



# The perfSONAR Lookup Service

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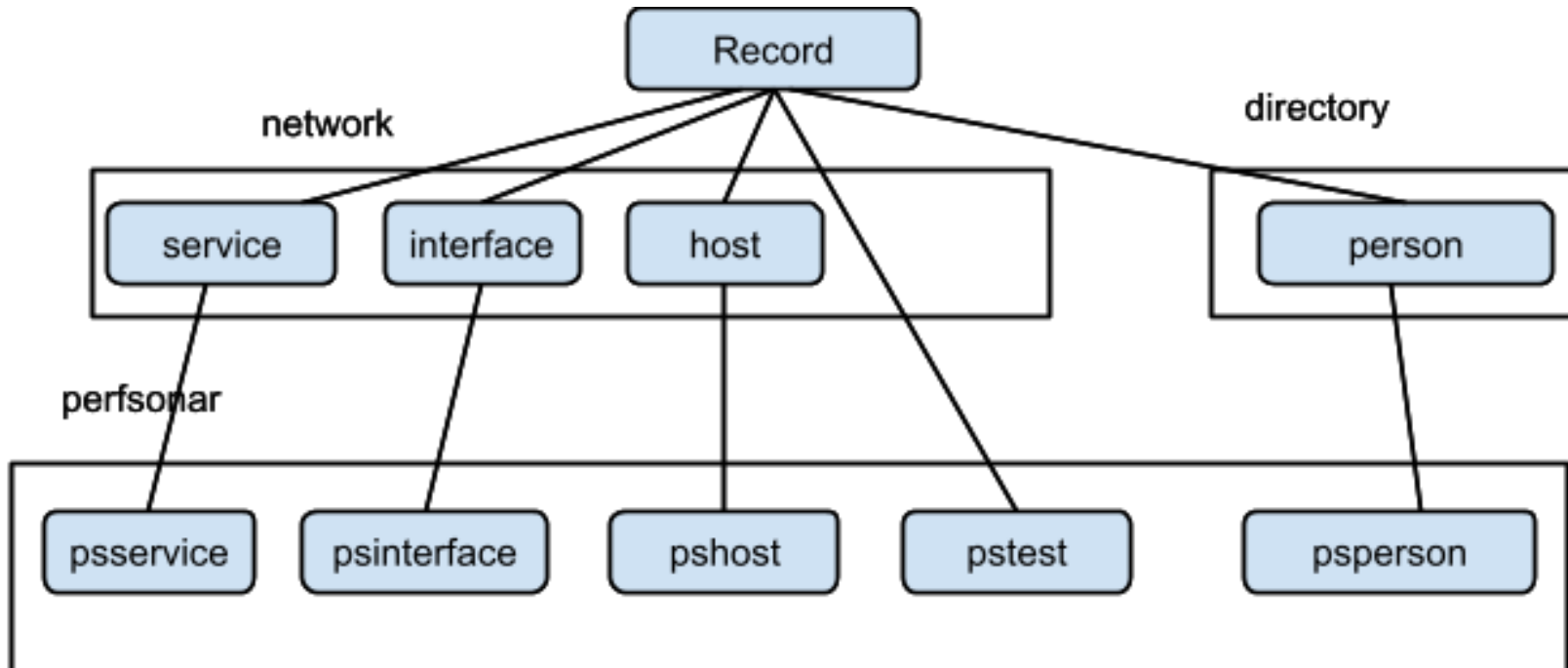
AMRES

