

Perfsonar FR

Etat des lieux et discussion



"perfsonar team" LCG-France

Espace LCGFR Forge IN2p3 :

<https://forge.in2p3.fr/projects/lcg-france/wiki/PerfsonarTeam2018>

- Petit groupe chargé de coordonner le déploiement des Perfsonars en France.
 - A l'origine : Catherine Biscarat, Philippe Séraphin, Jean-Michel Barbet
 - Rejoints par : Laurent Duflot et David Bouvet (remplace Catherine)
- Passage à Perfsonar v4 / CentOS7 (Dec 2018) ✓
- Création d'un « mesh » FR (Fevrier 2019) ✓
- Routage des alertes de « checkMK » vers les administrateurs de sites ✓
- Adresse « suivi-perfsonar-fr@in2p3.fr » ✓
- Essayer de comprendre les résultats des mesures (Dashboard) ✗

Etat des Perfsonar FR

CheckMK Perfsonars FR le 3 Décembre 2019

Raw 1.5.0p22

Host search \.fr 22 rows /O=GRID-FR/C=FR/O=CNRS/OU=SUBATECH/CN=Jean-Michel Barbet (user) 14:01

Tactical Overview

Hosts	Problems	Unhandled	State
306	0	0	0

Services

Services	Problems	Unhandled	State
4694	1351	1351	16

Quicksearch

Views

- Overview
- Hosts
- Host Groups
- Host Groups (Grid)
- Host Groups (Summary)
- Services
- All services
- Favorite services
- Recently changed services
- Serv. by host groups
- Service check durations
- Service search
- Unmonitored services
- Service Groups
- Service Groups (Grid)
- Service Groups (Summary)
- Services by group
- Metrics
- Business Intelligence
- Problems
- Inventory
- Other

Bookmarks

WATO - Configuration

Local site etf

State	Host	Icons	OK	Wa	Un	Cr	Pd
UP	ccperfsonar1.in2p3.fr		14	1	0	0	0
UP	ccperfsonar2.in2p3.fr		13	1	0	0	0
UP	clrperf-bwctl.in2p3.fr		14	1	0	0	0
UP	clrperf-owamp.in2p3.fr		12	1	0	1	0
UP	lapp-ps01.in2p3.fr		14	1	0	0	0
UP	lapp-ps02.in2p3.fr		13	1	0	0	0
UP	llrpsonar1.in2p3.fr		14	0	0	0	0
UP	llrpsonar2.in2p3.fr		13	2	0	0	0
UP	lpnhe-psb.in2p3.fr		15	0	0	0	0
UP	lpnhe-psl.in2p3.fr		13	1	0	0	0
UP	lpssc-perfsonar.in2p3.fr		14	1	0	0	0
UP	lpssc-perfsonar2.in2p3.fr		14	0	0	0	0
UP	marperf01.in2p3.fr		14	1	0	0	0
UP	marperf02.in2p3.fr		13	1	0	0	0
UP	nanperfs01.in2p3.fr		14	0	0	0	0
UP	nanperfs02.in2p3.fr		15	0	0	0	0
UP	perfsonar01.datagrid.cea.fr		13	0	0	1	0
UP	perfsonar02.datagrid.cea.fr		14	1	0	0	0
UP	psonar1.lal.in2p3.fr		2	1	9	2	0
UP	psonar2.lal.in2p3.fr		13	2	0	0	0
UP	sbgperfs1.in2p3.fr		14	0	0	0	0
UP	sbgperfs2.in2p3.fr		14	1	0	0	0

