



# The perfSONAR Lookup Service

How to locate perfSONAR nodes

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Public (PU)

GN5-2

## perfSONAR Lookup Service records

- By default all perfSONAR hosts register to the Global Lookup Service
  - perfSONAR collaboration hosted server
  - OpenSearch based
  - And a Grafana frontend: <https://stats.perfsonar.net>
- Configurable through the toolkit admin
- One configuration file
  - `/etc/perfsonar/lsregistrationdaemon.conf`
  - Useful entries:
    - **site\_name**
    - **site\_project** (or communities, can have multiple entries)
    - Location related: **city**, **country**, **latitude**, **longitude**
  - Reload after change:
    - **`systemctl restart perfsonar-lsregistrationdaemon`**

# <https://stats.perfsonar.net>



Home > Dashboards > perfSONAR Public

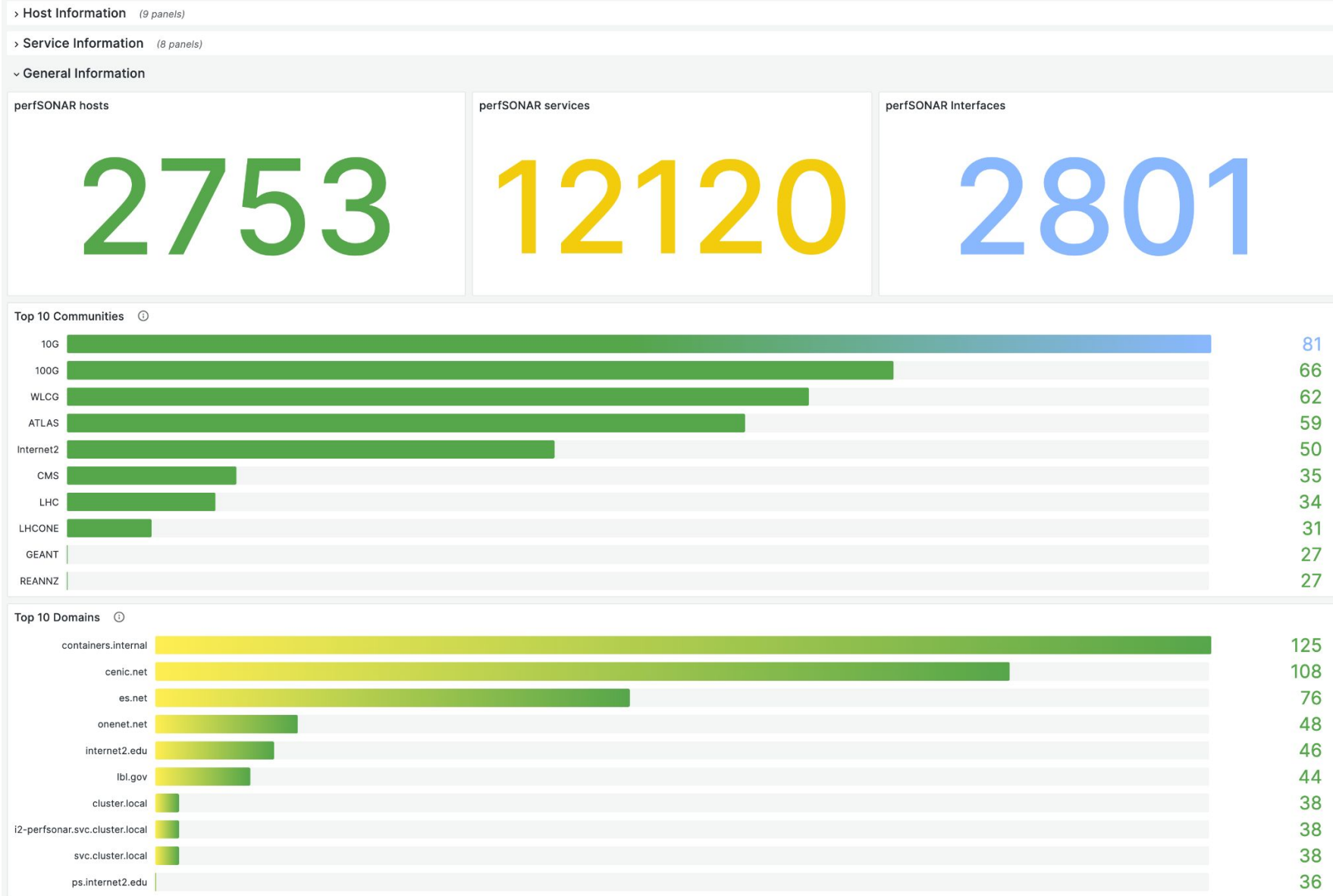
Country\_Code All ▾ Domain All ▾ Communities All ▾ Filters +

