

NetSim[®]
USER GUIDE

ONLINE APP

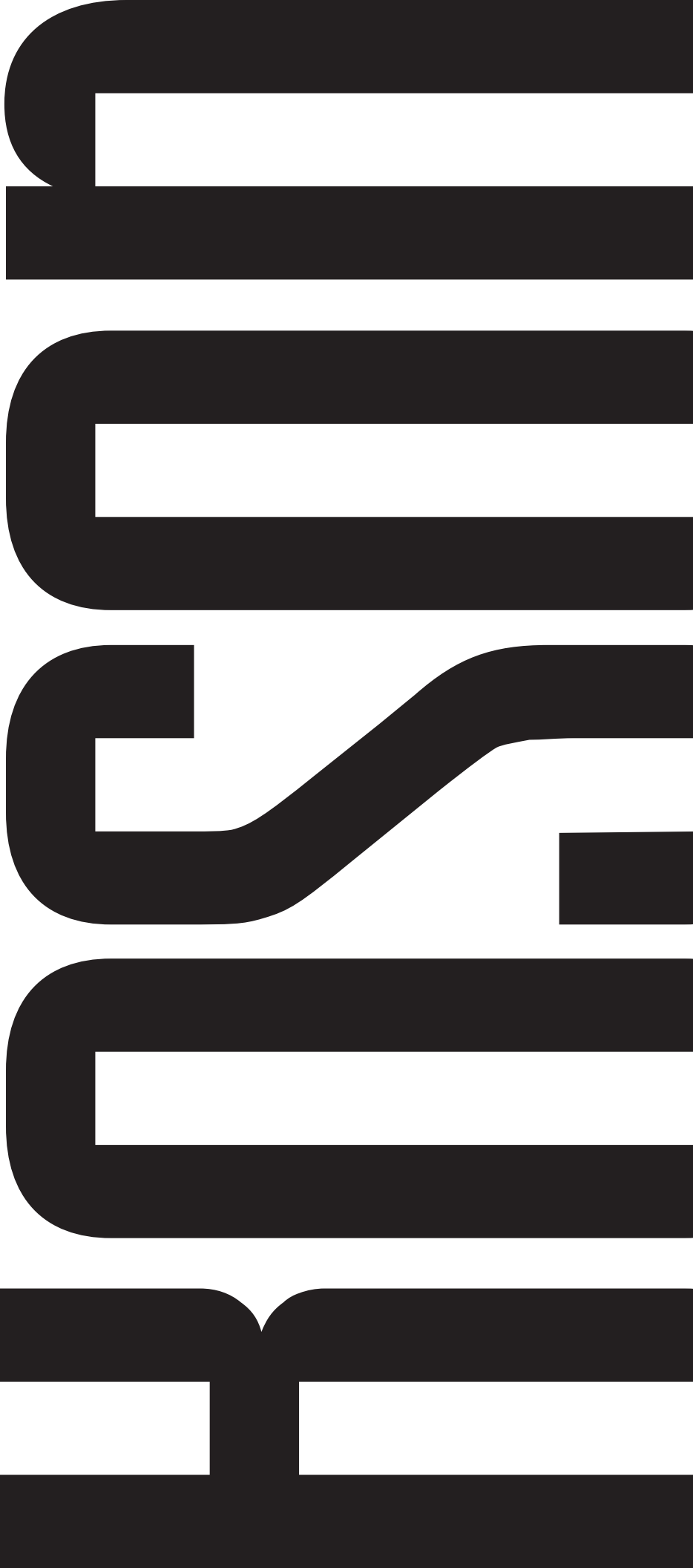



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Quick Start Guide

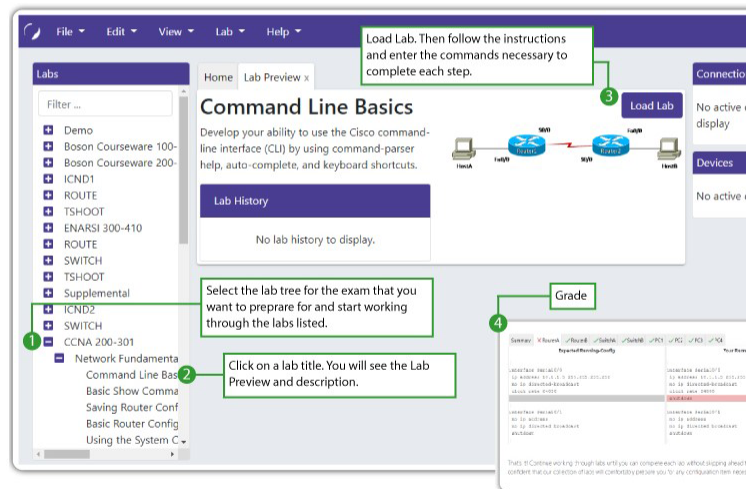


NetSim is a tool that simulates Cisco Systems' networking hardware and software and is designed to give you the hands-on experience entering commands and configuring protocols needed to pass your certification exam.

