SYSTEM ADMINISTRATION

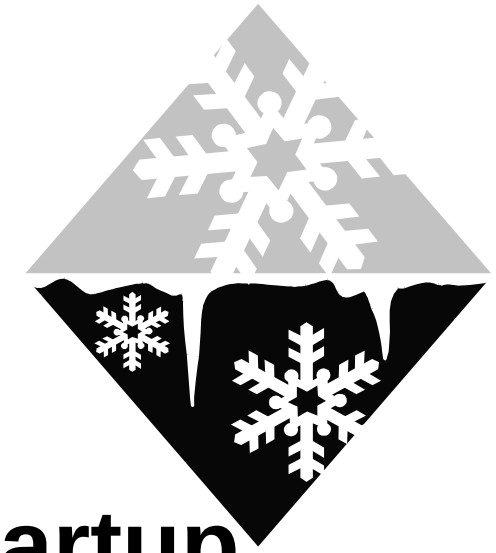
ECS Release 4 Training

625-CD-004-002

System Administration Topics

- System Startup and Shutdown
  - ECS Assist & HP Openview
- Tape Operations: Labeling and Indexing
- System Backup and Restore (full, incremental)
- System Logs
- User Administration
- New Workstation Installation
- Contractor Off-the-Shelf Software (COTS)
- Distributed Computing Environment (DCE)
- Security
- Earth Science Online Directory

System Startup

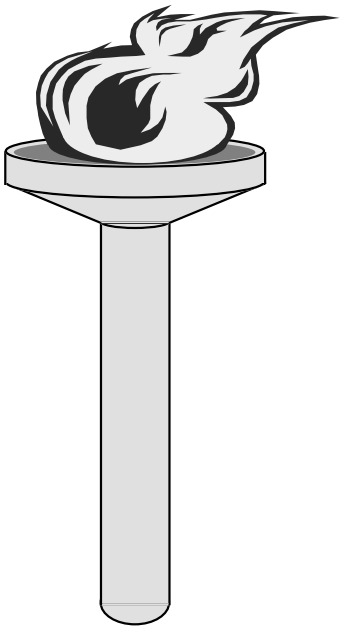


Cold Startup

- NO SUBSYSTEMS RUNNING
  - Power failure
  - Following system maintenance
  - Power switch OFF?

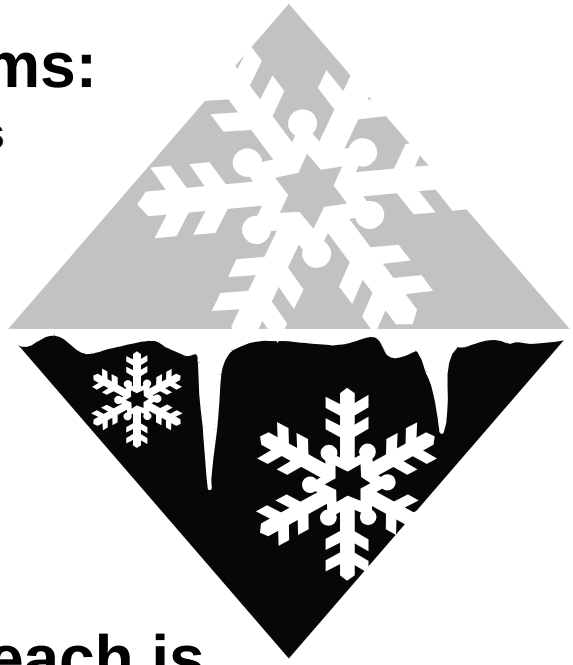
Warm Startup

- SOME SUBSYSTEMS MAY BE RUNNING -- OTHER MAY BE OFF
  - Operator intervention
  - External malfunction



Cold Startup Procedure

- **Determine existence of following systems:**
  - **DNS Master**
  - **NIS Master**
  - **Automount Server**
  - **DCE License Server**
  - **ClearCase Server**
  - **CSS**
  - **-- Other License Servers**
  - **-- Mail Hub Servers**
  - **-- MSS**
  - **-- CIDM Subsystem**
  - **-- Sybase SQL Servers**
  - **-- DSS**



- **Turn on power for each one IN ORDER!**
- **HP OpenView icons turn GREEN when each is properly booted.**

