



## Instructor Guide

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1	Introduction .....	4
2	Initial Login.....	5
2.1	New Password .....	6
2.2	Time Zone.....	7
2.3	Email Address.....	7
2.4	Remote Access Test.....	8
3	MyNETLAB Instructor Interface.....	10
4	Set Your Instructor Profile .....	13
5	Manage Classes .....	16
5.1	Add Classes .....	18
5.2	Edit Class Information.....	24
5.3	Add Learners to the Class Roster .....	27
5.4	Manage a Class Roster .....	33
5.5	Group the Class Roster Into Teams.....	37
5.6	Choose Lead Instructors for a Class .....	41
5.7	Delete Classes.....	42
6	Managing Accounts.....	45
6.1	Add Accounts .....	46
6.2	Edit Accounts .....	48
6.2.1	Instructor Privileges .....	51
6.3	Delete Accounts.....	53
6.4	Reset Account Passwords.....	54
6.5	Performing Actions On Multiple Accounts.....	56
7	Schedule Lab Reservations .....	57
7.1	Schedule Instructor-led Training Time.....	58
7.2	Schedule Self-study Time for Teams .....	61
7.3	Schedule Self-study Time For Individual Learners.....	65
7.4	Reserve An Equipment Pod For Your Own Use.....	70
7.5	Reserve Lab Time In A Class That You Are Attending As A Learner .....	73
7.6	View or Cancel Reservations .....	77
8	Lab Sessions .....	80
8.1	Enter a Lab Session .....	81
8.2	Accessing Devices.....	82
8.2.1	Remote Console Connection.....	84
8.2.2	Connection to a PC (Remote K/V/M).....	91
8.3	End a Reservation.....	95
9	Sections of the Lab Access Interface .....	96
9.1	Topology Tab .....	96
9.2	Action Tab .....	100
9.3	Status Tab .....	102
9.4	Connections Tab .....	102
9.5	Load Tab.....	103
9.6	Save Tab .....	107
9.7	Exercise Tab .....	109
10	File Manager .....	112
10.1	Open Configuration Files .....	113

10.2	Creating Folders and Files .....	116
10.3	Deleting Files and Folders .....	121
10.4	Copying Files and Folders .....	121
10.5	Interface Name Translation .....	125
11	Archive.....	126
11.1	View Archived Data from Individual Reservations .....	127
11.2	View Archived Data from Team Reservations.....	129
11.3	View Archived Data from Instructor-Led Reservations.....	131
11.4	Archive Log Viewer .....	132
11.4.1	Archive Summary .....	132
11.4.2	Archive Final Configs.....	133
11.4.3	Archive Command Index .....	135
11.4.4	Archive Session Logs .....	137
12	Curriculum Content For NETLAB <sub>AE</sub> .....	139
13	Lab Designer .....	141
14	Pod Designer .....	142
15	Log Out .....	143

## 1 Introduction

NETLAB+<sup>®</sup> is the premiere remote lab appliance for information technology training and distance learning, developed by Network Development Group, Inc. Students and instructors can share worldwide access to real lab equipment in a training environment that is easy to use and manage.

Depending on how you use the NETLAB+ system, you may allow your students to log in, create and edit configuration files, and program one or more lab devices. Because NETLAB+ equipment can be accessed from any PC and browser connected to the Internet, students can perform configuration tasks from virtually anywhere. The NETLAB+ scheduler provides controlled access to your lab equipment. All lab access is by reservation, using the scheduler.

You may also use the NETLAB+ system within the classroom. The Instructor-led lab features of NETLAB+ provide an effective way to teach new configuration tasks, as instructors lead their class through a lab exercise. Instructors can configure one or more devices while each student observes the process within a session initiated through NETLAB+. You may choose to allow students to actively participate in the instructor-led lab session and enter commands.

Using NETLAB+, you may have your students complete assignments working individually, or as part of an assigned team. Students can be grouped into teams and work together from different locations.

NETLAB+ can save and store configuration files, allowing you to easily evaluate the performance of each team or individual student. You may view this archived data online, or receive it automatically by e-mail.

This guide provides information on how to set up your class and student information in NETLAB+, how to schedule lab reservations, and how to perform a NETLAB+ lab session. If you are new to NETLAB+, you may find it helpful to review the *NETLAB+ System Overview* to gain understanding of NETLAB+'s many features.

## 2 Initial Login

Instructors access the NETLAB+ system via the web interface. Your NETLAB+ administrator will provide you with the IP address (or domain name) of the NETLAB+ server. To access the login page, direct a browser to the address of the NETLAB+ server. Please review the information on the login page concerning browser support and firewall use.

You will also receive a username and initial password. At least one Instructor ID and password must be set up by the NETLAB+ administrator, through the administrator interface. Please see the *NETLAB+ Administrator Guide* for details on creating an instructor account as an administrator. Instructors with community-wide or system-wide privileges (see section 6.2.1) may also create instructor accounts (see section 6.1).

Enter your username and password in the login box located on the left side of the page.

**Username**

**Password**

**Login**

[Forgot password?](#)

[NETLAB Academy Edition](#)<sup>®</sup> provides remote access to Cisco Networking Academy Program lab equipment and curriculum. To access, you need a user ID and password, assigned by your instructor or local system administrator.

**Personal Firewall** software can interfere with NETLAB. If you are having login problems or other issues, please disable your personal firewall to see if that fixes the problem. If so, adjust your firewall software accordingly.

**Required Browser Plugins and Options**


Java™	Enabled (IE users see below)
JavaScript	Enabled
Cookies	Enabled (for this site)
Popup Windows	Enabled (disable popup blockers for this site)

**Browser Support**

Browser	Version	Status
Microsoft Internet Explorer (Windows)	5.5, 6.x	<input checked="" type="radio"/> Supported
Firefox	1.x	<input checked="" type="radio"/> Supported
Mozilla	1.x	<input type="radio"/> Beta (not tested)
	7.x	<input type="radio"/> Beta (not tested)
Netscape	6.x	<input checked="" type="radio"/> Not supported (bugs)
	4.x	<input checked="" type="radio"/> Obsolete

**Microsoft Internet Explorer users** may need a Java plug-in. You can obtain Java at [java.sun.com](http://java.sun.com).

POWERED BY



**NETLAB**<sub>AE</sub>

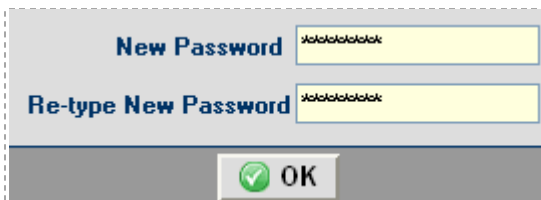
## 2.1 New Password

On your first login, you will be required to change your password after you successfully provide your Username and initial Password. NETLAB+ enforces strong passwords.

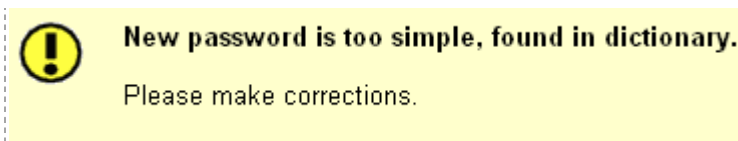
**Passwords must meet the following requirements:**

- **Not found in the English dictionary and not too simple**
- **Between 7 and 16 ASCII characters**
- **Contain both numbers and letters**

One strategy you may find helpful is to combine a word together with numbers. For example, you could not use the word “airplane” but you could use “airplane789”. You may not reuse your initial password.

A screenshot of a web form for changing a password. It features two input fields: the first is labeled "New Password" and the second is labeled "Re-type New Password". Both fields contain masked characters (asterisks). Below the fields is a button with a green checkmark icon and the text "OK".

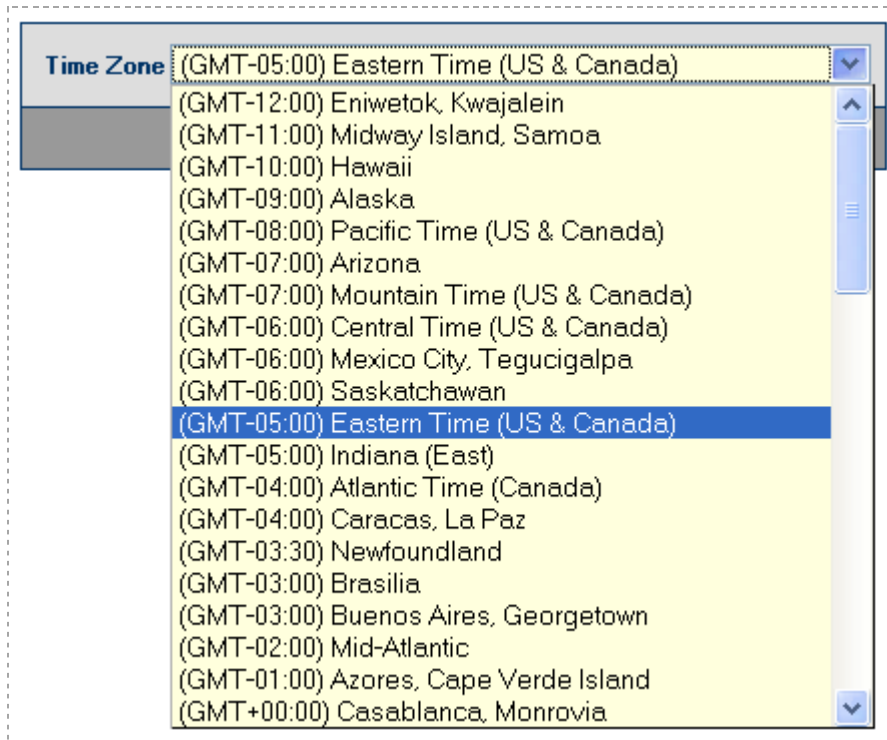
An error message will be displayed if the password entered does not meet requirements. The message will indicate why the password was unacceptable. This example shows an error message displayed when the new password entered is a simple word found in the dictionary and therefore not eligible to be a password on the system.



Selecting OK from a password error screen will allow you to make another password selection. The MyNETLAB Instructor Interface, described in the next section, will be displayed after you have successfully changed your password.

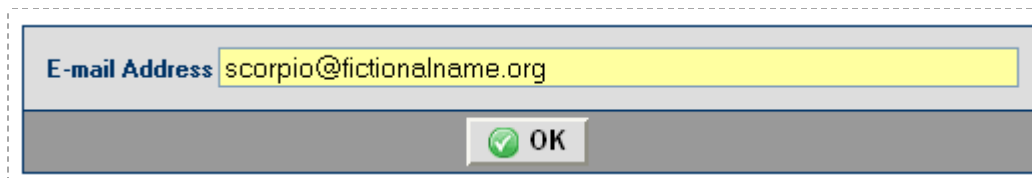
## 2.2 Time Zone

You will select the **Time Zone** appropriate to your region. Selecting the correct time zone is important, to allow correct time information to be displayed when using the scheduler (see section 7).



## 2.3 Email Address


The next field you will be prompted to enter is your **Email Address**. Enter the destination e-mail address for student logs and configuration files, should you choose to have these files emailed to you (see section 10). This field may already contain a value, if an email address was entered at the time your account was created. If so, edit the email address if necessary.



## 2.4 Remote Access Test

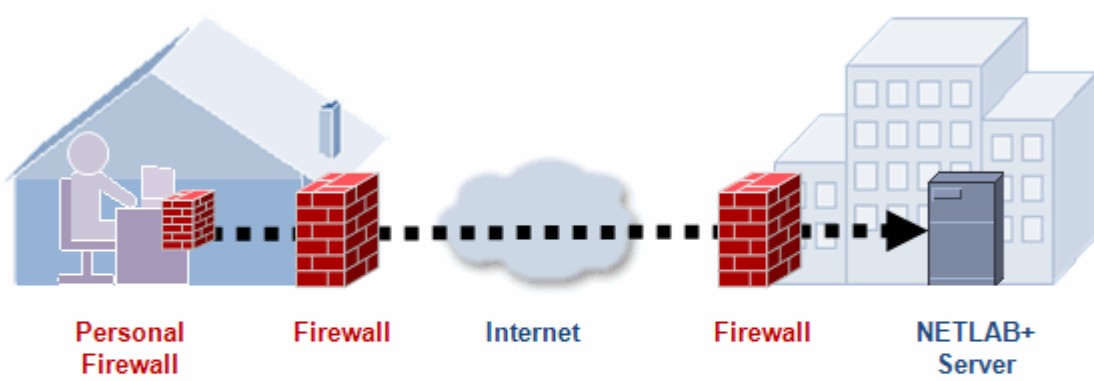
A Remote Access Test is performed during each user login. The purpose of the test is to attempt to establish an outbound TCP connection. This connection is necessary for remote device access, remote PC access and access to chat functions (chat functions will be available in a future software release).

This test will fail if a connection using the TCP port(s) defined by the NETLAB+ administrator cannot be established.

**Remote Access Test**INSTRUCTOR  janedoe

**PORT TEST FAILED**

A TCP/IP connection for remote console and remote PC functions could not be established.



The diagram illustrates a network path from a user's computer to a NETLAB+ server. On the left, a person is seated at a desk with a computer. A red brick wall labeled 'Personal Firewall Software' is positioned between the user and the network. A dashed line representing a connection attempt passes through this wall, then through a cloud labeled 'Internet', and through another red brick wall labeled 'Firewall' before reaching a server rack labeled 'NETLAB+ Server'.

Please refer to the diagram above.

This system uses **TCP port 23** for remote access functions. It is possible that personal firewall software on your computer, or some other firewall in the path is blocking connections on this TCP port.

- Are you using Windows Firewall, McAfee®, Norton, Comodo, Zone Alarm®, AVG, or other security software?
- If your software is prompting you to validate the connection, please accept and try again.
- Manual configuration changes to your software may be required.
- For technical details about this port test, please click the Support button.

In this example, the Remote Access Test failed when instructor “janedoe” logged in.







NETLAB+ now allows the administrator to define the Remote Access Port (or list of ports) that may be used in place of the factory default, port 23.

It is critical that the ports specified are opened in the site firewall, or the client may experience delays and/or port test failures during user login.

Please see the Remote Access Ports section of the *NETLAB+ Installation Guide*.

There are several reasons why the Remote Access Test may fail:

- 1) Personal Firewall settings on your computer:** The personal firewall software on your computer may be set by default to prohibit the port connection. This issue is routinely resolved by selecting to allow the connection when prompted by a pop-up window from your personal firewall software.
- 2) Security policy at your current location:** It is possible that local security policy does not allow outbound access using the port(s) chosen by the NETLAB+ administrator. This is the most likely diagnosis if you are able to successfully access the system from another location.
- 3) Ports have not been opened in the site firewall:** As part of the installation process, you must be certain to open the ports in the site firewall that have been designated available for outbound client connections. This is only likely to be the problem if all users are unable to establish a connection.

 <b>Try Again</b>	Repeat the port test.
 <b>Skip Test</b>	Skip remote access test and login.
 <b>Learn More</b>	More information to help you troubleshoot.
 <b>Support</b>	Show port test details for technical support.

Use the “**Try Again**” option if you wish to repeat the test after adjusting your personal firewall settings. You may select “**Skip Test**” if you prefer to proceed to your MyNETLAB page without resolving the issue at this time. You will not have remote device access, remote PC access or chat functions (chat functions will be available in a future software release).

### 3 MyNETLAB Instructor Interface

After successful login, the MyNETLAB instructor interface page will be displayed.

**MyNETLAB**
INSTRUCTOR

File Scheduler Account Class Profile Curriculum Archive Logout Help
i | jdoe2006





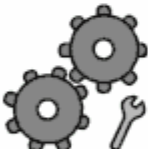

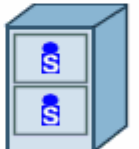



Welcome to the NETLAB system of XYZ Tech!

---

There are no relevant lab reservations to display at this time.

[Refresh](#) this page to check for recently scheduled labs.

---

<div style="background-color: #ccc; padding: 2px; font-weight: bold; margin-bottom: 5px;">Scheduler</div>  <p>Reserve lab time or check the schedule.</p>	<div style="background-color: #ccc; padding: 2px; font-weight: bold; margin-bottom: 5px;">File Manager</div>  <p>Manage device configuration files.</p>	<div style="background-color: #ccc; padding: 2px; font-weight: bold; margin-bottom: 5px;">Account Manager</div>  <p>Create or manage student and instructor accounts.</p>	<div style="background-color: #ccc; padding: 2px; font-weight: bold; margin-bottom: 5px;">Class Manager</div>  <p>Create or manage classes and rosters.</p>
<div style="background-color: #ccc; padding: 2px; font-weight: bold; margin-bottom: 5px;">Profile</div>  <p>Change your personal settings.</p>	<div style="background-color: #ccc; padding: 2px; font-weight: bold; margin-bottom: 5px;">Curriculum</div>  <p>Access class learning materials.</p>	<div style="background-color: #ccc; padding: 2px; font-weight: bold; margin-bottom: 5px;">Archive</div>  <p>Access configurations and logs from completed labs.</p>	<div style="background-color: #ccc; padding: 2px; font-weight: bold; margin-bottom: 5px;">Lab Designer</div>  <p>Create custom lab exercises for your students.</p>
<div style="background-color: #ccc; padding: 2px; font-weight: bold; margin-bottom: 5px;">Pod Designer</div>  <p>Create custom equipment pods.</p>	<div style="background-color: #ccc; padding: 2px; font-weight: bold; margin-bottom: 5px;">Logout</div>  <p>Logoff the system.</p>		

In the upper right corner, the privilege level “instructor” and your Username are displayed.

The menu bar at the top of the screen contains choices **including File, Scheduler, Account, Class, Profile, Curriculum, Archive, Logout and Help**. These functions are accessed by selecting them on the menu bar or the corresponding icon on the page.

Use the **File** link to enter the section where you may manage the configuration files for your classes.

You may use the **Scheduler** to schedule lab time for your classes, student teams, or your own use. The scheduling feature facilitates scheduled access to lab equipment. Equipment can be scheduled for either classroom lectures or student lab time.

The **Account Manager** is used to create and manage student and instructor accounts. The **Class Manager** is used to create and manage classes and rosters. Your access to these functions by your privilege account level assigned by the NETLAB+ administrator (see section 6.2.1).

Use the **Profile** link to update your user preferences. You may update your email address, password and Telnet client selection.

Subject to availability, you can reference course content information in the **Curriculum** section. This can include class-learning materials that supplement your labs.

The **Archive** section is used to access saved configuration files from student, team, or instructor-led sessions. The NETLAB+ Log Viewer allows an instructor to review the final configuration files and device output (logs) from a lab reservation. NETLAB+ records every keystroke and router output of a lab session, allowing an instructor to rapidly assess how a student or team arrived at a solution. For routers, switches, and firewalls, NETLAB+ provides a *Command Index*. The index lists the sequence of commands entered during a lab session, across all devices, in chronological order. You may click on each command to view the resulting output in the corresponding log file. This tool sorts through all logs, highlights the commands entered by the student, and allows you to quickly assess the student's work. *Session Logs* are also available, which show all the activity associated with a single device during a lab reservation

The **Logout** link is used to logout of the NETLAB+ system. Selecting Help will provide links to documentation and FAQs.

The section below the menu bar may contain information provided by the NETLAB+ administrator pertaining to your use or scheduling of the NETLAB+ resources. Review the section each time you log in.

Any scheduled lab times for you and your classes will be listed on the page. If you have scheduled instructor-led time for you and your students, those reservations will be displayed. In addition, you will also see listings of active reservations made by your students and student teams. These listings will be displayed only when they are currently active. You may also join these sessions by clicking the “Enter Lab” button. You may see a message indicator on the page. Selecting **Message** will display informational or error messages pertaining to lab reservations or the status of lab devices.

You have 1 [message](#).

The messages will be retained by exiting using the **Close** button. You may delete some or all of the messages by using the **Delete Selected** or **Delete All** buttons.

Select	ID	Time	Description
<input type="checkbox"/>			The following lab reservation was deleted by jdoe2006 (Jane Doe), who had administrative rights to perform this action.
<input checked="" type="checkbox"/>	16	Mon Feb 13, 2006 4:30AM	<ul style="list-style-type: none"><li>◆ Reservation: 898</li><li>◆ Pod: POD 1</li><li>◆ Starting: Thu Feb 9, 2006 12:00PM Eastern Time (US &amp; Canada)</li><li>◆ Type: Team reservation</li><li>◆ Reserved for: Team A</li></ul>

## 4 Set Your Instructor Profile



To set the appropriate values in your instructor profile, access the profile page by selecting Profile on the MyNETLAB menu bar or the link in the body of the page.

Your current account profile settings will be displayed.

ACCOUNT SETTINGS (jdoe2006)	
Full Name	Jane Doe
Community	XYZ Technical College
Privileges	Instructor with system-wide privileges
▶ Password	(not displayed)
▶ Time Zone	(GMT-05:00) Eastern Time (US & Canada)
▶ E-mail Address	janedoe@fictionalname.org
▶ Telnet Client	NETLAB Telnet Applet
▶ Device Passwords	console: cisco enable: class

**Password** allows the instructor to change the password. Select the password field to display the change password screen.

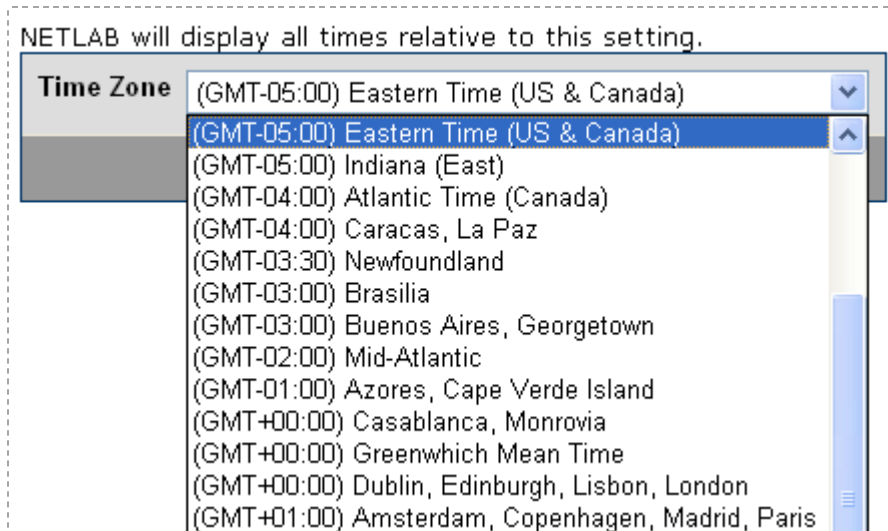
**Passwords must meet the following requirements:**

- **Not found in the English dictionary and not too simple**
- **Between 7 and 16 ASCII characters**
- **Contain both numbers and letters**

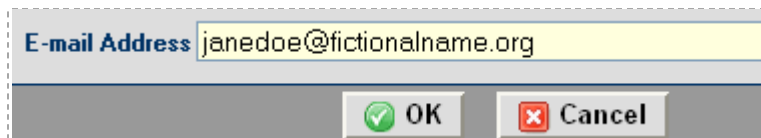
<b>Current Password</b>	XXXXXXXXXX
<b>New Password</b>	XXXXXXXXXX
<b>Re-type New Password</b>	XXXXXXXXXX
<input type="button" value="OK"/> <input type="button" value="Cancel"/>	

An error message will be displayed if the entered password does not meet these requirements. See section 2 for details.

The **Time Zone** field allows you to select the time zone appropriate to your region. Selecting the correct time zone is important, to allow correct time information to be displayed when using the scheduler (see section 7).



The next field, **E-mail Address**, should contain the destination e-mail address for student logs and configuration files, should you choose to have these files emailed to you (see section 10).

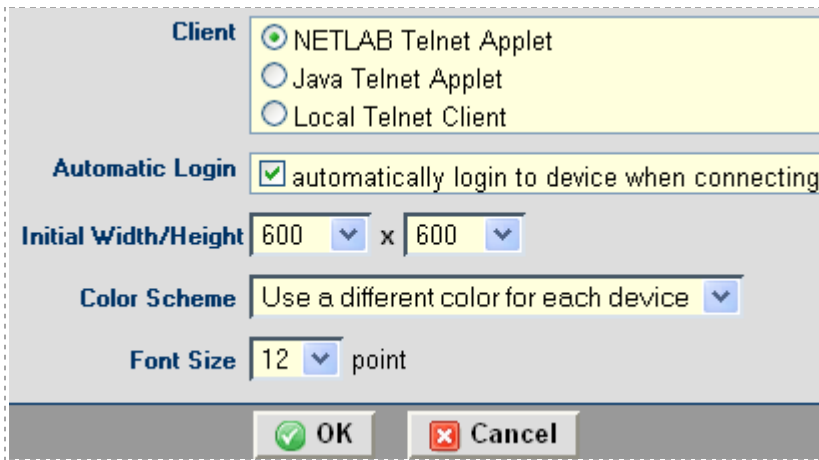


Your **Telnet Client** preference may be changed if needed. NETLAB+ uses Telnet to communicate with devices in the equipment pod. You may use the optional Java-based Telnet Applets supplied with NETLAB+, or you may use your own Telnet client application installed on your local machine.

- **NETLAB+ Telnet Applet** provides a Telnet applet streamlined for NETLAB+. It operates in line mode that is suitable for devices with a command line interface. It loads quickly, provides automatic login, can be resized in Microsoft Internet Explorer, and can provide a different color scheme for each device.
- **Java Telnet Applet** provides a consistent interface, automatic login, and full VT100 terminal emulation. It is 165 kilobytes, so it may load slowly the first time over a slow network connection.
- **Local Telnet Client** option will prompt for your NETLAB+ user ID and password each time you connect to a device. Your browser (or client computer) must be configured to associate URL's in the form of telnet:// with your local Telnet client application.

**Windows XP Users:** Both the Java™ Telnet Applet and NETLAB+ Telnet Applet require Java™. You can get the Java plug-in for Windows XP from [java.sun.com](http://java.sun.com)

For both the Java and NETLAB+ applets, options for automatic login, initial width and height of the window, color scheme and font size may be selected.



The screenshot shows a configuration dialog box with the following settings:

- Client:** NETLAB Telnet Applet (selected), Java Telnet Applet, Local Telnet Client.
- Automatic Login:**  automatically login to device when connecting.
- Initial Width/Height:** 600 x 600.
- Color Scheme:** Use a different color for each device.
- Font Size:** 12 point.

Buttons: OK, Cancel.

Please specify the *console* and *enable secret* passwords that you are going to use with Cisco lab routers, switches, and firewall devices on the **Device Passwords** page. NETLAB+ will try these passwords when performing automated operations during **personal instructor reservations**.

These settings are only used during personal instructor reservations. NETLAB+ will use the passwords defined in the class profile for instructor-led class, student, and team reservations and when the instructor has reserved lab time as a learner participant in a class.



The screenshot shows a configuration dialog box for device passwords:

- Console Password:** cisco
- Enable Secret Password:** class

Buttons: OK, Cancel.

## 5 Manage Classes



A class record must be created on the NETLAB+ system for each class using the system. Each class record includes a *class roster*. A class roster is a list of members, which may include student accounts, instructor accounts, or both. All members must belong to the same community.

If you have system-wide privileges, you may manage classes for all the communities on your NETLAB+ system. Community-wide instructors may manage classes within their community. Instructors with normal privileges may manage classes for which they are the lead instructor (see section 6.2.1). Instructors with system-wide privileges may select a community; others simply accept the default value.

### Typical Class Management Tasks:

- **Viewing Class Records:** The class records that are present in your community (or other communities depending on your privilege level) are listed on the class manager page. You may select and view the details of any class record, but your ability to edit class records will depend upon your account privilege level.
- **Add Class Records:** A class record must be created for each class using the NETLAB+ system. You may be responsible for adding the class record for a class you are leading, or this task may be completed by another instructor with the appropriate privilege level. For details on adding class records see section 0.
- **Edit Class Records:** The class record settings may be modified. Common circumstances where it will be necessary to edit a class record include:
  - Update the selection of lab exercises and content available to the class.
  - Enable the team reservations class option after assigning members of the class roster to teams (see section 5.5).
- **Add Learners to the Class Roster:** The account for each user enrolled in the class must be added to the class roster. Several methods are available to allow you to quickly accomplish this task. Please see section 5.3 for details.
- **Remove Accounts from the Class Roster:** If a student is no longer enrolled in the, their account should be removed from the class roster.
- **Move or Copy a Class Roster:** Make use of these functions to when setting up the class roster for a class with many of the same students as an existing class. Actions may be performed on all accounts listed in a roster or selected accounts.





- **Group the Class Roster into Teams:** Allow students to work in groups for self-study resource reservations and share access to equipment at the same time. This can be a practical way of sharing resources in a class with a large number of students. Follow the procedure detailed in section 5.5 to enable team access for a class.
- **Delete Class Records:** Class records should be deleted only when it is certain that any configuration files and logs associated with them are no longer needed, see section 5.7.
- **Assign a Lead Instructor:** A lead instructor should be assigned to each class. Lead instructors may participate in any lab reservation associated with the class. If you are an instructor with Normal Privileges, you will be lead instructor for any class you create, with the option of adding additional lead instructors. The ability to appoint lead instructors for other classes will depend upon your account privilege level (see section 5.6).
- **Review Lab Usage Statistics:** A count of the labs and lab hours used by the class for instructor-led training, individual reservations and team reservations is provided by the class manager. Detailed information on lab usage is provided per class, per team and per individual. (See sections 5.4 and 5.5). Reviewing lab usage is per class is a convenient way of monitoring usage of the NETLAB+ system.

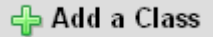
For more flexible usage reporting options, consider using the usage reporting tools available to the NETLAB+ administrator. Several levels of reporting including Community Usage, User Usage, Class Usage and Pod Usage are available. Please see the “Usage Reporting” section of the *NETLAB+ Administrator Guide* for details.

## 5.1 Add Classes

The Class Manager page will list all existing class records for your community.

CLASS LIST COMMUNITY: XYZ Technical College				
CLASS NAME	LEAD INSTRUCTOR(S)	# ENROLLED	START DATE	END DATE
▶ CCNP Fall Class	Jane Doe	5	Jan 21, 2006	May 15, 2006
▶ fall ccna	Ann Dole	3	None	None
▶ FNS Class	Ann Dole Jane Doe	2	None	None
▶ FNS review class	Jane Doe	3	None	None
▶ spring ccna	None	6	Jan 7, 2006	May 7, 2007

To add a class to the system, select the  button at the bottom of the Class Manager page and enter the class information into the form.

