



SCO

SCO OpenServer™ Release 5 Administration I: User Services

Transparency Masters

Course Release: 2.0

For Software: SCO OpenServer™ Release 5

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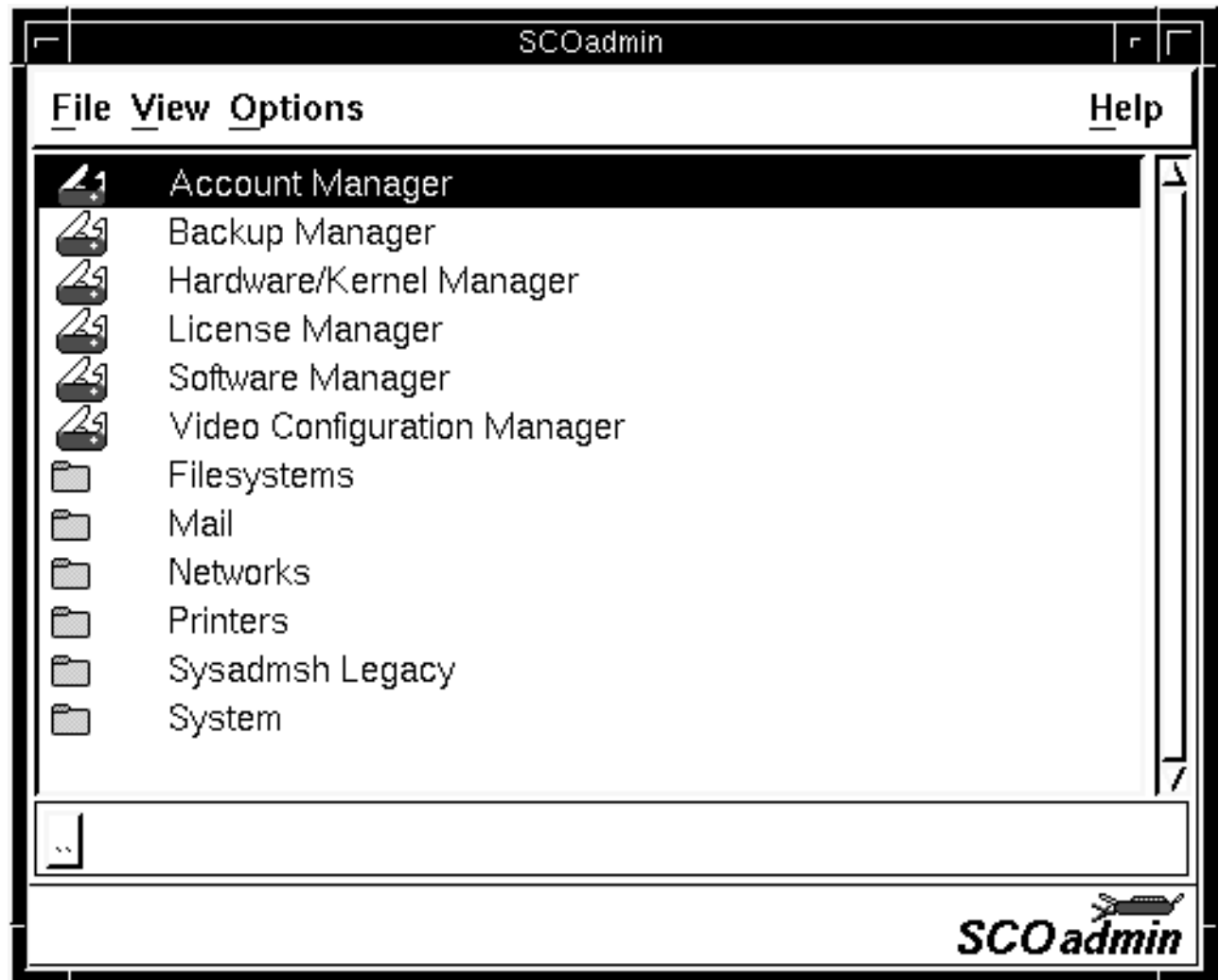
Using SCO Administration Tools

- **Use scoadmin(ADM)**
- **Locate topics in SCO documentation**
- **Identify other sources of information**
- **Describe the importance of the superuser account**
- **Maintain a system log**

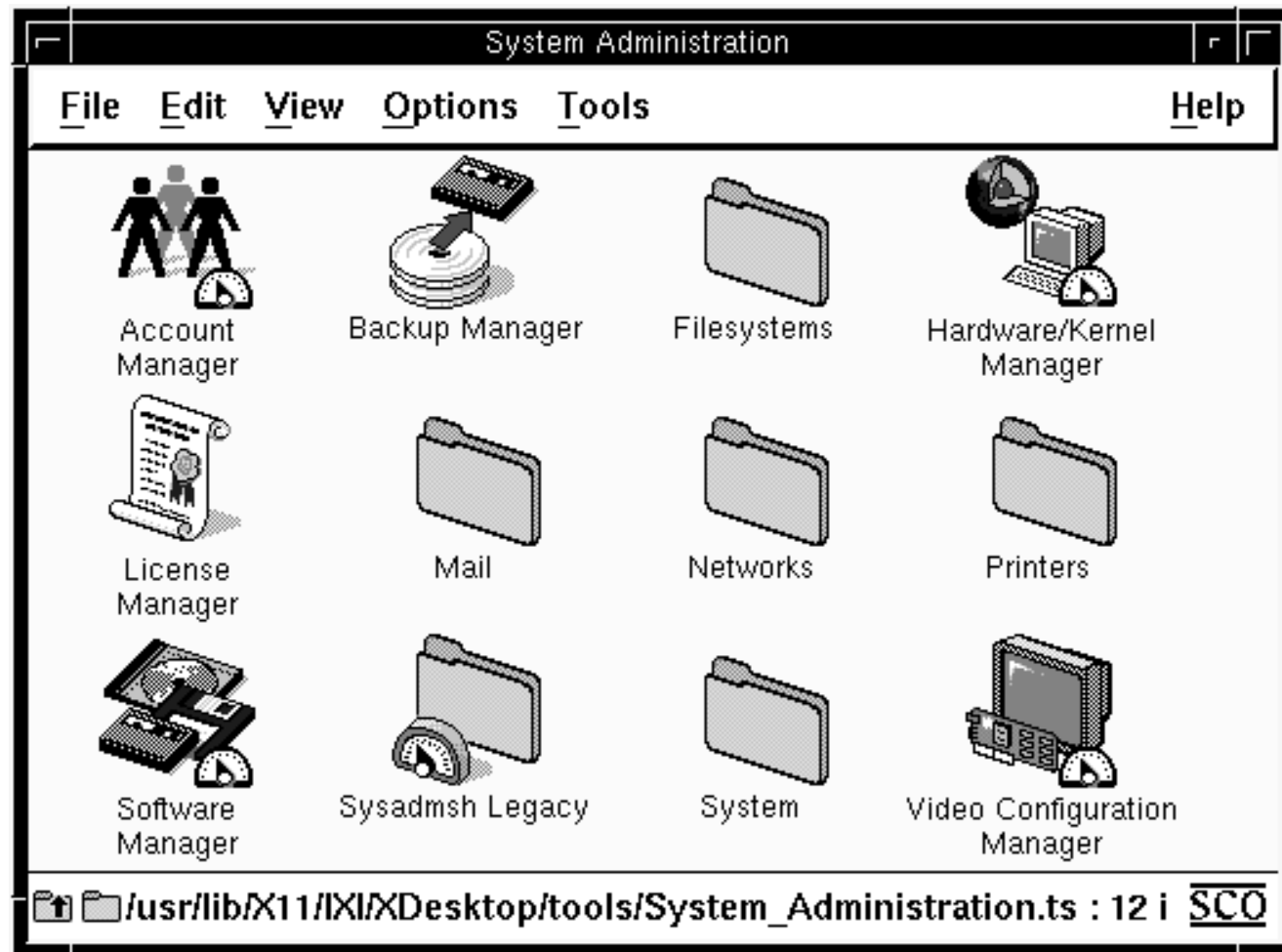
SCOadmin Launcher

Managers →

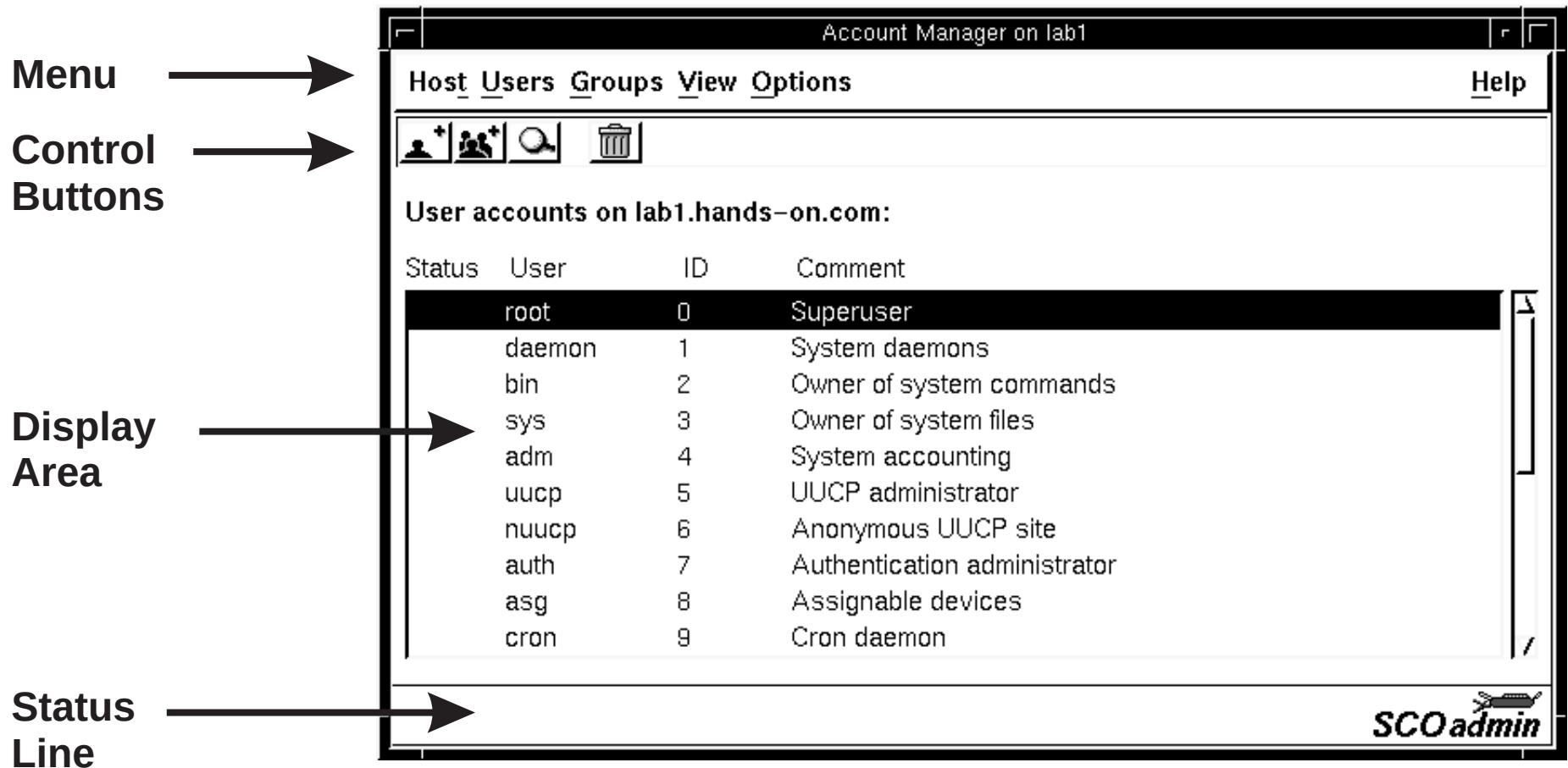
Folders →



Desktop Administration Clients



Graphical SCOadmin Manager



CHARM SCOadmin Manager

Menu



Display
Area



Status
Line



Account Manager on lab1				
Host	Users	Groups	View	Options
Help				
User accounts on lab1.hands-on.com:				
Status	User	ID	Comment	
*	root	0	Superuser	^
	daemon	1	System daemons	*
	bin	2	Owner of system commands	*
	sys	3	Owner of system files	*
	adm	4	System accounting	*
	uucp	5	UUCP administrator	*
	nuucp	6	Anonymous UUCP site	*
	auth	7	Authentication administrator	
	asg	8	Assignable devices	
	cron	9	Cron daemon	
	sysinfo	11	System information	
	dos	16	DOS device	v
<*****>				

CHARM Help System

Help Title: Chapter 1 Administering user accounts

System Administration Guide
Chapter 1, Administering user accounts

Chapter 1

Administering user accounts

User accounts help the system administrator keep track of the people using the system and control their access to system resources. Accounts also help organize user files and control their access by other users.

