

How to use the nlc

prepared by members of
NetDay/AmeriCorps Bridge Oakland*

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"Bridging the Digital Divide, one classroom at a time."

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1 Introduction

The New Internet Computer (nIc)¹, also known as the “Oracle”, is a small computer without a hard drive that can be used to browse the Internet and perform basic word processing tasks. The Oracle Help Us Help Foundation² has donated 1500 of these machines to the Oakland Unified School District for use in elementary school classrooms.

The NetDay/AmeriCorps Bridge Oakland team has installed these computers in your school. In addition, we now present this guide to explain how to set up and use the machines.

1.1 Intended Audience

This document is intended for Site Technologists and teachers in the Oakland Unified Schools. It is intended that Section 2 be used primarily by Site Technologists, while the remainder of the guide will hopefully be useful to all teachers.

1.2 Acknowledgments

This document was prepared by members of NetDay/AmeriCorps Bridge Oakland. We wish to thank the following organizations for their support of this effort:

- Oracle’s Help Us Help Foundation, which donated the nIc machines to Oakland.
- The Oakland Unified School District
- AmeriCorps and the Corporation for National Service
- NetDay and its Digital Divide Initiative
- The OUSD Technology Learning Center

¹<http://www.thinknic.com/>

²<http://www.oraclespromise.com/>

- ...and all the staff and volunteers at the schools who helped us with the initial installation and continue to provide service to the children of Oakland.

2 Setup

Although the NetDay team has already set up the Oracles, we provide the information in this section as a reference in case you need to set up more Oracles or maintain the ones you already have.

2.1 Hardware Setup

After you unpack the `nlc`, what you will see is similar to Figure 1. You must then connect the `nlc` to its components, as follows:

- The power cable must be plugged into the large port at the bottom of the `nlc`. The other end must, of course, be plugged into the wall or into a power strip. Make sure the power strip is turned on.
- The keyboard and mouse connectors are color-coded; plug the keyboard into the purple connector and the mouse into the green.
- The monitor is connected to the blue port near the top of the `nlc`.
- The network connection is the port at the top of the `nlc`. Do **not** use the two modem ports next to the monitor connector; they will not work. Make sure that you are using an Ethernet cable with eight pins, not a phone cable with two or four. Also make sure that, if you are connecting to a hub, the hub is turned on and its uplink port is connected.
- If you wish to use the included speakers, make the following connections:
 - Plug the transformer into the wall or power strip, and connect the other end to the speakers.