Network Performance and Monitoring Workshop, Prague

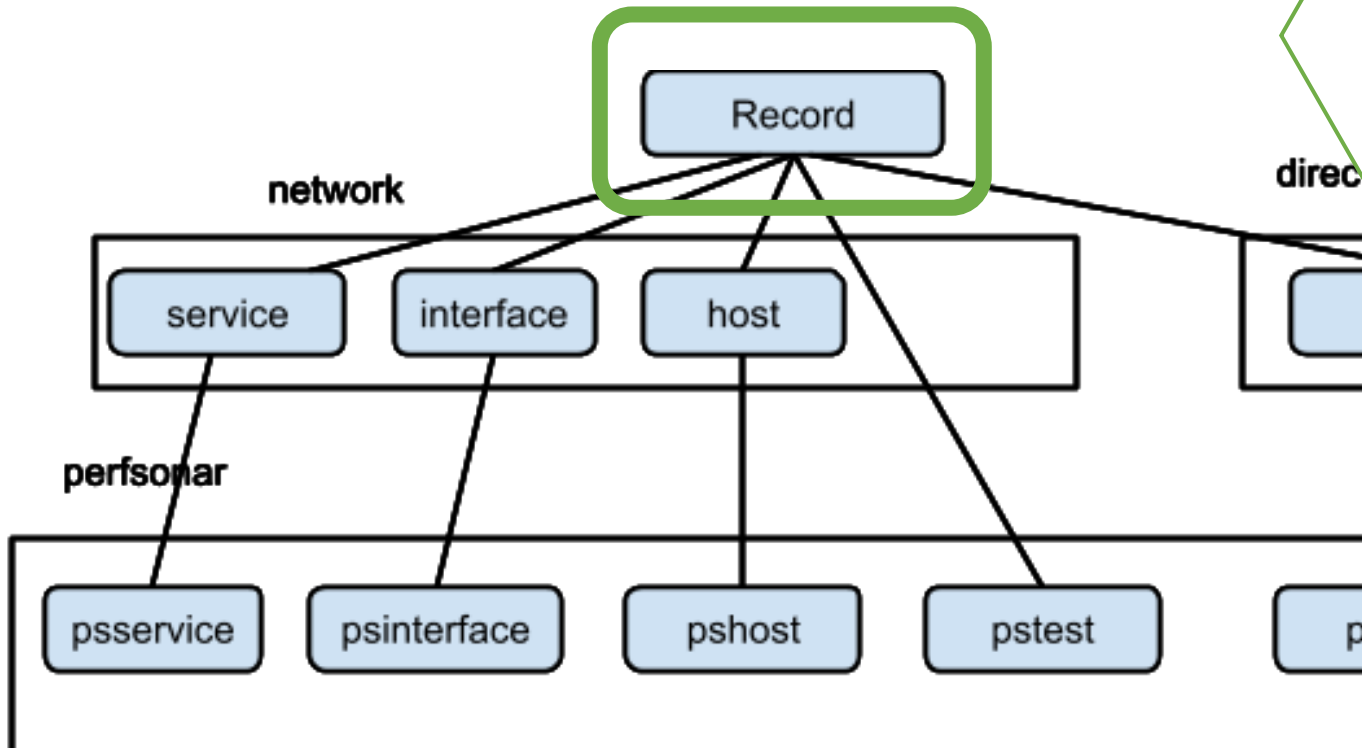
01-02 April 2025

<Click to edit label> Public (PU) / Project Participants Sensitive (SEN)

## perfSONAR Lookup Service records



## Lookup Service “base” record



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

# Elasticsearch Data Source Plugin for Grafana

- perfSONAR Elastcsearch API

**GET/POST** `http://35.223.142.206/ls/lookup/_search`

```
{  
  query...  
}
```

Name  Default

Before you can use the Elasticsearch data source, you must configure it below or in the config file. For detailed instructions, [view the documentation](#).

## Connection

URL

## Authentication

### Authentication methods

Choose an authentication method to access the data source

Authentication method

### TLS settings

Additional security measures that can be applied on top of authentication

- Add self-signed certificate [?](#)  
 TLS Client Authentication [?](#)  
 Skip TLS certificate validation [?](#)

### HTTP headers

Pass along additional context and metadata about the request/response

## Additional settings

Additional settings are optional settings that can be configured for more control over your data source.

### Advanced HTTP settings

Allowed cookies

Timeout

### Elasticsearch details

Specific settings for the Elasticsearch data source. [Learn more about Elasticsearch details](#)