The **Class Name** field is required; other fields may be filled out now, or later through the Edit Class function (see section 5.2).

<b>Class Name</b>	CCNP Fall Class	<b>REQ</b>
<b>Lead Instructor(s)</b>	Jane Doe	
<b>Global Labs</b>	<input checked="" type="checkbox"/> AE CCNA 1 English V3.1 <input checked="" type="checkbox"/> AE CCNA 2 English V3.1 <input checked="" type="checkbox"/> AE CCNA 3 English V3.1 <input type="checkbox"/> AE CCNA 4 English V3.1 <input type="checkbox"/> AE CCNA Bridge Exams 3.0 <input type="checkbox"/> AE CCNA English V2.1 (retired) <input checked="" type="checkbox"/> AE CCNA Pod Reservations (no labs) <input type="checkbox"/> AE CCNP BCMSN V5.0 English <input type="checkbox"/> AE CCNP BCMSN V5.0 Skills Exams English <input type="checkbox"/> AE CCNP BSCI V5.0 English <input type="checkbox"/> AE CCNP ISCW V5.0 English <input checked="" type="checkbox"/> AE CCNP ONT V5.0 English <input checked="" type="checkbox"/> AE CCNP Pod Reservations (no labs) <input type="checkbox"/> AE FNS Combined V1.2 English <input checked="" type="checkbox"/> AE FNS PIX V1.2 English <input checked="" type="checkbox"/> AE FNS Router V1.2 English	
<b>Private Labs</b>	<i>you have no installed private lab content to select</i>	
<b>Starting Date</b>	<input checked="" type="radio"/> None <input type="radio"/> Date    Jun    26    2008	
<b>Ending Date</b>	<input checked="" type="radio"/> None <input type="radio"/> Date    Jun    26    2009	
<b>Self Study Lab Access</b>	<input checked="" type="checkbox"/> Allow individuals to schedule lab time <input type="checkbox"/> Allow teams to schedule lab time	
<b>Predetermined Lab Time Limits</b>	<input checked="" type="radio"/> Enforce lab author's time limits (if any) <input type="radio"/> Do not enforce lab author's time limits	
<b>Preferred Maximum Length of Reservation</b>	3.0 hours (community maximum is 4.0 hours)	
<b>Preferred Minimum Time Between Reservations</b>	4 hours (community minimum is 3 hours)	
<b>Console Password (Cisco devices)</b>	cisco	
<b>Enable Password (Cisco devices)</b>	class	
<b>E-mail Configs/Logs</b>	<input checked="" type="radio"/> No <input type="radio"/> To lead instructors upon completion	
<b>Retain Configs/Logs</b>	<input checked="" type="checkbox"/> Instructor-led reservations <input checked="" type="checkbox"/> Individual or team reservations	
<b>Retention Period</b>	1 year	

## Class Edit/Add Field Descriptions

- **Class Name:** The name of the class must be unique on the NETLAB+ system.
- **Lead Instructor(s):** Instructors who are trainers in this class. Only lead instructors can schedule instructor-led lab reservations for a class. Lead instructors may schedule instructor-led lab reservations for this class. A lead instructor may also join any student or team reservations in progress that are associated with the class.
- **Global Labs:** Select lab exercises and content that can be accessed by users in the class roster. This also affects the pod types that users can access. This setting does NOT control access to curriculum. Global labs are available to all instructors on the system (if authorized by the administrator).
- **Private Labs:** Private labs are available only to the original installer. If you have created lab designs using the Lab Designer, they will be available for selection in this section. Please refer to section [13](#), and the *NETLAB+ Lab Design Guide* for details.
- **Starting Date:** An optional starting date for the class. New pod reservations for this class may not be made before this date.

If this date is changed later, existing lab reservations are not affected .

- **Ending Date:** An optional ending date for the class. New pod reservations for this class (student or instructor) may not be made after this date.

If this date is changed later, existing lab reservations are not affected.

- **Self Study Lab Access**

**Individuals:** If selected, individual users in the roster can schedule lab reservations.

**Teams:** Enabling this option allows learners to work in groups for self-study lab reservations and share access to equipment at the same time. Before enabling this option, place each user in the roster into the desired team (A to Z).

- **Predetermined Lab Time Limits**

**Enforce lab author's time limits (if any):** When a lab author specifies a time limit for a lab exercise, NETLAB+ will always use this limit to determine the length of an individual or team reservation. When a lab time limit is enforced, the Maximum Length of Reservation setting (described below) will have no effect on the reservation length. The time limit is only imposed upon learners making their own individual or team reservations. Individual or team reservations created by the lead instructor on behalf of individual learners or teams in the class are not restricted by the lab author's time limit.

**Do not enforce lab author's time limits:** NETLAB+ will disregard any time limits set by lab authors. Individuals and teams may determine how much time is allocated for any lab, up to the Maximum Length of Reservation setting (see below).

- **Preferred Maximum Length of Reservation:** Sets the maximum length (in hours) of an individual or team lab reservation. Lab exercises can also have a time limit. The lower of the two times is used. The maximum time lengths of lab reservations for all classes within a community are subject to community maximums, if a community maximum has been set. You may not establish a higher (less restrictive) maximum for the class; it will not override the community maximum set by the NETLAB+ Administrator. A lower (more restrictive) maximum time length for the class may be enforced by setting a value that is lower than the community maximum.

Lead instructors and instructor-led reservations are not bound by this restriction.

- **Preferred Minimum Time Between Reservations:** Sets the minimum amount of time between successive reservations made by an individual or team. This setting can be used to prevent excessive scheduling of labs. For example, a setting of **48 hours** prevents the same individual or team from scheduling lab exercises less than 48 hours apart. The default value, **no limit** will allow a student or team to make unlimited reservations. The minimum time between reservations for all classes within a community is subject to community minimums, if a community minimum has been set. You may not establish a lower (less restrictive) minimum for the class; it will not override the community minimum set by the NETLAB+ Administrator. A higher (more restrictive) minimum time between lab reservations for the class may be enforced by setting a value that is higher than the community minimum.

Lead instructors and instructor-led reservations are not bound by this restriction.

Community level restrictions for Maximum Length of Reservations and Minimum Time Between Reservations may be set by the NETLAB+ Administrator. Please see the “Manage Communities” section of the *NETLAB+ Administrator Guide*.

- **Console Password:** Cisco courses only. The password which students and instructors are expected to assign to all device consoles, 'line con 0'. When NETLAB+ performs an automated operation, it will try this password to gain access to the console. Some automated operations may abort if the device's console is not set to this value.
- **Enable Password:** Cisco courses only. The password which students and instructors are expected to assign as the privileged (enable secret) password on all devices. When NETLAB+ performs an automated operation, it will try this password to gain access to privileged exec mode. Some automated operations may abort if the device's enable password is not set to this value.
- **E-mail Configs/Logs:** After a reservation has completed, a copy of the final configuration files and session logs can be automatically e-mailed to lead instructors.

E-mail can be unreliable. This option will only work if the lead instructors have a valid e-mail address set in their profiles. System settings, port filters and/or anti-spam software may interfere with e-mail from NETLAB+ (even if other e-mail from the NETLAB+ site may be working). Alternatively, you can access configuration and log data using the archive feature.

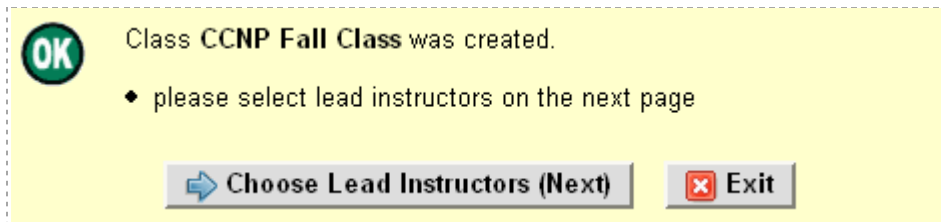
- **Retain Configs/Logs:** After a reservation has completed, a copy of the final configuration files and session logs can be retained in the NETLAB+ archive. Since this information consumes disks space and increases the size of backups, please retain only the data you need. A master summary record of the reservation is retained in the archive regardless of what setting is selected for retaining configuration and session logs.

**Instructor-led reservations:** If checked, NETLAB+ will retain configs and logs from instructor-led class reservations.

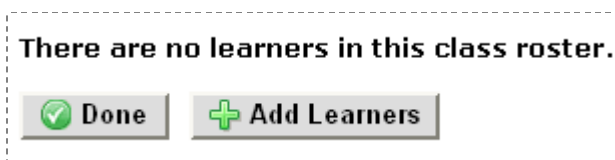
**Individual or team reservations:** If checked, NETLAB+ will retain configs and logs from student or team reservations.

- **Retention Period:** This pull down lets you control the length of time NETLAB+ will retain configuration files and session logs in the archive for this class. Since this information consumes disks space and increases the size of backups, please retain the data only as long as needed. A master summary record of the reservation is retained in the archive, which is not subject to the retention period and will remain unless the class is deleted.

After entering information on the page, select **OK**. A confirmation message will be displayed. You may now choose lead instructors for the class (see section 5.6), or select **Exit** if you prefer to enter this information at a later time.



If you complete the process to choose lead instructors, you will then be prompted to add learners to the class roster (see section 5.3).



You may also choose to add learners to the roster at another time.

## 5.2 Edit Class Information

Edit the information for an existing class by clicking on the class name displayed in the class list displayed on the class manager page. Here, we will select the record for the CCNP Fall Class.

CLASS LIST COMMUNITY: XYZ Technical College			
CLASS NAME	LEAD INSTRUCTOR(S)	# ENROLLED	START DATE
<a href="#">CCNP Fall Class</a>	Jane Doe	6	Jan 21, 2006
<a href="#">fall ccna</a>	Ann Dole	0	None
<a href="#">FNS Class</a>	Jane Doe	1	None
<a href="#">FNS review class</a>	Jane Doe	0	None
<a href="#">spring ccna</a>	None	0	Jan 7, 2006

A page displaying the current settings for the class will be displayed. The Class Lab Usage statistics include a count of the laboratory reservations and hours of use, for instructor-led, individual, and team reservations for the class. These counts include only lab reservations that have been attended. If a lab reservation is scheduled but not used, it is not included in these statistics.



CLASS: CCNP Fall Class					
Class Name	CCNP Fall Class				
Lead Instructor(s)	Jane Doe				
Number Enrolled	2				
Global Labs	AE CCNA 1 English V3.1 AE CCNA 2 English V3.1 AE CCNA 3 English V3.1 AE CCNA Pod Reservations (no labs) AE CCNP ONT V5.0 English AE CCNP Pod Reservations (no labs) AE FNS PIX V1.2 English AE FNS Router V1.2 English				
Private Labs					
Start Date	None				
Ending Date	None				
Self Study Lab Access	Individuals				
Predetermined Lab Time Limits	Enforce lab author's time limits (if any)				
Preferred Maximum Length of Reservations	3.0 hours				
Preferred Minimum Time Between Reservations	4 hours between reservations				
Console Password	cisco				
Enable Password	class				
E-mail Configs/Logs	No				
Retain Configs/Logs	ILT Class, Student or Team				
Retention Period	1 year				
Class Lab Usage		Instructor Led	Individual	Team	Total
	Labs	14	6	5	25
	Hours	42.0	4.5	2.5	49.0
<div style="display: flex; justify-content: space-between; align-items: center;"> <span> Done</span> <span> Settings</span> <span> Roster</span> <span> Teams</span> <span> Leads</span> <span> Delete</span> </div>					

Select the **Settings** button to make the information for the displayed class available for editing. The class edit page is identical to the add class page. Please see section 0 for a detailed description of each field on the page.

<b>Class Name</b>	CCNP Fall Class	<b>REQ</b>
<b>Lead Instructor(s)</b>	Jane Doe	
<b>Global Labs</b>	<input checked="" type="checkbox"/> AE CCNA 1 English V3.1 <input checked="" type="checkbox"/> AE CCNA 2 English V3.1 <input checked="" type="checkbox"/> AE CCNA 3 English V3.1 <input type="checkbox"/> AE CCNA 4 English V3.1 <input type="checkbox"/> AE CCNA Bridge Exams 3.0 <input type="checkbox"/> AE CCNA English V2.1 (retired) <input checked="" type="checkbox"/> AE CCNA Pod Reservations (no labs) <input type="checkbox"/> AE CCNP BCMSN V5.0 English <input type="checkbox"/> AE CCNP BCMSN V5.0 Skills Exams English <input type="checkbox"/> AE CCNP BSCI V5.0 English <input type="checkbox"/> AE CCNP ISCW V5.0 English <input checked="" type="checkbox"/> AE CCNP ONT V5.0 English <input checked="" type="checkbox"/> AE CCNP Pod Reservations (no labs) <input type="checkbox"/> AE FNS Combined V1.2 English <input checked="" type="checkbox"/> AE FNS PIX V1.2 English <input checked="" type="checkbox"/> AE FNS Router V1.2 English	
<b>Private Labs</b>	<i>you have no installed private lab content to select</i>	
<b>Starting Date</b>	<input checked="" type="radio"/> None <input type="radio"/> Date Jun 26 2008	
<b>Ending Date</b>	<input checked="" type="radio"/> None <input type="radio"/> Date Jun 26 2009	
<b>Self Study Lab Access</b>	<input checked="" type="checkbox"/> Allow individuals to schedule lab time <input type="checkbox"/> Allow teams to schedule lab time	
<b>Predetermined Lab Time Limits</b>	<input checked="" type="radio"/> Enforce lab author's time limits (if any) <input type="radio"/> Do not enforce lab author's time limits	
<b>Preferred Maximum Length of Reservation</b>	3.0 hours (community maximum is 4.0 hours)	
<b>Preferred Minimum Time Between Reservations</b>	4 hours (community minimum is 3 hours)	
<b>Console Password (Cisco devices)</b>	cisco	
<b>Enable Password (Cisco devices)</b>	class	
<b>E-mail Configs/Logs</b>	<input checked="" type="radio"/> No <input type="radio"/> To lead instructors upon completion	
<b>Retain Configs/Logs</b>	<input checked="" type="checkbox"/> Instructor-led reservations <input checked="" type="checkbox"/> Individual or team reservations	
<b>Retention Period</b>	1 year	

After updating information, select the **OK** button at the bottom of the page.

### 5.3 Add Learners to the Class Roster

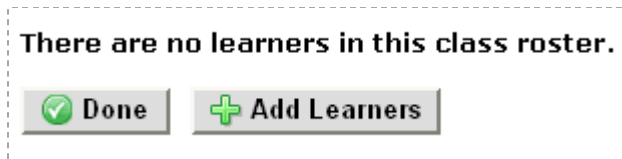
A class *roster* is a list of members, which may include student accounts, instructor accounts, or both. All members must belong to the same community.

A class may contain one or more *lead instructors* (trainers). All other users in the roster (who are not leads) are *learners*. Select the **Roster** button on the class page to add learners.

CLASS: CCNP Fall Class					
Class Name	CCNP Fall Class				
Lead Instructor(s)	Jane Doe				
Number Enrolled	2				
Global Labs	AE CCNA 1 English V3.1 AE CCNA 2 English V3.1 AE CCNA 3 English V3.1 AE CCNA Pod Reservations (no labs) AE CCNP ONT V5.0 English AE CCNP Pod Reservations (no labs) AE FNS PIX V1.2 English AE FNS Router V1.2 English				
Private Labs					
Start Date	None				
Ending Date	None				
Self Study Lab Access	Individuals				
Predetermined Lab Time Limits	Enforce lab author's time limits (if any)				
Preferred Maximum Length of Reservations	3.0 hours				
Preferred Minimum Time Between Reservations	4 hours between reservations				
Console Password	cisco				
Enable Password	class				
E-mail Configs/Logs	No				
Retain Configs/Logs	ILT Class, Student or Team				
Retention Period	1 year				
Class Lab Usage		Instructor Led	Individual	Team	Total
	Labs	14	6	5	25
	Hours	42.0	4.5	2.5	49.0

Done
 Settings
 Roster
 Teams
 Leads
 Delete

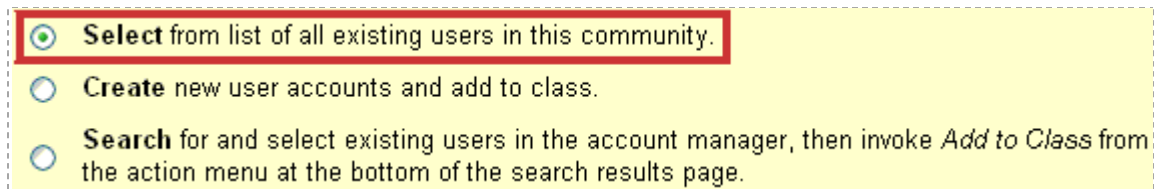
A list of learners assigned to the class will be displayed, or, as in this example, a message stating that no learners have yet been added to the class.







Selecting **Add Learners** will display the **Add Learners to Roster** page. This page allows you to select from 3 methods to add learners to the class.

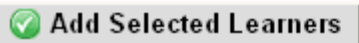

The first method, **Select from a list of all existing users in this community** is an ideal choice when:

- You will be selecting learners for which accounts already exist.
- The list of all existing users in your community is relatively small. (Since this option displays all the accounts from which you can make your roster selections).



Select the learners you wish to add to the class roster from the list displayed. Notice also that the list shows that instructor Jane Doe has already been selected as a class lead (see section 5.6).

COMMUNITY: XYZ Technical College			
NAME	USER ID	SELECT	
 Ann Dole	Adole	<input checked="" type="checkbox"/>	
 Bob Miller	bmiller	<input type="checkbox"/>	
 Jane Doe	jdoe2006	already class lead	
 Mary Smith	msmith	<input checked="" type="checkbox"/>	

Click the **Add Selected Learners** button to add the learners to the class roster.

The second method, **Create new user accounts and add to class** is an ideal choice when:

- You need to add learners to a class and have not yet set up accounts for them (typically, if this is a group of first-time users of your NETLAB+ system).
- You prefer to do this process in one step rather than first adding the accounts using the Account Manager (see section 6.1).

**Select** from list of all existing users in this community.

**Create** new user accounts and add to class.

**Search** for and select existing users in the account manager, then invoke *Add to Class* from the action menu at the bottom of the search results page.

Enter the new account information for each user (see section 6.1).

### Enter New Account Information

**Add to Community** XYZ Technical College

**Add to Class** CCNP Fall Class

**Initial Password**

**Retype Initial Password**

	User ID	Name	Type	E-mail Address (optional)	Status
1	<input type="text" value="ida2006"/>	<input type="text" value="Ida Lerner"/>	student ▼	<input type="text"/>	Enter new user or leave blank
2	<input type="text" value="vstevens"/>	<input type="text" value="Victoria Stevens"/>	student ▼	<input type="text"/>	Enter new user or leave blank
3	<input type="text" value="jcary"/>	<input type="text" value="Jason Cary"/>	student ▼	<input type="text"/>	Enter new user or leave blank
4	<input type="text"/>	<input type="text"/>	student ▼	<input type="text"/>	Enter new user or leave blank

The third method, **Search for and select existing users in the account manager, then invoke *Add to Class* from the action menu at the bottom of the search results page** is an ideal choice when:

- You will be selecting learners for which accounts already exist.
- The options on the account search page (see section 6) will allow you to conveniently select a subset of the accounts from which you may make your selections. This may allow you to avoid scrolling through a long list if there are a large number of accounts in your community.

- Select** from list of all existing users in this community.
- Create** new user accounts and add to class.
- Search** for and select existing users in the account manager, then invoke *Add to Class* from the action menu at the bottom of the search results page.

Here, we will use the **show** option to display only student accounts.

**Account Search**

Community: XYZ Technical College

Show:

- all account types
- instructors only
- students only
- users that have never logged in
- users that have been inactive for 1 year or more

Match User ID or Name:

(partial name OK, leave blank to match all)

The result of the account search displays all of the student accounts in the community. Select the students you wish to add to the class roster. (Notice that student Ida Lerner has been selected, although she is already indicated to be a member of the class. For the purpose of this example, let's imagine that this record was selected in error). Select the **Add to Class Roster** action and click **Go**.

Users matched: 5 Community: XYZ Technical College Showing: students only Matching: (any)					
USER ID	NAME	COMMUNITY	CLASSES	LAST LOGIN	SELECT
▶ bmiller	Bob Miller	XYZ Technical College		Jan 21, 2006	<input checked="" type="checkbox"/>
▶ ida2006	Ida Lerner	XYZ Technical College	CCNP Fall Class	never	<input checked="" type="checkbox"/>
▶ jcary	Jason Cary	XYZ Technical College		never	<input type="checkbox"/>
▶ msmith	Mary Smith	XYZ Technical College		never	<input type="checkbox"/>
▶ vstevens	Victoria Stevens	XYZ Technical College		never	<input checked="" type="checkbox"/>

Perform Action on Selected Accounts:







Next, you will be prompted to select the class to which you wish to add learners. Here, we'll select the CCNP Fall Class.

CLASS LIST					
CLASS NAME	LEAD INSTRUCTOR(S)	# ENROLLED	START DATE	END DATE	
▶ CCNP Fall Class	Jane Doe	1	Jan 21, 2006	May 15, 2006	
▶ fall ccna	Ann Dole	0	None	None	
▶ FNS review class	Jane Doe	0	None	None	
▶ spring ccna	None	0	Jan 7, 2006	May 7, 2007	

The status of the accounts added is shown. Notice that Ida Lerner is flagged as already in the roster, thus illustrating that selecting accounts more than once to add to a roster will not result in duplicates on the roster.

ADDING TO CLASS ROSTER: CCNP Fall Class		
USER ID	NAME	STATUS
bmiller	Bob Miller	added to roster
ida2006	Ida Lerner	already in roster
vstevens	Victoria Stevens	added to roster

To view the class roster, select the  button.

CLASS ROSTER: <b>CCNx 3.x Test</b>						
NAME	USER ID	TEAM	LAST LOGIN	E-MAIL ADDRESS	LABS	LAB HOURS
 Bob Miller	bmilller	A	Nov 7, 2006	bmilller@fictionalname.org	 3	3.0
 Ida Lerner	ida2006	A	Nov 7, 2006	ilerner@fictionalname.org	 1	0.5
 Victoria Stevens	vstevens	B	Nov 6, 2006	vstevens@fictionalname.org	 2	1.0
Usage by Deleted Accounts					0	0.0
Total Individual Lab Usage *					6	4.5

If your class roster will consist of both new users (for which you need to create a new account) along with previous users, (already having an account on your NETLAB+ system) you will need to use more than one of the methods described above to add all of the learners to your class roster.

In addition, you can add learners to a class by moving or copying a class roster from one class to another (see section [5.4](#)).









## 5.4 Manage a Class Roster

As students join and withdraw from a class, you will need to make periodic changes to the class roster. Select the class record for the class whose roster you need to update (see section 5). You may also wish to review the statistics on lab usage provided for each member of the class roster.


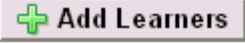
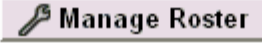

CLASS: CCNP Fall Class					
Class Name	CCNP Fall Class				
Lead Instructor(s)	Jane Doe				
Number Enrolled	2				
Global Labs	AE CCNA 1 English V3.1 AE CCNA 2 English V3.1 AE CCNA 3 English V3.1 AE CCNA Pod Reservations (no labs) AE CCNP ONT V5.0 English AE CCNP Pod Reservations (no labs) AE FNS PIX V1.2 English AE FNS Router V1.2 English				
Private Labs					
Start Date	None				
Ending Date	None				
Self Study Lab Access	Individuals				
Predetermined Lab Time Limits	Enforce lab author's time limits (if any)				
Preferred Maximum Length of Reservations	3.0 hours				
Preferred Minimum Time Between Reservations	4 hours between reservations				
Console Password	cisco				
Enable Password	class				
E-mail Configs/Logs	No				
Retain Configs/Logs	ILT Class, Student or Team				
Retention Period	1 year				
Class Lab Usage		Instructor Led	Individual	Team	Total
	Labs	14	6	5	25
	Hours	42.0	4.5	2.5	49.0

Done
 Settings
 Roster
 Teams
 Leads
 Delete

Select the **Roster** button. In a previous example, (see section 5.3) only the **Add Learners** roster function was available, since no learners had yet been assigned to the class. This time, selecting the Roster function displays the class roster, the option to add learners, the manage accounts option and the manage roster option.

CLASS ROSTER: <b>CCNx 3.x Test</b>						
NAME	USER ID	TEAM	LAST LOGIN	E-MAIL ADDRESS	LABS	LAB HOURS
 Bob Miller	bmiller	A	Nov 7, 2006	bmiller@fictionalname.org	 3	3.0
 Ida Lerner	ida2006	A	Nov 7, 2006	ilerner@fictionalname.org	 1	0.5
 Victoria Stevens	vstevens	B	Nov 6, 2006	vstevens@fictionalname.org	 2	1.0
Usage by Deleted Accounts					0	0.0
Total Individual Lab Usage *					6	4.5






\* Individual totals do not include team labs.







By selecting the link next to the count of the labs attended for a learner, a list of the labs will be displayed including the status of the reservation. Notice that lab hours are not accumulated for lab reservations that are not attended.




CLASS	NAME	USER ID	LAST LOGIN
CCNx 3.x Test	Bob Miller	bmiller	Tue Nov 7, 2006 12:16PM

Lab List: <b>Bob Miller</b>			
DATE/TIME	LAB NAME	STATUS	LAB HOURS
 Tue Nov 7, 2006 11:00PM	2.2.1 Router Configuration Using Setup	not attended	
 Fri Nov 3, 2006 1:30PM	1.2.5 Verifying RIP v2 Configuration	completed	1.0
 Fri Nov 3, 2006 10:30AM	6.2.5 Configuring Port Security	not attended	
 Fri Oct 27, 2006 1:00PM	2.2.9 Command Line Fundamentals	completed	1.0
 Fri Oct 27, 2006 12:00PM	2.2.1 Router Configuration Using Setup	completed	1.0
<b>Total (completed)</b>		<b>3 labs</b>	<b>3.0</b>



Returning back to the Class Roster page, you may continue by selecting **Manage Roster**. Actions on the **Manage Roster** page may be performed on several selected accounts at one time.

CLASS ROSTER: CCNP Fall Class				
NAME	USER ID	TEAM	LAST LOGIN	SELECT
 Bob Miller	bmiller	A	Jan 21, 2006	<input checked="" type="checkbox"/>
 Ida Lerner	ida2006	A	never	<input type="checkbox"/>
 Victoria Stevens	vstevens	A	never	<input checked="" type="checkbox"/>

Perform Action on Selected Members: Remove from Roster (retain accounts) ▼ Go Select All Unselect All

I'm Done Making Change




- Remove from Roster (retain accounts)
- Copy to Another Class
- Move to Another Class

The **Remove from Roster** action results in the removal of the selected accounts from the class roster. The accounts remain on the system and may be added to other class rosters.

The **Copy to Another Class** action will add the selected accounts from the currently displayed class roster to another class roster. You will be prompted to select the class to which the accounts will be added.

Selecting the **Move to Another Class** action will remove the selected accounts from the currently displayed class roster and add them to another class roster. You will be prompted to select the class to which the accounts will be added.







The Manage Accounts option is also included on the class roster screen.

CLASS ROSTER: CCNx 3.x Test						
NAME	USER ID	TEAM	LAST LOGIN	E-MAIL ADDRESS	LABS	LAB HOURS
 Bob Miller	bmiller	A	Nov 7, 2006	bmiller@fictionalname.org	3	3.0
 Ida Lerner	ida2006	A	Nov 7, 2006	ilerner@fictionalname.org	1	0.5
 Victoria Stevens	vstevens	B	Nov 6, 2006	vstevens@fictionalname.org	2	1.0
Usage by Deleted Accounts					0	0.0
Total Individual Lab Usage *					6	4.5

\* Individual totals do not include team labs.

Done  Add Learners  Manage Roster  Manage Accounts

Select **Manage Accounts** to display the accounts page, listing all the accounts assigned to the class roster. See section 6 for details on managing accounts.

Class: <b>CCNP Fall Class</b>					
USER ID	NAME	COMMUNITY	CLASSES	LAST LOGIN	SELECT
<a href="#">vstevens</a>	 Victoria Stevens	XYZ Technical College	CCNP Fall Class spring ccna	never	<input type="checkbox"/>
<a href="#">Adole</a>	 Ann Dole	XYZ Technical College	CCNP Fall Class fall ccna [Lead] spring ccna	Jan 21, 2006	<input type="checkbox"/>
<a href="#">ida2006</a>	 Ida Lerner	XYZ Technical College	CCNP Fall Class fall ccna spring ccna	never	<input type="checkbox"/>
<a href="#">bmiller</a>	 Bob Miller	XYZ Technical College	CCNP Fall Class fall ccna spring ccna	Jan 21, 2006	<input type="checkbox"/>
<a href="#">jcary</a>	 Jason Cary	XYZ Technical College	CCNP Fall Class fall ccna spring ccna	never	<input type="checkbox"/>
<a href="#">msmith</a>	 Mary Smith	XYZ Technical College	CCNP Fall Class spring ccna	never	<input type="checkbox"/>

Perform Action on Selected Accounts:

## 5.5 Group the Class Roster Into Teams

Classes can be configured to allow students to have Self Study Lab Access both as individuals and as part of an assigned team.

You may place class members into teams labeled A to Z. Teams allow students to work in groups for self-study resource reservations and share access to equipment at the same time. If teams are not used with the class, all students should be assigned to the default, team “A”. Students may not change their own team assignment; however, the lead instructor(s) can adjust team assignments as needed.

Lead instructors are not assigned to a team and may participate in the lab reservations for any team. See section 7 for details on scheduling lab reservations.

Here, we’ll group the 6 members of the CCNP Fall class into 3 teams.

CLASS: CCNP Fall Class					
Class Name	CCNP Fall Class				
Lead Instructor(s)	Jane Doe				
Number Enrolled	2				
Global Labs	AE CCNA 1 English V3.1 AE CCNA 2 English V3.1 AE CCNA 3 English V3.1 AE CCNA Pod Reservations (no labs) AE CCNP ONT V5.0 English AE CCNP Pod Reservations (no labs) AE FNS PIX V1.2 English AE FNS Router V1.2 English				
Private Labs					
Start Date	None				
Ending Date	None				
Self Study Lab Access	Individuals				
Predetermined Lab Time Limits	Enforce lab author's time limits (if any)				
Preferred Maximum Length of Reservations	3.0 hours				
Preferred Minimum Time Between Reservations	4 hours between reservations				
Console Password	cisco				
Enable Password	class				
E-mail Configs/Logs	No				
Retain Configs/Logs	ILT Class, Student or Team				
Retention Period	1 year				
Class Lab Usage		Instructor Led	Individual	Team	Total
	Labs	14	6	5	25
	Hours	42.0	4.5	2.5	49.0

Done
 Settings
 Roster
 Teams
 Leads
 Delete

Select the **Teams** button. The current team assignments will be displayed. In this example, previous team assignments have been made. Otherwise, all team members would have been in the initial default assignment of Team “A”. The count of labs and lab hours per team are also displayed.

