ECE 264
Advanced C Programming

SecureCRT and Linux
Remotely Execute Tools

Yung-Hsiang Lu

Purdue University,

West Lafayette, IN, USA

Purpose

- This course uses Linux. If you do not have a Linux machine at home, you can remotely use the Linux computers provided by ECN.

- If you have a Windows machine, you can remotely enter a Linux computer using SecureCRT.

- Some tools require opening windows on your local machine.

- This video shows how to set up the environment.

Steps

- Download and Install SecureCRT.
- Download and Install Cygwin.
- Start Xwin Server in Cygwin.
- Enter an ECN Linux machine.
- In SecureCRT, allow X11 Forwarding.
- Use the tools (DDD, emacs, ...)

Download and Install SecureCRT.

https://engineering.purdue.edu/ECN

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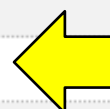
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Information For

Software

Engineering Software

We support a wide variety of engineering software on servers and desktops in labs, office, a

If there is software you need to on your ECN supported computer you can <u>request software</u> online contact us form.

Software Downloads

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Security software provided to all Purdue users.

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Downloads

McAfee Antivirus and other Security Software

Antivirus Patches

McAfee Daily DAT files

Product Manuals

Other Links

McAfee Antivirus Software Help & General Information

McAfee Threat Center

Antivirus & Security Software

To ensure virus protection, be sure to download and install the latest McAfee patch from the patc

IMPORTANT NOTES:

1. Attention: McAfee VirusScan Enterprise Edition is now being used for both Non-Purdue (per equipment.

2. McAfee Personal Equipment PRODUCT SUPPORT GRANT NUMBER: 9112313-NET

3. To aid you in securely browsing from your personal machine, ITNS suggests that you instal https://www.siteadvisor.com

4. Tripwire for Server users please note: Internet Explorer 6 SP2 may change the file extension issue in Internet Explorer. If you download a file and the extension is .tar, you should renam unzips correctly.

www.purdue.edu/securepurdue/download/index.cfm

unzips correctly.

Download

Select Operating System

Windows XP

Number of Machines Product will be installed on

1

Email Address

yunglu@purdue.edu

1) The software may be installed and used only on computers owned, leased or controlled by Purdue University or by its faculty, staff and students.

2) The software may not be made available to persons or organizations not directly affiliated with Purdue.

I agree to the above terms

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Download products

2. McAfee Personal Equipment PRODUCT SUPPORT GRANT NUMBER: 9112313-NET

3. To aid you in securely browsing from your personal machine, ITNS suggests that you install McAfee SiteAdvisor
   https://www.siteadvisor.com

4. Tripwire for Server users please note: Internet Explorer 6 SP2 may change the file extensions for .tgz to .tar! This is a known issue in Internet Explorer. If you download a file and the extension is .tar, you should rename it to .tgz to ensure that it unzips correctly.

Product	Help	Download
McAfee AntiVirus		
McAfee VirusScan Enterprise 8.8	❓	Download
SSH, SFTP, and SCP Secure Clients		
Secure CRT (32-bit)	❓	Download
SecureCRT-SecureFX Combination (Purdue Custom) (32-bit)	❓	Download

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ess, equal opportunity university.
e because of a disability, please contact ITaP at itap@purdue.edu.