Index name

Pattern

Time field name

Max concurrent Shard Requests

Min time interval

Include Frozen Indices

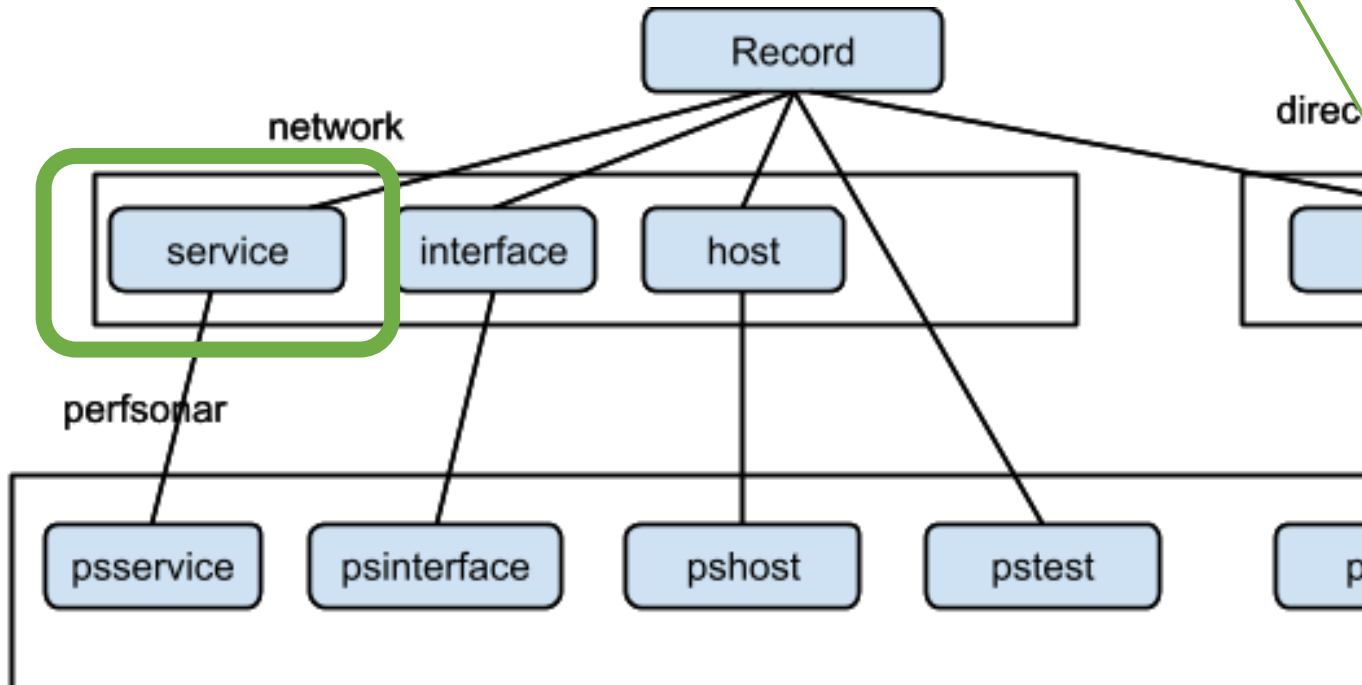
### Logs

Configure which fields the data source uses for log messages and log levels. [Learn more about Elasticsearch log fields](#)

