

ResNet Information Guide

New Student Information

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Welcome

Welcome to the ResNet Information Guide. This guide is intended to provide you with detailed information about the on-campus residential computing network. It is written for students planning to reside on campus. It is strongly recommended that you read this document in its entirety. Doing so will more than likely save you time, money and effort once you arrive on campus (not to mention, it will make you feel a little bit cooler). We encourage parents to read through this guide, too. However, parents, please be sure that your student reads this as some details explain what they will need to do on a daily basis to gain network access.

We expect that you will come to a complete understanding of the information contained in this guide. If you have any questions, please address them prior to arriving. You can find our contact information on our "[Contact Us](#)" page.

In addition to the information contained in this document, [Cal Poly's Information Technology Services website](#) contains a plethora of additional computing information. Much of this information applies to student accounts and on-campus computing. These documents outline policies that hold true across the entire campus, including on the residence hall network. You should read through all the [legal stuff](#) contained on their website.

We welcome and congratulate you on your acceptance to Cal Poly!

Network Information

While living on campus, you will be provided with a high-speed, "always-on" Internet connection. The Internet port in your room connects to a complex network designed for the fastest, most stable and most secure Internet experience possible. We have a firewall between the residence hall network and the Internet connection to assist in protecting you from the evils lurking on the web. Our network also connects directly to the on-campus network providing a seamless bond with necessary educational resources. It's important to understand that the residence hall network exists solely for educational purposes.

Primarily, you will connect to the network using the wired Ethernet port in your room. In addition to this, we provide wireless Internet access in study lounges and common rooms around the different halls. No wireless Internet access is provided in any room. Some students have previously reported being able to receive wireless signals in their rooms. In this scenario, we discourage its use as it is much slower than the wired connection provided in your room. The Mustang Wireless website maintains a [coverage map](#) displaying the locations of campus wireless "hotspots."

Different halls have different configurations. Two network ports are provided in each room (one per resident) for the North Mountain Halls (white-bricks), South Mountain Halls (red-bricks), Sierra Madre, and Yosemite. In the Cerro Vista apartments, only one network port is provided in each room (still one per resident). However, in Cerro Vista the common living room contains an additional network port for the entire apartment.

Some students decide to bring more than one computer to campus. While there is nothing wrong with this, please take note that you receive only one network connection in your room. This means that you will need to swap the network cable between computers (if you want the other to be on the network, that is). We do not make any exceptions to this policy. Some students tried to solve this dilemma by

bringing their own networking hardware (such as switches, hubs, wireless access points, etc.). The [Cal Poly Responsible Use Policy](#) strictly forbids the modification of the state network (such as adding switches, hubs, wireless access points, etc.). In addition to it being against state law, adding networking hardware disrupts the operations of the residence hall network. As we mentioned before, our network is extremely complex. It is not like a simple home network. The presence of these unauthorized devices can actually cause network outages on entire floors and sometimes entire halls.

Computer Hardware Information

Thanks to the broad use of high-speed network connections and simple home-networking, most computers come prepackaged with the necessary hardware to connect to our network. To double check, you should make sure your computer has a 10/100 Base-T or compatible Ethernet network adapter. If you would like to use the wireless connections, you will need an 802.11a/b/g network adapter. For wireless cards, we recommend 802.11g for the best performance. You will also need to bring your own network cable. Any standard Ethernet cable will work on the network. Usually these cables are referred to as CAT-5 cables, but they can also appear as CAT-5e and CAT-6 cables. Although these cables are slightly different, all will operate exactly the same.

Many students and parents consult us for suggestions about computer hardware to purchase. Different students come with different requirements and applications. As such, it is not possible for us to recommend any one manufacturer. Any computer that possesses the network adapters noted above will be compatible with the network. We will point out that Cal Poly students do receive discounts on purchases from Dell. To access these discounts, you will need to log into the [My Cal Poly](#) portal and click on the “Technology” tab. We recommend you choose a manufacturer you trust. You may also want to check prices at the [El Corral Bookstore](#). They often carry a discount for Macintosh platforms.

