Time to welcome

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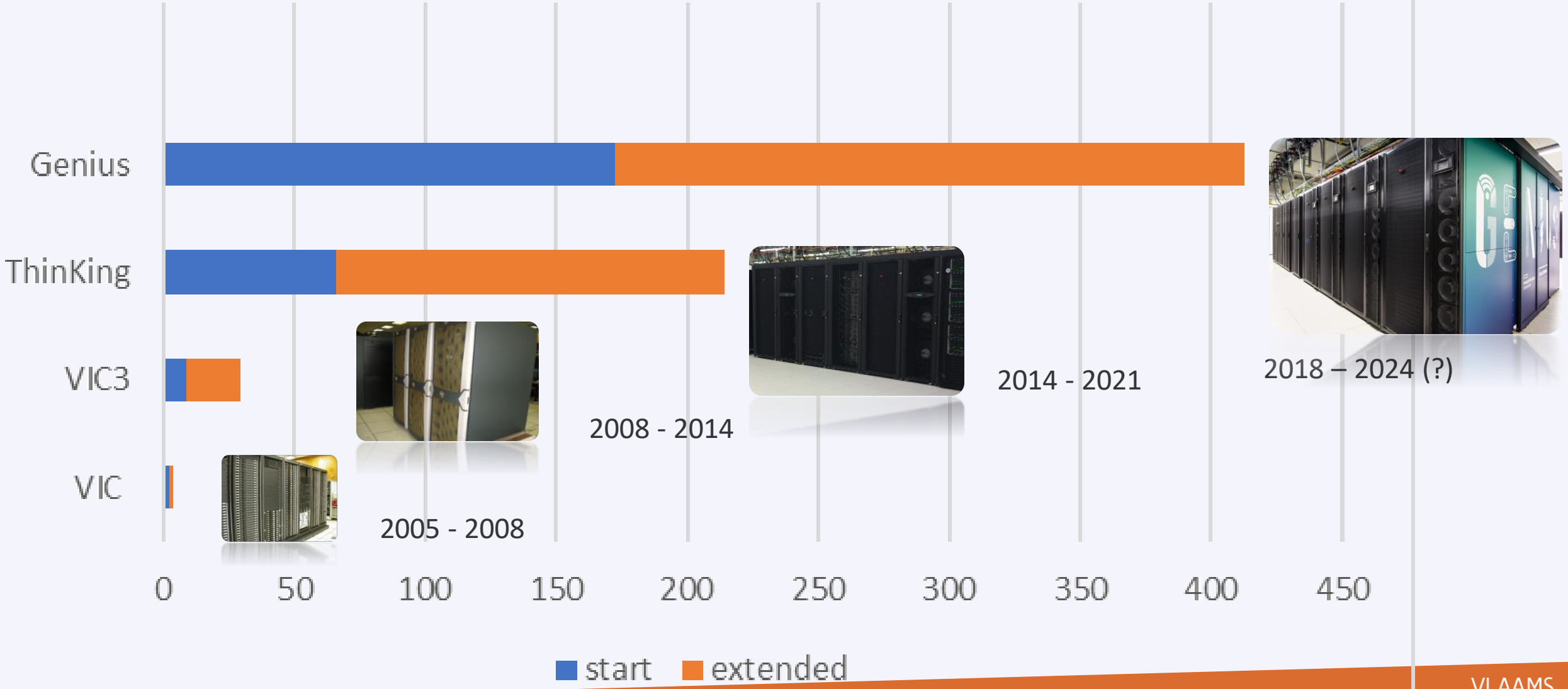
Tier-2 Evolution (CPU TFlops)



