

Atlas report 09.06.2015

Site networking - update on Sonar

Tomas Javurek

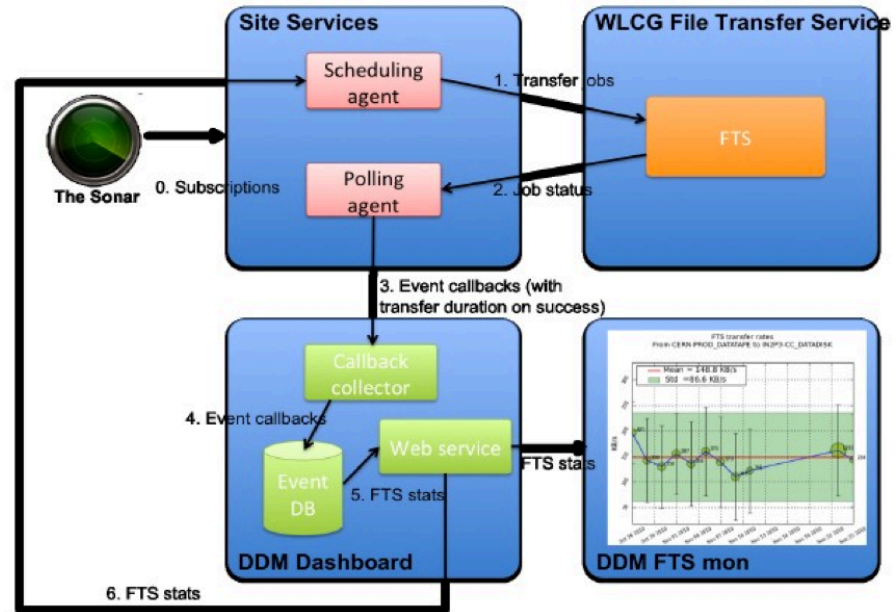
The sonar tests played an important role to test the connectivity of the sites (T2Ds,diagnostics in case of problems).

SCHEME OF RUNI SONAR

Great Simone's work:

Why new concept?

- adapt to Rucio interface
- single file size (3 sizes in RunI):
 - fts3 gives us srm overhead info
 - less load to the mesh
 - less info -> easier to publish
- full mesh needed, including t3s
- testing a single link
- comparison with other tests