## perfSONAR

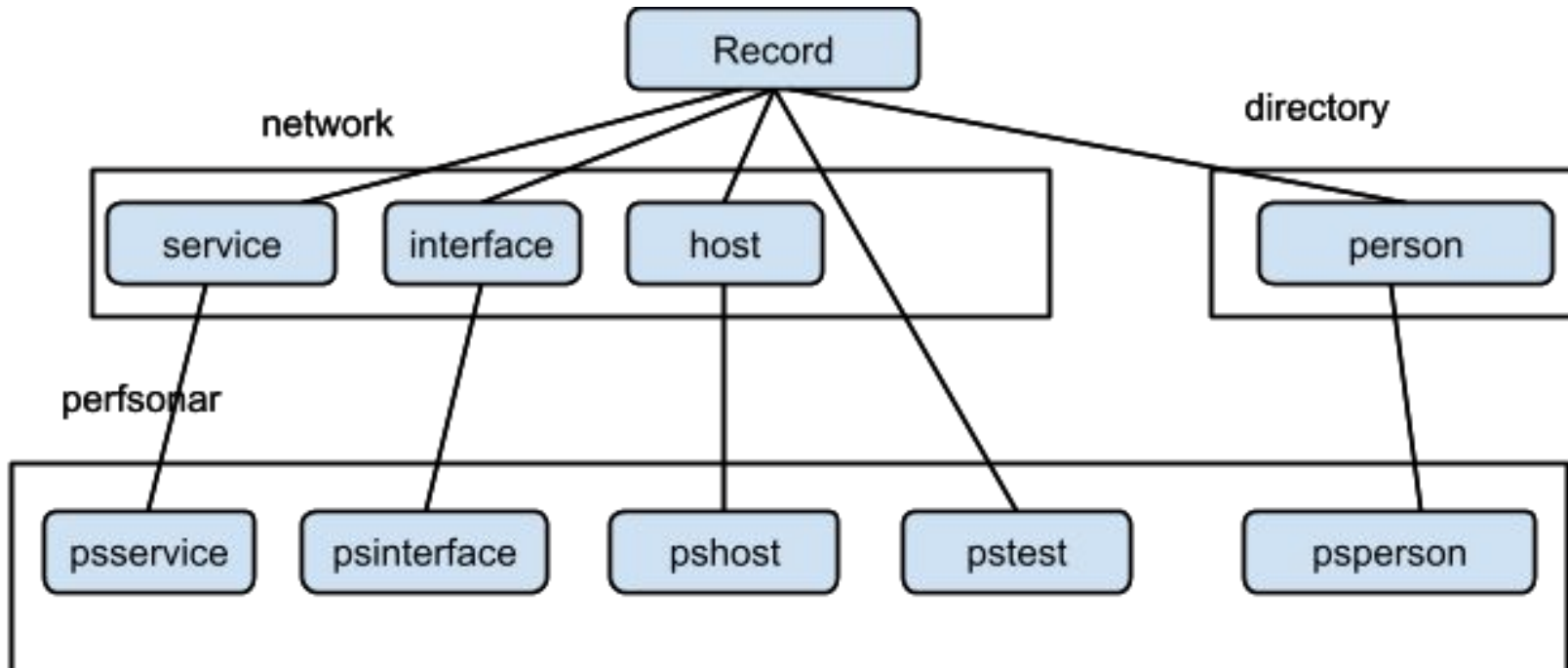
20 years of perfSONAR



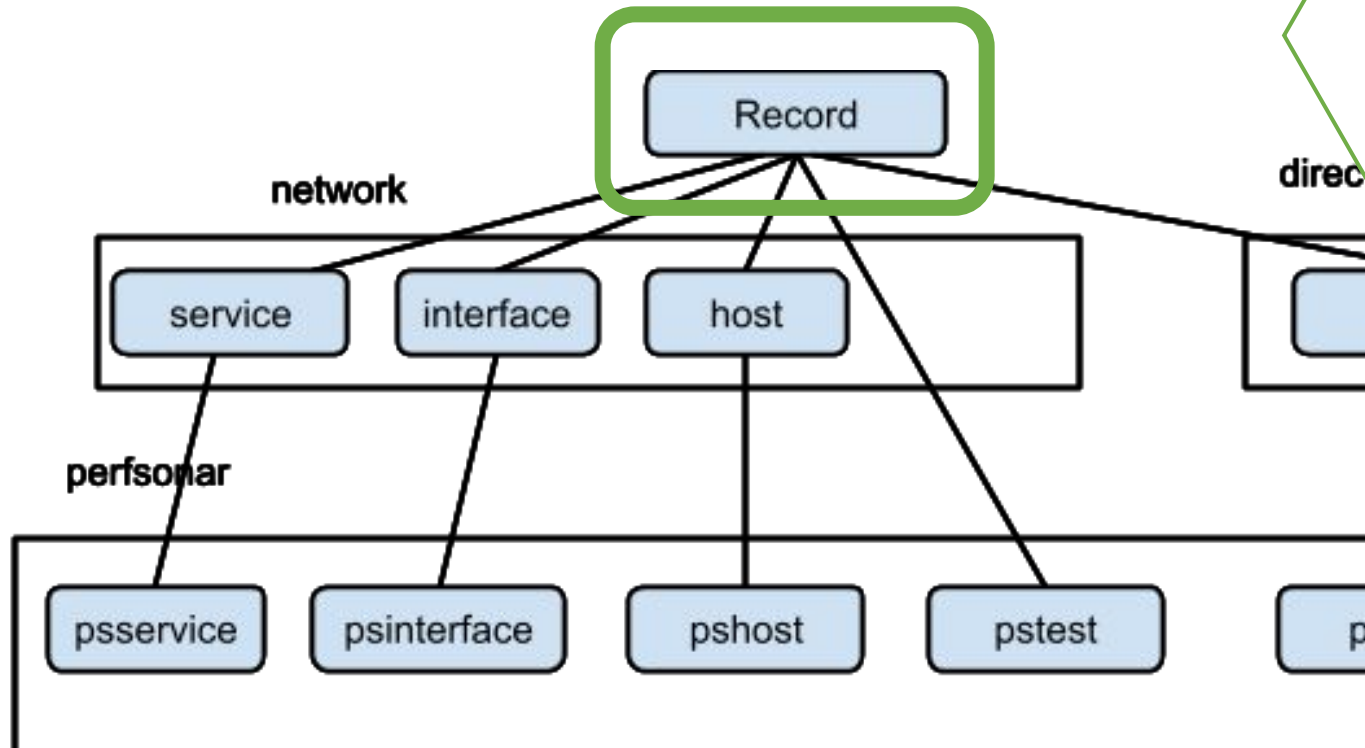
# <https://stats.perfsonar.net>



## perfSONAR Lookup Service records



## Lookup Service “base” record

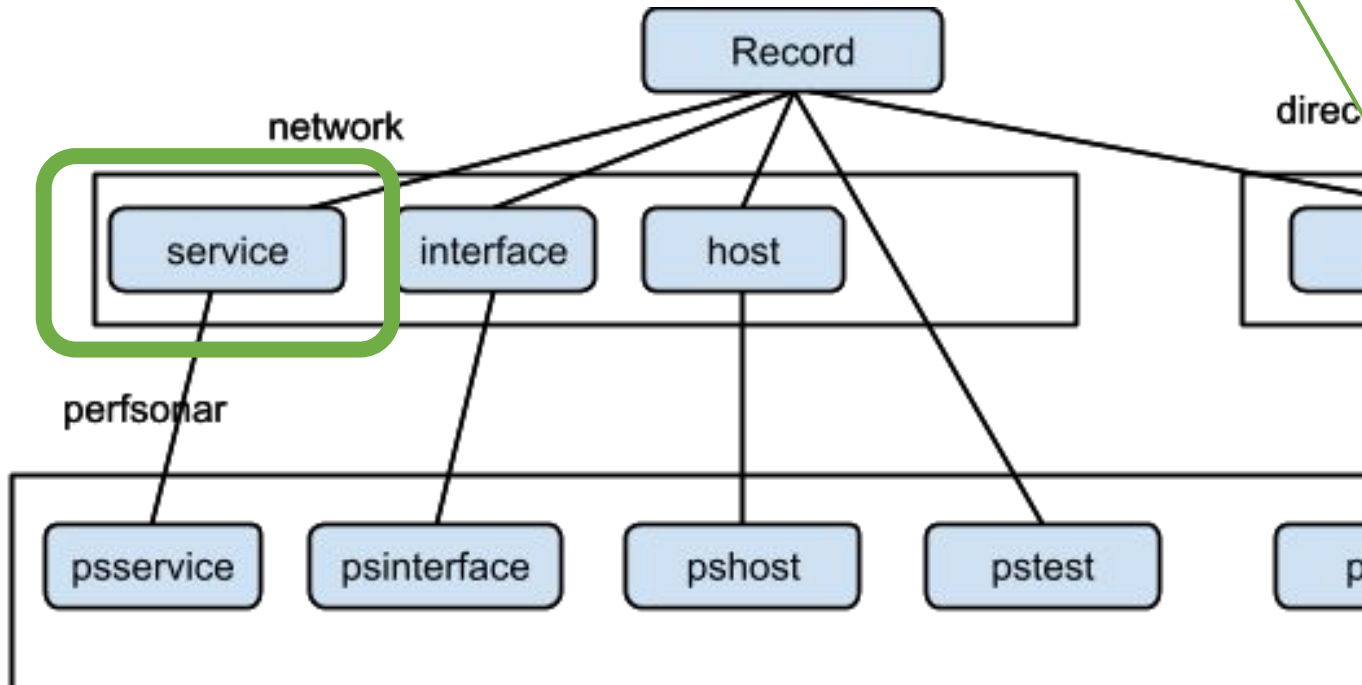


```

"expires" : {
  "type" : "date"
},
"state" : {
  "type" : "keyword"
},
"type" : {
  "type" : "keyword"
},
"uri" : {
  "type" : "keyword"
},
"client-uuid" : {
  "type" : "keyword"
},

```

## Lookup Service records of “service” type



service-administrators

service-host

service-locator

service-name

service-type

service-version

location-city

location-code

location-country

location-latitude

location-longitude

location-sitename

location-state

group-communities

group-domains

# Lookup Service records of “service” type


Country\_Code All ▾
Domain All ▾
