ENTERPRISE SONIC BOOTCAMP WITH EXTENSIVE HANDS-ON ELEMENTS

LIVE - REMOTE - INSTRUCTOR-LED TRAINING FOR NETWORK PROFESSIONALS

WHY SONiC?

- SONiC's market value is expected to reach $2 billion by 2024. It's fast becoming the preferred choice for data center switches.
- Over 6 million switch ports are currently running on SONiC, with significant adoption by cloud service providers since 2021.

WHO SHOULD ATTEND

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

PREREQUISITES

- A solid understanding of Ethernet network principles and switching/routing concepts.
- Recommended: Hands-on experience with basic switch configuration.

A proven way to become a **Certified SONiC System Administrator!**

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**, **Advanced Routing**, **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	• Exploring Linux Concepts, Containers, Redis Database • What is SONiC? General Introduction and System Architecture
Initial SONiC Set-Up	• Accessing the Switch, Installing, and Upgrading SONiC • Configuring Switch Management Access, User Authentication • Zero Touch Provisioning (ZTP) and Automation Options
Configuration Methods	• Detailed Configuration Methods in SONiC • Management Framework, Klish CLI • Basic Physical Interface Configuration and Validation • Interface Ranges, Port Groups, Breakout Configurations • Port Channels (Link Aggregation), VLAN Configuration • Layer 2 Ports, Spanning Tree Protocol

HANDS-ON DAY 1

Hands-On	• Installing SONiC, Configuring Hostnames, User Access • Interface Configurations, IP Addressing, LLDP Checks

Day 2: Advanced Routing and Automation DAY 2

Redundancy Methods	• Layer 2 and 3 Redundancy: STP, MC-LAG, VRRP, SAG
Routing Protocols	• Introduction to Routing Protocols, SONiC Routing Architecture • Configuring and Validating BGP, OSPF, Static Routes • Displaying and Influencing Routing Table • DHCP Relay • Improving Convergence Time with BFD
Automation	• 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	• 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

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CERTIFICATION

Upon completing this bootcamp, you'll earn certification as a Certified SONiC System Administrator. This credential showcases your expertise in managing and troubleshooting SONiC Linux networks, a valuable asset in the industry.

MEET YOUR TRAINER

Volker Scheel

With over 25 years of experience in network engineering, including 20 years at AT&T Global Network Services and 6 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 3

Day 3: VXLAN, EVPN, and Troubleshooting

VXLAN + EVPN	• Introduction to VXLAN, EVPN, Layer 2/3 VPNs • 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 • 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 4

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