

bd NOG 9

SANOG 32 & BDN OG 9

SANOG XXXII

**CONFERENCE ON
INTERNET OPERATIONAL TECHNOLOGY**

*02-10 August, 2018
Le Meridien, Dhaka*



INTERNET SERVICE PROVIDERS ASSOCIATION OF BANGLADESH

Virtualization and Cloud Computing

Days and Topic

TRACK: Infra

Virtualization

Workshop:
02-06 August, 2018

Venue:
Le Meridien
Dhaka, Bangladesh

01

Building The Foundation

02

Virtualization & High Availability # 1 (KVM+LizardFS)

03

Virtualization & High Availability # 2 (KVM+LXC+ZFS)

04

Virtualization Continue

05

Virtualization Continue



Introductions, Objectives and Elaborating Workshop Goal

Day 01, Session 1.1



Introduce your self

- **What's your name?**
- **Which country are you from?**
- **What's your job?**
- **What company do you work for?**

INSTRUCTORS

Insert the title of your subtitle Here

| Name | Organization | Short Name |
|------------------|------------------------------------|------------|
| GZ Kabir | BDCOM, Bangladesh | GZ |
| Suman Kumar Saha | Amber IT , Bangladesh | SS |
| Rezaul Karim | Redsky Solution, Bangladesh | RK |
| Md Ehsanul Haque | Independent University, Bangladesh | EH |
| Imtiaz Rahman | SBAC Bank Ltd. Bangladesh | IR |

Agenda

Insert the title of your subtitle Here

DAY 1

| Session | Topic | Instructor |
|---------|--|------------|
| 1.1 | Welcome, Introductions, Workshop Details | GZ |
| 1.2 | Intro to Virtualization | SS |
| 1.3 | Desktop Virtualization | IR |
| 1.4 | Preparing the Workstation for the Lab | ALL |
| 1.5 | Linux Basics | EH |
| 1.6 | Linux package management | RK |
| 1.7 | SSH | SS |
| | | |

Agenda

Insert the title of your subtitle Here

DAY 2

| Session | Topic | Instructor |
|---------|---|------------|
| 2.1 | KVM and Libvirt | EH |
| 2.2 | OpenvSwitch Intro | IR |
| 2.3 | Create Virtual Machine with KVM | RK |
| 2.4 | LizardFS Distributed File system Basics | SS |
| 2.5 | LizardFS Master Meta Data Server Configuration | RK |
| 2.6 | LizardFS Shadow Master & Chunk Server Configuration | SS/EH |
| 2.7 | Mounting Clustered Storage and Creating Virtual Machine | RK |
| 2.8 | Summary & Q&A | GZ |

Agenda

DAY 3

| Session | Topic | Instructor |
|---------|--|------------|
| 3.1 | Computing node failure and recovery from Cluster | RK |
| 3.2 | KVM Live Migration Using Virt-Manager | EH |
| 3.3 | LizardFS MDS failure and recovery from Shadow Master | SS |
| 3.4 | Container Basics (LXC/LXD/Docker) | IR |
| 3.5 | Zettabyte file system(ZFS) Basics & Various ZFS RAID Levels. | RK |
| 3.6 | ZFS RAID Management & Disk-Failure & Recovery. | RK/SS |
| 3.7 | ZFS read/write cache management | RK |
| 3.8 | Summary & Q&A | SS |

DAY 4

| Session | Topic | Instructor |
|---------|---|------------|
| 4.1 | Create ZFS volume and Create LXC Container inside ZFS Volume. | RK/SS |
| 4.2 | LXC Container snapshot and Replication Using ZFS. | RK/SS |
| 4.3 | Container Scripted replication & Automated it using Shell Script. | RK |
| 4.4 | LXC Web-Panel (Basic Function) | EH |
| 4.5 | Create private network with OpenVswitch between LXC. | SS |
| 2.6 | Application Clustering and HA with Haproxy. | RK/EH |
| 2.8 | Summary & Q&A | SS |

| Session | Topic | Instructor |
|---------|---|------------|
| 5.1 | Docker Introduction | IR |
| 5.2 | Docker installation on Linux | IR |
| 5.3 | Run docker container start/stop/kill | IR |
| 5.4 | Create docker image from Dockerfile | IR |
| 5.5 | Create docker hub account and push the image to docker hub. | IR |
| 5.6 | Ansible installation, ad-hoc command. | IR |
| 5.7 | Summary & Q&A | IR |

Agenda

Insert the title of your subtitle Here

<http://wiki.bdnog.org/doku.php/bdnog9/track3agenda>

Resources

Insert the title of your subtitle Here



WiFi Access Point: **SANOG32**

WiFi Password: **sanog32bd**

WiFi Access Point: **SANOG32-virt**

WiFi Password: **12345678**

Sessions

Session 1: 9:00 AM – 11:00 AM

Session 2: 11:30 AM – 1:00 PM

Session 3: 2:00 PM – 3:30 PM

Session 4: 4:00 PM – 5:30 PM



Any Questions ?