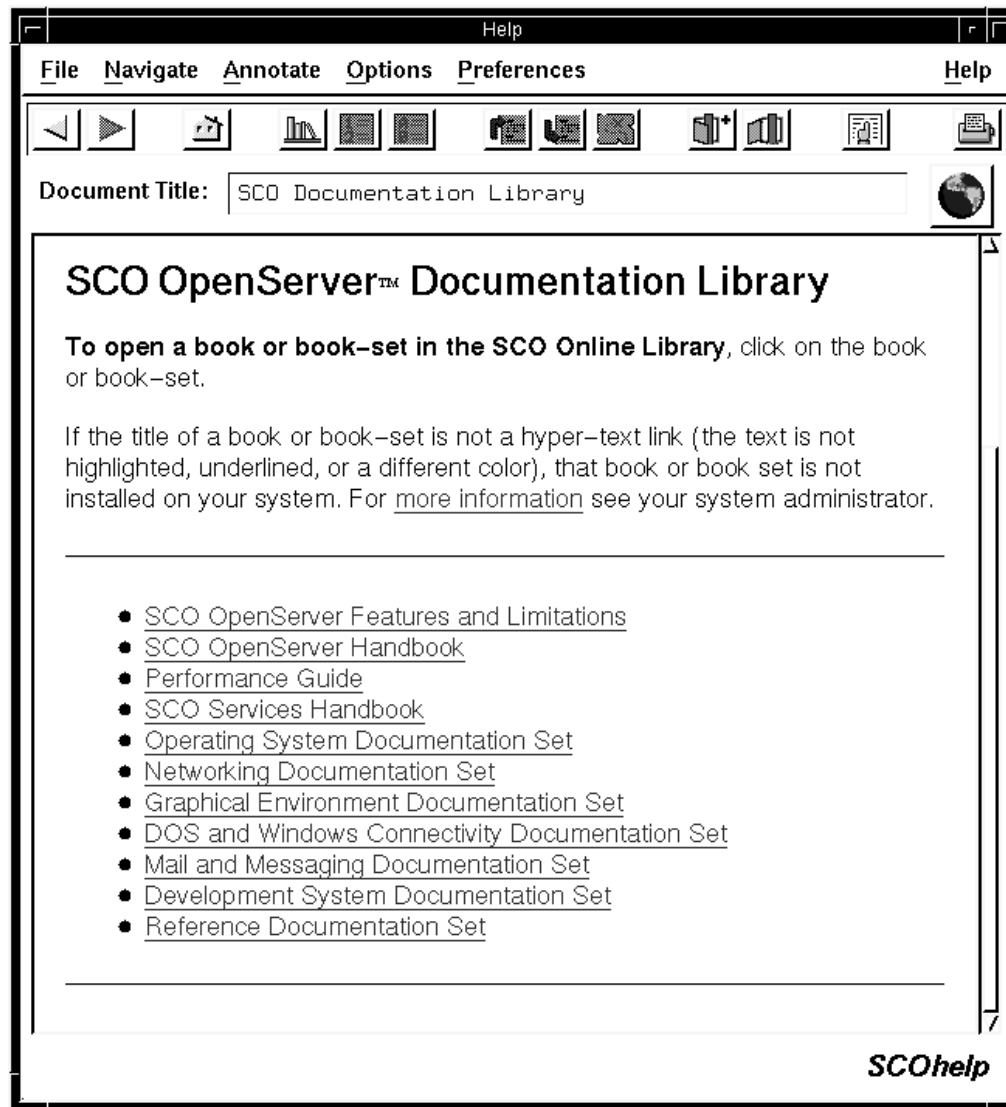
There are several aspects to account administration:

- o Users -- adding, modifying, and removing

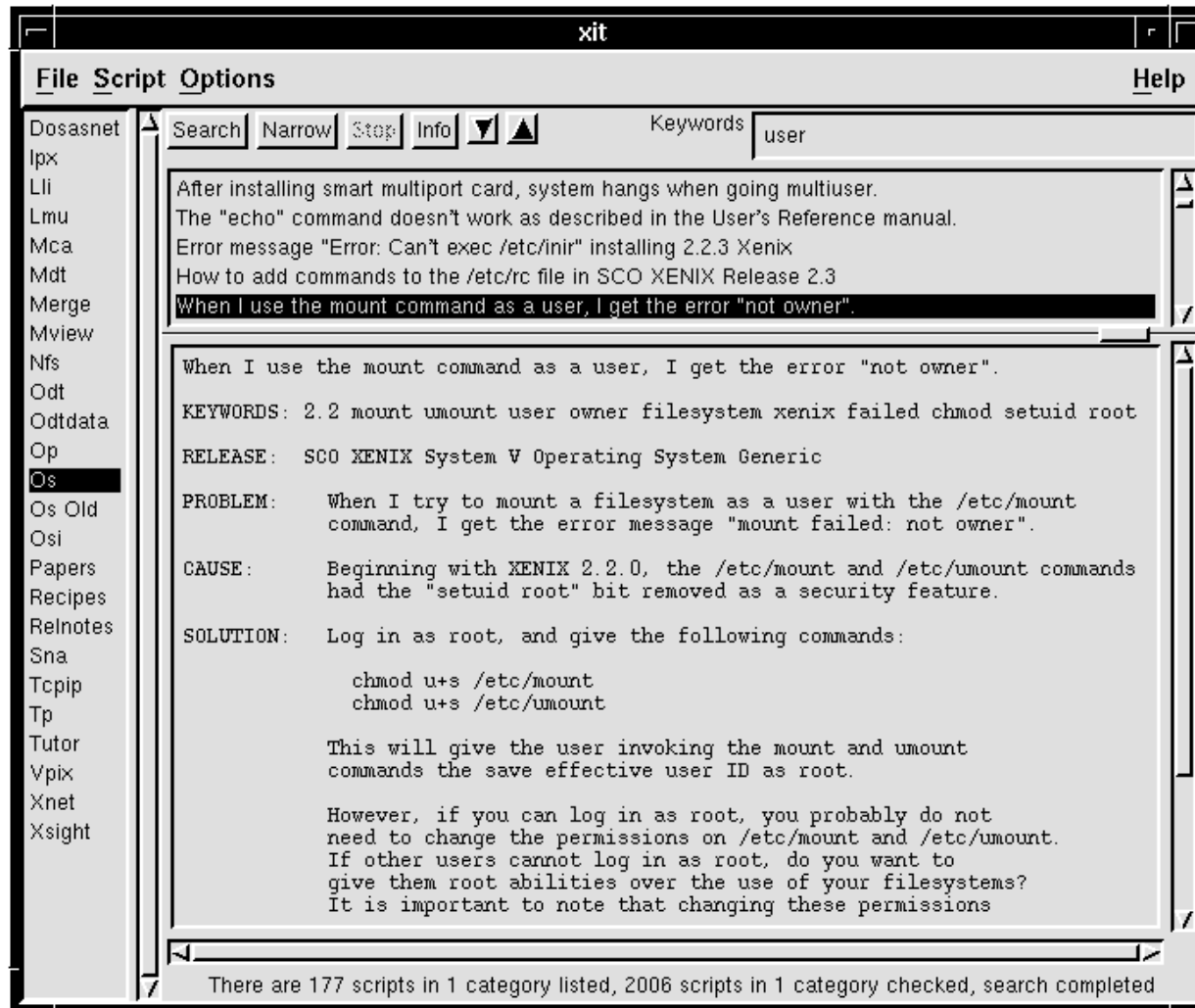
Scroll text with arrow keys; Press <Tab> to move to buttons

[(Back)] [Related Topics...] [Close Window]

SCOhelp



SCO Support Library



Administering User Accounts

- **Analyze user account requirements**
- **Create, remove, and retire user accounts**
- **Modify individual accounts**
- **Manage user groups**
- **Set, change, and remove login restrictions**
- **Create account and login activity reports**
- **Troubleshoot user accounts**

/etc/default/passwd

```
# PASSLENGTH
# Minimum acceptable password length (unless the user is authorized
# to not have a password). If it is not set, or set to a star (*)
# then the minimum password length is computed based on the
# password lifetime, delay between login attempts and other values.
PASSLENGTH=3

# MINWEEKS
# Minimum number of weeks which must elapse between changes
# of password
MINWEEKS=0

# MAXWEEKS
# Number of weeks before a password must be changed.
MAXWEEKS=0

.
.
.
```

Modify User Defaults

lab1: Modify User Defaults

Minimum User ID: 200

Maximum User ID: 60000

Login Shell: sh [Change Login Shell...](#)

Distributed Via: [Change Distribution...](#)

Home Directory Base Path: /usr [Home Directory Options...](#)

Login Group: group [Change Group Membership...](#)

OK Cancel Help

Group Permissions

Directory:

drwxrwx--- 2 david sales 688 Jan 1993 reports

File:

-rw-r----- 1 david sales 234 Jan 1993 sales.dat

-rw-rw---- 1 sue market 1256 Mar 1993 forecast

Groups:

sales: john, sue, david

account: peter, mary, donna

market: john, sue, phil

Adding a New Group

lab1: Add New Group

Group Name:

Group ID:

Distributed Via: [Change Distribution...](#)

Users In Group

Other Users

[Remove >>](#)
[<< Add](#)

Search for:

Search for:

[OK](#) [Cancel](#) [Help](#)

Default Login Group

**Default
Login
Group**

lab1: Modify User Defaults

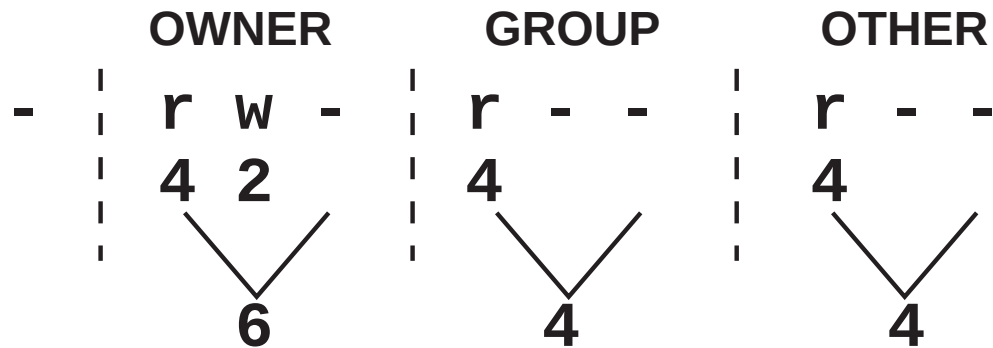
Minimum User ID:	200	
Maximum User ID:	60000	
Login Shell:	/sh	Change Login Shell...
Distributed Via:	/	Change Distribution...
Home Directory Base Path:	/usr	Home Directory Options...
Login Group:	group	Change Group Membership...