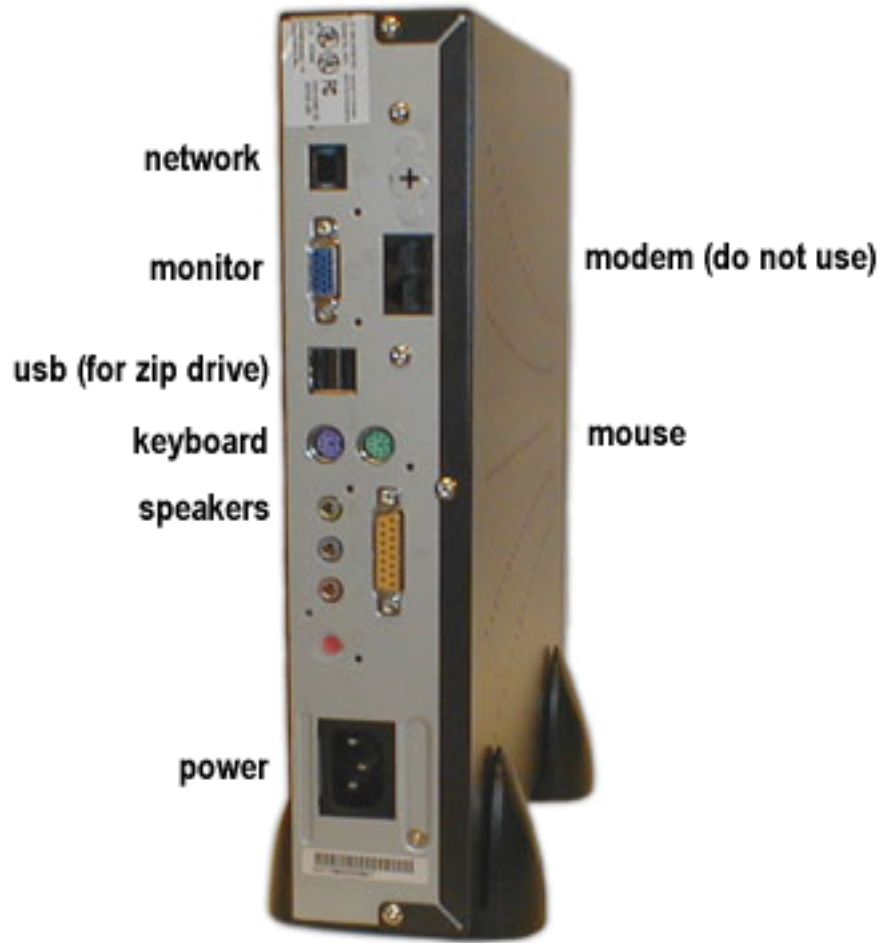


Figure 1: The nic, showing all ports to be connected.

- Plug the speakers' audio cable into the lime green (topmost) audio connector on the **n1c**, as shown in Figure 1.

Note that five pairs of speakers can provide quite a distraction in an elementary school classroom. You may prefer to obtain headphones for the students' use. If you do this, simply plug them into the lime green connector in place of the speakers.

- If you have a Zip drive (not provided by us) and wish to use it to store your files, you may plug it into either of the USB ports located directly above the keyboard port.

Obs: It is important that the ventilation holes on the top and sides of the **n1c** not be covered with tape or any other obstruction. Otherwise, the **n1c** may overheat and break or even cause a fire.

2.2 Software Setup

Once you have done the physical set up of the machine, you must set up the software.

2.2.1 BIOS Flashing (optional)

You may have received a BIOS update CD. If you do not have one, you may safely skip this step.

Obs! It is important that this step be done only once per machine and that it not be interrupted. Violating either of these constraints will cause irreparable damage to your **n1c**!

BIOS flashing can improve the stability of your **n1c**. To perform this step, turn on the **n1c**. When prompted, insert the BIOS disk into the CD-ROM drive and press Enter. Enter Y at the prompt to continue with the flashing process. Do not interrupt it! When the process has terminated, you will see the `A:\>` prompt. Only then is it safe to remove the BIOS CD.

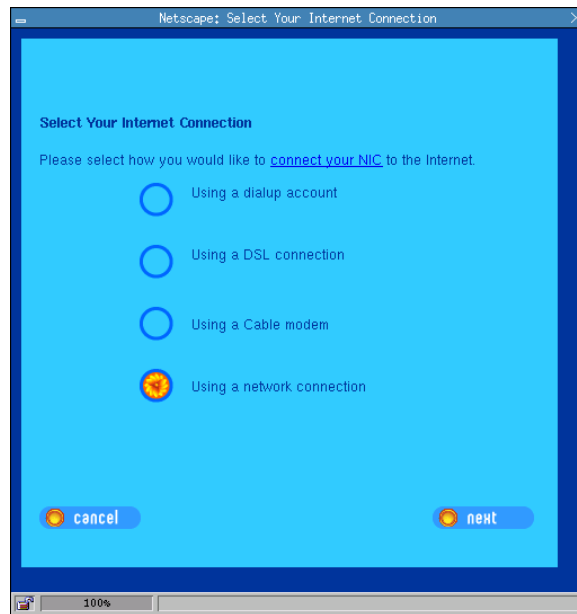


Figure 2: The initial setup screen of the nlc.

2.2.2 Boot Process and Connection Configuration

The nlc comes with two different kinds of CD: setup disks which must be used to configure the computer and student disks which are locked such that students cannot change the settings. So, for the initial configuration, turn the nlc on and insert a setup disk. After the nlc has finished starting up, you will see a screen similar to that in Figure 2. On this screen and those that follow, select the following settings, pressing the next button when appropriate.

- Connection type: Using a Ethernet connection
- IP Configuration: Use a Static IP Address³
- IP Information
 - IP Address: 192.168.x.y (The third number varies by school; contact the TLC if you do not know the appropriate number for

³Note: a few schools use the DHCP protocol for automatically determining connection settings. If your school is one of these, contact the TLC for further instructions.

yours. The fourth number will vary by machine; refer to the site-specific map.)