NetSim comes with guided labs covering the topics that are covered on the corresponding certification exam. NetSim labs are preconfigured and designed to improve your understanding and master the skill necessary to complete your certification.

Quick Start Guide

1. Select the lab tree for the exam that you want to prepare for, and start working through the labs listed.
2. Select a lab title.
3. Load Lab. Then follow the instructions and enter the commands necessary to complete each step.
4. When you have finished a lab, click the grade button to verify that you have completed a lab successfully. NetSim compares your final running configuration to what is expected and highlights any differences.
5. Continue working through labs until you can complete each lab without skipping ahead to the lab solutions. We're confident that our collection of labs will comfortably prepare you for any configuration item necessary to pass your exam.



Boson NetSim Overview

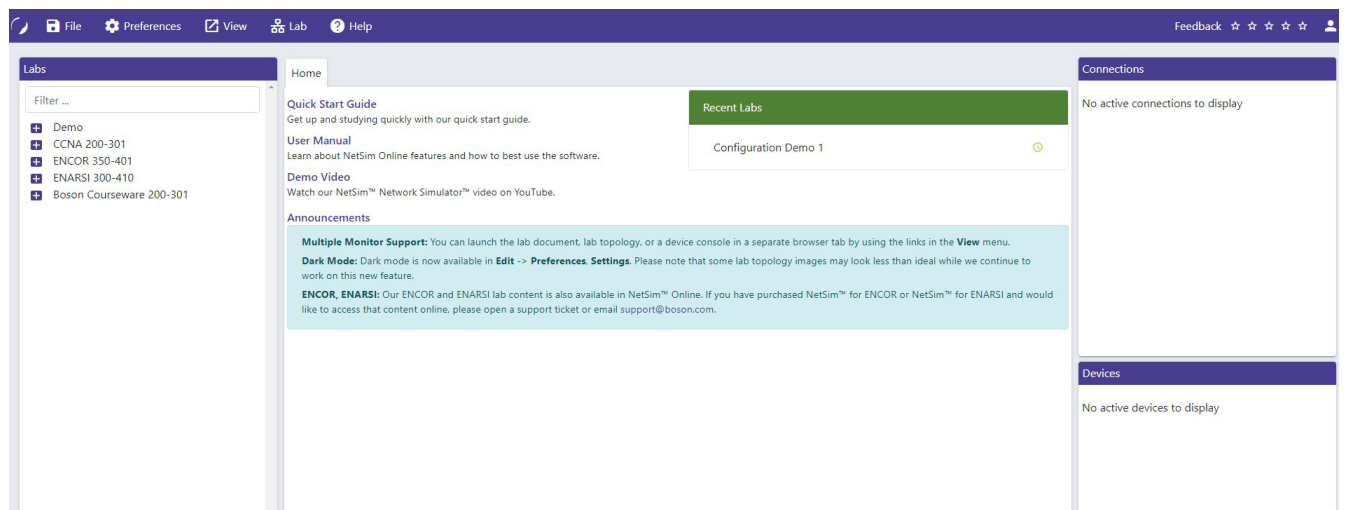
The Boson NetSim[®] Network Simulator[®], which includes the Boson Router Simulator, is unique compared to all others on the market because of the functionality it supports and its features. NetSim utilizes Boson's proprietary Network Simulator, Router Simulator, and EROUTER software technologies, along with the Boson Virtual Packet Technology engine, to create individual packets. These packets are routed and switched through the simulated network, allowing NetSim to build an appropriate virtual routing table and simulate true networking. Other simulation products on the market do not support this level of functionality.

NetSim simulates a wide variety of Cisco[®] routers, including the 2500 series, 2600 series, 2800 series, and 3600 series routers, as well as the Cisco Catalyst[®] 1900 series, 2900 series, and 3500 series switches. NetSim supports multiple routing protocols, including RIP, IGRP, EIGRP, BGP, and OSPF. It supports different LAN/WAN protocols, including PPP/CHAP, ISDN, and Frame Relay. The labs in NetSim require only the devices and functionality included with NetSim—they do not require access to any external router or switch hardware. NetSim supports many, but not all, of the IOS commands available on a physical router or switch. All of the commands referenced in the available labs are supported by NetSim.

Achieving Cisco CCNA[®] or CCNP[®]-level certification is the goal of many people who use this product. The Boson NetSim covers several Cisco certifications: CCNA (200-301), ENCOR (350-401), and ENARSI (300-410). The included labs guide you through the configuration of routers, switches, and workstations in a variety of scenarios.