Cold Startup Boot Order

g0css02

DNS Master Server - Mail Server
NIS Master - NFS Server
NETLS License Server
DCE Time Server

g0mss02

License Server - Clearcase Server
Clearcase VOB Server

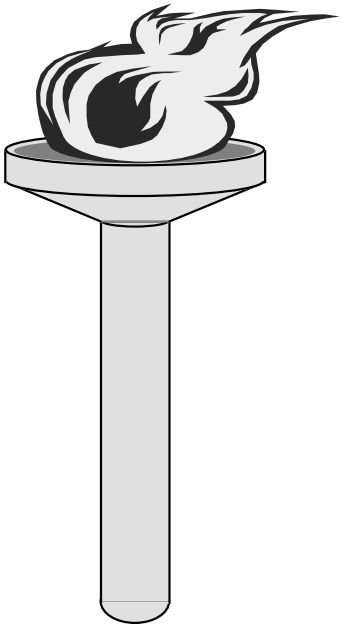
g0ins02

- HP OpenView
Sybase Rep Server - ESSM
Sybase SQL Server - PERL5 - MSS Primary DB

All others in any order

g = goddard
e = edc
l = larc
n = nsidc

Warm Startup Procedure



- **Determine which server is down.**
- **Determine order in which servers are to be booted.**
- **Determine position in hierarchy.**
- **Shutdown all servers above the affected server in hierarchy.**
- **Restart servers in order.**

Normal Shutdown

- Turn off power to FULL system
- Turn off power to a component subsystem
- Scheduled by Resource Manager
- Approved by DAAC Manager
- Minimal disruption to system users
- NO loss of data

Normal Shutdown Procedure

SA sends broadcast messages to users announcing the impending shutdown

Active jobs finish *OR* long-running jobs are killed by the SA.

SHUT DOWN SUBSYSTEMS IN ORDER

Normal Shutdown Order

All others in any order

g0msh08

Sybase SQL Server - PERL5 - MSS Primary DB
Sybase Rep Server - ESSM
DCE Time Server - HP OpenView

g0mss10

Clearcase VOB Server - IQ Report Writer
License Server - Clearcase Server

g0css02

NETLS License Server
NIS Master - NFS Server
DNS Master Server - Mail Server

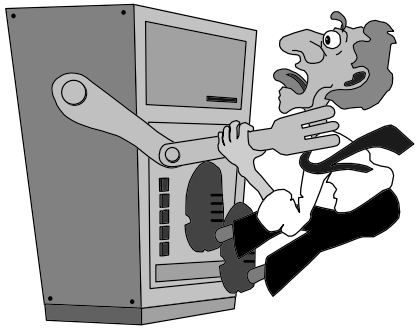
Emergency Shutdown

- **Indications**
  - **System or Subsystem is locked up**
  - **Unable to access or maneuver through the system**
  - **Impending or actual power failure**
  - **Hardware or Software failure**
- **Verify need to shutdown**
  - **Resolve subsystem and user problems first**
  - **Shutdown is a last resort**
- **Minimize loss of data**

Emergency Shutdown (cont.)

- **Type sync and press to flush buffers - SUN/SGI machines**

- **Repeat the first step**
- **Type `halt` on the main server - HP machines**



- **Shutdown Subsystems IN ORDER**

Extreme Emergency Shutdown
SUN SYSTEMS ONLY

Login as ROOT.

Press STOP *and type* **a** *simultaneously to immediately kill the system.*

ECS Assistant

ECS Assistant is a GUI tool developed to faciliate management activities

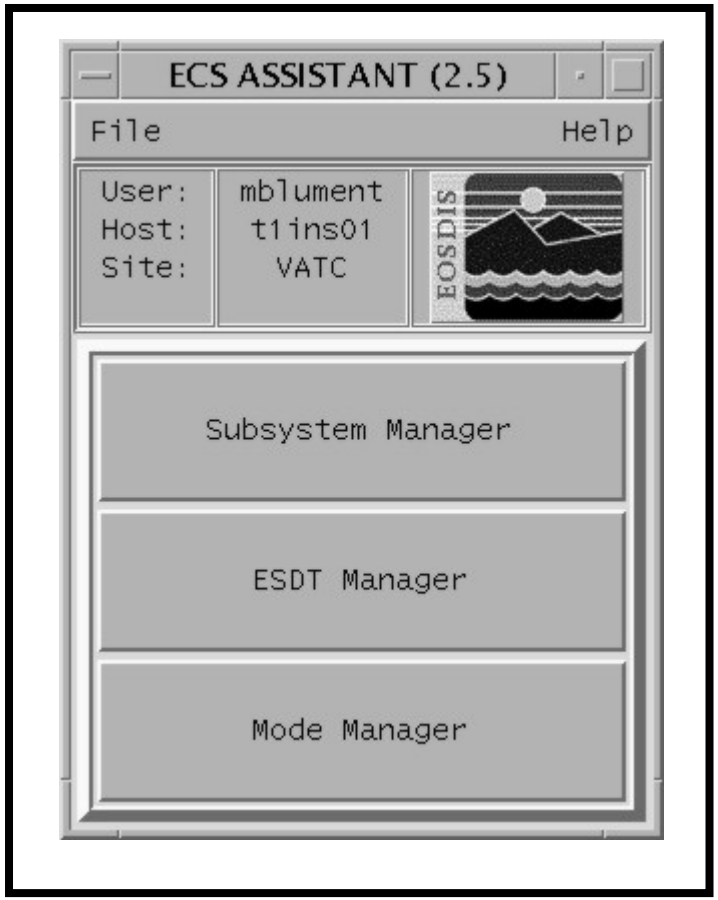
ECS is comprised of three major components -

