

HPC and Big Data Technologies for Global Systems



**Technical Calls
April 2020
(replamement for Technical Meeting
in Poznań, Poland)**

Objectives

The technical meeting of HiDALGO follows the provisions of the General Assembly in Graz in November 2020 and the previous plenary meetings. This meeting is conceived as preparatory step towards General Assembly in Athens as well as the midterm review to happen after M18. Consequently, the main goals for this meeting are the following:

- Get an understanding of the current status of the project and evaluate the steps taken
- Review technical developments after the definition of the requirements and the workflow
- Work out a strategy to generate the required impact (e.g. future application stakeholders, community building, information material, social media, etc.)
- Define a plan for HiDALGO year 2 and 3, taking into account the midterm review
- Discuss the pending details of the contract amendment to reflect the current situation
- Prepare the midterm review to happen in June, taking into account its clustering nature

This will require to:

- Elaborate comprehensive parallelization roadmap
- Understand and review the technology baseline for all implementations
- Implement a strategy that can capture and update requirements on the fly
- Discuss about the open points in the technical work, reaching any required agreement

Venue

Date and time

01.04.2020 – 03.04.2020

Location

Skype

Agenda

Day 1, April 1, 2020

10:00-11:30	Portal development and portal integration (Dinesh) - Portal development (30 min) - Javi - Cloudify blueprints for pilot workflows defined in WP6 (30 min) - Dinesh - CI/CD with Singularity and Jenkins (30 min) - Dinesh	Chair: USTTUT	Required: USTUTT, ATOS, PSNC, (ALL)
12:00-12:30	Hands-on sessions on: Portal - HPC interfacing (Marcin) - discussion (30 min)	Chair: PSNC, USTUTT	Required: PSNC, USTUTT, ATOS, (ALL)
14:00-14:30	Hands-on sessions on: Training infrastructure (Robert) - discussion (30 min)	Chair: PLUS, PSNC, USTUTT	Required: PLUS, PSNC, USTUTT, ECMWF, ICCS, (ALL)

Day 2, April 2, 2020

09:30-11:00	Pilots' parallelization status and plans (Derek): <ul style="list-style-type: none"> • Migration (20 min) - Derek • Urban Air Pollution (20 min) - Zoltan • Social Network (20 min) - Robert Concentration on aspects advancing: - complexity - the rule sets in applications - implementing parallelization paradigms: distributed and parallel processing e.g. utilizing the infrastructure we deal with	Chair: BUL	Required: BUL, SZE, PLUS, ICCS, USTUTT, PSNC, ECMWF, (ALL)
11:30-12:30	Parallelization roadmap (Marcin with Nikela and Sergiy) Analysis of simultaneous running of the same simulations with different input parameters (reasoning and technical implications). Discussion and developing an overall action plan covering vertically different parallelization/performance aspects. Concept of benchmarking which facilitates parallelization development. Preparation to special benchmarking tests (HAWK happy hours) - achieving scalability KPI	Chair: PSNC, USTUTT, ICCS	Required: ICCS, USTUTT, PSNC, ATOS, BUL, SZE, PLUS, (ALL)

14:00-15:30	Marketplace – status and hands-on session (Mark): Status of the discussion (Mark) Applications being interfaced with Marketplace – definition of services (Dinesh) Proposition of workflows for individual pilots (Pilots' representatives)	Chair: KNOW USTTUT	Required: ALL
16:00-17:15	Artificial Intelligence (Mark): Presentation the status. Discussion on AI specific (not data analytics) ideas, propositions, requirements. Roadmap for AI	Chair: KNOW	Required: KNOW, ICCS, PSNC, USTUTT, ATOS, BUL, SZE, PLUS, (ALL)

Day 3, April 3, 2020

9:30-11:00	HPDA - status of implementation and first results (Dimitris): <ul style="list-style-type: none"> - Localization Graph Extraction – Bernhard (20 min) - SVD (20 min) - Plans - Ideas for other analytics What is still required in respect of infrastructure and software solutions?	Chair: ICCS	Required: ICCS, KNOW, ATOS, USTUTT, PSNC (ALL)
11:30-12:15	Visualization (Anna): <ul style="list-style-type: none"> - Status of implementation incl. short presentation - Performance and scalability aspects - Integration with portal 	Chair: USTTUT	Required: USTUTT, KNOW, SZE, BUL (ALL)
14:00-14:45	Data management (Piotr): <ul style="list-style-type: none"> - ECMWF CDS2 integration - Efficient data transfer - Data streaming 	Chair: PSNC	Required: PSNC, ATOS, USTUTT, (ALL)
15:00-15:45	Hands-on sessions on: Solving current problems with HPC and HPDA infrastructure (Javi with Sergiy and Marcin) <ul style="list-style-type: none"> - discussion: 30 min - wrap up: 15 min 	Chair: ATOS, USTUTT	ALL