

# ENTERPRISE SONiC TRAINING AND CERTIFICATION CORE CURRICULUM

DATASHEET



## HIGHLIGHTS

- 9 Modules
- 53 Lessons
- 9 Exams
- Certificate in the use of the Enterprise SONiC Distribution by Broadcom – Certified SONiC System Administrator
- BONUS! Free Monsoon training! Learn how to use Open-Source Network Monitoring Exporter for SONiC

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

Learn more at [route2open.com/sonic-course](https://route2open.com/sonic-course)

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## OVERVIEW

Enterprise SONiC course is an online solution that provides comprehensive and actionable insights on how to deploy and manage SONiC, an open-source network operating system. SONiC training is designed for developers with experience working on any operating system who want to understand the basics of SONiC open-source environment. The course covers everything from installation and configurations to advanced networking concepts, with real-world examples and hands-on activities. With the Enterprise SONiC course, users can gain the skills needed to set up and control software-defined networks and network devices.

By the end of this course, you should be able to:

- Operate Smoothly Under SONiC Environment
- Complete SONiC Installation & Set-up Process
- Introducing the CLI Interface & Interface Configuration
- Redundancy Methods & Routing Protocols & Automation
- Troubleshooting Layers 1, 2, and 3 & Management & Monitoring

With the Enterprise SONiC course, you can upgrade your system administration skills and boost your confidence in networking expertise.



### Lifetime Updates

Get access to updated and upgraded versions of the course no extra charge



### Expert Support

Get access into our student-only community for expert support



### Community

Learn from a thriving community of helpful experts students and members



### Certificate of Achievements

A certificate can be obtained after each completed module. The final certificate is awarded to those who have completed the entire course



### At Your Own Pace

No need to rush. You can take the course on your own schedule



### Proven System

Easy-to-implement SONiC configuration tips



[route2open.com](https://route2open.com)

## WHO IS IT FOR? WHAT IT PREPARES YOU FOR?

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The primary goal of this course is to prepare system administrators and IT professionals to become proficient in SONiC network configuration and maintenance. Upon completion of the course, participants will become certified in the use of Broadcom's Enterprise SONiC Distribution and receive the "Certified SONiC System Administrator" certificate. We can help you master the unique networking expertise you need to stand out from the crowd.

## ENTERPRISE SONiC TRAINING COURSE INSTRUCTORS

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### Volker Scheel



Volker Scheel has been the Senior System Engineer for the last 5 years. He supports companies in moving from legacy networks to open networking environments. Volker spent more than 20 years building his professional career at AT&T GLOBAL NETWORK SERVICES as Chief Engineer and then Lead Engineer, designing and building global data networks for international customers. He had a particular passion for integrating different services and regional subnetworks. Today, he successfully continues his development by sharing his knowledge in the ever-changing world of open networking systems. He advises our customers in choosing the ideal products that are right for their ecosystem and through courses such as this one, teaches them how to start to work with their new system. In his spare time, he is nuts about C++ programming language and NetCDF software libraries.

### Kamal Krishna Bhatt

Kamal Krishna Bhatt is currently working as Software Product Manager. He has more than a decade of experience in software development, working for several network OEMs and service providers at various global locations. Kamal specializes in developing Network Management Systems and SDN Controllers. Moreover, Kamal was also leading the development of BSPs and supporting customers with Tofino-powered programmable switches. Kamal has a deep interest in all things "Open Source" and loves to solve engineering challenges with the use of open source technologies and provides enterprise-level solutions with minimal development effort in quick time. Kamal is the lead engineer on the open-source SONiC monitoring solution MONSOON and is also working on other exciting future projects.