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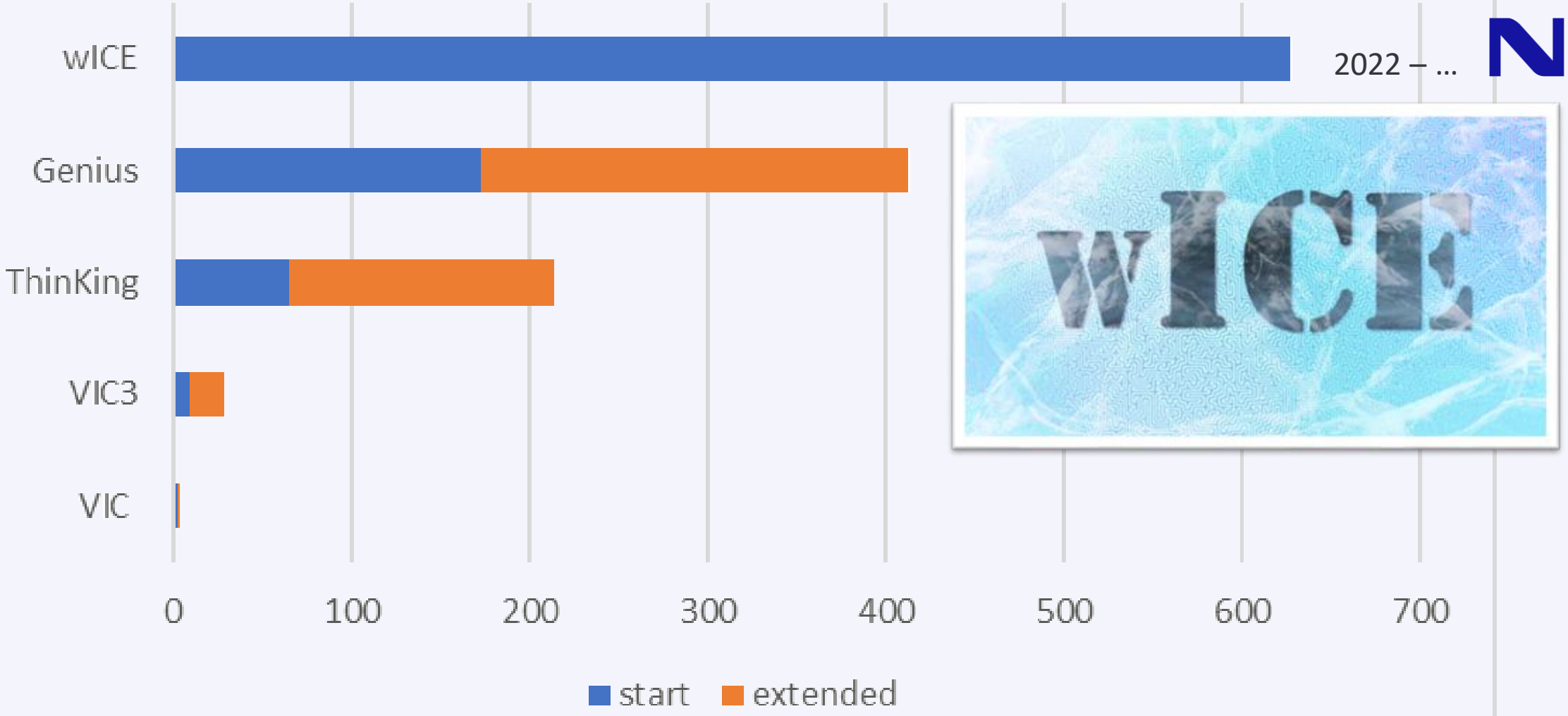
Evolution of TFlops



2022 – …

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\Orchestrating a brighter world