Communities All ▾
Filters +

**perf2ONAR**  
years

- > Host Information (9 panels)
- > Service Information (8 panels)
- > General Information (10 panels)

**Service Information**

Service Locations



**Service Locator**

http://198.32.43.66/esmond/perfsonar/archive	28
http://[2605:d9c0:6:2001::1:2]/esmond/perfsonar/archive	28
https://198.32.43.66/esmond/perfsonar/archive	28
https://198.32.43.66/pscheduler	28
https://[2605:d9c0:6:2001::1:2]/esmond/perfsonar/archive	28
https://[2605:d9c0:6:2001::1:2]/pscheduler	28
tcp://perfsonar-01-v2001.ultralight.org:861	28

owamp	3279
twamp	2948
pscheduler	1936
ma	1910
bwctl	109
mp-bwctl	97
mp-owamp	87

missing	6484
pscheduler-1.0	1936
esmond-2.0	1811
oppd-3.4	184
esmond-1.0	98

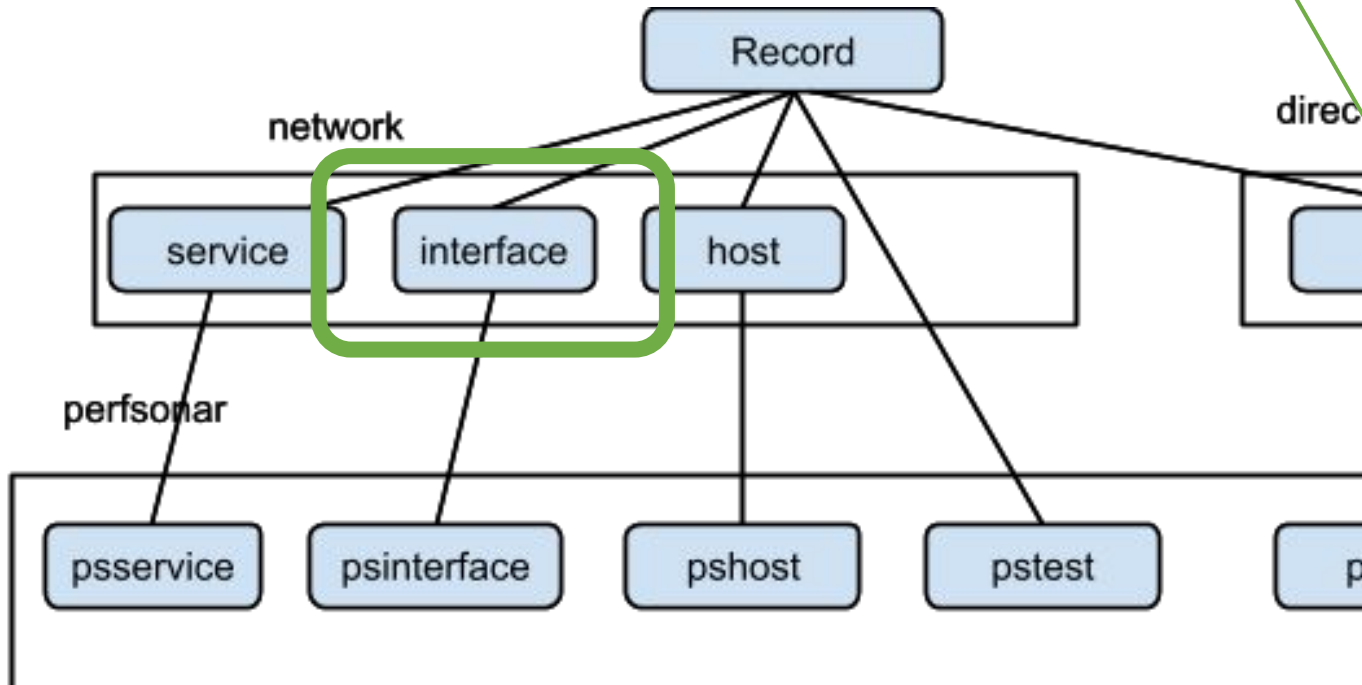
es.net	2266
missing	1491
sinet.ad.jp	285
ac.uk	189
onenet.net	147
wustl.edu	139
lbl.gov	134