- Subnet Mask: 255.255.255.0
- Default Gateway: 192.168.*x*.1 (The third number is the same as in the IP address above.)

- DNS Information

- Hostname: `roomnn-m` (for example, the third machine in room 12 would be `room12-3`)
- Domain Name: `ousd.k12.ca.us`
- DNS Address: 198.94.64.3
- Secondary Nameserver: 198.94.64.5

- Using a Proxy: Use Proxy should be checked

- Proxy Information

- Proxy Address: `bess-proxy.ousd.k12.ca.us`
- Proxy Port: 8080
- Unproxied Domains: *(leave blank)*

Once this information has been entered, the connection settings wizard will not automatically reappear. However, these settings may be updated by going to the configuration page (see below).

2.2.3 Printer Settings

At this point, you are almost done with setup. However, a few more settings need to be changed. Go to the setup page by clicking the setup icon on the button bar at the top of the screen. This is the seventh button from the left and looks like a box being opened. See Figure 5 on page 10.

From this screen, which is shown in Figure 3, there are two kinds of settings you must change. The first set is the printer settings. If you are not using a printer with your nlcs, skip the rest of this section.

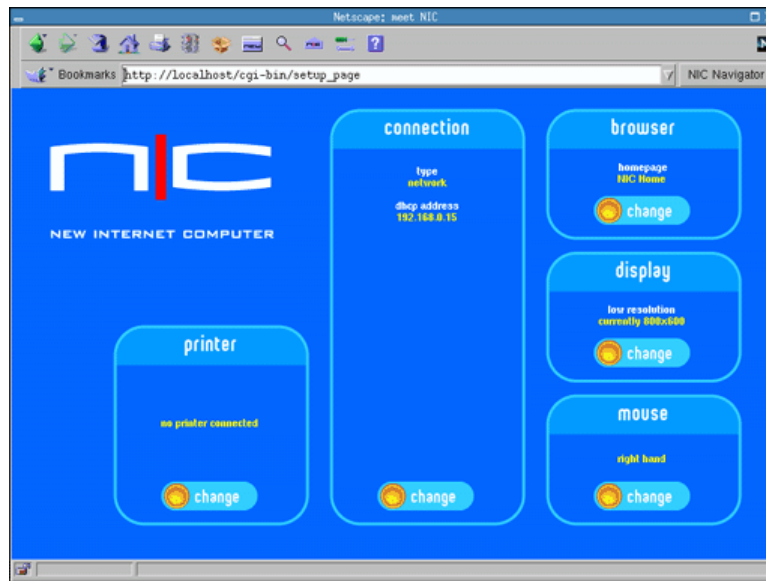


Figure 3: The configuration page.

If a printer is to be used with the `nIC`, it must first be set up properly. The printer must be connected to the grey JetDirect box, which must in turn be plugged in and connected to the network. The printer must also, of course, be turned on and have paper in it. The `nICs` work well with the LaserJet 6MP printers that came with the original Oracle installation. Other models of printer, especially other LaserJet models, may also work; however, `TLC` cannot support these.

Once the printer is turned on, press the button on the JetDirect box. The printer then will print two configuration pages. Near the top of the second will be the JetDirect's IP address. Usually, but not always, the box itself will be labeled with the same number. Note this number. **Obs:** If the IP address is shown as `192.0.0.192` or `0.0.0.0`, then the JetDirect is not set up properly. Contact the `TLC`.

Now, back on the `nIC`, click the Change button in the printer box of the configuration page. Select "Network Printer" and press next. Enter the IP address you noted above in the Printer Address field. The Printer Queue field cannot be blank, but it does not matter what you write there. We have been reentering the hostname set above, but you can enter anything you want. Press next, and your printer will be set up.

2.2.4 Browser Settings

The final thing you must change is the *nlc*'s home page. Click the change button in the browser box on the configuration page. Set the home page to be <http://www.ousd.k12.ca.us/> and press next. Leave the rest of the settings in this wizard at their defaults.

