



An Adaptable Scalable Analytics Platform

Project ASAP develops an open-source execution framework for scalable data analytics. ASAP assumes that no single execution model is suitable for all types of tasks and no single data model (and store) is suitable for all types of data. The solution to this is to combine existing and future stores, model the behavior of each and schedule each task using the most appropriate for that case.

The project has four goals:

- A general-purpose task-parallel programming model and a runtime system to execute it in the cloud. The runtime will incorporate and advance state-of-the-art task-parallel programming models features:
 - irregular general-purpose computations,
 - resource elasticity,
 - synchronization, data-transfer, locality and scheduling abstraction,
 - ability to handle large sets of irregular distributed data, and
 - fault-tolerance.
- A modeling framework that constantly evaluates the cost, quality and performance of data and computational resources in order to decide on the most advantageous store, indexing and execution pattern available.
- A unique adaptation methodology that will enable the analytics expert to amend the task she has submitted at an initial or later stage.
- A state-of-the-art visualization engine that will enable the analytics expert to obtain accurate, intuitive results of the analytics tasks she has initiated in real-time.

Project Acronym: ASAP

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Project Type: STReP

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Duration: 36 Months

Total Budget: €3,637,349

EC Funding: €2,769,000

Total Effort: 365 Person-Months

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