CLASS TEAMS: <b>CCNx 3.x Test</b>			
TEAM	CURRENT MEMBERS	LABS	LAB HOURS
A	Bob Miller Mary Smith Jason Cary	3	1.5
B	Ann Dole Ida Lerner Victoria Stevens	1	0.5
Usage by Deleted Teams		1	0.5
Total Team Lab Usage *		5	2.5

\* Team totals do not include lab reservations made for individual users.







By selecting the link next to the count of the labs attended for a team, a list of the labs scheduled will be displayed including the status of the reservation

CLASS	TEAM	CURRENT MEMBERS
CCNx 3.x Test	A	Bob Miller Jason Cary Mary Smith







Lab List:			
DATE/TIME	LAB NAME	STATUS	LAB HOURS
→ Tue Nov 7, 2006 1:00PM	6.2.1 Verifying Default Switch Configuration	completed	0.5
→ Mon Nov 6, 2006 1:30PM	Reserve Basic Router Pod Version 2 (no lab exercise)	completed	0.5
→ Mon Nov 6, 2006 1:00PM	2.2.1 Router Configuration Using Setup	completed	0.5
<b>Total (completed)</b>		<b>3 labs</b>	<b>1.5</b>

After returning back to the Class Teams list page, select the **Define Teams** button in order to modify the current team assignments. Notice also that this class roster happens to include an instructor who is enrolled as a learner. This instructor participates in the class identically to the other student learners. Use the pull-down box to the left of each user name to make team assignments.

CLASS TEAMS: CCNP Fall Class		
TEAM	USER NAME	USER ID
A	 Ann Dole	Adole
A	 Bob Miller	bmiller
B	 Ida Lerner	ida2006
C	 Jason Cary	jcary
D	 Mary Smith	msmith
E	 Victoria Stevens	vstevens

Apply Cancel

After selecting the **Apply** button, the class list will be sorted in team order.

CLASS TEAMS: CCNP Fall Class		
TEAM	USER NAME	USER ID
A	 Ann Dole	Adole
A	 Mary Smith	msmith
B	 Jason Cary	jcary
B	 Victoria Stevens	vstevens
C	 Bob Miller	bmiller
C	 Ida Lerner	ida2006

After initial team assignments have been made, you must return to the class edit screen and enable the option to allow teams to schedule lab time.

You may select the option to allow team reservations for a class at the same time you add a class record to the system (see section 0). You must be certain to also make team assignments, otherwise, all accounts will remain assigned to default team “A”.

<b>Self Study Lab Access</b>	<input checked="" type="checkbox"/> Allow individuals to schedule lab time
	<input checked="" type="checkbox"/> Allow teams to schedule lab time
<b>Predetermined Lab Time Limits</b>	<input checked="" type="radio"/> Enforce lab author's time limits (if any) <input type="radio"/> Do not enforce lab author's time limits
<b>Maximum Length of Reservation</b>	4.0 hours (individual or team reservations)
<b>Minimum Time Between Reservations</b>	No limit (individual or team reservations)
<b>Console Password (Cisco devices)</b>	cisco
<b>Enable Password (Cisco devices)</b>	class
<b>E-mail Configs/Logs</b>	<input checked="" type="radio"/> No <input type="radio"/> To lead instructors upon completion
<b>Retain Configs/Logs</b>	<input checked="" type="checkbox"/> Instructor-led reservations <input checked="" type="checkbox"/> Individual or team reservations
<b>Retention Period</b>	14 days





## 5.6 Choose Lead Instructors for a Class

A lead instructor should be defined for each class. An instructor with Normal Privileges (see section 6.2.1) can create and manage classes for which they are the lead. Lead instructors may make reservations for instructor-led training sessions for the class. Lead instructors may make lab reservations for individual students or teams, or allow the students or teams to make reservations themselves depending on the settings selected for the class (see section 5). The lead instructor has the option to participate in any lab reservation associated with the class.

CLASS: CCNP Fall Class					
Class Name	CCNP Fall Class				
Lead Instructor(s)	Jane Doe				
Number Enrolled	2				
Global Labs	AE CCNA 1 English V3.1 AE CCNA 2 English V3.1 AE CCNA 3 English V3.1 AE CCNA Pod Reservations (no labs) AE CCNP ONT V5.0 English AE CCNP Pod Reservations (no labs) AE FNS PIX V1.2 English AE FNS Router V1.2 English				
Private Labs					
Start Date	None				
Ending Date	None				
Self Study Lab Access	Individuals				
Predetermined Lab Time Limits	Enforce lab author's time limits (if any)				
Preferred Maximum Length of Reservations	3.0 hours				
Preferred Minimum Time Between Reservations	4 hours between reservations				
Console Password	cisco				
Enable Password	class				
E-mail Configs/Logs	No				
Retain Configs/Logs	ILT Class, Student or Team				
Retention Period	1 year				
Class Lab Usage		Instructor Led	Individual	Team	Total
	Labs	14	6	5	25
	Hours	42.0	4.5	2.5	49.0

Done
 Settings
 Roster
 Teams
 Leads
 Delete

After selecting a class in the class manager, (see section 5) select the **Leads** option. The accounts for all instructors in the community will be displayed. You may select more than one lead instructor for a class.

LEAD INSTRUCTORS CLASS: <b>CCNP Fall Class</b> COMMUNITY: <b>XYZ Technical College</b>		
NAME	USER ID	SELECT
 Ann Dole	Adole	<input type="checkbox"/>
 Jane Doe	jdoe2006	<input checked="" type="checkbox"/>

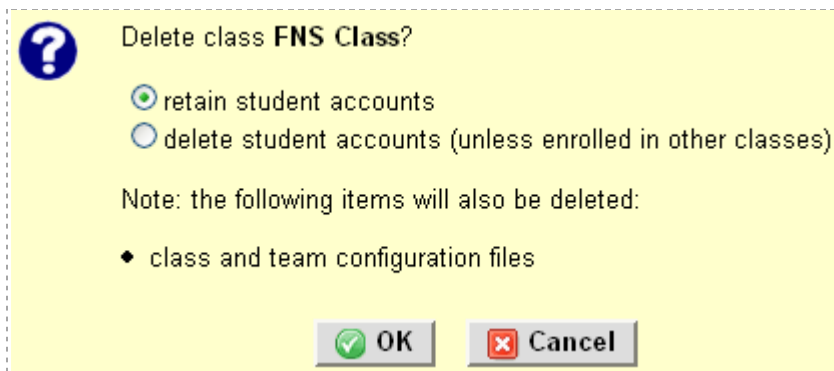
## 5.7 Delete Classes

To delete a class record, select a class in the class manager (see section 5) and select the **Delete** option. Do not delete a class until determining that all of the information for the class is no longer needed.

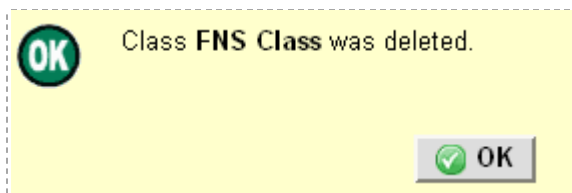
Keep in mind that you may want to edit (see section 5.2) and continue to use a class record. For example, if there will be a similar course with many of the same students the next semester, you can simply update the class record and the class roster (see section 5.4) as needed.

CLASS: <b>CCNP Fall Class</b>					
Class Name	FNS Class				
Lead Instructor(s)	Jane Doe				
Number Enrolled	2				
Global Labs	AE CCNA 1 English V3.1 AE CCNA 2 English V3.1 AE CCNA 3 English V3.1 AE CCNA Pod Reservations (no labs) AE CCNP ONT V5.0 English AE CCNP Pod Reservations (no labs) AE FNS PIX V1.2 English AE FNS Router V1.2 English				
Private Labs					
Start Date	None				
Ending Date	None				
Self Study Lab Access	Individuals				
Predetermined Lab Time Limits	Enforce lab author's time limits (if any)				
Preferred Maximum Length of Reservations	3.0 hours				
Preferred Minimum Time Between Reservations	4 hours between reservations				
Console Password	cisco				
Enable Password	class				
E-mail Configs/Logs	No				
Retain Configs/Logs	ILT Class, Student or Team				
Retention Period	1 year				
Class Lab Usage		Instructor Led	Individual	Team	Total
	Labs	14	6	5	25
	Hours	42.0	4.5	2.5	49.0
<div style="display: flex; justify-content: space-between; align-items: center;"> <span> Done</span> <span> Settings</span> <span> Roster</span> <span> Teams</span> <span> Leads</span> <span> Delete</span> </div>					

When deleting a class, you must choose to either retain or delete the student accounts on the class roster along with class and team configuration files. Accounts will not be deleted if the student is enrolled in other classes.



Select **OK** to proceed with the class deletion. A confirmation message will be displayed.



## 6 Managing Accounts



As an instructor, you may manage accounts for students within your community. Each student must be assigned an account. A student account should be created for each student to allow them to participate in labs as part of an instructor-led session, a team session, or an individual reservation.

If you have been granted community-wide privileges, you may also manage instructor accounts within your community. Instructor accounts with system-wide privileges may manage student and instructor accounts in all communities that are present on your NETLAB+ system (see section [6.2.1](#)).

### Typical Account Management Tasks:

- **Viewing Accounts:** To look at the accounts that are present in your community (or other communities depending on your privilege level), use the account search option. You may apply search criteria; see section [6.2](#) for an example.
- **Adding New Accounts:** New users to your NETLAB+ system must be assigned an account. You may add the same account to the roster of multiple classes, so only one account per user is necessary regardless of how many classes the user is enrolled. Please see section [6.1](#) for details on adding new accounts using the Account Manager.
- **Editing an Account:** Please see section [6.1](#) for details on editing account information using the Account Manager. Keep in mind that account users may also edit their own email and time zone information.
- **Disable An Account:** If you need to revoke a user's access to the system, select the disable logins function, see section [6.1](#). This is a good option if revoking access temporarily rather than deleting an account because you can easily enable access again if needed. In addition, any logs and configuration files associated with the account will remain if an account is disabled, rather than deleted.
- **Deleting An Account:** If you have determined that an account should be deleted from the system, use the account manager to delete the account, see section [6.3](#).
- **Resetting An Account Password:** It may be necessary to reset an account password if a user has lost or forgotten their current password to allow them regain access to their account. To use the reset password function, see section [6.4](#).

## 6.1 Add Accounts

An account should be created for each user to allow them to participate in labs as part of an instructor-led session, a team session, or an individual reservation.

Instructors with system-wide privileges (see section 6.2.1) may select a community from the drop-down community box on the Account Search page. Instructors with community or normal privileges will not have the ability to modify the community selection.

**Account Search**

Community (all) ▾

Show

- all account types
- instructors only
- students only
- users that have never logged in
- users that have been inactive for 1 year or more

Match User ID or Name

(partial name OK, leave blank to match all)

Search

+ Add Accounts X Exit

Select the **Add Accounts** button to display the add accounts screen.

As an instructor, your ability to add both instructor and student accounts will depend upon the privilege setting of your account, assigned by the NETLAB+ administrator (see section 6.2.1)

Assign an initial password to the accounts by entering a value for initial password. The account users will be required to change this password during their initial login.

**Passwords must meet the following requirements:**

- **Not found in the dictionary and not too simple**
- **Between 7 and 16 characters**
- **Contain both numbers and letters**

Enter New Account Information					
Add to Community XYZ Technical College					
Initial Password <input type="password" value="*****"/>					
Retype Initial Password <input type="password" value="*****"/>					
	User ID	Name	Type	E-mail Address (optional)	Status
1	<input type="text" value="Adole"/>	<input type="text" value="Ann Dole"/>	<input type="text" value="instructor"/>	<input type="text" value="adole@fictionalname.org"/>	Enter new user or leave blank
2	<input type="text" value="jdoe2006"/>	<input type="text" value="Jane Doe"/>	<input type="text" value="instructor"/>	<input type="text" value="jdoe@fictionalname.org"/>	Enter new user or leave blank
3	<input type="text" value="msmith"/>	<input type="text" value="Mary Smith"/>	<input type="text" value="student"/>	<input type="text" value="msmith@fictionalname.org"/>	Enter new user or leave blank
4	<input type="text" value="bmiller"/>	<input type="text" value="Bob Miller"/>	<input type="text" value="student"/>	<input type="text" value="bmiller@fictionalname.org"/>	Enter new user or leave blank
5	<input type="text"/>	<input type="text"/>	<input type="text" value="student"/>	<input type="text"/>	Enter new user or leave blank

### NETLAB+ User ID

A user ID that will be used to log in to the NETLAB+ system. May contain up to 16 ASCII alphanumeric characters, and the underscore "\_" character. Alphanumeric characters include A-Z, a-z, 0-9. The specified ID must be unique to the NETLAB+ system. You may wish to establish standards for account creation. The User ID is case sensitive. No duplicate User IDs are permitted.

### Name


The user's real name. It is recommended that you use Last name, First name format if you wish to view names in alphabetical order within a class roster.

### Account Type

The account type, **student or instructor** must be selected for each account. Once an instructor record is created, the instructor may be assigned as a lead instructor for a class or may join a class as a *learner*. A class may contain one or more *lead instructors* (trainers). All other users in the roster (who are not leads) are *learners* (see section 5.3).

### E-mail Address





Any valid e-mail address associated with the account. Entering an email address is optional, account users will be prompted to add/update their email address and time zone information when they initially log in to their account.

Select  at the bottom of the page to add the new accounts to the system. A confirmation screen will indicate that the accounts have been successfully added.

**All Requested Accounts Were Added**

**Add to Community** XYZ Technical College

**Initial Password** *accepted, not shown*

	User ID	Name	Type	E-mail Address (optional)	Status
1	Adole	Ann Dole	instructor	adole@fictionalname.org	 added
2	jdoe2006	Jane Doe	instructor	jdoe@fictionalname.org	 added
3	msmith	Mary Smith	student	msmith@fictionalname.org	 added
4	bmiller	Bob Miller	student	bmiller@fictionalname.org	 added
5					
6					
7					
8					
9					
10					

You have the option to immediately assign the newly entered accounts to a class by selecting the **Add These Accounts to a Class** button (see section 5.3). Select **I'm Done** if you prefer to assign the accounts to a class roster at a later time.

## 6.2 Edit Accounts

As an instructor, your ability to manage student and instructor accounts will depend upon the privilege level you have been assigned by the NETLAB+ administrator. System-wide instructor privileges to allow an instructor to manage accounts in any community. An instructor with community-wide privileges may manage student and instructor accounts within their community. Instructors with normal privileges can only manage student accounts within their own community. See section 6.2.1.

To edit accounts, use the account search function to locate the record(s) you wish to edit. You may select a community, an account type, and/or a full or partial User Id or name to narrow down your selections.



### Account Search

**Community** XYZ Technical College ▼

**Show**

- all account types
- instructors only
- students only
- users that have never logged in
- users that have been inactive for 1 year or more

**Match User ID or Name**

**Search**

(partial name OK, leave blank to match all)

The results of your search query will be displayed in a list.




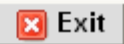
Users matched: <b>7</b> Community: <b>XYZ Technical College</b> Showing: <b>all account types</b> Matching: <b>(any)</b>					
USER ID	NAME	COMMUNITY	CLASSES	LAST LOGIN	SELECT
<a href="#">▶ Adole</a>	Ann Dole	XYZ Technical College	CCNP Fall Class fall ccna [Lead]	Jan 21, 2006	<input type="checkbox"/>
<a href="#">▶ bmiller</a>	Bob Miller	XYZ Technical College	CCNP Fall Class	Jan 21, 2006	<input type="checkbox"/>
<a href="#">▶ ida2006</a>	Ida Lerner	XYZ Technical College	CCNP Fall Class	never	<input type="checkbox"/>
<a href="#">▶ jcary</a>	Jason Cary	XYZ Technical College	CCNP Fall Class	never	<input type="checkbox"/>
<a href="#">▶ jdoe2006</a>	Jane Doe	XYZ Technical College	FNS review class [Lead] CCNP Fall Class [Lead]	Jan 27, 2006	<input type="checkbox"/>
<a href="#">▶ msmith</a>	Mary Smith	XYZ Technical College	CCNP Fall Class	never	<input type="checkbox"/>
<a href="#">▶ vstevens</a>	Victoria Stevens	XYZ Technical College	CCNP Fall Class	never	<input type="checkbox"/>

Perform Action on Selected Accounts: Add to Class Roster ▼ Go

Select All  
Unselect All



Select an account by clicking on the **User Id**. The account page for the record will be displayed.

Adole	
User ID	Adole
Name	Ann Dole
Account Type	instructor
Community	XYZ Technical College
E-mail Address	adole@fictionalname.org
Class Membership	CCNP Fall Class fall ccna [Lead] spring ccna FNS Class [Lead] CCNA 101 [Lead]
Privileges	instructor
Logins	enabled
Last Login	Mon Feb 13, 2006 3:03PM

To proceed to the edit page for the account, select the **Edit** button. The account edit page may be used to modify the account name, email address and to enable and disable account logins. When account logins are disabled, the user will not be able to login to the NETLAB+ system. Account privileges may only be modified by the NETLAB+ administrator

Adole	
<b>Account Type</b>	instructor
<b>User ID</b>	Adole
<b>Name</b>	<input type="text" value="Ann Dole"/>
<b>E-mail Address</b>	<input type="text" value="adole@fictionalname.org"/>
<b>Privileges</b>	instructor
<b>Logins</b>	<input checked="" type="radio"/> enabled <input type="radio"/> disabled

Select **Update** to save changes to the account record.

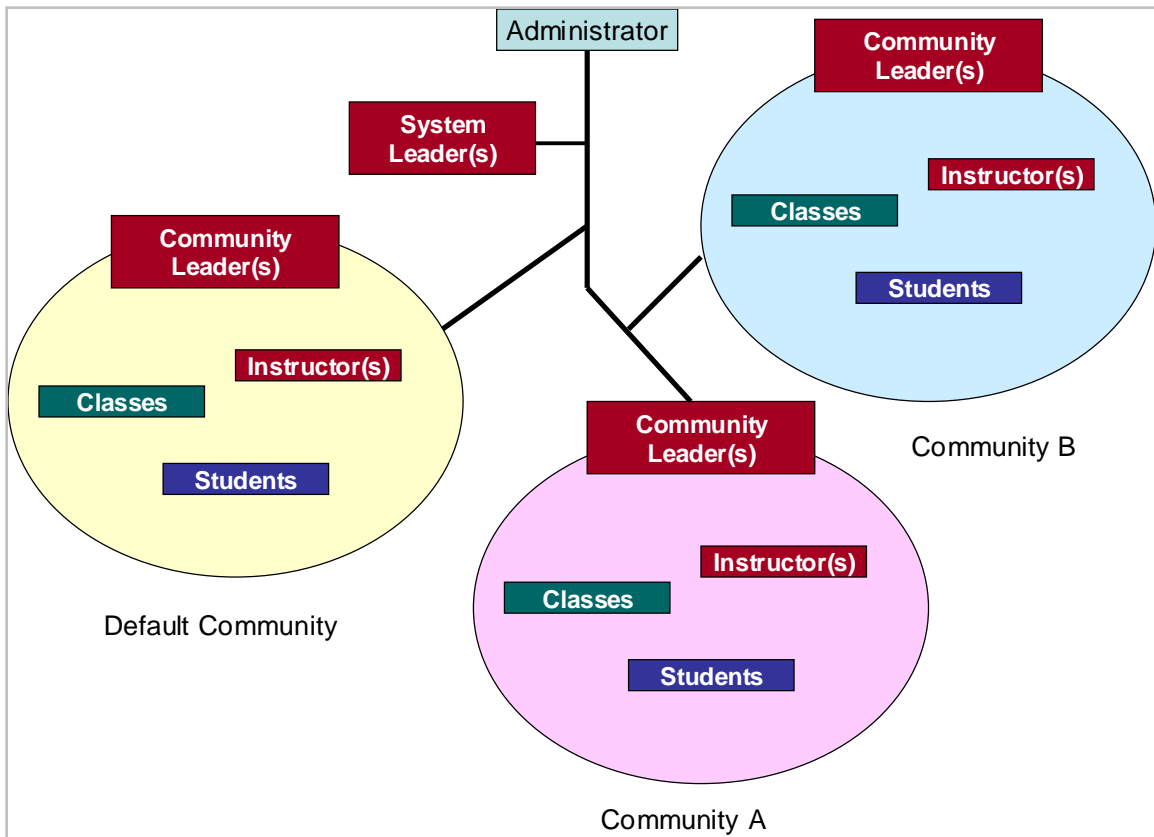
## 6.2.1 Instructor Privileges

The privilege level of your instructor account is set by NETLAB+ administrator (see the *NETLAB+ Administrator Guide*). The privilege level of your account should be set according to scope of your responsibilities on the system.

If there is more than one community on your NETLAB+ system and you are responsible for managing and overseeing the operations of all the communities on the system, you should be granted *System-Wide* Instructor Privileges. With this privilege level, you will act as a System Leader, able to manage classes and accounts in any community without accessing the administrator account. Assigning an instructor system-wide privileges is ideal in a situation where an instructor needs to manage information for the entire system, but whose responsibilities don't extend to administrator tasks such as adding new equipment pods.

An instructor granted *Community-Wide* privilege may manage both student and instructor accounts, within their own community. If you are responsible for managing operations within your own community, such as adding new instructor accounts, you should be assigned Community-Wide Privileges so that you may act as a Community Leader.

Instructors with *normal privileges* (the default) can only manage student accounts within their own community. If your responsibilities do not extend beyond the classes for which you lead, you should be assigned Normal Instructor Privileges.



Only the NETLAB+ administrator can grant community-wide or system-wide privilege to an instructor account.

### **Level 1 - Normal Instructor Privileges**

- ◆ Can create and manage student accounts in their community.
- ◆ Can create and manage classes for which they are a lead.
- ◆ Can cancel lab reservations made by students in their classes.
- ◆ Cannot manage other instructor accounts.

### **Level 2 - Community-Wide Instructor Privileges**

- ◆ Can create and manage student accounts in their community.
- ◆ Can create and manage instructor accounts in their community.
- ◆ Can create and manage any classes in a community.
- ◆ Can attend all lab reservations in their community (except instructor personal reservations)
- ◆ Can cancel lab reservations made by instructors and students in their community.

### **Level 3 - System-Wide Instructor Privileges**

- ◆ Can create and manage student accounts in any community.
- ◆ Can create and manage instructor accounts in any community.
- ◆ Can manage classes in any community.
- ◆ Can attend all lab reservations in any community (except instructor personal reservations)
- ◆ Can cancel any lab reservation.

### 6.3 Delete Accounts


Use the account search page to search for and select a record (see section 6) that you wish to delete. Keep in mind that accounts may be assigned to multiple classes, rather than being bound to a specific class as in previous versions of NETLAB+.

If the accounts are for students who will continue to use your NETLAB+ system in other classes, you can keep the accounts and add them to the class roster of other classes as needed (see section 5.3).

jdoe2006	
User ID	jdoe2006
Name	Jane Doe
Account Type	instructor
Community	XYZ Technical College
E-mail Address	jdoe@fictionalname.org
Class Membership	
Privileges	instructor
Logins	enabled
Last Login	never

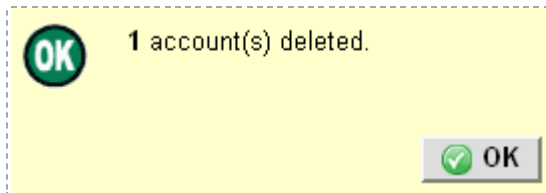
Select the **Delete** button. The page will indicate if the selected account is eligible for deletion. Eligibility for deletion is dependent upon the privilege level of the user performing the deletion (see section 6.2.1).

ACCOUNTS SELECTED FOR DELETION					
USER ID	NAME	TYPE	COMMUNITY	CLASS MEMBERSHIP	STATUS
msmith	Mary Smith	student	XYZ Technical College		eligible for deletion

 **All of the selected accounts are eligible for deletion.**

**Proceed with deletion?**

Select **Yes** to proceed with the account deletion.



The account delete function may also be performed as an action on multiple accounts, see section 6.5.

#### 6.4 Reset Account Passwords

It may be necessary to reset an account password if a user has lost or forgotten their current password. You may use the reset password function. Upon initial login, the user will be required to change the password.

Use the account search page to search for and select a record (see section 6).

jdoe2006	
User ID	jdoe2006
Name	Jane Doe
Account Type	instructor
Community	XYZ Technical College
E-mail Address	jdoe@fictionalname.org
Class Membership	
Privileges	instructor
Logins	enabled
Last Login	never

Select the **Reset Password** button to display the password reset screen. Enter the new password for the account.

#### Passwords must meet the following requirements:

- **Not found in the dictionary and not too simple**
- **Between 7 and 16 characters**
- **Contain both numbers and letters**


ACCOUNTS SELECTED FOR PASSWORD RESET				
USER ID	NAME	TYPE	COMMUNITY	STATUS
jdoe2006	Jane Doe	instructor	XYZ Technical College	eligible for password reset

Enter a temporary login password for the selected users. Upon login, each user will be required to select a new password.

Temporary Password

Retype Temporary Password

A confirmation message will be displayed.

 1 password(s) reset.

- ◆ Please provide the temporary password to the selected users.

The password reset function may also be performed as an action on multiple accounts, see section [6.5](#).

## 6.5 Performing Actions On Multiple Accounts

Several account functions may be performed on multiple records at one time. Here, we select all accounts for XYZ Technical College.

### Account Search

Community XYZ Technical College ▾

Show 
 all account types  
 instructors only  
 students only  
 users that have never logged in  
 users that have been inactive for 1 year or more

Match User ID or Name  

🔍 Search

(partial name OK, leave blank to match all)

A list of all the instructor and student accounts is displayed. To the right of each account in the list is a selection box. To perform an action on multiple records, you may select individual records, or use the **Select All** and **Unselect All** buttons as needed.

Users matched: 7 Community: XYZ Technical College Showing: all account types Matching: (any)					
USER ID	NAME	COMMUNITY	CLASSES	LAST LOGIN	SELECT
▶ Adole	Ann Dole	XYZ Technical College	CCNP Fall Class fall ccna [Lead]	Jan 21, 2006	<input type="checkbox"/>
▶ bmiller	Bob Miller	XYZ Technical College	CCNP Fall Class	Jan 21, 2006	<input type="checkbox"/>
▶ ida2006	Ida Lerner	XYZ Technical College	CCNP Fall Class	never	<input type="checkbox"/>
▶ jcary	Jason Cary	XYZ Technical College	CCNP Fall Class	never	<input type="checkbox"/>
▶ jdoe2006	Jane Doe	XYZ Technical College	FNS review class [Lead] CCNP Fall Class [Lead]	Jan 27, 2006	<input type="checkbox"/>
▶ msmith	Mary Smith	XYZ Technical College	CCNP Fall Class	never	<input type="checkbox"/>
▶ vstevens	Victoria Stevens	XYZ Technical College	CCNP Fall Class	never	<input type="checkbox"/>

Perform Action on Selected Accounts: Add to Class Roster ▾ Go

Add to Class Roster  
 Reset Password  
 Delete

Select All  
Unselect All

🔍 New Search
+ Add

Selecting the **Add to Class Roster** action will allow you to assign the selected accounts to a class (see section 5.3). You may also **reset the password** (see section 6.4) of the selected accounts or **delete** the account records (see section 6.3).




## 7 Schedule Lab Reservations





NETLAB+ includes a scheduling feature to facilitate scheduled access to lab equipment. Equipment can be scheduled for either classroom lectures or student lab time.


To schedule a lab reservation, select **Scheduler** from the menu bar or the link on the body of the MyNETLAB page.


The Scheduler Options screen will be displayed. Instructors have several options available to them as to the type of lab session they may schedule. The scheduling options available to students will depend on the Self Study Access Options selected for the class (see section 5).

 **Reserve instructor-led training time for a class.** Use this option for lecturing or guiding a whole class of students. With this option, you and a designated class will share the same lab reservation time.

 **Reserve self-study time for teams.** Use this option for allowing your class to work as teams. With this kind of reservation, you can allow your students to share lab time as teams. You can edit team assignments through the Class Manager pages.


 **Reserve self-study time for individual learners.** This is a good option to allow students in your class to work as individuals. With this option, you can designate a student to work on a specific exercise or free time to gain practice.


 **Reserve an equipment pod for your own use.** This is an ideal option for using lab equipment for your own practice. You can also use this kind of reservation when you want to update your lab equipment, or you want to move the lab equipment around. The reservation process is similar to the other kinds of reservations described above.


 **Reserve lab time in a class that you are attending as a learner.** As an instructor, you may be enrolled in a class where you are attending as a learner. You participate in the class identically to other students that are enrolled in the class. Use this option to reserve lab time as a learner in a class. The lead instructor of the class will have the option of participating in the reservation.


## 7.1 Schedule Instructor-led Training Time


Select instructor-led training time as the scheduling option click and then click the **OK** button.


 View or cancel reservations

 Reserve instructor-led training time for a **class**





 Reserve self-study time for **teams**



 Reserve self-study time for **individual learners**

 Reserve an equipment pod for **your own use**


 Reserve lab time in a class that you are **attending as a learner**

When, as in this example, the scheduling option for instructor-led training has been selected, a list of all classes for which you have been designated lead instructor will be displayed. Select the class that will be using the lab reservation.

CLASSES YOU LEAD				
CLASS NAME	LEAD INSTRUCTOR(S)	# ENROLLED	START DATE	END DATE
 CCNA 101	Ann Dole Jane Doe	0	None	None
 CCNP Fall Class	Jane Doe	5	Jan 21, 2006	May 15, 2006
 FNS Class	Ann Dole Jane Doe	2	None	None
 FNS review class	Jane Doe	3	None	None

After selecting the name of the class that will be using this lab reservation, the reservation calendar will be displayed, where a reservation time may be selected. Use the calendar in the upper left corner of the screen to select the date for the reservation by clicking on the date of your choice. You may scroll from month to month by selecting the  and  symbols.

