

**MY EXPERIENCE AT**  
**npNOG7 and**  
**SANOG39/bdNOG16**

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# npNOG7

- Network Operators Community, 7th edition
- Held on Jan 20th to 22nd, 2023 (3 days)
- At Hotel Barahi, Lakeside, Pokhara
- Tracks: Network Administration and System Administration
- System Track Instructors:
  - Chatur Shakya (PCH)
  - Rupesh Basnet (OM Network)
  - Ashish Shrestha (Sky Broadband)

# System Administration

## What we learned?

- Efficient use of text editors
- Password less SSH
- DNS Tree Hierarchy
- Let's Encrypt
- Scripting
- System Monitoring Tools and Commands

# Learning Implementations

- Let's Encrypt:- Securing cacti graph website

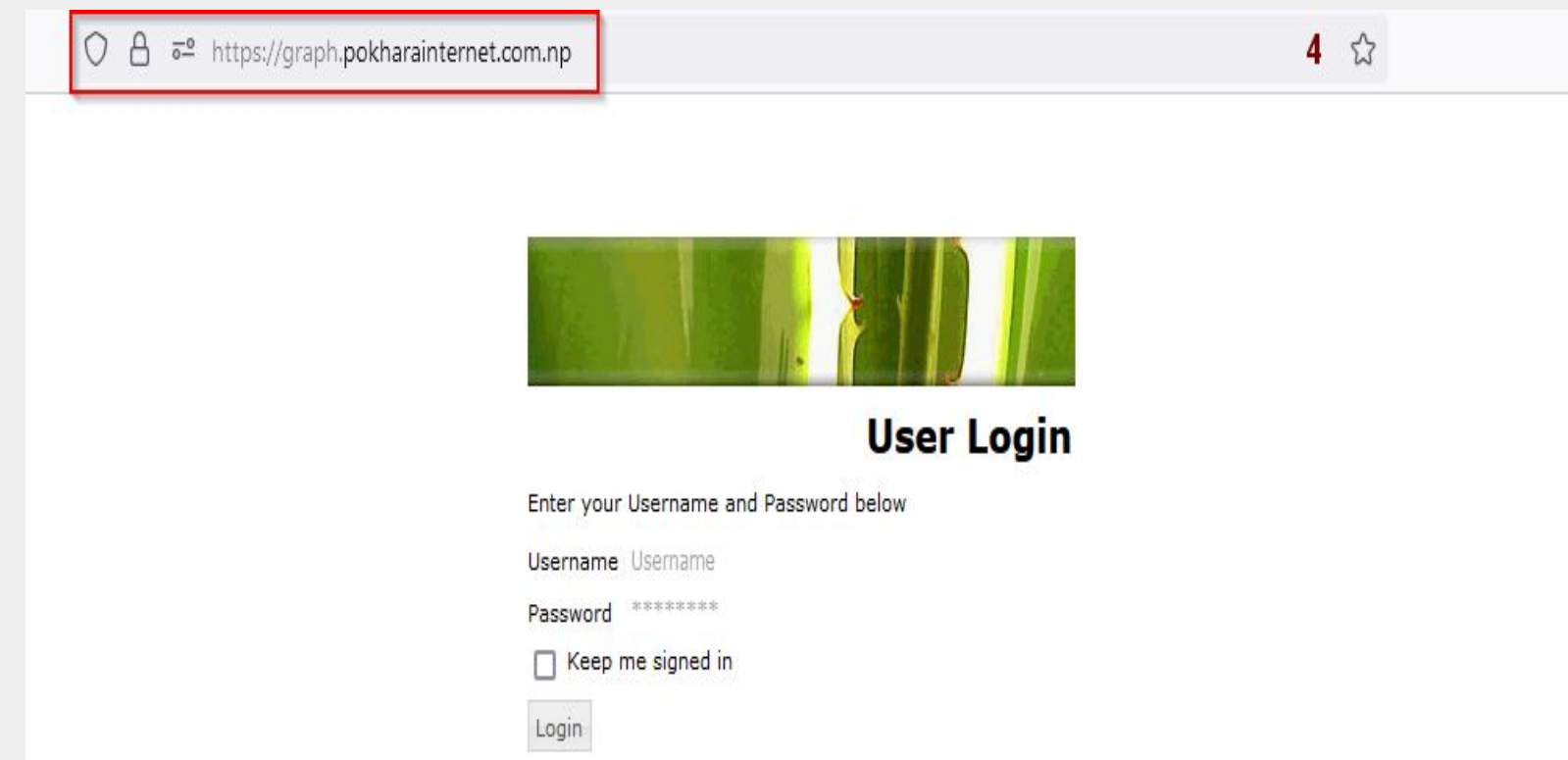
```
<VirtualHost *:443>
  ServerName graph.pokharainternet.com.np

#   DocumentRoot /var/www/html/cacti
  DocumentRoot /usr/share/cacti

  SSLEngine on
  SSLCertificateFile /etc/letsencrypt/live/graph.pokharainternet.com.np/cert.pem
  SSLCertificateKeyFile /etc/letsencrypt/live/graph.pokharainternet.com.np/privkey.pem
  SSLCertificateChainFile /etc/letsencrypt/live/graph.pokharainternet.com.np/chain.pem


#   <Directory "/var/www/html/cacti">
  <Directory "/usr/share/cacti">
    Options None
    AllowOverride None
    Require all granted
  </Directory>
</VirtualHost>

<VirtualHost *:80>
  ServerName graph.pokharainternet.com.np
  Redirect permanent / https://graph.pokharainternet.com.np/
</VirtualHost>
```