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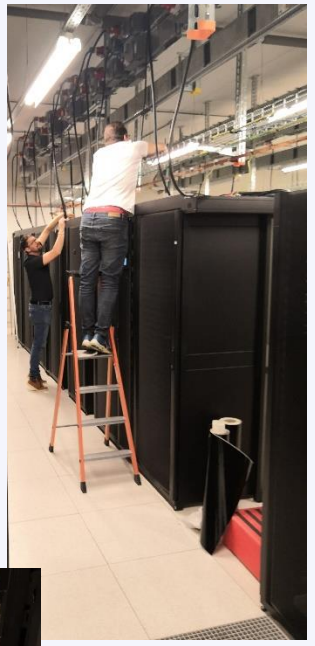
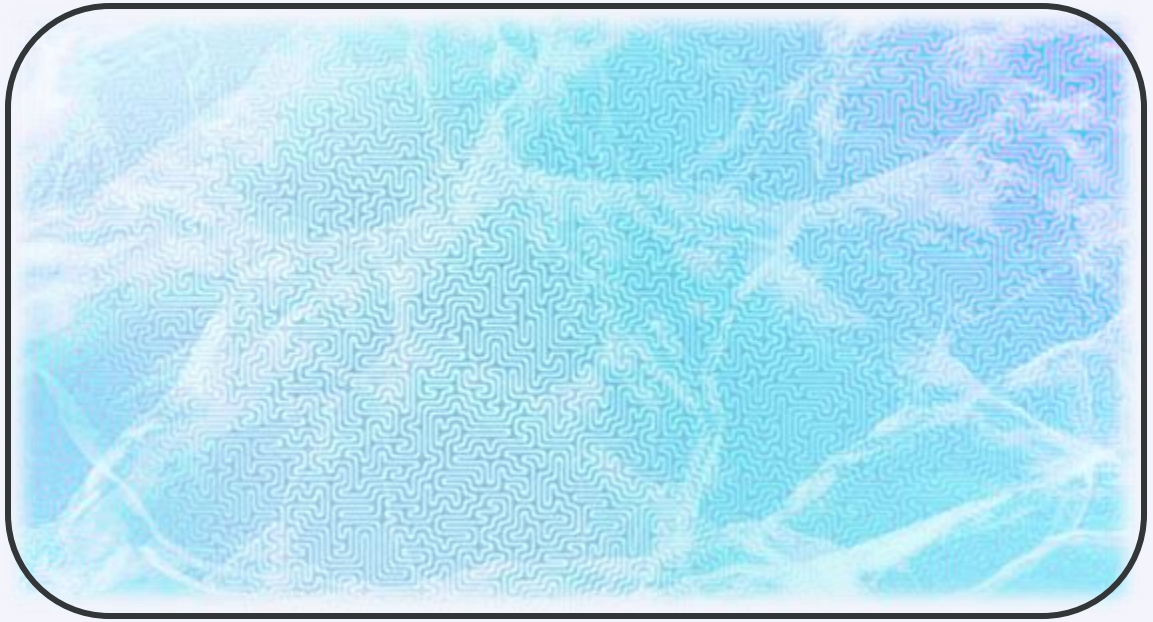
Flexebility in strange times…