Labs are made available (unlocked) depending on the version of NetSim available to you. All labs are kept up to date regardless of which NetSim product is owned; however, only the labs that have been unlocked with the product purchased are available to you. For example, if you start your studies with a CCNA product, you will have the command set and labs available that are necessary to study for that exam. When you are ready to study for either the ENCOR or the ENARSI exam, you will need to purchase a new product; NetSim will unlock more labs, and a larger command set will become available.

Each NetSim product unlocks a selection of labs. Some lab packs are delivered by NetSim to support other products that are sold separately. If you have questions about locked labs, please contact support@boson.com.



After you load and complete an unlocked lab, you can use the grading function in NetSim to grade the lab so that

you can determine whether you completed it correctly. As you progress through the labs, you can master the skills needed to pass the simulation questions in the Cisco certification exams. NetSim has the ability to guide and grade, and using it for practice can be more helpful than using real routers and switches. NetSim allows you to gain experience without requiring you to purchase expensive equipment.

Using NetSim to Prepare for Your Certification

By using NetSim to help you achieve a Cisco certification, you can learn and master the skills necessary to help you successfully complete your certification track. The purpose of NetSim is to help you with the practical, hands-on portion of your education and to ensure that you not only understand the concepts of routing but can actually configure and implement routing on Cisco devices.

Mastering Cisco networking involves two fundamental tasks:

1. Learn the theory of routers and switches.
2. Gain the hands-on experience of implementing that theory by configuring the devices in a network and testing them in a lab.

Self-studying for a Cisco certification can be a daunting task. The amount of information a CCNA candidate is required to know and the skills that candidate is required to possess are quite extensive. To begin learning the theory of configuring a network, you can find a good reference book or listen to an instructor. (Boson Training, www.boson.com/boson-training, offers a full slate of classes and Bootcamps.) But a reference book might not be enough. The book will not give you the practical, hands-on experience of routing and switching that you can learn from NetSim—experience that will help you build on the theoretical knowledge you learned from the reference book.

Real equipment gives you the ability to practice on physical routers and switches, but it also is a very costly way to practice and leaves a lot of room for error. The Boson NetSim, on the other hand, is an excellent tool to help you prepare for the CCNA-level (www.boson.com/certification/CCNA) and CCNP-level (www.boson.com/certification/CCNP) exams. NetSim simulates the behavior of a network and does not just return preprogrammed responses to expected command inputs. It allows you to create virtual packets and virtual frames that will be routed and switched through the simulated network. Aside from physically plugging in the cables and listening to the fan noise, your experience with the simulated network will be much the same as your experience with a fully functional lab rack without the expense of the hardware. NetSim will enable you to practice various configurations and master helpful skills.

Once you feel you have mastered both the theory (www.boson.com/boson-training) and the practical labs (www.boson.com/netsim-cisco-network-simulator), you can test your knowledge by using the Boson ExSim-Max practice exam products available at the ExSim-Max home page (www.boson.com/exsim-max-practice-exams). Boson ExSim-Max products include complex multiple-choice questions, drag-and-drop questions, and custom simulation questions.

The Boson NetSim Network Simulator is the most comprehensive product on the market for learning how to configure a Cisco router. The Boson NetSim will not only help you become certified, it will help you learn and understand how to configure routers, switches, and networks.

Contact Information

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NetSim Technical Support

- To review NetSim support topics, go to the NetSim Products Support Topics page (www.boson.com/support/netsim-support-topics).
- To submit a support ticket, use the navigation bar and select **Help > Open Support Ticket**.

License Solutions

- Single-User License Agreement (SULA) – You can review the SULA here (www.boson.com/sula#netsim).

Getting Started

After you purchase a NetSim Online product, log in to your Boson account. Once logged into your Boson account, you may access NetSim Online directly at netsim.boson.com. You may also access your online products by going to the [My Products](#) tab on your [My Account](#) page.

System Requirements

- Supported operating systems: Windows 11, Windows 10, Windows 8, Windows 7, MacOS 10.10+, or a Debian based Linux
- A web browser that supports JavaScript ECMA 6
 - Chrome 75+
 - Firefox 70 +
 - Safari 6.2.8
 - Etc.

Begin a Lab

To begin an unlocked Boson NetSim lab, perform the following steps:

1. In the **Labs** pane on the left, select the lab you want to open and click to open the selected lab.
2. To open and run the selected lab, select **Lab > Load Lab** from the navigation bar or click the **Load Lab** button. Alternatively, you may double-click the title of a lab in the **Labs** pane to load a lab.
3. Click the **Lab Document** tab to view the the lab's objectives and instructions. Follow the steps in the **Lab Tasks** section to complete the lab.
4. When you finish, click **Lab > Grade Lab** from the main menu to ensure that you have successfully completed the lab.
5. You can choose to save your configurations by selecting the appropriate **Save** option from the **File** menu.

Menus

The menu options in NetSim enable you to easily navigate through the labs, the Consoles section, and more.