www.purdue.edu/securepurdue/download/index3.cfm

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Product Manuals

Other Links

McAfee Antivirus Software Help & General Information
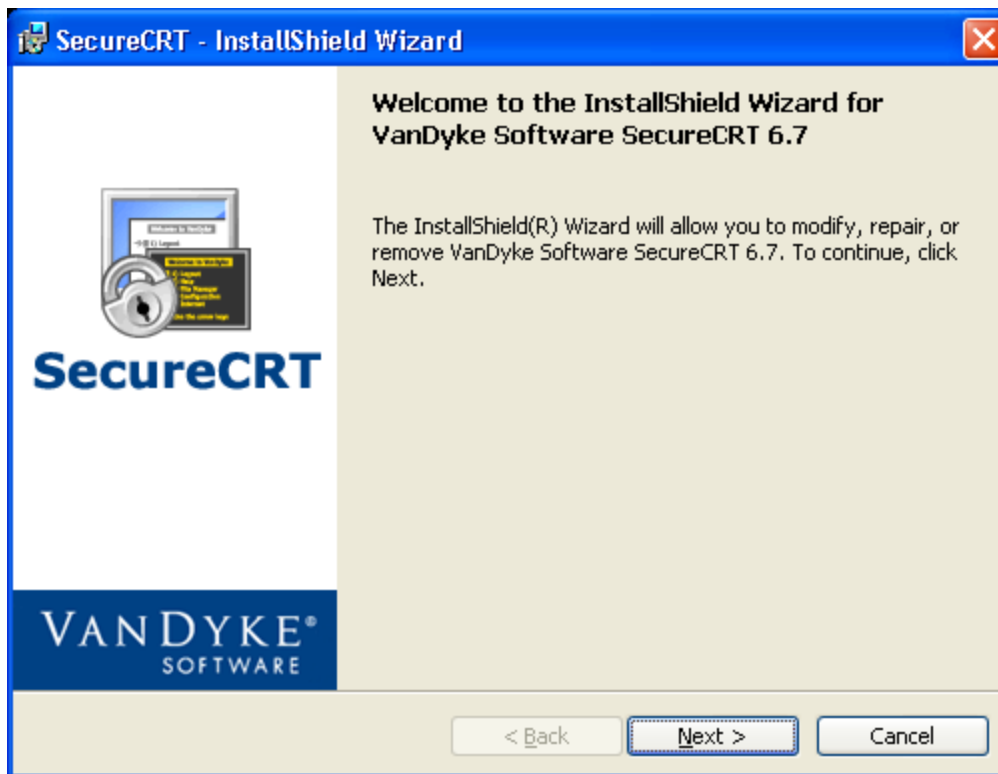
McAfee Threat Center