Types de problèmes :

clrperf-bwctl : CRITICAL - Error connecting to pscheduler API (IPv4 or IPv6)

perfsonar01.datagrid.cea.fr : CRITICAL - NTP not synchronized

psonar1.lal.in2p3.fr : CRITICAL - Connection failed

(HTTPSConnectionPool(host='134.158.73.243', port=443): Read timed out. (read timeout=60))

clrperf-owamp

clrperf-owamp.in2p3.fr						
State	Service	Icons	Status detail	Age	Checked	Perf-O-Meter
OK	perfSONAR configuration: contacts		OK - Contact and organization found	2019-11-29 08:26:36	24 m	
OK	perfSONAR configuration: location		OK - Location: 3.0833/45.7833	2019-11-29 08:26:36	24 m	
OK	perfSONAR configuration: meshes		OK - Auto-URL configured correctly	2019-11-29 08:26:36	24 m	
WARN	perfSONAR esmond freshness: owamp		WARNING - esmond 78.65 % complete for event type: histogram-owdelay	6 h	30 m	
OK	perfSONAR hardware check		OK - CPU:2/8cores/2490.0000Mhz RAM:16GB NIC:1Gbps/1500MTU/IPv6 enabled	2019-11-29 08:26:36	24 m	
OK	perfSONAR json summary		OK - Toolkit metadata successfully retrieved	2019-11-29 08:26:00	24 m	
OK	perfSONAR services: http/https		OK - Toolkit homepage reachable	2019-11-29 08:26:36	24 m	
OK	perfSONAR services: ndt/npad disabled		OK - NDT/NPAD disabled	2019-11-29 08:26:36	24 m	
OK	perfSONAR services: ntp		OK - NTP synchronized	2019-11-29 08:26:36	24 m	
OK	perfSONAR services: owamp		TCP OK - 0.133 second response time on clrperf-owamp.in2p3.fr port 861	2019-11-29 08:32:01	12.7 s	
CRIT	perfSONAR services: pscheduler		CRITICAL - Error connecting to pscheduler API (IPv4 or IPv6)	27 h	7 m	
OK	perfSONAR services: regular testing/pscheduler		OK - pscheduler is enabled and running	2019-11-29 08:26:36	24 m	
OK	perfSONAR services: versions		OK - Toolkit version found: 4.2.2-1.el7	2019-11-29 08:26:36	24 m	
OK	perfSONAR services: web/https IPv6		TCP OK - 0.254 second response time on clrperf-owamp.in2p3.fr port 443	2019-11-29 08:41:01	6 m	

Ticket GGUS #144195:

https://ggus.eu/index.php?mode=ticket_info&ticket_id=144195

perfsonar01.datagrid.cea.fr

State	Service	Icons	Status detail	Age	Checked	Perf-O-Meter
OK	perfSONAR configuration: contacts		OK - Contact and organization found	2019-11-29 08:44:19	10 m	
OK	perfSONAR configuration: location		OK - Location: 2.148822/48.721490	2019-11-29 08:44:19	10 m	
OK	perfSONAR configuration: meshes		OK - Auto-URL configured correctly	2019-11-29 08:44:19	10 m	
OK	perfSONAR esmond freshness: owamp	 	OK - esmond 80.0 % complete for event type: histogram-owdelay	138 m	18 m	
OK	perfSONAR hardware check		OK - CPU:2/12cores/1700.000Mhz RAM:31GB NIC:1Gbps/1500MTU/IPv6 enabled	2019-11-29 08:44:19	10 m	
OK	perfSONAR json summary		OK - Toolkit metadata successfully retrieved	2019-11-29 08:43:11	11 m	
OK	perfSONAR services: http/https		OK - Toolkit homepage reachable	2019-11-29 08:44:19	10 m	
OK	perfSONAR services: ndt/npad disabled		OK - NDT/NPAD disabled	2019-11-29 08:44:19	10 m	
CRIT	perfSONAR services: ntp		CRITICAL - NTP not synchronized	2019-11-29 08:44:19	10 m	
OK	perfSONAR services: owamp	 	TCP OK - 0.120 second response time on perfsonar01.datagrid.cea.fr port 861	2019-12-01 00:10:03	12 m	
OK	perfSONAR services: pscheduler	 	OK - pscheduler stats retrieved	2019-11-29 08:24:11	30 m	
OK	perfSONAR services: regular testing/pscheduler		OK - pscheduler is enabled and running	2019-11-29 08:44:19	10 m	
OK	perfSONAR services: versions		OK - Toolkit version found: 4.2.2-1.el7	2019-11-29 08:44:19	10 m	
OK	perfSONAR services: web/https IPv6	 	TCP OK - 0.220 second response time on perfsonar01.datagrid.cea.fr port 443	2019-11-29 08:28:25	7 m	