Menu Bar

The menu options in NetSim enable you to easily navigate through the labs, the Consoles section, and more.

File Menu

Open

This option enables you to select a file to open. The supported file extensions are *.lab and *.bsn.

Save

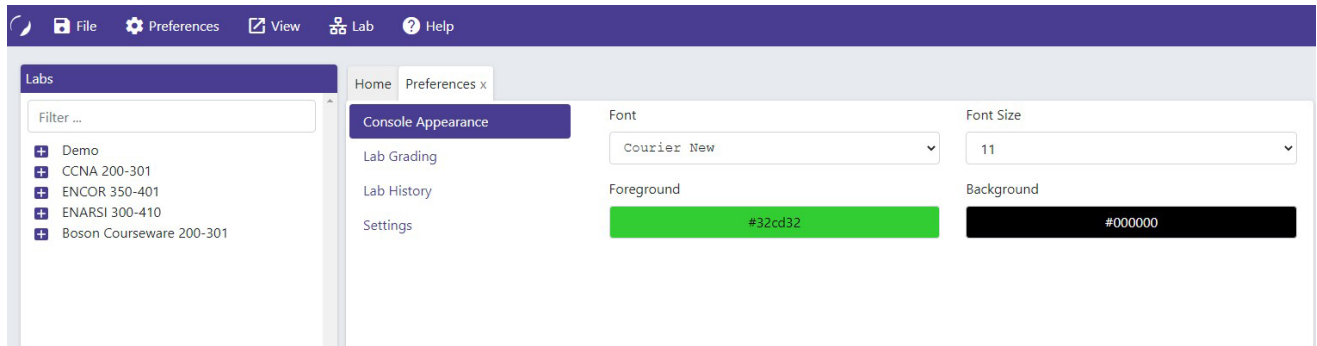
This option enables you to save your current lab or topology and configurations. Files are saved with the *.lab or *.bsn extension.

Save As

This option enables you to save your current lab or topology and configurations. Files are saved with the *.lab or *.bsn extension.

Preferences Menu

Selecting **Preferences** opens a tab from which you can configure your user experience, including layout and color schemes.



View Menu

The options in this menu tree enable you to alter the way you view the windows and panes within NetSim.

Lab Document

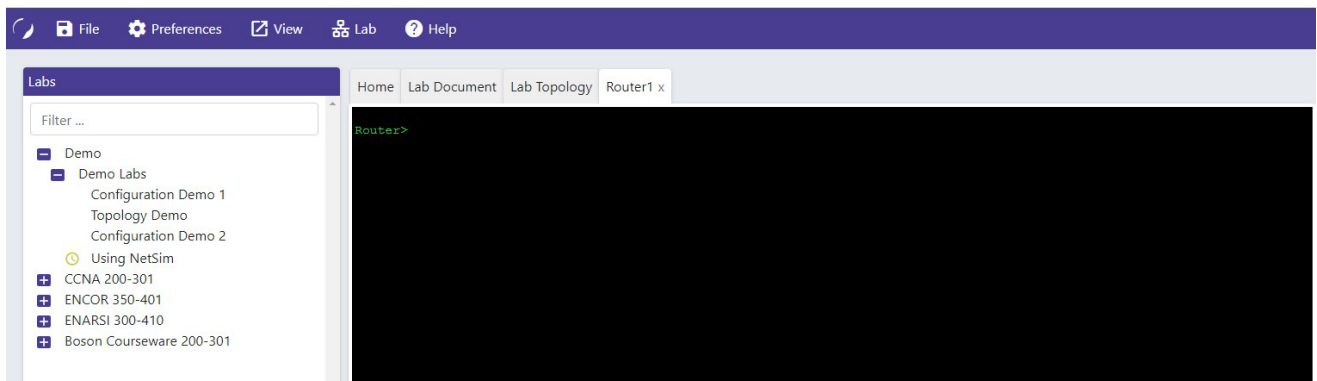
Click this option to open the related lab document in a new tab.

Lab Topology

Click this option to open the related lab topology in a new tab.

Devices

After you start a lab, select a device from this list; a new browser tab that contains the console for the selected device will open. For example, clicking **Console Router 1** will open a new tab in your browser showing the console of Router 1.



Lab Menu

This menu tree enables you to perform all the functions you need once a lab is loaded.

Load Lab

After you select a lab from the navigation pane, click this option to load the lab instructions, topology, and configurations.

Grade Lab

After you have completed a lab, click this option to verify that you have completed the lab successfully.

End Lab

After you have completed a lab, click this option to end the lab.

Help Menu

The options in this menu tree enable you to find out more information about the Boson NetSim Network Simulator and how to find support if you need it.

User Manual

This option opens the Boson NetSim User Manual, the document you are reading now, which guides you through the features and functionalities of NetSim.

Create Support Ticket

This option allows you to submit a ticket through your Boson.com account (www.boson.com/Account/SupportTickets).

