



# SoX Virtual Training Workshop

## Hands-on Session 1: Introduction to perfSONAR, GUI, basic overview

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# SoX Virtual Training Workshop

- Webpage with PowerPoint presentations:

[http://ce.sc.edu/cyberinfra/sox\\_workshop\\_2023.html](http://ce.sc.edu/cyberinfra/sox_workshop_2023.html)

- Hands-on sessions: to access labs for the hands-on sessions, use the following link:

<https://netlab.cec.sc.edu/>

- Username: email used for registration
- Password: nsf2023

# perfSONAR Lab Series

- Lab experiments

Lab 1: Configuring Admin. Information Using perfSONAR Toolkit GUI

Lab 2: PerfSONAR Metrics and Tools

Lab 3: Configuring Regular Tests Using perfSONAR GUI

Lab 4: Configuring Regular Tests Using pScheduler CLI Part I

Lab 5: Configuring Regular Tests Using pScheduler CLI Part II

Lab 6: Bandwidth-delay Product and TCP Buffer Size

Lab 7: Configuring Regular Tests Using a pSConfig Template

Lab 8: perfSONAR Monitoring and Debugging Dashboard

Lab 9: pSConfig Web Administrator

Lab 10: Configuring pScheduler Limits

# Organization of the Lab Manuals

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Each lab starts with a section *Overview*

- Objectives
- Lab topology
- Lab settings: passwords, device names
- Roadmap: organization of the lab