missing	8100
10G	430
100G	407
WLCG	376
SINET	293
ATLAS	274
LHC	242

missing	8779
dnspy	1740
nuttcp	1740
owping	1740
ping	1740
powstream	1740
psclock	1740

missing	8779
dnspy	1740
nuttcp	1740
owping	1740
ping	1740
powstream	1740
psclock	1740

## Lookup Service records of “interface” type



interface-name

interface-addresses

interface-capacity

interface-mac

interface-mtu

group-domains

# Lookup Service records of "interface" type

The dashboard displays the following data:

- perfSONAR hosts:** 2240
- perfSONAR services:** 10519
- perfSONAR interfaces:** 2356

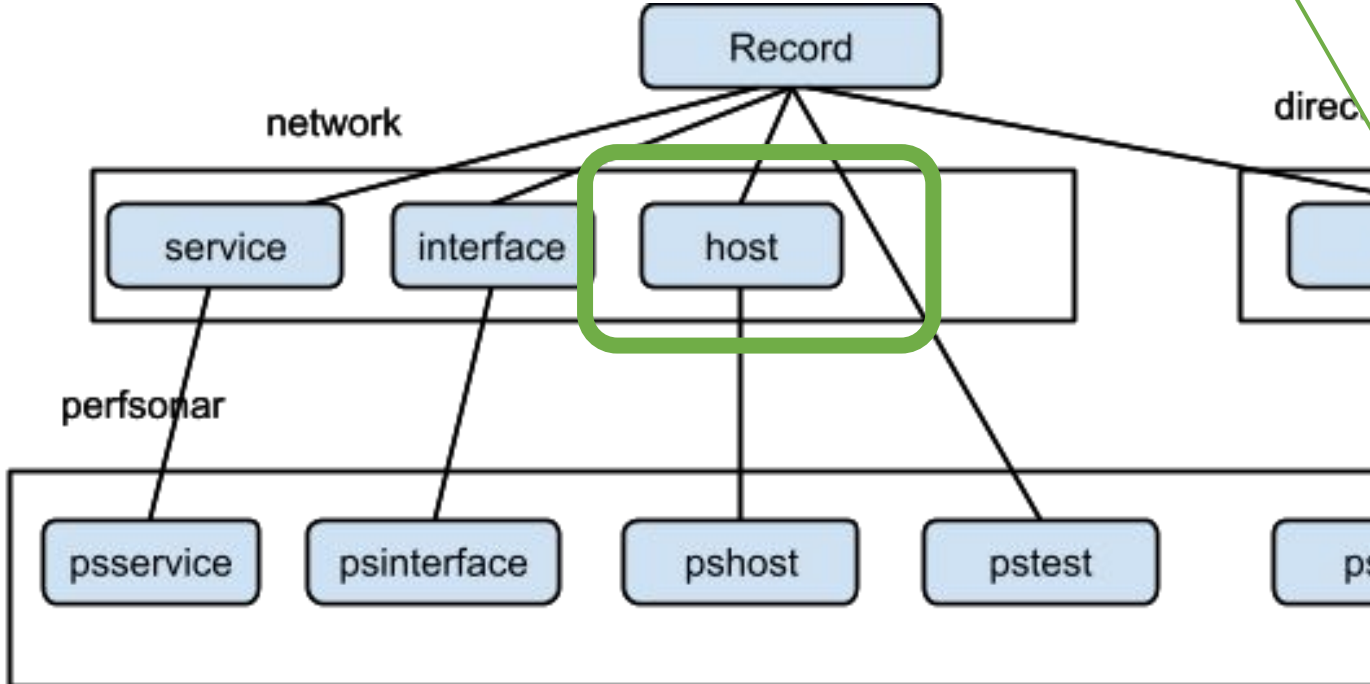
**Top 10 Communities**

Community	Count
100	105
WLCG	73
ATLAS	64
100G	57
Internet2	53
LHC	42
CMS	39
LHCONE	34
MonIPE	31
KREON...	28

**Top 10 Domains**

Domain	Count
es.net	74
wustl.edu	48
ononet.net	45
accounts.ad.wustl.edu	43
ad.wustl.edu	43

# Lookup Service records of "host" type



- host-administrators
- host-hardware-cpuid
- host-hardware-memory
- host-hardware-processorcore
- host-hardware-processorcount
- host-hardware-processorspeed
- host-manufacturer
- host-name
- host-net-interfaces
- host-net-ipv6-enabled
- host-net-tcp-autotunemaxbuffer-recv
- host-net-tcp-autotunemaxbuffer-send
- host-net-tcp-congestionalgorithm
- host-net-tcp-maxbacklog
- host-net-tcp-maxbuffer-recv
- host-net-tcp-maxbuffer-send
- host-os-architecture
- host-os-kernel
- host-os-name
- host-os-version
- host-productname
- host-vm
- group-communities
- group-domains
- location-city
- location-code
- location-country
- location-latitude
- location-longitude
- location-sitename
- location-state