The number of pods available for you to select from will depend upon the number and type of pods that have been installed on your NETLAB+ server. If more than one community uses your NETLAB+ server, you will be limited to selecting within the timeframes designated for your community by the NETLAB+ administrator. Consult your NETLAB+ administrator if you have questions about the pods available to you.

**Scheduler** INSTRUCTOR  **idoe2006**

**MyNETLAB Logout**

February 2006						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

Now Showing

**Wednesday**

**February**

**8**


**2006**














Today's Date and Local Time


[February 7, 2006](#)


**4:01 PM**


Eastern Time (US & Canada)

Select a pod and reservation time for class **CCNP Fall Class** by clicking on a 

POD 1 BASIC ROUTER POD v2	
	3 Routers PC Support
12am	
	
1am	
	
2am	
	
3am	
	
4am	
	
5am	
	

To select the reservation time, scroll the page up and down as needed to display available reservation times. Available times are indicated with a  symbol. Scrolling to the bottom of the page will display the color legend, designed to make the calendar easy to understand.

Color Legend	
	Date you are viewing
	Today's date
	Time reserved for you
	Time reserved for someone else
	Unreserved time
	* Access restricted to specific instructors and classes
	Available time, click to reserve

Once a lab reservation time has been selected by selecting an available time , the confirmation page will be displayed.

Select the appropriate option for initial configuration of the pod equipment. The restore last configuration option will try to restore the lab to the state it was in at the end of the last attended reservation. NETLAB+ maintains a different .LAST\_SAVED configuration folder for each type of reservation (classroom, student, team, and instructor).

Select **Confirm** to confirm the reservation or **Back to Calendar** to make changes.

**Reservation Type** Instructor-Led Training Class

**Class Name** CCNP Fall Class

**Equipment Pod** POD 1

**Time Zone** Eastern Time (US & Canada)

**Start Time** Thursday February 9, 2006 10:00AM

**End Time** Feb 9 2006 11 30 AM

**Initial Configuration**

- restore configs from last Basic Router Pod (Version 2) reservation (if any)
- load default configs for exercise
- no configs loaded (clean)


After confirming, a message will be displayed and you may make additional reservations if needed or select **I'm Done** to return to the MyNETLAB page.





Reservation confirmed.




Reservation 895	
Reservation Type	Instructor-Led Training Class
Class Name	CCNP Fall Class
Equipment Pod	POD 1
Reserved For	Entire Class
Time Zone	(GMT-05:00) Eastern Time (US & Canada)
Start Time	Thu Feb 9, 2006 10:00AM
End Time	Thu Feb 9, 2006 11:30AM
Initial Configuration	load last saved config (if any)


## 7.2 Schedule Self-study Time for Teams


To reserve training time for a team, select the teams scheduling option and then click the **OK** button.



 View or cancel reservations

    Reserve instructor-led training time for a **class**

   Reserve self-study time for **teams**

 Reserve self-study time for **individual learners**

 Reserve an equipment pod for **your own use**

  Reserve lab time in a class that you are **attending as a learner**



The class list will be displayed next, allowing the instructor to select the class for the reservation.

CLASSES YOU LEAD				
CLASS NAME	LEAD INSTRUCTOR(S)	# ENROLLED	START DATE	END DATE
<a href="#">▶ CCNA 101</a>	Ann Dole Jane Doe	0	None	None
<a href="#">▶ CCNP Fall Class</a>	Jane Doe	5	Jan 21, 2006	May 15, 2006
<a href="#">▶ FNS Class</a>	Ann Dole Jane Doe	2	None	None
<a href="#">▶ FNS review class</a>	Jane Doe	3	None	None

If curriculum content has been installed on your NETLAB+ system, the course catalog will be displayed allowing an instructor to select a specific exercise for the student team.

This example NETLAB<sub>AE</sub> system shows lab exercises. An exercise may be selected by clicking on the exercise name. Notice that the first option allows the instructor to select “**no exercise**”.

CATALOG OF LAB EXERCISES				
TYPE	EXERCISE NAME	TIME LIMIT	DESCRIPTION	POD TYPE
CCNP Pod	<a href="#">Reserve Basic Router Pod Version 1 (no exercise)</a>	up to 4 hours	<a href="#">show topology</a>	<b>BASIC ROUTER POD</b>  3 Routers
CCNP Pod	<a href="#">Reserve Basic Router Pod Version 2 (no exercise)</a>	up to 4 hours	<a href="#">show topology</a>	<b>BASIC ROUTER POD v2</b>  3 Routers PC Support
CCNP Pod	<a href="#">Reserve Basic Switch Pod Version 1 (no exercise)</a>	up to 4 hours	<a href="#">show topology</a>	<b>BASIC SWITCH POD</b>  1 Router 2 Switches
CCNP Pod	<a href="#">Reserve Basic Switch Pod Version 2 (no exercise)</a>	up to 4 hours	<a href="#">show topology</a>	<b>BASIC SWITCH POD v2</b>  1 Router, 2 Switches PC Support
CCNP Pod	<a href="#">Reserve Advanced Router Pod (no exercise)</a>	up to 4 hours	<a href="#">show topology</a>	<b>ADVANCED ROUTER POD</b>  Frame / ISDN / Dial
CCNP Pod	<a href="#">Reserve Advanced Switch Pod (no exercise)</a>	up to 4 hours	<a href="#">show topology</a>	<b>ADVANCED SWITCH POD</b>  3 Routers 5 Switches

Once an exercise has been selected, the reservation calendar will be displayed, where a reservation time may be selected. Use the calendar in the upper left corner of the screen to select the date for the reservation by clicking on the date of your choice. You may scroll from month to month by selecting the  and  symbols.

The number of pods available for you to select from will depend upon the number and type of pods that have been installed on your NETLAB+ server that are appropriate for the selected class curriculum and lab exercise. If more than one community uses your NETLAB+ server, you will be limited to selecting within the timeframes designated for your community by the NETLAB+ administrator. Consult your NETLAB+ administrator if you have questions about the pods available to you.

**Scheduler** INSTRUCTOR  
MyNETLAB Logout **jdoe2006**

<< February 2006 >>

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

Now Showing  
**Thursday  
February  
9  
2006**

Today's Date and Local Time  
February 8, 2006  
**1:04 PM**  
Eastern Time (US & Canada)

Select a pod and reservation time for **Reserve Basic Router Pod Version 2 (no exercise)** by clicking on a **+**

**POD 1  
BASIC ROUTER POD v2**  
 3 Routers  
PC Support

12am	<b>+</b>
	<b>+</b>
1am	<b>+</b>
	<b>+</b>
2am	<b>+</b>
	<b>+</b>
3am	<b>+</b>
	<b>+</b>
4am	<b>+</b>
	<b>+</b>
5am	<b>+</b>

To select the time, scroll the page up and down as needed to display available reservation times. Available times are indicated with an **+** symbol. Scrolling to the bottom of the page will display the color legend, designed to make the calendar easy to understand.

Color Legend	
	Date you are viewing
	Today's date
	Time reserved for you
	Time reserved for someone else
	Unreserved time
	* Access restricted to specific instructors and classes
	<b>+</b> Available time, click to reserve

Once a lab reservation time has been selected by selecting an available time **+**, the confirmation page will be displayed. Since this is a team reservation, it is also necessary to indicate what team will be using the lab reservation. The team selections available will

depend on the team assignments made when adding students to the class (see section 5.5). If students have not been put into teams, then only the default selection, team “A” will be available.

Select the appropriate option for initial configuration of the pod equipment. The restore last attended reservation. NETLAB+ maintains a different .LAST\_SAVED configuration folder for each type of reservation (classroom, student, team and instructor).

Select **Confirm** to confirm the reservation or **Back to Calendar** to make changes.

**Reservation Type** Team Self Study for Class

**Class Name** CCNP Fall Class

**Exercise** Reserve Basic Router Pod Version 2 (no exercise)

**Equipment Pod** POD 1

**Reserve Pod For** Team A

**Time Zone** Eastern (US & Canada) A

**Start Time** Thursday, February 9, 2006 12:00PM B

**End Time** Feb 9 2006 1 00 PM C

**Initial Configuration**

restore configs from last Basic Router Pod (Version 2) reservation (if any)

no configs loaded (clean)

**Confirm Reservation**
 **Back to Calendar**
 **Cancel**

After confirming, a message will be displayed and you may make additional reservations if needed, or select **I'm Done** to return to the MyNETLAB page.

Reservation confirmed.


Reservation 898	
Reservation Type	Team Self Study for Class
Class Name	CCNP Fall Class
Exercise Name	Reserve Basic Router Pod Version 2 (no exercise)
Equipment Pod	POD 1
Reserved For	Team A
Time Zone	(GMT-05:00) Eastern Time (US & Canada)
Start Time	Thu Feb 9, 2006 12:00PM
End Time	Thu Feb 9, 2006 1:00PM
Initial Configuration	load last saved config (if any)





**I'm Done**
 **Make Another Reservation**







### 7.3 Schedule Self-study Time For Individual Learners


To reserve training time for an individual student, select the student teams scheduling option click and then click the **OK** button.



 View or cancel reservations

    Reserve instructor-led training time for a **class**





   Reserve self-study time for **teams**

 Reserve self-study time for **individual learners**

 Reserve an equipment pod for **your own use**

  Reserve lab time in a class that you are **attending as a learner**



The class list will be displayed next, allowing the instructor to select the class for the reservation.

CLASSES YOU LEAD				
CLASS NAME	LEAD INSTRUCTOR(S)	# ENROLLED	START DATE	END DATE
 CCNA 101	Ann Dole Jane Doe	0	None	None
 CCNP Fall Class	Jane Doe	5	Jan 21, 2006	May 15, 2006
 FNS Class	Ann Dole Jane Doe	2	None	None
 FNS review class	Jane Doe	3	None	None

If curriculum content has been installed on your NETLAB+ system, the course catalog will be displayed allowing an instructor to select a specific exercise for the student.

This example shows lab exercises available on a NETLAB<sub>AE</sub>. An exercise may be selected by clicking on the exercise name. Notice that the first option allows the instructor to select “**no exercise**”.

CATALOG OF LAB EXERCISES				
TYPE	EXERCISE NAME	TIME LIMIT	DESCRIPTION	POD TYPE
CCNP Pod	<a href="#">Reserve Basic Router Pod Version 1 (no exercise)</a>	up to 4 hours	<a href="#">show topology</a>	<b>BASIC ROUTER POD</b>  3 Routers
CCNP Pod	<a href="#">Reserve Basic Router Pod Version 2 (no exercise)</a>	up to 4 hours	<a href="#">show topology</a>	<b>BASIC ROUTER POD v2</b>  3 Routers PC Support
CCNP Pod	<a href="#">Reserve Basic Switch Pod Version 1 (no exercise)</a>	up to 4 hours	<a href="#">show topology</a>	<b>BASIC SWITCH POD</b>  1 Router 2 Switches
CCNP Pod	<a href="#">Reserve Basic Switch Pod Version 2 (no exercise)</a>	up to 4 hours	<a href="#">show topology</a>	<b>BASIC SWITCH POD v2</b>  1 Router, 2 Switches PC Support
CCNP Pod	<a href="#">Reserve Advanced Router Pod (no exercise)</a>	up to 4 hours	<a href="#">show topology</a>	<b>ADVANCED ROUTER POD</b>  Frame / ISDN / Dial
CCNP Pod	<a href="#">Reserve Advanced Switch Pod (no exercise)</a>	up to 4 hours	<a href="#">show topology</a>	<b>ADVANCED SWITCH POD</b>  3 Routers 5 Switches

Once an exercise has been selected, the reservation calendar will be displayed, where a reservation time may be selected. Use the calendar in the upper left corner of the screen to select the date for the reservation by clicking on the date of your choice. You may scroll from month to month by selecting the  and  symbols.

The number of pods available for you to select from will depend upon the number and type of pods that have been installed on your NETLAB+ server that are appropriate for the selected class curriculum and lab exercise. If more than one community uses your NETLAB+ server, you will be limited to selecting within the timeframes designated for your community by the NETLAB+ administrator. Consult your NETLAB+ administrator if you have questions about the pods available to you.

**Scheduler** INSTRUCTOR  
jdoe2006

**MyNETLAB Logout**

February 2006						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

Now Showing  
**Thursday  
February  
9  
2006**

Today's Date and Local Time  
**February 8, 2006**  
**1:20 PM**  
Eastern Time (US & Canada)

Select a pod and reservation time for **Reserve Basic Switch Pod Version 2** (no exercise) by clicking on a

POD 2 BASIC SWITCH POD v2 1 Router, 2 Switches PC Support	
12am	
1am	
2am	
3am	

To select a reservation time, scroll the page up and down as needed to display available reservation times. Available times are indicated with an symbol. Scrolling to the bottom of the page will display the color legend, designed to make the calendar easy to understand.

Color Legend	
	Date you are viewing
	Today's date
	Time reserved for you
	Time reserved for someone else
	Unreserved time
	* Access restricted to specific instructors and classes
	Available time, click to reserve

Once a lab reservation time has been selected by selecting an available time , the confirmation page will be displayed. Since this is a reservation for an individual learner, it is also necessary to indicate what learner will be using the lab reservation. Select the appropriate option for initial configuration of the pod equipment. The restore last configuration option will try to restore the lab to the state it was in at the end of the last attended reservation. NETLAB+ maintains a different .LAST\_SAVED configuration folder for each type of reservation (classroom, student, team, and instructor).

Select **Confirm** to confirm the reservation or **Back to Calendar** to make changes.






<b>Reservation Type</b>	Individual Self Study for Class			
<b>Class Name</b>	CCNP Fall Class			
<b>Exercise</b>	Reserve Basic Switch Pod Version 2 (no exercise)			
<b>Equipment Pod</b>	POD 2			
<b>Reserve Pod For</b>	Ann Dole			
<b>Time Zone</b>	Ann Dole	Canada)		
<b>Start Time</b>	Bob Miller			
<b>End Time</b>	Ida Lerner	8, 2006	2:00PM	
	Mary Smith	06	3	30
	Victoria Stevens			PM
<b>Initial Configuration</b>	<input checked="" type="radio"/> restore configs from last Basic Switch Pod (Version 2) reservation (if any) <input type="radio"/> no configs loaded (clean)			
<input checked="" type="button" value="Confirm Reservation"/> <input type="button" value="Back to Calendar"/> <input type="button" value="Cancel"/>				

After confirming, a message will be displayed and you may make additional reservations, or select **I'm Done** to return to the MyNETLAB page.



Reservation confirmed.

<b>Reservation 900</b>	
Reservation Type	Individual Self Study for Class
Class Name	CCNP Fall Class
Exercise Name	Reserve Basic Switch Pod Version 2 (no exercise)
Equipment Pod	POD 2
Reserved For	Ida Lerner (ida2006)
Time Zone	(GMT-05:00) Eastern Time (US & Canada)
Start Time	Wed Feb 8, 2006 2:00PM
End Time	Wed Feb 8, 2006 3:30PM
Initial Configuration	load last saved config (if any)
<input checked="" type="button" value="I'm Done"/> <input type="button" value="Make Another Reservation"/>	

The reservation for this individual student lab reservation will now be displayed on the MyNETLAB page for the assigned student. The reservation for instructor-led training created in section 7.1 is also displayed.

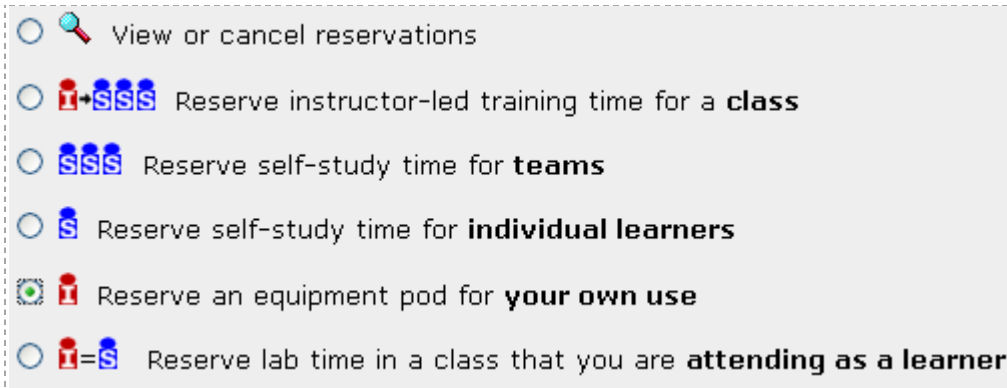
LAB RESERVATIONS			
ID	DATE / TIME	DESCRIPTION	POD
<a href="#">900</a>	<b>TODAY</b> 2:00PM - 3:30PM	 Ida Lerner (ida2006) Class: CCNP Fall Class	<b>POD 2</b> <b>BASIC SWITCH POD v2</b>  1 Router, 2 Switches PC Support
<a href="#">895</a>	Thu Feb 9, 2006 10:00AM - 11:30AM	  Class: CCNP Fall Class Instructors: Jane Doe	<b>POD 1</b> <b>BASIC ROUTER POD v2</b>  3 Routers PC Support

When the time arrives for the lab reservation, the reservation information will also appear on the instructor's MyNETLAB page, giving the instructor the option to participate in the session. This allows the instructor to monitor the student's progress through the session step by step or provide assistance.














LAB RESERVATIONS			
ID	DATE / TIME	DESCRIPTION	POD
<a href="#">900</a>	<b>HOW</b> 2:00PM - 3:30PM <b>ENTER LAB</b>	 Ida Lerner (ida2006) Class: CCNP Fall Class Reserve Basic Switch Pod Version 2 (no exercise)	<b>POD 2</b> <b>BASIC SWITCH POD v2</b>  1 Router, 2 Switches PC Support



## 7.4 Reserve An Equipment Pod For Your Own Use

NETLAB+ includes a scheduling option to allow instructors to conveniently schedule lab reservations for their own use. To reserve an equipment pod for your own use, select the scheduling option shown below and then click the **OK** button.



A screenshot of a reservation menu with seven radio button options. The options are:

-  View or cancel reservations
-     Reserve instructor-led training time for a **class**
-    Reserve self-study time for **teams**
-  Reserve self-study time for **individual learners**
-   Reserve an equipment pod for **your own use**
-   Reserve lab time in a class that you are **attending as a learner**

The reservation calendar will be displayed, where a reservation time may be selected. Use the calendar in the upper left corner of the screen to select the date for the reservation by clicking on the date of your choice. You may scroll from month to month by selecting the  and  symbols.

The number of pods available for you to select from will depend upon the number of pods that have been installed on your NETLAB+ server. If more than one community uses your NETLAB+ server, you will be limited to selecting within the timeframes designated for your community by the NETLAB+ administrator. Consult your NETLAB+ administrator if you have questions about the pods available to you.

**Scheduler** INSTRUCTOR  
**MyNETLAB Logout** jdoe2006

<< February 2006 >>

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

**Now Showing**  
**Thursday**  
**February**  
**9**  
**2006**


**Today's Date and Local Time**  
February 8, 2006  
**1:56 PM**  
 Eastern Time (US & Canada)

Select a pod and reservation by clicking on a

	<b>POD 1</b> <b>BASIC ROUTER POD v2</b> 3 Routers PC Support	<b>POD 2</b> <b>BASIC SWITCH POD v2</b> 1 Router, 2 Switches PC Support
12am		
1am		
2am		
3am		

To select the reservation time, scroll the page up and down as needed to display available reservation times. Available times are indicated with an symbol. Scrolling to the bottom of the page will display the color legend, designed to make the calendar easy to understand.

Color Legend	
	Date you are viewing
	Today's date
	Time reserved for you
	Time reserved for someone else
	Unreserved time
	* Access restricted to specific instructors and classes
	Available time, click to reserve

Once a lab reservation time has been selected by selecting an available time , the confirmation page will be displayed.

Select the appropriate option for initial configuration of the pod equipment. The restore last configuration option will try to restore the lab to the state it was in at the end of the last attended reservation. NETLAB+ maintains a different .LAST\_SAVED configuration folder for each type of reservation (classroom, student, team, and instructor).

**Reservation Type** Instructor Access

**Equipment Pod** POD 1

**Reserve Pod For** Jane Doe

**Time Zone** Eastern Time (US & Canada)

**Start Time** Thursday February 9, 2006 7:00AM

**End Time** Feb 9 2006 8:00 AM

**Initial Configuration**

- restore configs from last Basic Router Pod (Version 2) reservation (if any)
- load default configs for exercise
- no configs loaded (clean)

After confirming, a message will be displayed and you may make additional reservations, or select **Done** to return to the MyNETLAB page.

Reservation confirmed.


Reservation 901	
Reservation Type	Instructor Access
Equipment Pod	POD 1
Reserved For	Jane Doe (jdoe2006)
Time Zone	(GMT-05:00) Eastern Time (US & Canada)
Start Time	Thu Feb 9, 2006 7:00AM
End Time	Thu Feb 9, 2006 8:00AM
Initial Configuration	load last saved config (if any)


The reservation for this lab reservation will now be displayed on the instructor's MyNETLAB page.





## 7.5 Reserve Lab Time In A Class That You Are Attending As A Learner


Instructors have the option of enrolling in a class as a learner, participating in the class identically to other students. Use this option to schedule a lab reservation for a class that you are attending as a learner. Select the scheduling option shown below and then click the **OK** button.


 View or cancel reservations

 Reserve instructor-led training time for a **class**

 Reserve self-study time for **teams**

 Reserve self-study time for **individual learners**

 Reserve an equipment pod for **your own use**






 Reserve lab time in a class that you are **attending as a learner**

The list of classes that you are enrolled in as a learner will be displayed. Select the class for which you'd like to make a reservation.

YOUR CLASSES				
CLASS NAME	LEAD INSTRUCTOR(S)	# ENROLLED	START DATE	END DATE
▶ fall ccna	Ann Dole	4	None	None
▶ spring ccna	None	7	Jan 7, 2006	May 7, 2007

If curriculum content has been installed on your NETLAB+ system, the course catalog will be displayed allowing an instructor to select a specific exercise for the student.

This example shows lab exercises available on a NETLAB<sub>AE</sub>. An exercise may be selected by clicking on the exercise name. Notice that the first option allows selection of “**no exercise**”.

CATALOG OF LAB EXERCISES				
TYPE	EXERCISE NAME	TIME LIMIT	DESCRIPTION	POD TYPE
CCNA Pod	▶ Reserve Basic Router Pod Version 1 (no exercise)	up to 4 hours	▶ show topology	<b>BASIC ROUTER POD</b>  3 Routers
CCNA Pod	▶ Reserve Basic Router Pod Version 2 (no exercise)	up to 4 hours	▶ show topology	<b>BASIC ROUTER POD v2</b>  3 Routers PC Support
CCNA Pod	▶ Reserve Basic Switch Pod Version 1 (no exercise)	up to 4 hours	▶ show topology	<b>BASIC SWITCH POD</b>  1 Router 2 Switches
CCNA Pod	▶ Reserve Basic Switch Pod Version 2 (no exercise)	up to 4 hours	▶ show topology	<b>BASIC SWITCH POD v2</b>  1 Router, 2 Switches PC Support
CCNA Pod	▶ Reserve Advanced Router Pod (no exercise)	up to 4 hours	▶ show topology	<b>ADVANCED ROUTER POD</b>  Frame / ISDN / Dial

Once an exercise has been selected, the reservation calendar will be displayed, where a reservation time may be selected. Use the calendar in the upper left corner of the screen to select the date for the reservation by clicking on the date of your choice. You may scroll from month to month by selecting the < and > symbols.

The number of pods available for you to select from will depend upon the number of pods that have been installed on your NETLAB+ server. If more than one community uses your NETLAB+ server, you will be limited to selecting within the time-frames designated for your community by the NETLAB+ administrator. Consult your NETLAB+ administrator if you have questions about the pods available to you.

**Scheduler** INSTRUCTOR  
jdoe2006

**MyNETLAB Logout**

<<	February 2006						>>
Sun	Mon	Tue	Wed	Thu	Fri	Sat	
			1	2	3	4	
5	6	7	8	9	10	11	
12	13	14	15	16	17	18	
19	20	21	22	23	24	25	
26	27	28					

Now Showing

**Thursday**

**February**

**9**

**2006**

Today's Date and Local Time

February 8, 2006

**2:18 PM**

Eastern Time (US & Canada)

Select a pod and reservation time for **Reserve Basic Router Pod Version 2 (no exercise)** by clicking on a

	<p><b>POD 1</b></p> <p><b>BASIC ROUTER POD v2</b></p> <p>3 Routers PC Support</p>	 
12am		
1am		
2am		

To select the reservation time, scroll the page up and down as needed to display available reservation times. Available times are indicated with an symbol. Scrolling to the bottom of the page will display the color legend, designed to make the calendar easy to understand.

Color Legend	
	Date you are viewing
	Today's date
	Time reserved for you
	Time reserved for someone else
	Unreserved time
	* Access restricted to specific instructors and classes
	Available time, click to reserve

Once a lab reservation time has been selected by selecting an available time , the confirmation page will be displayed.

Select the appropriate option for initial configuration of the pod equipment. The restore last configuration option will try to restore the lab to the state it was in at the end of the last attended reservation. NETLAB+ maintains a different `.LAST_SAVED` configuration folder for each type of reservation (classroom, student, team, and instructor).

**Reservation Type** Individual Self Study for Class

**Class Name** fall ccna

**Exercise** Reserve Basic Router Pod Version 2 (no exercise)

**Equipment Pod** POD 1

**Reserve Pod For** Jane Doe

**Time Zone** Eastern Time (US & Canada)

**Start Time** Thursday February 9, 2006 2:00PM

**End Time** 1.0 hours

**Initial Configuration**

restore configs from last Basic Router Pod (Version 2) reservation (if any)

no configs loaded (clean)

After confirming, a message will be displayed and you may make additional reservations, or select **Done** to return to the MyNETLAB page.







Reservation confirmed.

Reservation 902	
Reservation Type	Individual Self Study for Class
Class Name	fall ccna
Exercise Name	Reserve Basic Router Pod Version 2 (no exercise)
Equipment Pod	POD 1
Reserved For	Jane Doe (jdoe2006)
Time Zone	(GMT-05:00) Eastern Time (US & Canada)
Start Time	Thu Feb 9, 2006 2:00PM
End Time	Thu Feb 9, 2006 3:00PM
Initial Configuration	load last saved config (if any)

The reservation for this lab reservation will now be displayed on the instructor's MyNETLAB page.


## 7.6 View or Cancel Reservations

Instructors may view or cancel reservations that have been scheduled. Select the View or Cancel Reservations scheduling option.

-  View or cancel reservations
-  Reserve instructor-led training time for a **class**
-  Reserve self-study time for **teams**
-  Reserve self-study time for **individual learners**
-  Reserve an equipment pod for **your own use**
-  Reserve lab time in a class that you are **attending as a learner**

You will be presented with the option to view the reservations one day at a time in the calendar (same view as when scheduling reservations) or as a simple list. There is an option to include information on reservations for which the time has already passed.

- view one day at a time in the calendar
- view as a simple list
- include reservations that have already passed

The calendar view displays the reservation calendar pages just as when making a reservation, except that the  symbol to select a reservation time is not displayed.

**Scheduler** INSTRUCTOR  
jdoe2006

**MyNETLAB Logout**

February 2006						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

Now Showing

**Thursday**  
**February**  
**9**  
**2006**

Today's Date and Local Time

February 8, 2006  
**2:30 PM**  
Eastern Time (US & Canada)

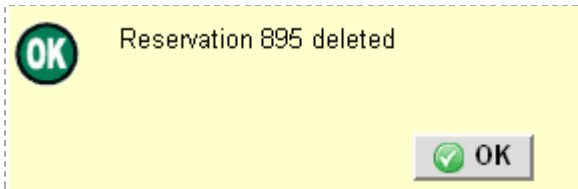
Viewing reservations for all pods.

7am	<b>901</b> Jane Doe	<b>899</b> Ann Dole
8am		
9am		
10am	<b>895</b> CCNP Fall Class	
11am		
12pm	<b>898</b> CCNP Fall Class, Team A	
1pm		


















Clicking on the reservation number will display the reservation details.

Reservation 895	
Reservation Type	Instructor-Led Training Class
Class Name	CCNP Fall Class
Equipment Pod	POD 1
Reserved For	Entire Class
Time Zone	(GMT-05:00) Eastern Time (US & Canada)
Start Time	Thu Feb 9, 2006 10:00AM
End Time	Thu Feb 9, 2006 11:30AM
Initial Configuration	load last saved config (if any)

Select **Cancel Reservation** to delete the reservation. A message will display indicating the reservation has been deleted. Selecting **OK** will return you to the calendar with no deletion.









Here, we view reservations as a list. Using this option is convenient when you wish to see information for more than one day displayed at a time. Just as when viewing in calendar view, you may view details of any reservation by clicking on the ID number and will have the option to delete the reservation.

RESERVATION LISTING			
ID	DATE/TIME	DESCRIPTION	POD
<a href="#">900</a>	<b>HOW</b> 2:00PM - 3:30PM	 Ida Lerner (ida2006) Class: CCNP Fall Class Reserve Basic Switch Pod Version 2 (no exercise)	<b>POD 2</b> <b>BASIC SWITCH POD v2</b>  1 Router, 2 Switches PC Support
<a href="#">901</a>	Thu Feb 9, 2006 7:00AM - 8:00AM	 Jane Doe (jdoe2006)	<b>POD 1</b> <b>BASIC ROUTER POD v2</b>  3 Routers PC Support
<a href="#">899</a>	Thu Feb 9, 2006 7:00AM - 8:00AM	 Ann Dole (Adole) Class: CCNP Fall Class Reserve Basic Switch Pod Version 2 (no exercise)	<b>POD 2</b> <b>BASIC SWITCH POD v2</b>  1 Router, 2 Switches PC Support
<a href="#">903</a>	Thu Feb 9, 2006 10:00AM - 11:30AM	    Class: CCNP Fall Class Instructors: Jane Doe	<b>POD 1</b> <b>BASIC ROUTER POD v2</b>  3 Routers PC Support
<a href="#">898</a>	Thu Feb 9, 2006 12:00PM - 1:00PM	   Team A: Ann Dole, Mary Smith Class: CCNP Fall Class Reserve Basic Router Pod Version 2 (no exercise)	<b>POD 1</b> <b>BASIC ROUTER POD v2</b>  3 Routers PC Support
<a href="#">902</a>	Thu Feb 9, 2006 2:00PM - 3:00PM	 Jane Doe (jdoe2006) Class: fall ccna Reserve Basic Router Pod Version 2 (no exercise)	<b>POD 1</b> <b>BASIC ROUTER POD v2</b>  3 Routers PC Support

## 8 Lab Sessions

The previous section described how lab reservations are made using the scheduling system. The labs will be listed in the upper section of the MyNETLAB page. The labs displayed will include lab sessions for your own use (acting as an instructor or learner) and instructor-led lab sessions that are scheduled for a future time or are occurring now. Team lab sessions and individual student lab sessions will display at the time they occur (to view future reservations of all kinds see section 7.6). The reservation ID, status, Date and time of the reservation, instructor and or student/team designation, and pod name and type are displayed.





