

# **CYBER DEFENSE COMPETITION**

## **Remote Setup Guide**



**IOWA STATE UNIVERSITY, INFORMATION ASSURANCE CENTER**  
SPRING 2009

1. There are several ways to remotely setup your machines. You will first need to remotely connect to a web interface we created for you to access a remote KVM and then load operating systems onto the machines. Then, if you enable SSH or remote desktop on the servers, you can connect to our SSH/RDP gateway and then reach your machines. We'll now start with the initial setup of the operating systems. First, go to the site <http://setup.iseage.org>. Select your team name. I'm going to use Team 12. The default password is cdcN (where N is your team number), in my case, "cdc12".



Team:

Password:

Login

- a. The first thing you should do is to change your password. Enter a new password in the Change Password area at the bottom of the page and then click Submit.



Logout

Network KVM Access

Java

Java SSL

Support Chat

Competition Documents

Description	Reboot
Computer 1 <input type="text"/>	Reboot
Computer 2 <input type="text"/>	Reboot
Computer 3 <input type="text"/>	Reboot
Computer 4 <input type="text"/>	Reboot

Update

Change Password

New Password:

Confirm:

Submit

- b. A Support Chat has been provided to help you set up in real-time. This is accessible from the main setup page, also. There will be designated times when we will be manning the chat room, which we will let you know. Also, you can

log in and leave a message for us there and we will answer you. This chat room should be used to ask questions about rule clarifications, assistance with physical problems with machines (e.g., put a CD into a drive, reboot a computer, rewire network cables), or other technical questions.



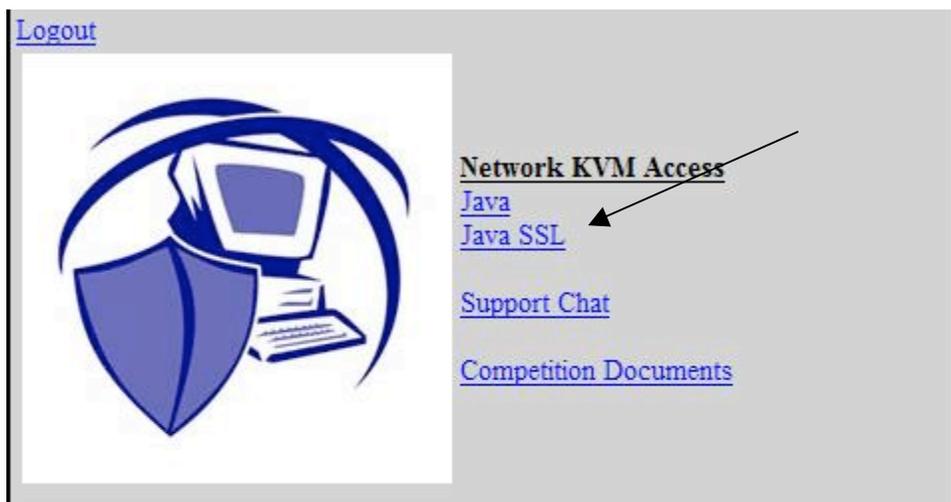
- c. Each of the computers that you will be using has a description text box. You can enter a name for a machine such as FTP Server and then click Update. This is just for your reference during setup. There is also a reboot button to the right of the description field. If you need to power cycle the machine, you can use this button to do so. This works just like the reset button on the front of the computer. You should start with machine 1 and only use more than four if you have accounted for the extra machine(s) in your budget. Computers 5-8 will not be hooked up unless you request them from the Competition Director.

	Description	
Computer 1	FTP Server	Reboot
Computer 2		Reboot
Computer 3		Reboot
Computer 4		Reboot
Computer 5		Reboot
Computer 6		Reboot
Computer 7		Reboot
Computer 8		Reboot
Update		

2. You can access the remote KVM from this web page, but you must first be (virtually) inside our setup network. We have set up a Remote Desktop gateway for this purpose. To access this machine, use the Remote Desktop client (Start→Run:mstsc or Start→Programs→Accessories→Communications→Remote Desktop Client) on a Windows machine, by downloading the Mac Client (<http://connect.microsoft.com/macrdc>), or using “rdesktop” on Linux/Unix. Connect to rdp.iseage.org:



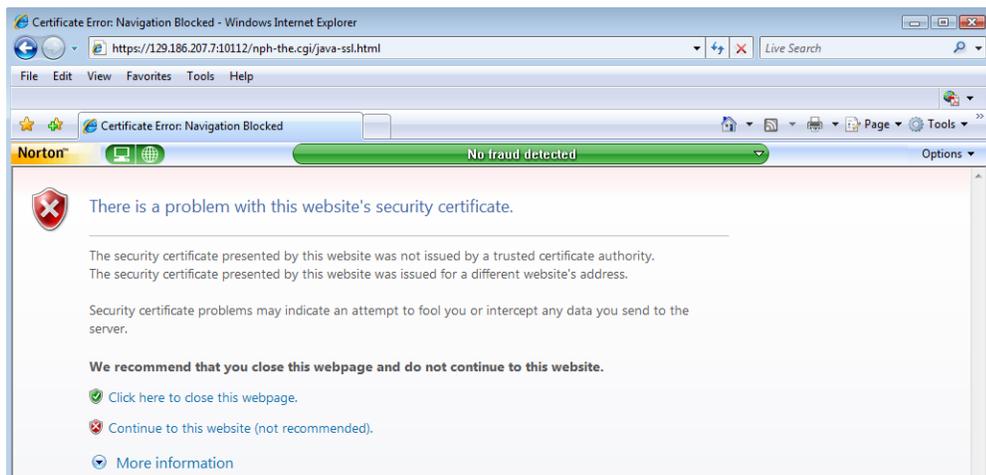
- a. Log in to this server with cdcN/cdcN (where N is your team number). Make sure “REMOTE” is selected as the Domain. You should change this password immediately. It is not connected to your setup.iseage.org password. After you’ve logged in you’ll see a few icons on your desktop. Double-click the “Setup” shortcut to open the setup webpage.
- b. Log in just like you did before, and then click “Java SSL” under “Network KVM Access”. If this is too slow, try “Java”. Note: not using SSL may expose your traffic to other teams using the same remote gateway.



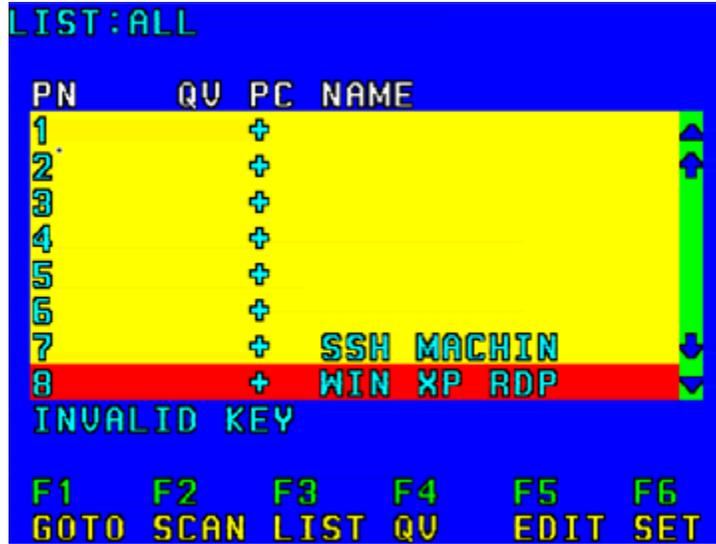
- c. If you are running Firefox, you may see the following warnings. Go ahead and accept the certificate by clicking Ok, Ok, and yes. (You may also get the new Firefox warning, which looks like a web page error, but follow the link on that page to accept the certificate). Internet Explorer 7 acts a little differently, so skip to step ahead to step “d” to see those warnings.