https://graph.pokharainternet.com.np

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### User Login

Enter your Username and Password below

Username

Password

Keep me signed in

# SANOG39/bdNOG16

- Network Operators Community for South Asian Region and Bangladesh.
- 09th to 13th May, 2023 (4 days workshop & 1day conference)
- Pan Pacific (conference) and Hotel Intercontinental (workshop), Dhaka
- Hosted by ISPAB in collaboration with bdNOG.
- Tracks:
  - BGP & IPv6 Deployment
  - Network Security
  - Network Automation

# Network Security

## What we learned?

- Network Security Fundamentals
- Packet Analysis
- Device & Infrastructure Security
- BGP route Leaks
- Security Operations & Monitoring
- Honeypots
- Log Management and Flow Monitoring

# Learning Implementations

## LibreNMS Setup:

LibreNMS Overview Devices Maps Ports Health Apps Routing Alerts

Lists: Basic | **Detail** | Graphs: Bits | CPU | Load | Memory | Uptime | Storage | Disk I/O | Poller | Ping | Temperature Agent

Search All All OS All Versions All Platforms All Featuresets All Locations All Device Typ

S.	Id	M.	Vendor	Device	Metrics	Platform	Operating System	Up/Down Time
	22			<b>Damek-olt1</b> 172.16.20.45	20 3	V4.0	cdata V1.5.1_200723	2w 6d 8h
	5			<b>Abcare-olt1</b> ab-care-olt1	110 39	P3608-2TE mother card	BDCOM(tm) Software 10.1.0E Build 46085	6mos 5d 2h
	6			<b>Amarsingh-olt1</b> amarshing-olt1	51 261	MA5603T	Huawei SmartAX MA5683V800R015C00B058	1mo 2w 6d
	7			<b>Amarsingh-sw1</b> amarsing-sw1.pokharainternet.com.np	27 3	Catalyst 2950 (WS-C2950-24)	Cisco IOS 12.1(19)EA1c (I6Q4L2)	1mo 2w 6d
	8			<b>Armala-olt1</b> armalaolt-1	400 39	P3608-2TE mother card	BDCOM(tm) Software 10.1.0E Build 46085	36m 13s
	9			<b>Baghmara-olt1</b> bagmara-olt1	204 39	P3608-2TE mother card	BDCOM(tm) Software 10.1.0E Build 46085	3h 32m 44s
	10			<b>Bhalem-olt1</b>	19	Fan Box	Huawei SmartAX	1mo 3w 1d Shenzhen China