Antivirus & Security Software

Platform: **Windows XP**

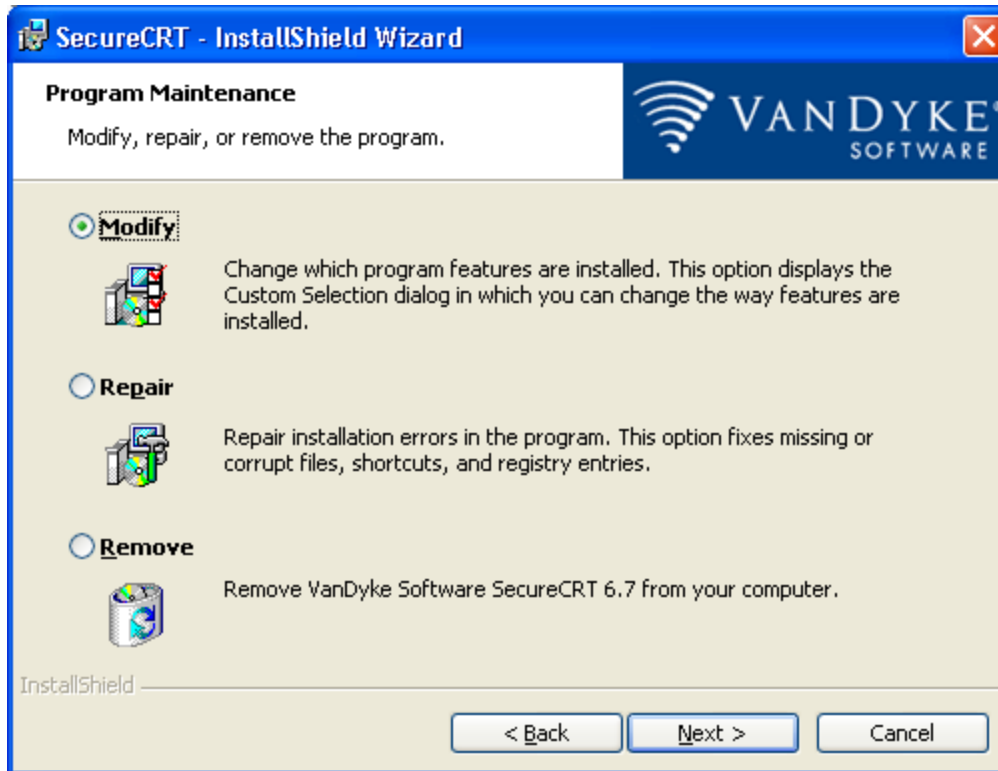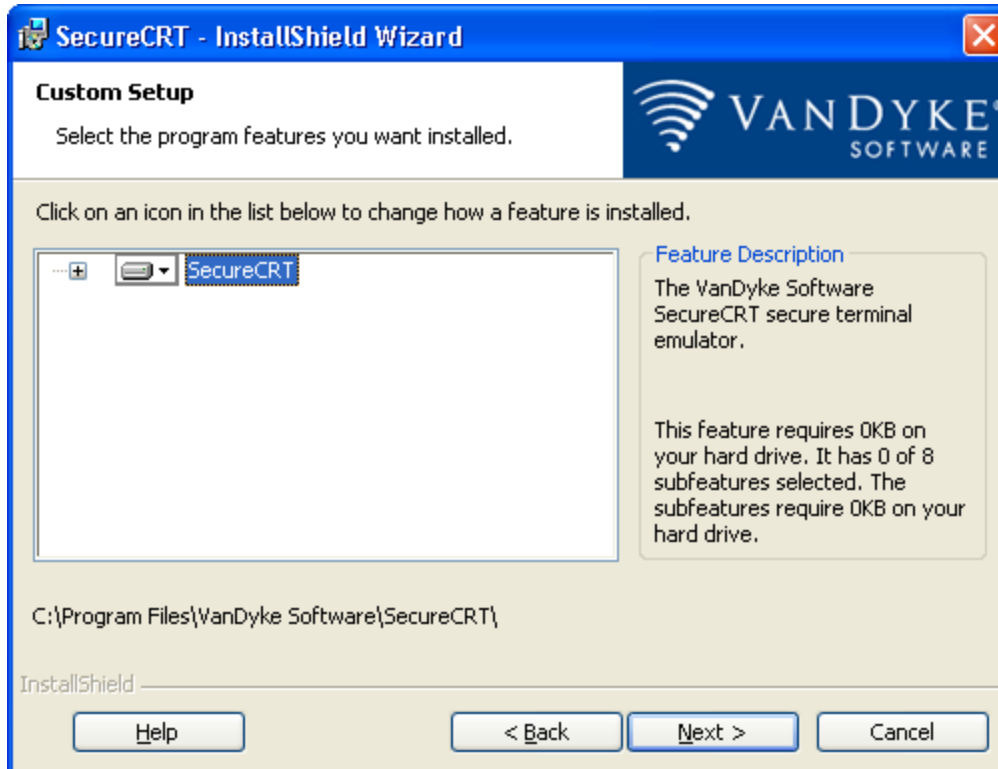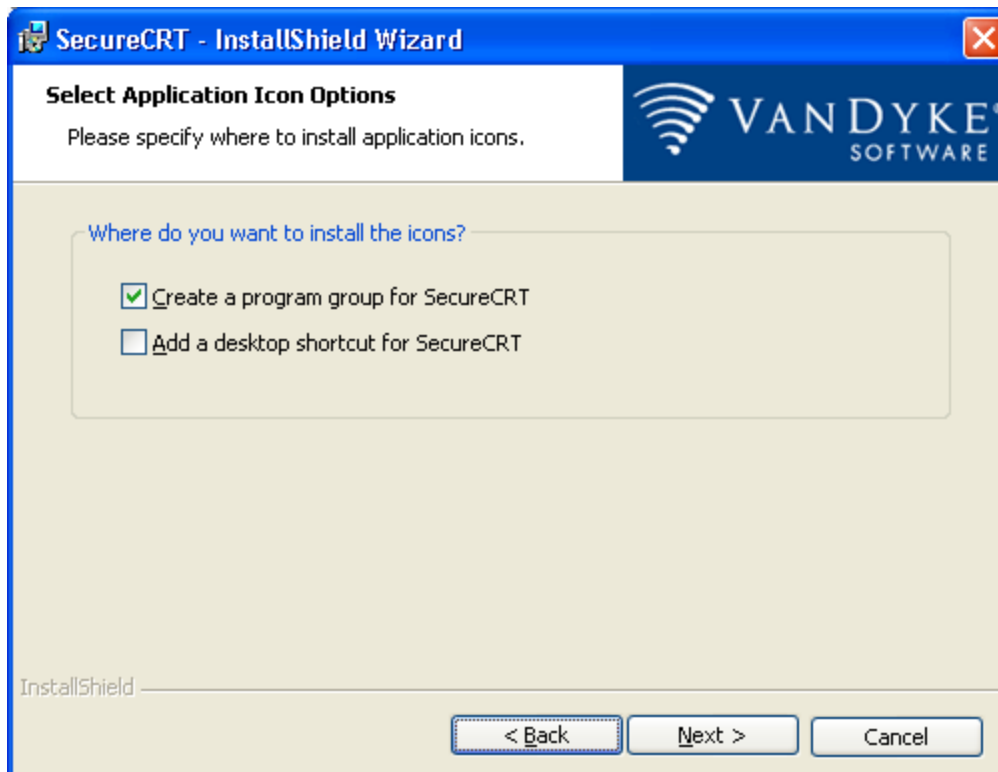Product: **Secure CRT (32-bit)**

Download scrt671-x86.exe

< Download another file

SecureCRT - InstallShield Wizard

Welcome to the InstallShield Wizard for VanDyke Software SecureCRT 6.7

The InstallShield(R) Wizard will allow you to modify, repair, or remove VanDyke Software SecureCRT 6.7. To continue, click Next.