Changing Permissions

Each permission is assigned a number:

read = 4 write = 2 execute = 1

Add these numbers for each user category:



Use with chmod(C):

\$ chmod 644 filename

Default Discretionary Access Control

Effect on files:

Unrestricted permissions:

umask 022

Permissions of new files

(6)(6)(6)

-rw-rw-rw-

0 2 2

-rw-r--r--

(6)(4)(4)

Effect on directories:

Unrestricted permissions:

umask 022

Permissions of new directories

(7)(7)(7)

drwxrwxrwx

0 2 2

drwxr-xr-x

(7)(5)(5)

Adding a New User

lab1: Add New User

Login:

User ID:

Comment:

Password: ☐ Set password now ☒ Set password later

Login Shell: [Change Login Shell...](#)

Distributed Via: [Change Distribution...](#)

Home Directory: [Change Home Directory...](#)

Login Group: [Change Group Membership...](#)

Changing a Password

lab1: Change Password: krisr

- ◆ Enter a new password
- ◇ Keep existing password
- ◇ Use machine generated password
- ◇ Remove password

Enter Password:

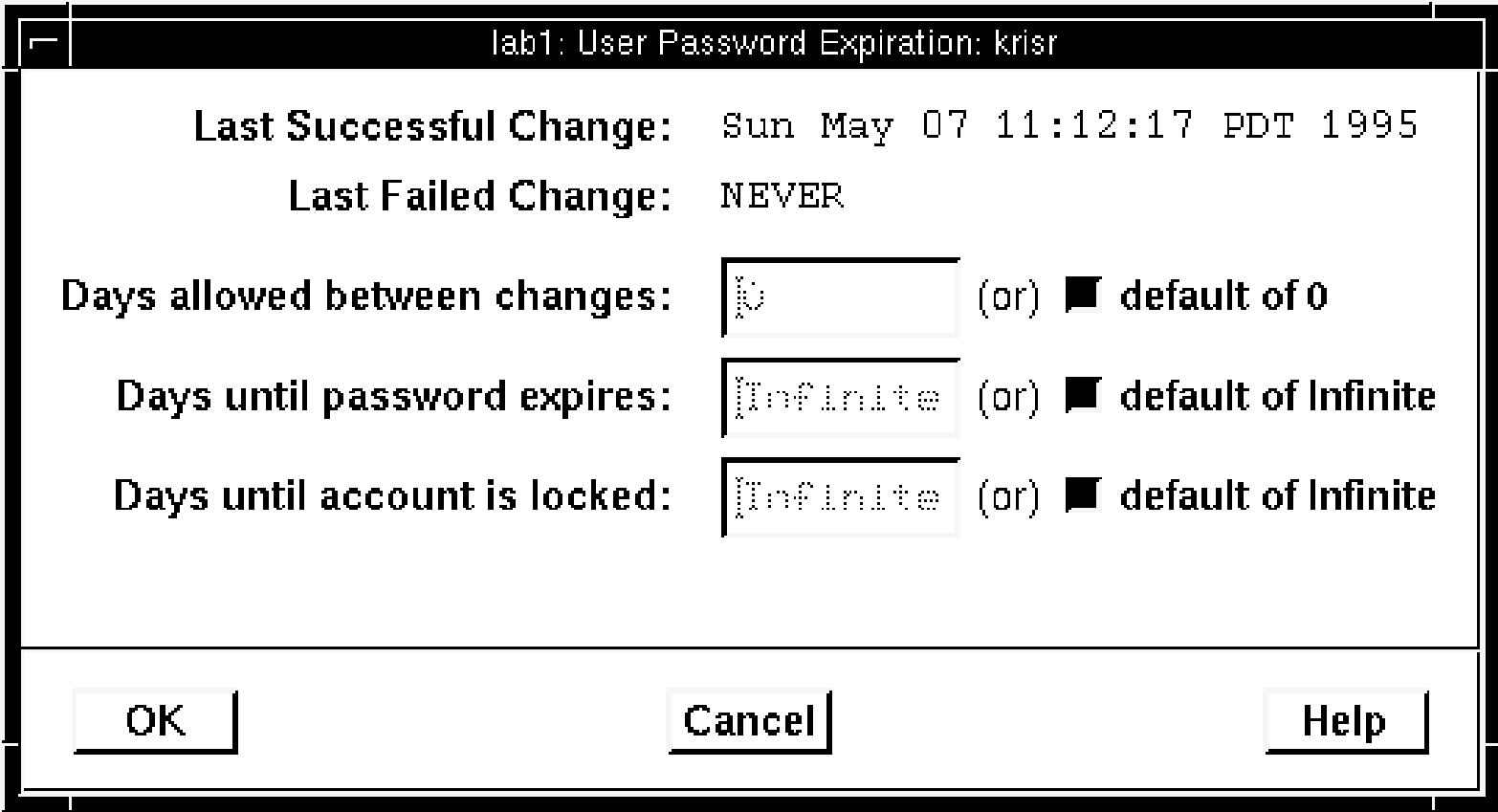
Confirm Password:

Generated Password: [Generate a password](#)

☐ Force password change at next login

[OK](#) [Cancel](#) [Help](#)

Password Expiration



A screenshot of a 'Password Expiration' dialog box. The title bar reads 'lab1: User Password Expiration: krisr'. The dialog contains three lines of status information: 'Last Successful Change: Sun May 07 11:12:17 PDT 1995', 'Last Failed Change: NEVER', and three rows for configuration. Each row has a text label, a text input field, and a radio button option. The first row is 'Days allowed between changes:' with a field containing '0' and a radio button labeled 'default of 0'. The second row is 'Days until password expires:' with a field containing '[Infinite]' and a radio button labeled 'default of Infinite'. The third row is 'Days until account is locked:' with a field containing '[Infinite]' and a radio button labeled 'default of Infinite'. At the bottom are three buttons: 'OK', 'Cancel', and 'Help'.

lab1: User Password Expiration: krisr

Last Successful Change: Sun May 07 11:12:17 PDT 1995

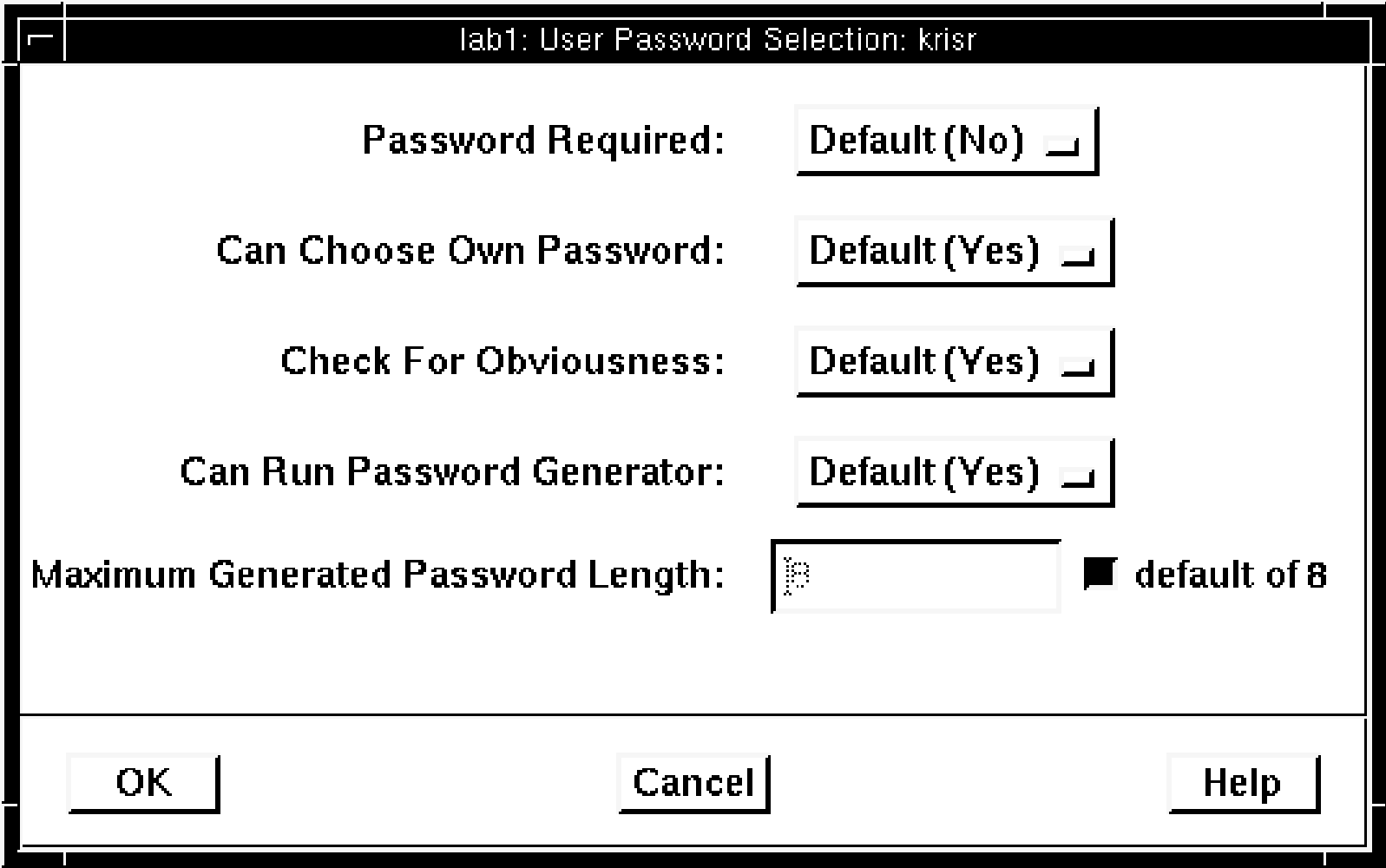
Last Failed Change: NEVER

Days allowed between changes: (or) ☒ default of 0

Days until password expires: (or) ☒ default of Infinite

Days until account is locked: (or) ☒ default of Infinite

Password Selection

A screenshot of a 'Password Selection' dialog box. The title bar reads 'lab1: User Password Selection: krisr'. The dialog contains five settings, each with a label and a control element. The first four settings are 'Password Required:', 'Can Choose Own Password:', 'Check For Obviousness:', and 'Can Run Password Generator:', each followed by a button labeled 'Default (No)' or 'Default (Yes)'. The fifth setting is 'Maximum Generated Password Length:', followed by a text input field containing the number '8' and a checkbox labeled 'default of 8'. At the bottom, there are three buttons: 'OK', 'Cancel', and 'Help'.

lab1: User Password Selection: krisr

Password Required:

Can Choose Own Password:

Check For Obviousness:

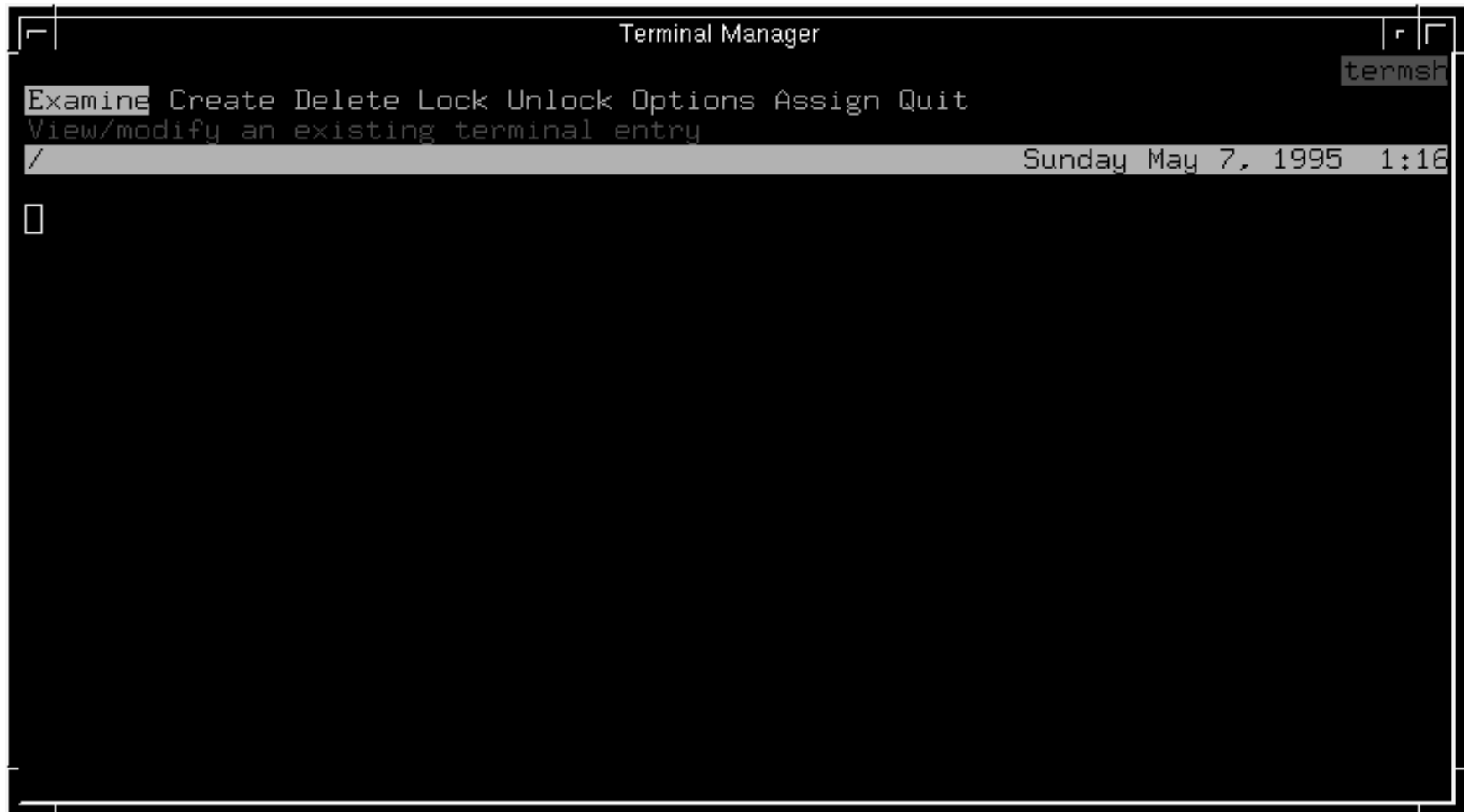
Can Run Password Generator:

Maximum Generated Password Length: ☒ default of 8

Login Restrictions

lab1: User Login Controls: krisr		
	Location	Time
Last Successful Login:	UNKNOWN	Sun May 07 11:12:17 PDT 1995
Last Failed Login:	UNKNOWN	NEVER
Last Logout:	UNKNOWN	UNKNOWN
Failed login attempts since last successful login: NONE		
Failed login attempts allowed before account is locked:	99	☒ default of 99
Current Account Lock Status:	Locked	☐ Unlock Account
Reason:	Account locked by Administrator	
OK Cancel Help		

Terminal Manager



Reports Manager

Reports Manager on lab1.hands-on.com

File Reports Options Help

Report Data:

I

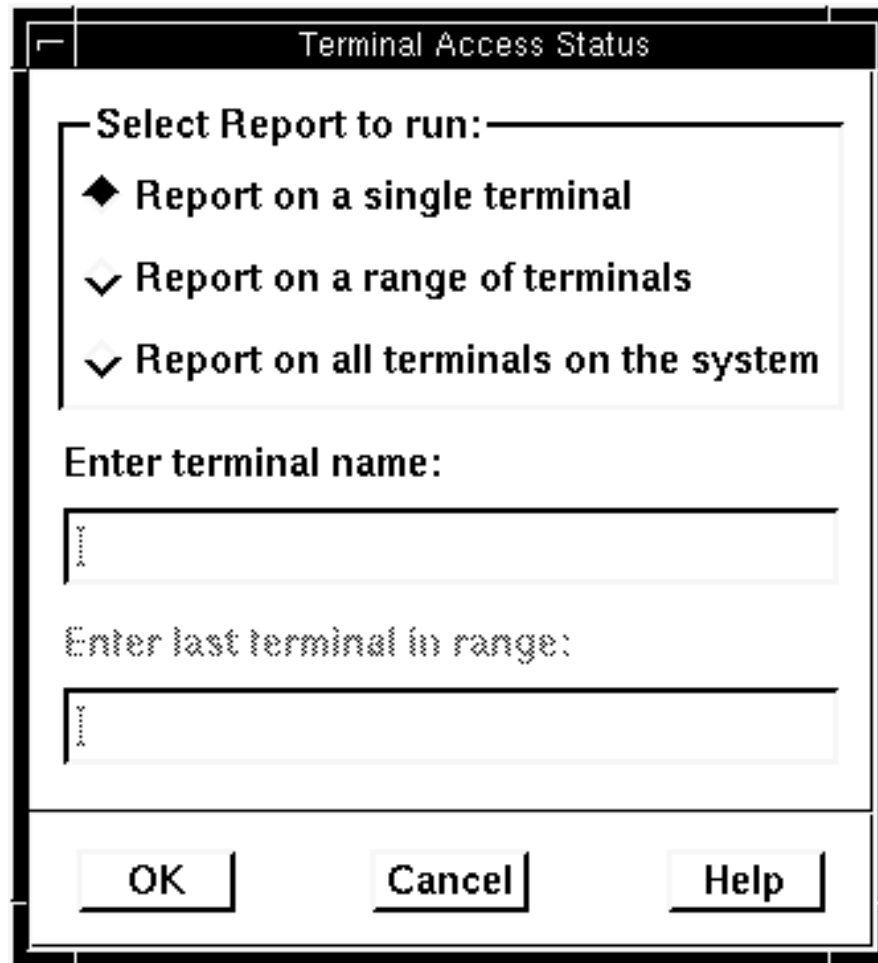
Login Activity Report
System SCO_SV
Sun May 7 13:17:10 1995

User Name	Successful login	Unsuccessful login	#Failed	Lck?
adm	NEVER	NEVER	None	N
asg	NEVER	NEVER	None	Y
audit	NEVER	NEVER	None	N
auth	NEVER	NEVER	None	N
backup	NEVER	NEVER	None	N
bin	NEVER	NEVER	None	N
cron	NEVER	NEVER	None	N
daemon	NEVER	NEVER	None	N
dos	NEVER	NEVER	None	N
krisr	NEVER	NEVER	None	Y
listen	NEVER	NEVER	None	N
lp	NEVER	NEVER	None	N
mmdf	NEVER	NEVER	None	N

Use the menu to select a report to run

SCOadmin

Terminal Access Reports



A screenshot of a software dialog box titled "Terminal Access Status". The dialog box has a standard Windows-style title bar with a close button. Inside, there is a section labeled "Select Report to run:" followed by three radio button options. The first option, "Report on a single terminal", is selected. Below this, there are two text input fields. The first is labeled "Enter terminal name:" and the second is labeled "Enter last terminal in range:". At the bottom of the dialog box, there are three buttons: "OK", "Cancel", and "Help".

Terminal Access Status

Select Report to run:

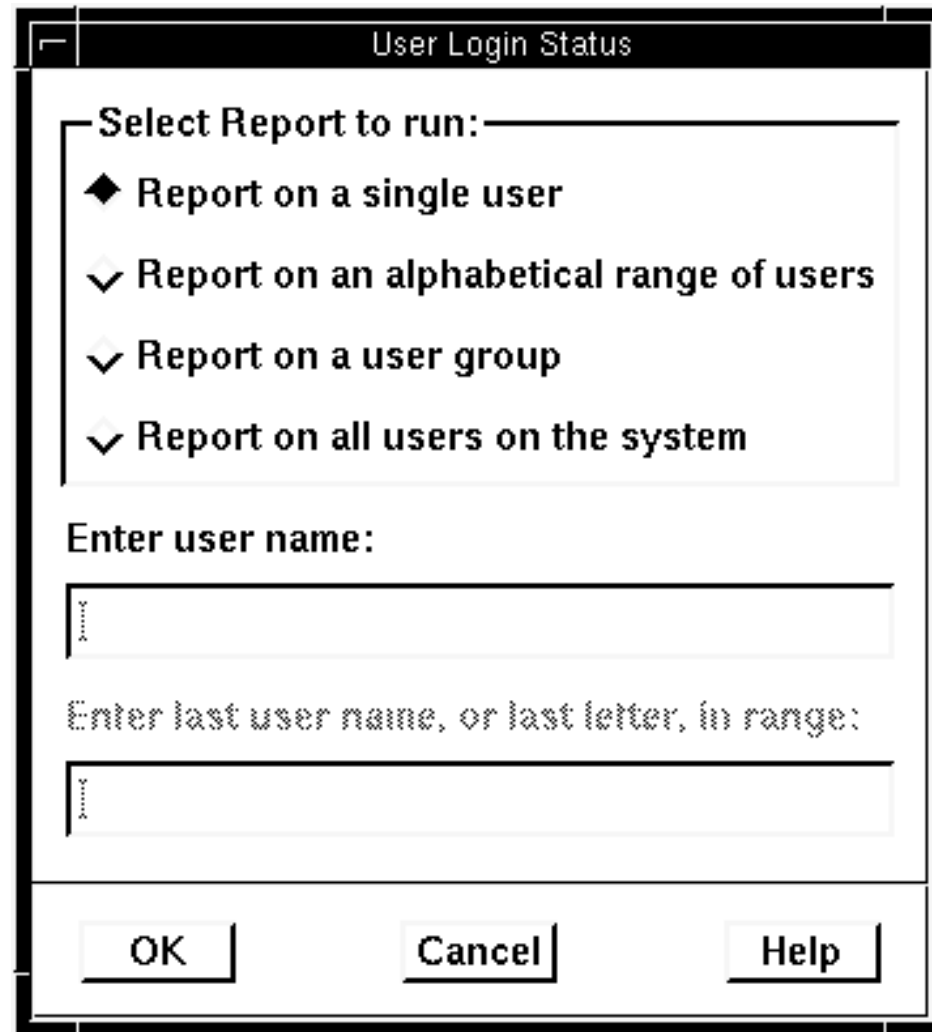
- ☒ Report on a single terminal
- ☐ Report on a range of terminals
- ☐ Report on all terminals on the system

Enter terminal name:

Enter last terminal in range:

OK Cancel Help

User Login Reports



A screenshot of a software dialog box titled "User Login Status". The dialog box has a standard Windows-style border with a title bar. Inside, there is a section titled "Select Report to run:" followed by four radio button options. Below this is a text input field labeled "Enter user name:". Further down is another text input field labeled "Enter last user name, or last letter, in range:". At the bottom of the dialog box are three buttons: "OK", "Cancel", and "Help".