2.3 Testing and Cleanup

At this point, you are done with configuration. Congratulations! (Believe us, it's easier the 1500th time than the 1st.) Press the home button on the button bar, and, if all went well, you should see the OUSD homepage. (This may take a few seconds depending on the speed of your network.) If it didn't work, review all the settings and verify that the network connection is good.

Once setup is complete, turn off the *nlc*. Then, turn it back on, eject the setup CD during the initial boot process, and replace it with a student disk.

2.4 Broken Machines

The *nlc* have a tendency to break when subjected to manhandling, or even for no reason at all. If a *nlc* becomes defective—or for replacement of broken *nlc*s you may already have—please do the following:

1. Go to <http://www.helpushelp.org/>
2. Click on *School Support*.
3. Click on *Technical Support*.
4. Follow the instructions on the page.

3 Use

In this section, we explain how to use the *nlc*, with attention given to special classroom considerations.

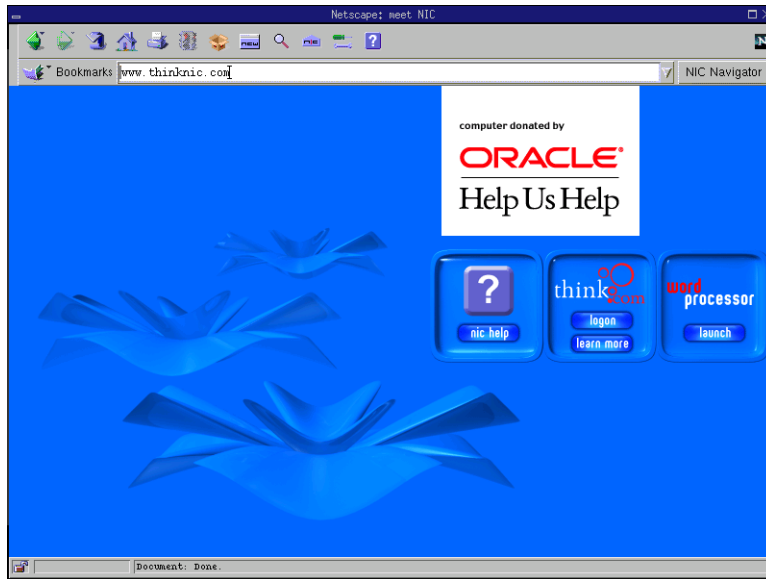


Figure 4: The nlc's initial screen.

3.1 A Note about CDs

Each nlc needs a CD in order to operate properly. For normal use, the student CD should be used. The CD cannot be removed when the nlc is in use; the eject button works only during the initial startup process. Unfortunately, students have been very quick to figure this out, and the fact that the CD does not work in any computer other than the nlc does not always deter them from taking the disk. Every school should have a few extra disks for this case; you may also make more copies in any CD burner. A piece of tape across the CD drive may help prevent the problem. It should also be noted that, because the nlc has no hard drive, other software CDs, audio CDs, and PlayStation games **will not work** with the nlc.

3.2 Browsing the Internet

When the nlc is turned on, after it finishes booting up, you will be taken directly into Netscape Navigator, which can be used to browse the Internet. The initial screen will be similar to that shown in Figure 4.

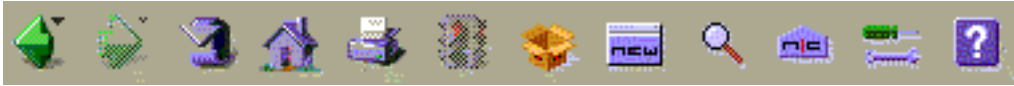


Figure 5: The Netscape button bar.

From this screen, you may enter any Internet address (URL) into the “location bar” at the top of the screen to be taken to the corresponding webpage (unless Bess blocks it, of course). It is not necessary to enter the initial `http://` at the beginning of the address.

3.2.1 The Button Bar

At the top of the screen is a “button bar” (see Figure 5) which can be used to control many aspects of Netscape. From left to right, these buttons are:

- The back and forward buttons, which can be used to navigate among the pages you have visited. Holding the mouse button down over one of these buttons will bring up a menu listing these pages.
- The reload button, which re-fetches a page from the Internet.
- The home button, which will take you to the OUSD home page (unless your Site Technologist has changed this).
- The print button, which will send the current page to your printer, if you have one configured. Note that some pages do not print properly; this is the fault of those specific pages, not your printer.
- The stop button, which can be used if a particular page is taking a very long time to load.
- The configure button. See Section 2.2.3.
- The new window button, which will open up a new Netscape window, so you can look at two web pages and switch between them.
- The find button, which will allow you to search for text within the page you are viewing. Note that this does not search the Internet; to do that, go to `http://www.google.com/` or your favorite search engine.

