



VirgoWMS

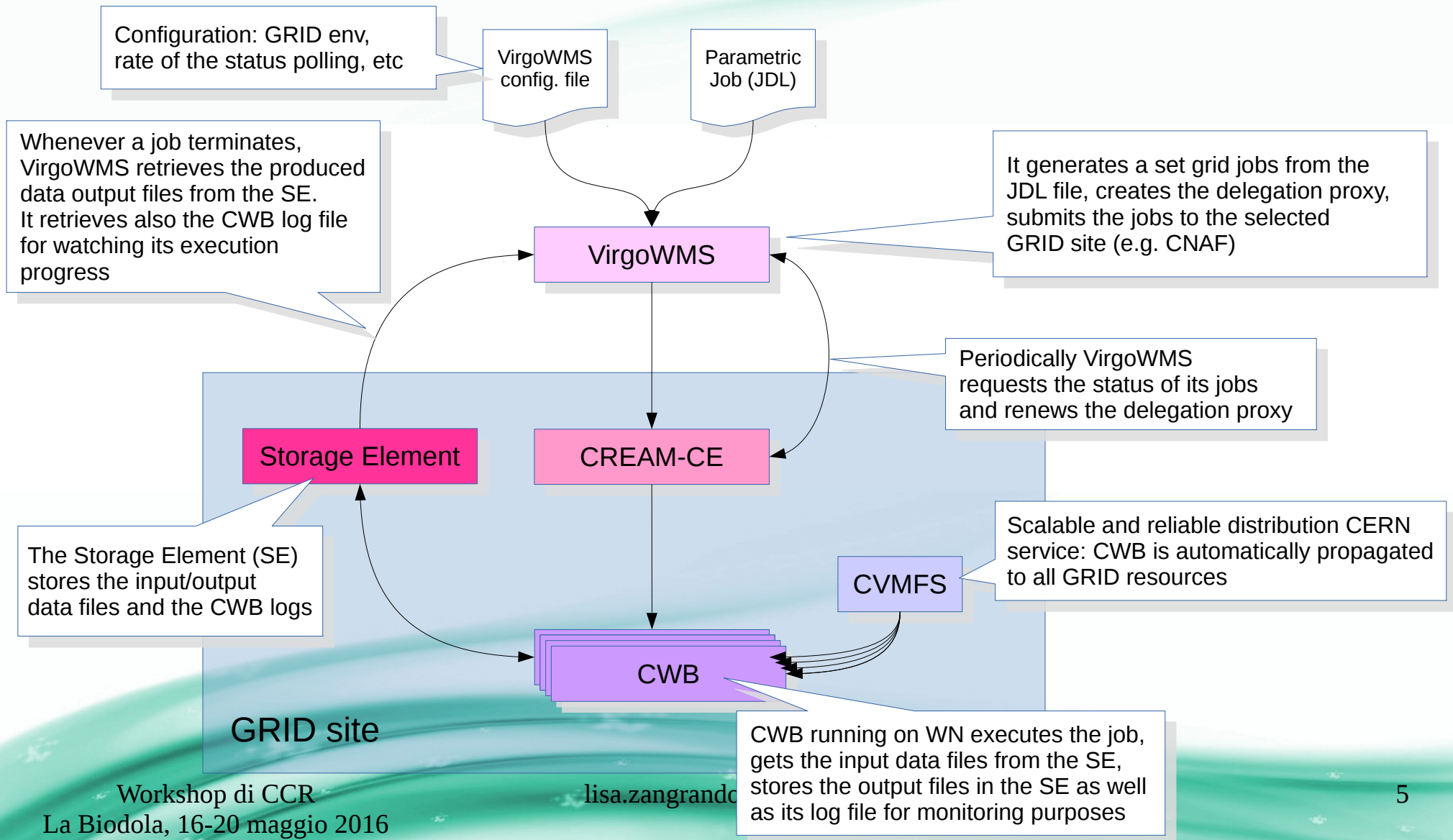
a solution for running the Virgo pipelines in GRID

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- The Virgo data analysis model evolved: it will require more computing resources than in the past
 - data flow and data storage needs similar to those of High Energy Physics experiments
- Analysis software tools have been developed to handle and analyze these large amounts of data
 - two different execution environments:
 - INFN grid sites
 - LIGO (dedicated Condor based clusters)

- Political and technical reasons are pushing us to address the data analysis even on European resources usually accessible by GRID
- Problem: to open grid based infrastructures like CNAF to the LVC analysis pipelines currently studied for the LSC like computing infrastructures
- Requirement: to have a "neutral" solution, as much as possible unrelated to the specific pipeline
- Solution proposed: VirgoWMS

- Java client, running on a personal workstation/notebook, for GRID based computing centres
 - designed to be lightweight, simple to install, configure and use
 - tools other than those GRID not required (e.g. external libs, SW, etc)
- acts as workflow management system
 - data transfer (input/output sandbox)
 - Job submission, monitoring, delegation, recovering in case of failure...
- it accesses the Virgo GRID resources (e.g. CNAF) all handled by the CREAM-CE
- in principle all the LVC pipelines can be submitted to a GRID based centre using VirgoWMS



- Involved persons: Lisa Zangrando with the support of Claudia Lazzaro and Gabriele Vedovato
- Architectural Design Document
 - <https://docs.google.com/document/d/1jBZJp5y1t-kl9BgxC53w8Lc5KrHN0l0bLkwmHokDj3U/edit?usp=sharing>
- first prototype ready
- testing ongoing
 - preliminary simple tests have been already executed successfully in the both CNAF and Padua production GRID infrastructures
 - at the moment, no real data analysis tests have been executed yet
 - server which provides to the users a shared VirgoWMS testing environment

Next steps

- The results of the tests and feedback provided by the users will allow us to fix any problem occurred during the tests and to enhance the functionality and usability of the service
- VirgoWMS will be distributed and made available to the LIGO community as soon as a good stability is reached

Do you know that Pythagoras...