## TESTIMONIAL

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“ For those who wish to master a new technology or looking to enhance their knowledge of Linux and networks, I recommend taking SONiC course at route2open. The amount of knowledge from experienced trainers, along with their willingness to help with any questions, is impressive. I am currently working on an open-source SONiC-based project, which signifies a great opportunity for professional growth. This course leads me down the right path. - Tommy, C/C++ Engineer

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According to IDC forecasts SONiC will grow into a datacenter switch market worth \$2 billion in 2024<sup>1</sup>

According to industry experts, SONiC will become the default NOS for datacenter networks

By 2025, 40% of organizations that operate large data center networks will run SONiC in production environments<sup>2</sup>

<sup>1,2</sup> Based upon IDC Research "[Why SONiC Has the Potential to Become a True "Linux of Networking"](#)"



## ABOUT ROUTE2OPEN ACADEMY

Route2Open Academy is the leading global Authorized Training Centre for the world's biggest and brightest open technology vendors. We help people within businesses to grow their technical skills and knowledge to enable them to make a real difference to their company and build a successful future



route2open.com

## ENTERPRISE SONiC TRAINING CURRICULUM OVERVIEW

<b>SONiC Introduction</b>	<ul style="list-style-type: none"> <li>Linux Concepts</li> <li>Introduction to Containers</li> <li>Introduction to Redis Database</li> <li>What is SONiC</li> <li>System Architecture</li> </ul>
<b>Initial SONiC Setup</b>	<ul style="list-style-type: none"> <li>Accessing the Switch</li> <li>Installing and upgrading SONiC via ONIE</li> <li>Configure Management IP, Hostname, DNS, NTP</li> <li>Authentication: Local user accounts &amp; TACACS+/Radius</li> <li>Automating initial configuration with ZTP</li> </ul>
<b>Introducing the CLI Interface and Interface Configuration</b>	<ul style="list-style-type: none"> <li>SONiC configuration methods</li> <li>Klish – the Management Framework CLI</li> <li>Basic Interface Configuration</li> <li>VLAN configuration</li> </ul>
<b>Redundancy Methods</b>	<ul style="list-style-type: none"> <li>Layer 2 redundancy methods Spanning Tree Protocol, MC-LAG                             <ul style="list-style-type: none"> <li>- Spanning Tree Protocol</li> <li>- Multi chassis link aggregation (MC-LAG)</li> </ul> </li> <li>Layer 3 redundancy methods MLAG Variation                             <ul style="list-style-type: none"> <li>- Virtual Router Redundancy Protocol (VRRP)</li> <li>- Static Anycast Gateway (SAG)</li> </ul> </li> <li>Example: redundant default gateway for dual-connected host</li> </ul>
<b>Routing Protocols in SONiC</b>	<ul style="list-style-type: none"> <li>Introduction to Routing Protocols</li> <li>Introduction, configuration &amp; validation of BGP, OSPF, Static Routes</li> <li>Displaying and influencing the routing table</li> <li>DHCP Relay</li> <li>Improving convergence time with BFD</li> </ul>
<b>Automation</b>	<ul style="list-style-type: none"> <li>Automation use cases</li> <li>Automation tools</li> <li>Introduction to RESTAPI and YANG models in Enterprise SONiC</li> <li>Introduction to Ansible</li> </ul>
<b>Troubleshooting, Management and Monitoring</b>	<ul style="list-style-type: none"> <li>Troubleshooting Layer 1</li> <li>Troubleshooting Layer 2</li> <li>Troubleshooting Layer 3</li> <li>Introduction to SPAN / ERSPAN</li> <li>Troubleshooting the switch system</li> <li>General Files &amp; Support File Generation</li> <li>SNMP &amp; Syslog &amp; Sflow</li> </ul>
<b>VXLAN/EVPN</b>	<ul style="list-style-type: none"> <li>Introduction to VXLAN</li> <li>Introduction to EVPN</li> <li>Layer 2 VPNs</li> <li>Layer 3 VPNs – asymmetric and symmetric IRB</li> <li>Multi-pod and Multi-site DCI options</li> </ul>
<b>Campus Deployments</b>	<ul style="list-style-type: none"> <li>Power over Ethernet</li> <li>Access control</li> <li>Security features</li> </ul>