- The **nlc** home button, which will return you to the initial startup screen.
- The tools button. See Section 3.5.
- The help button. See Section 3.3.

3.2.2 E-mail

The **nlc** has no internal capability to read or send email. If you wish to do this, you will have to sign up for a web-accessible account from OUSD (<http://webmail.ousd.k12.ca.us>) or a commercial provider such as Hotmail (<http://www.hotmail.com>).

3.3 Getting More Help

If you would like to browse the **nlc**'s online help, press the rightmost button on the button bar of any Netscape window, or press the “**nic help**” button on the initial startup page.

This help contains a lot of useful information, including such classroom-specific information as suggested room layouts and lesson plans, as well as a comprehensive reference manual for the **nlc**. Do note that the reference manual is for the commercial **nlc** software rather than the classroom version, and that a few of the screenshots may be different. However, the information should still be valid.

3.4 Word Processing

The **nlc** comes with AbiWord (shown in Figure 6), a free word processing program. Note that, because it is free, you can also download it from <http://www.abisource.com/> for use on a Windows PC if you like. Use of AbiWord is similar to use of Microsoft Word and other commercial word processors. Certain features (most notably, tables) are not present, but everything you should need for classroom use is there: multiple fonts, a spellchecker, and more. Full documentation of AbiWord is beyond the scope of this document; however, a basic introduction is presented here. Further documentation is

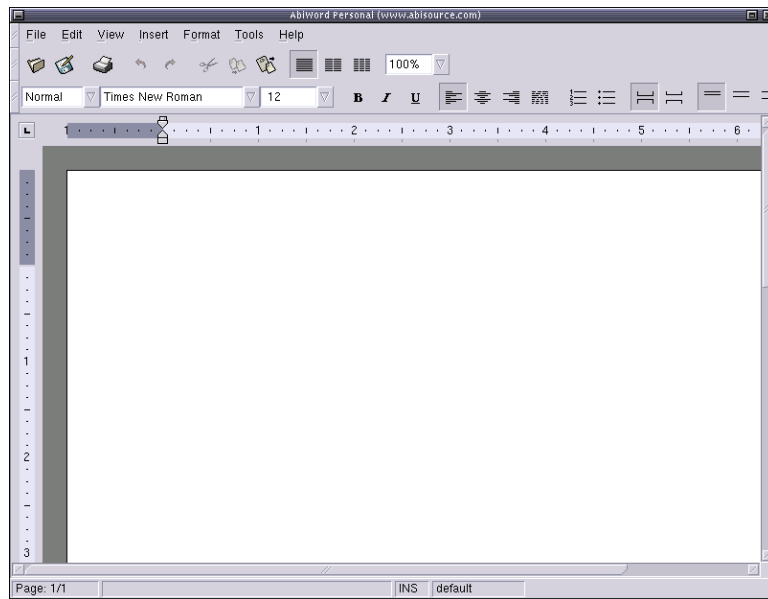


Figure 6: The AbiWord Word Processor

available from the on-line help which can be accessed from the Help menu within AbiWord.

To start AbiWord, click the “Word Processor Launch” button from the `nlc` start page. (To return to the start page, click the `nlc` home button, the third button from the left, on the Netscape toolbar.) You can also start AbiWord from the tools menu; see Section 3.5.

Once AbiWord is started, simply type whatever text you wish. You may change fonts and sizes by selecting the text you wish to change with the mouse and choosing the new font or size from the toolbar at the top of the screen.

3.4.1 Spelling Checker

AbiWord contains a spelling checker (shown in Figure 7) with a built-in dictionary that can be used to find and correct many typing and spelling mistakes.