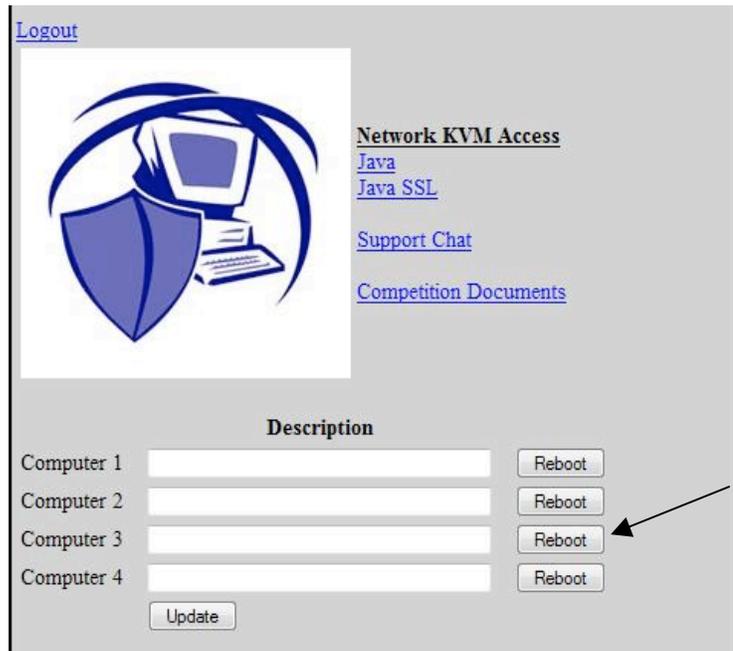
- d. In Internet Explorer 7, you will see the following warning. Click on the words “Continue to this web site.” You may also see the box pop up that tells you that you are running Java. Just click Ok.



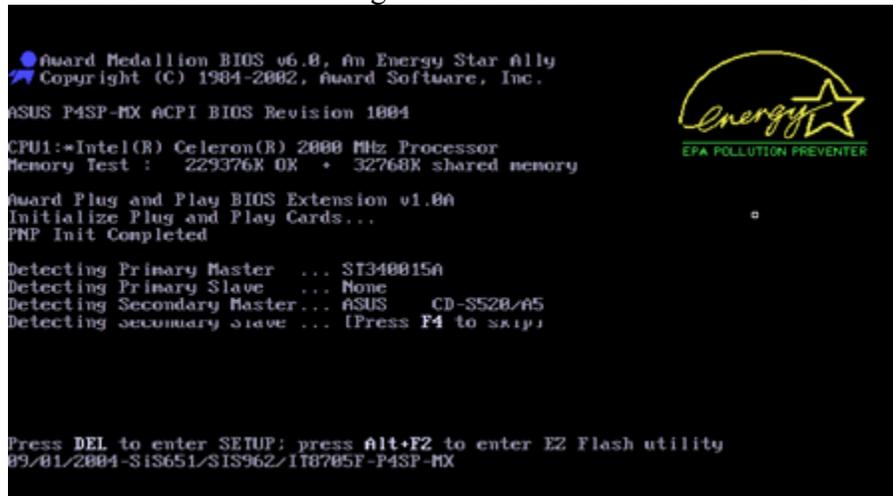
- e. The KVM window will pop up (it may be in the background).
- f. Once the KVM screen comes up, hit the control key twice and the remote KVM will open up a window for you to select which machine you want to control.



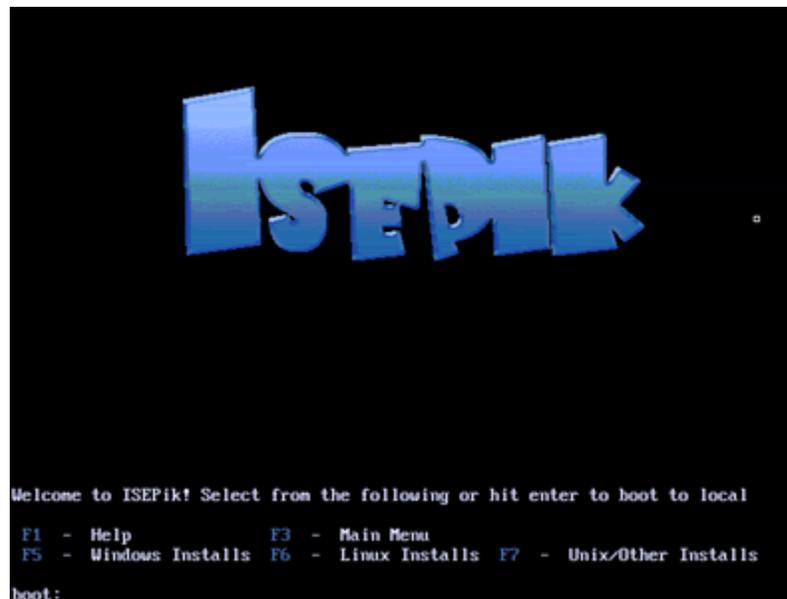
- g. We're going to set up computer 7 with Windows XP as an example. Select one of your computers (1-4) and follow along. Arrow up/down to the computer you want to use, and hit enter. This will bring up the console of that computer in the KVM window. Keep this window open and go back to the setup web page and reboot the machine. You may also wish to assign it a name.