Notice that this page displays several reservations including two current lab reservations for teams that the instructor has the option to join and a reservation for an instructor-led reservation.

LAB RESERVATIONS			
ID	DATE / TIME	DESCRIPTION	POD
<a href="#">919</a>	<b>HOW</b> TODAY 11:30PM - Tue Feb 14, 2006 12:30AM <b>ENTER LAB</b>	 Team A: Ann Dole, John Smith, Mary Smith Class: CCNP Fall Class Reserve Basic Router Pod Version 2 (no exercise)	<b>POD 1</b> <b>BASIC ROUTER POD v2</b>  3 Routers PC Support
<a href="#">920</a>	<b>HOW</b> TODAY 11:30PM - Tue Feb 14, 2006 12:30AM <b>ENTER LAB</b>	 Team C: Bob Miller, Ida Lerner Class: CCNP Fall Class Reserve Basic Switch Pod Version 2 (no exercise)	<b>POD 2</b> <b>BASIC SWITCH POD v2</b>  1 Router, 2 Switches PC Support
<a href="#">922</a>	Tue Feb 14, 2006 9:00AM - 10:30AM	 Class: CCNP Fall Class Instructors: Jane Doe	<b>POD 1</b> <b>BASIC ROUTER POD v2</b>  3 Routers PC Support

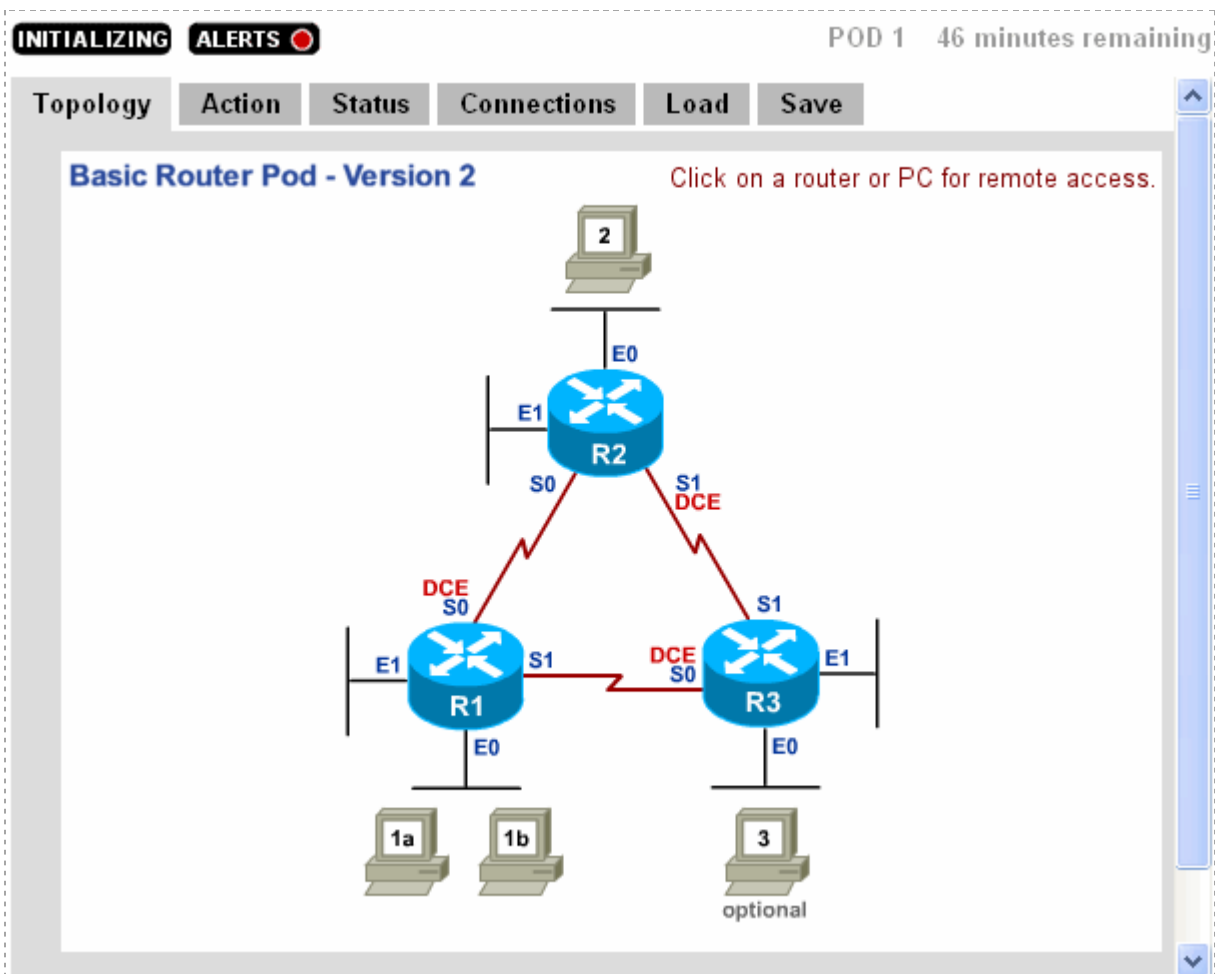


## 8.1 Enter a Lab Session

This lab reservation that has been scheduled for instructor-led training. At the scheduled time, the lab session indicates **Now** rather than **Future** and the **Enter Lab** button will display. The instructor can enter the Lab Access Interface by selecting the **Enter Lab** button

LAB RESERVATIONS			
ID	DATE / TIME	DESCRIPTION	POD
903	<b>Now</b> 10:00AM - 11:30AM <b>ENTER LAB</b>	   Class: CCNP Fall Class Instructors: Jane Doe	<b>POD 1</b> <b>BASIC ROUTER POD v2</b>  3 Routers PC Support

The **Lab Access** Page is divided into several tabbed sections, allowing users to easily access all of NETLAB+'s functions. The **Topology**, **Action**, **Status**, **Connections**, **Load**, **Save** and **Exercise** sections can be accessed by selecting the section name on the tab. Details on each of these sections is provided in section 9.



You may see an alerts indicator on the page. Selecting **Alerts** will display informational or error messages pertaining to the status of lab devices.

The messages will be retained by exiting using the **Close** button. You may delete some or all of the messages by using the **Delete Selected** or **Delete All** buttons.

Select	ID	Time	Description
<input checked="" type="checkbox"/>	16	Mon Feb 13, 2006 4:30AM	<p>The following lab reservation was deleted by jdoe2006 (Jane Doe), who had administrative rights to perform this action.</p> <ul style="list-style-type: none"> <li>◆ Reservation: 898</li> <li>◆ Pod: POD 1</li> <li>◆ Starting: Thu Feb 9, 2006 12:00PM Eastern Time (US &amp; Canada)</li> <li>◆ Type: Team reservation</li> <li>◆ Reserved for: Team A</li> </ul>

Close    Delete Selected    Delete All

You may see the **Initializing** indicator displayed on the page at the very beginning of your session. This indicates that NETLAB+ is in the process of initializing the lab devices in the topology to prepare them for use. When initialization is complete, the **We're Done** button (for instructor-led or team), or **I'm Done** button (for individual or self) will appear allowing you to end the session prior to the scheduled end time (see section 8.3).

NETLAB+ devices may be accessed by opening a Telnet session through the **Topology**, **Action**, **Status** or **Connections** tabs on the Lab Access interface. See section 9 for a detailed description of each section.

## 8.2 Accessing Devices

NETLAB+ supports two methods for remotely accessing lab devices:

- Remote Console for routers, switches, firewalls
- Remote K/V/M (keyboard/video/mouse) for remote PCs

NETLAB+ devices may be accessed from the Topology, Status or Connections tabs on the Lab Access interface (see section 9 for a detailed description of each tab). To access a device, select the Topology tab and click on the device in the drawing. Alternatively, you may use the hyperlinks on Connection tab or Status tab.

By default, NETLAB+ will open the built-in console viewer or remote PC viewer. These viewers are Java based, so there is no special client to load (other than Java). You may also use your own Telnet software for Remote Console connections (see section 4).

NETLAB+ support sharing of both console based devices and remote PCs. During an instructor-led session or a team reservation, multiple users may enter the lab and simultaneously connect to the same device. This is ideal for both Blended Distance Learning and team-based collaboration.

Each Remote K/V/M connection consumes additional CPU processing power on the remote PC. A practical limit of 3 shared sessions to the same remote PC should be observed to maintain reasonable response times. Remote Console based connections (routers, switches, and firewalls) do not consume significant CPU resources and can support as many as 30 sessions.

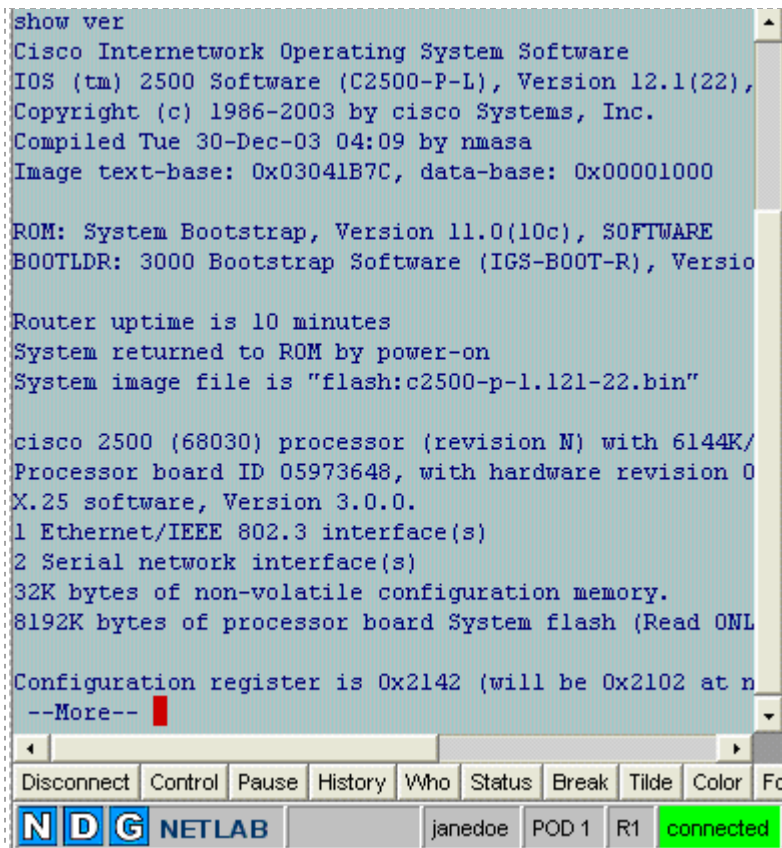
## 8.2.1 Remote Console Connection

Remote Console connections provide remote access to the console port of devices such as routers, switches and firewalls. These connections are established transparently through an access server. The access server is not displayed in the topology diagram. By using console ports, NETLAB+ does not depend on the configuration of the lab topology to access a device.

Console devices may be accessed from the Topology, Status or Connections tabs on the Lab Access interface (see section 9 for a detailed description of each tab). To access a device, select the Topology tab and click on the device in the drawing. Alternatively, you may use the hyperlinks on Connection tab or Status tab.

By default, NETLAB+ uses the built-in viewer. You must click inside the window prior to entering in commands.

In the following example, console access has been opened to **ROUTER1** by clicking on the device icon shown on the Topology tab displayed in 8.1. NETLAB+ opens a Remote Console viewer.



```
show ver
Cisco Internetwork Operating System Software
IOS (tm) 2500 Software (C2500-P-L), Version 12.1(22),
Copyright (c) 1986-2003 by cisco Systems, Inc.
Compiled Tue 30-Dec-03 04:09 by nmasa
Image text-base: 0x03041B7C, data-base: 0x00001000

ROM: System Bootstrap, Version 11.0(10c), SOFTWARE
BOOTLDR: 3000 Bootstrap Software (IGS-BOOT-R), Versio

Router uptime is 10 minutes
System returned to ROM by power-on
System image file is "flash:c2500-p-1.121-22.bin"

cisco 2500 (68030) processor (revision N) with 6144K/
Processor board ID 05973648, with hardware revision 0
X.25 software, Version 3.0.0.
1 Ethernet/IEEE 802.3 interface(s)
2 Serial network interface(s)
32K bytes of non-volatile configuration memory.
8192K bytes of processor board System flash (Read OML

Configuration register is 0x2142 (will be 0x2102 at n
--More--
```

Disconnect Control Pause History Who Status Break Tilde Color Fc

NETLAB janedoe POD 1 R1 connected

If a third party (local) Telnet client is configured in your NETLAB+ profile, the local Telnet application will open and ask the user to log in with the NETLAB+ user ID and password. The username and password required here are the same as the ID and password required to log into the NETLAB+ system.

```
Connecting...
Please login to NETLAB device.
Unauthorized access is prohibited.

NETLAB user ID: janedoe
NETLAB password:
```

You must **first** click on the device before attempting to log in using a local Telnet client. This action identifies the device that NETLAB+ will subsequently establish a connection to (after you provide your username and password).

NETLAB+ Telnet Applet	Correct Action	⇒ Click on the device you want to access. • NETLAB+ connects you to the device. • Login is automatic.
Local Telnet Application (3 <sup>rd</sup> party Telnet client)	Correct Action	⇒ Click on the device you want to access. • NETLAB+ invokes your Telnet client. ⇒ Enter your username and password. • NETLAB+ connects you to the device.
	Incorrect Action	⇒ Telnet directly to NETLAB+ before clicking on the device you want to access.  • <b>This will not work.</b>

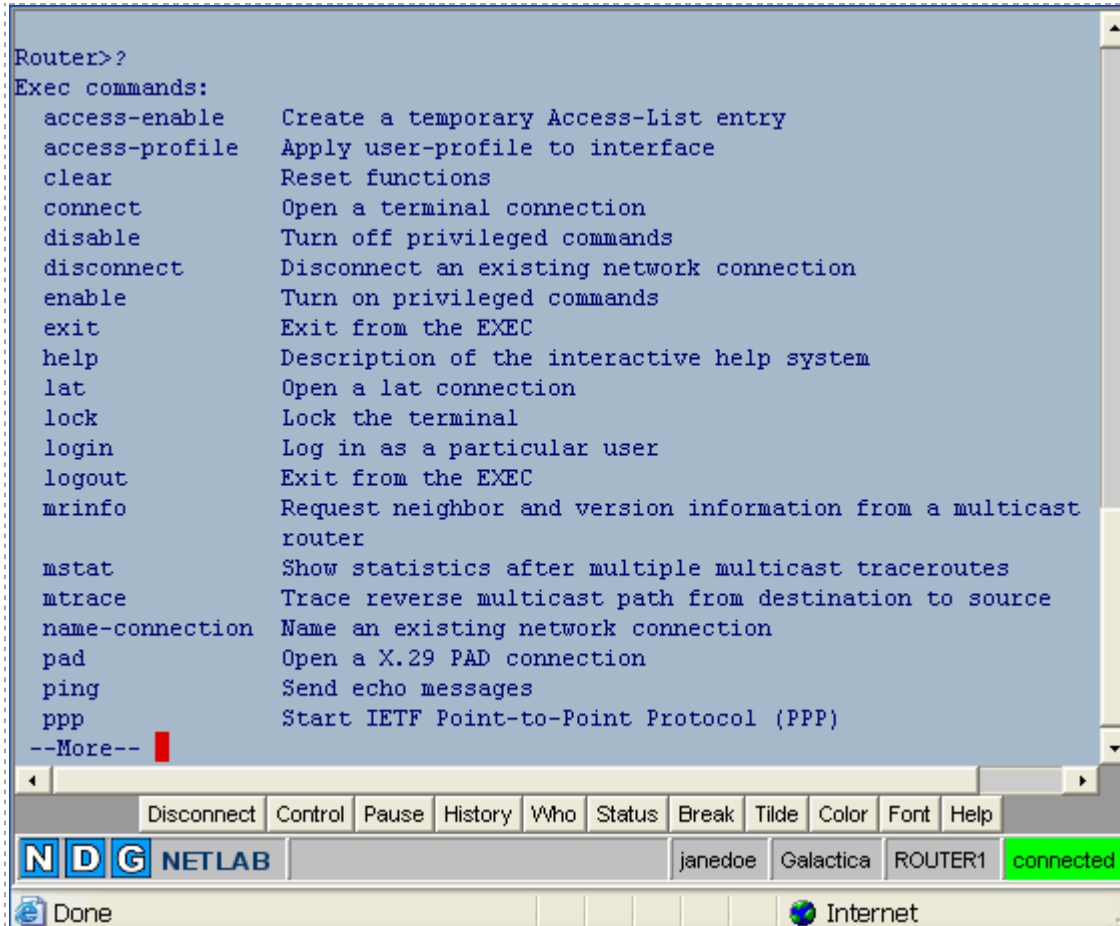
Once a connection is established, you may perform any activity supported by the device's console port.

**You must click inside the window prior to entering in commands.**

```
Router>?
Exec commands:
  access-enable   Create a temporary Access-List entry
  access-profile  Apply user-profile to interface
  clear           Reset functions
  connect         Open a terminal connection
  disable         Turn off privileged commands
```

NETLAB+ Remote Console provides several unique features that can be invoked once a connection has been established.

If you are using the NETLAB+ Telnet Applet as your Remote Console viewer, you may click on any of the buttons on the Telnet Button Bar to invoke these features.



If you are using a 3<sup>rd</sup> party (local) Telnet client, you can use keyboard shortcuts to invoke a feature. Each shortcut starts with a tilde (~) followed by a letter. To send a tilde (~) to the console device, press tilde twice.

Button	Keyboard Shortcut	Description
Disconnect	~D	Terminates your connection. Other users (if any) remain connected.
Control	~C	Click once to take control of a session so other users cannot type. Click again to release control.
Pause	~P	Click once to stop the device from displaying output. Click again to resume output.

History	~H	Replays recent output from the device.
Who	~W	Lists users connected to the device.
Status	~S	Displays the status of your connection.
Break	~B	Sends a hardware break to the console device. Typically used for password recovery exercises.
Tilde	~~	Sends a tilde character to the console device.
Color	n/a	Changes the screen colors. NETLAB+ Telnet Applet only.
Font	n/a	Changes the screen font. NETLAB+ Telnet Applet only.
Help	~?	Displays this information.

Shared access to a console device is facilitated automatically as each user joins the device. Remote Console based connections (routers, switches, and firewalls) do not consume significant CPU resources and can support as many as 30 sessions.

Here, instructor Jane Doe has connected to **ROUTER1** during an instructor-led session. As her students do the same, messages indicate when each user has joined the connection.

```
*** you are connected to ROUTER1
*** press ~? for help

Trying 169.254.1.22...
Connected to 169.254.1.22.
Escape character is 'off'.

*** jsmith (John Smith) joined the connection...

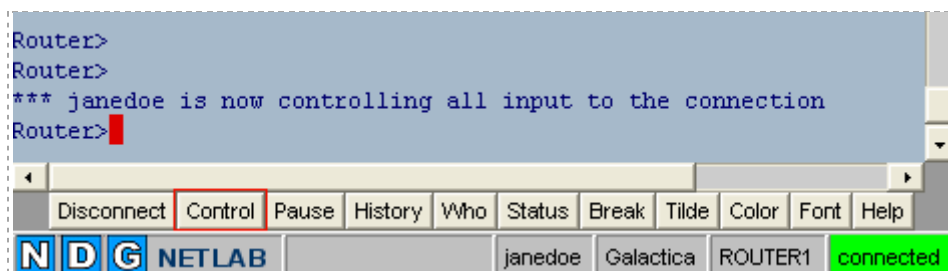
*** ajones (Arnold Jones) joined the connection...
```

The **Control** and **Who** features are used in conjunction with session sharing.

Clicking the Control button (or keyboard shortcut) allows you to take control over the device. Other users in the session may then watch your configuration commands, but will not be able to type commands. Control can be transferred to other users during the session to allow others to make configuration changes. A user who wants to control the device should click the Control button.

Instructors have priority over students. An instructor may always take control from a student, but a student cannot take control from an instructor. Similarly, NETLAB+ automated operations have priority over both instructors and student. When NETLAB+ is performing an automated operation such as password recovery, it will take control of the session. As this happens, users can watch but not interfere with the operation.

Here, Jane Doe has taken control of the device by pressing the Control button. A message will alert everyone connected that Jane has taken control of the device.



```
Router>
Router>
*** janedoe is now controlling all input to the connection
Router>
```

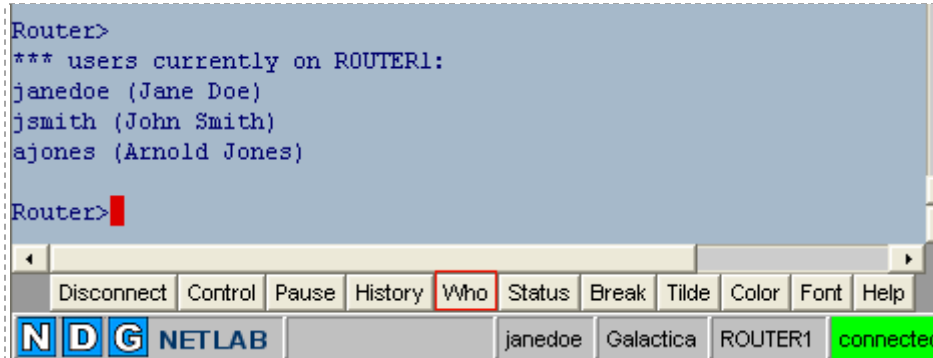
It is not necessary to take control of a device when it is being shared, but this may be helpful in preventing users from typing over each other.



Selecting the **Who** button will display a list of users currently connected to the device. This information is also displayed on the Connections tab.

```
Router>
*** users currently on ROUTER1:
janedoe (Jane Doe)
jsmith (John Smith)
ajones (Arnold Jones)

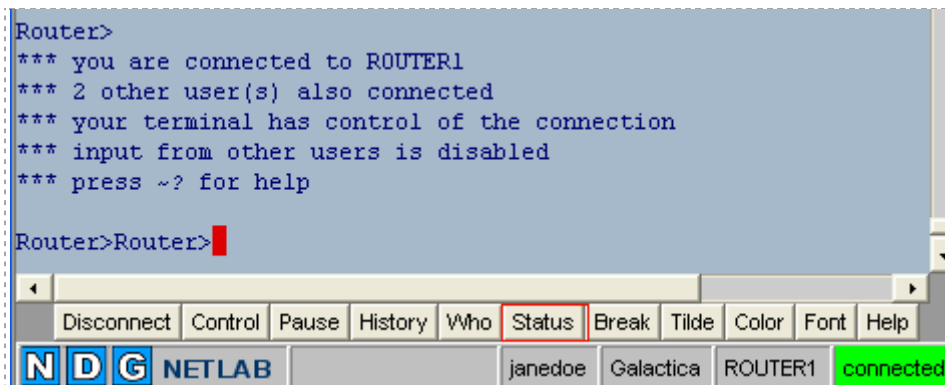
Router>
```



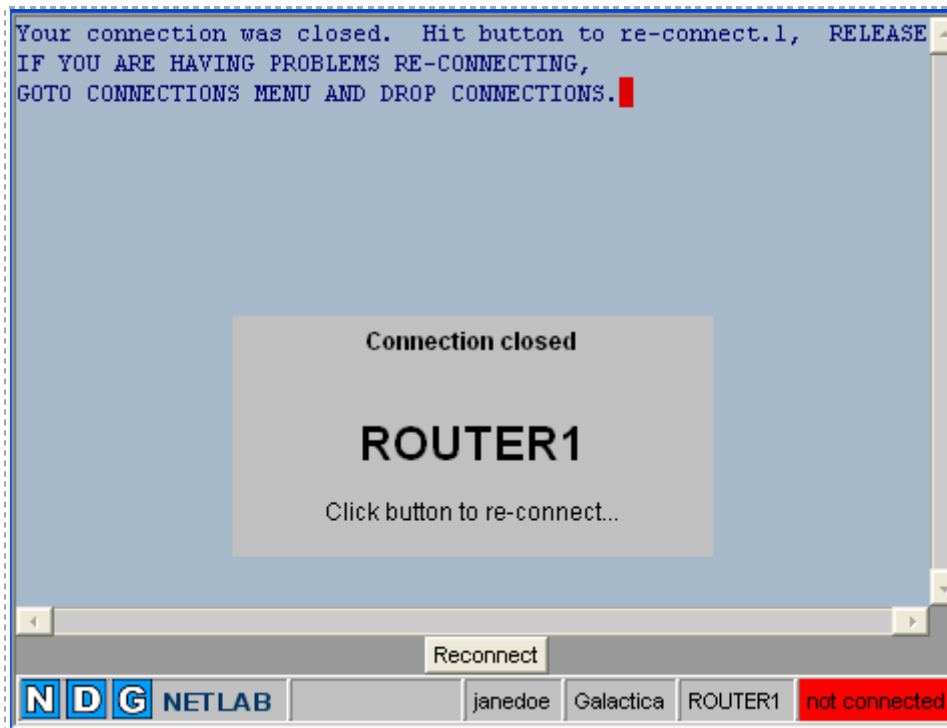
The **Status** button can be used to display who has control of the session and the number of connections.

```
Router>
*** you are connected to ROUTER1
*** 2 other user(s) also connected
*** your terminal has control of the connection
*** input from other users is disabled
*** press ~? for help

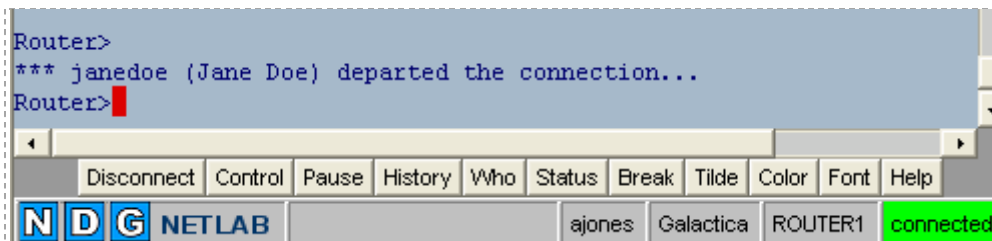
Router>Router>
```



The **Disconnect** button is used to close a user's connection. If there are other users connected to the device, they will remain connected. When the connection has been closed, the reconnect button will be displayed. Here, Jane Doe has disconnected from **ROUTER1**.



Other connected users will see a message indicating that Jane has left the connection.



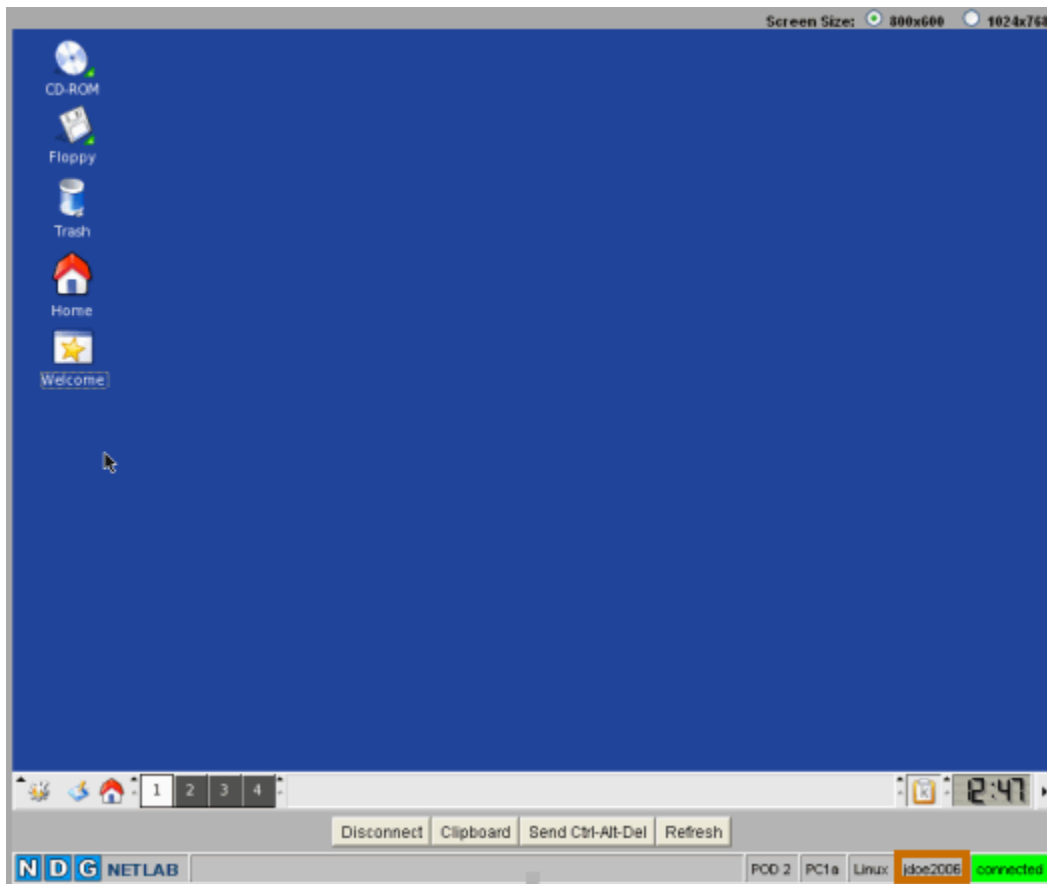
Connections can also be dropped using the function on the Connections tab (see section 9.4).

## 8.2.2 Connection to a PC (Remote K/V/M)

NETLAB+ can also provide a connection to a PC. A remote PC configured for *direct access* allows users to control the keyboard, video, and mouse using a Java based viewer. No special client software (other than Java) is required on the user's computer. NETLAB+ will download the viewer to the client whenever the user clicks on the PC shown in the lab topology. Please see the *NETLAB+ Remote PC Guide for VMware Server Implementation* for more details.