To launch the spelling checker, go to the Tools menu at the top of the AbiWord screen, and then select Spelling. If you prefer, you may also press the

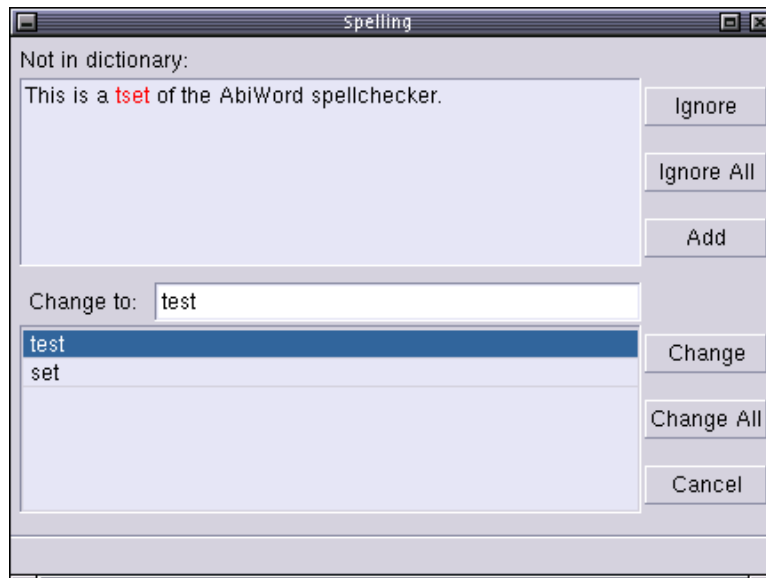


Figure 7: AbiWord's Spelling Checker

F7 key.

Once you have started the spelling checker, it will go through your document, finding any words not in its dictionary. When it finds one, it may offer a list of possible corrections. You may choose one, enter your own correction, choose to ignore the word, or add it to your personal dictionary, so that it will not be flagged the next time you run AbiWord.

3.4.2 Printing

If you have configured your nlc to use a printer, you may print your documents. Simply click the printer icon on the toolbar and press the Print button on the resulting dialog box.

3.4.3 Saving and Opening Files

Because the nlc has no internal storage, if you wish to save your documents, you will need a Zip drive or a filesaver. To open or save a document, click the first or second button on the toolbar.



Figure 8: Saving a document in AbiWord

If using a Zip drive, click the Zip option on the open/save dialog box. Instructions for connecting a Zip drive are given in Section 2.1. Then enter or select the name of the file, and you will be all set.

Saving to a filesaver is somewhat more complicated. A screenshot of the appropriate window is shown in Figure 8. The TLC is in the process of building fileservers for the Oracles and restoring all your data from the old servers. When the servers are completed and delivered, you will be given the settings to use in order to save to them. Until this point, you will be unfortunately unable to save documents unless you have a Zip drive.

3.5 Additional Programs

In addition to an internet browser and word processor, the `nlc` contains a few small games and extra programs. To access them, choose the tools button, the second button from the right, from the Netscape toolbar.

3.6 Powering Off

To conserve electricity, we ask that you turn your nlc's off at the end of the day or when not in use. Because the nlc has no hard drive, it is safe to turn it off at any time—there is no need for any shutdown procedure. Simply press the power button.

4 Curriculum Resources

The nlc can be used for any project which requires the Internet or word processing. The nlc's online help (see Section 3.3) contains the following sample lessons:

- *Developing Media Literacy: Evaluating Websites for Validity*, a Media Literacy lesson appropriate for 6th grade, with adaptations for primary, middle, and high schools.
- *Sparks of the Sun: Hotspots of Chumash Life*, a Language Arts lesson appropriate for 5th-8th grades, with suggestions for modification for 2nd-4th grades.
- *Topical Research Exercise: Current Events*, a Social Studies lesson appropriate for 4th grade and up.
- *Sunspots*, a Science lesson appropriate for 9th-12th grade.

More resources can be found on the Internet by going to http://dmoz.org/Reference/Education/Educators/K_through_12/Lesson_Plans/

A About This Document

This document was prepared by members of the NetDay⁴ / AmeriCorps⁵ Bridge Oakland Summer 2001. It was typeset using L^AT_EX 2_ε. Everything in this guide should be taken as a *suggestion*—if you find something that works better, be sure to use it, and tell others!

⁴<http://www.netday.org>

⁵<http://www.americorps.gov>