

ENTERPRISE SONiC LINUX TRAINING CERTIFICATION

ENTERPRISE SONiC BOOTCAMP WITH EXTENSIVE HANDS-ON ELEMENTS

LIVE - REMOTE - INSTRUCTOR-LED TRAINING FOR NETWORK PROFESSIONALS



WHY SONiC?

- **Explosive market growth:**
The SONiC ecosystem is rapidly scaling—anticipated to reach \$4 billion by 2025 and an impressive \$8 billion by 2027, driven by increasing enterprise and cloud adoption across the networking industry.
- **Expanding footprint:**
Now deployed in thousands of data centers, SONiC is on track to claim 10-20% of the Tier-2/3 cloud and enterprise switch market by 2028
- **Massive port scale:**
Over 12,000 data centers now use open-networking switches, many powered by SONiC. This means millions of switch ports are already in use—and the number keeps growing.
- **Preferred open-networking OS:** SONiC has become the top choice for white-box and disaggregated switch environments, embraced by both cloud providers and enterprises pushing for agility and modularity.



WHO SHOULD ATTEND

- This course is ideal for **system administrators** and **engineers** eager to install, configure, manage, monitor, and troubleshoot SONiC Linux-based switches.



WELCOME TO THE ENTERPRISE SONiC LINUX BOOTCAMP

Discover the power of **Enterprise SONiC Distribution by Broadcom**, the choice of the future for datacenter networking. Embrace the skills that are shaping tomorrow's networking landscape.

R2O-SON-BRC-BT-4D - 4-DAY BOOTCAMP FOR SYSTEM ADMINISTRATORS

This intensive program covers **SONiC Introduction, Configuration, Routing Protocols, Automation, Campus-specific topics**, and more. It's designed for practical, hands-on learning and in-depth understanding of **Enterprise SONiC Distribution by Broadcom**:

Day 1: SONiC Linux Introduction and Configuration

DAY 1

Introduction to SONiC	<ul style="list-style-type: none"> Exploring Linux Concepts, Containers, Redis Database What is SONiC? General Introduction and System Architecture
Initial SONiC Set-Up	<ul style="list-style-type: none"> Accessing the Switch, Introduction to ONIE, Installing and Upgrading SONiC Configuring Switch Management Access, User Authentication Zero Touch Provisioning (ZTP) and Automation Options
Configuration Methods	<ul style="list-style-type: none"> Detailed Configuration Methods in SONiC Management Framework, Klish CLI Configuration Sessions NEW Basic Interface Configuration and Validation Interface Ranges, Port Groups, Breakout Configurations Port Channels (Link Aggregation), VLAN Configuration Layer 2 and Layer 3 Ports NEW

HANDS-ON DAY 1

Hands-On	<ul style="list-style-type: none"> Installing SONiC, Basic Switch Configuration, User Access Interface Configurations, IP Addressing, LLDP Checks
-----------------	---

Day 2: Advanced Routing and Automation

DAY 2

Redundancy Methods	<ul style="list-style-type: none"> Layer 2 and 3 Redundancy: STP, MC-LAG, VRRP, SAG
Routing Protocols	<ul style="list-style-type: none"> Introduction to Routing Protocols, SONiC Routing Architecture Configuring and Validating BGP, OSPF, Static Routes Displaying and Influencing Routing Table Improving Convergence Time with BFD DHCP Relay
Automation	<ul style="list-style-type: none"> Introduction to Automation in SONiC, Use Cases Automation with Ansible: Concepts, Prerequisites, Deployment Automation with RESTCONF and gNMI: YANG Model, Config Deployment

HANDS-ON DAY 2

Hands-On	<ul style="list-style-type: none"> MCLAG Configuration, VLAN Configurations BGP Configurations, IPv4/Unnumbered Peers, Loopback Interfaces BFD on BGP Peers, BGP Network Advertisements Automation with Ansible and Postman: Interface Information, VLAN Configuration
-----------------	--

ENTERPRISE SONiC BOOTCAMP WITH EXTENSIVE HANDS-ON ELEMENTS

LIVE - REMOTE - INSTRUCTOR-LED TRAINING FOR NETWORK PROFESSIONALS



CERTIFICATION

Earn your **Certified SONiC System Administrator credential** —a clear proof of your skills in managing and troubleshooting SONiC Linux networks. A powerful, industry-recognized way to show your expertise!

MEET YOUR TRAINER



Volker Scheel

With over 25 years of experience in network engineering, including 20 years at AT&T Global Network Services and 5 years at STORDIS, Volker has trained over 500 students on SONiC just in 2024. His expertise is your gateway to mastering SONiC.

Route2Open Academy is the leading global Authorized Training Centre for the world's biggest and brightest open technology vendors.



DAY

Day 3: VXLAN, EVPN, and Troubleshooting

VXLAN + EVPN

- Introduction to VXLAN, EVPN, Layer 2/3 VPNs
- **Connecting multihomed hosts: Logical VTEP and EVPN Multihoming** NEW
- Asymmetric and Symmetric IRB, Monitoring VXLAN and EVPN
- Datacenter Interconnect (DCI): Types, Benefits, Multisite DCI

Troubleshooting

- Overview of Troubleshooting in SONiC
- Interface Troubleshooting: Validating Cabling, Transceivers
- Interface Counters
- Telemetry and Monitoring: sFlow, Traffic Mirroring, SPAN, ERSPAN
- Analyzing Packet Drops, Mirror on Drop
- Switch Information
- Generating Tech Support Information, Debugging Applications

HANDS-ON DAY 3

Hands-On

- Configuring Layer 2 and Layer 3 VPNs with VXLAN and EVPN

DAY

Day 4: Campus Focus

Power Over Ethernet (PoE)

- Introduction and Configuration of PoE
- Monitoring PoE Status

LLDP-MED

- Power Negotiation and Voice VLAN Information

Port Access Control

- Overview of 802.1x, MAC Authentication Bypass
- Host Modes, assigned VLANs, and Dynamic ACLs
- Configuration and Verification

IP Helper

- Configuration and Verification

Port Security

- Configuration and Verification

DHCP Snooping

- Configuration and Verification

Access Control Lists (ACLs)

- Types and Configuration
- Using ACL Counters for Monitoring

HANDS-ON DAY 4

Hands-On

- Practical implementation of Port Access Control and ACLs