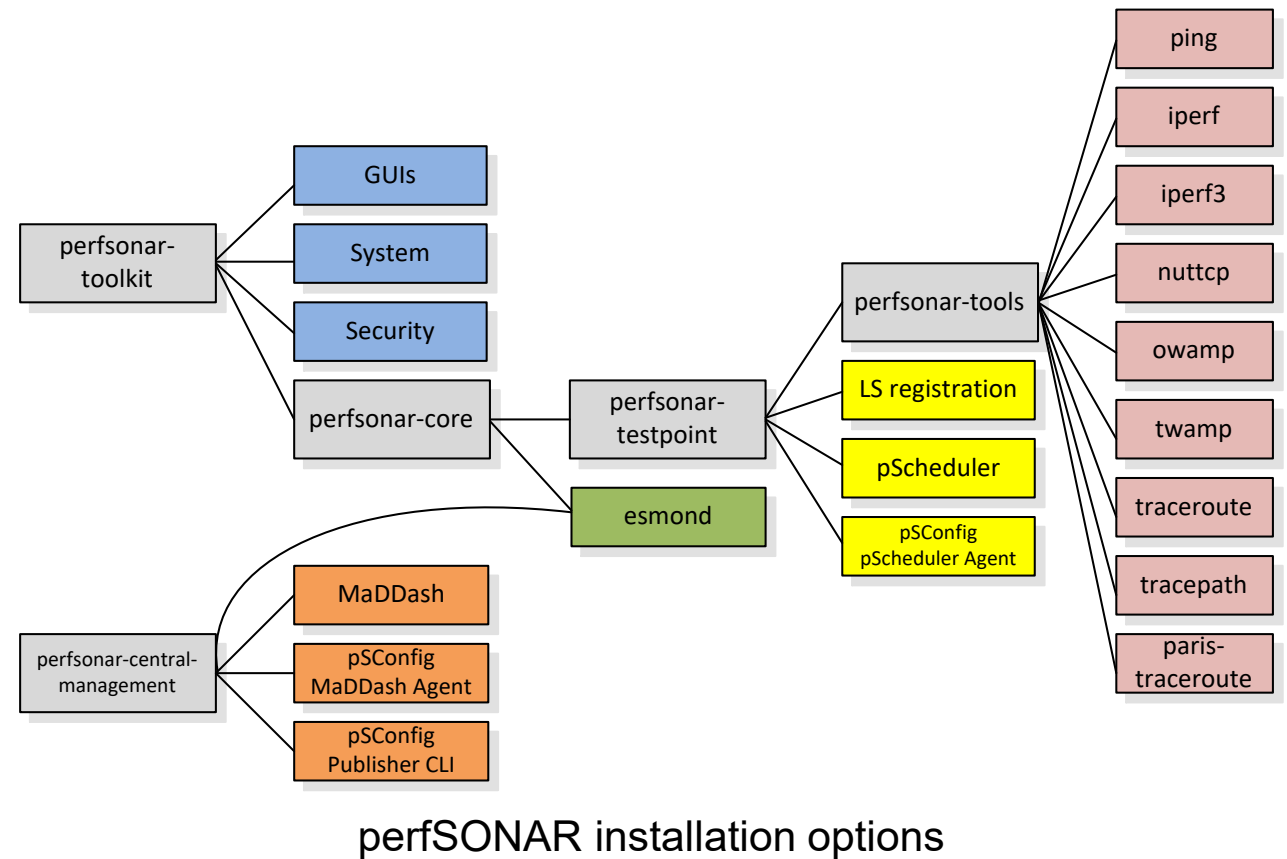
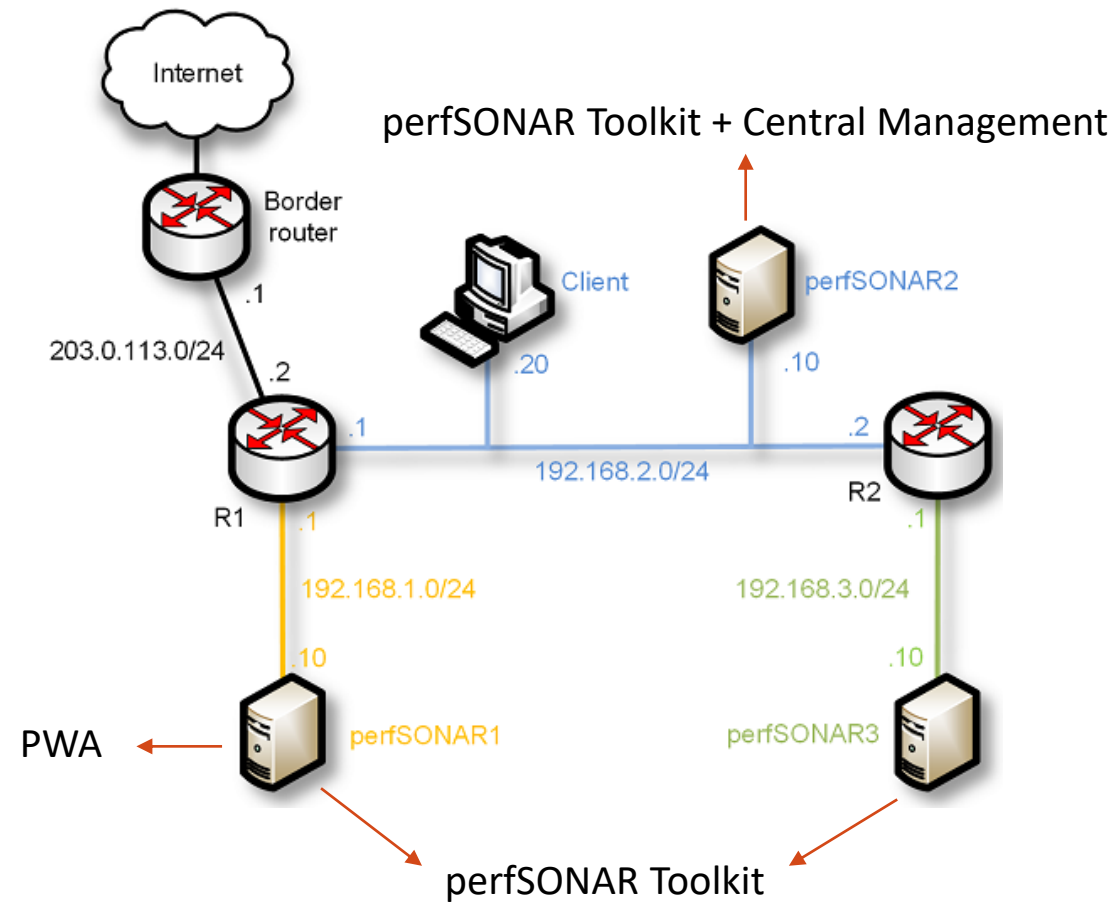
## *Section 1*

- Background information of the topic being covered (e.g., fundamentals of perfSONAR)
- Section 1 is optional (i.e., the reader can skip this section and move to lab directions)