Quick Start Guide

This option opens the Quick Start Guide.

About NetSim

This option displays basic information about NetSim, including the version and company information. You can also display the License Agreement from this page.

Activate Keys

This option opens the **Activate Keys** tab. From here, you can activate additional versions of NetSim not already associated with your Boson.com account and view versions that are already associated with your account.

User Menu

Icons in the Quick-Launch toolbar are enabled or disabled depending on the pane in use.

Boson.com

This option navigates to Boson's homepage (www.boson.com).

My Account

This option navigates to your Boson account (www.boson.com/Account).

My Tickets

This option allows you to view your existing support tickets and to submit a new support ticket through your Boson account (www.boson.com/Account/SupportTickets).

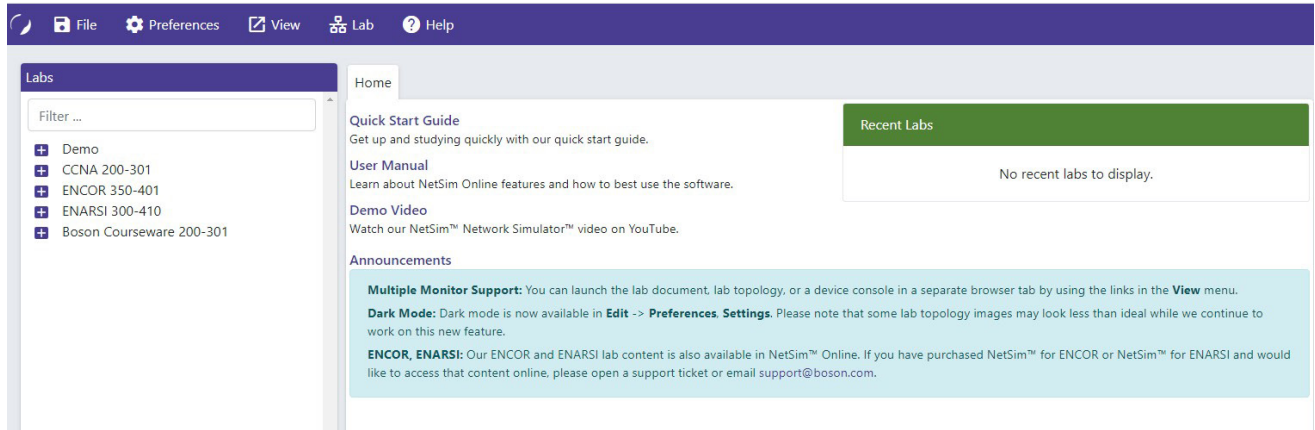
Logout

This option logs you out of NetSim.

Tabs

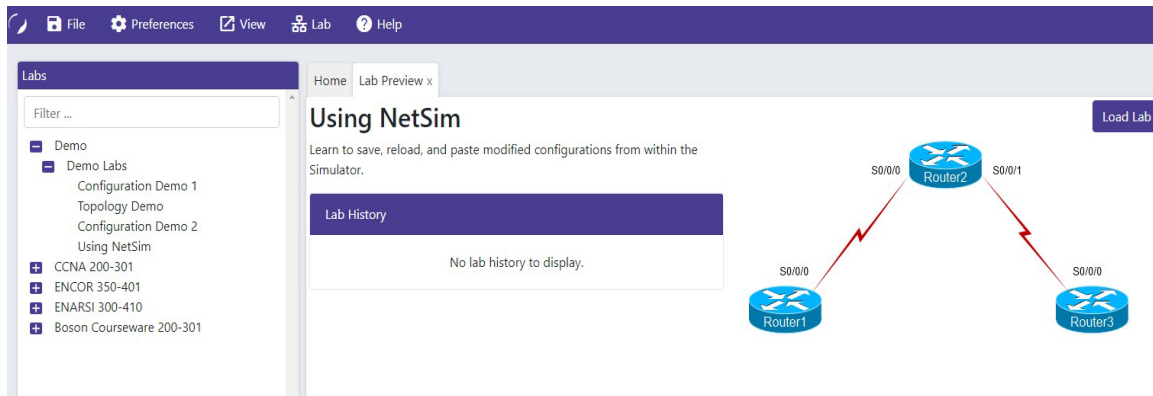
Home

Once you launch NetSim via your standard web browser, the **Home** tab will be available. From this tab, you can review the Quick Start Guide, open the User Manual (this document), view any recent labs, and view support materials. You can also read the latest announcements for new features and products.