User Login Status

Select Report to run:

- ☒ Report on a single user
- ☐ Report on an alphabetical range of users
- ☐ Report on a user group
- ☐ Report on all users on the system

Enter user name:

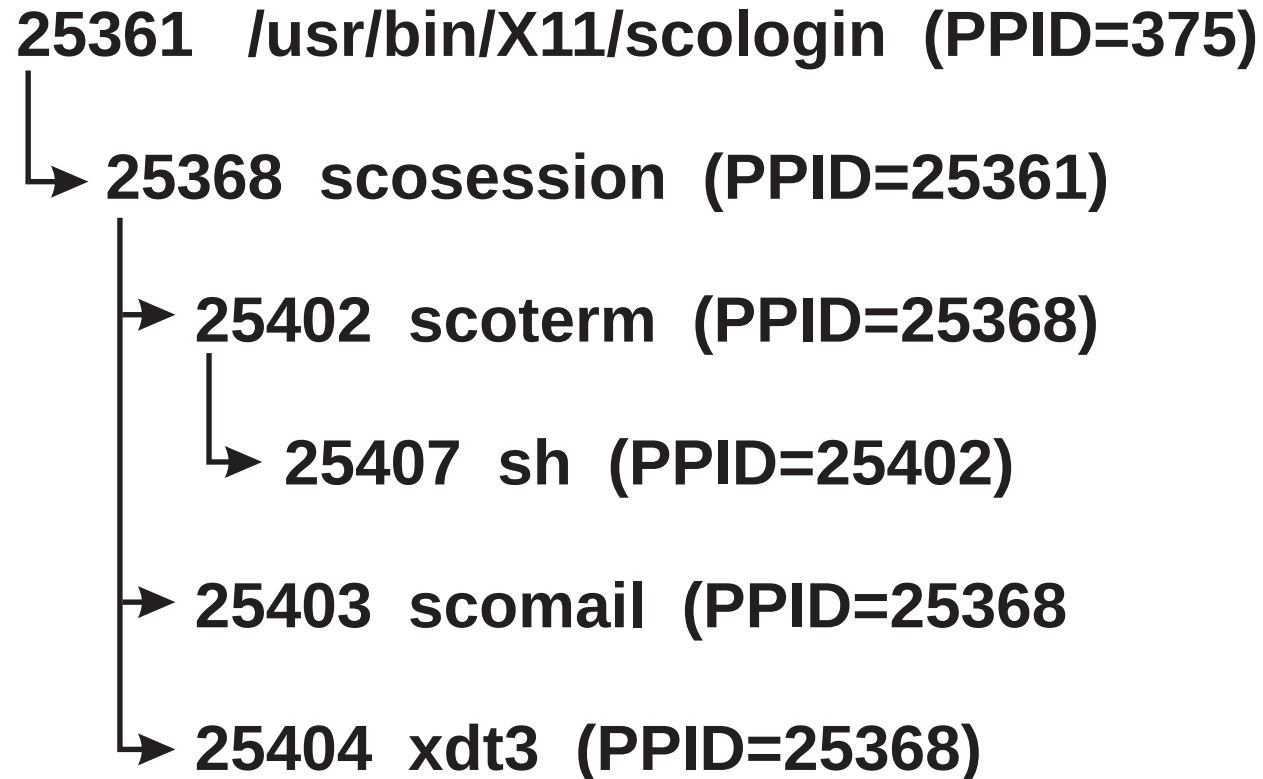
Enter last user name, or last letter, in range:

OK Cancel Help

Managing Processes

- **Describe a process**
- **Terminate processes**
- **Schedule jobs**

Parent and Child Processes



System Time Manager

System Time Manager on lab1

Time Options Help

Sun May 7 13:20:34 PDT 1995

Time

Hours	Minutes
13 ▲ ▼	20 ▲ ▼

Date

Year	Month	Day
95 ▲ ▼	5 ▲ ▼	7 ▲ ▼



Format for crontab.eg

crontab.eg

0,15,30,45	*	*	*	1-5	df -v >>/tmp/df.log
0	3	*	*	2-6	cbackup 2 150000 /dev/rct0/dev/u
0	4	28	*	*	lp /sales/month_report
30	4	1	1	*	tar cvf /arch/yr_report /sales/*

MINUTES

HOURS

MONTH

COMMAND

**DAY OF
MONTH**

**DAY OF
WEEK**

- Fields delimited by spaces or tabs
- The file must not have blank lines

crontab(C) Parameters

Field	Allowable Values
Minute	0 - 59
Hour	0 - 23
Day of month	1 - 31
Month	1 - 12
Day of week	0 - 6 (0=Sunday)
Command	Any non-interactive command or shell script

- A field value can be a single value, range of values, or list of values separated by commas
- An asterisk selects all allowable values

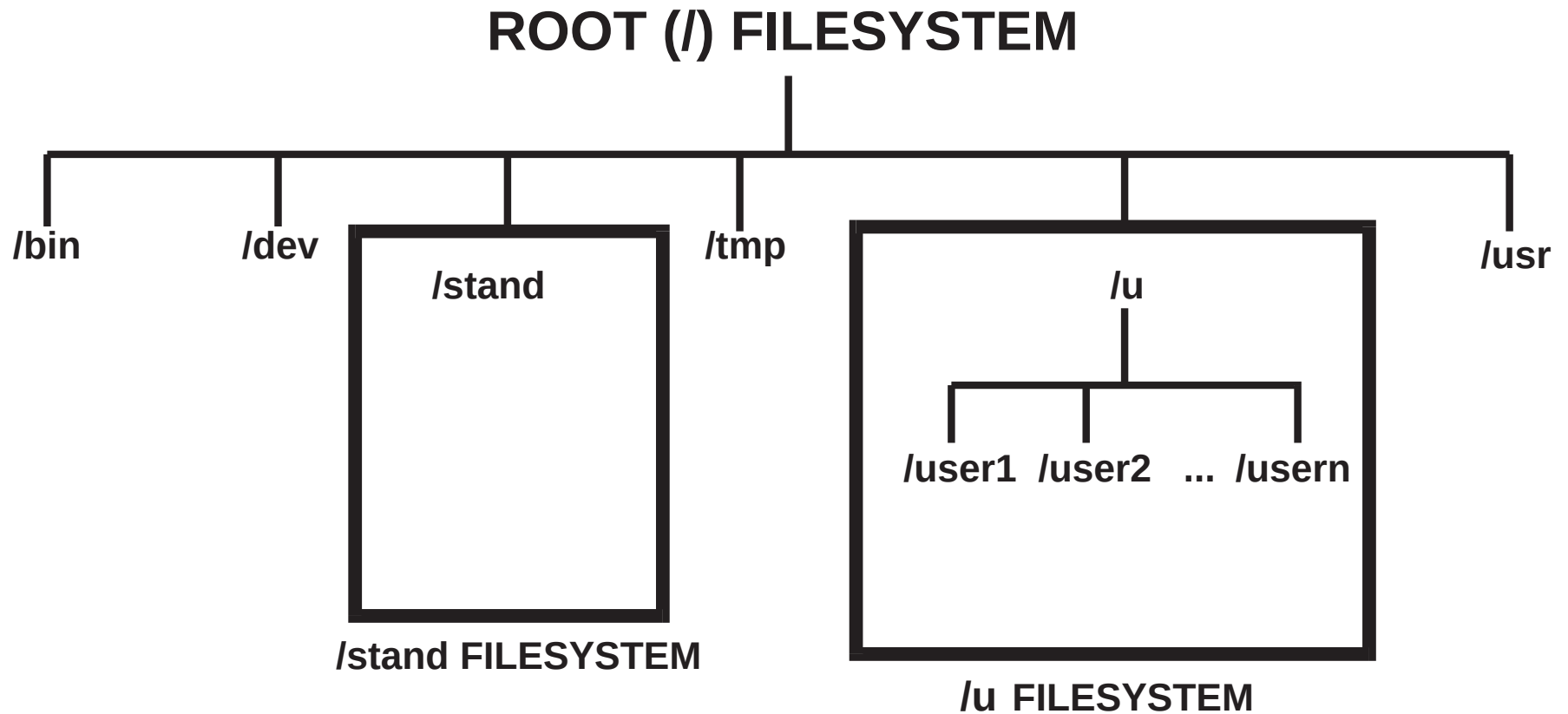
Cron Manager



Working with Filesystems

- **Understand filesystem basics**
- **Use different filesystem types**
- **Mount and unmount a filesystem**
- **Repair a non-root filesystem**
- **Monitor filesystems**
- **Locate and manage user files**
- **Manage system log files and temporary directories**

One Directory -- Several Filesystems

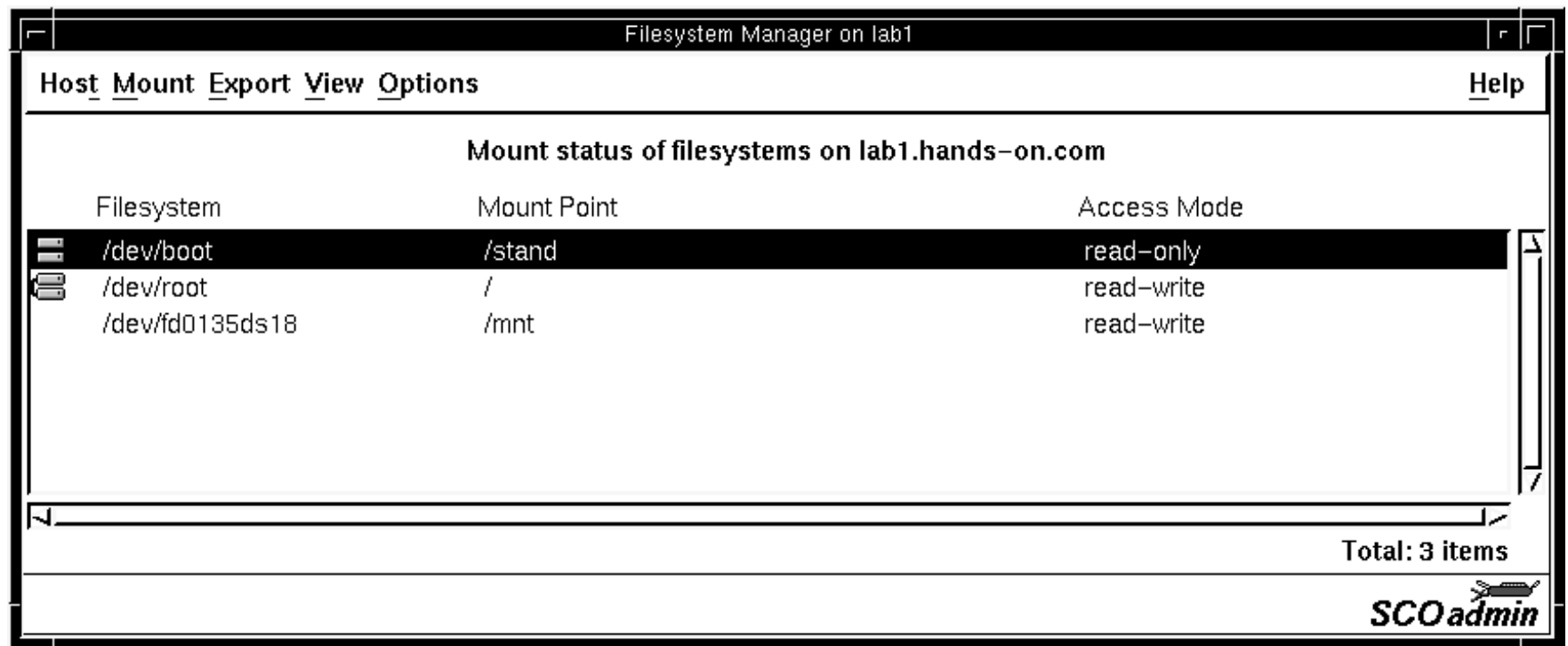


Filesystem Types

	HTFS	DTFS	EAFS	AFS	S51K
Increased Throughput	✓				
Data Compression		✓			
Checkpointing	✓	✓			
Logging	✓	✓			
Versioning	✓	✓			
Long Filenames	✓	✓	✓		
Symbolic Links	✓	✓	✓		