Message field name

Level field name

## 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 +



- > 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

Service Type

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

Service Version

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

Domains

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

Communities

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

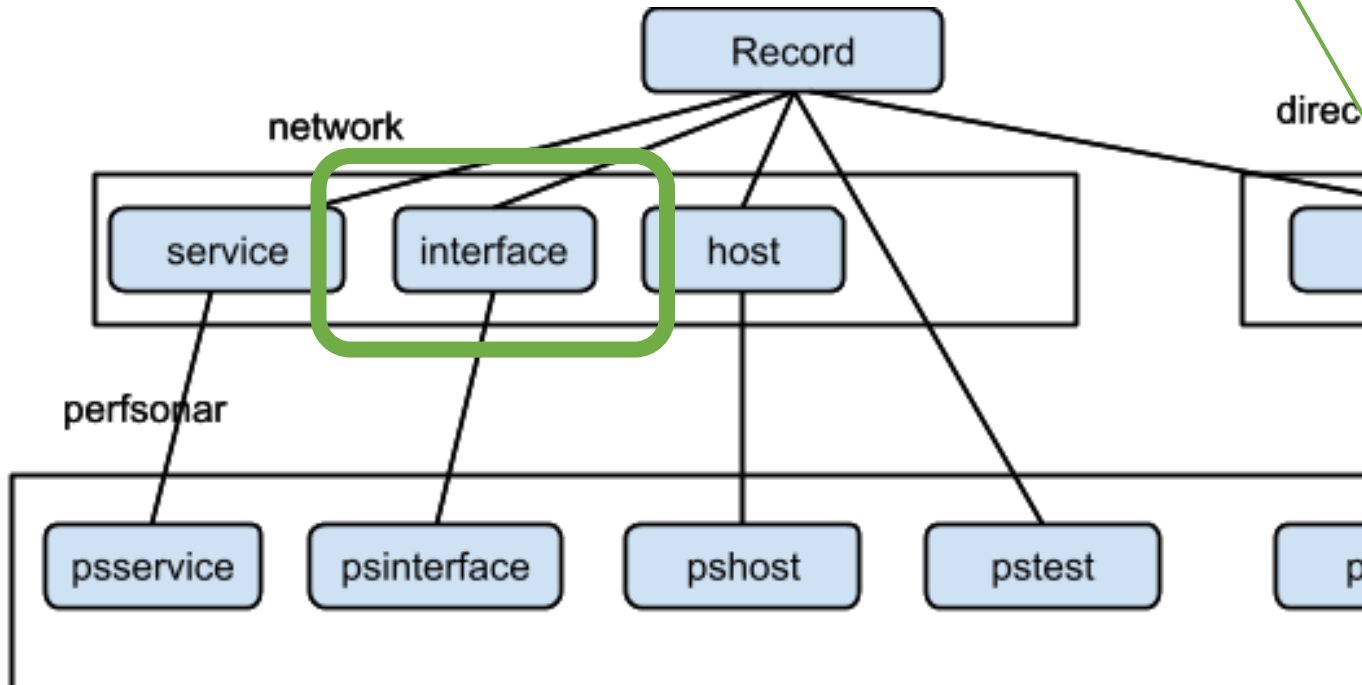
pScheduler Tools

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

pScheduler Tests

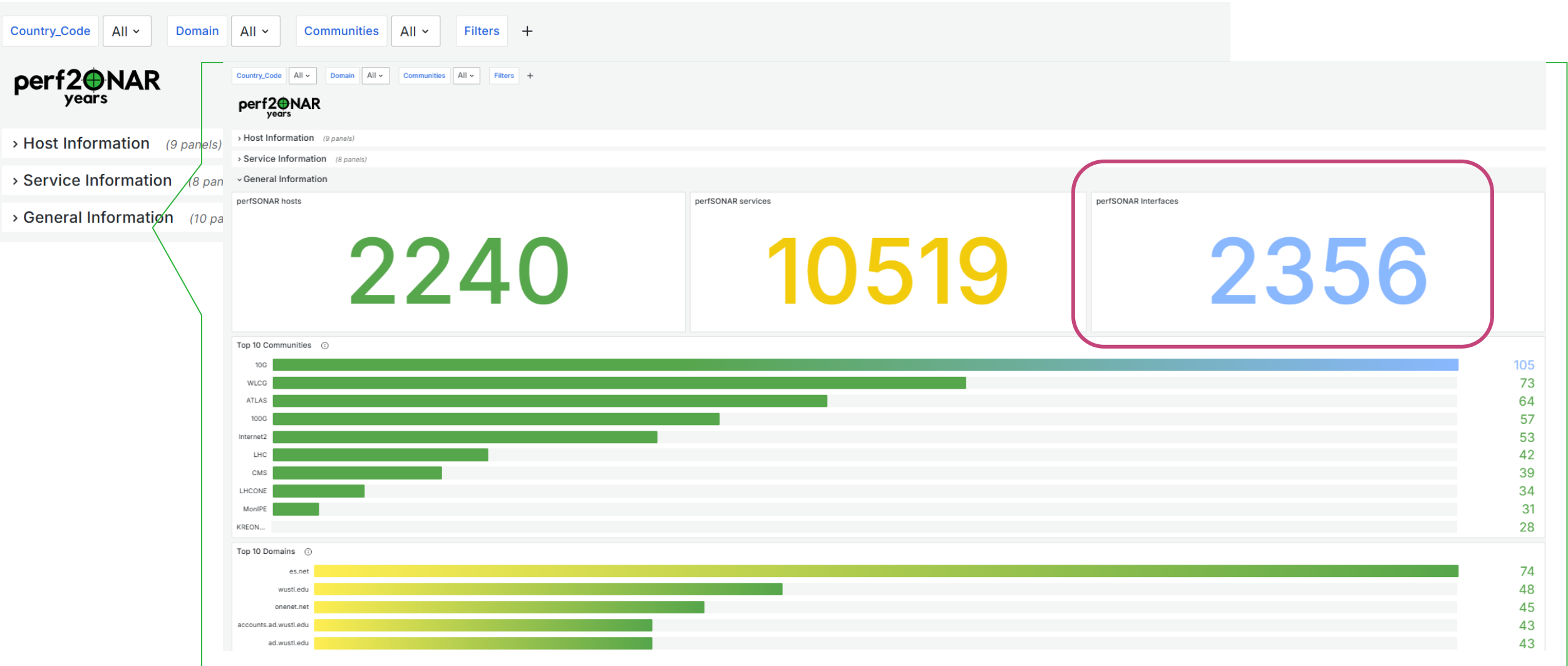
missing	8779
dnspy	1740
nuttcp	1740
owping	1740
ping	1740
powstream	1740
psclock	1740