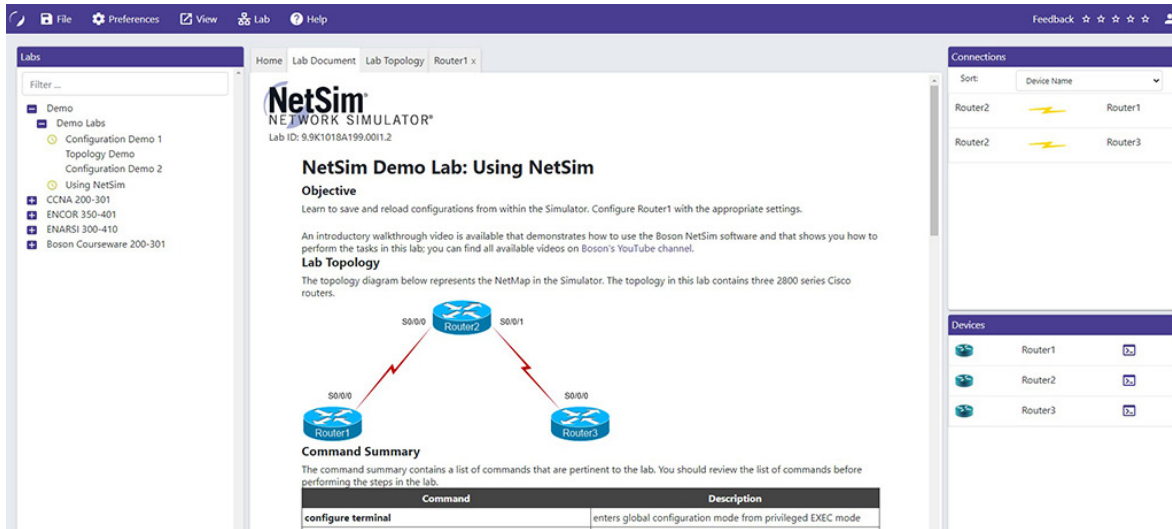
Lab Preview

When you click a lab in the **Labs** section, the **Lab Preview** tab opens and displays the lab description, the topology of the lab, and your lab history for that lab. Here, you can click the **Load Lab** button to start or continue the lab.



Lab Document

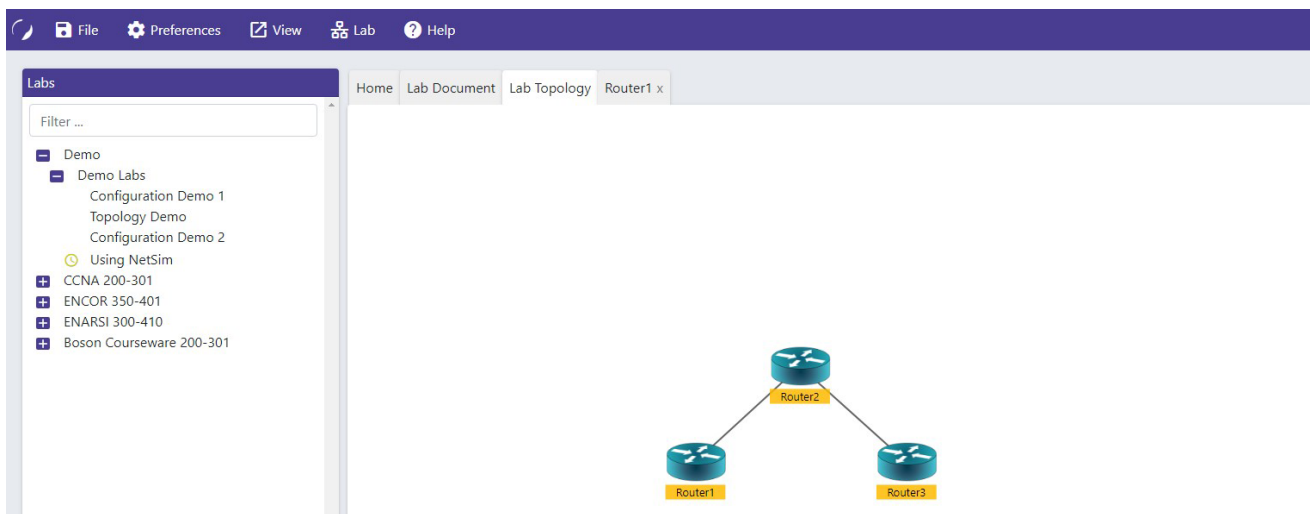
When you load a lab, the Lab Document tab opens. You can scroll through the instructions as you work through the lab. If desired, you can view this document in a separate tab by clicking **View > Lab Document**.



You can search the lab instructions by clicking within the document area and pressing the Ctrl+F key combination.