Stepping in Genius footprints

Thin node Island

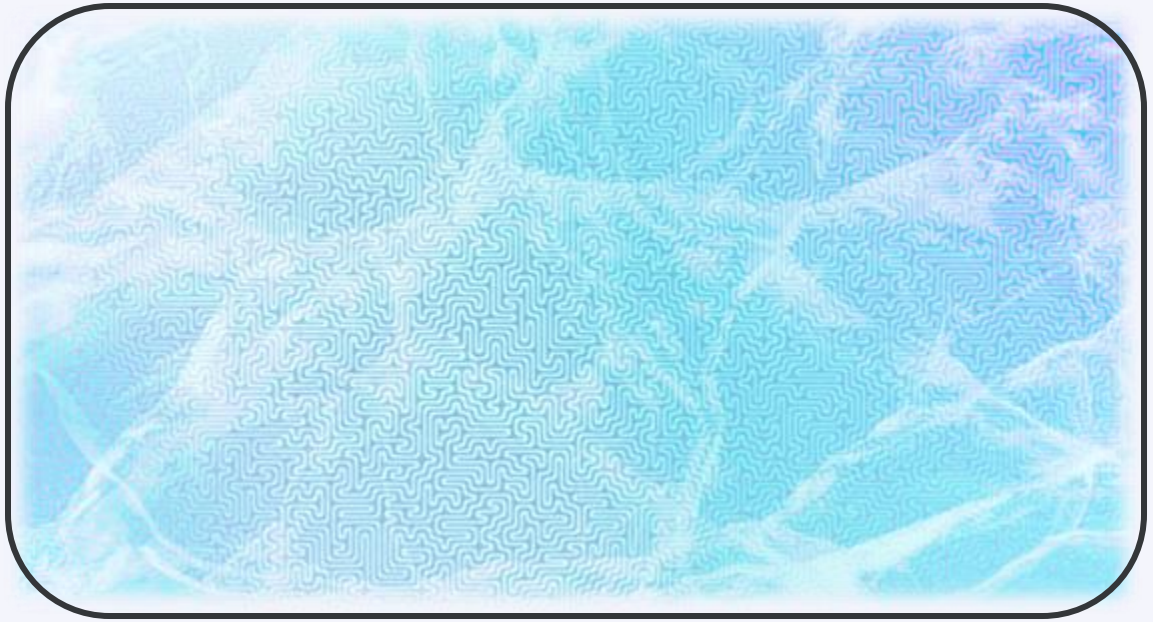


GPU Island

Large memory Island

And adding something more

Thin node Island



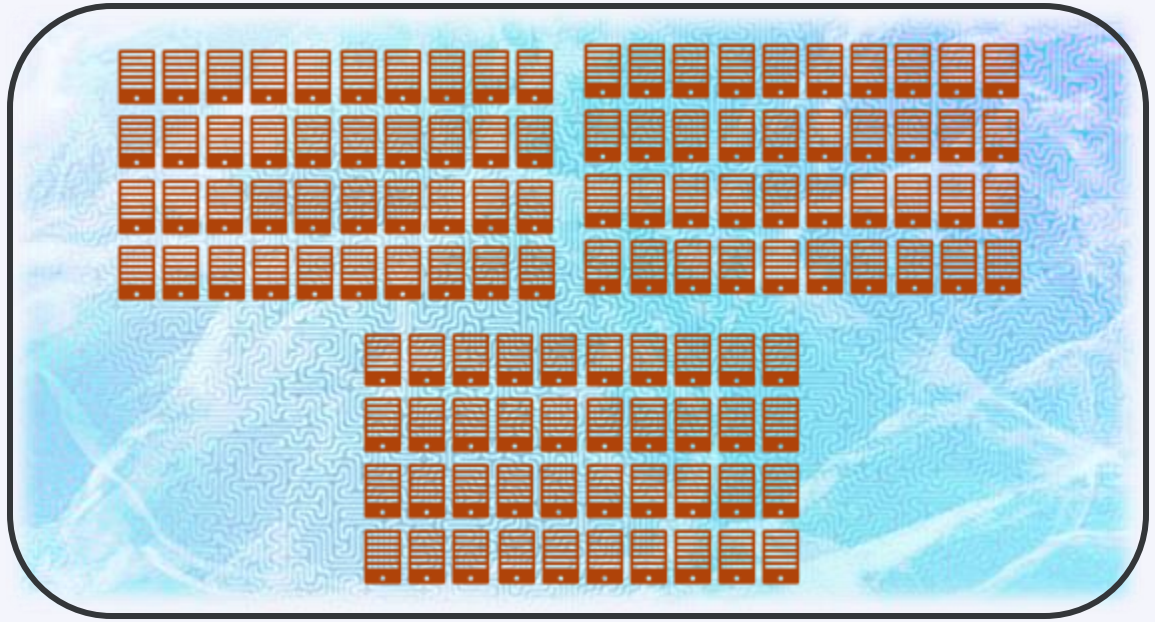
GPU Island

Large memory Island

Interactive Island

Moving forward

Thin node Island



GPU Island

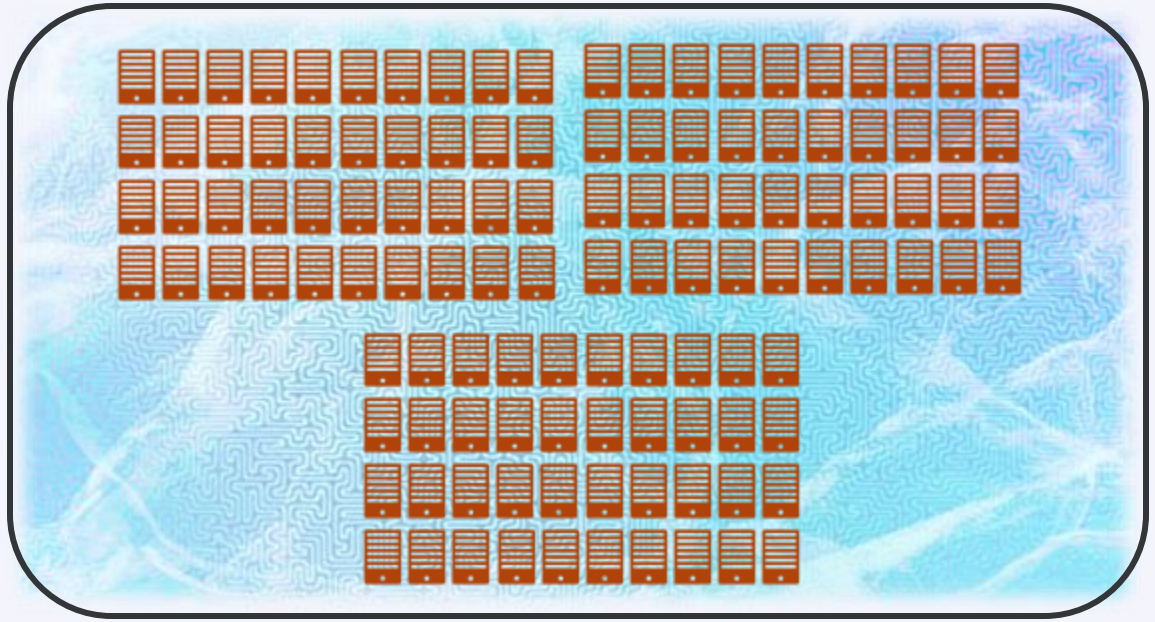
Large memory Island

Interactive Island

Moving forward

Thin node Island

172 nodes (12K cores)
72 core/node
256 GB Ram



GPU Island 16 Nvidia A100 80GB

Large memory Island

2 TB RAM

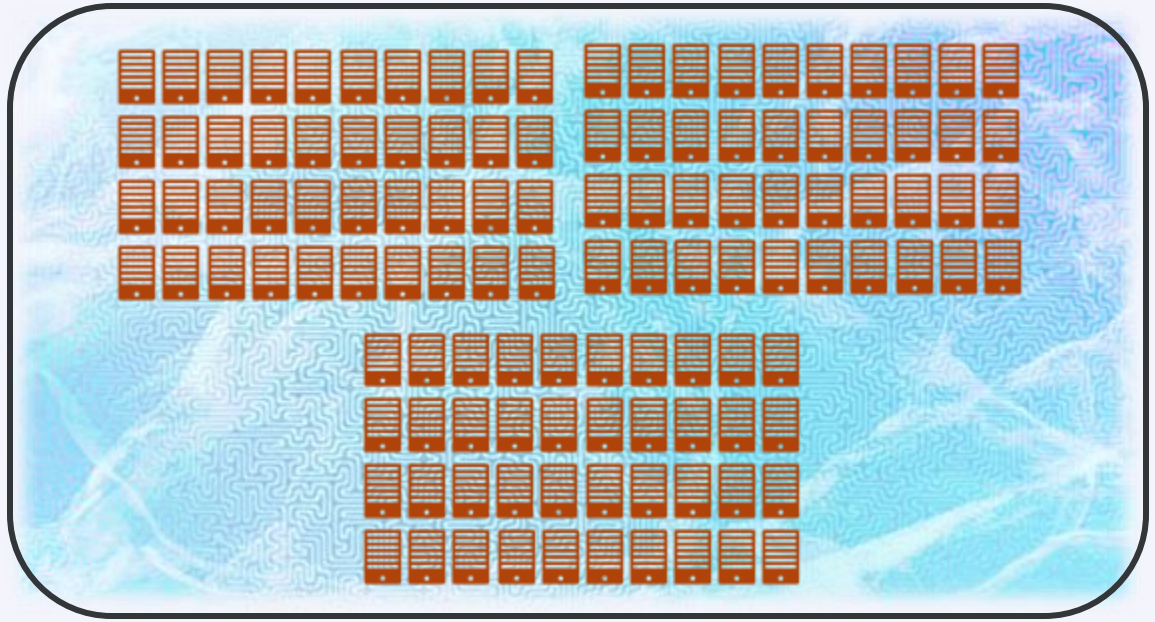
Interactive Island

5 Nvidia A100 80 GB RAM
512GB RAM

Moving forward

Thin node Island
172 nodes (12K cores)
72 core/node
256 GB Ram

+150 %



+70%

GPU Island 16 Nvidia A100 80GB

Nieuw

Interactive Island

5 nodes
5 Nvidia A100 80 GB RAM
512GB RAM

Large memory Island

2 TB RAM

+130 %

What’s in it for you

- More capacity
  - Easier schedulling,
  - larger core sized jobs
- More capability
  - Additional GPU RAM
  - large memory workloads
- More flexibility
  - Smaler pre- post- processing
  - Development/prototyping
  - New interface to the cluster (openOnDemand)
    - Job submission
    - Notebooks / Rstudio
    - …

Closed pilot testing

- Improved performance
  - CPU compute capactiy of a single node ~ 1.6 - 2x
  - But also scaling performance per core
  - GPU compute V100 compared to A100 x2
