



NIL Remote Labs TECHNICAL REQUIREMENTS

NIL Remote Labs products have been developed to make your training experience simple to implement. To successfully use NIL Remote Lab products, you must:

- Meet NIL Remote Lab hardware and software requirements; use an approved browser and system platform as listed in the System Requirements tables below.
- Have 28.8 kbps or faster internet connection.
- Accept browser cookies.
- Enable Java and Java Script on your Web browser.
- Enable Active X on your Web browser.
- Have Telnet client that can be launched from the Web browser. For Windows users some Telnet clients like HyperTerminal may have problems running multiple instances. Telnet access is also possible through a special Java applet provided on the NIL Remote Lab site.
- Set your browser to refresh at every page.

1. SYSTEM REQUIREMENTS

Hardware/Software Minimum Requirements	
Processor:	Personal computer capable of running modern browser
Screen Resolution:	800 x 600 or higher, 256 colors
Network bandwidth:	28.8 kbps (telnet access to devices), 128kbps/PC (remote desktop client for access to lab virtual PCs)

Supported Systems Platforms	
Windows 2000/NT/XP	see http://forums.nil.com/viewtopic.php?f=15&t=2 for specific settings
Vista/Windows 7	
Macintosh OS 9.0, OS X	to access lab PCs, please download Microsoft Remote Desktop Connection Client for Mac 2.0.1, link to download available at http://forums.nil.com/viewtopic.php?f=15&t=2
Linux	there is a preconfigured VMWare player appliance available at http://stack.nil.com/RL-app.zip



NEW USER DIRECTIONS

Supported Browsers

Microsoft Internet Explorer 7.0 or higher

Mozilla Firefox 2.0 or higher

Minimum Application/Plug-in versions

Adobe Acrobat Reader 8 or higher

Recommended applications

Putty (<http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>)

2. NIL Remote Lab PRODUCTS AND FIREWALLS

A firewall is a system designed to prevent unauthorized access to or from a private network. If you access the Internet from behind a company firewall or proxy, you might not be able to access parts of NIL Remote Lab site from your computer. Company firewalls sometimes block Java and JavaScript, or won't let you log in to a secure server. The following applies:

- Access to the Internet directly or through a non-proxying firewall.
- Network Address Translation (NAT) and Port Address Translation (PAT) firewalls are supported.
- For labs that require Telnet access, access to the equipment is possible even through a Web proxy (that does not block Java applets or deny login to a secure server) with a special Java applet.
- You have to have access to the following hosts/ports:

Host name	IP address	Ports
e-learning.nil.com	193.110.145.37	80, 443, 24097
lab#.nil.com*	193.110.145.64-75	2000-2100, 4000-4100
ts#.nil.com**	193.110.145.96-115	2000-2100

* - lab# stands for lab10, lab11, lab12 and so forth.

** - ts#.nil.com stands for ts12, ts14, ts15 and so forth.



3. BROWSER CAPABILITIES TEST

To test your system and browser for NIL Remote Lab experience, the Remote lab wizard application is available. It will guide you through the series of tests which will determine the best connection method for your environment. You will also be prompted to select the date/time format and your timezone. The Remote Lab Wizard application (Figure 1) is available at <http://e-learning.nil.com/wizard> URL. Please follow the on-screen instructions and press *Finish* to save the settings to your profile. You can change these settings later by clicking on *Profile* link at the top of the page. You can also restart the wizard from the profile if you for example change location from which you access labs.

The screenshot shows the 'Settings wizard' interface for NIL Remote Labs. At the top right, it indicates 'Logged in: Stefan Ivanetic' with links for 'Profile', 'Help', and 'Logout'. The main heading is 'Settings wizard'. A navigation bar contains a link to '« E-learning Home'. The content is organized into three sections:

- Welcome to NIL Remote Labs!**
Let's see if your browser meets our minimum requirements:
 - JavaScript/ECMAScript works.
 - Cookies are enabled.
 - AJAX is enabled.
 - Java is enabled. Your browser is running Java version 1.6.0_10-rc from Sun Microsystems Inc.
- Access to lab equipment**
Next we'll test if you can open arbitrary TCP session from your workstation to our remote labs.
 - Your IP address as seen by our remote labs is 192.168.225.146

You'll get the best remote lab experience if you can use the telnet application native to your operating system. However, your browser has to support that option (it usually does not work in Internet Explorer 7) and your firewall (if you have one) should not be too restrictive. We cannot test your telnet application automatically. Please try [starting telnet application](#) and tell us whether you can use Telnet from your browser (a new window should open after you click the button and you should see an ASCII banner from our remote labs).

 - telnet application works from my browser
 - I did not get the NIL remote labs banner
 - Your firewall allows telnet sessions to TCP ports 2000-2100. That's perfect.
- Connection test results**
It looks like the only reliable way to access equipment in NIL remote labs from your environment is with a Java applet that connects to our web server.

A 'Next >>' button is located at the bottom left of the wizard.

Figure 1