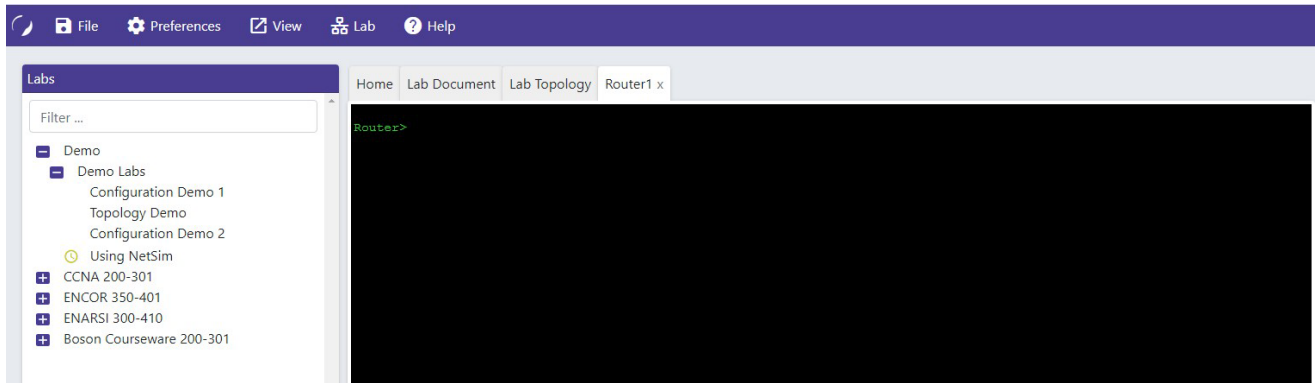
Lab Topology


When you load a lab, the **Lab Topology** tab opens. The topology displayed shows the devices that are loaded into the network for the current lab. You can double-click on any device shown in this tab to open a console for the selected device.



Consoles

After you have loaded a lab, you can view the device consoles and begin performing the lab steps. You will see the console window for each device that is currently open.



From the console window, you can modify the devices and perform the steps in the lab's instructions. By default, only one device console is opened when a lab is loaded. You can access additional device consoles in the lab by selecting **View > Devices device name** menu, by clicking the console button () next to a device in the **Devices** pane, or by double-clicking the device on the **Lab Topology** tab. To begin performing the lab steps on a device, you should select the console for that specific device. Note that clicking **View > Devices device name** while the lab is loaded will open the console for a device in a separate browser tab.

You can paste configuration commands to a device from another application. For example, if you have typed a series of commands in a program such as Notepad and would like to add them to a device's configuration, copy the commands you typed. Then, in NetSim, right-click within the device's **Console** pane and press Enter. The device will then quickly execute the commands.

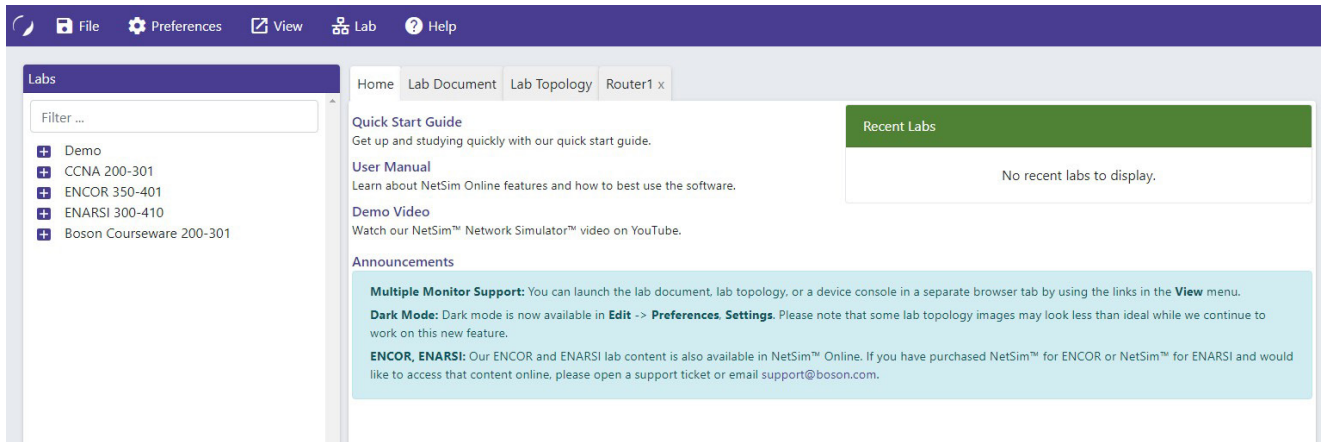
In addition, you can copy console output or commands that you have entered in a device's configuration in NetSim by pressing the left mouse button and dragging the cursor to select the text you wish to copy. When you release the left mouse button, the text you selected will be copied to the clipboard. **Note:** The copy/paste feature is not supported on FireFox due to web browser security restrictions.

