

Interactive Computing E-Infrastructure
Public Information Event



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R&D topic: Efficient use of the
interactive computing services

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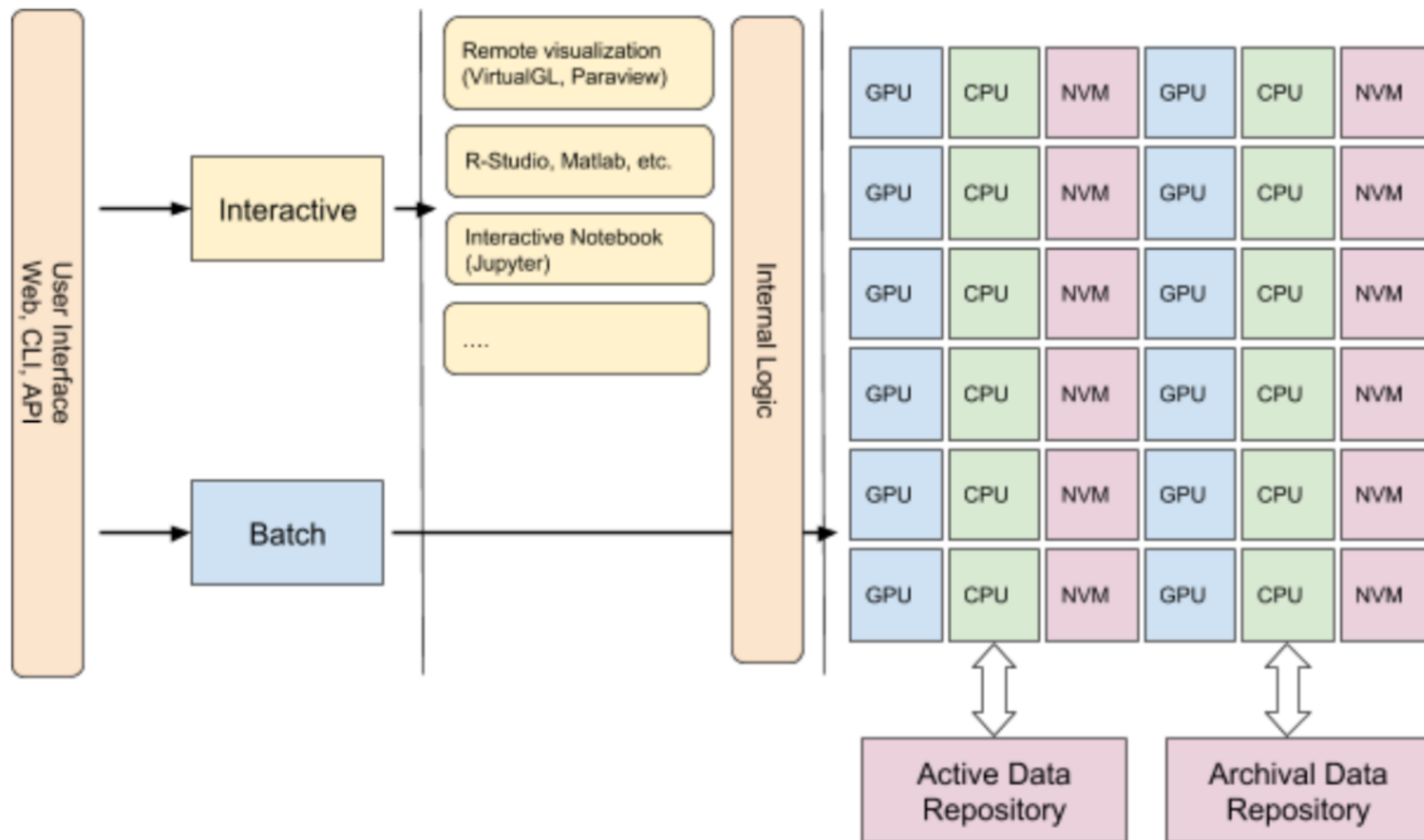
Disclaimer

Neither this announcement nor the event itself signifies the beginning of a procurement procedure or constitutes a commitment by the public procurers involved in the presentation to undertake such exercise at a later stage

Background derived from use cases

- The Fenix Interactive Computing Service must provide support for interactive use of computational resources
- Possible utilization scenarios:
 - interactive computing via notebook
 - data manipulation and post-processing
 - (remote) visualization of large data sets
 - computational steering

Logical architecture



Challenges

- Dynamically free resources for interactive jobs
 - Balance interactive and batch jobs to maximize resources utilization via
 - Jobs suspension
 - NVM flush to free resources to create interactive sessions
- Reasonable waiting time to spawn interactive jobs (mins)
- Improve the overbooking strategy
 - Adaptive resource allocation based on initial user's consumption assumption
- Guarantee efficient and scalable interactive sessions set-up, i.e. Web Service, tunnelling, etc.
- Improve usability and performance of remote visualization sessions

Expected outcome

1. Specification of a scalable, HW agnostic, solution (possibly based onto Open Source components) to maximize users interaction with the **Fenix Interactive Computing Services**
2. Modular software package capable to meet defined requirements, compatible with Fenix systems and specification in terms of users authentication and authorization
3. Training and documentation about developed software package(s)
4. Maintenance/support services for whole project duration
5. Long-term sustainability plan going beyond the end of the project



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