3. Now we will see the machine rebooting in the window where the KVM selection was.

A screenshot of a BIOS boot screen. The background is black with white text. At the top left, it says "Award Medallion BIOS v6.0, An Energy Star Ally" and "Copyright (C) 1984-2002, Award Software, Inc.". Below that, it says "ASUS P4SP-MX ACPI BIOS Revision 1004". The hardware information includes "CPU1: Intel(R) Celeron(R) 2000 MHz Processor" and "Memory Test : 229376K OK + 32768K shared memory". It then shows "Award Plug and Play BIOS Extension v1.00" and "Initialize Plug and Play Cards... PNP Init Completed". The next section lists "Detecting Primary Master ... ST3400150", "Detecting Primary Slave ... None", "Detecting Secondary Master... ASUS CD-S520/A5", and "Detecting secondary slave ... (Press F4 to skip)". At the bottom, it says "Press DEL to enter SETUP; press Alt+F2 to enter EZ Flash utility" and "89/01/2004-SIS651/SIS962/IT8705F-P4SP-MX". On the right side, there is a yellow "Energy Star" logo with the text "EPA POLLUTION PREVENTER" below it.

- a. It will boot to a PXE server interface we call ISEPIK. ISEPIK allows you to install operating systems onto your servers remotely. To see available Windows operating systems, press the F5 button. If you want to do Linux installs, use F6. For other Unix installations, select F7. We are going to select Windows for this demonstration, so press the F5 button. *Note: If you wish to boot from the local hard drive or CD/DVD: type "local" and hit enter (this is the default after about four minutes).*

A screenshot of the ISEPIK boot screen. The background is black. In the center, the word "ISEPIK" is written in large, blue, 3D-style block letters. Below the logo, there is a white text prompt: "Welcome to ISEPIK! Select from the following or hit enter to boot to local". Underneath, there is a list of function keys: "F1 - Help", "F3 - Main Menu", "F5 - Windows Installs", "F6 - Linux Installs", and "F7 - Unix/Other Installs". At the bottom left, there is a "boot:" prompt.

- b. Now you need to decide what version of Windows you want to install. We're going to select Windows XP SP2, so I type *xpsp2* at the "boot:" prompt and press Enter. This will install as if you have put the CD in the drive.

```

***** Windows *****

Windows XP SP8      => xpsp8
Windows XP SP1      => xpsp1
Windows XP SP2      => xpsp2
Windows Server 2003 SP1 => 2k3sp1
Windows 2000 Pro SP4 => 2ksp4 (broken)

F1 - Help           F3 - Main Menu
F5 - Windows Installs F6 - Linux Installs F7 - Unix/Other Installs

Enter the boot option and press <return>.
boot: xpsp2

```

- c. If you have any problems with the remote KVM, you may be typing too fast. So, try typing very slowly. You may also need to resync the mouse for a Windows machine. Click on “Menu” and then click on “Mouse resync”. You may also want to turn off precision pointing on your Windows machine.