In terms of operating system brands, students come with a variety of platforms ranging from Microsoft Windows to Apple Macintosh to Unix to GNU/Linux. We recommend you choose the platform you are most comfortable with. However, you may also wish to consult with your college or department office. Some majors require students to use software available only on a single platform. Often times these departments do offer the software on open laboratory computers, but some students prefer a version accessible from their room. You can find contact information for your department by searching for your department's name on the [Cal Poly homepage](#).

Software Information

The remaining pages are broken into subsections classified by operating system. As noted above, a variety of operating systems are compatible with the campus network. If you already know which platform you will be bringing to campus, you can skip to and read that section. If not, we recommend you read all the notices below.

Purchasing antivirus software is not required. Cal Poly has already licensed Symantec and Norton AntiVirus for Microsoft and Apple platforms. Free solutions exist for Unix and GNU/Linux platforms.

We would like you to also take note that students receive a discount on operating systems through the [El Corral Bookstore](#). If you are enrolled in the Orfalea College of Business, Computer Science, Computer Engineering, or Software Engineering departments you may be eligible for *extremely* discounted (sometimes free) Microsoft software. If you are enrolled in one of these programs, you

should consult your department to learn more about the Microsoft Academic Software Alliance.

As a general rule, ResNet does not support “beta” or “alpha” software. Software that's labeled “beta” or “alpha” is considered an early, unstable release. Using software in this state can cause problems with your connection to the network. ResNet will not assist users that use software in this state.

Microsoft Windows

Our network supports the following 32-bit versions of Microsoft Windows:

- Windows Vista Home Basic
- Windows Vista Home Premium
- Windows Vista Business
- Windows Vista Ultimate
- Windows Vista Enterprise
- Windows XP Professional with Service Pack 2
- Windows XP Home with Service Pack 2
- Windows XP Media Center Edition with Service Pack 2
- Windows XP Tablet PC with Service Pack 2
- Microsoft Windows 2000 with Service Pack 4

All other versions of Microsoft Windows will not work. This means that users cannot run Windows 3.1, Windows 95, Windows 98, Windows ME, Windows Server 2003, or any 64-bit editions of Windows. There are no exceptions to this policy. You will need Administrator access to your computer. If you do not use an account that is marked as a System Administrator, be sure you know the password to the Administrator account.

Antivirus Notes

All Microsoft Windows users will be **required** to install an antivirus client. Users are given the option of using Cal Poly's licensed version of Symantec AntiVirus Corporate Edition 10 available free of charge to all students, staff, and faculty. Alternatively, users may opt to purchase a license for Symantec Norton AntiVirus 2007 or McAfee VirusScan 2007 from an authorized software distributor. If you do not have one of these three clients installed, you have to uninstall any other antivirus clients and install Symantec AntiVirus, even if you purchased a license for the other antivirus client. In the past some students failed to uninstall previous antivirus clients, and they ended up with corrupted operating systems. Please take note that we are not responsible for any corrupted operating systems or lost data should you fail to properly uninstall your previous antivirus client.

Antispyware Notes

All Microsoft Windows XP and Windows Vista users will be **required** to install [Microsoft's Windows Defender](#) and [Javacool Software's SpywareBlaster](#). All Microsoft Windows 2000 users will be **required** to install Cal Poly's licensed Webroot Spy Sweeper Home Edition. You may optionally install other antispyware programs. In fact, we recommend users download and install [Lavasoftware's Ad-Aware](#) and [Safer-Networking's Spybot - Search & Destroy](#). All of these

antispymware programs may be obtained for free. Cal Poly has made a licensed copy of Webroot Spy Sweeper available for download from the [My Cal Poly](#) portal. If you would like to install Webroot Spy Sweeper, we recommend you read the [SpywareBlaster/Spy Sweeper compatibility notes](#) prior to downloading it.