# Lookup Service records of "host" type

Country\_Code All ▾ Domain All ▾ Communities All ▾ Filters +



- > Host Information (9 panels)
- > Service Information (8 panels)
- > General Information (10 panels)

### Hosts Locations

Host name		
198.32.43.66		28
perfonar-01-v2001.ultralight.org		28
128.239.20.170		25
perfonar-jones-test		25
128.171.235.51		12
199.8.74.184		12
10.30.50.4		11

Virtualisation of the nodes		
Physical machine		1786
Virtual machine		433
missing		10

Operating System		
Ubuntu	<div style="width: 100%; height: 10px; background: linear-gradient(to right, #008000, #FFD700, #FFA500, #FF4500, #FF0000);"></div>	464
AlmaLinux	<div style="width: 100%; height: 10px; background: linear-gradient(to right, #008000, #FFD700, #FFA500, #FF4500, #FF0000);"></div>	278
Rocky Linux	<div style="width: 100%; height: 10px; background: linear-gradient(to right, #008000, #FFD700, #FFA500, #FF4500, #FF0000);"></div>	201
Debian	<div style="width: 100%; height: 10px; background: linear-gradient(to right, #008000, #FFD700, #FFA500, #FF4500, #FF0000);"></div>	131
Red Hat Enterprise Linux	<div style="width: 100%; height: 10px; background: linear-gradient(to right, #008000, #FFD700, #FFA500, #FF4500, #FF0000);"></div>	50
Red Hat Enterprise Linux Server	<div style="width: 100%; height: 10px; background: linear-gradient(to right, #008000, #FFD700, #FFA500, #FF4500, #FF0000);"></div>	14
missing	<div style="width: 100%; height: 10px; background: linear-gradient(to right, #008000, #FFD700, #FFA500, #FF4500, #FF0000);"></div>	12
Scientific Linux	<div style="width: 100%; height: 10px; background: linear-gradient(to right, #008000, #FFD700, #FFA500, #FF4500, #FF0000);"></div>	7
Centos	<div style="width: 100%; height: 10px; background: linear-gradient(to right, #008000, #FFD700, #FFA500, #FF4500, #FF0000);"></div>	1079

Operating System Version		
7.9.2009 (Core)		893
22.04		351
9.5 (Teal Serval)		228
9.5 (Blue Onyx)		171
6.10 (Final)		83
20.04		74
12.10		66

perFONAR Package Bundle Installed		
perfonar-toolkit		1299
perfonar-testpoint		798
perfonar-core		48
perfonar-centralmanagement		30
missing		25
perfonar-tools		25
test-point		11

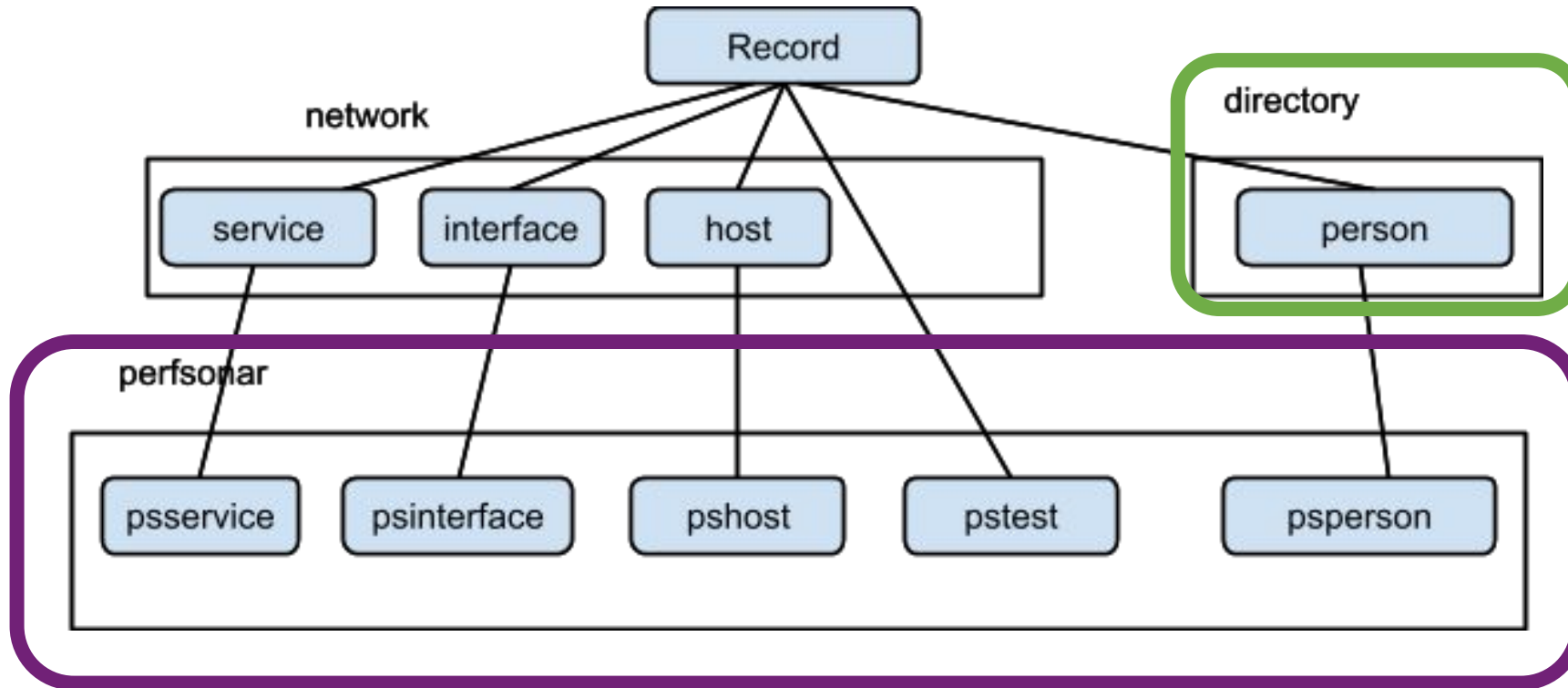
Communities		
missing		1700
10G		105
WLCG		73
ATLAS		64
100G		57
Internet2		53
LHC		42