SecureCRT

VANDYKE® SOFTWARE

< Back   Next >   Cancel

SecureCRT - InstallShield Wizard

Program Maintenance

Modify, repair, or remove the program.

VANDYKE® SOFTWARE

◉ **Modify**

Change which program features are installed. This option displays the Custom Selection dialog in which you can change the way features are installed.

○ **Repair**

Repair installation errors in the program. This option fixes missing or corrupt files, shortcuts, and registry entries.

○ **Remove**

Remove VanDyke Software SecureCRT 6.7 from your computer.

InstallShield

[< Back] [Next >] [Cancel]

SecureCRT - InstallShield Wizard

Custom Setup

Select the program features you want installed.

VAN DYKE
SOFTWARE

Click on an icon in the list below to change how a feature is installed.

⊞ 📼▾ SecureCRT

Feature Description

The VanDyke Software SecureCRT secure terminal emulator.

This feature requires 0KB on your hard drive. It has 0 of 8 subfeatures selected. The subfeatures require 0KB on your hard drive.

C:\Program Files\VanDyke Software\SecureCRT\

InstallShield

Help | < Back | Next > | Cancel

SecureCRT - InstallShield Wizard

Select Application Icon Options
Please specify where to install application icons.

VANDYKE®
SOFTWARE

Where do you want to install the icons?

☑ Create a program group for SecureCRT

☐ Add a desktop shortcut for SecureCRT

InstallShield

< Back   Next >   Cancel

Download and Install Cygwin.

www.cygwin.com

Cygwin
    Install Cygwin
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    Search Packages
    Licensing Terms

Cygwin/X

Community
    Reporting Problems
    Mailing Lists
    Newsgroups
    Gold Stars
    Mirror Sites
    Donations

Documentation
    FAQ
    User's Guide
    API Reference
    Acronyms

Contributing
    Snapshots
    Source in CVS
    Cygwin Packages

Cygwin

Get that Linux feeling - on Windows!

This is the home of the Cygwin project

What...

...is it?

Cygwin is:

- a collection of tools which provide a Linux look and feel environment for Windows.

- a DLL (cygwin1.dll) which acts as a Linux API layer providing substantial Linux API functionality.

...isn't it?

Cygwin is not:

- a way to run native Linux must rebuild your applica want it to run on Window

- a way to magically make aware of UNIX® functio Again, you need to build you want to take advanta

cygwin.com/install.html

Cygwin

Get that Linux feeling - on Windows!

Installing and Updating Cygwin

Run setup.exe any time you want to update or install a Cygwin package. The signature fo
verify the validity of this binary using this public key.

When installing packages for the first time, setup.exe *does not install every package.*
packages from the Cygwin distribution are installed by default. Clicking on categories a
setup.exe package installation screen will provide you with the ability to control what i
Clicking on the "Default" field next to the "All" category will provide you with the opportu
package. Be advised that this will download and install hundreds of megabytes to your c
probably to click on individual categories and install either entire categories or packages
themselves.

The latest net releases of the Cygwin DLL are numbered *1.n.x*, where "n" is currently "7
version numbering refers only to the Cygwin DLL. Individual packages like *bash, gcc, le*

Cygwin Setup

Cygwin Net Release Setup Program

This setup program is used for the initial installation of the Cygwin environment as well as all subsequent updates. Make sure to remember where you saved it.

The pages that follow will guide you through the installation. Please note that Cygwin consists of a large number of packages spanning a wide variety of purposes. We only install a base set of packages by default. You can always run this program at any time in the future to add, remove, or upgrade packages as necessary.

Setup.exe version 2.769

Copyright 2000-2012

http://www.cygwin.com/

< Back   Next >   Cancel

Cygwin Setup - Choose Installation Type

Choose A Download Source
Choose whether to install or download from the internet, or install from files in a local directory.