Web Browser Notes

All users will need Microsoft Windows Internet Explorer to complete all Microsoft Windows Updates. For security reasons, Windows Internet Explorer 7 is required. Outside of using Windows Internet Explorer for updates, ResNet heavily encourages users to explore safer browser applications such as [Mozilla Firefox](#) and [Opera](#), both of which may be obtained for free.

Firewall Notes

We do not recommend you use a firewall. We protect users at the Internet connection with a strong, hardware firewall. Most users find that their firewalls only restrict them from gaining access to campus resources. If you do wish to use a firewall, we recommend that you use the built-in Windows firewall. If you choose to use a firewall, we will only support residents using the built-in Windows firewall. This means that we will be unable to assist with configuring your firewall to allow Clean Access and other applications the necessary network access if it is not the built-in Windows firewall. You may not use a hardware firewall on the residence hall network.

Apple Macintosh

Only Mac OS X version 10.2 to 10.4 is allowed to be used in the residence halls. All other versions of Mac OS will be unable to obtain network access.

Antivirus Notes

All Mac OS X users have access to download Cal Poly's licensed version of Norton AntiVirus 10 through the [My Cal Poly](#) portal. It is suggested you use this version of antivirus, but it is not required.

Antispymware Notes

Apple Macintosh computers are not affected by spyware and do not require an antispymware client.

Firewall Notes

We do not recommend you use a firewall. We protect users at the Internet connection with a strong, hardware firewall. Most users find that their firewalls only restrict them from gaining access to campus resources. If you do wish to use a firewall, we recommend that you use the built-in Mac OS X firewall. If you choose to use a firewall, we will only support residents using the built-in Mac OS X firewall. This means that we will be unable to assist with configuring your firewall to allow Clean Access and other applications the necessary network access if it is

not the built-in Mac OS X firewall. You may not use a hardware firewall on the residence hall network.

UNIX and GNU/Linux

All 32-bit UNIX and GNU/Linux platforms capable of supporting TCP/IP network connections are allowed to be used in the residence halls. However, we will provide NO support for these platforms. This means that we will be unable to provide technical support if you experience difficulties with an operating system in this classification.

Antivirus Notes

UNIX and GNU/Linux computers are not affected by viruses and worms and do not require an antivirus client. Antivirus clients do exist, and if you wish to use an antivirus client, free ones may be obtained online (such as the one offered by [ClamAV](#)).

Antispyware Notes

UNIX and GNU/Linux computers are not affected by spyware and do not require an antispyware client.

Web Browser Notes

All users will need a web browser capable of running a Java browser applet plugin. Sun Microsystems currently provides a free Java Runtime with a Java browser applet plugin. However, please take special note that the Sun Microsystem's version is only compatible with 32-bit browsers.

Firewall Notes

We do not recommend you use a firewall. We protect users at the Internet connection with a strong, hardware firewall. Most users find that their firewalls only restrict them from gaining access to campus resources. If you do wish to use a firewall, we recommend that you use the built-in firewall for your particular distribution. You may not use a hardware firewall on the residence hall network.

Cisco Clean Access

Several years ago, there was an epidemic of network worms. Belonging to the phylum Annelida, these worms crawled the network so quickly and caused so much damage that the Internet connection would fail almost every other weekend. These worms only spread because users were browsing unprotected. Without updates and without antivirus clients, these worms burrowed themselves deep within the heart of the residents' computers making it difficult to rectify. The following year, we decided to enforce the installation of Symantec AntiVirus. To do this, we hand-checked every computer for our minimum security requirements. This worked to an extent, but proved to be more difficult than we (and the students) wanted. So we implemented a system called Cisco Clean Access. With it, we have not experienced any network outages due to worms, viruses, and other malicious malware. We additionally

stopped receiving reports of virus infections across the network.

What is Cisco Clean Access?

You may ask, “What is Cisco Clean Access?” Well, I'm glad you asked. Clean Access is a network authentication system that verifies every user who logs onto the network is a Cal Poly student. In addition, it automatically certifies that machines are protected against the latest threats. It accomplishes this amazing feat by checking each computer for the minimum security requirements. You will interface with Clean Access differently depending upon your operating system. If you already know which platform you will be bringing to campus, you can skip to and read that section. If not, we recommend you read all the notices below.

