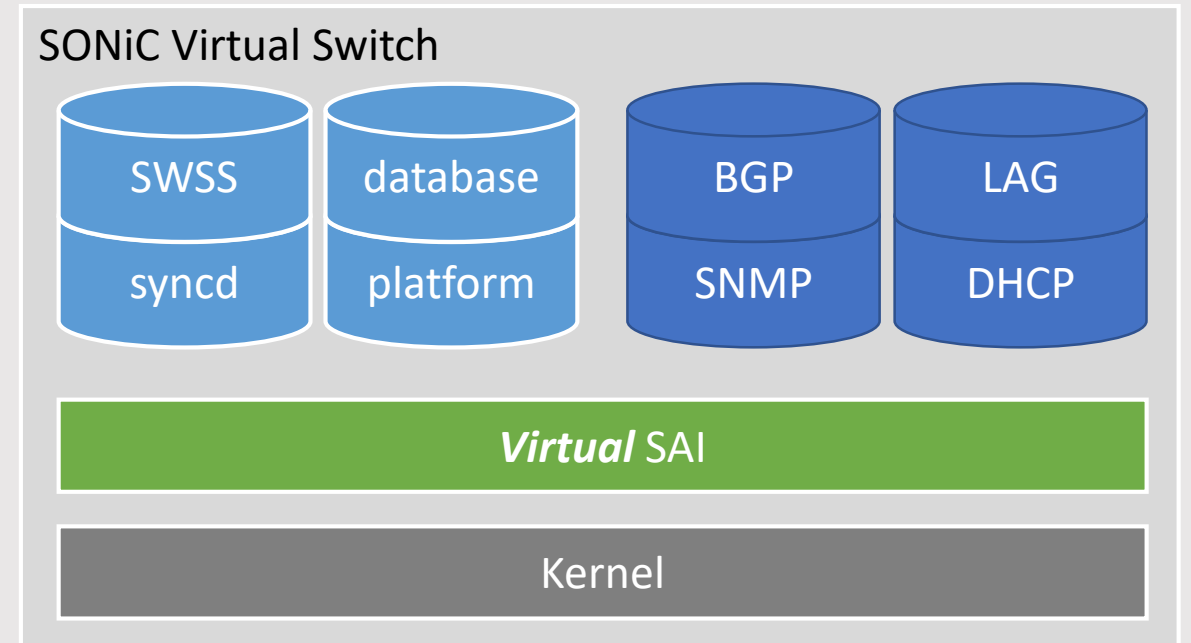
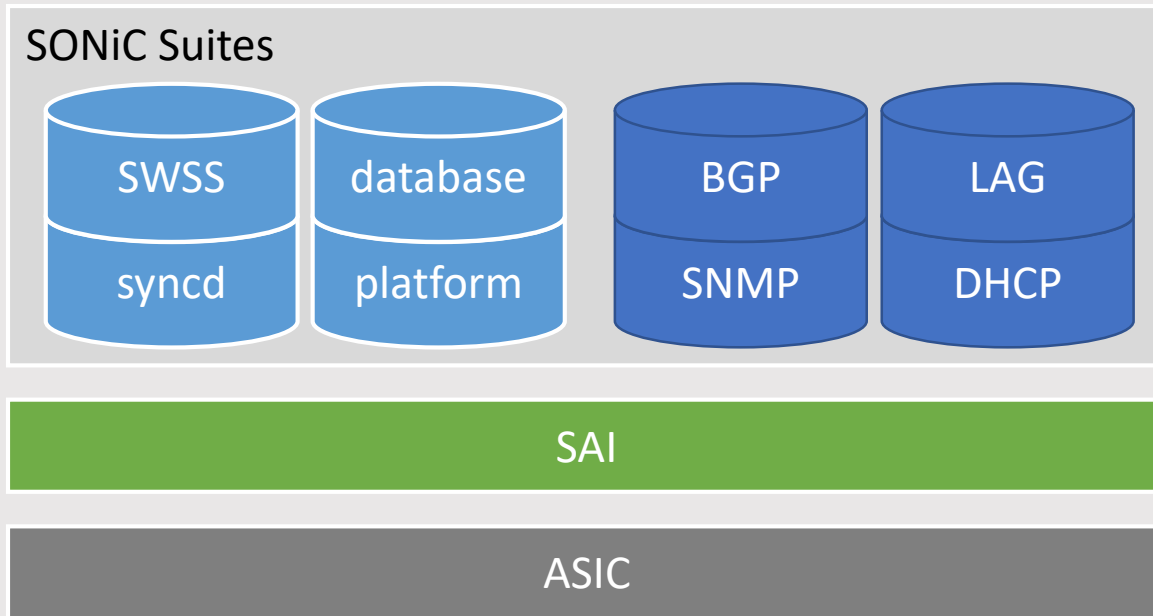