Filesystem Manager

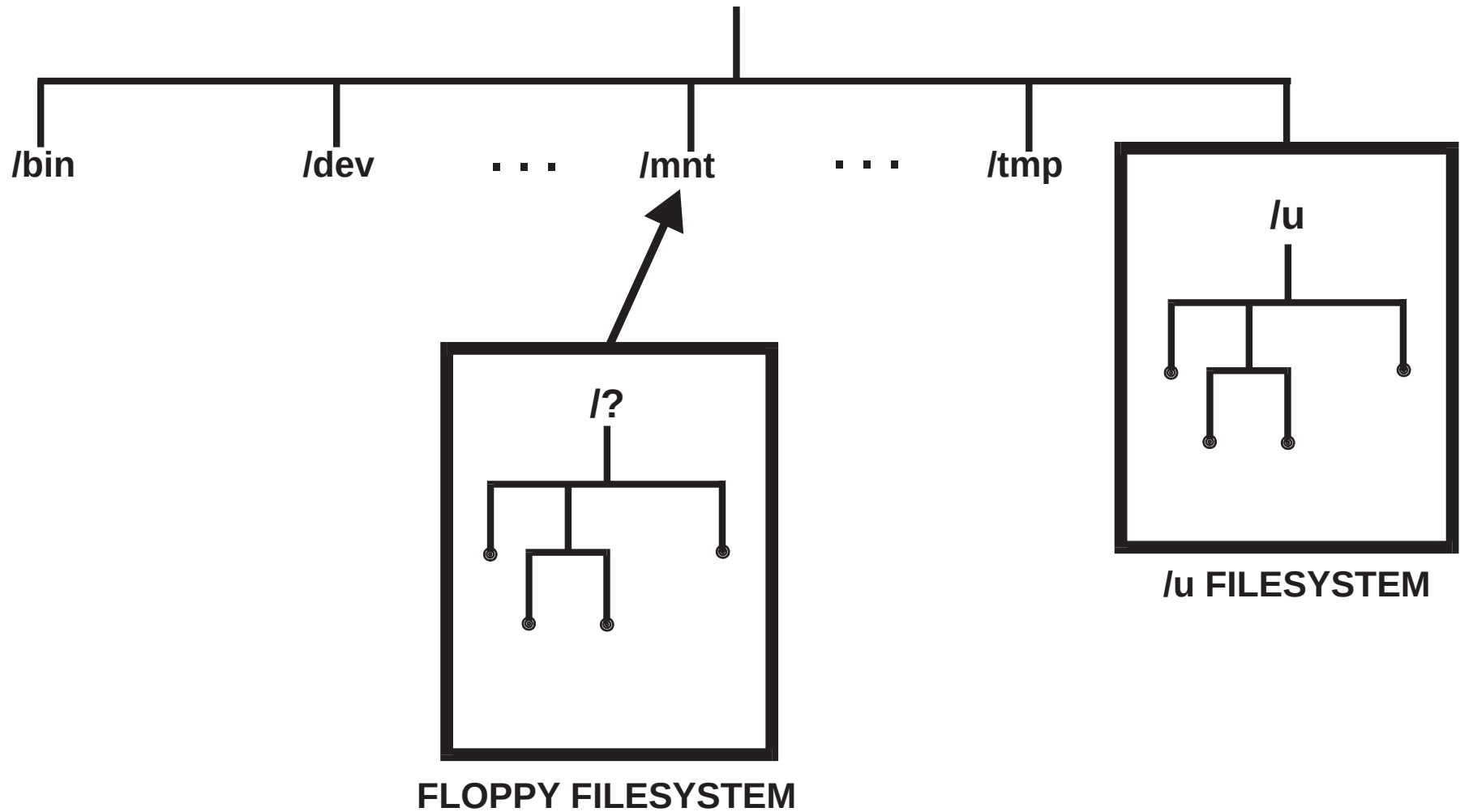
Mounted
filesystem



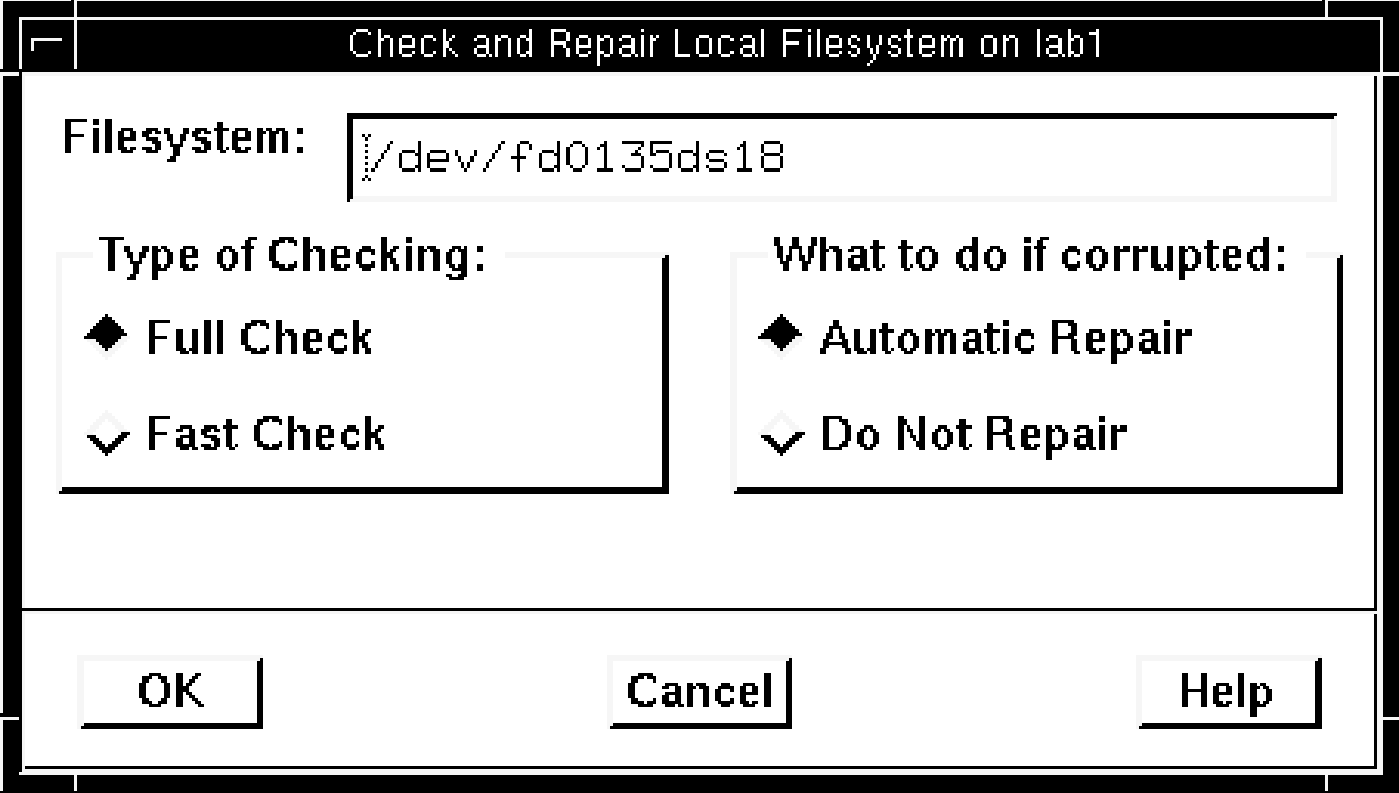
Host Mount Export View Options			Help
Mount status of filesystems on lab1.hands-on.com			
Filesystem	Mount Point	Access Mode	
/dev/boot	/stand	read-only	
/dev/root	/	read-write	
/dev/fd0135ds18	/mnt	read-write	
			Total: 3 items
			SCOadmin

Mounting a Filesystem

ROOT (/) FILESYSTEM



Repairing a Filesystem



The image shows a graphical user interface window titled "Check and Repair Local Filesystem on lab1". Inside the window, there is a text field labeled "Filesystem:" containing the path "/dev/fd0135ds18". Below this, there are two columns of radio button options. The left column is titled "Type of Checking:" and contains two options: "Full Check" (selected with a filled diamond) and "Fast Check" (unselected with an empty diamond). The right column is titled "What to do if corrupted:" and contains two options: "Automatic Repair" (selected with a filled diamond) and "Do Not Repair" (unselected with an empty diamond). At the bottom of the window, there are three buttons: "OK", "Cancel", and "Help".

Check and Repair Local Filesystem on lab1

Filesystem: /dev/fd0135ds18

Type of Checking:

- ◆ Full Check
- ◇ Fast Check

What to do if corrupted:

- ◆ Automatic Repair
- ◇ Do Not Repair

OK Cancel Help

Filesystem Free Space

Filesystem Manager on lab1

Host Mount Export View OptionsHelp

Disk usage of filesystems on lab1.hands-on.com

Filesystem	Mount Point	Total (MB)	Used (MB)	Free (MB)	% Used
 /dev/boot	/stand	15.0	5.5	9.4	38%
 /dev/root	/	936.9	195.6	741.3	21%
 /dev/fd0135ds18	/mnt	1.1	1.1	0.0	98%

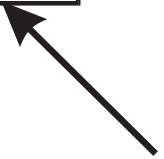
Total: 3 items

SCOadmin

Determining the Size of a Directory

```
# du -ks /etc
```

```
16352      /etc
```



SIZE IN 1K BLOCKS

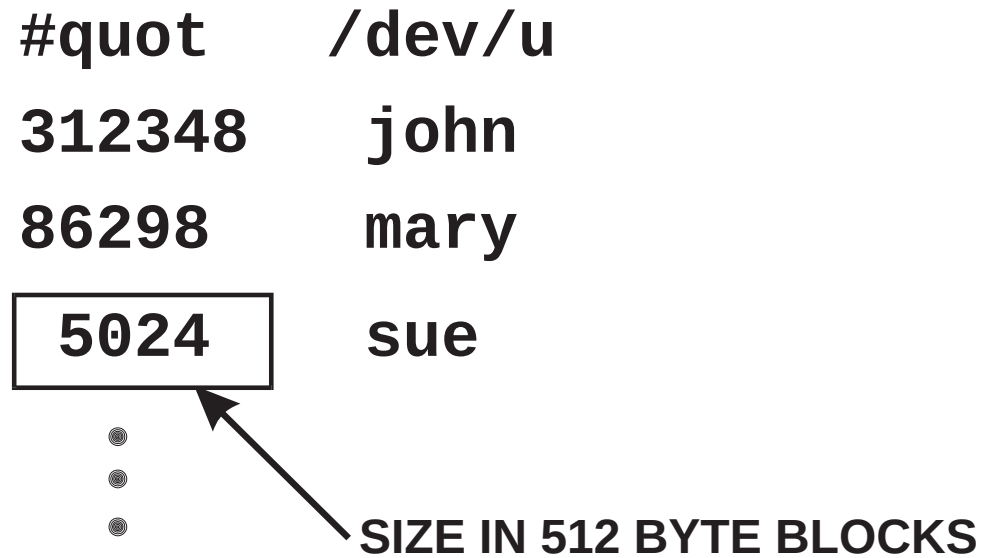
-s: DISPLAY GRAND TOTAL

-k: DISPLAY SIZE IN 1K BLOCKS

Determining Disk Usage by User

#quot	/dev/u
312348	john
86298	mary
5024	sue
⋮	

SIZE IN 512 BYTE BLOCKS



Working with Disks and Tapes

- **Work with floppy disks**
- **Work with tape drives**
- **Transfer data to tape or disk using the tar(C) and cpio(C) commands**
- **Transfer data to and from a DOS disk**

Floppy Disk Device Names

48ds9	360 KB	5.25-inch
96ds15	1.2 MB	5.25-inch
135ds9	720 KB	3.5-inch
135ds18	1.44 MB	3.5-inch
135ds36	2.88 MB	3.5-inch

Examples:

Floppy Disk 0 3.5-inch 1.44 MB /dev/rfd0**135ds18**

Floppy Disk 1 5.25-inch 1.2 MB /dev/rfd1**96ds15**

Determining the Type of Floppy Disk

```
# dtype    /dev/rfd0
```

```
/dev/rfd0  : tar format
```

Formatting a Floppy Disk



Types of Tape Drives

DEVICE

TYPE

/dev/xct0

Cartridge tape controller

/dev/erct0

Error correcting cartridge tape

/dev/nrct0

No rewind cartridge tape

/dev/rct0

Cartridge tape

/dev/rStp0

SCSI tape

/dev/rctmini

Mini cartridge tape

/dev/rft0

QIC 40 floppy tape

/etc/default/tar

#	DEVICE	BLOCK	SIZE	TAPE
	archive0=/dev/rfd048ds9	18	360	n
	archive1=/dev/rfd148ds9	18	360	n
	archive2=/dev/rfd096ds15	10	1200	n
	⋮			
	archive6=/dev/rfd0135ds18	18	1440	n
	⋮			
	archive8=/dev/rStp0	20	0	y
	⋮			

archive=/dev/rfd0135ds18	18	1440	n
--------------------------	----	------	---

← **DEFAULT tar DEVICE**

tar(C) Options

OPTION	DESCRIPTION
v	Verbose (display output)
L	Follow symbolic links
c	Create archive
r	Append to archive
t	Table of contents
x	Extract from archive
#	Archive device in <i>/etc/default/tar</i>

cpio(C) Options

Creating an Archive: (vocBL)

v	Verbose
o	Write archive out
c	ASCII header (for moving to different types of systems)
B	Blocking factor set to 5KB
L	Follow symbolic links

Extracting an Archive (vicdumB)

v	Verbose
i	Read archive in
c	ASCII header
d	Create directories as required
u	Copy unconditionally
m	Retain previous modification times
B	Blocking factor set to 5 KB

/etc/default/msdos

A = /dev/install

B = /dev/install1

C = /dev/hd0d

D = /dev/hd1d

X = /dev/install

Y = /dev/install1

Filesystem Backups

- **Organize and maintain filesystem backups**
- **Manage backup schedules**
- **Back up filesystems**
- **Schedule unattended backups**
- **Verify a filesystem backup**
- **Restore files**
- **Restore non-root filesystems**

Adding a Backup Schedule

Add Filesystem Backup Schedule on lab1

Backup Schedule for lab1 /dev/root Filesystem

Perform Complete backup every days

Select days to perform Incremental backups:

✓ Day 1	Complete
Day 2	No Backup
Day 3	No Backup
Day 4	No Backup
Day 5	No Backup
Day 6	No Backup
Day 7	No Backup

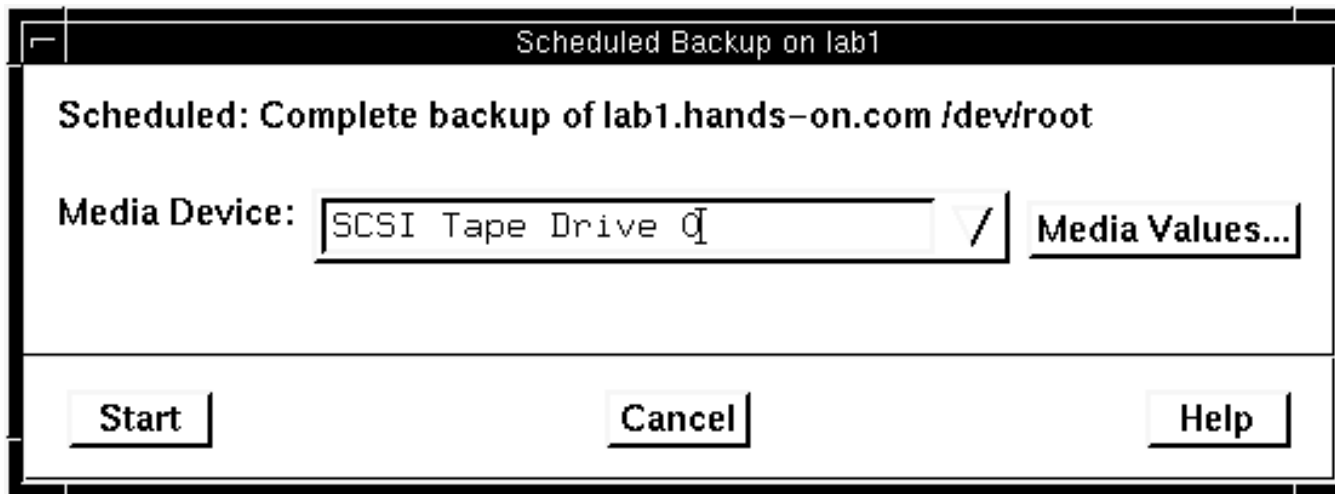
Incremental Backup Types:

- Level 1 (files changed since last Complete backup)
- Level 2 (files changed since last Incremental backup)

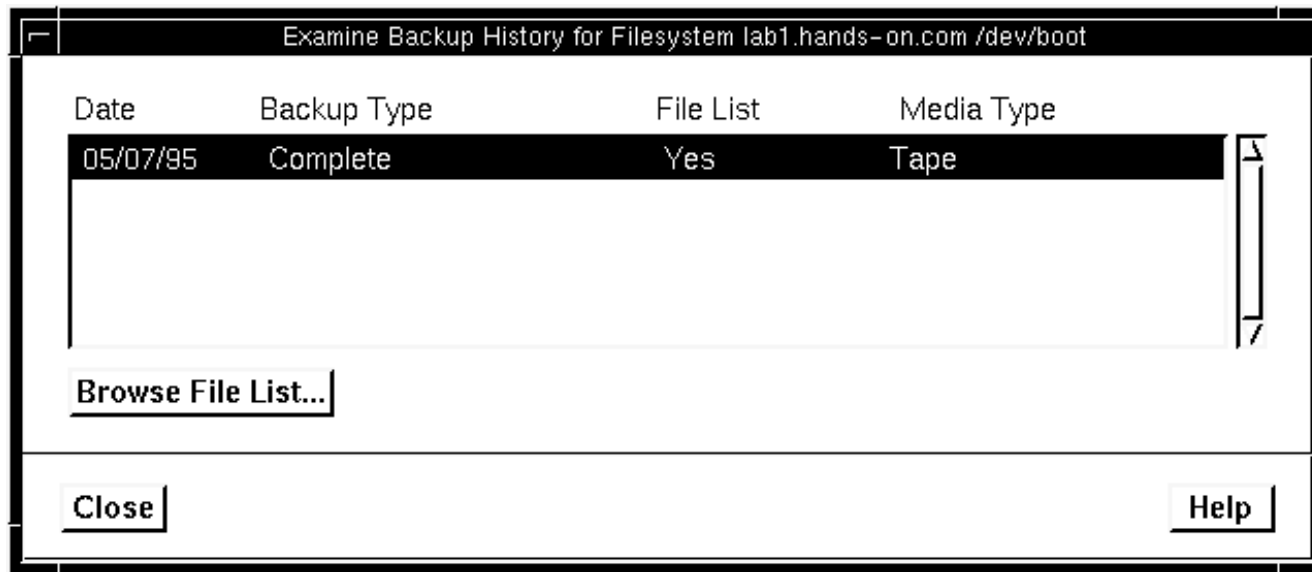
Today is Day [Backup Options...](#)

OK **Cancel** **Help**

Running a Scheduled Backup



Examining a Backup History



Restoring a Backup

Restore Filesystem: lab1 /dev/boot

Restore to Date: Original location

Complete Backup Set Required:

Date	Backup Type	File List	Media Type
05/07/95	Complete	Yes	Tape

◆ Complete Filesystem ▼ Directories or Files

Managing Printers

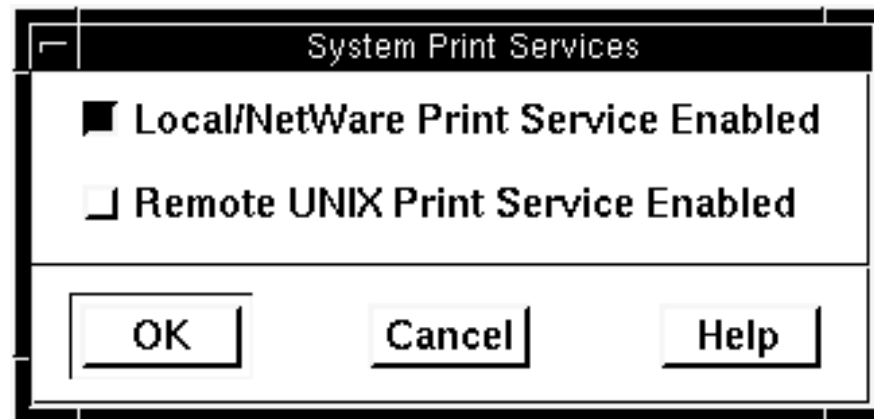
- **Manage the print service**
- **Accept and reject print jobs**
- **Disable and enable printers**
- **Manage print jobs**
- **View and change printer settings**
- **Troubleshoot printer problems**

Checking Printer Status

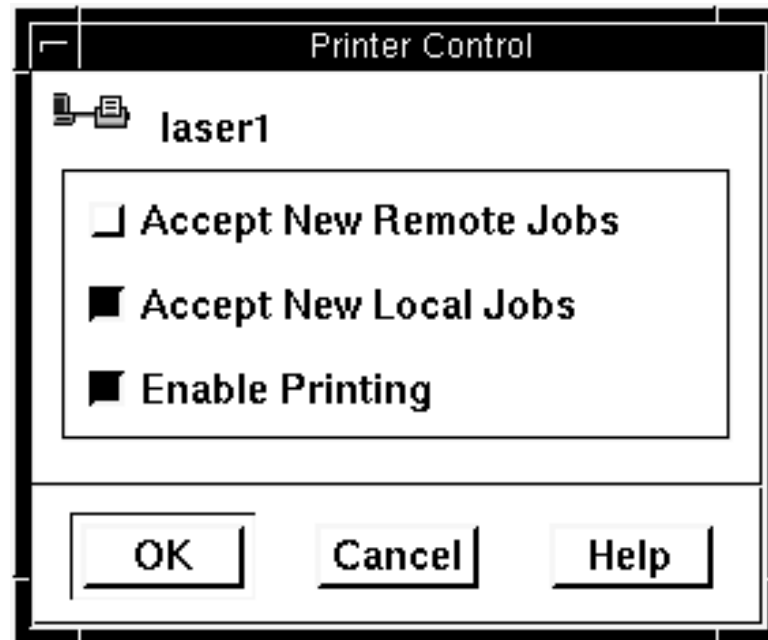
```
$ lpstat -t
```

```
scheduler is running  
system default destination: laser1  
device for laser1: /dev/lp0  
laser1 accepting requests since Fri Jan 13 17:22:45 1995  
printer laser1 is idle. enabled since Fri Jan 13 17:22:45 1995  
available.
```