- **EcCoAssist - To start up and shutdown subsystem servers**
- **EcCoModemgr - mode management**
- **EcCoEsdtmgr - database review**

ECS Assistant must be run on each server where a subsystem resides - some of the files that comprise ECS Assistant are architecture specific.

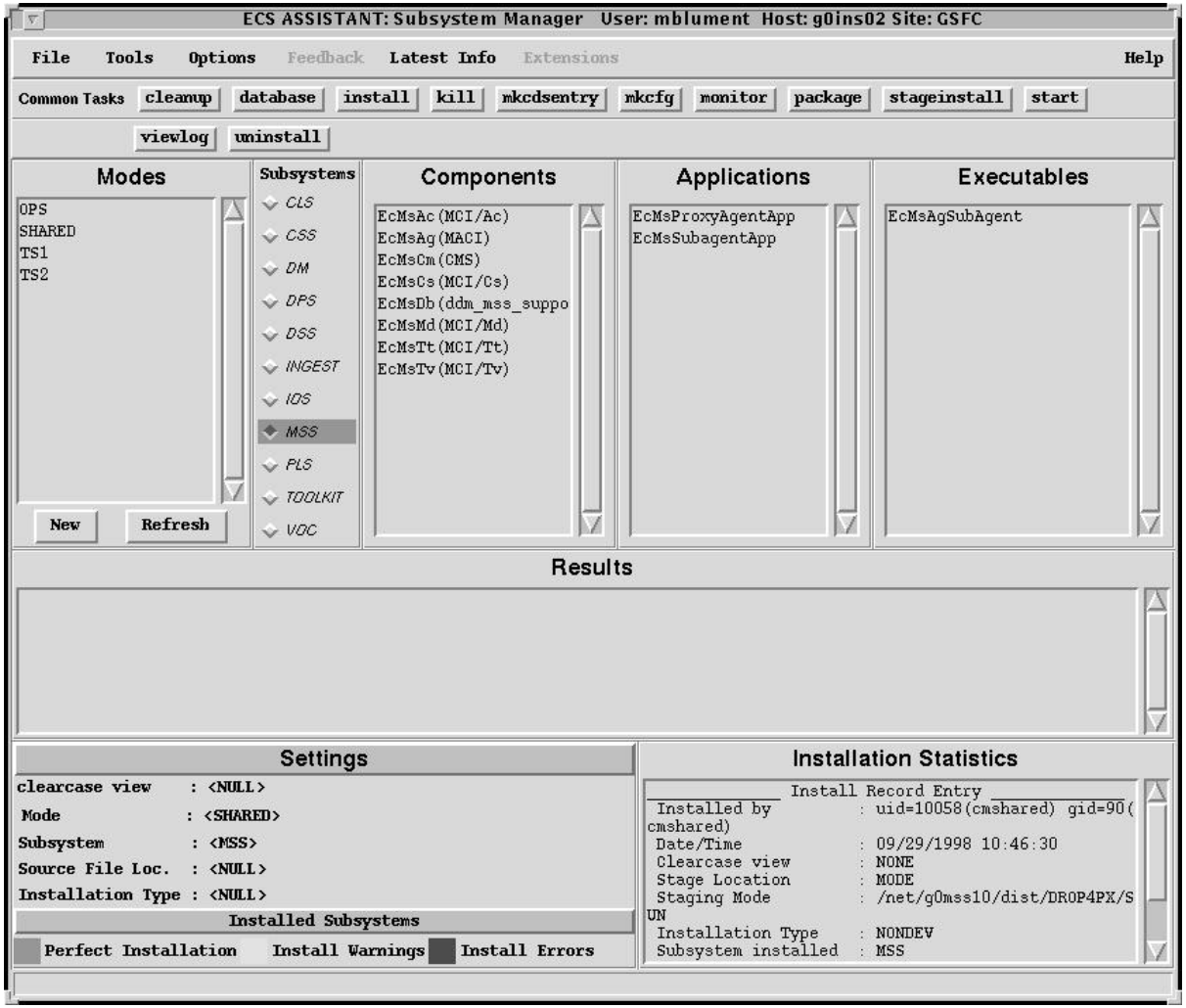
ECS Assistant also has a debugger to help ascertain where a problem may have occured.