Microsoft Windows

If you are using a Microsoft Windows platform, you will need to download and install the Cisco Clean Access Agent. The agent will run in your system tray (by the clock), and will be used to login to the network. To get the Clean Access Agent, you will start by plugging your computer into the wired residence hall network. Next, you will open a web browser (like Windows Internet Explorer, Mozilla Firefox, Safari, or Opera). You will be redirected to the Cal Poly Residence Hall Student Computing Agreement. You will digitally sign the agreement by logging into the network for the first time. After digitally signing the agreement, you will be redirected to a page with the remaining instructions for downloading and installing the Clean Access Agent.

Once the Clean Access Agent is installed on your computer, you will use it to authenticate with the network. After authenticating, the Clean Access Agent will verify that your computer meets the minimum security requirements. If your computer does not meet the minimum security requirements, you will be given temporary network access. This temporary access will only provide you access to the websites necessary to remedy any failed requirements. After you have completed the actions required in the temporary role, you will be given complete network access. With complete network access, you are unrestricted from browsing any content on the web or using any network applications.

Minimum Security Requirements for Microsoft Windows Vista

The following minimum security requirements are for Microsoft Windows Vista-based operating systems:

- Microsoft Windows Update – Microsoft patches critical flaws found in their Windows Vista-based operating systems via the built-in Windows Update control panel. This control panel will search your computer for unpatched vulnerabilities and allow you to easily download and install Microsoft Hotfixes (patches). All “critical” and “high-priority” updates are required to be installed. In addition, Windows Update must be scheduled to automatically check for, download, and install the latest “critical” and “high-priority” updates.
- Symantec AntiVirus – Cal Poly provides a licensed version of Symantec AntiVirus Corporate Edition 10.2 for all Cal Poly students using Windows Vista free of charge. The Cal Poly licensed version of Symantec AntiVirus Corporate Edition 10.2 must be installed. In addition, antivirus definition files must be kept up-to-date. Up-to-date definitions are any applied antivirus definition files within two weeks of the current

date.

- Microsoft Windows Defender – Microsoft provides a free, real-time antispyware program, Windows Defender. This program is installed on Windows Vista by default. The latest version of Windows Defender must be installed along with the latest definitions.
- Javacool Software's SpywareBlaster – SpywareBlaster is an antispyware program. Most antispyware programs simply scan and remove spyware infections. Unlike other antispyware programs, SpywareBlaster prevents spyware infections from happening in the first place. It does this by configuring your computer to refuse connections to the spyware servers. The latest version of SpywareBlaster must be installed along with the latest definitions.

Minimum Security Requirements for Microsoft Windows XP and Windows 2000

These are the minimum security requirements for Microsoft Windows XP and Windows 2000:

- Microsoft Windows Update – Microsoft patches critical flaws found in their operating systems via the online Microsoft Update and Windows Update website. This website will search your computer for unpatched vulnerabilities and allow you to easily download and install Microsoft Hotfixes (patches). All “critical” and “high-priority” updates are required to be installed. *The Microsoft Update and Windows Update websites will only work with Windows Internet Explorer.* Other than for Microsoft Windows Update, we recommend you use a different, more secure web browser.
- Microsoft Automatic Updates – The Automatic Updates service must be enabled and set to automatically check for, download, and install the latest “critical” and “high-priority” updates.
- Symantec AntiVirus – Cal Poly provides a licensed version of Symantec AntiVirus Corporate Edition 10.1 for all Cal Poly students using Windows XP and Windows 2000 free of charge. The Cal Poly licensed version of Symantec AntiVirus Corporate Edition 10.1 must be installed. In addition, antivirus definition files must be kept up-to-date. Up-to-date definitions are any applied antivirus definition files within two weeks of the current date.
- Microsoft Windows Defender – Microsoft provides a free, real-time antispyware program, Windows Defender. This program is not installed on Windows XP or Windows 2000 by default. The latest version of Windows Defender must be installed along with the latest definitions.
- Javacool Software's SpywareBlaster – SpywareBlaster is an antispyware program. Most antispyware programs simply scan and remove spyware infections. Unlike other antispyware programs, SpywareBlaster prevents spyware infections from happening in the first place. It does this by configuring your computer to refuse connections to the spyware servers. The latest version of SpywareBlaster must be installed along with the latest definitions.