# Virtual Switch Platform System Setup Instructions

Shuotian Cheng

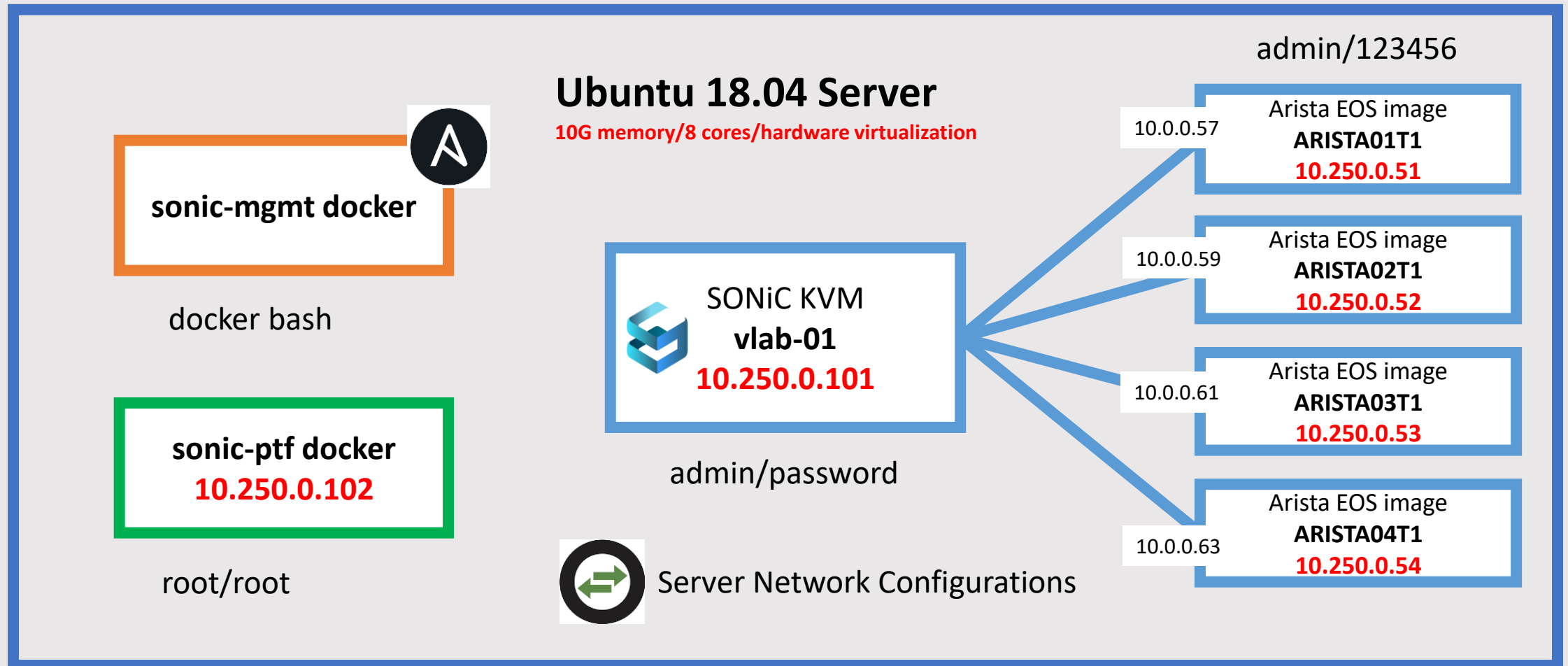
# Real Switch Platform Vs. *Virtual* Switch Platform