## *Section 2... n*

- Step-by-step directions

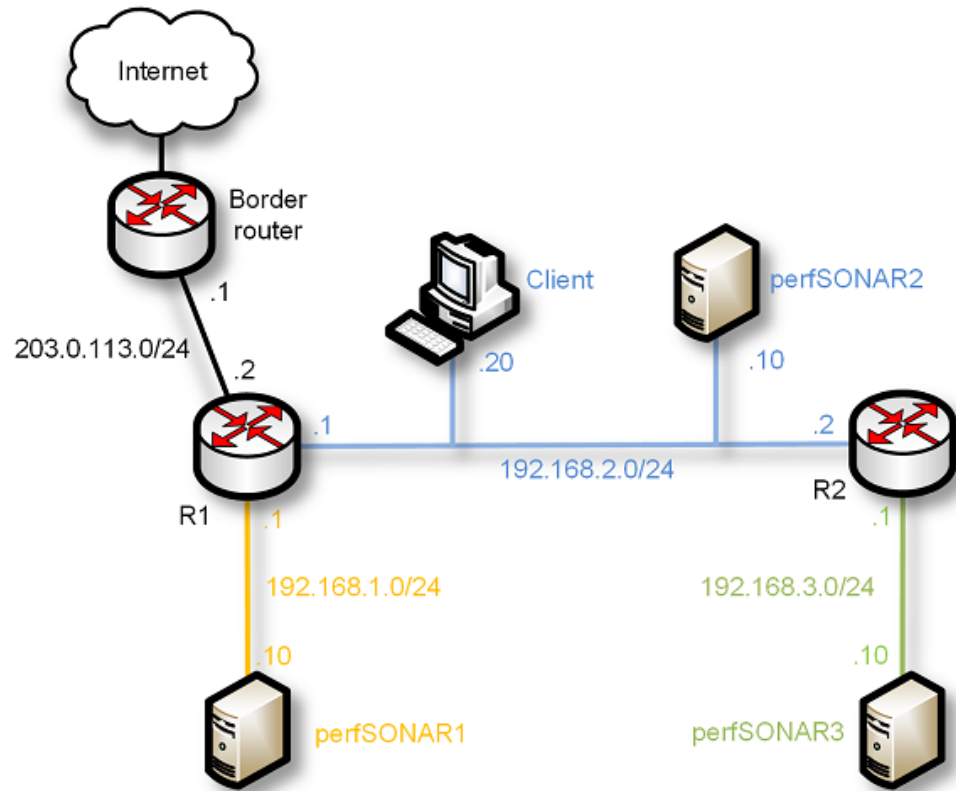
# Pod Design



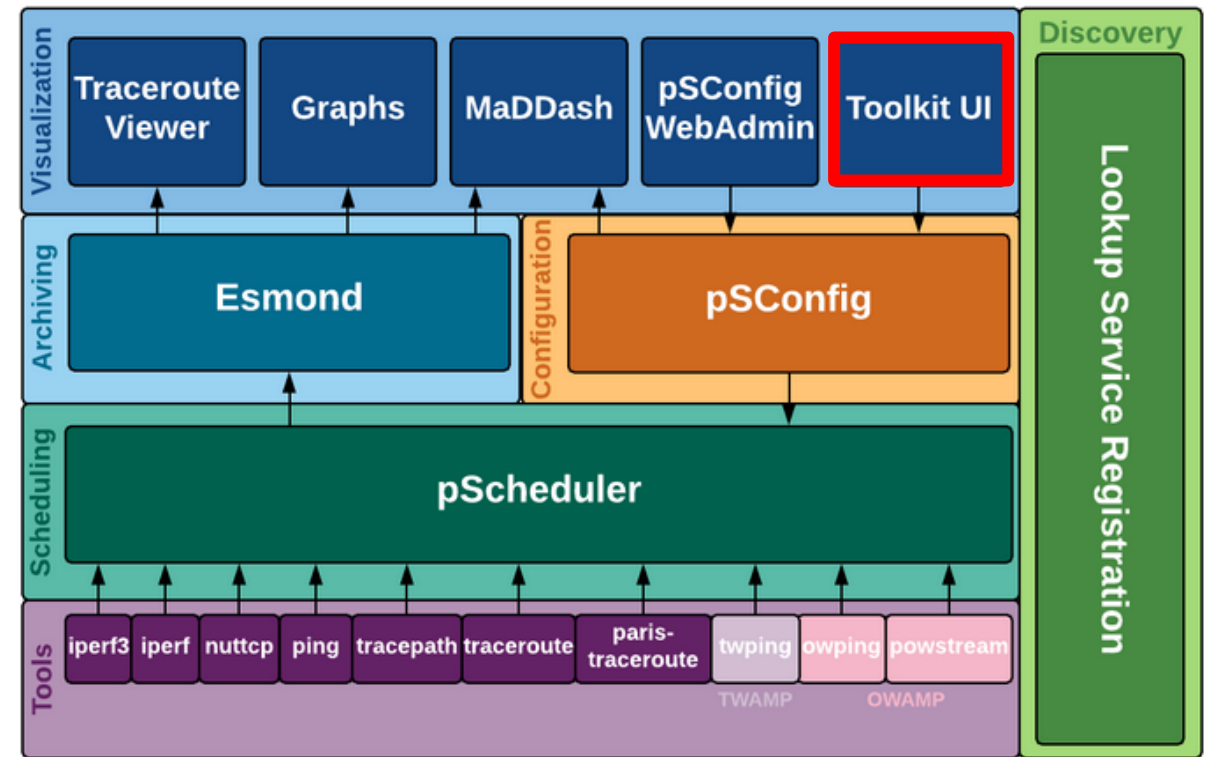
## **Lab 3: Configuring Regular Tests Using perfSONAR GUI**