ResNet Configuration Wizard

Installing and configuring the above applications and necessary settings is handled by the ResNet Configuration Wizard. You will receive this wizard through the Clean Access Agent after you arrive on campus. Installing the ResNet Configuration Wizard is required for all Microsoft Windows-based operating systems.

Preparation

Prior to arriving on campus, be sure to uninstall any antivirus software. In addition, you can install all available Hotfixes by visiting the Microsoft Update or Windows Update website. Also, you can configure the Automatic Updates service to automatically download and install updates. Completing these tasks will dramatically decrease the amount of time required to get online once you arrive.

Periodic Updates

Our Clean Access servers update once a week every Thursday at 4:00 am. At this time, every user (no matter what operating system they are using) is logged off the network. If there have been changes to the security requirements (like new Windows Hotfixes, more up-to-date virus definitions, new version of an application) you will receive temporary access until you update your computer. It is good to note that Microsoft releases new Windows Hotfixes on the second Tuesday of every month. By keeping your computer updated, we can achieve a high level of system stability with virtually no network outages.

Apple Macintosh

If you are using an Apple Macintosh platform with Mac OS X, you will need to download and install the Cisco Clean Access Mac Agent. The agent will run as a menu “extra” (by the clock), and will be used to login to the network. To get the Clean Access Mac Agent, you will start by plugging your computer into the wired residence hall network. Next, you will open a web browser (like Mozilla Firefox or Safari). You will be redirected to the Cal Poly Residence Hall Student Computing Agreement. You will digitally sign the agreement by logging into the network for the first time. After digitally signing the agreement, you will be redirected to a page with the remaining instructions for downloading and installing the Clean Access Mac Agent.

Once the Clean Access Mac Agent is installed on your computer, you will use it to authenticate with the network. After authenticating, you will be given complete network access. With complete network access, you are unrestricted from browsing any content on the web or using any network applications.

Please take special note that our Clean Access servers update once a week on Thursday at 4:00am. At this time, every user (no matter what operating system they are using) is logged off the network. To get back on the network, you will simply need to re-authenticate using a web browser.

UNIX, and GNU/Linux

If you are using one of these platforms, you will authenticate with Clean Access using a web browser. You will start by plugging your computer into the wired residence hall network. Next, you will open a web browser (like Mozilla Firefox or Konqueror). You will be redirected to the Cal Poly Residence

Hall Student Computing Agreement. You will digitally sign the agreement by logging into the network for the first time. After digitally signing the agreement, you will be logged onto the network. At this point, you are unrestricted from browsing any content on the web or using any network applications. The authentication process will require a Java applet to load. This applet will properly determine your specific type of operating system. It will be necessary for users to use a browser that supports a Java applet browser plugin. ResNet has found the 32-bit Mozilla Firefox browser and the Sun Microsystem's 32-bit Java Runtime Standard Edition to work well. Other alternatives may be possible. If you do not have a compatible Java Runtime Environment or Java capable browser, links to binary downloads will be provided.

Please take special note that our Clean Access servers update once a week on Thursday at 4:00 am. At this time, every user (no matter what operating system they are using) is logged off the network. To get back on the network, you will simply need to re-authenticate using a web browser.

Policies

Cal Poly has a collection of network and computing policies. These policies are valid for all on-campus computing, including network use in the residence halls. You can find the policies on the [Cal Poly Computing Policy homepage](#). We have created a [Residence Hall Student Computing Agreement](#). You will digitally sign this agreement the first time you log onto the network. This agreement states that you will follow the Cal Poly computing policies and meet our [minimum security requirements](#). If you have any questions about these policies, please feel free to [contact us](#).