- Overall stability of the system has been good
  - Network issues were solved
  - But other problems might still show up
- No major software issues
  - But new OS / Kernel / Toolchain version, it might need work

Now it’s your turn to pilot

- Open pilot until the end of the year
- **Going from PBS to Slurm** => Adapt jobscripts
  - And don’t forget 72 cores/node
- Your own scaling tests are needed
  - Software availability and compatibility
  - Memory bandwidth per core is lower
  - For hybrid codes test # MPI process per node

wICE is here for your research

JOURNAL ARTICLE

Rotation and toroidal magnetic field effects on the stability of two-component jets

Dimitrios Millas, Rony Keppens, Zakaria Meliani

Monthly Notices of the Royal Astronomical Society, Volume 470, Issue 1, August 2017, Pages 592–605, https://doi.org/10.1093/mnras/stx1288

Published: 25 May 2017 **Article history**

https://doi.org/10.3847/1538-4365/abb604

Magnetized Plasmas in

A Coupled Guiding Cen

Fabio Bacchini

JAMES | Journal of Advances in Modeling Earth Systems

RESEARCH ARTICLE

Tropical Peatland Hydrology Simu Surface Model

Reconstruction of turbulent flow fields from lidar measurements using large-eddy simulation

Published online by Cambridge University Press: 13 November 2020

Pieter Bauweraerts and Johan Meyers

nature

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Article | Published: 05 January 2022