## Lookup Service records of “interface” type

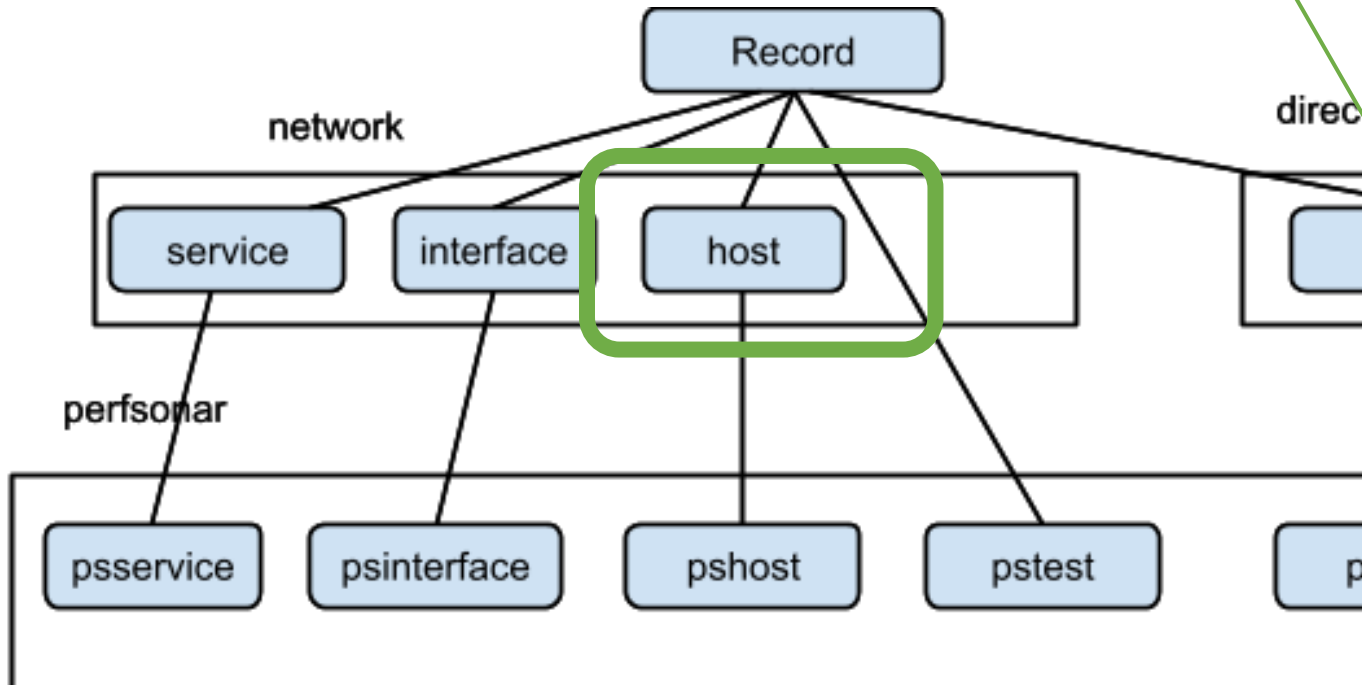


- interface-name
- interface-addresses
- interface-capacity
- interface-mac
- interface-mtu
- group-domains

# Lookup Service records of “interface” type



## 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)

### Host Information

Hosts Locations

Host name		
198.32.43.66		28
perfsonar-01-v2001.ultralight.org		28
128.239.20.170		25
perfsonar-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		464
AlmaLinux		278
Rocky Linux		201
Debian		131
Red Hat Enterprise Linux		50
Red Hat Enterprise Linux Server		14
missing		12
Scientific Linux		7
Centos		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

