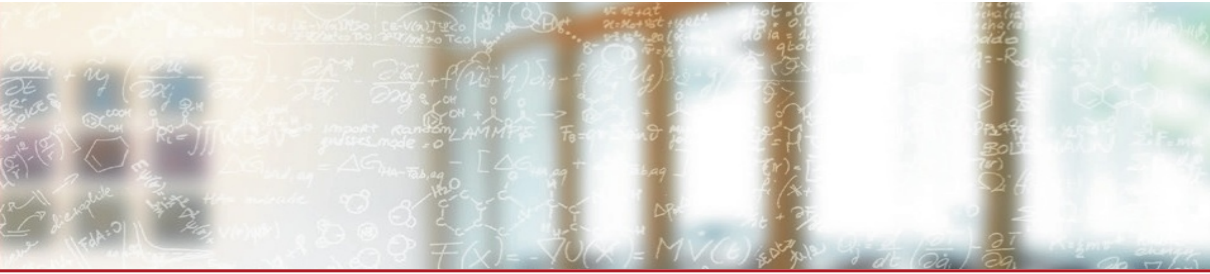
CSCS
Centro Svizzero di Calcolo Scientifico
Swiss National Supercomputing Centre

ETH zürich



Computing Platforms and Infrastructure Program Update

Victor Holanda, CSCS
Darren Reed, UZH
January 22th, 2024

Reporting time

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The Computing and Platforms contributions

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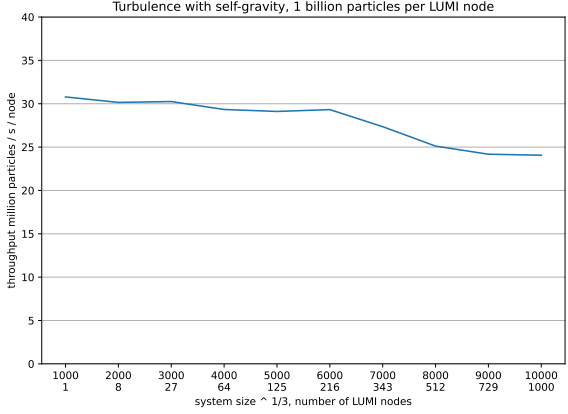
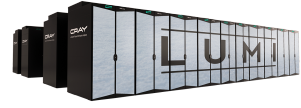
  - Congratulate the SKACH team - 10th Place
  - Allocated 15'000 node hours to them (94% utilization)
- Supporting the different synergies in collaboration with CTA

What have we work on?

The Computing and Platforms contributions

- Supported the submission of Lucio's Project to LUMI-G using SPH-EXA





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- Work on the FirecREST integrated with JupyterHUB

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- Develop guidelines for Secure Software Development Life Cycle with SKAO
- Work on the FirecREST integrated with JupyterHUB
- Extend the Kubernetes offering with a development cluster

Moving to ALPS

The (current) plan

When and how are we moving?

- The migration should start in April

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  - Suggest you to write ReFrame tests for your applications and workflows

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  - Based on Spack and Stackinator
  - Uses squashfs images

SKACH Computing Platform

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- Same components as the User Lab at CSCS

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  - Failover opportunities
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- What does it change from the system administrator point of view?
  - Client services will have to be deployed using Nomad

Internal Hackathons

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- Aiming to make the tests portable - to be shared between SRCNet nodes
  - Focus on system testing and on user environment
  - Application testing will be next
- The areas of the tests encompass:
  - OS checks
  - Individual components (e.g. SLURM, Filesystem, Sarus, FirecREST, etc)
  - Component integration
  - Workflow integration (e.g. K8s + vCluster)

What are the open questions for 2024?

Let's find the answers together

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  - How do manage to get Karaboo integrated and running with MWA data?
  - How do we integrate Bluebild into the pipeline?

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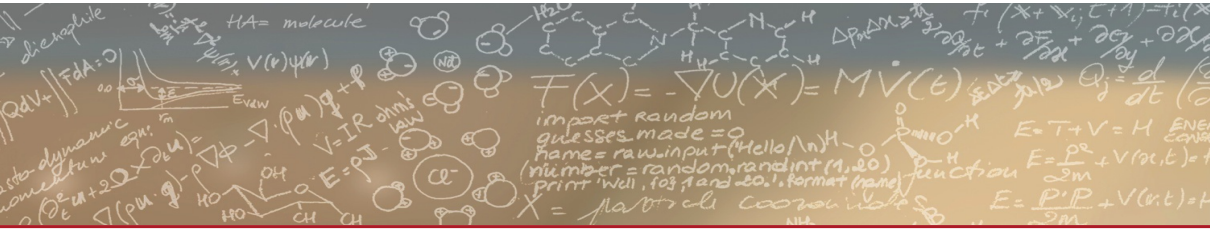
Let's find the answers together

- MWA collaboration
  - What are the plans for integrating Swiss projects into MWA?
  - How do manage to get Karaboo integrated and running with MWA data?
  - How do we integrate Bluebild into the pipeline?
  - What are the plans for leveraging the MWA data for SPH-EXA simulations?



Thank you!

Questions?

