

# Installing Linux-Athena – SIPB Installer

## Redhat 6.2/Athena 8.4

You may have used the Linux-Athena workstations deployed in many Athena clusters around campus. These workstations are installed by an installer distributed by Information Systems. Since it makes a lot of assumptions about the ethernet card and video hardware, it won't work on a workstation whose hardware configuration isn't exactly like that of the cluster machines.

The SIPB installer, documented here, is designed to install the same software as is deployed in the clusters, onto any hardware that RedHat Linux supports. It should produce a workstation capable of auto-updating, and which is fully supported by Information Systems.

This is a substantial change from previous versions of Linux-Athena. Loosely speaking, previous versions of Linux-Athena strived to produce a system resembling RedHat Linux, with Athena functionality added. By comparison, this version chooses the Athena way of doing things, when there is conflict between the Athena way and the RedHat way.

1. We urge you to become familiar with how the end product of this install should behave, before you begin. Read the Private Workstation Owner's Guide at <http://web.mit.edu/olh/Private/Private.html>.
2. Install a supported Ethernet card. The list of cards which Information Systems recommends can be found at <http://web.mit.edu/is/desktop/pcether.html>. You can find a list of other cards that will work with Linux in [/mit/linux/docs/HOWTO/Hardware-HOWTO](http://mit/linux/docs/HOWTO/Hardware-HOWTO).
3. Get a hostname and an IP address. Look at <http://rcc.mit.edu/> for more information, including forms which you can use to submit a request for your IP address.<sup>1</sup>
4. Have a Linux partition of at least 2 gigabytes for files, and a swap partition of appropriate size (rule of thumb: enough swap so that you've got 150Mb total swap plus memory, or at least 50Mb). If it's convenient, allow for another 100Mb partition dedicated to your afs cache, although that isn't strictly necessary.

A Linux-only partition will generally require you to repartition your drive. You can do this at install time, if you don't mind losing whatever else is on your drive. If you'd like to keep an existing install, you might want to try using FIPS, which can be found at <http://www.igd.fhg.de/~aschaefer/fips/>, to shrink your partition. Do be sure, however to make a backup of whatever you want to keep, before changing partition sizes or installing linux.

5. Find out the following information about your computer (You can find this information by physically looking in your machine or by looking at your DOS/Windows configuration):
  - Type and configuration of your ethernet card.
  - Type and configuration of SCSI card (if you have one).
  - Type of video card, including the chipset, video memory, monitor statistics, and other video information. It may help to have your monitor and video card manuals on hand.
  - Type of mouse and how it is connected to your computer.

After reading through the documentation, you are ready to begin installing Linux on your system. Don't worry, it is a lot easier than it seems. We recommend the following basic outline:

1. Create your boot disk. From any Athena workstation, make a boot floppy by running

```
add linux
linux-install-floppy
```

2. Boot your machine with the boot disk you have prepared. If it boots successfully, you will be presented with the RedHat Install screen.

When prompted, select "NFS install", and provide the install program with the information you looked up prior to beginning the install.

You'll need to provide your IP address, but installer should make a reasonable guess at the correct netmask and network addresses. For most people on MITnet, the following table should help you cross check these:

---

<sup>1</sup>MIT Departments **ONLY** (We mean *only!*) x3-1104. Students on Resnet use the web page.

Parameter	Form	Example	Yours
IP Address	18.b.c.d	18.20.0.153	18.____.____.____
Netmask	255.255.0.0	255.255.0.0	255.255.0.0
Network	18.b.0.0	18.20.0.0	18.____.0.0
Broadcast	18.b.255.255	18.20.255.255	18.____.255.255
Gateway	18.b.0.1	18.20.0.1	18.____.0.1

These are site specific configurations that should also be provided by the installer:

- Nameserver: 18.70.0.160
  - NFS Server: sipb-nfs.mit.edu
  - Path to RedHat directory: /u3/is-linux/redhat-6.2
3. You've now reached the point at which the installer will spend some time downloading the heavily customized second stage installer (up until now, you've been exclusively using stock RedHat).  
If it can figure out enough about your video hardware, it should start the X based installer. If not, it'll fall back to the text mode one (if it doesn't do this correctly for you, you can force the installer to run in text mode, by starting over, and typing `text` at the very first prompt that you are given, when the system boots up).
4. When the time comes to select your installation choices, choose "Athena Workstation". Choosing "Custom Install" will most likely result in a non-functional system, so don't do that unless you know what you are doing.
5. One of the questions you'll be asked about is if you want to register your workstation with Information Systems. To learn more about this option, take a look at <http://web.mit.edu/acs/min-std-athena.html>.

If you choose to let the installer register you, it'll simply send mail similar to the mail that the web form would send, so if you prefer to use the web form, feel free. If you've already registered from the hostname that you're using, you don't need to register it a second time. Running `hesinfo hostname cluster` will check for hesiod information associated with your hostname. If you've already registered, it'll say something like

```
syscontrol control/control-8.4 8.4
sysprefix /afs/athena.mit.edu/system/rhlinux
syscontrol control/control-8.3 8.3
```

(this takes a few hours to update, so don't expect to see it right away).

Even if you would prefer that your workstation not take updates automatically, we still recommend that you register, since it'll make taking updates manually a lot easier. You can easily disable auto-update later,<sup>2</sup> but the install process assumes that the workstation will take its first update automatically.

6. Using the default configuration, the install process takes about an hour on MITnet. (It will take longer from off-campus ILGs and houses with a cable-modem connection to the internet.)
7. After rebooting you should have a system equivalent to a public Athena workstation. Much of the maintenance of this system will be Athena specific, rather than linux specific, so even if you've maintained a linux workstation before, we encourage you to look at the Private Workstation Owner's Guide at <http://web.mit.edu/olh/Private/Private.html>.

If you have any questions about the install process, or running Linux-Athena, you can stop by the SIPB office (W20-557, x3-7788), or send e-mail to [linux-help@mit.edu](mailto:linux-help@mit.edu). Bugs in Linux-Athena should be reported using `sendbug`, while bugs about the install process can be reported to [linux-dev@mit.edu](mailto:linux-dev@mit.edu).

You should subscribe to the Linux-Athena announcements mailing list, `linux-announce`, if you are not already subscribed, To do so, type:

```
blanche linux-announce -a $USER
```

*This document was originally written by Emil Sit ([sit@mit.edu](mailto:sit@mit.edu)) and Derek Atkins ([warlord@mit.edu](mailto:warlord@mit.edu)), and was revised for Athena 8.4 by Camilla Fox ([cfox@mit.edu](mailto:cfox@mit.edu)).*

*This document is \$Revision: 1.37 \$. Last modified \$Date: 2001/05/10 21:42:34 \$.*

---

<sup>2</sup>Edit `/etc/athena/rc.conf`