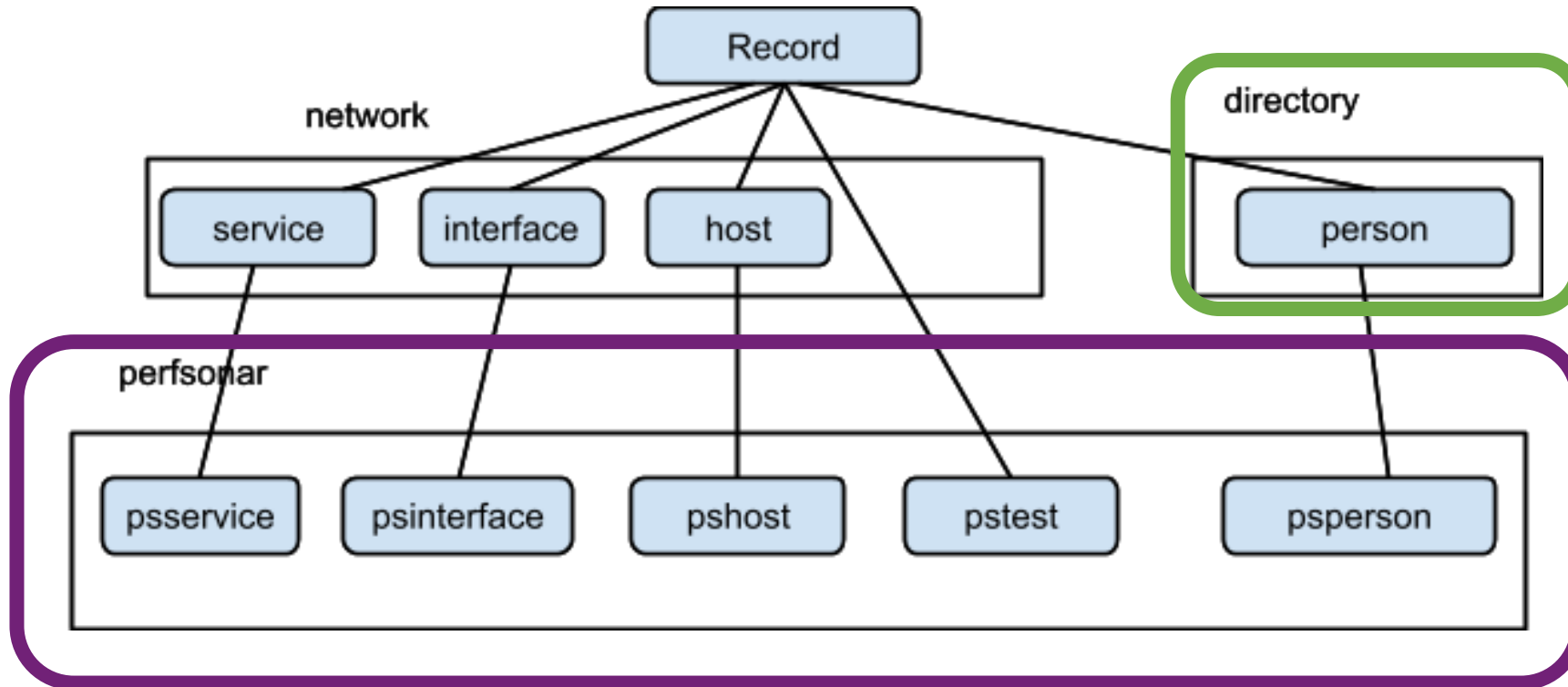
perfSONAR Package Bundle Installed		
perfsonar-toolkit		1299
perfsonar-testpoint		798
perfsonar-core		48
perfsonar-centralmanagement		30
missing		25
perfsonar-tools		25
test-point		11