Decoding gene regulation in the fly brain

Jasper Janssens, Sara Aibar, Ibrahim Ihsan Taskiran, Joy N. Ismail, Alicia Estacio Gomez, Gabriel Aughey, Katina I. Spanier, Florian V. De Rop, Carmen Bravo González-Blas, Marc Dionne, Krista Grimes, Xiao Jiang Quan, Dafni Papasokrati, Gert Hulselmans, Samira Makhzami, Maxime De Waegeneer, Valerie Christiaens,

Three-dimensional phase-field simulation of microstructural evolution in three-phase materials with different diffusivities

Hamed Ravash, Jef Vleugels & Nele Moelans

Journal of Materials Science **49**, 7066–7072 (2014) | Cite this article

THE ASTROPHYSICAL JOURNAL LETTERS

On the Dependency between the Peak Velocity of High-speed Solar Wind Streams near Earth and the Area of Their Solar Source Coronal Holes

Stefan J. Hofmeister, Astrid M. Veronig, Stefaan Poedts, Evangelia Samara, and Jasmina Magdalenic

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Acknowledgement

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Let us know how it’s going with your pilot

Program – afternoon

- 14:00-14:50h : parallel session 1
  - Slurm Introduction
  - OpenOndemand
- 14:50-15:10h : Break
- 15:10-16:00h : parallel session 2
  - Slurm Introduction
  - Lustre filesystem & parallel storage
- 16:10-16:30h : Students @ work
- 16:30-17:00h : 1-minute presentation poster session & wrap-up
- 17:00 : Reception