- ● Install from Internet
  (downloaded files will be kept for future re-use)

- ○ Download Without Installing

- ○ Install from Local Directory

< Back   Next >   Cancel

Cygwin Setup - Choose Installation Directory

Select Root Install Directory

Select the directory where you want to install Cygwin. Also choose a few installation parameters.

Root Directory

C:\cygwin   Browse...

Install For

(•) All Users (RECOMMENDED)

Cygwin will be available to all users of the system.

( ) Just Me

Cygwin will still be available to all users, but Desktop Icons, Cygwin Menu Entries, and important Installer information are only available to the current user. Only select this if you lack Administrator privileges or if you have specific needs.

< Back   Next >   Cancel

Start Xwin Server in Cygwin.

Recycle Bin

Windows
Media Player

Internet
Explorer

Dropbox

Click Me!
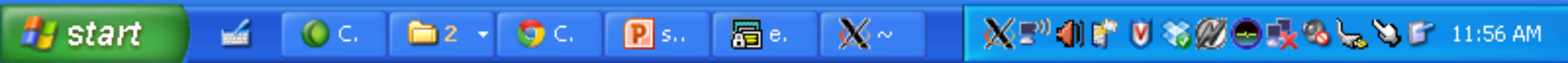
Cygwin
Terminal

Mozilla
Thunderbird

Camtasia
Studio 5

PortShutter

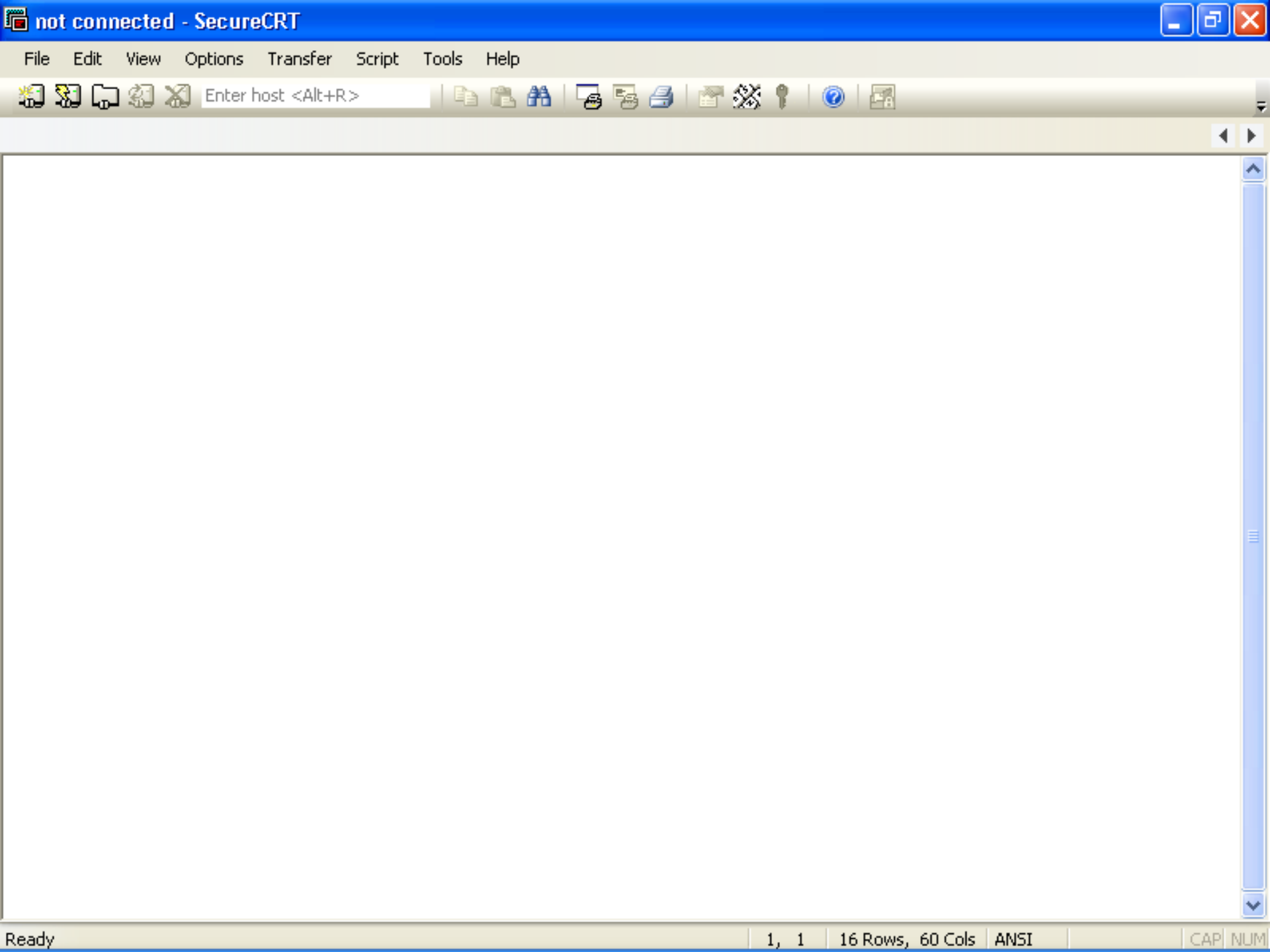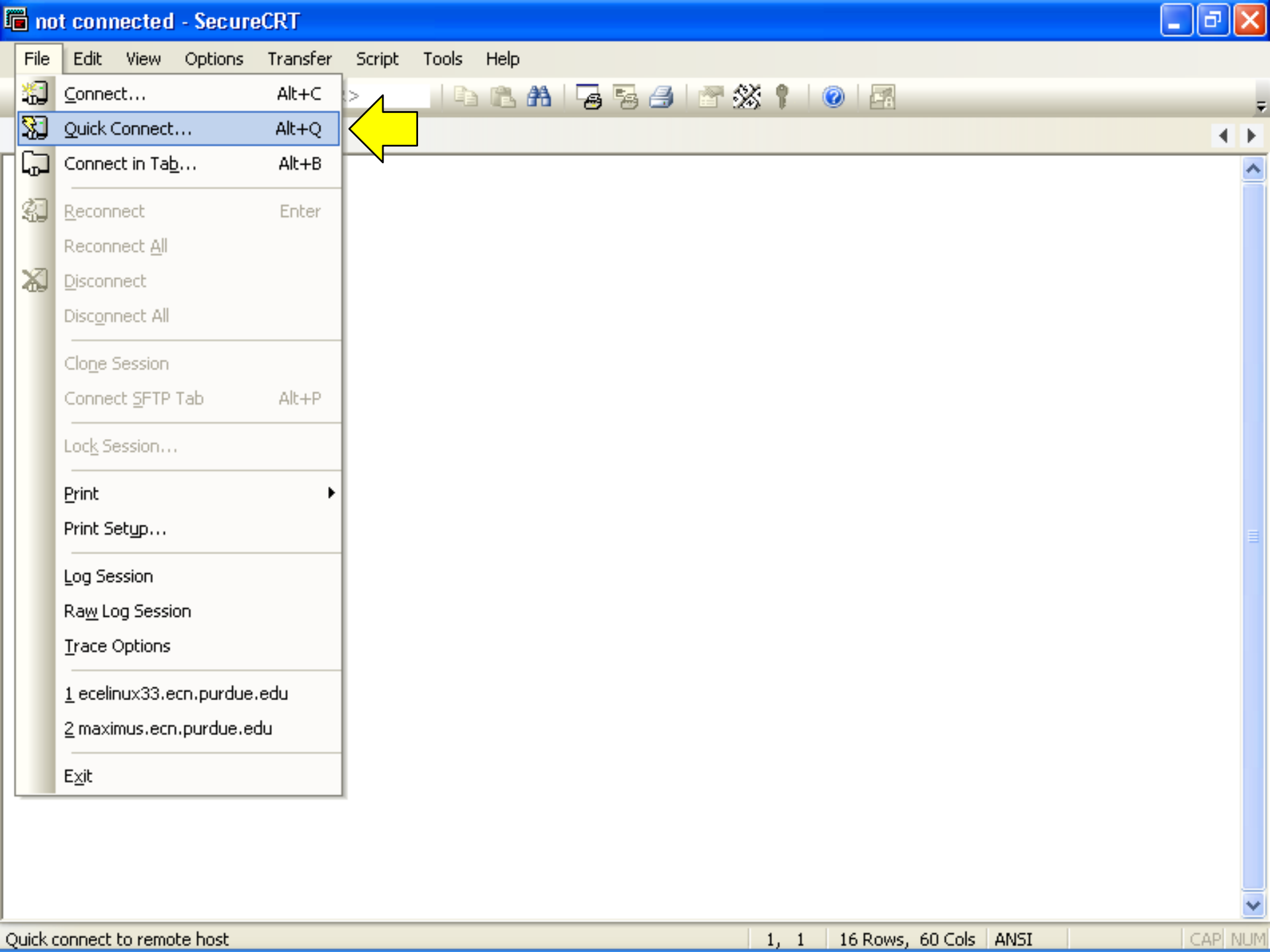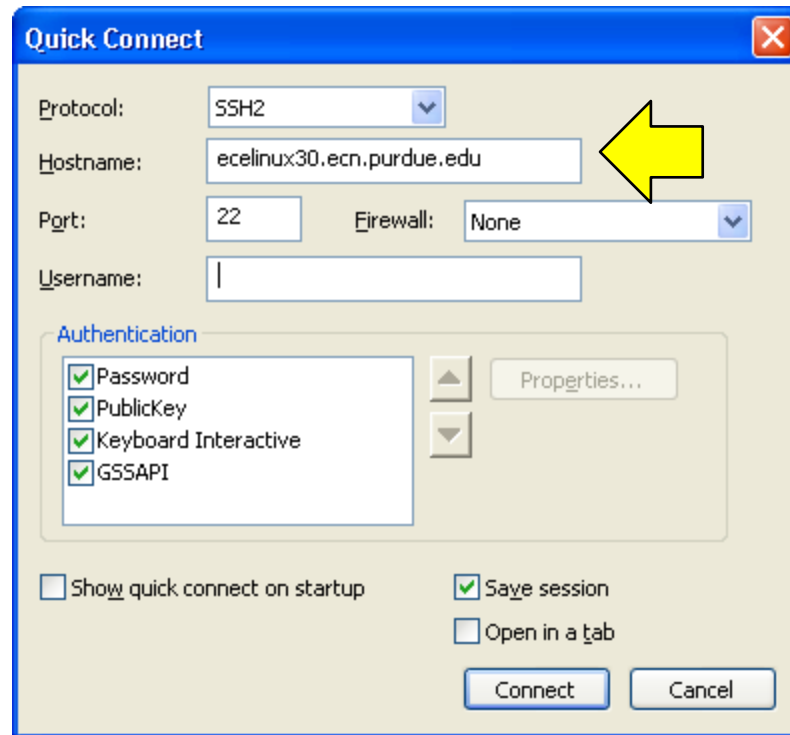Skype