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

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

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

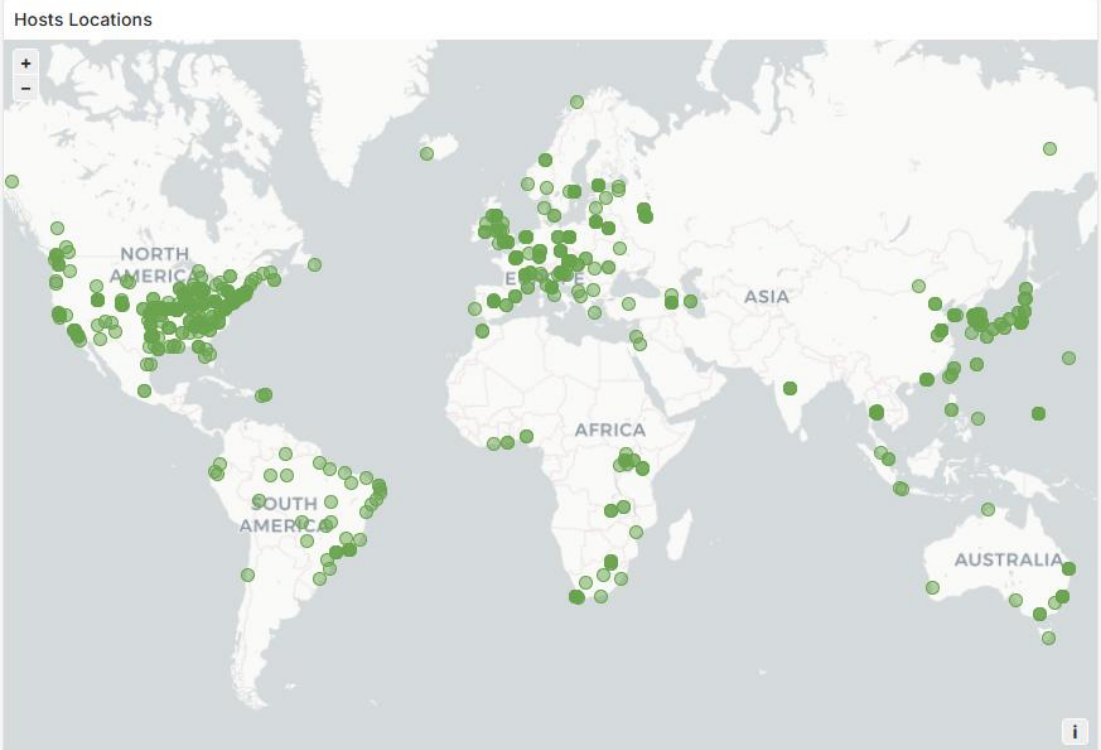


# perfSONAR LS Public Dashboard

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

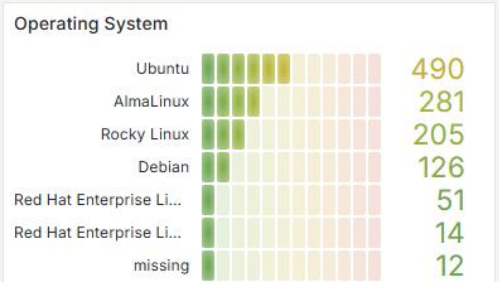
missing	1704
10G	109
WLCG	78
ATLAS	66
Internet2	62
100G	59
LHC	49

### 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

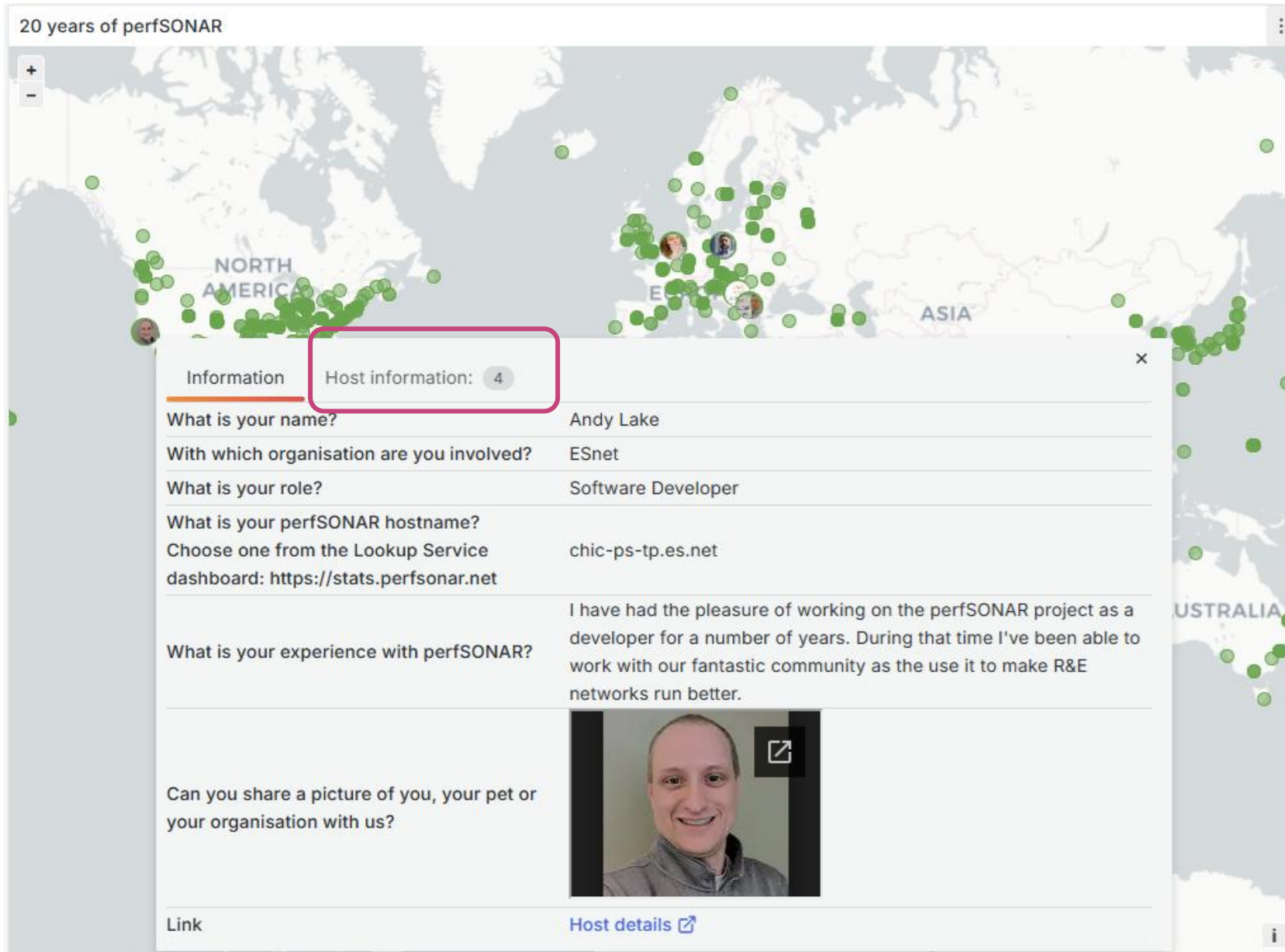
perfsonar-toolkit	1319
perfsonar-testpoint	819
perfsonar-core	48
perfsonar-centralmanagement	25
perfsonar-tools	25