Conflit avec Chrony ?

sbgperfps1.in2p3.fr

sbgperfps1.in2p3.fr						
State	Service	Icons	Status detail	Age	Checked	Perf-O-Meter
OK	perfSONAR configuration: contacts		OK - Contact and organization found	2019-11-29 08:45:35	20 m	
OK	perfSONAR configuration: location		OK - Location: 7.7095/48.6056	2019-11-29 08:45:35	20 m	
OK	perfSONAR configuration: meshes		OK - Auto-URL configured correctly	2019-11-29 08:45:35	20 m	
CRIT	perfSONAR esmond freshness: owamp	 	CRITICAL - esmond 0.0 % complete for event type: histogram-owdelay	203 m	83 m	
OK	perfSONAR hardware check		OK - CPU:2/16cores/2666.0000Mhz RAM:12GB NIC:10Gbps/9000MTU/IPv6 enabled	2019-11-29 08:45:35	20 m	
OK	perfSONAR json summary		OK - Toolkit metadata successfully retrieved	2019-11-29 08:45:29	20 m	
OK	perfSONAR services: http/https		OK - Toolkit homepage reachable	2019-11-29 08:45:34	20 m	
OK	perfSONAR services: ndt/npad disabled		OK - NDT/NPAD disabled	2019-11-29 08:45:34	20 m	
OK	perfSONAR services: ntp		OK - NTP synchronized	2019-11-29 08:45:34	20 m	
OK	perfSONAR services: owamp	 	TCP OK - 0.147 second response time on sbgperfps1.in2p3.fr port 861	2019-11-29 08:20:22	11 m	
OK	perfSONAR services: pscheduler	 	OK - pscheduler stats retrieved	2019-11-29 08:25:24	39 m	
OK	perfSONAR services: regular testing/pscheduler		OK - pscheduler is enabled and running	2019-11-29 08:45:34	20 m	
OK	perfSONAR services: versions		OK - Toolkit version found: 4.2.2-1.el7	2019-11-29 08:45:34	20 m	
OK	perfSONAR services: web/https IPv6	 	TCP OK - 0.144 second response time on sbgperfps1.in2p3.fr port 443	2019-11-29 08:30:17	99 s	

Pas de mesures... Peut arriver juste après le redémarrage, sinon c'est un dysfonctionnement...

psonar1.lal.in2p3.fr

psonar1.lal.in2p3.fr						
State	Service	Icons	Status detail	Age	Checked	Perf-O-Meter
UNKN	perfSONAR configuration: contacts		UNKNOWN - Masked by perfSONAR JSON Summary - CRITICAL/UNKNOWN	131 m	11 m	
UNKN	perfSONAR configuration: location		UNKNOWN - Masked by perfSONAR JSON Summary - CRITICAL/UNKNOWN	131 m	11 m	
UNKN	perfSONAR configuration: meshes		UNKNOWN - Masked by perfSONAR JSON Summary - CRITICAL/UNKNOWN	131 m	11 m	
WARN	perfSONAR esmond freshness: owamp	 	WARNING - esmond 73.58 % complete for event type: histogram-owdelay	2019-12-01 04:40:53	21 m	
UNKN	perfSONAR hardware check		UNKNOWN - Masked by perfSONAR JSON Summary - CRITICAL/UNKNOWN	131 m	11 m	
CRIT	perfSONAR json summary		CRITICAL - Connection failed (HTTPSConnectionPool(host='134.158.73.243', port=443): Read timed out. (read timeout=60))	133 m	13 m	
CRIT	perfSONAR services: http/https		CRITICAL - Toolkit homepage unreachable	131 m	11 m	
UNKN	perfSONAR services: ndt/npad disabled		UNKNOWN - Masked by perfSONAR JSON Summary - CRITICAL/UNKNOWN	131 m	11 m	
UNKN	perfSONAR services: ntp		UNKNOWN - Masked by perfSONAR JSON Summary - CRITICAL/UNKNOWN	131 m	11 m	
OK	perfSONAR services: owamp	 	TCP OK - 0.127 second response time on psonar1.lal.in2p3.fr port 861	2019-12-01 00:23:33	15 m	
UNKN	perfSONAR services: pscheduler	 	UNKNOWN - Exception caught while executing plugin (invalid literal for int() with base 10: '	153 m	33 m	
UNKN	perfSONAR services: regular testing/pscheduler		UNKNOWN - Masked by perfSONAR JSON Summary - CRITICAL/UNKNOWN	131 m	11 m	
UNKN	perfSONAR services: versions		UNKNOWN - Masked by perfSONAR JSON Summary - CRITICAL/UNKNOWN	131 m	11 m	
OK	perfSONAR services: web/https IPv6	 	TCP OK - 0.125 second response time on psonar1.lal.in2p3.fr port 443	2019-11-29 08:30:15	10 m	

