Enabling Grids for E-sciencE

A comparison of ARC and gLite on medical imaging use-cases

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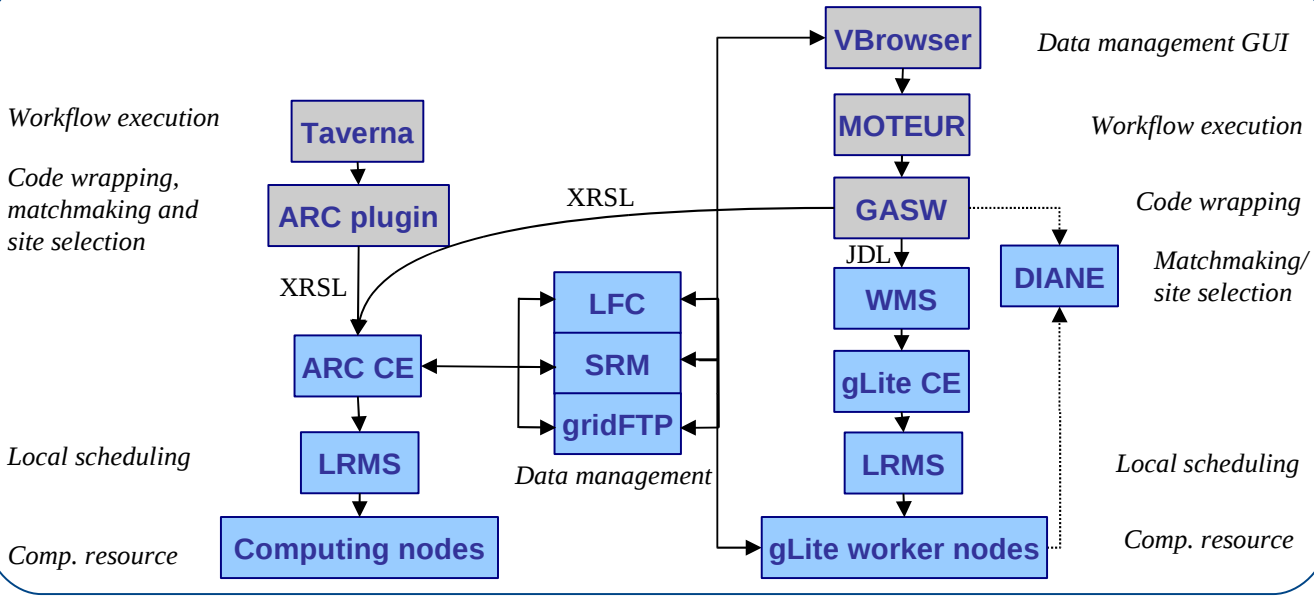
Objectives

Enable application-level interoperability between ARC and gLite in order to (1) allow cross executions of medical imaging applications and (2) compare the performance of those two middleware on complete use-cases.

Systems and interoperability



Application results

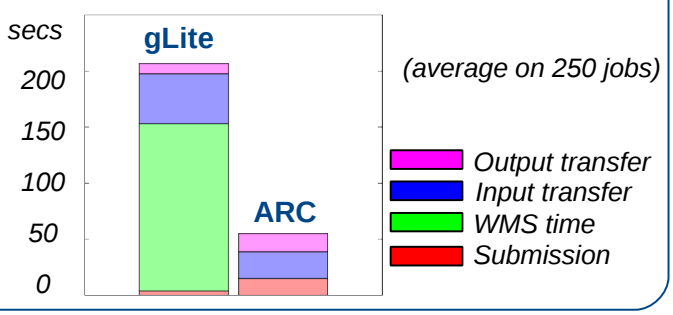
- Executed Image Retrieval application (developed on ARC) with data stored on EGEE SE
- Executed GATE workflow (developed on gLite) on computing resources managed by ARC

Performance tests

ARC client VS VBrowser LFC driver (KB/s)

	Download	Upload
(no VPN)		
VBrowser	4523	1022
ARC-client	4451	997
(over VPN)		
VBrowser	339	116
ARC-client	361	110

Comparison on GATE simulations



Conclusions

- ARC, gLite and VBrowser data clients are equivalent
- ARC's matchmaking performs better than gLite's in the tested case
- Pilot jobs are difficult to use with ARC
- Infrastructure overhead is very high in both cases