Domains		
missing		509
es.net		74
wustl.edu		48
ononet.net		45
accounts.ad.wustl.edu		43
ad.wustl.edu		43
uhnet.net		40

perFONAR Package Bundle Installed		
perfonar-toolkit		1299
perfonar-testpoint		798
perfonar-core		48
perfonar-centralmanagement		30
missing		25
perfonar-tools		25
test-point		11

Toolkit Version		
5.0.8-1.e17		554
5.1.4-1.e19		428
5.1.4		234
4.3.4-1.e17		172
5.1.4-1		152
4.4.6-1.e17		64
5.1.3		59

## LS records of “person” type and perfSONAR specific records



# perfSONAR LS Public Dashboard

Country\_Code All ▾ Domain All ▾ Communities All ▾ Filters +



Host Information



### Host name

perfsonar-01-v2001.ultralight.org	22
128.171.235.51	13
128.171.242.49	12
171.64.76.180	11
200.237.196.161	11
128.171.242.53	10
128.252.182.225	10

### Communities

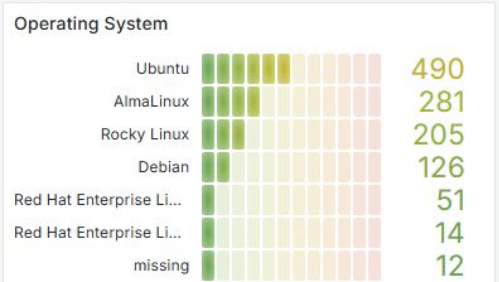
missing	1704
10G	109
WLCG	78
ATLAS	66
Internet2	62
100G	59
LHC	49

### Virtualisation of the nodes

Physical machine	1807
Virtual machine	447
missing	10

### Domains

missing	516
es.net	76
uhnet.net	47
ononet.net	44
wustl.edu	44
ac.uk	43
accounts.ad.wustl.edu	39



### Operating System Version

7.9.2009 (Core)	903
22.04	365
9.5 (Teal Serval)	235
9.5 (Blue Onyx)	173
20.04	85

### perfSONAR Package Bundle Installed

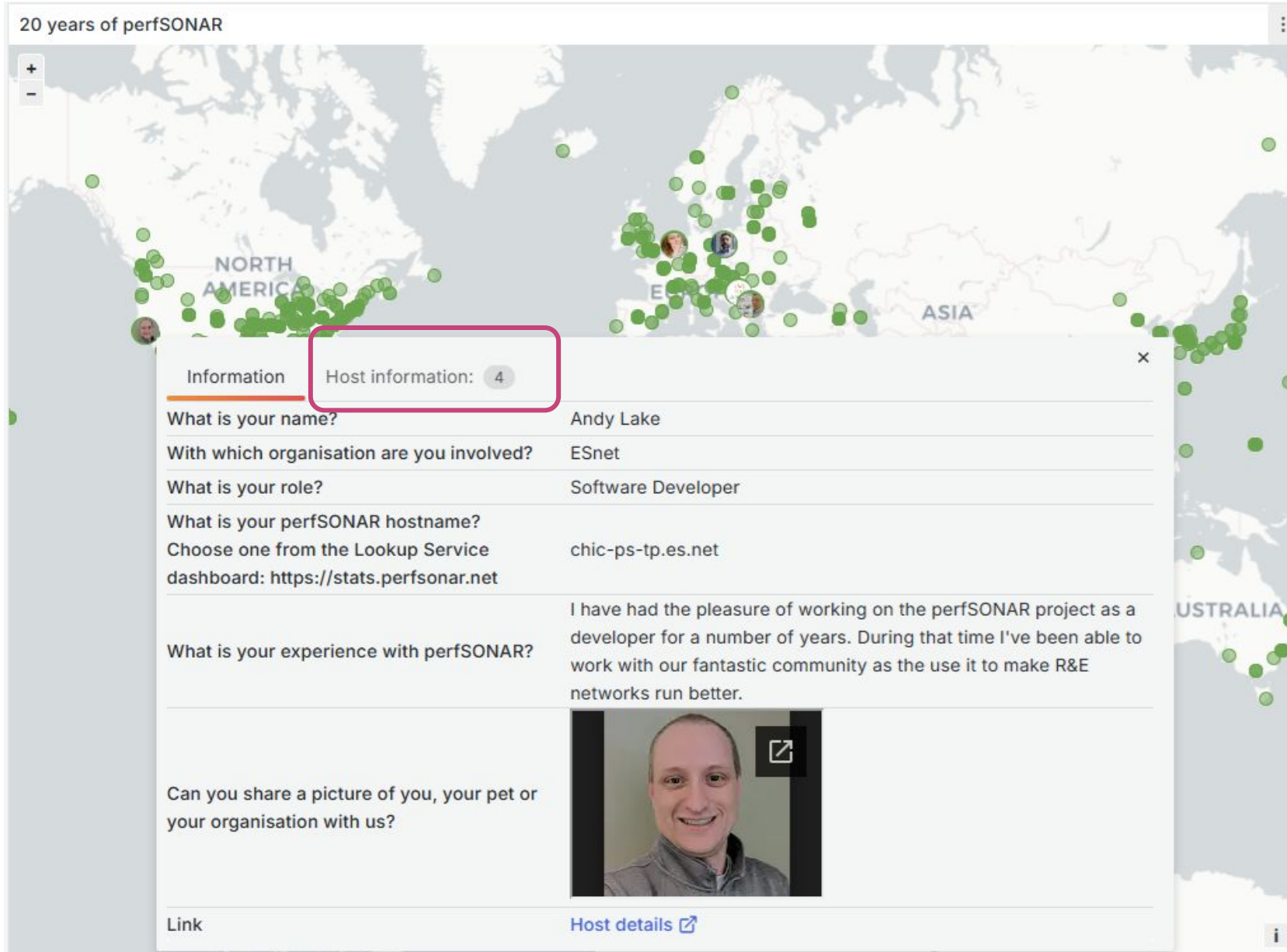
perfsonar-toolkit	1319
perfsonar-testpoint	819
perfsonar-core	48
perfsonar-centralmanagement	25
perfsonar-tools	25