ECS Assistant GUI

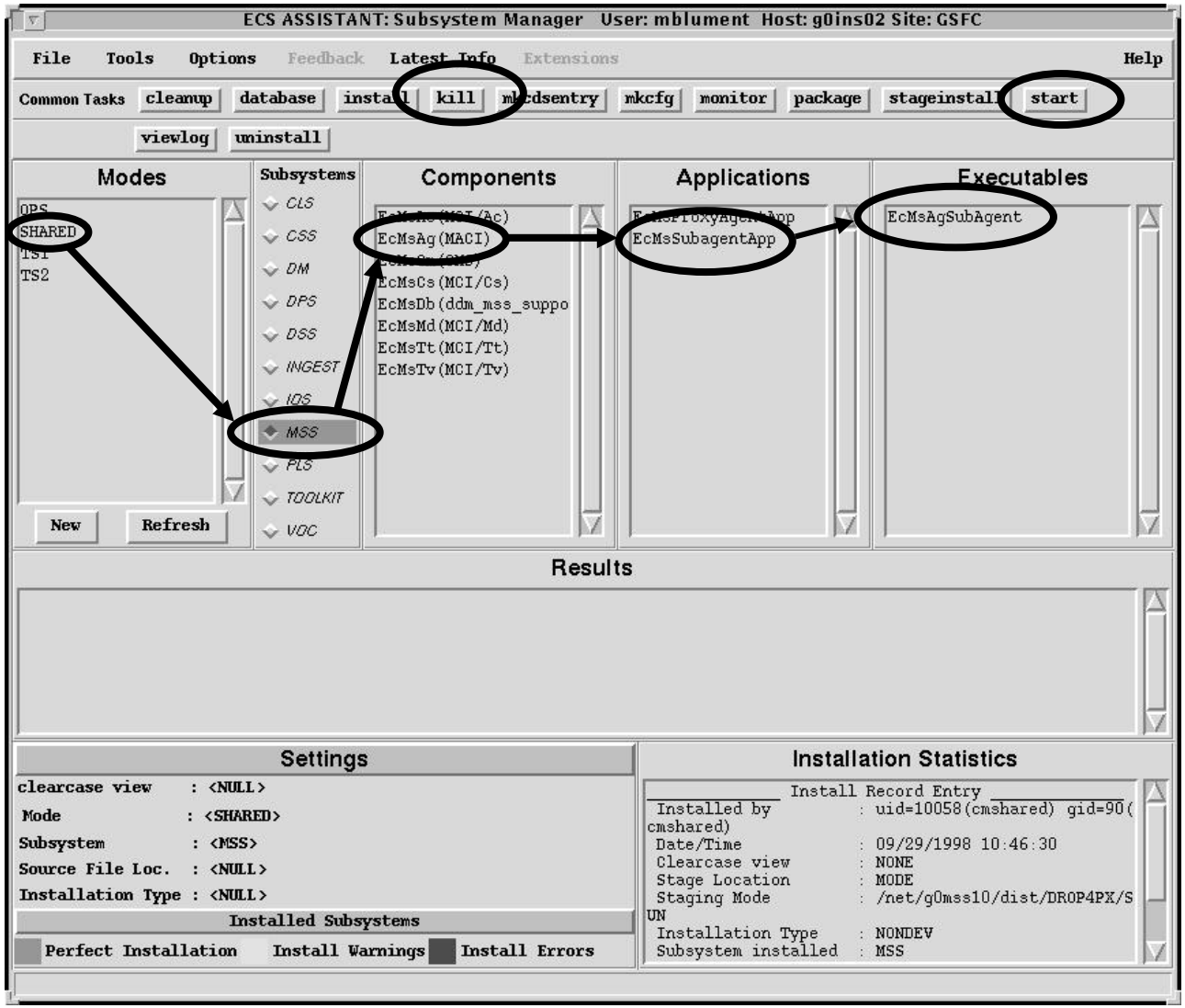


ECS Assistant GUI

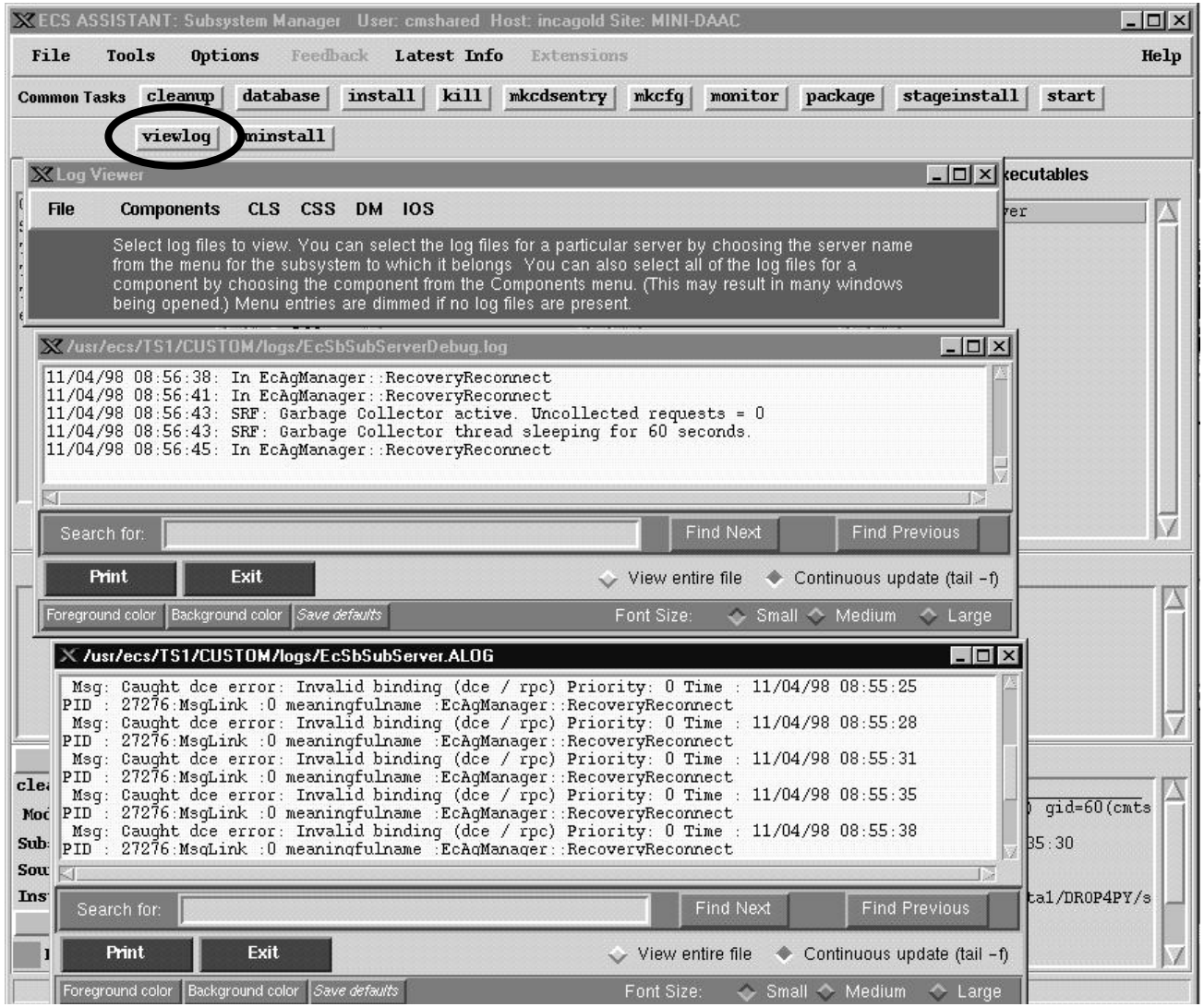