Accès en https impossible ?
 curl --insecure https://psonar1.lal.in2p3.fr/toolkit/
 Lent à répondre ?

Utilisation de CheckMK

- Vérifier que les tests Nagios sont OK :

https://psetf.opensciencegrid.org/etf/check_mk/index.py?start_url=%2Fetf%2Fcheck_mk%2Fview.py%3Ffilled_in%3Dfilter%26host_regex%3D%255C.fr%26view_name%3Dsearchhost

- Alertes : Vérifier sur le site
- Ne pas hésiter à créer un ticket GGUS
(workunit : WLCG perfSONAR Support)

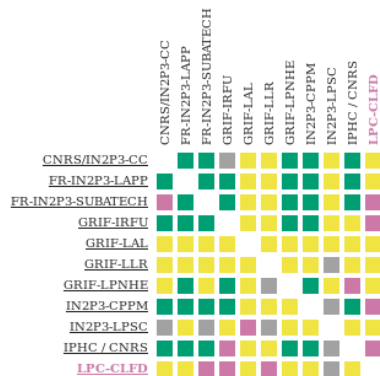
Exploitation : Mesh FR

Lien : <http://psmad.grid.iu.edu/maddash-webui/index.cgi?dashboard=FR%20Mesh%20Config>

FR Mesh Config - FR IPv4 Bandwidth - Throughput

Throughput $\geq$ 1Gbps Throughput $<$ 1Gbps Throughput $\leq$.5Gbps

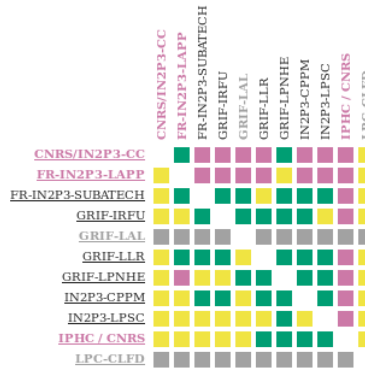
! Found a total of 2 problems involving 1 host in the grid



FR Mesh Config - FR IPv4 Latency - Loss

Loss rate is $\leq$ 0.001% Loss rate is $>$ 0.001% Loss rate is $\geq$ 0.1%

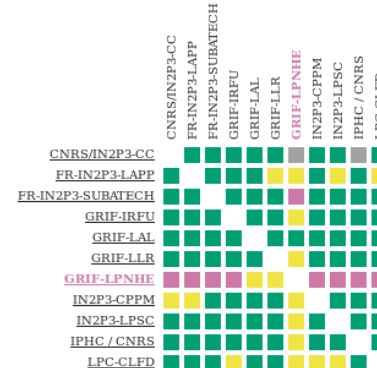
! Found a total of 5 problems involving 5 hosts in the grid