### Toolkit Version

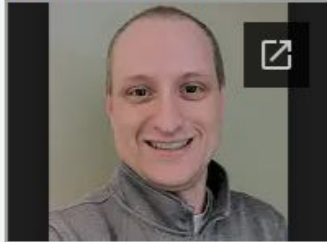
5.0.8-1.e17	568
5.1.4-1.e19	438
5.1.4	243
4.3.4-1.e17	168
5.1.4-1	157

# perfSONAR LS Public Dashboard – 20 years of perfSONAR

20 years of perfSONAR



The image shows a world map with green dots representing perfSONAR hosts. A pop-up window is open over a host in Europe, displaying the following information:

Information	Host information: 4
What is your name?	Andy Lake
With which organisation are you involved?	ESnet
What is your role?	Software Developer
What is your perfSONAR hostname? Choose one from the Lookup Service dashboard: <a href="https://stats.perfsonar.net">https://stats.perfsonar.net</a>	chic-ps-tp.es.net
What is your experience with perfSONAR?	I have had the pleasure of working on the perfSONAR project as a developer for a number of years. During that time I've been able to work with our fantastic community as the use it to make R&E networks run better.
Can you share a picture of you, your pet or your organisation with us?	
Link	<a href="#">Host details</a>

# Looking for hosts in the Lookup Service

# perfSONAR Lookup Service Filter

Country\_Code All ▾ Domain All ▾ Communities All ▾ Filters +



> Host Information (9 panels)

> Service Information (8 panels)

> General Information (10 panels)

# perfSONAR Lookup Service Filter

The screenshot displays the perfSONAR Lookup Service Filter interface. At the top, there are filter controls for Country\_Code, Domain, and Communities, each with an 'All' dropdown menu. A 'Filters +' button is also present. The main content area shows a list of panels, with the first panel titled 'Country\_Code' (9 panels) selected. This panel contains a list of country codes with checkboxes, and 'PL' is selected. A second panel titled 'Domain' (8 panels) is also selected, showing a list of domains with checkboxes, and 'man.poznan.pl' is selected. A third panel titled 'Communities' (10 panels) is selected, showing a list of community names with checkboxes, and 'PSNC' is selected. The interface also features the 'perf2ONAR years' logo and a search bar.

Country\_Code All ▾ Domain All ▾ Communities All ▾ Filters +

perf2ONAR years

Country\_Code (9 panels)

Enter variable value

- MZ
- NG
- NL
- NO
- NZ
- PH
- PK
- PL
- PR
- PT
- RO
- RU
- SE
- SG
- SI
- SK

Domain (8 panels)

Enter variable value

- Selected (1)
- All
- man.poznan.pl

Communities (10 panels)

Enter variable value

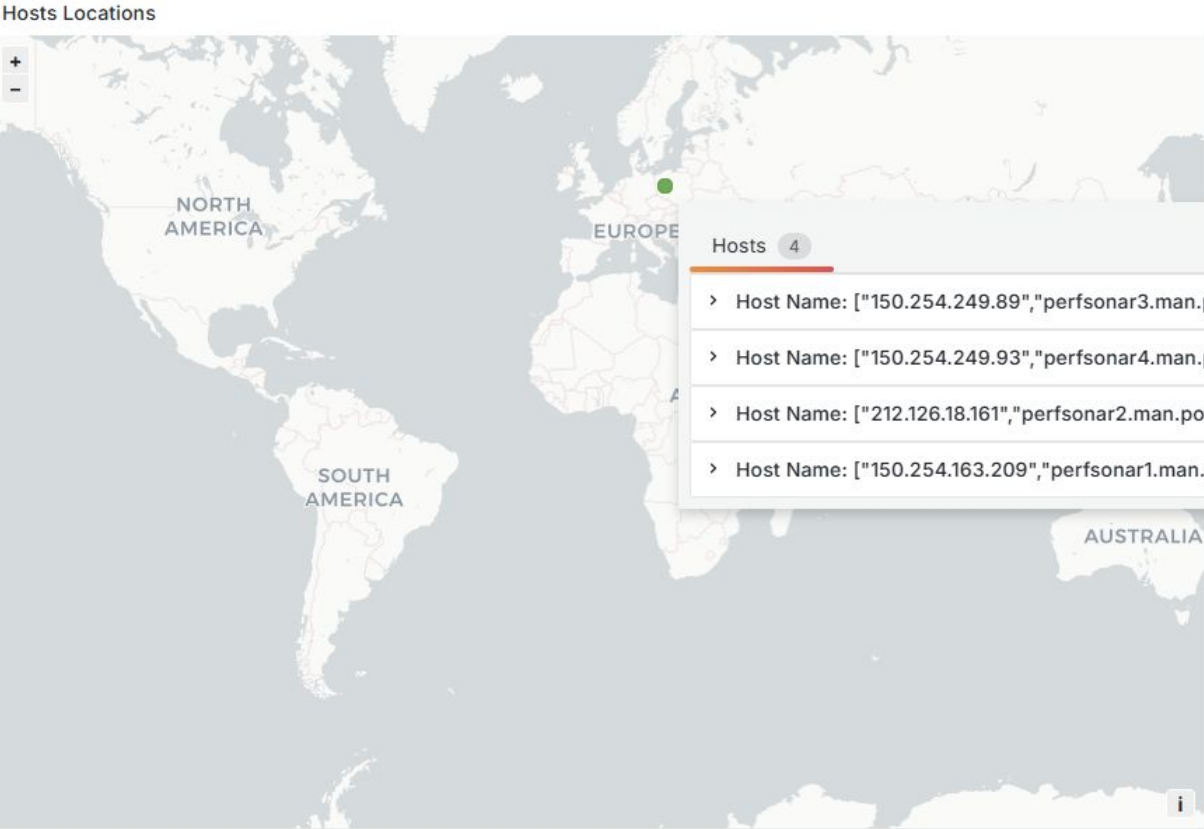
- Selected (1)
- All
- GEANT
- PCSS
- PMP
- PMP-GEANT
- POZMAN
- PSNC