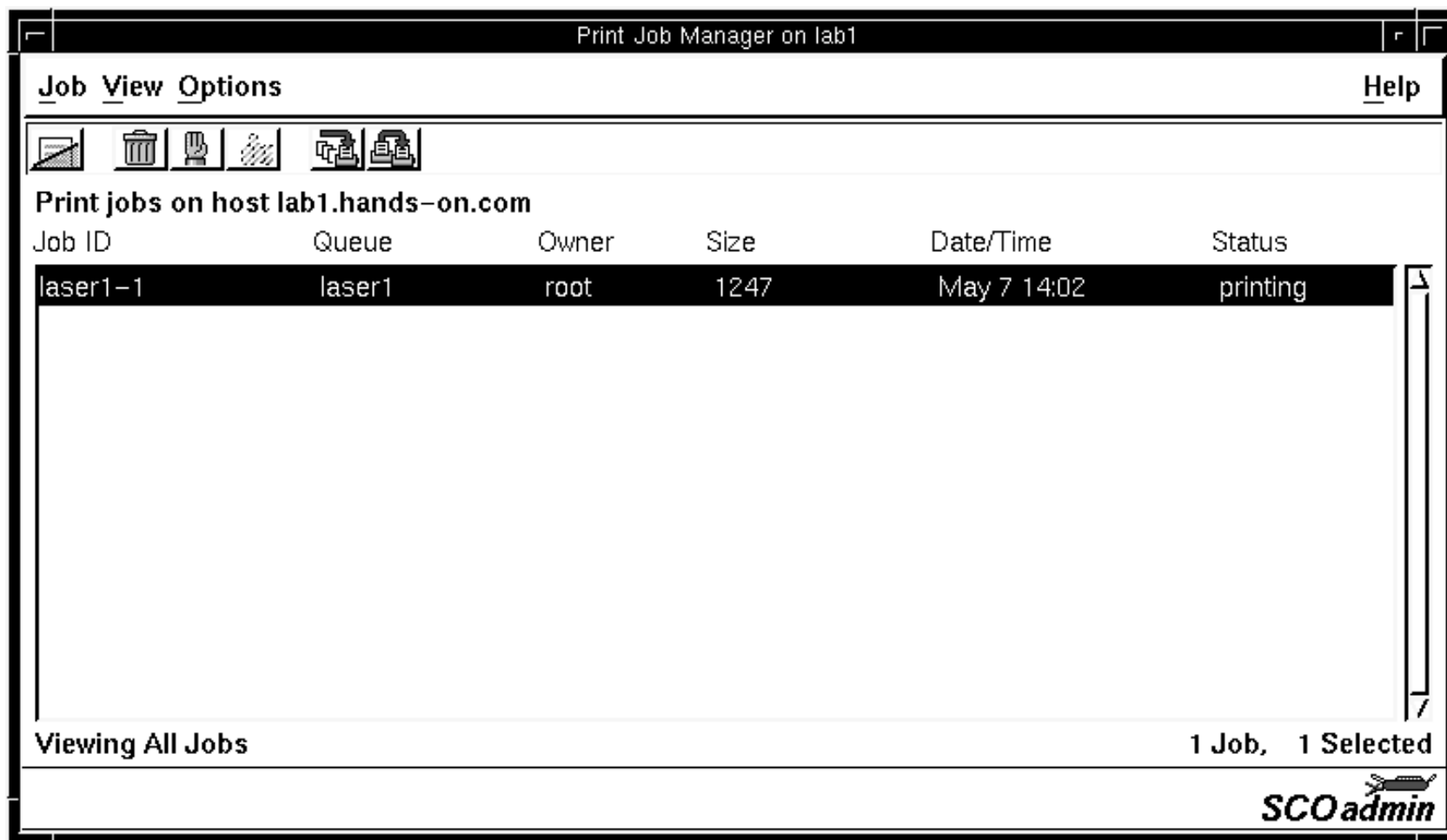
Stopping/Starting the Print Service



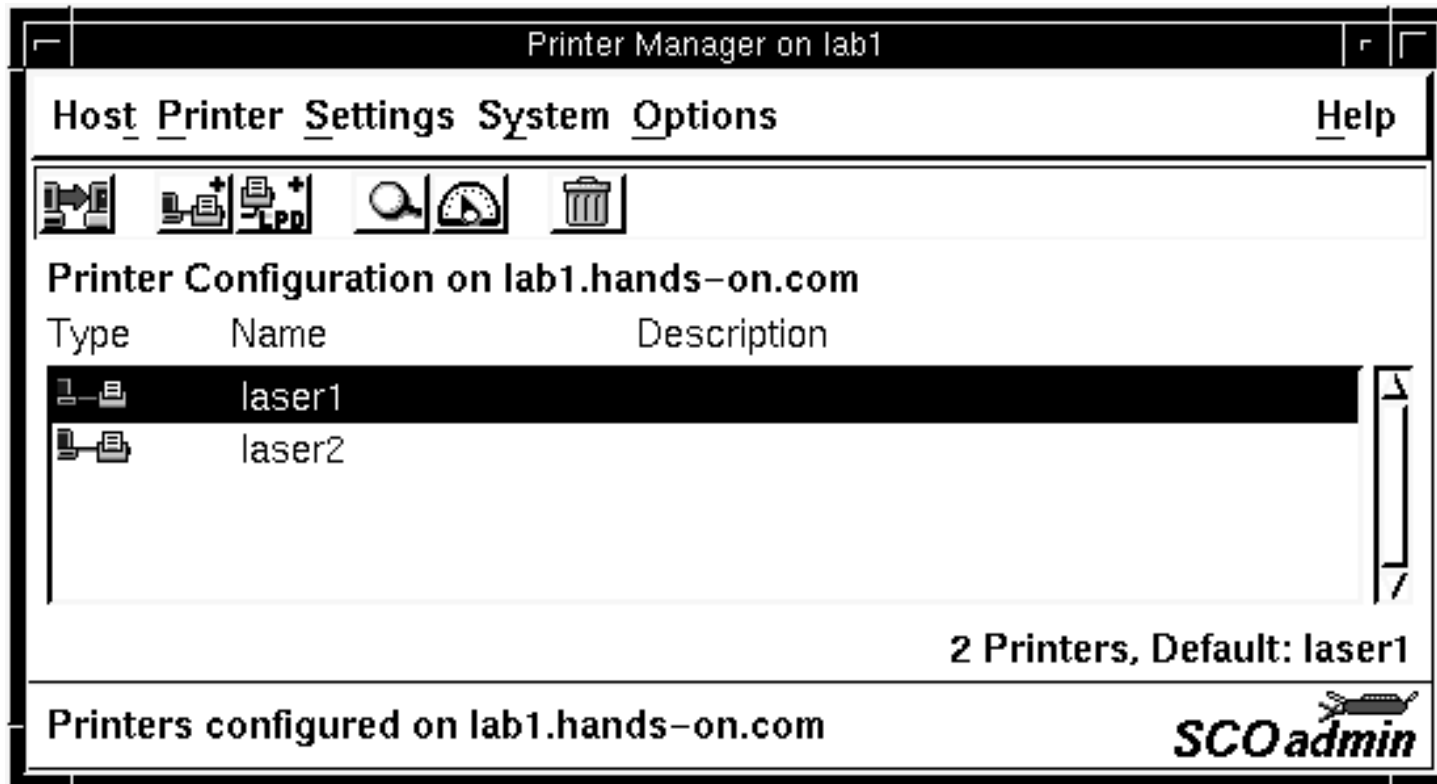
Controlling a Printer



Print Job Manager

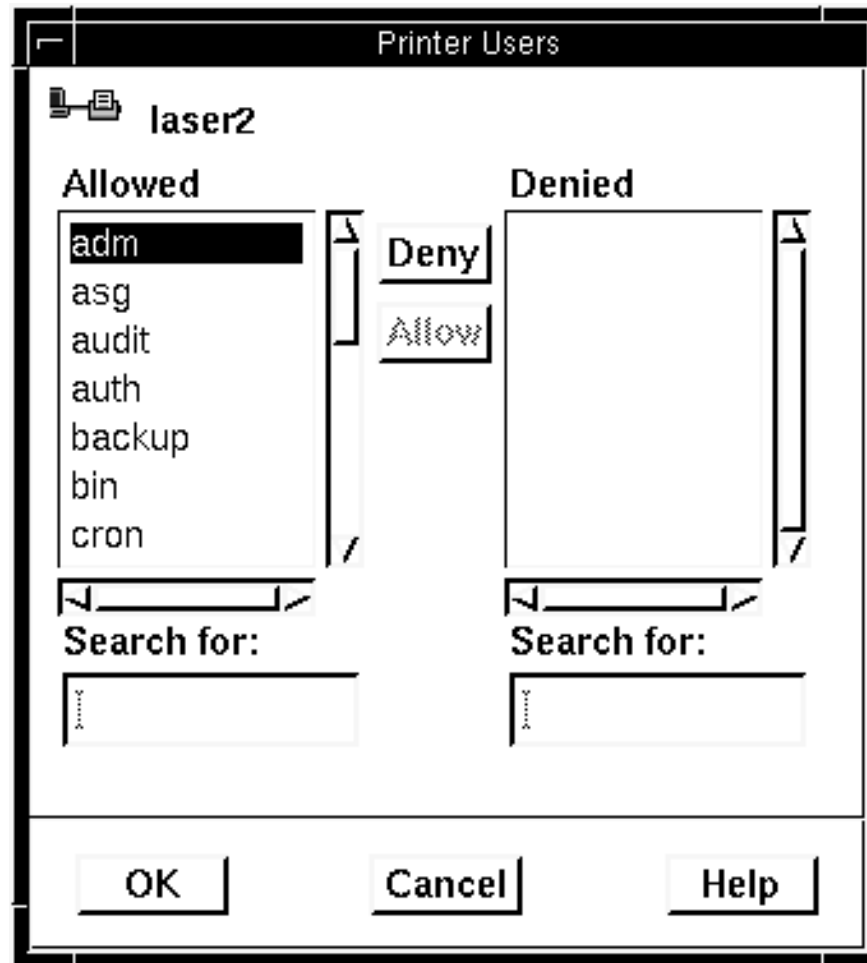


Default Printer

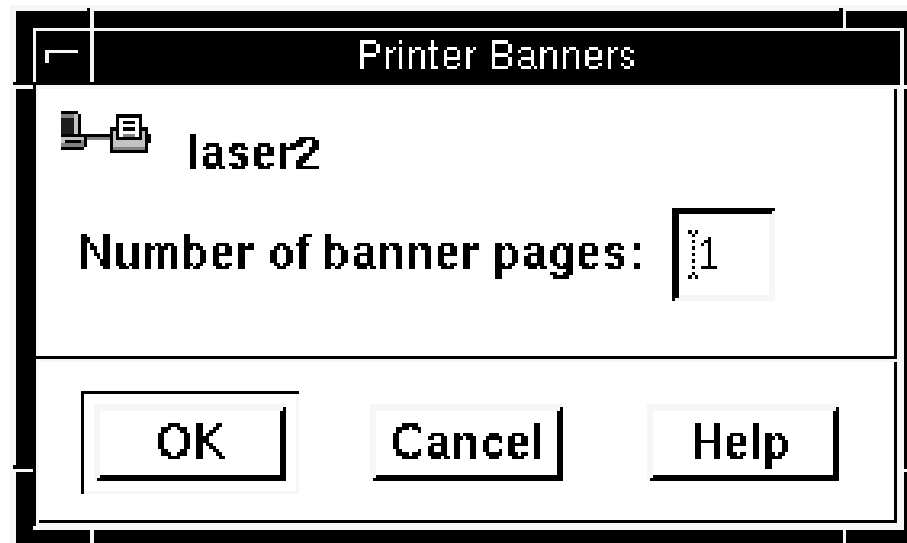


← Default
Printer

Controlling Printer Access



Controlling Banner Pages



Stopping and Starting the System

- **Stop an SCO OpenServer system**
- **Start an SCO OpenServer system**
- **Switch between system modes**

System Shutdown Manager

System Shutdown Manager on lab1

Shutdown Message Options [Help](#)

Delay:

  Hours   Minutes

Message:

☐ Reboot after shutdown

☐ Confirm prior to shutdown

SCOadmin 

Shutting Down the System

shutdown(ADM)

- **polite, gradual**
- **allows programs warning (networks, windows)**

haltsys(ADM)

- **emergencies only**
- **from single user mode**

reboot(ADM)

- **from single user mode**
- **automatically starts up again**

Turn off computer

- **necessary for a "hung" system**
- **last resort**