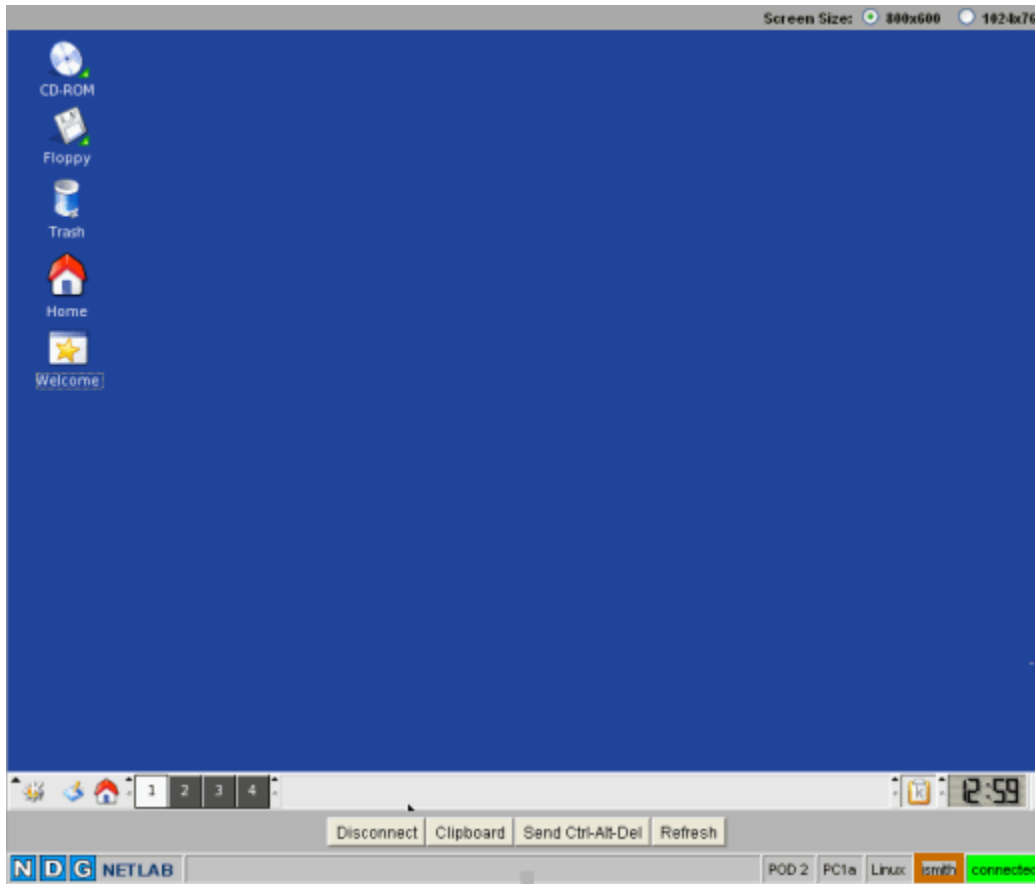
These connections are graphically oriented and not recommended for dial-up users.

Working from the topology shown in section 8.1, instructor jdoe2006 has established a connection to remote **PC 1a**.



Session sharing is facilitated automatically by NETLAB+.

Here, student jsmith has also established a connection to **PC 1a**, and is sharing the session with instructor jdoe2006.




Each Remote K/V/M connection consumes additional CPU processing power on the remote PC. A practical limit of 3 shared sessions on a remote PC should be observed to maintain reasonable response time.

Either user may view the list of connected users for all devices in the topology on the connections tab (see section 9.4). In this example, we can see that both Jane Doe and jsmith are connected to **PC 1b**. Jsmith has also established a connection to **R2**. Jane Doe also has connections to devices **R1**, **R3**, and **PC 1a**.

Topology	Action	Status	Connections	Load	Save	Exercise
DEVICE	TYPE	USER ID	NAME	PRIORITY		
R1	Cisco 1841 (S0/1/x)	jdoe2006	Jane Doe	3		
R2	Cisco 2801/2811 (S0/1/x)	jsmith	John Smith	1		
R3	Cisco 2801/2811 (S0/1/x)	jdoe2006	Jane Doe	3		
PC1a	Linux	jdoe2006	Jane Doe			
PC1b	Other	jdoe2006	Jane Doe			
		jsmith	John Smith			

CLICK ON THE DEVICE NAME TO OPEN A CONNECTION

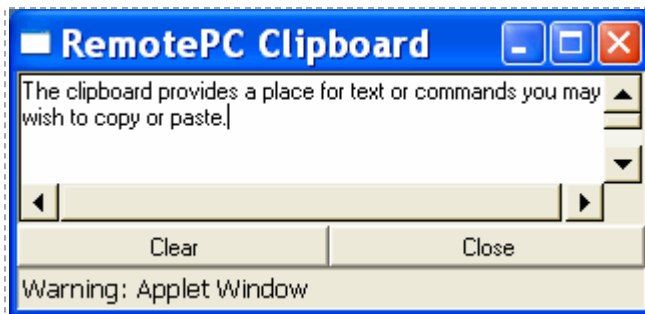
 **Drop My Connections**

The button bar on the viewer provides access to several functions, **Disconnect**, **Clipboard**, **Send Ctrl-Alt-Del** and **Refresh**.



To disconnect from the PC, select the **Disconnect** button. Connections can also be dropped using the function on the Connections tab (see section 9.4).

The **Clipboard** can be used to copy and paste text between the remote PC and your PC.



To use the clipboard feature, the software on the remote PC software must also support it. Currently, VMware does not implement the clipboard.

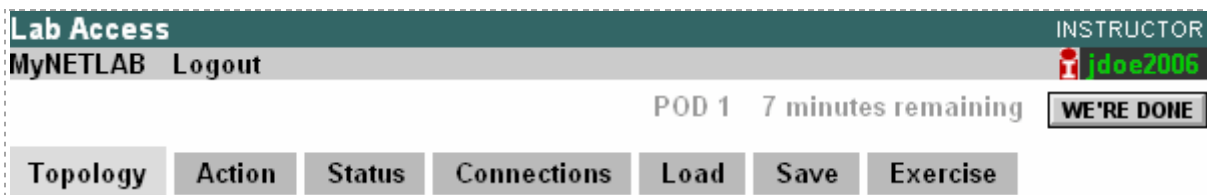
To simulate the actions of pressing Ctrl-Alt-Delete, press the **Send Ctrl-Alt-Del** button.

To refresh the view of the information you are currently displaying, select the **Refresh** button. You may find this helpful when the display appears incorrect or incomplete.

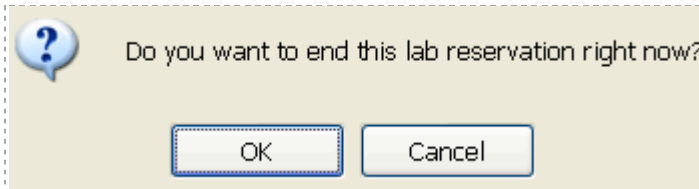
### 8.3 End a Reservation

When the reservation time expires, all connections will be dropped. It is important to save any configuration files prior to the session expiration if you want these files to be available for future use. Users should allow 5 minutes at the end of the session to save configuration files. See section 9.6 for information on saving configuration files.

A reservation may also be ended prior to the scheduled time by using the **We're Done** (for instructor-led or team), or **I'm Done** (for individual or self) buttons. These buttons will appear after initialization of the pod has been completed, at the start of a lab session. If the session is an instructor-led session, the We're Done button will appear only to the instructor.



After confirming the selection, the session will be ended.



The lab session will end immediately and any open user connections will be closed. NETLAB+ will then execute a scrub to prepare the equipment for the next reservation. After the lab scrub has completed, the scheduler will be updated to include any unused time increments of thirty minutes or more to be available for reservation.

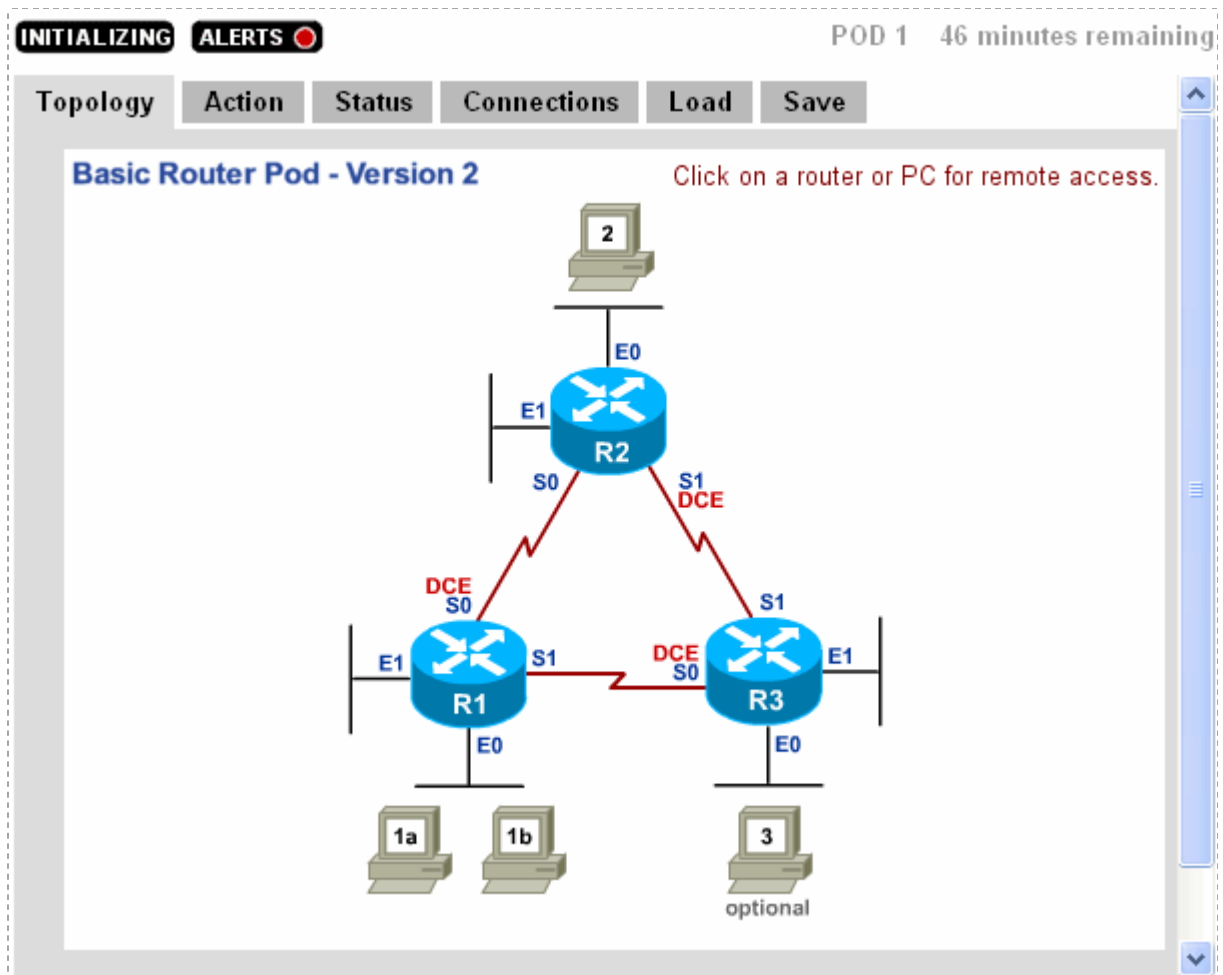
## 9 Sections of the Lab Access Interface

This section describes in detail the functions available on each section of the Lab Access Interface. The Lab Access Page is divided into several tabbed sections, allowing users to easily access all of NETLAB+'s functions. The **Topology**, **Action**, **Status**, **Connections**, **Load**, **Save** and **Exercise** sections can be accessed by selecting the section name on the tab.

You will notice that some functions can be performed from several of the tabbed sections. For example, NETLAB+ devices may be accessed by opening a Telnet session through the **Topology**, **Action**, **Status** or **Connections** tabs.

### 9.1 Topology Tab

The **Topology** tab displays the lab topology including the IP addressing scheme and physical or logical connections. You may click on all devices configured for direct access to establish direct console or GUI access.



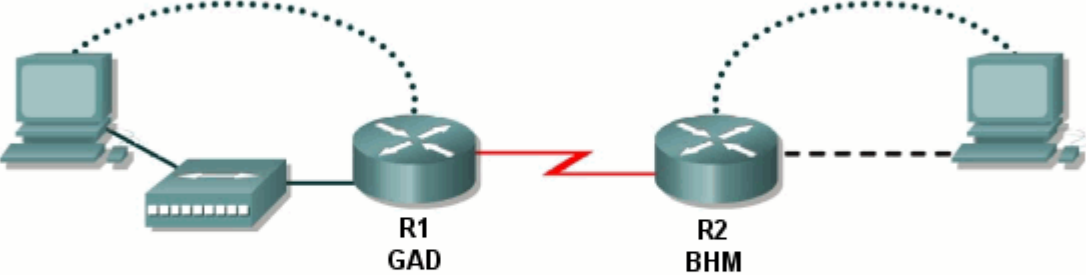


You may see an alerts indicator on the page. Selecting **Alerts** will display informational or error messages pertaining to the status of lab devices. You may see the **Initializing** indicator displayed on the page at the very beginning of your session. This indicates that NETLAB+ is in the process of initializing the lab devices in the topology to prepare them for use. See section 8.1 for more information concerning Initializing and Alerts indicators.

If a lab exercise was selected when the lab reservation was made, or if an instructor selects an exercise during an instructor-led session (see section 9.7), the topology shown may contain graphics specific to the lab exercise.

**Topology**   **Action**   **Status**   **Connections**   **Load**   **Save**

Click on the terminal or router icons to open console connections to the routers.



This lab is using a NETLAB Basic Router Pod.  
Router R3 is not used in this lab.

Click the Show Lab Content button below to view the instructions for this lab.  
The instructions are in PDF format and require the Adobe Acrobat Reader.

**1.2.3 Review of Basic Router Configuration with RIP**   [Show Lab Content](#)

Another example of the Topology tab for a lab reservation to perform a selected lab exercise.

**Topology**   **Action**   **Status**   **Connections**   **Load**   **Save**

Click on the router or terminal icons to open console connections to the routers.

Click the Show Lab Content button below to view the instructions for this lab.  
The instructions are in PDF format and require Adobe Acrobat Reader.

**2.3.6 Propagate Default Route Information in an OSPF Domain**   [Show Lab Content](#)

Here, we have opened a connection to R3 by clicking on the device icon shown on the Topology tab.

```
*** NETLAB (system process) departed the connection...
Router>sho ver
Cisco Internetwork Operating System Software
IOS (tm) 2500 Software (C2500-P-L), Version 12.1(22), RELEASE SO
Copyright (c) 1986-2003 by cisco Systems, Inc.
Compiled Tue 30-Dec-03 04:09 by nmasa
Image text-base: 0x03041B7C, data-base: 0x00001000

ROM: System Bootstrap, Version 5.2(8a), RELEASE SOFTWARE
BOOTLDR: 3000 Bootstrap Software (IGS-RXB00T), Version 10.2(8a),

Router uptime is 7 minutes
System returned to ROM by power-on
System image file is "flash:c2500-p-1.121-22.bin"

cisco 2500 (68030) processor (revision L) with 6144K/2048K bytes
Processor board ID 03238200, with hardware revision 00000000
X.25 software, Version 3.0.0.
1 Ethernet/IEEE 802.3 interface(s)
2 Serial network interface(s)
32K bytes of non-volatile configuration memory.
8192K bytes of processor board System flash (Read ONLY)

Configuration register is 0x2142 (will be 0x2102 at next reload)
--More--
```

Disconnect Control Pause History Who Status Break Tilde Color Font Help

**NDG** NETLAB | janedoe | POD 1 | R3 | **connected**

## 9.2 Action Tab

The **Action** tab provides a convenient method to power off, power on, power recycle, scrub devices (return them to clean state) or perform automatic password recovery. Actions may be performed on single devices or the entire pod simultaneously.

The text box located on this tab displays the passwords NETLAB+ will use to access the devices. If the equipment passwords are not configured to match these, NETLAB+ may not be able to complete the requested action. If this type of error occurs, the ALERTS icon will flash. Errors can be retrieved by clicking on the icon. Also, if the equipment passwords do not match the listed passwords that NETLAB+ expects to be used in the lab, the final configuration will not be saved for instructor review or student use for a future reservation

To perform an action on one device in the topology, select the **Action** command from the drop down menu next to a single device.

NAME	TYPE	ACTION	ACTION ON ENTIRE POD
R1	Cisco 1841 (S0/1/x)	-select-	-select-
R2	Cisco 2801/2811 (S0/1/x)	-select-	-select-
R3	Cisco 2801/2811 (S0/1/x)	power off power on	-select-
PC1a	Linux	power recycle	-select-
PC1b	Other	scrub device password recover	-select-

For automated operations to work properly, please use the following passwords for lab routers, switches, and firewalls:

console: **cisco**    enable secret: **class**

Selecting the Action command from the drop down menu under “**Action on Entire Pod**” will perform the selected action on each device in the topology. Connections to devices can be made from this tab by clicking the hyperlink for the device.

Topology	Action	Status	Connections	Load	Save	Exercise
<b>NAME</b>	<b>TYPE</b>	<b>ACTION</b>			<b>ACTION ON ENTIRE POD</b>	
R1	Cisco 1841 (S0/1/x)	-select-			-select-	
R2	Cisco 2801/2811 (S0/1/x)	-select-			-select-	
R3	Cisco 2801/2811 (S0/1/x)	-select-			power off	
PC1a	Linux	-select-			power on	
PC1b	Other	-select-			power recycle	
					password recover	
					scrub device	

For automated operations to work properly, please use the following passwords for lab routers, switches, and firewalls:

console: **cisco** enable secret: **class**

Routers, switches and firewalls are accessed through a console connection (see section 8.2.1). NETLAB+ also provides connectivity to PCs (see section 8.2.2). Not all actions are available on all types of devices. Certain restrictions apply when the lab device is a remote PC, depending on the type of implementation selected. Please see the *NETLAB+ Remote PC Guide* for more details.

**Availability of Actions for Lab Devices:**

	Console Based Router, Switch, Firewall	PC Based Direct/ VMware (GSX)	PC Based Direct/ Standalone
<b>Power Off</b>	Yes	Yes	No
<b>Power On</b>	Yes	Yes	No
<b>Power Recycle</b>	Yes	Yes	No
<b>Password Recovery</b>	Yes	N/A	N/A
<b>Scrub Device</b>	Yes, erases configuration.	Yes, reverts to a snapshot (built into VMware) if feature is enabled by administrator.	Yes, performs a reboot to revert to a clean state (requires third party software).

### 9.3 Status Tab

The status of all devices in the topology is displayed on the **Status** tab. For reservations that are instructor-led or team sessions, several users may be attached to the devices. The number of users will be displayed in the **Users** column. You can also access a device by clicking the device name.

Topology	Action	Status	Connections	Load	Save	Exercise
DEVICE	TYPE	POWER	USERS	STATUS		
R1	Cisco 1841 (S0/1/x)	ON	2	normal		
R2	Cisco 2801/2811 (S0/1/x)	ON	0	normal		
R3	Cisco 2801/2811 (S0/1/x)	ON	0	normal		
PC1a	Linux	ON	1	online		
PC1b	Other	ON	0	online		
PC2				not implemented in this pod		
PC3				not implemented in this pod		
CLICK ON THE DEVICE NAME TO OPEN A CONNECTION						

### 9.4 Connections Tab

Device connections are shown on the **Connections** tab. For reservations that are instructor-led or team sessions, several users may be attached to devices during a lab session and their User Id and Names are displayed. Each user attached to the device is assigned a *Priority* to determine who can assert exclusive control over the devices when more than one user is sharing the device's console port. Instructors have priority over students. NETLAB+ automated operations have priority over both instructors and students. This tab also contains a button to **Drop My Connections** that allows connected users to quickly disconnect from all devices. Connections to devices can be made from this tab by clicking the device name.

Topology	Action	Status	Connections	Load	Save	Exercise
DEVICE	TYPE	USER ID	NAME	PRIORITY		
R1	Cisco 1841 (S0/1/x)	jdoe2006	Jane Doe	3		
		jsmith	John Smith	1		
R2	Cisco 2801/2811 (S0/1/x)	-	-	-		
R3	Cisco 2801/2811 (S0/1/x)	-	-	-		
PC1a	Linux	jsmith	John Smith			
PC1b	Other	-	-	-		
CLICK ON THE DEVICE NAME TO OPEN A CONNECTION						

## 9.5 Load Tab

The **Load** tab is used to load saved configuration files into one or more console based devices. These saved configuration files can be the result of a previously saved session, or files created and edited offline. The file path is displayed at the top of the directory list. The top level folders allow for separation between personal and class files (see section 10).

Topology	Action	Status	Connections	Load	Save	Exercise
Top Level Folders Accessible by jdoe2006						
NAME						TYPE
My Personal Folder (jdoe2006)						folder
My Class Folders						folder
<p>For automated operations to work properly, please use the following passwords for lab routers, switches, and firewalls:</p> <p>console: <b>cisco</b>    enable secret: <b>class</b></p>						

Selecting the **My Class Folders** link will display a shared files folder and a system files folder for each class. Here we'll select system folder for the CCNP Fall Class.

My Class Folders (jdoe2006)
NAME
go up one level
CCNA 101 Shared Files
CCNA 101 System Files
CCNP Fall Class Shared Files
<b>CCNP Fall Class System Files</b>
fall ccna Shared Files
FNS Class Shared Files
FNS Class System Files
FNS review class Shared Files
FNS review class System Files
spring ccna Shared Files

In this example we see that there are two configuration folders in the System Files folder LAST\_SAVED\_BRPV2 and Example for CCNP Lecture 1. Configuration folders contain configuration files for each device in a lab topology. If all devices will be configured from saved files, it is more efficient to save all device configuration files into a single folder. This folder can then be used to load all devices. See section 10 for details concerning configuration file management.

Topology	Action	Status	Connections	Load	Save	Exercise
<b>CURRENT FOLDER: CCNP Fall Class System Files</b>						
NAME	TYPE	SIZE	UPDATED			
<a href="#">go up one level</a>						
Test Prep	folder					
.LAST_SAVED_BRPV2	config folder		Mon Feb 6, 2006 3:50PM			
Example for CCNP Lecture 1	config folder		Fri Feb 10, 2006 9:48AM			
<p>For automated operations to work properly, please use the following passwords for lab routers, switches, and firewalls:</p> <p>console: <b>cisco</b>    enable secret: <b>class</b></p>						

Here, we've selected the LAST\_SAVED\_BRPV2 configuration folder. The folder contents are displayed.

Topology	Action	Status	Connections	Load	Save	Exercise
<b>CURRENT FOLDER: CCNP Fall Class System Files &gt; .LAST_SAVED_BRPV2</b>						
NAME	TYPE	SIZE	UPDATED			
<a href="#">go up one level</a>	folder					
R1	config	813	Thu Feb 9, 2006 1:18PM			
R2	config	813	Thu Feb 9, 2006 1:18PM			
R3	config	813	Thu Feb 9, 2006 1:18PM			
<p><input type="button" value="Load All Devices"/>    <input checked="" type="checkbox"/> reload with erase before loading</p>						
<p>For automated operations to work properly, please use the following passwords for lab routers, switches, and firewalls:</p> <p>console: <b>cisco</b>    enable secret: <b>class</b></p>						



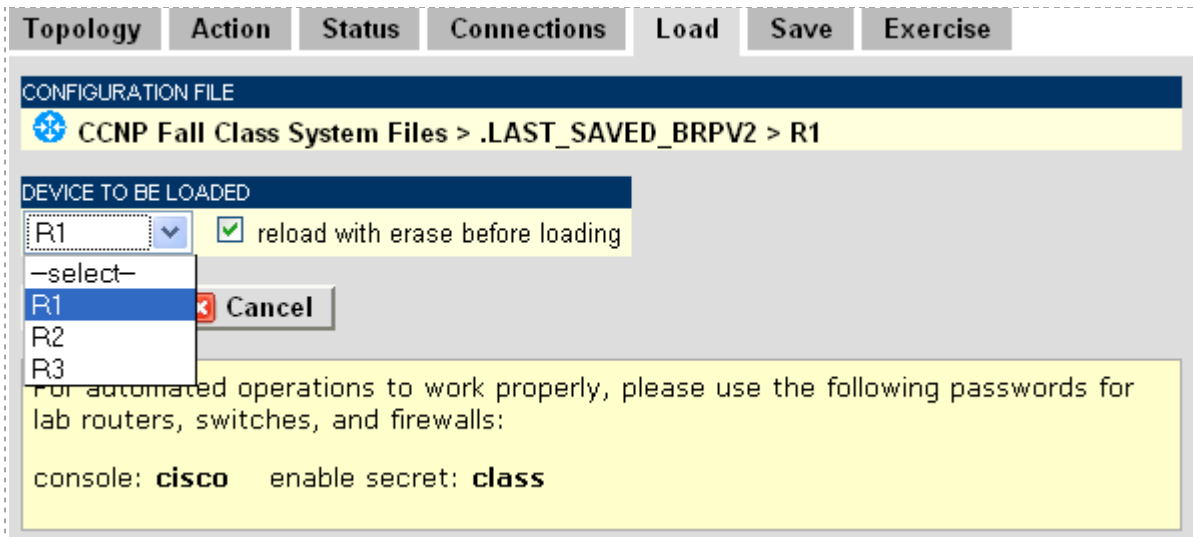
Select the **Load All Devices** button to load the configuration files for each device. You may load all devices with the saved files with the option of erasing the devices prior to loading these files. If the erase option is selected, NETLAB+ will perform a write erase/reload prior loading the selected configuration file. Erasing prior to loading files may be necessary if the passwords have been misconfigured or forgotten. If the erase option is not selected, NETLAB+ will load the overlay the configuration “on top of” the existing configuration, this process is faster but may produce “side effects” depending on the current device configuration.

A pop-up window will confirm the loading process is taking place.

- ◆ loading configuration for jdoe2006 on R1 : **Submitted**
- ◆ loading configuration for jdoe2006 on R2 : **Submitted**
- ◆ loading configuration for jdoe2006 on R3 : **Submitted**

*Your request may be delayed by other jobs.  
Any errors encountered will be sent as alerts.*

There is also the option to select a file in the configuration folder to load a single device. Here, the file **R1** was selected. The file may be loaded into any selected device.



After choosing a device and selecting **OK**, a pop-up window will confirm the loading process is taking place.

- ◆ loading configuration for jdoe2006 on R1 : **Submitted**

*Your request may be delayed by other jobs.  
Any errors encountered will be sent as alerts.*

The page also displays the passwords that NETLAB+ will use to access the devices for the loading process. If the currently configured passwords do not match these, NETLAB+ may be unable to access the devices to load the files.

This does not apply to Remote PCs.

Files are only loaded from this screen; they cannot be edited here. To edit files the instructor must use the File Manager accessible from the MyNETLAB main page.

## 9.6 Save Tab

The **Save** tab is used to save the configuration files of one or more console based devices into selected folders that reside on the NETLAB+ server. Configurations can be saved at any point in the lab reservation. There are two options when saving configuration files. A configuration folder can be created to hold the configuration files for all devices or files for specific devices can be saved individually. To manage configuration files, please refer to section 10.

Topology Action Status Connections Load Save Exercise

CURRENT FOLDER (configurations saved here)

Folder icon jdoe2006 Change Folder

SAVE ALL (enter a folder name)

Folder icon Lecture 2 Configs Save All

DEVICE	FILE NAME	
Folder icon R1	R1	Save
Folder icon R2	R2	Save
Folder icon R3	R3	Save

Overwrite existing configurations

For automated operations to work properly, please use the following passwords for lab routers, switches, and firewalls:

console: **cisco** enable secret: **class**

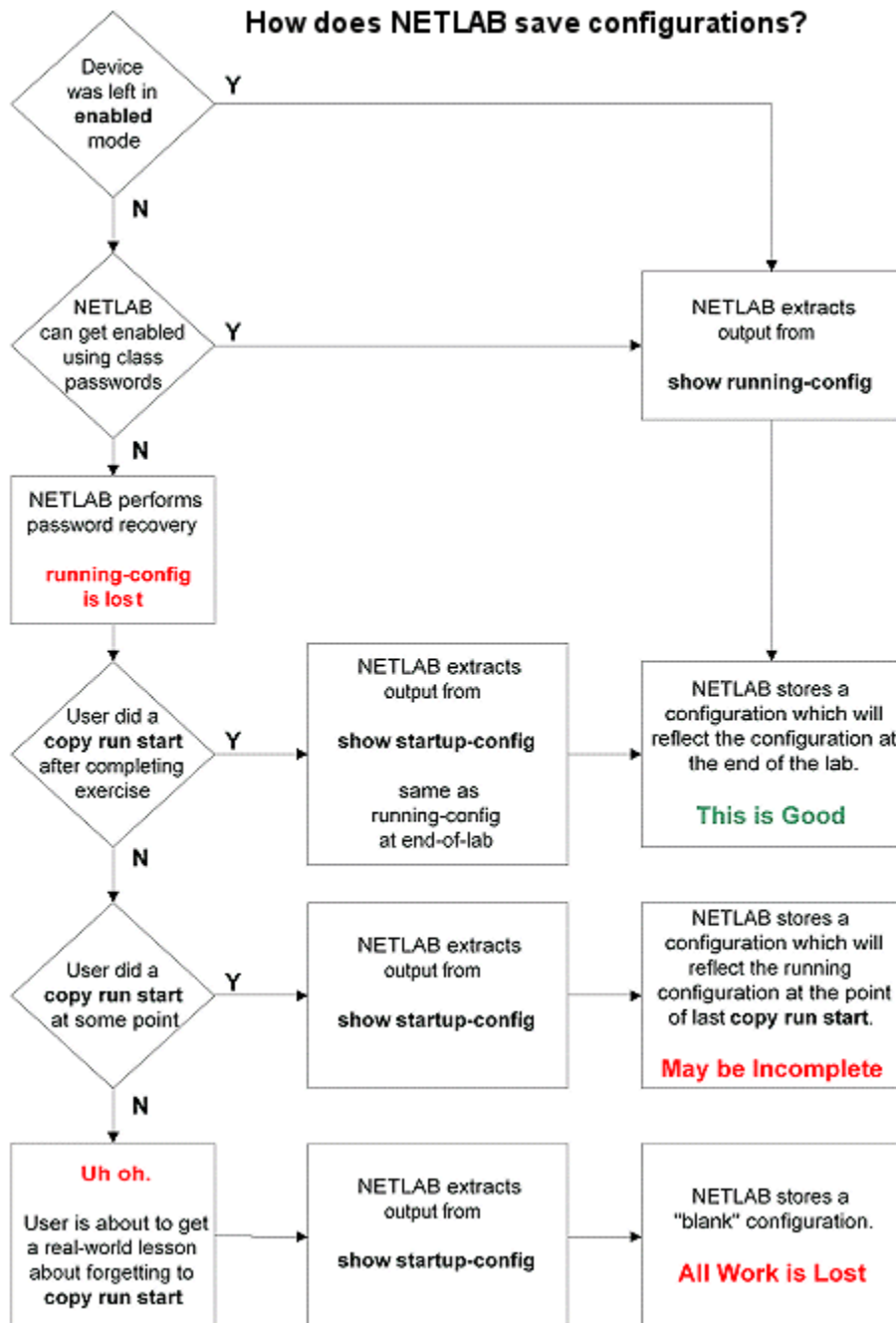
Select the **Save All** option to save configuration files for each device into a configuration folder. You must enter a folder name in the box to the left of the **Save All** button.