FR Mesh Config - FR IPv4 Traceroute - Path Count

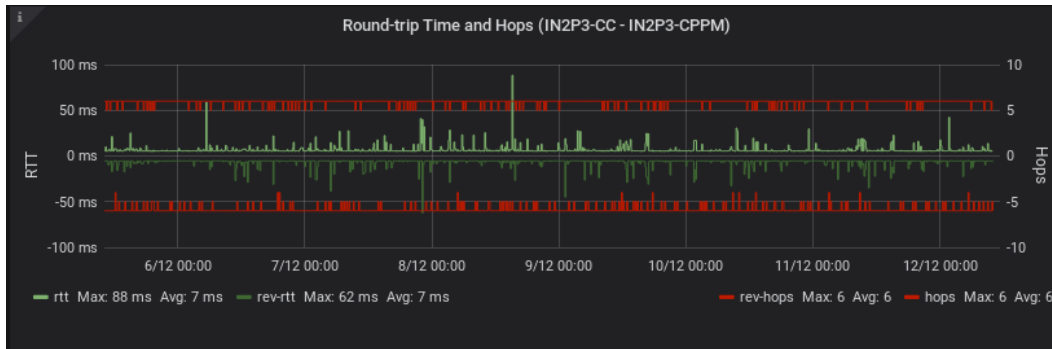
Paths = 1 packets Paths $>$ 1 Paths $>$ 2 Unable to find test data

! Found a total of 1 problem involving 1 host in the grid

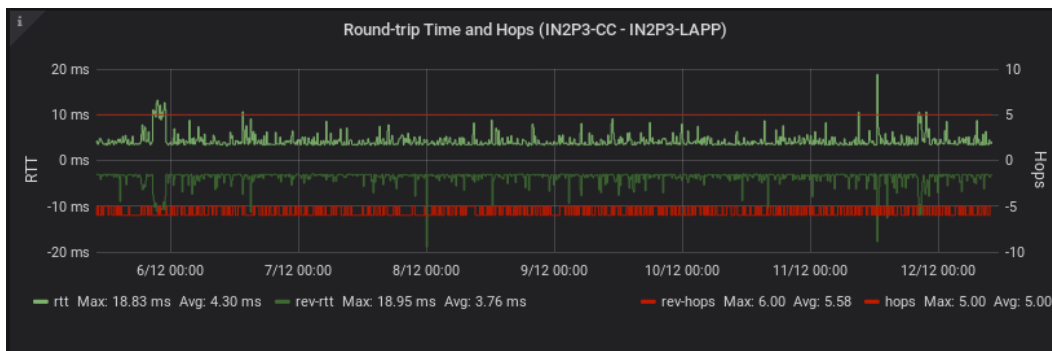


Idem pour IPV6.

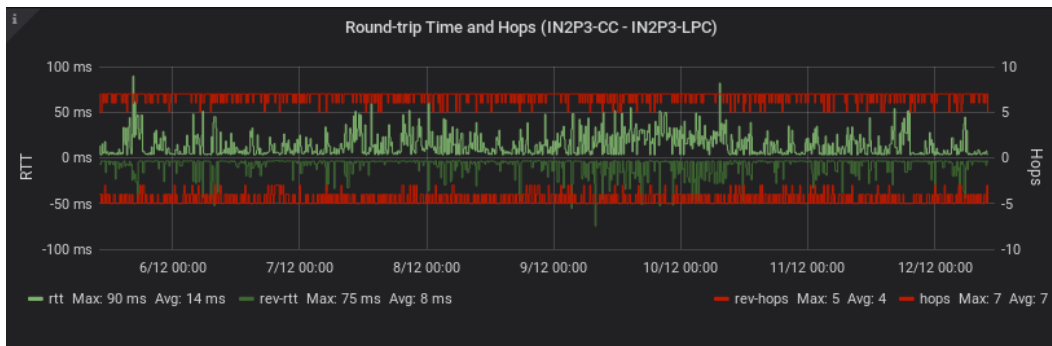
Dashboard Grafana



Possibilité de comparer un site « source » avec 2 sites « destination »



Exemple :
Source : CCIN2P3
Destination 1 : CPPM
Destination 2 : LAPP
Destination 1 : LPC



Max round-trip time and number of hops as measured by the traceroute command



Tests manuels : throughput

```
[root@nanperfs01 ~]# pscheduler task throughput --source nanperfs02.in2p3.fr --dest lpssc-perfsonar.in2p3.fr
Submitting task...
Task URL:
https://nanperfs02.in2p3.fr/pscheduler/tasks/6bfd60fa-85d9-4566-b305-4570782cd50f
Running with tool 'iperf3'
Fetching first run...
```

```
Next scheduled run:
https://nanperfs02.in2p3.fr/pscheduler/tasks/6bfd60fa-85d9-4566-b305-4570782cd50f/runs/e2603a2c-3ea5-4523-bc7f-784d2c8cfafe
Starts 2019-12-03T13:35:47Z (~6 seconds)
Ends   2019-12-03T13:36:06Z (~18 seconds)
Waiting for result...
```

```
* Stream ID 5
```