### Toolkit Version

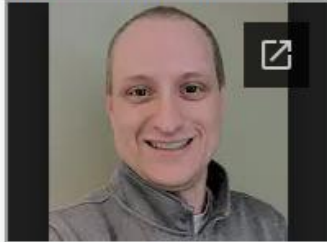
5.0.8-1.e17	568
5.1.4-1.e19	438
5.1.4	243
4.3.4-1.e17	168
5.1.4-1	157

# 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 perf2ONAR years interface with three filter dropdown menus open, each highlighted with a green box and connected to the corresponding filter button in the top navigation bar by a green line. The filters are:

- Country\_Code:** A list of country codes from MZ to SK, with PL selected.
- Domain:** A list with 'Selected (1)' and 'All', with 'man.poznan.pl' selected.
- Communities:** A list of community names including GEANT, PCSS, PMP, PMP-GEANT, POZMAN, and PSNC, with PSNC selected.

The top navigation bar includes buttons for 'Country\_Code', 'All', 'Domain', 'All', 'Communities', 'All', and 'Filters +'. The main content area shows the 'perf2ONAR years' logo and several data rows, each with a filter icon and a count of panels (e.g., '(9 panels)', '(8 panels)', '(10 panels)').

# perfSONAR Lookup Service Filter

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



Host Information

Hosts Locations

Host name

150.254.163.209	1
150.254.249.89	1
150.254.249.93	1
...	1
...	1
...	1
...	1
...	1
...	1
...	1

Communities

PCSS	4
POZMAN	4
PSNC	4

**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"]

Operating System

Debian	3
Ubuntu	1
Centos	0

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  Domain  Communities  Filters +



Host Information

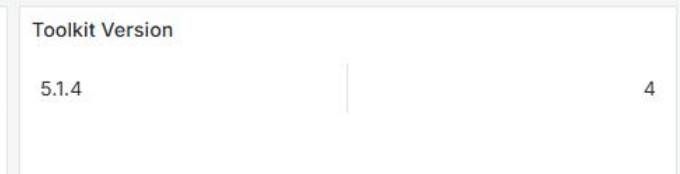
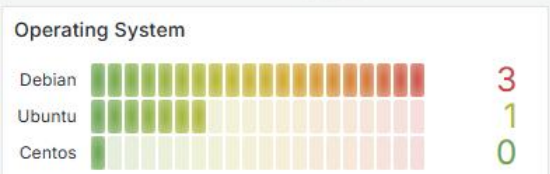
Hosts Locations



Host information: 4

- > Host Name: ["150.254.163.209", "perfsonar1.man.poznan.pl"] 4
- > Host Name: ["212.126.18.161", "perfsonar2.man.poznan.pl"] 4

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



# 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	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



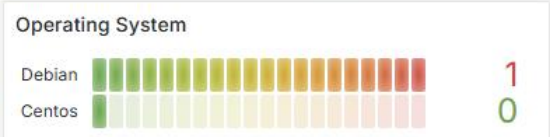
Host name	Count
150.254.163.209	1
perfsonar1.man.poznan.pl	1

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
12.8	1

Host name	Count
perfsonar-testpoint	1

Toolkit Version	Count
5.1.4	1



# Thank You

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