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EasyGateway

Dressing Apache Airavata service with automatically user-generated interfaces

Outline





3. Architecture

Outline





EasyGateway – Why?

- Accelerate Science Gateways front-end development
 - 1. Based on real-world experience in developing Science Gateways*
 - Provide a set of high level features
 - 1. Automatic generation of configuration interfaces
 - 2. Configuration parameters validation
 - 3. Result and configuration sharing
 - 4. Accessibility rights management

* D'Agostino, D., Danovaro, E., Clematis, A., Roverelli, L., Zereik, G., Parodi, A., & Galizia, A. (2015). Lessons learned implementing a science gateway for hydro-meteorological research. Concurrency and Computation: Practice and Experience.

* D'Agostino D, Roverelli L, Zereik G, De Luca A, Salvaterra R, Belfiore A, Lisini G, Novara G, Tiengo A. (2016) A microservice-based portal for X-ray transient and variable sources.

EasyGateway – What is?



Based on **Portal** TS

- General purpose Web portal
- Modular
- Science Gateway Module

*http://www.portalts.it

EasyGateway – Architecture

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Outline







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- Workflow configuration
- Workflow execution
- Results collection
- Sharing

Using EasyGateway – Type Definition



Using EasyGateway – Application Definition Time A 💼 EASY GATEWAY Home Model Types Models Configuration Workflow configuration Results Administration Signup Logout Login **Simulation Models** Туре -Name -Actions RainFARM Ensemble Delete Edit Wrf-arw Delete Meteo Edit Add Model First › Last 1 <

Using EasyGateway – Parameters Definition

Simulation Models

Basin boundaries parameter configuration

Туре	
Domains	\$
Namelist name	
basin_boundaries	
Generic fields	
Domains required	
True	\$
Markers required	
False	\$
Editable	
True	\$
Specific fields	
Only nested domains	
True	\$
Allow markers out domains	
False	\$
User can draw domains	
True	\$
User can draw markers	
False	\$
Maximum number of domains	

Maximum number of markers

0	
Category	
Basin Specs	\$
Hint	
Draw a rectangular region to define a basin.	

Default value



Using EasyGateway – Validation Definition

	Start Dat	e validation ex	pression	
Start Date	*	End Date		Add Cond
		Delete		
Start Date	\$	Static Value		- Add Cond
Static Value	01/01/1970			
	00:00			
Start Date must be greater th	an 01/01/1970			
		Delete		

Using EasyGateway – Workflow Configuration



Using EasyGateway – Workflow Execution

flow Actions Configuration	Untitled *										
re											
en											
e as											
-arw		Model: DRIFT Type: HYDRO Status: CONFIGURE	OAD CONFIGURATION								

V

Using EasyGateway – Sharing



Using EasyGateway – Results Collection

	ľ	EASY G	ATEWA	١Y	Home	App Definition	Type Definitio	n Workflow Configuration	n Results	Administration	Logout		
L My workflows		MY WORK	FLOWS										
		RUNNING	ENDED										
Shared													
		NAME	-	DATE –		STATU	JS –	Author -					
		Drift		04 October 2016 14:	14	RUNI	NING	Gabriele		D	DETAILS	SHARE	
		First	۲ (> Last									

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Outline





Submission to Airavata





Conclusion

EasyGateway

- Modular
- Extensible

Airavata dress

- Enhanced user interfaces
- Results and configurations sharing
- Accessibility rights management
- Configuration postprocessing

Future

- Workflows submission to Airavata
- User accounting on resources



EASY GATEWAY APACHE

Soon available on easygateway.it

