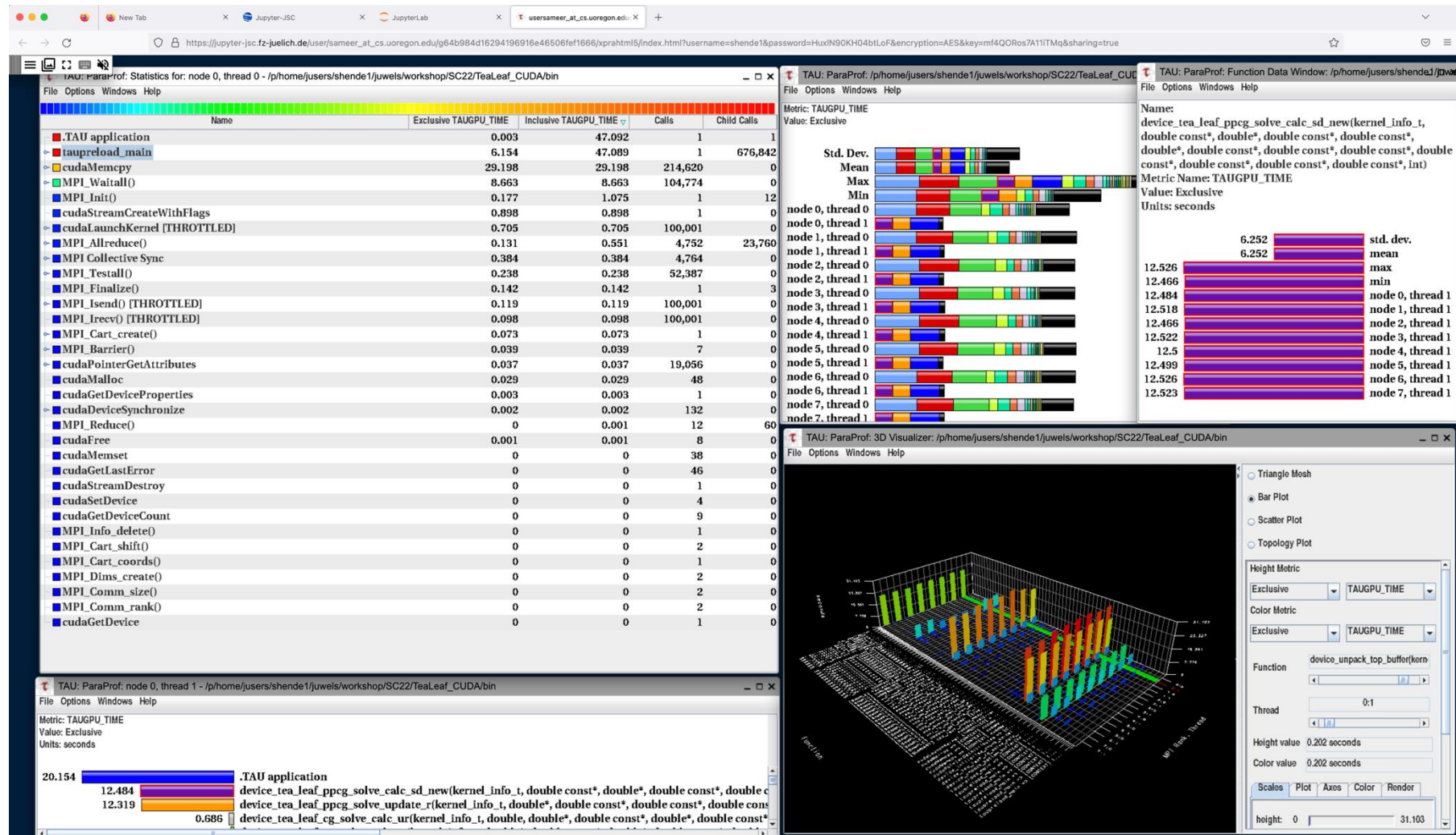
```
module load e4s
```

```
ls $E4S/e4s-A100.sif
```

```
singularity run -e --nv $E4S/e4s-A100.sif
```