Configuration files devices can also be saved individually. The descriptive file name may be edited in the text box prior to clicking the **Save** button next to the device. The configuration file will be saved in the listed directory. Files can be overwritten depending on the state of the overwrite checkbox.

Use the **Change Folder** button if you wish to navigate to another directory location, . prior to saving folders or files. The folder structure is hierarchical and can be used to save the configurations from multiple sessions. These files can later be retrieved, edited, or loaded into devices in the topology.

The flowchart below illustrates the process that NETLAB+ will follow to automatically save lab configurations at the end of a reservation. The configuration is automatically restored for the next reservation (of the same type) when the **Restore from Last Saved**

**Config** option is selected while confirming the reservation. If the device passwords are correct (i.e. match NETLAB+'s), the saved configurations will reflect the “running-config”. If the device passwords are not correct, NETLAB+ will save the “startup-config” based on the last “copy run start”.



## 9.7 Exercise Tab

For lab reservations that have been scheduled as instructor-led training sessions (see section 7.1), there is an additional tab, the **Exercise** tab.

The Exercise tab allows instructors to select lab exercises during the lab reservation. Changing the exercise during an instructor-led session allows you to cover multiple exercises during a single session. This might be useful when you wish to review a prior concept before moving on to new material. The current lab exercise is displayed at the top.

The screenshot shows the 'Exercise' tab selected in a navigation bar. Below the navigation bar, the 'Current Lab Exercise' is displayed as '1.2.3 Review of Basic Router Configuration with RIP' with a 'Show Content' button. A list of exercises is shown below, with '1.2.3 Review of Basic Router Configuration with RIP' selected. The list includes:

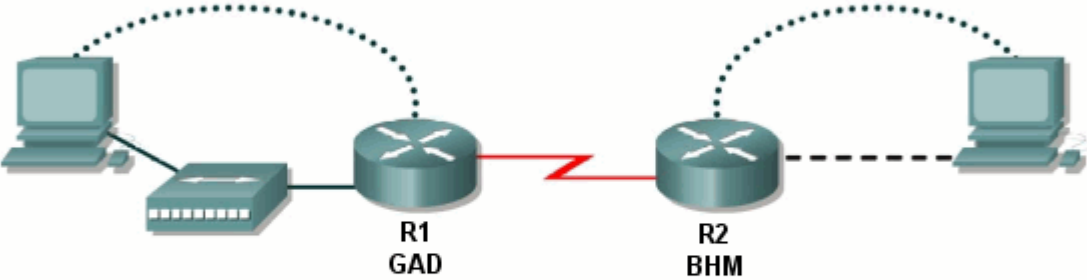
- 1.2.3 Review of Basic Router Configuration with RIP
- 1.2.4 Converting RIP v1 to RIP v2
- 1.2.5 Verifying RIP v2 Configuration
- 1.2.6 Troubleshooting RIP v2 using Debug
- 2.3.1 Configuring OSPF
- 2.3.2 Configuring OSPF with Loopback Addresses
- 2.3.3 Modifying OSPF Cost Metric
- 2.3.4 Configuring OSPF Authentication
- 2.3.5 Configuring OSPF Timers
- 2.3.6 Propagate Default Route Information in an OSPF Domain

Below the list, there is a checked checkbox labeled 'Load default configuration files for exercise (if any)' and a 'Change Exercise' button.

The Topology page shows information for the current exercise.

**Topology**
Action
Status
Connections
Load
Save
Exercise

Click on the terminal or router icons to open console connections to the routers.



This lab is using a NETLAB Basic Router Pod.  
Router R3 is not used in this lab.

Click the Show Lab Content button below to view the instructions for this lab.  
The instructions are in PDF format and require the Adobe Acrobat Reader.

**1.2.3 Review of Basic Router Configuration with RIP**
Show Lab Content

The instructor may return to the Exercise tab at any time during the lab session and select another lab exercise.

**Topology**
Action
Status
Connections
Load
Save
**Exercise**

**Current Lab Exercise**

2.3.6 Propagate Default Route Information in an OSPF Domain Show Content

- 2.3.1 Configuring OSPF
- 2.3.2 Configuring OSPF with Loopback Addresses
- 2.3.3 Modifying OSPF Cost Metric
- 2.3.4 Configuring OSPF Authentication
- 2.3.5 Configuring OSPF Timers
- 2.3.6 Propagate Default Route Information in an OSPF Domain
- 3.2.1 Configuring EIGRP
- 3.2.3 Verifying Basic EIGRP
- 5.2.2 Configuring Frame Relay PVC
- Reserve Basic Router Pod (no exercise)

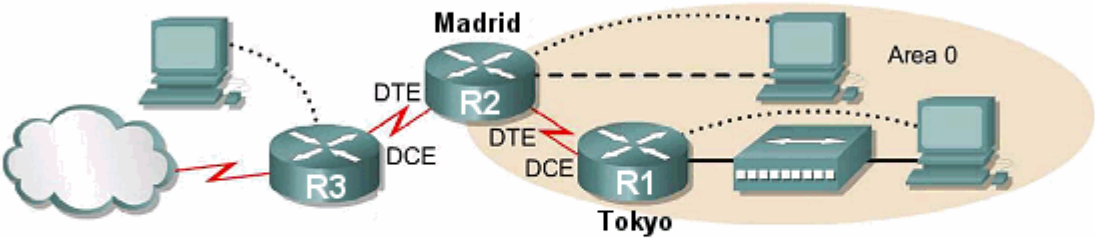
Load default configuration files for exercise (if any)

Change Exercise

The Topology page will be updated with graphics for the new exercise. Students viewing the topology page will need to reload the page to see the updated exercise information.

**Topology**   **Action**   **Status**   **Connections**   **Load**   **Save**   **Exercise**

Click on the router or terminal icons to open console connections to the routers.



Click the Show Lab Content button below to view the instructions for this lab.  
The instructions are in PDF format and require Adobe Acrobat Reader.

**2.3.6 Propagate Default Route Information in an OSPF Domain**   [Show Lab Content](#)

## 10 File Manager





The File Manager is used to view add, change, or delete configuration files and folders. NETLAB+ can upload and download *configuration files* to routers, switches, and firewall devices in the lab. These files are stored in the NETLAB+ *file system*. To access the file manager, select **File** on the MyNETLAB menu bar or select the icon on the body of the page.



NETLAB+ can upload and download *configuration files* to console based devices in the lab. These files are stored in the NETLAB+ *file system*.

To avoid reliance on the lab topology and state, NETLAB+ performs these operations through the console port on each device. When loading a configuration into a device, NETLAB+ will enter configuration mode and send each line of the configuration file as if you had typed it manually. When saving a configuration, NETLAB+ captures the output from the 'show running' or equivalent commands

 *Configuration Files* contain the actual device configurations.

 *Ordinary Folders* may contain other ordinary folders, configuration folders, and configuration files.

 *Configuration Folders* are special folders used for 'Load All' and 'Save All' operations.



- When you issue a 'Load All' request to NETLAB+, you are requesting that the entire equipment pod be loaded with configuration files from a named configuration folder. Any configuration files whose file name matches the name of the device are loaded into the device. Configuration files whose names do not match a device name are not loaded in a 'Load All' operation.
- When you issue a 'Save All' request to NETLAB+, you are requesting that the configuration of each device in the equipment pod be saved. NETLAB+ will create a configuration folder using the name specified and create a configuration for each device in this folder. The name of each configuration file will match the name of the device from which it was saved.






## 10.1 Open Configuration Files

The top level folders allow for separation between personal and class files. The top level folders cannot be modified.

### My Configuration Files












-  Clicking on a folder file changes the current folder
-  Clicking on a configuration file opens the file for viewing or editing

Top Level Folders Accessible by jdoe2006	
NAME	TYPE
 My Personal Folder (jdoe2006)	folder
 My Class Folders	folder


 Due to access restrictions, you can not create, modify or delete files and folders here.

[← Return to MyNETLAB](#)

Selecting the **My Class Folders** link will display file folders for shared files and system files for each class. Here we'll select the shared files folder for the CCNP Fall Class



My Class Folders (jdoe2006)	
NAME	TYPE
 <i>go up one level</i>	folder
 CCNA 101 Shared Files	folder
 CCNA 101 System Files	folder
 CCNP Fall Class Shared Files	folder
 CCNP Fall Class System Files	folder
 fall ccna Shared Files	folder
 FNS Class Shared Files	folder
 FNS Class System Files	folder
 FNS review class Shared Files	folder
 FNS review class System Files	folder
 spring ccna Shared Files	folder






[↑ My Top Level Folders](#)

 Due to access restrictions, you can not create, modify or delete files and folders here.


The files in the class shared folder may be accessed by the students enrolled in the class. Students may view files, copy files, and load devices with configuration files and folders. Students do not have access to add, edit or delete items in the class shared folder.

### My Configuration Files

-  Clicking on a folder file changes the current folder
-  Clicking on a configuration file opens the file for viewing or editing

CURRENT FOLDER: <b>CCNP Fall Class Shared Files</b>				
SELECT	NAME	TYPE	SIZE	UPDATED
	 <i>go up one level</i>			
<input type="checkbox"/>	 Configs Exercise 1	config folder		Fri Feb 10, 2006 11:13AM
<input type="checkbox"/>	 Configs Exercise 2	config folder		Fri Feb 10, 2006 3:26PM
<input type="checkbox"/>	 CCNP Test Commands	config	26	Thu Feb 9, 2006 11:36AM
<input type="checkbox"/>	 R1	config	813	Fri Feb 10, 2006 3:16PM

Here, we select the R1 configuration file.

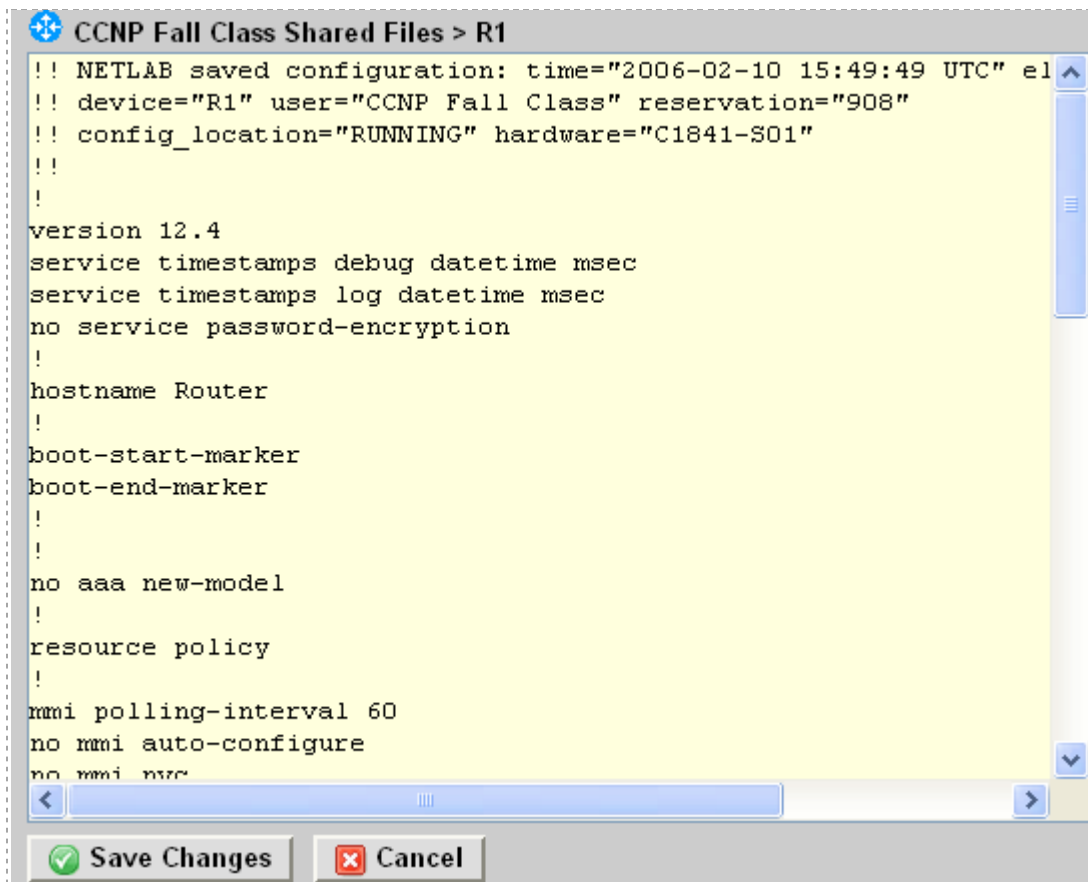
 **CCNP Fall Class Shared Files > R1**

```

!! NETLAB saved configuration: time="2006-02-10 15:49:49 UTC" e1
!! device="R1" user="CCNP Fall Class" reservation="908"
!! config_location="RUNNING" hardware="C1841-S01"
!!
!
!
version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname Router
!
boot-start-marker
boot-end-marker
!
!
no aaa new-model
!
resource policy
!
nmi polling-interval 60
no nmi auto-configure
no nmi nstr

```

Select **Edit This File** in order to make modifications.



```
!! NETLAB saved configuration: time="2006-02-10 15:49:49 UTC" el
!! device="R1" user="CCNP Fall Class" reservation="908"
!! config_location="RUNNING" hardware="C1841-S01"
!!
!
version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname Router
!
boot-start-marker
boot-end-marker
!
!
no aaa new-model
!
resource policy
!
mmi polling-interval 60
no mmi auto-configure
no mmi nvr
```

Save Changes  Cancel



Select **Save Changes** to save the modified version or **Cancel** to exit without saving.






## 10.2 Creating Folders and Files

Using the File Manager, you can create a configuration file or folder outside of a lab session by creating, naming, and editing the file or folder. You may find it useful to create a configuration file offline when you want to practice your router commands or create files to use in later sessions. These files can be created whether or not you have access to a router pod. These configuration files can be saved and later applied to one or more routers in the topology during a lab session.

In this example, we'll create a new configuration folder in the current directory. Configuration folders provide a convenient way to store and access configuration files for a topology (see section 10). Select the list item, **Create new configuration folder** and then select **Go**.

**My Configuration Files**

-  Clicking on a folder file changes the current folder
-  Clicking on a configuration file opens the file for viewing or editing

CURRENT FOLDER: CCNP Fall Class Shared Files				
SELECT	NAME	TYPE	SIZE	UPDATED
	 <i>go up one level</i>			
<input type="checkbox"/>	 Configs Exercise 1	config folder		Fri Feb 10, 2006 11:13AM
<input type="checkbox"/>	 Configs Exercise 2	config folder		Fri Feb 10, 2006 3:26PM
<input type="checkbox"/>	 CCNP Test Commands	config	26	Thu Feb 9, 2006 11:36AM
<input type="checkbox"/>	 R1	config	812	Fri Feb 10, 2006 3:47PM

- ← perform action on this folder →
- Create new configuration file
- Create new ordinary folder
- Create new configuration folder**
- Add selected items to copy list
- Delete selected items

Specify the name of the new folder and then select the **Create** button.

### Create Configuration Folder

Please specify the name of your new folder, then click the Create button.

**CURRENT FOLDER** (new folder is created here)

📁 CCNP Fall Class Shared Files

NEW FOLDER NAME (required)	TYPE
Configs Exercise 3	📁 Configuration Folder

The **Configs Exercise 3** configuration folder is now displayed in the directory list..

CURRENT FOLDER: CCNP Fall Class Shared Files				
SELECT	NAME	TYPE	SIZE	UPDATED
	📁 <i>go up one level</i>			
<input type="checkbox"/>	📁 Configs Exercise 1	config folder		Fri Feb 10, 2006 11:13AM
<input type="checkbox"/>	📁 Configs Exercise 2	config folder		Fri Feb 10, 2006 3:26PM
<input type="checkbox"/>	📁 Configs Exercise 3	config folder		Sat Feb 11, 2006 9:39AM
<input type="checkbox"/>	📄 CCNP Test Commands	config	26	Thu Feb 9, 2006 11:36AM
<input type="checkbox"/>	📄 R1	config	812	Fri Feb 10, 2006 3:47PM

In this example, a new ordinary folder will be added to the directory. Creating ordinary folders will allow you to create a custom hierarchical structure to organize your configuration files and configuration folders.

CURRENT FOLDER: CCNP Fall Class Shared Files				
SELECT	NAME	TYPE	SIZE	UPDATED
	go up one level			
<input type="checkbox"/>	Configs Exercise 1	config folder		Fri Feb 10, 2006 11:13AM
<input type="checkbox"/>	Configs Exercise 2	config folder		Fri Feb 10, 2006 3:26PM
<input type="checkbox"/>	Configs Exercise 3	config folder		Sat Feb 11, 2006 9:39AM
<input type="checkbox"/>	CCNP Test Commands	config	26	Thu Feb 9, 2006 11:36AM
<input type="checkbox"/>	R1	config	812	Fri Feb 10, 2006 3:47PM

<input type="button" value="Create new ordinary folder"/>	<input type="button" value="Go"/>	<input type="button" value="My Top Level Folders"/>	<input type="button" value="Refresh List"/>
<- perform action on this folder -> Create new configuration file <b>Create new ordinary folder</b> Create new configuration folder Add selected items to copy list Delete selected items			

Enter the name of the new ordinary folder and then select the **Create** button.

CURRENT FOLDER (new folder is created here)	
CCNP Fall Class Shared Files	
NEW FOLDER NAME (required)	TYPE
Practice Exam	Folder

<input type="button" value="Create"/>	<input type="button" value="Cancel"/>
---------------------------------------	---------------------------------------

The **Practice Exam** folder is now listed in the directory.

CURRENT FOLDER: CCNP Fall Class Shared Files				
SELECT	NAME	TYPE	SIZE	UPDATED
	<i>go up one level</i>			
<input type="checkbox"/>	Practice Exam	folder		
<input type="checkbox"/>	Configs Exercise 1	config folder		Fri Feb 10, 2006 11:13AM
<input type="checkbox"/>	Configs Exercise 2	config folder		Fri Feb 10, 2006 3:26PM
<input type="checkbox"/>	Configs Exercise 3	config folder		Sat Feb 11, 2006 9:39AM
<input type="checkbox"/>	CCNP Test Commands	config	26	Thu Feb 9, 2006 11:36AM
<input type="checkbox"/>	R1	config	812	Fri Feb 10, 2006 3:47PM

<- perform action on this folder ->

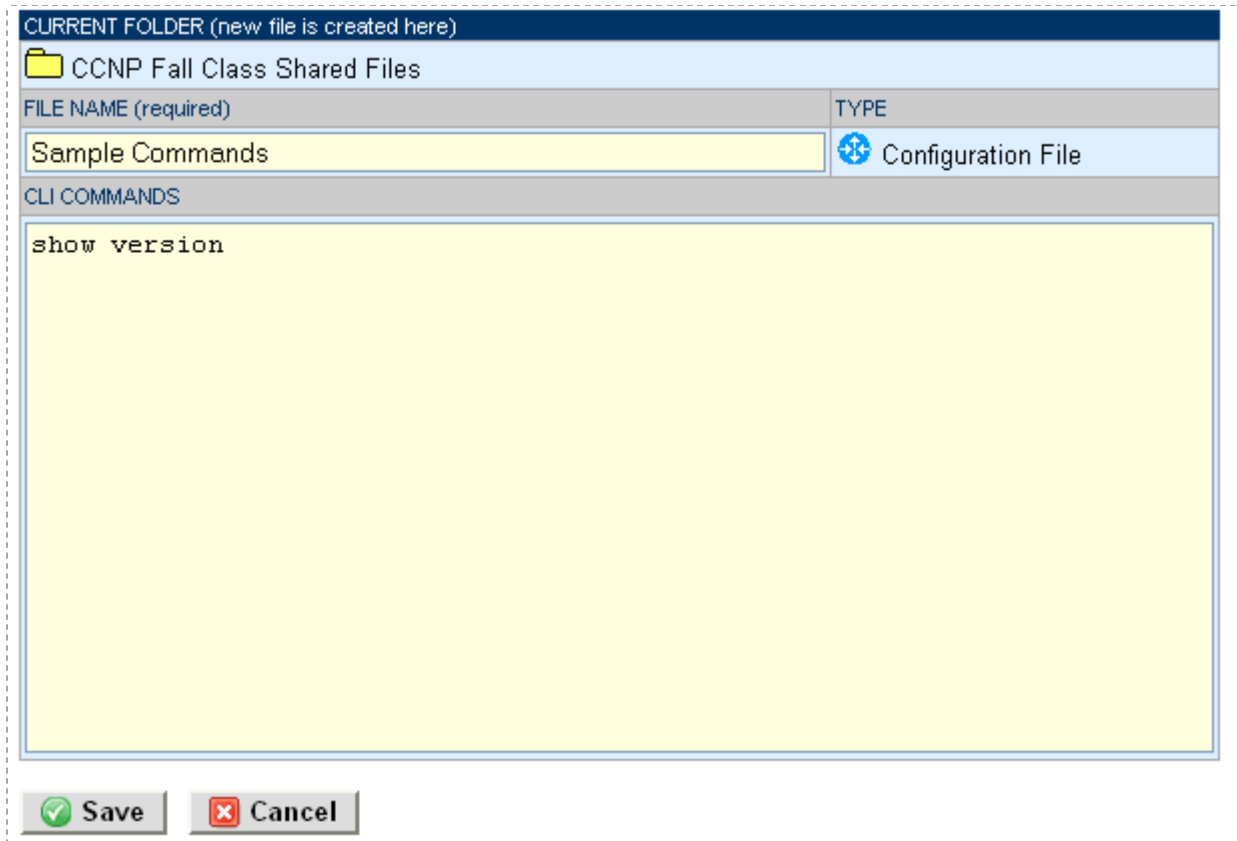
Here, we'll create a new configuration file. Select the list option, **Create new configuration file** and then select **Go**.

CURRENT FOLDER: CCNP Fall Class Shared Files				
SELECT	NAME	TYPE	SIZE	UPDATED
	<i>go up one level</i>			
<input type="checkbox"/>	Practice Exam	folder		
<input type="checkbox"/>	Configs Exercise 1	config folder		Fri Feb 10, 2006 11:13AM
<input type="checkbox"/>	Configs Exercise 2	config folder		Fri Feb 10, 2006 3:26PM
<input type="checkbox"/>	Configs Exercise 3	config folder		Sat Feb 11, 2006 9:39AM
<input type="checkbox"/>	CCNP Test Commands	config	26	Thu Feb 9, 2006 11:36AM
<input type="checkbox"/>	R1	config	812	Fri Feb 10, 2006 3:47PM

<- perform action on this folder ->

- <- perform action on this folder ->
- Create new configuration file**
- Create new ordinary folder
- Create new configuration folder
- Add selected items to copy list
- Delete selected items

The Configuration File Edit Page will be displayed. You will be required to enter a file name. After entering in CLI commands, select **Save** to store the configuration file.



The screenshot shows a web-based interface for creating a configuration file. At the top, it indicates the current folder is 'CURRENT FOLDER (new file is created here)'. Below this, a folder icon represents 'CCNP Fall Class Shared Files'. There are two columns: 'FILE NAME (required)' and 'TYPE'. The file name is 'Sample Commands' and the type is 'Configuration File'. A large text area labeled 'CLI COMMANDS' contains the text 'show version'. At the bottom, there are 'Save' and 'Cancel' buttons.

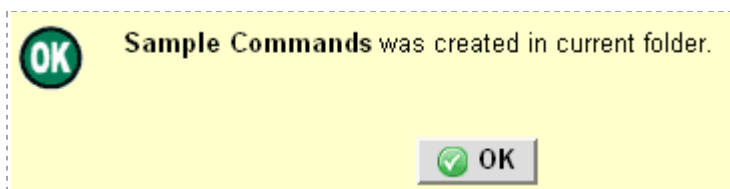
FILE NAME (required)	TYPE
Sample Commands	Configuration File

CLI COMMANDS

```
show version
```

Save Cancel

A confirmation message will indicate that the file has been saved in the current folder.





### 10.3 Deleting Files and Folders

To delete items in the current directory, select the box to the left of the file and/or folder name. From the drop-down menu list, select **Delete Selected Items** and then click the **Go** button.

CURRENT FOLDER: CCNP Fall Class Shared Files				
SELECT	NAME	TYPE	SIZE	UPDATED
	<i>go up one level</i>			
<input type="checkbox"/>	Configs Exercise 1	config folder		Fri Feb 10, 2006 11:13AM
<input type="checkbox"/>	Configs Exercise 2	config folder		Fri Feb 10, 2006 3:26PM
<input checked="" type="checkbox"/>	Configs Exercise 3	config folder		Sat Feb 11, 2006 9:39AM
<input type="checkbox"/>	CCNP Test Commands	config	26	Thu Feb 9, 2006 11:36AM
<input type="checkbox"/>	R1	config	812	Fri Feb 10, 2006 3:47PM
<input checked="" type="checkbox"/>	Sample Commands	config	12	Sat Feb 11, 2006 10:19AM

<- perform action on this folder ->

- <- perform action on this folder ->
- Create new configuration file
- Create new ordinary folder
- Create new configuration folder
- Add selected items to copy list
- Delete selected items**

Confirm that you wish to delete the items by selecting the **OK** button.

Delete selected files / folders / sub-folders?

### 10.4 Copying Files and Folders

The NETLAB+ File Manager includes a process that allows you to easily copy files from one folder to another. This can be useful if you wish to create new configuration files by editing a copies of existing files.

In this example, we will copy the configuration files from the **Configs Exercise 1** folder. Select the files to be copied by click the select box to the left of each file name. From the drop-down menu list, select **Add selected items to copy list** and then click the **Go** button.

CURRENT FOLDER: CCNP Fall Class Shared Files > Configs Exercise 1				
SELECT	NAME	TYPE	SIZE	UPDATED
	go up one level	folder		
<input checked="" type="checkbox"/>	R1	config	813	Sat Feb 11, 2006 12:09PM
<input checked="" type="checkbox"/>	R2	config	813	Sat Feb 11, 2006 12:09PM
<input checked="" type="checkbox"/>	R3	config	813	Sat Feb 11, 2006 12:09PM

<- perform action on this folder ->

<- perform action on this folder ->  
 Create new configuration file  
 Create new ordinary folder  
 Create new configuration folder  
**Add selected items to copy list**  
 Delete selected items

The three selected items have been added to the copy list.

**Copy List**

There are **3** items in your copy list.

You may display a list of the items in the copy list by selecting the **Show Items** button.

COPY LIST (3 items)		
SELECT	FILE	STATUS
<input type="checkbox"/>	CCNP Fall Class Shared Files > Configs Exercise 1 > R1	ready to copy
<input type="checkbox"/>	CCNP Fall Class Shared Files > Configs Exercise 1 > R2	ready to copy
<input type="checkbox"/>	CCNP Fall Class Shared Files > Configs Exercise 1 > R3	ready to copy

Next, traverse the directory structure to make the **Configs Exercise 2** folder the current folder. The files in the copy list will be copied to this folder by selecting **Paste to Current Folder** button on the copy list box.

Use the *file manager* to manage configuration files for your lab device. The [help](#) page contains a complete description of this feature.

**Copy List**

There are **3** items in your copy list.

### My Configuration Files

- Clicking on a folder file changes the current folder
- Clicking on a configuration file opens the file for viewing or editing

CURRENT FOLDER: CCNP Fall Class Shared Files > Configs Exercise 2				
SELECT	NAME	TYPE	SIZE	UPDATED
<input type="checkbox"/>	go up one level	folder		





Confirm that you wish to copy the files into the current folder by selecting the **OK** button.

Paste 3 item(s) in copy buffer to CCNP Fall Class Shared Files>Configs Exercise 2?

A list of the items copied will be displayed with the status of the copy process for each item.

COPY LIST (3 items)		
SELECT	FILE	STATUS
<input type="checkbox"/>	CCNP Fall Class Shared Files > Configs Exercise 1 > R1	copied OK
<input type="checkbox"/>	CCNP Fall Class Shared Files > Configs Exercise 1 > R2	copied OK
<input type="checkbox"/>	CCNP Fall Class Shared Files > Configs Exercise 1 > R3	copied OK

The copied files are now listed in the directory of the **Configs Exercise 2** folder.

CURRENT FOLDER: CCNP Fall Class Shared Files > Configs Exercise 2				
SELECT	NAME	TYPE	SIZE	UPDATED
	 <i>go up one level</i>	folder		
<input type="checkbox"/>	 R1	config	813	Sat Feb 11, 2006 12:37PM
<input type="checkbox"/>	 R2	config	813	Sat Feb 11, 2006 12:37PM
<input type="checkbox"/>	 R3	config	813	Sat Feb 11, 2006 12:37PM

← perform action on this folder →

Clear out the items in the copy list by selecting the **Clear List** button.

**Copy List**

There are **3** items in your copy list.

## 10.5 Interface Name Translation

Your NETLAB+ server may contain pods containing Cisco routers. The IOS commands used to configure router interfaces for one hardware type may not be compatible with other hardware types in your pods. For example, if you have 2600 series routers in Pod A and 2500 series routers in Pod B, a configuration file created with commands compatible with the 2600 series routers will not work if loaded into the 2500 series routers. The interface commands below illustrate this incompatibility.

Configuring an Ethernet interface on a **2600 series** router:

```
2600_router# interface fastethernet 0/0
2600_router# ip address 10.10.10.2
```

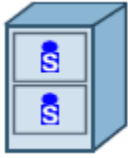
Configuring an Ethernet interface on a **2500 series** router:

```
2500_router# interface ethernet 0
2500_router# ip address 10.10.10.2
```

NETLAB+ Academy Edition pod types support *interface name translation*. This feature allows configuration files saved by NETLAB+ to be loaded, without errors, on a different pod with different router types. As a configuration is loaded, NETLAB+ will substitute the correct interface names for the actual router types being used (if necessary). To do this, NETLAB+ maintains a fixed table of interface names that should present on each router model. This may influence the selection of modular interface cards and slot placement within the router.