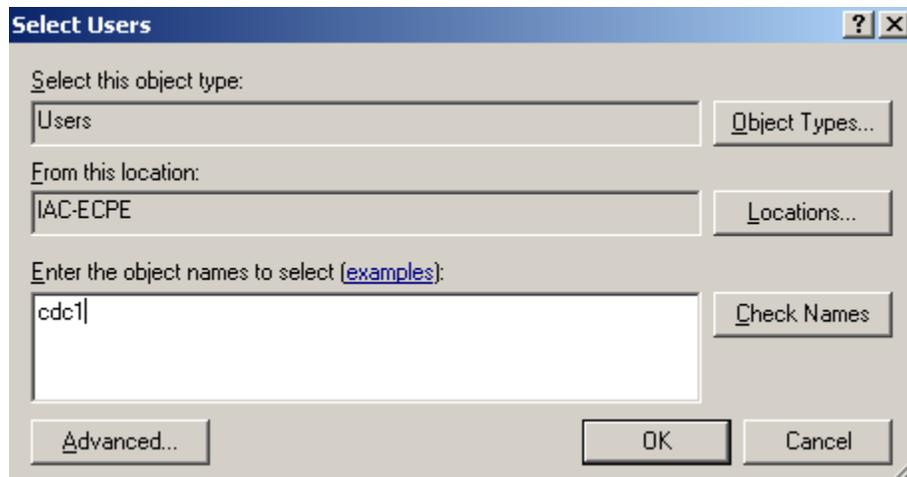
- 4. Now that you know how to use the network KVMs, we want to show you how to set up Remote Desktop on a Windows box. You should use this method after you have used the remote KVM to install a Windows operating system on a computer. You should do this because you can only have one person working on the remote KVM at a time, and as you’ve probably noticed, the KVM is a bit laggy. If you setup Remote Desktop, each of

your team members can remotely connect to a different (or the same) machine to work on setup.

- a. To enable Remote Desktop on a Windows box, right click on My Computer and select the Remote tab. Check the box labeled “Allow users to connect remotely to this computer”.

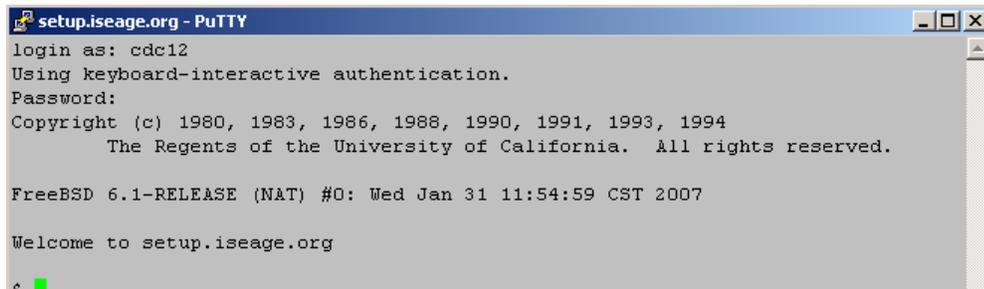


- b. You can also specify which remote users can connect by clicking on the “Select Remote Users” button and then adding the username(s), separated by a semicolon.



- c. Once you have Remote Desktop running on the remote machine, you can use the same remote desktop gateway you used to access the KVM to “hop” to your machine.

5. Similarly, you should use SSH to connect to your Linux/Unix machines. First, connect to our SSH gateway, [setup.iseage.org](http://setup.iseage.org), and then connect to your Unix/Linux boxes (make sure you have enabled SSH on them). You can use puTTY to make your SSH connection from a Windows computer, or the Apple Terminal (Applications/Utilities/Terminal) for Mac OS X. If you do not have puTTY, go to <http://tinyurl.com/2r4w> and download it (for free). You will make your first SSH connection to [setup.iseage.org](http://setup.iseage.org). Use the same user name and password you use for the Remote Desktop gateway. If you change your password there, it will update here, as well. Don't use "passwd" to change your password here: it won't work.



```
setup.iseage.org - PuTTY
login as: cdc12
Using keyboard-interactive authentication.
Password:
Copyright (c) 1980, 1983, 1986, 1988, 1990, 1991, 1993, 1994
The Regents of the University of California. All rights reserved.

FreeBSD 6.1-RELEASE (NAT) #0: Wed Jan 31 11:54:59 CST 2007

Welcome to setup.iseage.org
```

- a. Next you should SSH to your server. You do this by typing:

```
ssh <yourlogin>@<yourmachine>
```

In this example, we use connect to 192.168.2.10 as cdc1.

```
$ ssh cdc1@192.168.2.10
```

Once you have authenticated, then you can use your server just like you were sitting on the console locally.