# perfSONAR Toolkit GUI

- The user can configure administrative information and regular tests via perfSONAR Toolkit GUI



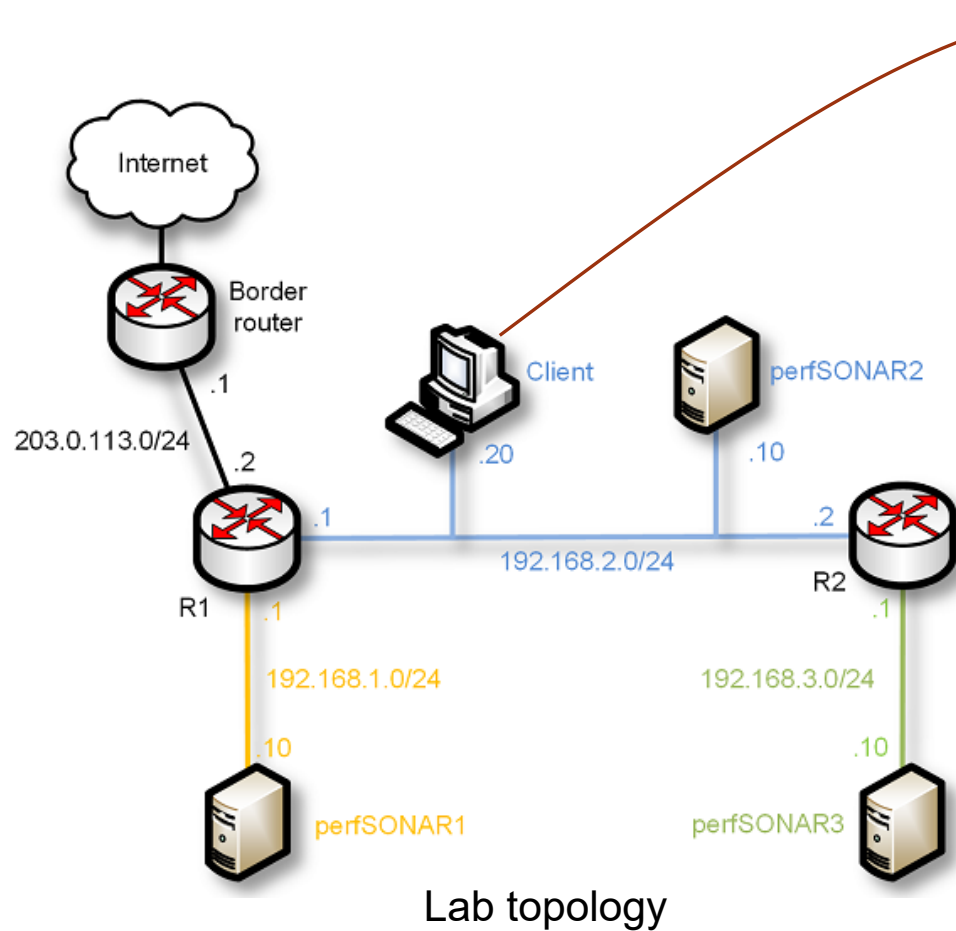
Lab topology



perfSONAR layers

# perfSONAR Toolkit GUI

- The user access the perfSONAR Toolkit GUI through the Client machine



Lab topology

The screenshot shows the perfSONAR Toolkit GUI. The browser address bar displays the URL `https://192.168.1.10/toolkit/auth/`. The page title is "perfSONAR Toolkit on perfSONAR-Toolkit". The main content area displays the following information:

**perfSONAR-Toolkit**  
Organization: University of South Carolina  
Address: Columbia, SC 29201 US (map)  
Administrator: Jose Gomez (gomezgaj@email.sc.edu)