ECS Subsystem Manager GUI



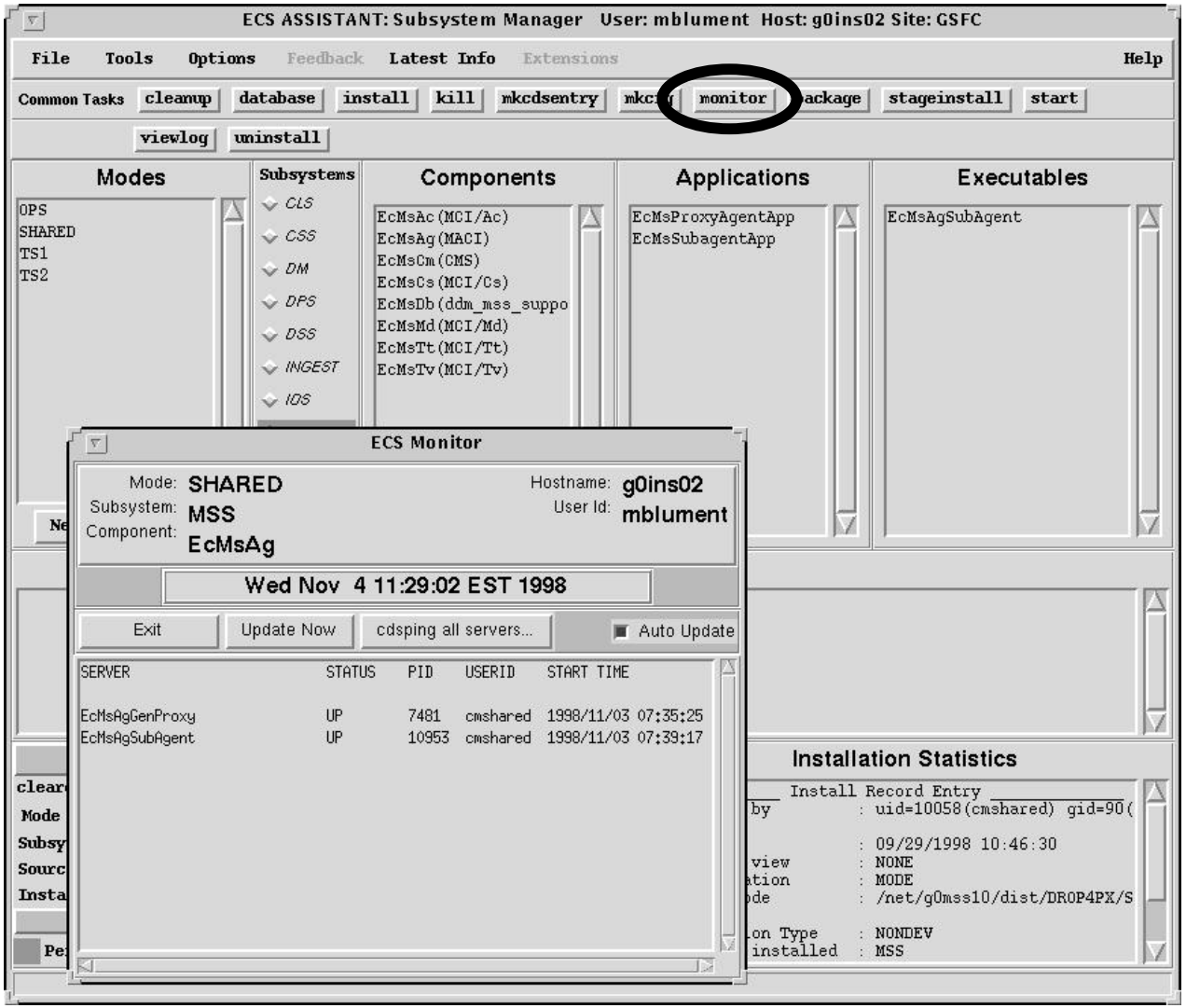
ECS Assistant Server Control