Accounting

Resource Consumption per Project

2023 Q1

Project	Group Leader	Node type	Quota [nh]	Used [nh]	Used [%]
sk08	lmayer	HYBRID	100'000	100'099	100.1 %
sk04	mstutz	HYBRID	5'000	299	6.0 %
sk02	dkorber	HYBRID	5'000	262	5.2 %
sk09	jpkneib	HYBRID	17'500	204	1.2 %
sk012	yrevaz	MULTICORE	5'000	151	3.0 %
sk10	etolley	HYBRID	5'000	89	1.8 %
sk05	lgehrig	HYBRID	5'000	45	0.9 %
sk014	mibianco	HYBRID	5'000	18	0.4 %
sk07	pllopiss	HYBRID	2'500	12	0.5 %
sk07	pllopiss	MULTICORE	2'500	11	0.4 %
sk015	phirling	HYBRID	5'000	2	0.0 %
sk012	yrevaz	HYBRID	5'000	0	0.0 %
sk01	hvictor	HYBRID	0	0	0.0 %
sk011	kshreyam	HYBRID	5'000	0	0.0 %
sk013	dpotter	MULTICORE	2'500	0	0.0 %
sk013	dpotter	HYBRID	2'500	0	0.0 %
sk016	fcabot	HYBRID	5'000	0	0.0 %
sk06	fschramk	MULTICORE	5'000	0	0.0 %
Total			**182'500**	**101'192**	**55.4 %**

Resource Consumption per Project

2023 Q2

Project	Group Leader	Node type	Quota [nh]	Used [nh]	Used [%]
sk08	lmayer	HYBRID	175'000	100'018	57.2 %
sk09	jpkneib	HYBRID	8'750	3'346	38.2 %
sk015	phirling	HYBRID	5'000	529	10.6 %
sk05	lgehrig	HYBRID	10'000	216	2.2 %
sk10	etolley	HYBRID	5'000	139	2.8 %
sk012	yrevaz	MULTICORE	5'000	100	2.0 %
sk014	mibianco	HYBRID	5'000	73	1.5 %
sk04	mstutz	HYBRID	10'000	51	0.5 %
sk09	jpkneib	MULTICORE	8'750	13	0.2 %
sk02	dkorber	HYBRID	5'000	1	0.0 %
sk016	fcabot	HYBRID	5'000	1	0.0 %
sk07	pllopiss	MULTICORE	2'500	0	0.0 %
sk01	hvictor	HYBRID	0	0	0.0 %
sk011	kshreyam	HYBRID	5'000	0	0.0 %
sk013	dpotter	MULTICORE	2'500	0	0.0 %
sk013	dpotter	HYBRID	2'500	0	0.0 %
sk06	fschramk	MULTICORE	5'000	0	0.0 %
sk07	pllopiss	HYBRID	2'500	0	0.0 %
Total			**262'500**	**104'487**	**39.8 %**

Resource Consumption per Project

2023 Q3

Project	Group Leader	Node type	Quota [nh]	Used [nh]	Used [%]
sk08	lmayer	HYBRID	175'000	176'195	100.7 %
sk014	mibianco	HYBRID	10'000	7'970	79.7 %
sk05	lgehrig	HYBRID	10'000	7'378	73.8 %
sk015	phirling	HYBRID	5'000	149	3.0 %
sk04	mstutz	HYBRID	10'000	100	1.0 %
sk017	framunno	HYBRID	5'000	0	0.0 %
sk01	hvictor	HYBRID	0	0	0.0 %
sk012	yrevaz	MULTICORE	5'000	0	0.0 %
sk013	dpotter	MULTICORE	2'500	0	0.0 %
sk013	dpotter	HYBRID	2'500	0	0.0 %
sk016	fcabot	HYBRID	5'000	0	0.0 %
sk018	pdenzel	HYBRID	5'000	0	0.0 %
sk07	pllopiss	MULTICORE	2'500	0	0.0 %
sk07	pllopiss	HYBRID	2'500	0	0.0 %
sk10	etolley	HYBRID	5'000	0	0.0 %
Total			**245'000**	**191'791**	**78.3 %**

Resource Consumption per Project

2023 Q4

Project	Group Leader	Node type	Quota [nh]	Used [nh]	Used [%]
sk08	lmayer	HYBRID	175'000	176'150	100.7 %
sk014	mibianco	HYBRID	15'000	5'993	40.0 %
sk19	lmachado	HYBRID	5'000	2'531	50.6 %
sk018	pdenzel	HYBRID	5'000	1'806	36.1 %
sk05	lgehrig	HYBRID	15'000	1'450	9.7 %
sk015	phirling	HYBRID	5'000	128	2.6 %
sk04	mstutz	HYBRID	10'000	11	0.1 %
sk016	fcabot	HYBRID	5'000	0	0.0 %
sk01	hvictor	HYBRID	0	0	0.0 %
sk012	yrevaz	MULTICORE	5'000	0	0.0 %
sk013	dpotter	MULTICORE	2'500	0	0.0 %
sk013	dpotter	HYBRID	2'500	0	0.0 %
sk017	framunno	HYBRID	5'000	0	0.0 %
sk020	mbredber	HYBRID	5'000	0	0.0 %
sk021	msargent	HYBRID	5'000	0	0.0 %
sk07	pllopiss	MULTICORE	2'500	0	0.0 %
sk07	pllopiss	HYBRID	2'500	0	0.0 %
Total			**265'000**	**188'068**	**71.0 %**