LibreNMS Overview Devices Maps Ports Health Apps Routing Alerts

Support-sw1 CISCO

Overview Graphs Health Ports VLANs Inventory Logs Alerts Alert Stats Latency Notes

Cisco Internetwork Operating System Software IOS (tm) C2950 Software (C2950-I6Q4L2-M), Version 12.1(22)EA3, RELEASE SOFTWARE (fc1) Copyright (c) 1986-2005 by cisco Systems, Inc. Compiled Tue 25-Jan-05 18:19 by antonio

System Name support-sw1.pokharainternet.com.np  
Resolved IP  
Hardware Catalyst 2950T (WS-C2950T-24)  
Operating System Cisco IOS 12.1(22)EA3 (I6Q4L2)  
Serial FOC0823W1NM  
Object ID .1.3.6.1.4.1.9.1.359  
Device Added 3 hours 39 minutes 49 seconds ago  
Last Discovered 7 minutes 13 seconds ago  
Uptime 4 days 21 hours 36 minutes 26 seconds

**Overall Traffic**

29 13 7 0

Fa0/1, Fa0/10, Fa0/11, Fa0/12, Fa0/13, Fa0/14, Fa0/15, Fa0/16, Fa0/17, Fa0/18, Fa0/19, Fa0/2, Fa0/20, Fa0/21, Fa0/22, Fa0/23, Fa0/24, Fa0/3, Fa0/4, Fa0/5, Fa0/6, Fa0/7, Fa0/8, Fa0/9, Gi0/1, Gi0/2, Null0, Vlan1, Vlan7

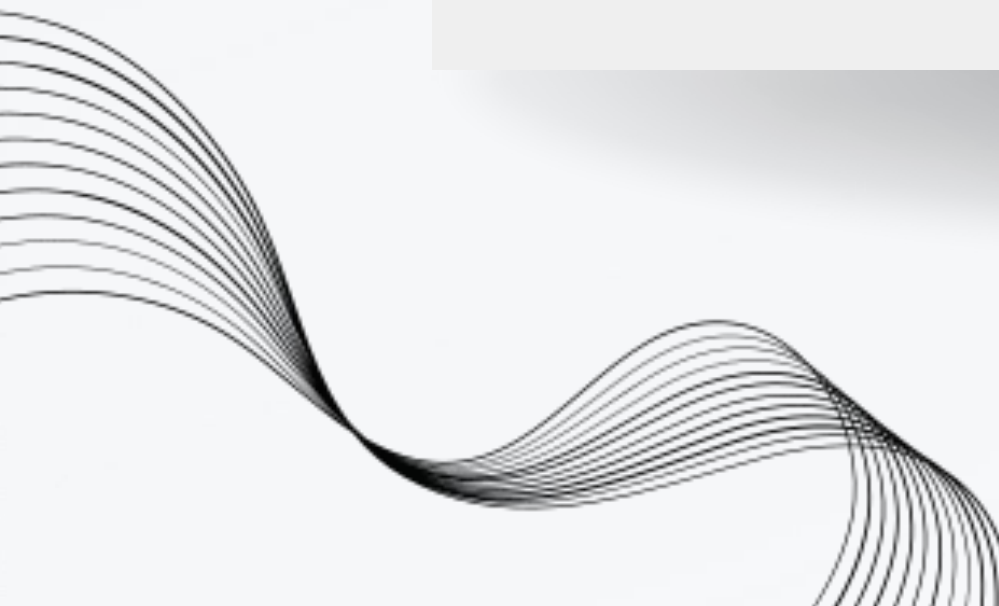
**Processors**

Processor 1 x1 5%

**Memory**

Processor 47% 47%

# Benefits

- Networking and Collaboration
  - Skill Development and Learning
  - Career Growth and Recognition
  - Community Building and Local Impact
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# Gratitude Mentions:

- Entire npNOG Committee
  - SANOG Fellowship Committee
  - npNOG Sponsors
  - SANOG Fellowship Sponsors, esp.  
FLEXOPTIX
  - SANOG Host ISPAB, bdNOG
  - APNIC Foundation
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**Thank You!!!**