Configuration files and folders created during lab sessions using the Save tab of the Lab Access interface will contain metadata allowing the configuration commands to work with multiple router hardware platforms. Using the Save tab (see section 9.6) will ensure that configuration files and folders will work across router hardware types.

## 11 Archive



The **Archive** contains session logs and configuration files from completed lab reservations. Examining the archive files is a very convenient means of evaluating the performance of your students. Archived data is accessible only by the lead instructor of the class. A retention policy for archived data for each class is set in the class manager. For information on setting class management options, please see section 5. To access the archive, select Archive on the MyNETLAB menu bar or the icon on the MyNETLAB page.



The archive class list displays all classes for which you are designated lead instructor. To view archived data, select a class from the list.

CLASS LIST					
CLASS NAME	LEAD INSTRUCTOR(S)	# ENROLLED	START DATE	END DATE	
▶ FNS review class	Jane Doe	3	None	None	
▶ CCNP Fall Class	Jane Doe	6	Jan 21, 2006	May 15, 2006	
▶ FNS Class	Ann Dole Jane Doe	2	None	None	
▶ CCNA 101	Ann Dole Jane Doe	3	None	None	
▶ Spring CCNA 1	Jane Doe	4	Jan 21, 2006	May 20, 2006	

## 11.1 View Archived Data from Individual Reservations

The archive list may be set to display all learners in the selected class, or only those with data in the archive. The list displays the total number of archived files for each student that occurred within the retention period set for the class. See section 0 for details on setting the retention period for a class.

CCNP Fall Class	
Lead Instructor(s)	Jane Doe
Self Study Access	Individuals, Teams
Retain Configs/Logs	ILT Class, Student or Team
Retention Period	30 days

**Reservations Completed by Individual Learners**

Display class members with data in the archive  
 Display all class members

Click on the student's name to access their completed lab reservations in the archive.

STUDENT ARCHIVE				
NAME	USER ID	LOGINS	LAST LOGIN	ARCHIVED
<a href="#">Ann Dole</a>	Adole	4	Wed Feb 8, 2006 4:28PM	1
<a href="#">Bob Miller</a>	bmiller	1	Sat Jan 21, 2006 11:17AM	0
<a href="#">Ida Lerner</a>	ida2006	3	Wed Feb 8, 2006 3:29PM	2
<a href="#">Jane Doe</a>	jdoe2006	46	Sat Feb 11, 2006 7:47PM	0
<a href="#">John Smith</a>	jsmith	3	Fri Feb 10, 2006 10:54AM	1
<a href="#">Mary Smith</a>	msmith	3	Mon Feb 6, 2006 6:00PM	1
<a href="#">Victoria Stevens</a>	vstevens	0	never	0

Select a student name to view the list of archived logs for the student.

CLASS ARCHIVE FOR <b>Mary Smith</b> (msmith)			
ID	DATE/TIME	EXERCISE	STATUS
<a href="#">892</a>	Mon Feb 6, 2006 6:00PM	Reserve Basic Router Pod Version 2 (no exercise)	completed
<a href="#">914</a>	Sat Feb 11, 2006 9:00PM	Reserve Basic Switch Pod Version 2 (no exercise)	not attended

Select one of the archived files by clicking on the ID number. The NETLAB+ Log Viewer allows an instructor to review the final configuration files and device output (logs) from a lab reservation. NETLAB+ records every keystroke and router output of lab allowing an instructor to rapidly assess how a student or team arrived at a solution.

Log Viewer

INSTRUCTOR

MyNETLAB Logout

i **idoe2006**

Summary

[Command Index](#)

---

Final Configs

[R1](#)

[R2](#)

[R3](#)

---

Session Logs

[R1](#)

[R2](#)

[R3](#)

---

[← Back](#)

SUMMARY	
Reservation ID	892
Date/Time	Mon Feb 6, 2006 6:00PM
Class	CCNP Fall Class
User Name	Mary Smith (msmith)
Status	completed

Use the navigation links on the left to see the details of this lab.

Details on the use of the log viewer are provided in section [11.4](#).



## 11.2 View Archived Data from Team Reservations

The Student Teams Archive list may be set to display all teams, or only teams with data in the archive. Select a team to display a list of completed lab reservations.

### Reservations Completed by Teams

- Display teams (past or present) with data in the archive  
 Display all currently defined teams

The following list shows the **current** members for each team. Click on the team name (letter) to access their completed lab reservations.

TEAM ARCHIVE		
TEAM	CURRENT MEMBERS	ARCHIVED
<a href="#">▶ A</a>	Ann Dole John Smith Mary Smith	2
<a href="#">▶ B</a>	Victoria Stevens	1
<a href="#">▶ C</a>	Bob Miller Ida Lerner	2

The students listed are the students assigned to the team, the list does not indicate who actually logged into the reservation. If one of the students from the team logs in to the reservation, all team members' names will appear here and the reservation status will indicate "completed". Select one of the archived files by clicking on the ID number.

<a href="#">▶ 919</a>	Mon Feb 13, 2006 11:30PM	Ann Dole (Adole) John Smith (jsmith) Mary Smith (msmith)	Reserve Basic Router Pod Version 2 (no exercise)	completed
-----------------------	-----------------------------	--	---	-----------

Here, we see the summary information (see section 11.4.1) for a team reservation. The summary information indicates this reservation was completed by Team A.

The screenshot shows the 'Log Viewer' interface. At the top, it says 'Log Viewer' and 'MyNETLAB Logout'. On the right, it says 'INSTRUCTOR' and 'jdoe2006'. The main content is divided into two columns. The left column has a navigation menu with 'Summary' (selected), 'Command Index', 'Final Configs', 'R1', 'R2', 'R3', 'Session Logs', and 'R1', 'R2', 'R3'. At the bottom of the left column is a 'Back' button. The right column shows a 'SUMMARY' table with the following data:

SUMMARY	
Reservation ID	912
Date/Time	Sat Feb 11, 2006 8:00PM
Class	CCNP Fall Class
Team	A
Members	
Status	completed

Below the table, it says: 'Use the navigation links on the left to see the details of this lab.'

See section 11.4 for details on each section of the log viewer.

### 11.3 View Archived Data from Instructor-Led Reservations

The archive page lists the number of instructor-led reservations that may be viewed.

#### Completed Instructor-Led Reservations

There are [6 instructor-led class reservations](#) in the archive.

Archives of the completed instructor-led class reservations are listed in date/time order. The archive list displays the length of the reservation.

Instructor-Led Class Archive		
ID	Date/Time	Length
<a href="#">891</a>	Mon Feb 6, 2006 3:00PM	60 minutes
<a href="#">903</a>	Thu Feb 9, 2006 10:00AM	90 minutes
<a href="#">906</a>	Thu Feb 9, 2006 11:30AM	60 minutes
<a href="#">907</a>	Thu Feb 9, 2006 12:30PM	60 minutes
<a href="#">908</a>	Fri Feb 10, 2006 10:00AM	90 minutes
<a href="#">911</a>	Sat Feb 11, 2006 11:30AM	60 minutes

The archive file is accessed clicking the ID hyperlink.

Log Viewer

INSTRUCTOR

MyNETLAB Logout

jdoe2006

[Summary](#)

[Command Index](#)

---

Final Configs

[R1](#)

[R2](#)

[R3](#)

---

Session Logs

[R1](#)

[R2](#)

[R3](#)

---

[Back](#)

SUMMARY

Reservation ID	908
Date/Time	Fri Feb 10, 2006 10:00AM
Class	CCNP Fall Class
Status	completed

Use the navigation links on the left to see the details of this lab.

The functions of the log viewer are described in section [11.4](#).

## 11.4 Archive Log Viewer

The NETLAB+ Log Viewer allows an instructor to review the final configuration files and device output (logs) from a lab reservation. Since NETLAB+ records every keystroke and router output of lab sessions, an instructor can rapidly assess how a student or team arrived at a solution. The instructor may also receive choose to receive this information by e-mail.

The **Log Viewer** screen is a framed interface. The left frame is used to navigate to the **Summary**, **Command Index**, **Final Configs** and **Session Logs**. The right window is used to display the data. The following sections show examples of each view available using the log viewer.

### 11.4.1 Archive Summary

The **Summary** shows general information about the session, including the student's name and the exercise selected for this reservation. The status of a reservation is indicated "completed" if the student logged in to the reservation. It does not necessarily indicate that the student completed all exercise requirements.

The screenshot shows the 'Log Viewer' interface. At the top, it says 'Log Viewer' and 'MyNETLAB Logout'. On the right, it indicates the user is an 'INSTRUCTOR' named 'jdoe2006'. The left sidebar contains navigation links: 'Summary' (selected), 'Command Index', 'Final Configs', and 'Session Logs'. Under 'Final Configs' and 'Session Logs', there are links for 'R1', 'R2', and 'R3'. A 'Back' button is at the bottom left. The main content area is titled 'SUMMARY' and contains the following table:

Reservation ID	892
Date/Time	Mon Feb 6, 2006 6:00PM
Class	CCNP Fall Class
User Name	Mary Smith (msmith)
Status	completed

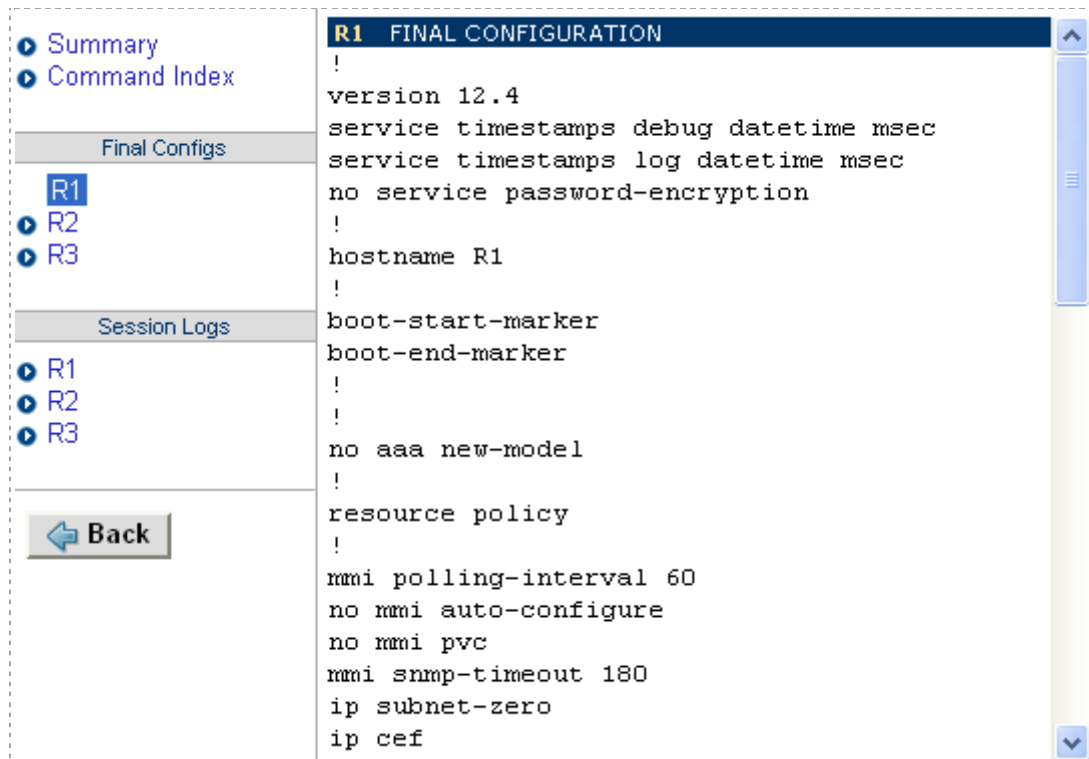
Below the table, it says: 'Use the navigation links on the left to see the details of this lab.'

## 11.4.2 Archive Final Configs

The Final Configs section displays the configuration of devices at the end of the reservation. To see the final configuration for a device, select the device name in the column on the left frame in the **Final Configs** section.

Since some exercises can be loaded with the default configuration for all devices, the final configuration associated with a device may or may not reflect work done by the student.

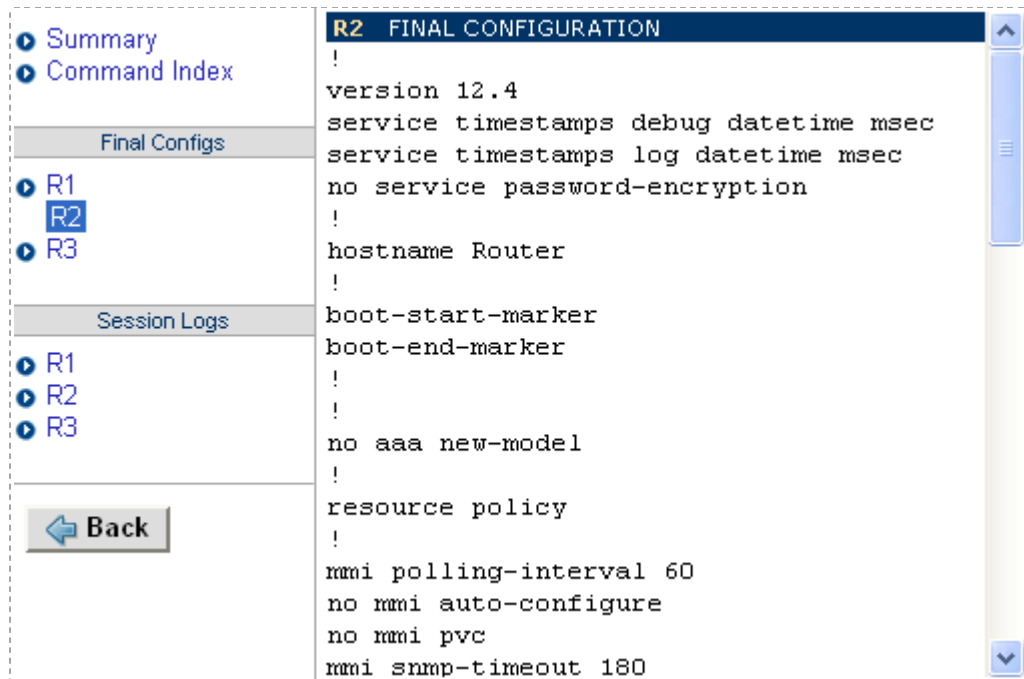
This example shows the final configuration for **R1**.



The screenshot shows a web interface with a left sidebar and a main content area. The sidebar has a 'Final Configs' section with a list of devices: R1 (selected), R2, and R3. Below this is a 'Session Logs' section with R1, R2, and R3. A 'Back' button is at the bottom of the sidebar. The main content area displays the configuration for R1, titled 'R1 FINAL CONFIGURATION'. The configuration text is as follows:

```
R1 FINAL CONFIGURATION
!
version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname R1
!
boot-start-marker
boot-end-marker
!
!
no aaa new-model
!
resource policy
!
mmi polling-interval 60
no mmi auto-configure
no mmi pvc
mmi snmp-timeout 180
ip subnet-zero
ip cef
```

This example shows the final configuration for **R2**.



The screenshot displays a web-based configuration interface. On the left side, there is a navigation menu with the following items:

- Summary
- Command Index
- Final Configs
  - R1
  - R2**
  - R3
- Session Logs
  - R1
  - R2
  - R3

At the bottom of the left sidebar is a "Back" button with a left-pointing arrow. The main content area is titled "R2 FINAL CONFIGURATION" and contains the following configuration text:

```
!  
version 12.4  
service timestamps debug datetime msec  
service timestamps log datetime msec  
no service password-encryption  
!  
hostname Router  
!  
boot-start-marker  
boot-end-marker  
!  
!  
no aaa new-model  
!  
resource policy  
!  
rmi polling-interval 60  
no rmi auto-configure  
no rmi pvc  
rmi snmp-timeout 180
```

### 11.4.3 Archive Command Index

For routers, switches, and firewalls, NETLAB+ provides a **Command Index**. The index lists the sequence of commands that were entered during the lab, across all devices, in chronological order. You may click on each command to view the resulting output in the corresponding log file. This tool sorts through all logs, highlights the commands entered by the student, and allows you to quickly assess the student's work.

The following example demonstrates the configuration of a serial link. Router R1 was configured first, followed by R2. Student "jsmith" did all of the work, and it took him about 2½ minutes. By clicking on the "ip address" in the command index, NETLAB+ automatically loads the session log for R2 into the bottom window and advances to the "ip address" command. NETLAB+ automatically highlights all user input. By clicking on the last "no shut" command, you could easily determine that the link came up and the student has successfully accomplished the task.

COMMAND INDEX			
H:M:S	USER	DEVICE	COMMAND
00:13:03	jsmith	R1	<b>ena</b>
00:13:07	jsmith	R1	<b>conf t</b>
00:13:17	jsmith	R1	<b>hostname R1</b>
00:13:28	jsmith	R1	<b>int serial 0</b>
00:13:54	jsmith	R1	<b>ip address 10.0.0.1 255.255.255.0</b>
00:14:04	jsmith	R1	<b>clock rate 56000</b>
00:14:10	jsmith	R1	<b>no shutdown</b>
00:14:11	jsmith	R1	<b>ena</b>
00:15:53	jsmith	R2	<b>ena</b>
00:15:57	jsmith	R2	<b>conf t</b>
00:16:10	jsmith	R2	<b>hostname R2</b>
00:16:17	jsmith	R2	<b>int serial 0</b>
00:16:35	jsmith	R2	<b>ip address 10.0.0.2 255.255.255.0</b>
00:16:42	jsmith	R2	<b>no shut</b>
00:17:52	jsmith	R2	<b>end</b>

Session log for R2 (partial)

```
R2 (config-if) #ip address 10.0.0.2 255.255.255.0
R2 (config-if) #no shut
R2 (config-if) #end
R2#
00:13:51: %SYS-5-CONFIG_I: Configured from console
```

The command index for this team reservation shows commands were entered by both “msmith” and “Adole”.

Summary  
**Command Index**

---

Final Configs

- ▶ R1
- ▶ R2
- ▶ R3

---

Session Logs

- ▶ R1
- ▶ R2
- ▶ R3

---

[← Back](#)

COMMAND INDEX			
H:M:S	USER	DEVICE	COMMAND
00:07:40	msmith	R1	ena
00:07:48	msmith	R1	sho ver
00:08:08	msmith	R1	sho run
00:47:51	Adole	R2	sho ver
00:47:56	Adole	R2	sho run
00:48:14	Adole	R2	ena
00:48:32	Adole	R2	sho ver
00:49:19	Adole	R1	sho ver
00:50:00	msmith	R1	sho ver

---

**R1 SESSION LOG [PARTIAL]**

```
Router>ena

Router#sho ver

Cisco IOS Software, 1841 Software (C1841-IPBAS)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2005 by Cisco Systems, Inc
Compiled Fri 23-Sep-05 19:43 by evmiller

ROM: System Bootstrap, Version 12.3(8r)T8, RELO
```



### 11.4.4 Archive Session Logs

**Session Logs** are used to view all activity associated with the device during the reservation. Unlike the Command Index, this log is associated with a single device. These logs can be used to determine what activity occurred on a device during a session.

Here is an example session log of **R1**.

**R1 SESSION LOG**

Router>**sho ip interface brief**

Interface	IP-Address	OK?	M
FastEthernet0/0	unassigned	YES	u
FastEthernet0/1	unassigned	YES	u

Router>**sho ver**

```
Cisco IOS Software, 1841 Software (C1841-IPBASE-
Technical Support: http://www.cisco.com/techsupp
Copyright (c) 1986-2005 by Cisco Systems, Inc.
Compiled Fri 23-Sep-05 19:43 by evmiller

ROM: System Bootstrap, Version 12.3(8r)T8, RELEA

Router uptime is 7 minutes
System returned to ROM by power-on
System image file is "flash:c1841-ipbase-mz.124-

Cisco 1841 (revision 5.0) with 114688K/16384K by
Processor board ID FTX0945Y0XX
2 FastEthernet interfaces
DRAM configuration is 64 bits wide with parity d
```

Here is an example session log of **R2**.

**R2 SESSION LOG**

Router>**sho ver**

Cisco IOS Software, 2801 Software (C2801-IPBASE-  
Technical Support: <http://www.cisco.com/techsupp>  
Copyright (c) 1986-2005 by Cisco Systems, Inc.  
Compiled Fri 27-May-05 22:48 by hqluong

ROM: System Bootstrap, Version 12.3(8r)T8, RELEA

Router uptime is 49 minutes  
System returned to ROM by power-on  
System image file is "flash:c2801-ipbase-mz.124-

Cisco 2801 (revision 5.0) with 114688K/16384K by  
Processor board ID FTX0941YOUN  
2 FastEthernet interfaces  
DRAM configuration is 64 bits wide with parity d  
191K bytes of NVRAM.  
62720K bytes of ATA CompactFlash (Read/Write)

Configuration register is 0x2142

## 12 Curriculum Content For NETLAB<sub>AE</sub>



NETLAB<sub>AE</sub> allow participants in the Cisco Networking Academy Program® to view curriculum content within the NETLAB<sub>AE</sub> environment.

Select Curriculum on the MyNETLAB menu bar.



Available curriculum will be displayed in a list and can be selected by clicking on the subject name. Students will only see curriculum for courses in which they are enrolled.

Only pre-installed curriculum modules are shown. The NETLAB<sub>AE</sub> administrator can add and remove curriculum modules as desired. See your NETLAB<sub>AE</sub> administrator, or the NETLAB<sub>AE</sub> administrator guide, if you have questions about the availability of curriculum subjects.

The following subjects are available.

CURRICULUM LIST		
SUBJECT	LANGUAGE	COMMENTS
▶ CCNA1 v3.1	English	
▶ CCNA1 v3.1 accessible	English	
▶ CCNA1 v3.1 accessible Instructor	English	
▶ CCNA1 v3.1 Instructor	English	

You will be required to enter your user ID and password..

Enter username and password for "CCNA1 v3.1 - please enter your NETLAB user ID and password to access" at http://204.85.2.207

User Name:  
jdoe2006

Password:  
\*\*\*\*\*

Use Password Manager to remember this password.

OK Cancel

The selected curriculum will then be displayed.

Modules

Take the CCNA 3 Curriculum Tour

CCNA 3: Switching Basics and Intermediate Routing v3.1

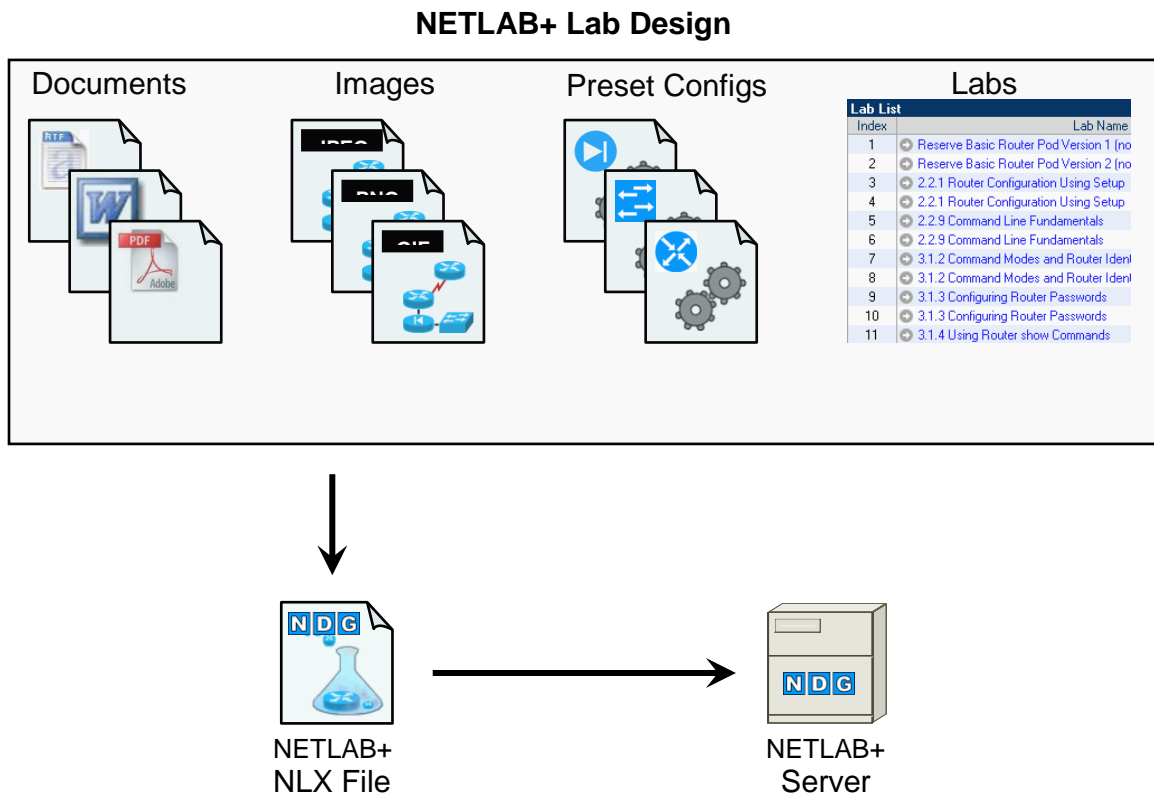
CCNA3: Switching Basics and Intermediate Routing is the third of four courses leading to the Cisco Certified Network Associate (CCNA) certification. The course focuses on advanced IP addressing techniques (variable Length Subnet Masking (VLSM)), intermediate routing protocols (RIP v2, single-area OSPF, EIGRP), command-line interface configuration of switches, Ethernet switching, Virtual LANs (VLANs), Spanning Tree Protocol (STP), and VLAN Trunking Protocol (VTP).

## 13 Lab Designer

The *Lab Designer* provides a means of creating a series of custom laboratory exercises that may be made available for class use.

A lab design is a set of labs and related reference material that may include documents, images and preset configuration files for each lab exercise. This data is stored in a *Lab Design File*. Lab design files are portable. They can be shared, exported, and installed on other NETLAB+ systems. A set of options and passwords control how the lab design can be used.

Please refer to the *NETLAB+ Lab Design Guide* for more information on creating your own custom lab exercises.



## 14 Pod Designer

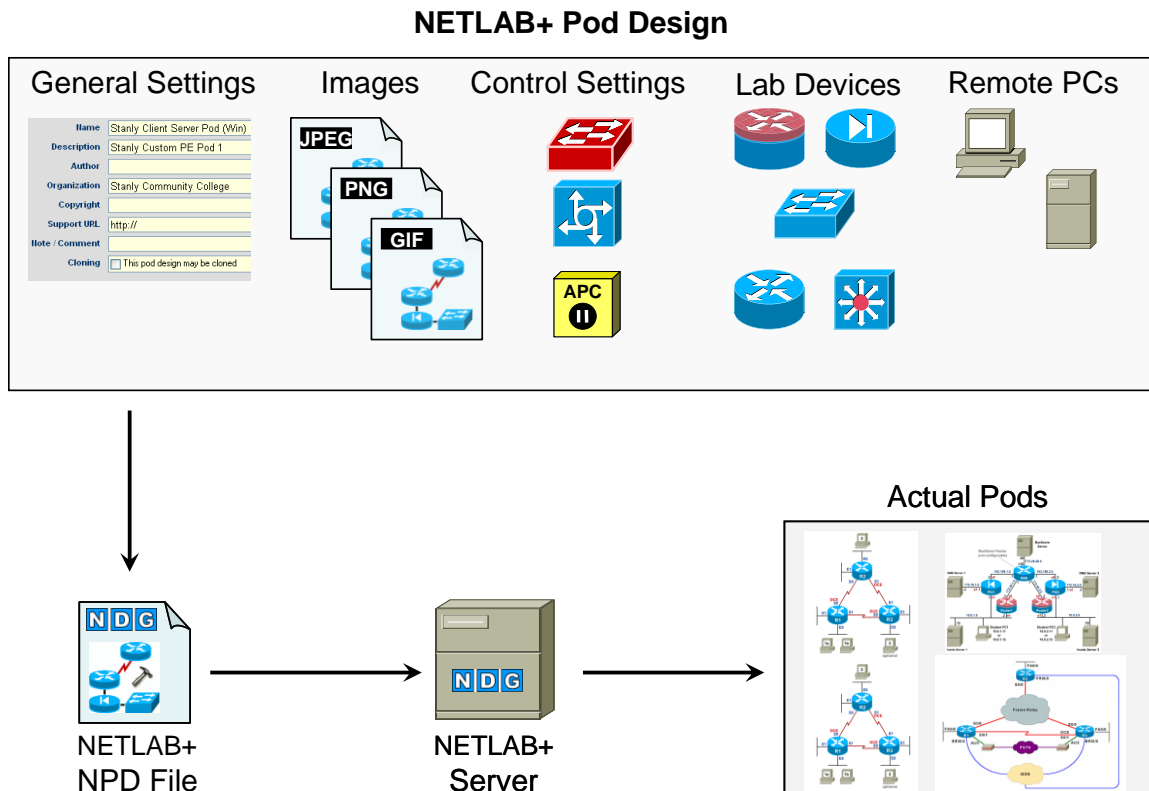
*Pod Designer* is used to create a custom pod layout. A *pod design* is a template used to create one or more actual pods on a NETLAB+ system.

Each NETLAB Professional Edition® pod may be a custom pod, and each custom pod may use a unique pod design. The NETLAB<sub>PE</sub> license allows custom pods to be used for commercial training.

NETLAB Academy Edition® allows you to stand up **two** custom pods, each of which may use the same pod design, or two unique pod designs. Custom pods deployed on a NETLAB<sub>AE</sub> system can only be used for training within the Cisco Networking Academy® Program. Valid uses include challenge labs, or supporting Networking Academy curriculum for which NDG has not provided an “official” NETLAB<sub>AE</sub> pod.

The NETLAB<sub>AE</sub> license does not permit custom pods to be used for any activity outside the Networking Academy program.

The Pod Designer tool is used to gather the required information about routers, switches, firewalls, PCs, control device requirements, and images. This data is stored in a *Pod Design File*. Pod design files are portable. They can be shared, exported, and installed on other NETLAB+ systems. A set of options and passwords control how the pod design can be used. Please refer to the *NETLAB+ Pod Design Guide* for more details.



## 15 Log Out



To log out of the NETLAB+ system, select **Logout** on the MyNETLAB menu bar, or the link in the body of the page.



Logging out of the system when have completed using NETLAB+, will prevent others from accessing your profile information from a previous connection.