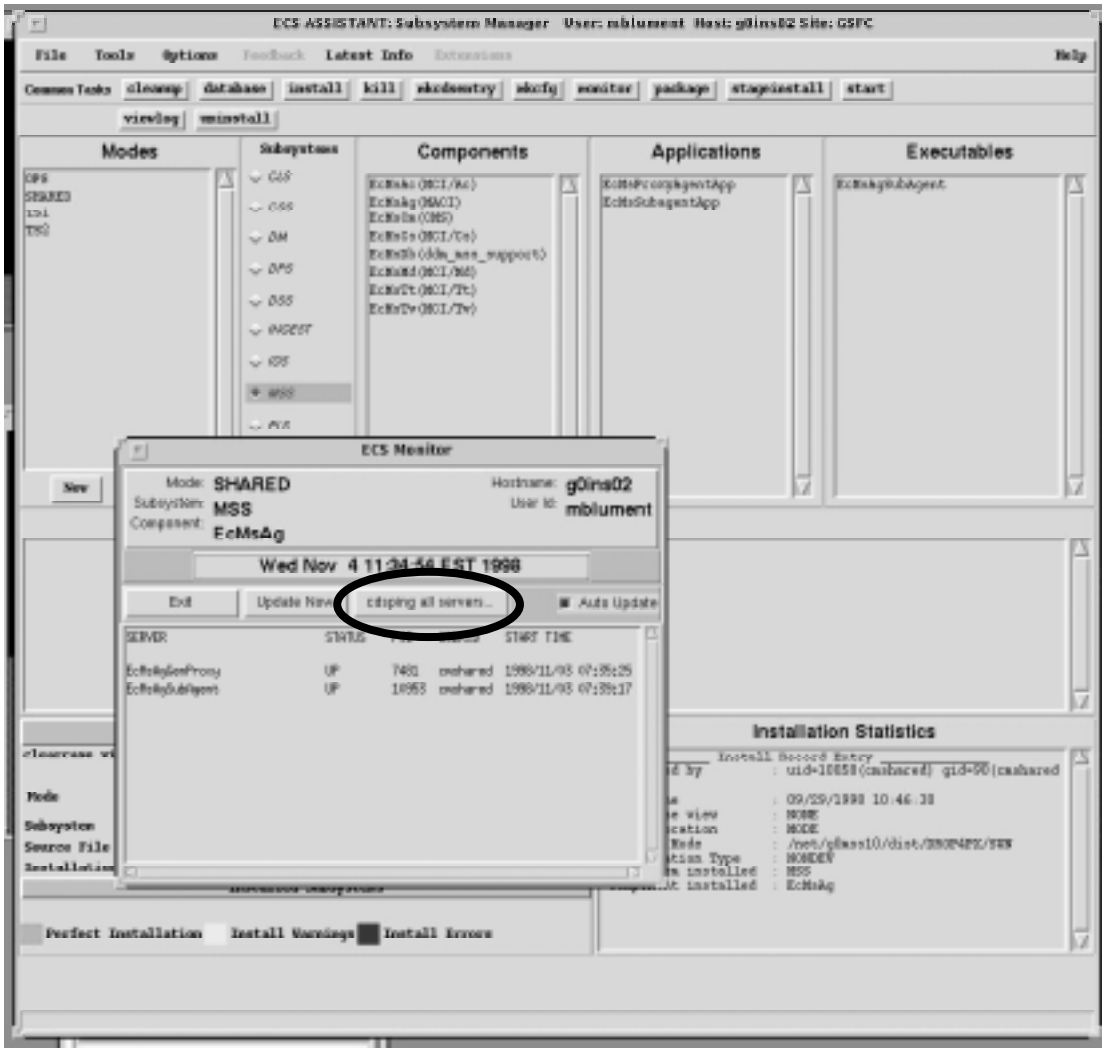
ECS Assistant Viewlog

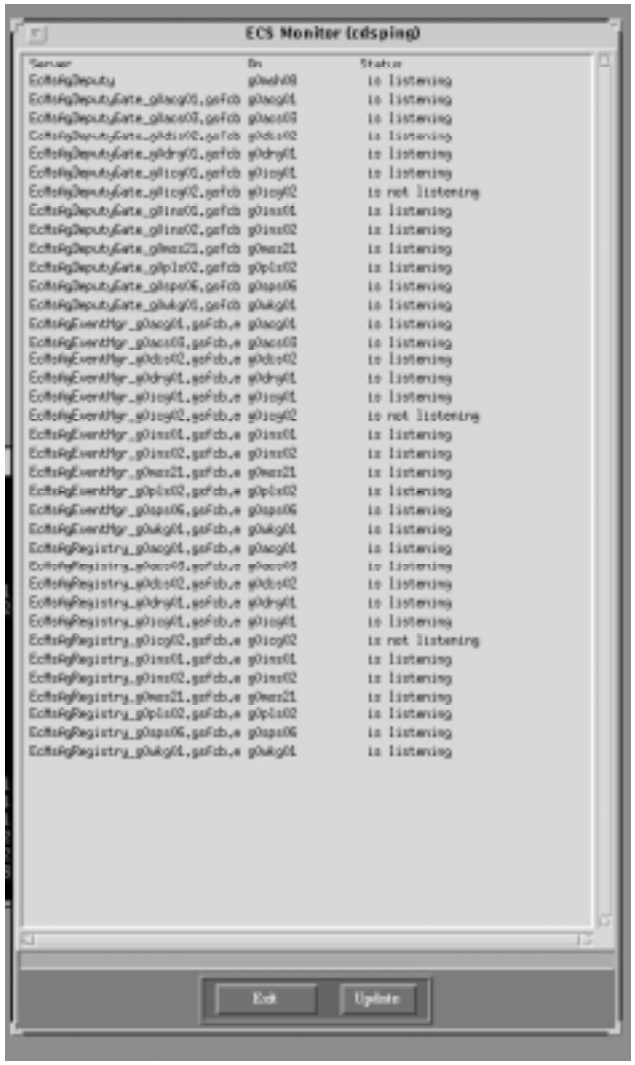