Interval	Throughput	Retransmits	Current Window
0.0 - 1.0	559.00 Mbps	756	1.25 MBytes
1.0 - 2.0	555.75 Mbps	0	1.28 MBytes
2.0 - 3.0	524.29 Mbps	0	1.33 MBytes
3.0 - 4.0	566.23 Mbps	0	1.44 MBytes
4.0 - 5.0	576.72 Mbps	0	1.59 MBytes
5.0 - 6.0	608.17 Mbps	0	1.79 MBytes
6.0 - 7.0	734.00 Mbps	0	2.06 MBytes
7.0 - 8.0	796.75 Mbps	0	2.37 MBytes
8.0 - 9.0	744.65 Mbps	0	2.67 MBytes
9.0 - 10.0	471.85 Mbps	197	739.70 KBytes

```
Summary
```

Interval	Throughput	Retransmits
0.0 - 10.0	613.74 Mbps	953

No further runs scheduled.



Tests manuels : rtt

```
[root@nanperfs02 ~]# pscheduler task rtt --source nanperfs02.in2p3.fr --dest ccperfsonar1.in2p3.fr
Submitting task...
Task URL:
https://nanperfs02.in2p3.fr/pscheduler/tasks/cdabd0f2-b777-4ead-baa6-1a011306528f
Running with tool 'ping'
Fetching first run...
```

```
Next scheduled run:
https://nanperfs02.in2p3.fr/pscheduler/tasks/cdabd0f2-b777-4ead-baa6-1a011306528f/runs/58326c54-b46d-4d90-a2c9-c5ba6a2e9e4a
Starts 2019-12-12T09:18:30Z (~3 seconds)
Ends   2019-12-12T09:18:41Z (~10 seconds)
Waiting for result...
```

1	ccperfsonar1.in2p3.fr	(2001:660:5009:9:193:48:99:77)	64 Bytes	TTL 60	RTT	13.6000 ms
2	ccperfsonar1.in2p3.fr	(2001:660:5009:9:193:48:99:77)	64 Bytes	TTL 60	RTT	13.5000 ms
3	ccperfsonar1.in2p3.fr	(2001:660:5009:9:193:48:99:77)	64 Bytes	TTL 60	RTT	13.5000 ms
4	ccperfsonar1.in2p3.fr	(2001:660:5009:9:193:48:99:77)	64 Bytes	TTL 60	RTT	13.8000 ms
5	ccperfsonar1.in2p3.fr	(2001:660:5009:9:193:48:99:77)	64 Bytes	TTL 60	RTT	13.5000 ms

```
0% Packet Loss  RTT Min/Mean/Max/StdDev = 13.537000/13.635000/13.847000/0.110000 ms
```

```
No further runs scheduled.
```

Tutorial vidéo : <https://www.youtube.com/watch?v=7Ai3GUjL3SA>



Liens, références

- User Guide for perfSONAR 4.2.2
<http://docs.perfsonar.net/http://docs.perfsonar.net/>
- Grafana perfSONAR E2E Performance
<http://monit-grafana-open.cern.ch/d/000000505/perfsonar-e2e-performance>
- CheckMK Perfsonars :
https://psetf.opensciencegrid.org/etf/check_mk
- Perfsonar YouTube Channel :
<https://www.youtube.com/channel/UCjK-P49pAKK9hUrrNbbe0Sg/videos>
- NSRC Documentation :
<https://learn.nsrc.org/perfsonar>
- Dashboard Grafana :
<https://monit-grafana-open.cern.ch/d/000000505/perfsonar-e2e-performance>
-

Discussion

- Avenir et rôle de la « Perfsonar team » ?
- Utilité des alertes ?
- Se servir de cette infrastructure ?