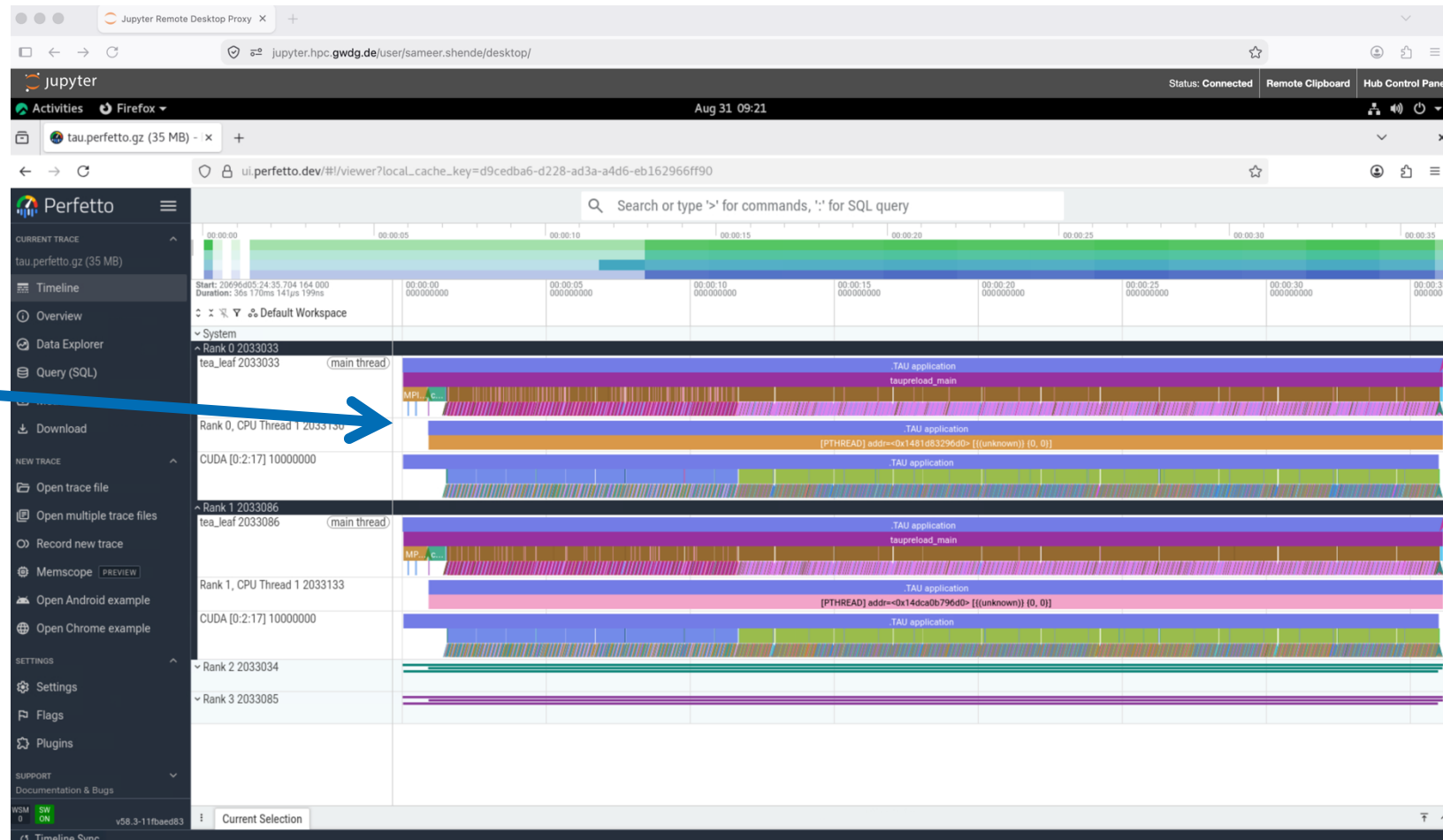
```
cat README
```

ParaProf:

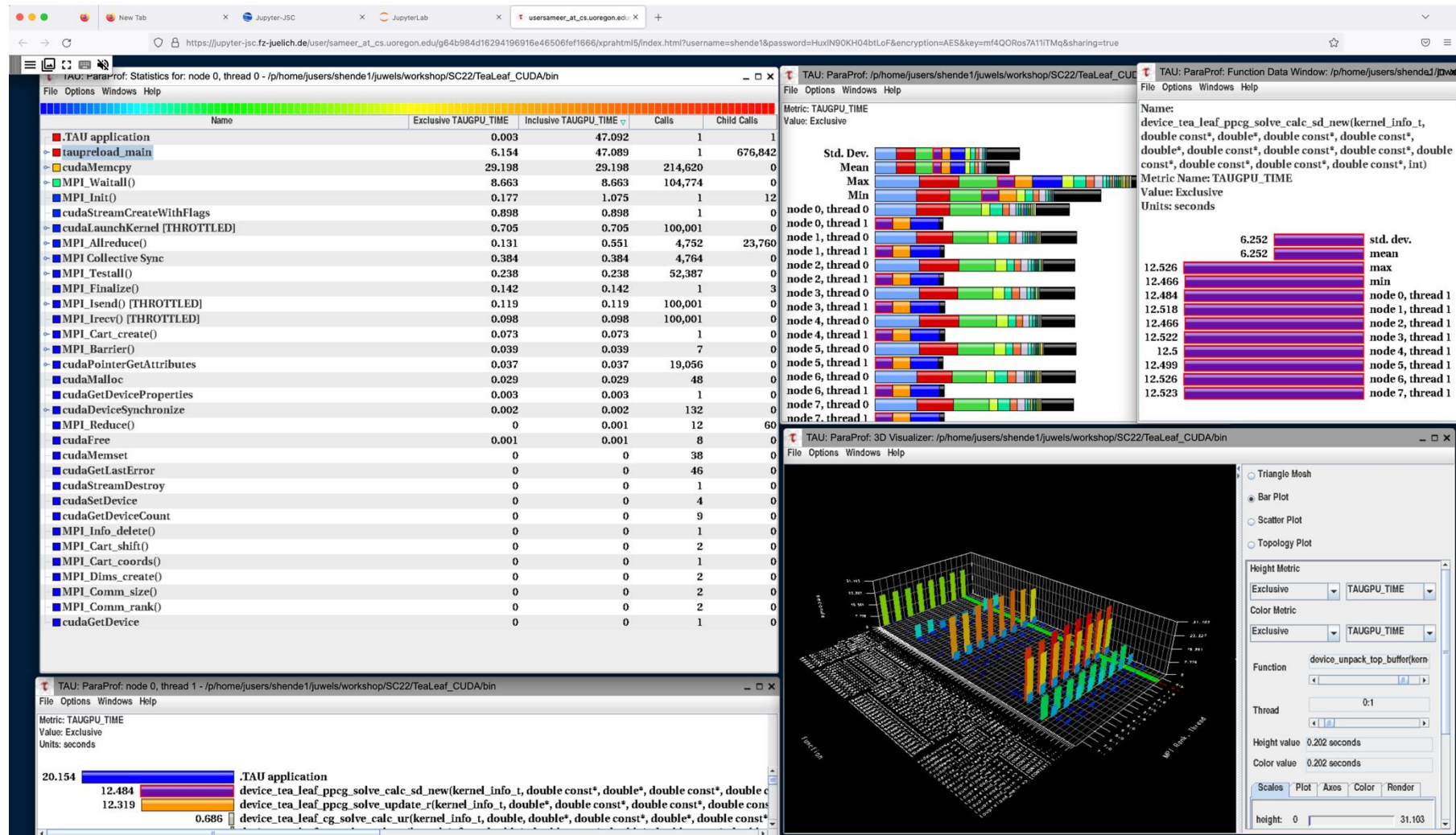


Perfetto.dev Timeline Display

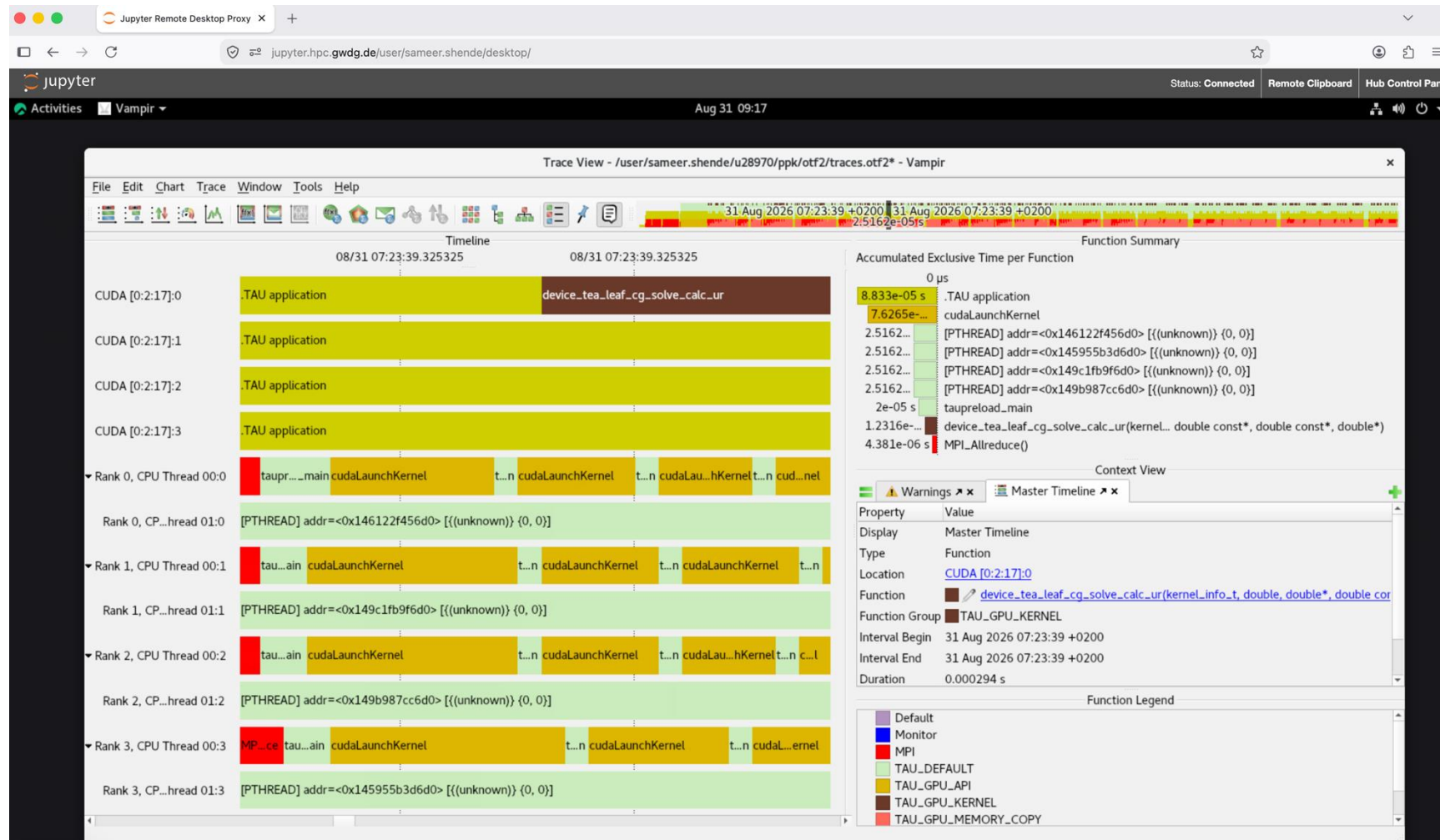
w=widen
s=shrink
a=left
d=right



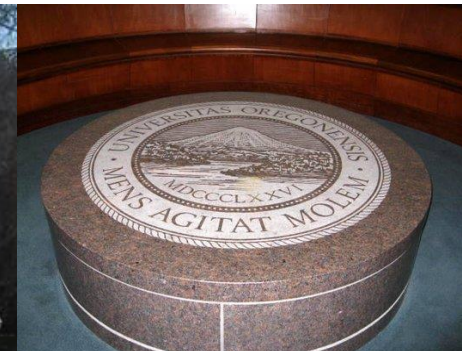
ParaProf:



Vampir Timeline Display



Performance Research Lab, University of Oregon, Eugene, USA



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⑩ <https://science.osti.gov/ascr>

⑩ <https://pesoproject.org>

⑩ <https://ascr-step.org>

⑩ <https://hpsf.io>

⑩ <https://www.energy.gov/technologytransitions/sbirsttr>



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 - University of Tennessee, Knoxville
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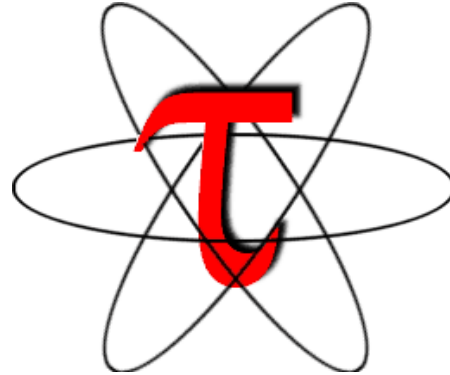
ParaTools

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Download TAU from U. Oregon



<http://tau.uoregon.edu>

<https://e4s.io> [HPC-AI Software Ecosystem for Science Containers]

<https://paratoolspro.com> [ParaTools Pro for E4S™ using Heidi AI on cloud systems]

Free download, open source, BSD license

Thank You