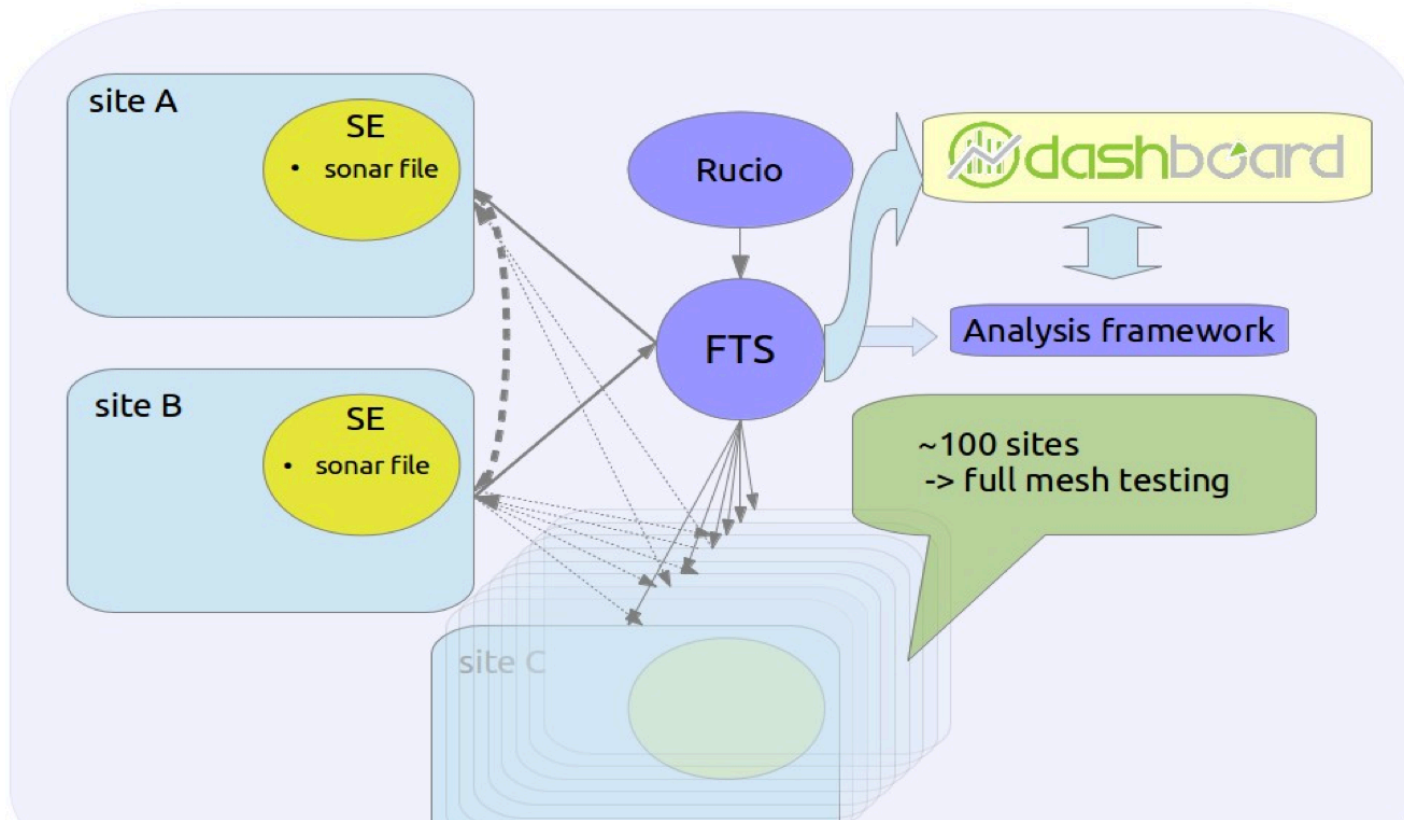


All about RunI sonar:

https://github.com/sonar/sonar/blob/master/README.md

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- results published in SSB "network measurements" view: [LINK](#)

all fts transfers included at the moment!

CLICK!!!