Labs

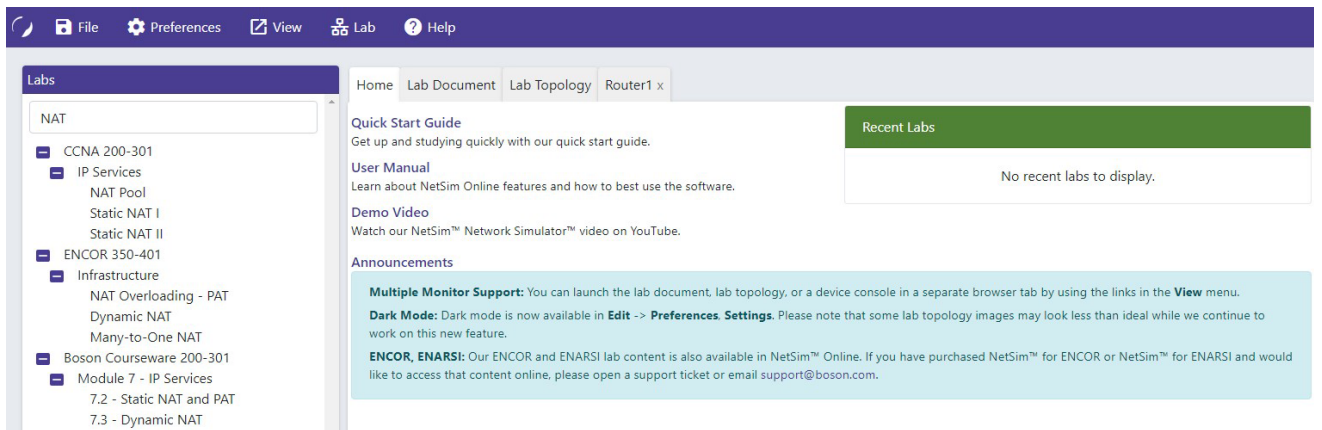
The **Labs** pane contains a list of labs you can load and a text box to enter text and search the available labs for keywords.

Search Labs

You can use the **Filter** section to search for a specific term within a lab description.



You can search all of the available labs. For example, if you want to find Network Address Translation (NAT) labs, you could type **NAT** in the search box. You will see labs addressing NAT from the CCNA, ENARSI, and ENCOR lab packs.



Note that although a search might return results from multiple lab packs, only labs from the currently activated version of NetSim will be available.

Available Labs

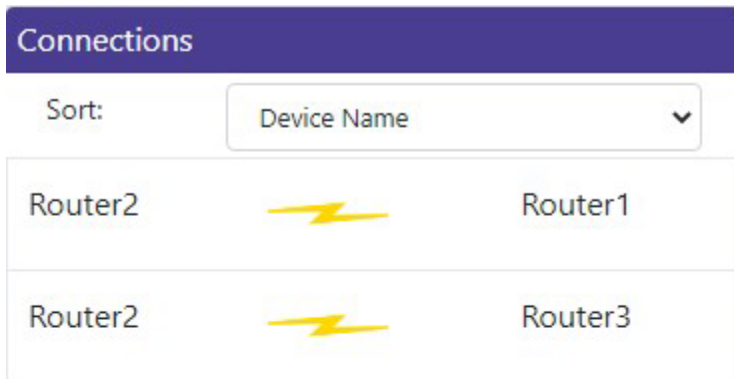
There are over 480 labs in NetSim, and these labs are arranged in specific categories. The lab packs are specific to the version of NetSim that you have activated. You can single-click a lab to view the **Lab Preview** tab. To load a lab, double-click the lab or select the lab and click **Lab > Load Lab**. You may also click the

Load Lab button located on the **Lab Preview** tab. You can expand or collapse the menu items by clicking the expander next to each category.




Connections

The **Connections** pane displays all of the configured connections in the currently active topology. Hovering your mouse cursor over one of the connections will display interface information about the link between the devices.



Devices

The **Devices** pane displays all of the devices in the currently active topology. You may also select a device and click the **Console** button () to access a device's console while a topology is running.

Troubleshooting

Can I use key combinations as shortcuts?

The following table contains various shortcut key combinations you can use in NetSim:

Function	Key
Console Shortcuts	
Move to beginning of line	Ctrl+A
Move to end of the line	Ctrl+E
Move back one character	Ctrl+B
Move forward one character	Ctrl+F
Next command	Down Arrow Key
Previous command	Ctrl+P or Up Arrow Key
Break	Ctrl+C
Copy	Highlighted text is automatically copied to your computer's clipboard
Paste	Right-click to past the contents of the clipboard to the console window

Certification Candidates

Boson Software's NetSim Network Simulator is designed to simulate a Cisco environment for practice and troubleshooting. To learn more about NetSim, please visit boson.com/netsim-cisco-network-simulator or contact Boson Software.

Organizational and Volume Customers

Boson Software's outstanding IT training tools serve the skill development needs of organizations such as colleges, technical training educators, corporations, and governmental agencies. If your organization would like to inquire about volume opportunities and discounts, please contact Boson Software at orgsales@boson.com.

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