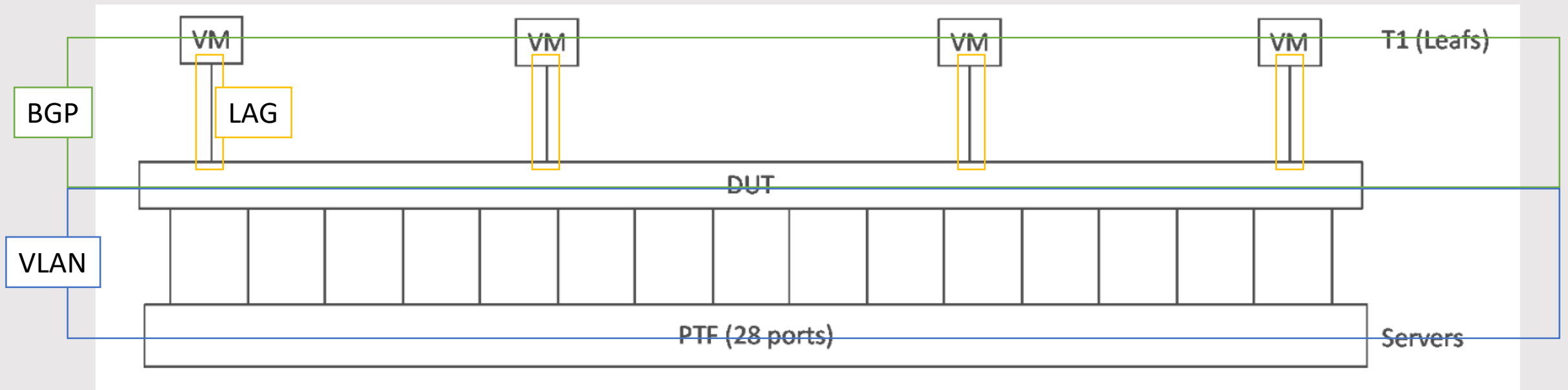
- SONiC Virtual Switch is a KVM (kernel-based virtual machine)
- Comes with full SONiC Suites and Acts as a real switch
- Creates virtual ports in the kernel and real host interfaces corresponding to each of the port
- Brings up full control plane and basic data plane functionalities
- Supports all dummy APIs for SAI and enables metadata checks and reference count checks for all APIs

# Virtual Environment

<https://github.com/Azure/sonic-mgmt/blob/master/ansible/doc/README.testbed.VsSetup.md>



# Top-of-Rack Topology



# Arista EOS VMs setup

```
$ ./testbed-cli.sh -m veos.vtb start-vm server_1 password.txt
$ ./testbed-cli.sh -t vtestbed.csv -m veos.vtb add-topo vms-kvm-t0 password.txt
$ ansible -m ping -i veos.vtb server_1 -u root -k
VM0102 | SUCCESS => {
    "changed": false,
    "ping": "pong"}
VM0101 | SUCCESS => {
    "changed": false,
    "ping": "pong"}
STR-ACS-VSERV-01 | SUCCESS => {
    "changed": false,
    "ping": "pong"}
VM0103 | SUCCESS => {
    "changed": false,
    "ping": "pong"}
VM0100 | SUCCESS => {
    "changed": false,
    "ping": "pong"}
```

```
interface Port-Channel1
  no switchport
  ip address 10.0.0.57/31
  ipv6 enable
  ipv6 address fc00::72/126
  ipv6 nd ra suppress
  port-channel min-links 1
!
interface Ethernet1
  no switchport
  channel-group 1 mode active
!
interface Ethernet2
!
interface Ethernet3
!
interface Ethernet4
!
interface Ethernet5
  description backplane
  no switchport
  ip address 10.10.246.29/24
  ipv6 enable
  ipv6 address fc0a::3a/64
  ipv6 nd ra suppress
!
interface Loopback0
  description LOOPBACK
  ip address 100.1.0.29/32
  ipv6 enable
  ipv6 address 2064:100::1d/128
  ipv6 nd ra suppress
!
interface Management1
  description TO LAB MGMT SWITCH
  vrf forwarding MGMT
  ip address 10.250.0.51/24
!
```

# Deploy topology and minigraph

```
$ ./testbed-cli.sh -t vtestbed.csv -m veos.vtb deploy-mg vms-kvm-t0 lab password.txt
```

**Minigraph:** /etc/sonic/minigraph.xml **configuration:** /etc/sonic/config\_db.json

```
admin@vlab-01:~$ show ip bgp sum
```

BGP router identifier 10.1.0.32, local AS number 65100

RIB entries 12807, using 1401 KiB of memory

Peers 8, using 36 KiB of memory

Peer groups 2, using 112 bytes of memory

Neighbor	V	AS	MsgRcvd	MsgSent	TblVer	InQ	OutQ	Up/Down	State/PfxRcd
10.0.0.57	4	64600	3208	12	0	0	0	00:00:22	6400
10.0.0.59	4	64600	3208	593	0	0	0	00:00:22	6400
10.0.0.61	4	64600	3205	950	0	0	0	00:00:21	6400
10.0.0.63	4	64600	3204	950	0	0	0	00:00:21	6400

Live Demo

# Basic Debug

- Critical processes
- syslog
- SAI function call logs
- Send packets from/to PTF docker



QA