# perfSONAR Lookup Service Filter

Country\_Code PL ▾ Domain man.poznan.pl ▾ Communities PSNC ▾ Filters +



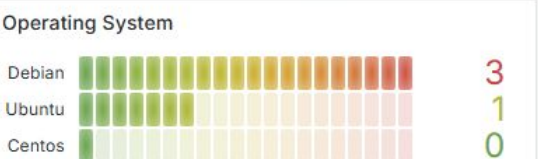
## Host Information



Host name	
150.254.163.209	1
150.254.249.89	1
150.254.249.93	1
	1
	1
	1
	1
	1
	1

Communities	
PCSS	4
POZMAN	4
PSNC	4

Domains	
man.poznan.pl	4



Operating System Version	
12.8	3
20.04	1

perfSONAR Package Bundle Installed	
perfsonar-testpoint	4

Toolkit Version	
5.1.4	4

# perfSONAR Lookup Service Filter

Country\_Code PL Domain man.poznan.pl Communities PSNC Filters +



Host Information

Hosts Locations

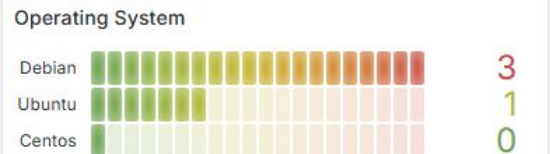


- Hosts 4
- > Host Name: ["150.254.249.89", "perfsonar3.man.poznan.pl"]
  - > Host Name: ["150.254.249.93", "perfsonar4.man.poznan.pl"]
  - > Host Name: ["212.126.18.161", "perfsonar2.man.poznan.pl"]
  - > Host Name: ["150.254.163.209", "perfsonar1.man.poznan.pl"]

Host information: 4

- > Host Name: ["150.254.163.209", "perfsonar1.man.poznan.pl"]
- > Host Name: ["212.126.18.161", "perfsonar2.man.poznan.pl"]

Host Name	["212.126.18.161", "perfsonar2.man.poznan.pl"]
Communities	PCSS, PSNC, POZMAN
Domains	man.poznan.pl
Host's Processor	Intel(R) Celeron(R) CPU J3160 @ 1.60GHz
Number of Processors	1
Manufacturer	GIGABYTE
IPv6 enabled	false
Architecture	x86_64
Kernel and Version Running	Linux 5.4.0-200-generic
Name of Operating System	Ubuntu
Version of Operating System	20.04
Model of the hardware or VM host	GB-BACE-3160
Virtualisation	physical machine



Operating System Version

12.8	3
20.04	1

perfSONAR Package Bundle Installed

perfsonar-testpoint	4
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Toolkit Version

5.1.4	4
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# perfSONAR Lookup Service Filter

How to use Filter: 1. Choose the field, eg. host-name 2. Choose the filter condition, eg. =~ 3. Specify the host-name, eg. `.*part_of_hostname.*`

Country\_Code All ▾ Domain All ▾ Communities All ▾ Filters +

**perf2ONAR**  
years

> Host Information (9 panels)

> Service Information (8 panels)

> General Information (10 panels)

Host name		
150.254.249.93		1
212.126.18.161	Filter for value	1
perfsonar1.man.poznan.pl	⊕ ⊖	1
perfsonar2.man.poznan.pl		1
perfsonar3.man.poznan.pl		1
perfsonar4.man.poznan.pl		1
psmall-poz1.man.poznan.pl		1

# perfSONAR Lookup Service Filter

How to use Filter: 1. Choose the field, eg. host-name 2. Choose the filter condition, eg. =~ 3. Specify the host-name, eg. \*.part\_of\_hostname.\*

Filters host-name = perfsonar1.man.poznan.pl +

Country\_Code All ▾ Domain All ▾ Communities All ▾ Filters +

**perf2ONAR**  
years

> Host Information (9 panels)

> Service Information (8 panels)

> General Information (10 panels)

Host name		
150.254.249.93		1
212.126.18.161		1
perfsonar1.man.poznan.pl	Filter for value	1
perfsonar2.man.poznan.pl		1
perfsonar3.man.poznan.pl		1
perfsonar4.man.poznan.pl		1
psmall-poz1.man.poznan.pl		1

# perfSONAR Lookup Service Filter

Country\_Code All ▾ Domain All ▾ Communities All ▾ Filters host-name = perfsonar1.man.poznan.pl +



Host Information

Hosts Locations



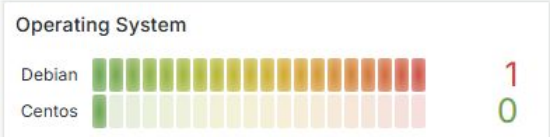
Host name	Count
150.254.163.209	1
perfsonar1.man.poznan.pl	1

Communities	Count
PCSS	1
POZMAN	1
PSNC	1

**Hosts**

Host Name	["150.254.163.209", "perfsonar1.man.poznan.pl"]
Communities	PCSS, PSNC, POZMAN
Domains	man.poznan.pl
Host's Processor	Intel(R) Celeron(R) CPU J3160 @ 1.60GHz
Number of Processors	1
Manufacturer	GIGABYTE
IPv6 enabled	false
Architecture	x86_64
Kernel and Version Running	Linux 6.1.0-28-amd64
Name of Operating System	Debian
Version of Operating System	12.8
Model of the hardware or VM host	GB-BACE-3160
Virtualisation	physical machine
City	Poznan
Country	PL
latitude	52.40733
longitude	16.95349

Domains	Count
man.poznan.pl	1



Operating System	Count
Debian 12.8	1

Host Name	Count
perfsonar-testpoint	1

Toolkit Version	Count
5.1.4	1



# Thank You

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