**Services**

SERVICE	STATUS	VERSION	PORTS	SERVICE LOGS
esmond	Running	2.1.3-1.el7		<a href="#">View</a>
lsregistration	Running	4.1.6-1.el7		<a href="#">View</a>
owamp	Running	3.5.8-1.el7	861	<a href="#">View</a>
pscheduler	Running	1.1.6-2.el7		<a href="#">View</a>
psconfig	Running	4.1.6-1.el7		<a href="#">View</a>
twamp	Running	3.5.8-1.el7	862	<a href="#">View</a>

perfSONAR Toolkit GUI



# perfSONAR Toolkit GUI

- Results are displayed in the perfSONAR Toolkit GUI (e.g., throughput, latency, packet loss, traceroute)

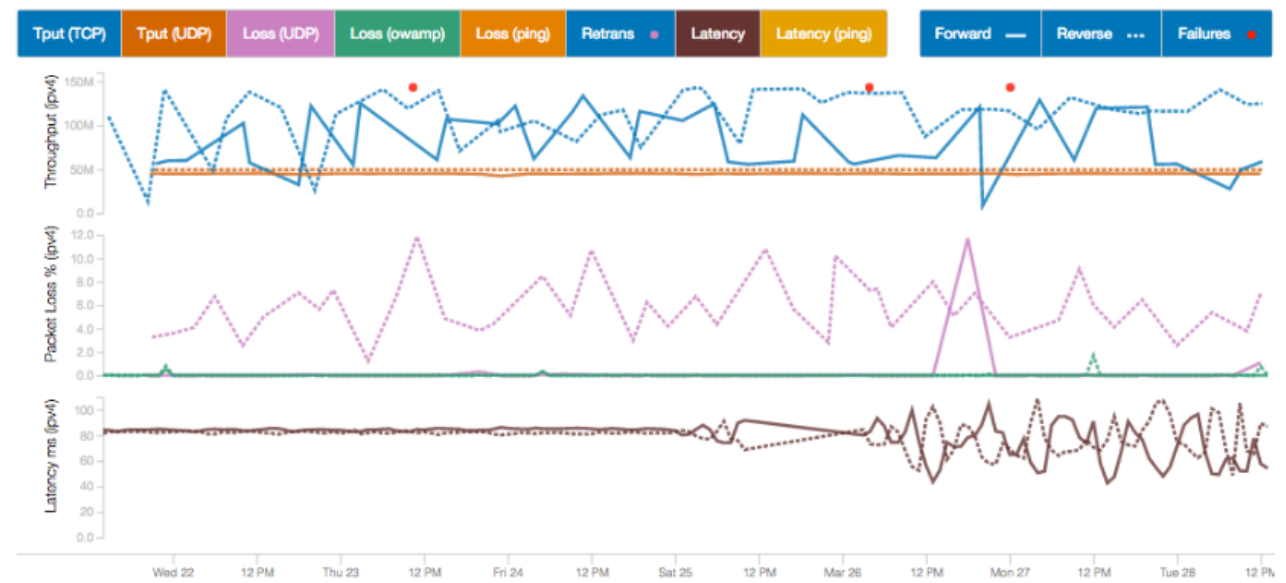
The screenshot shows the perfSONAR Toolkit GUI. At the top, it displays the organization name 'perfSONAR Toolkit on perfSONAR-Toolkit'. Below this, there is a section for 'perfSONAR-Toolkit' with an 'Edit' button. The organization details are: University of South Carolina, Columbia, SC 29201 US, and Administrator: Jose Gomez (gomezgaj@email.sc.edu). A 'Services' table lists several services: esmond, lsregistration, owamp, pscheduler, psconfig, and twamp, all with status 'Running'. Below the services is a 'Test Results' section with 2 results. A search bar and a dropdown for 'Results for the last...' (set to 1 week) are present. A table shows test results for two paths, with the first path highlighted in red.

SERVICE	STATUS	VERSION	PORTS	SERVICE LOGS
esmond	Running	2.1.3-1.e17		<a href="#">View</a>
lsregistration	Running	4.1.6-1.e17		<a href="#">View</a>
owamp	Running	3.5.8-1.e17	861	<a href="#">View</a>
pscheduler	Running	1.1.6-2.e17		<a href="#">View</a>
psconfig	Running	4.1.6-1.e17		<a href="#">View</a>
twamp	Running	3.5.8-1.e17	862	<a href="#">View</a>

SOURCE	DESTINATION	THROUGHPUT	LATENCY (MS)	LOSS
192.168.2.10	192.168.3.10	+ 4.69 Gbps + 3.37 Gbps	+ 2.94 + 1.12	+ 0 + 0
192.168.2.10	192.168.1.10	+ 4.69 Gbps + 5.04 Gbps	+ 0.374 + 2.12	+ 0 + 0

perfSONAR Toolkit GUI



perfSONAR test results