FILTER

sonar-w-o: 7days avg. throughput with overhead

Site Name	SrcSite	SrcCloud	SrcTier	DstSite	DstCloud	DstTier	Prio	sonar-w-o [MB/sec]	sonar-wo-o [MB/sec]	trafo-fail-rate [perc.]	FAI...
CERN-PROD_to_RAL-LCG2	CERN-PROD	CERN	T0	RAL-LCG2	UK	T1	10	0.07	0.87	0	na
CERN-PROD_to_BNL-OSG2	CERN-PROD	CERN	T0	BNL-ATLAS	US	T1	10	0.19	0.26	0	n/a
CERN-PROD_to_NDGF-T1	CERN-PROD	CERN	T0	NDGF-T1	ND	T1	10	0.08	0.29	2	n/a
CERN-PROD_to_INFN-T1	CERN-PROD	CERN	T0	INFN-T1	IT	T1	10	0.20	0.85	3	n/a
CERN-PROD_to_SARA-MATRIX	CERN-PROD	CERN	T0	SARA-MATRIX	NL	T1	10	21.62	23.67	1	n/a
CERN-PROD_to_PIC	CERN-PROD	CERN	T0	pic	ES	T1	10	0.12	0.30	0	n/a
CERN-PROD_to_TAIWAN-LCG2	CERN-PROD	CERN	T0	Taiwan-LCG2	TW	T1	10	0.03	0.09	0	n/a
CERN-PROD_to_FZK-LCG2	CERN-PROD	CERN	T0	FZK-LCG2	DE	T1	10	16.10	17.30	1	n/a
CERN-PROD_to_RRC-KI-T1	CERN-PROD	CERN	T0	RRC-KI-T1	RU	T1	10	0.10	0.14	0	n/a
CERN-PROD_to_NIKHEF-ELPROD	CERN-PROD	CERN	T0	NIKHEF-ELPROD	NL	T1	10	0.08	0.34	0	n/a
CERN-PROD_to_TRIUMF-LCG2	CERN-PROD	CERN	T0	TRIUMF-LCG2	CA	T1	10	0.11	0.15	0	0.35
CERN-PROD_to_IN2P3-CC	CERN-PROD	CERN	T0	IN2P3-CC	FR	T1	10	0.33	0.72	0	n/a
INFN-T1_to_IN2P3-CC	INFN-T1	IT	T1	IN2P3-CC	FR	T1	9	17.73	20.72	1	n/a
NDGF-T1_to_TAIWAN-LCG2	NDGF-T1	ND	T1	Taiwan-LCG2	TW	T1	9	10.82	16.59	1	n/a
RAL-LCG2_to_NDGF-T1	RAL-LCG2	UK	T1	NDGF-T1	ND	T1	9	3.18	5.04	1	n/a
FZK-LCG2_to...	FZK-LCG2	UK	T1	...	...	...	9	10.80	27.13	0	n/a
IN2P3-CC_to_NDGF-T1 as a source:	IN2P3-CC	FR	T1	NDGF-T1	ND	T1	9	7.08	14.16	17	n/a
NDGF-T1_to_J...	NDGF-T1	ND	T1	J...	...	...	9	31.66	68.66	0	n/a
NIKHEF-ELPR...	NIKHEF-ELPR	NL	T1	...	...	...	9	3.11	3.17	51	n/a
PIC_to_CERN...	PIC	ES	T1	CERN...	CERN	T0	9	7.13	7.49	5	n/a
PIC_to_FZK-L...	PIC	ES	T1	FZK-L...	DE	T1	9	16.27	24.33	1	n/a
SARA-MATRIX...	SARA-MATRIX	NL	T1	9	15.18	57.26	0	n/a

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Status:

- all test files distributed except of two sites
- full mesh transfers just started
- results published in SSB <http://turl.ca/pudxwsj>
(not filtering sonar transfers at the moment)
- <https://twiki.cern.ch/twiki/bin/view/AtlasComputing/AtlasSonarTests>

TODO:

- tool for occasional transfers (testing specific channel)
- filtering for publishing (all files, all files with same size, sonar only)

Further Plans:

- to send files only to the channels with low statistics
- after discussion with Marian Babik (following WLCG networking group)

- correlations with perfSonar and xrd cp
- perfSonar is in very good shape (almost full mesh)
- packet-loss rather than throughput?

→ compare results with xrd cp / perfSonar for all operations

DaTRI with Rucio

- Web Interface for Rucio Replication Rules
- Currently under active development
- Only for selected users

Not open for public use yet

(if interested please contact rucio-dev@cern.ch)

- Provides similar functionality as the CLI but in a multi step web interface:
 - Requesting of new rules
 - Listing of already created rules and they replication status
 - (in development) approval mechanism for special

DaTRI with Rucio

Comparison old/new interface dataset/container selection

- Before: provide data pattern and data type
- Now: provide full dataset/container name or pattern and get a list of all matching datasets/container
- For each datasets/container show detailed metadata
- User can decide to continue with all matching datasets/containers or select a subset

DaTRI with Rucio

- **User can create rules within their quota:**
 - Datasets/containers can be selected based on patterns or lists
 - Storage endpoints can be selected by name or RSE expression
 - A summary page shows dataset sizes and RSE quotas
 - Warnings if the quota is exceeded or write permission denied
- **Currently under development:**
 - Possibility to request a sample of a dataset/container
 - Approval system for over-quota requests
- **The system is in a pre-production state now and can be opened to more users**
 - Caveat: TAPE endpoints currently excluded