Google
Chrome

start   C.   2   C.   s..   e.   X ~   11:56 AM

Enter an ECN Linux machine.

File   Edit   View   Options   Transfer   Script   Tools   Help

Enter host <Alt+R>

There are dozens of computers with different numbers. Don't always use ecelinux30. If everyone uses 30, it will be very slow. **Use different numbers.**

In SecureCRT, allow X11 Forwarding.

ecelinux33.ecn.purdue.edu - SecureCRT

File   Edit   View   Options   Transfer   Script   Tools   Help

Session Options...
Global Options...

✓ Auto Save Options
Save Settings Now

✓ ecelinux33.ecn.

[(ecelinux

Configure session options   ssh2: AES-256-CTR   1, 19   20 Rows, 70 Cols   ANSI   CAP NUM
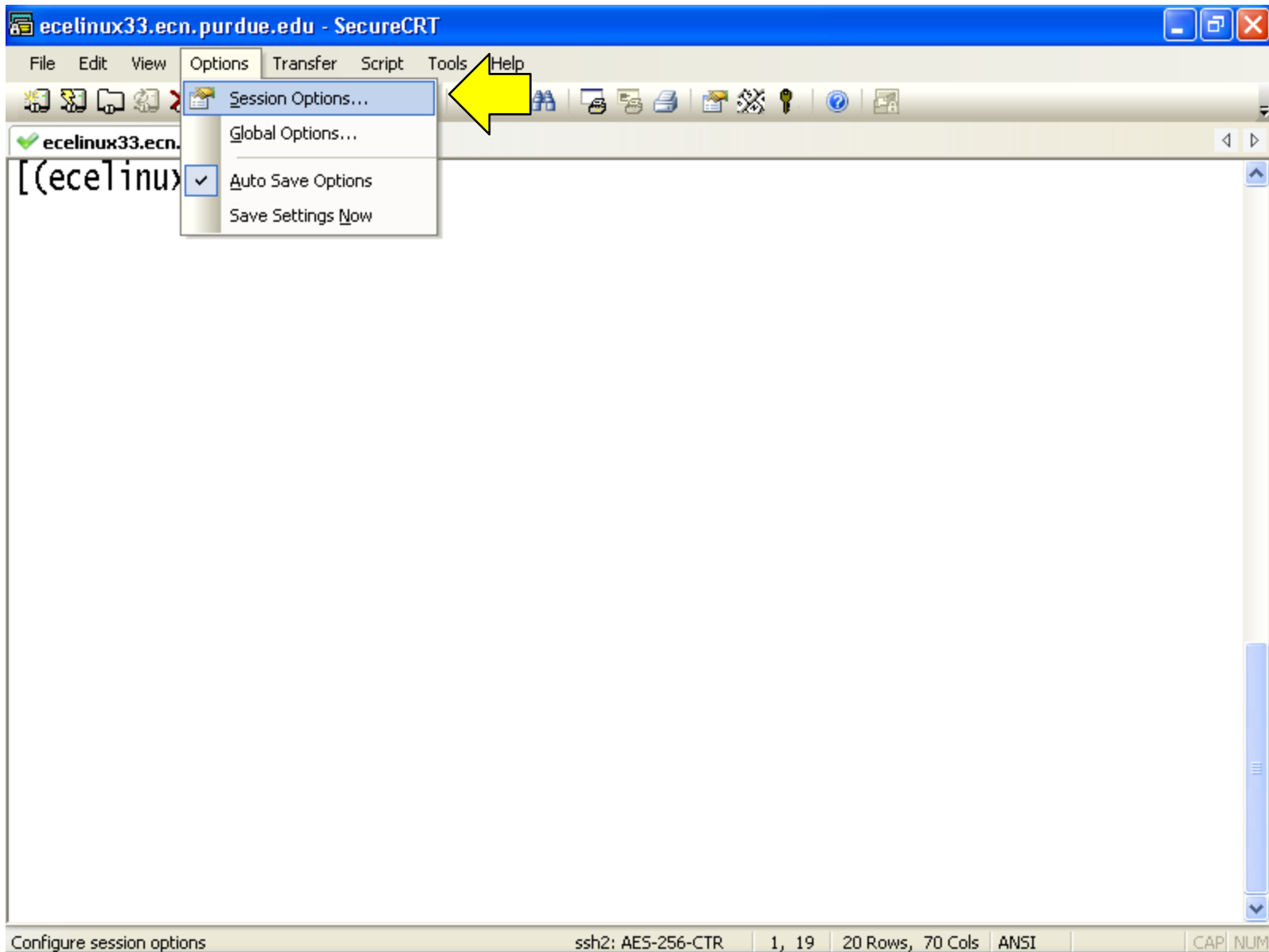
Session Options - ecelinux33.ecn.purdue.edu

Category:

- Connection
  - Logon Actions
  - SSH2
    - SFTP Tab
    - Advanced
  - Port Forwarding
    - Remote/X11
- Terminal
  - Emulation
    - Modes
    - Emacs
    - Mapped Keys
    - Advanced
  - Appearance
    - Window
  - Log File
  - Printing
  - X/Y/Zmodem

Remote Port Forwarding / X11 Forwarding

Remotely forwarded connections

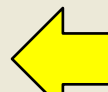| Name /	Remote Address	Local Host

[Add...] [Edit...] [Delete]

X11 forwarding

Selecting this option causes SecureCRT® to request that the remote machine forward X11 data to the X server running on the local machine.

☑ Forward X11 packets
  ☐ Enforce X11 authentication

[OK] [Cancel]

Start DDD

File   Edit   View   Options   Transfer   Script   Tools   Help

Enter host <Alt+R>

ecelinux33.ecn.purdue.edu

```
[(ecelinux33) ~/] ddd &
```

Ready   ssh2: AES-256-CTR   1, 24   20 Rows, 70 Cols   ANSI   CAP NUM

ecelinux33.ecn.purdue.edu - SecureCRT

File   Edit   View   Options   Transfer   Script   Too

Enter host <Alt+R>

✔ ecelinux33.ecn.purdue.edu

```
[(ecelinux33) ~/] ddd &
[1] 3113
[(ecelinux33) ~/]
```

Ready

DDD: Debugger Console

File   Edit   View   Program   Commands   Status   Source   Data

(): |main

Lookup   Find>>   Break   Wa

```
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Copyright © 1999-2001 Universität Passau, Germany.
Copyright © 2001 Universität des Saarlandes, German
Copyright © 2001-2004 Free Software Foundation, Inc
(gdb) |
```

△ Welcome to DDD 3.3.11 "Rhubarb" (x86_64-unknown-linux-gnu)