ECS Assistant Monitor



CDSPING SERVERS





ECS Assist Lab

setenv DISPLAY (IP address)
setenv ECS_HOME /usr/ecs

cd /tools/common/ea

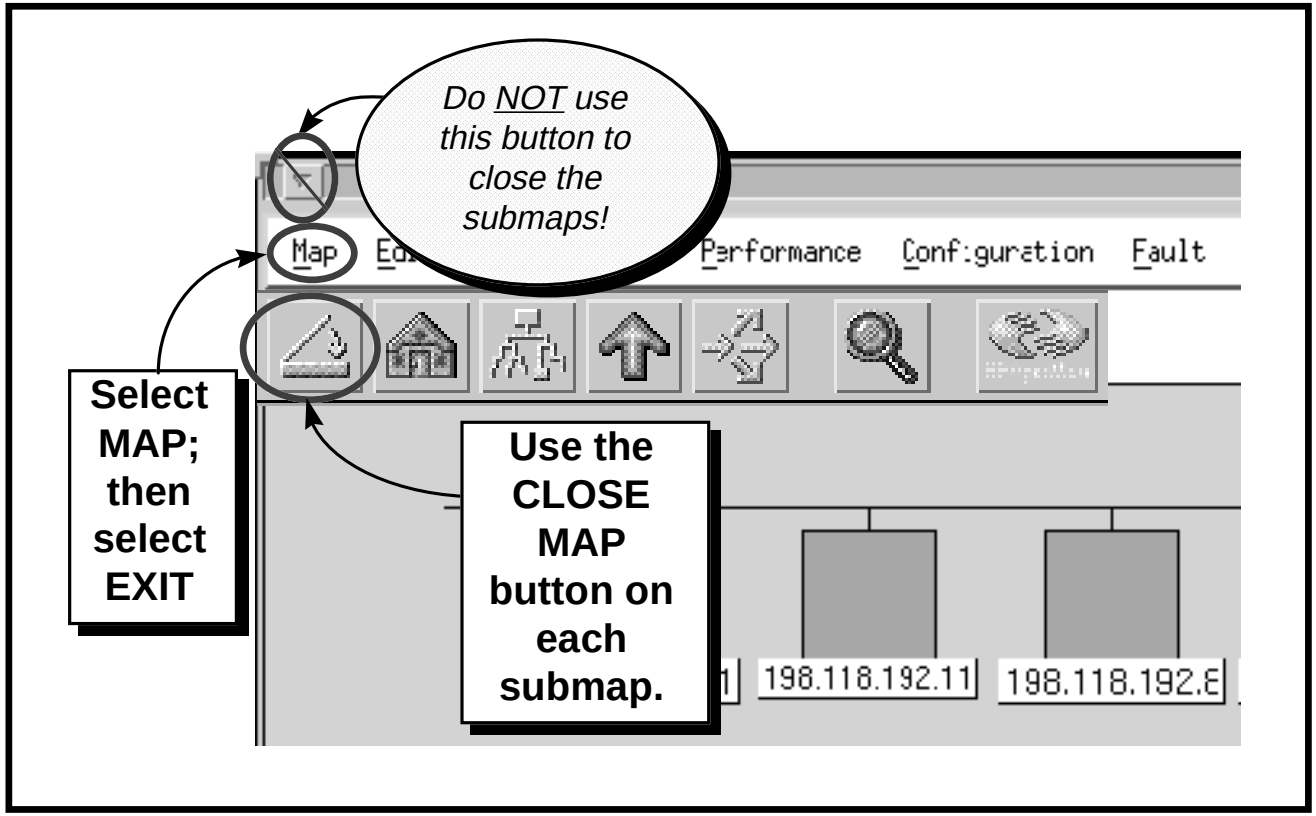
EcCoAssist &

HP OpenView

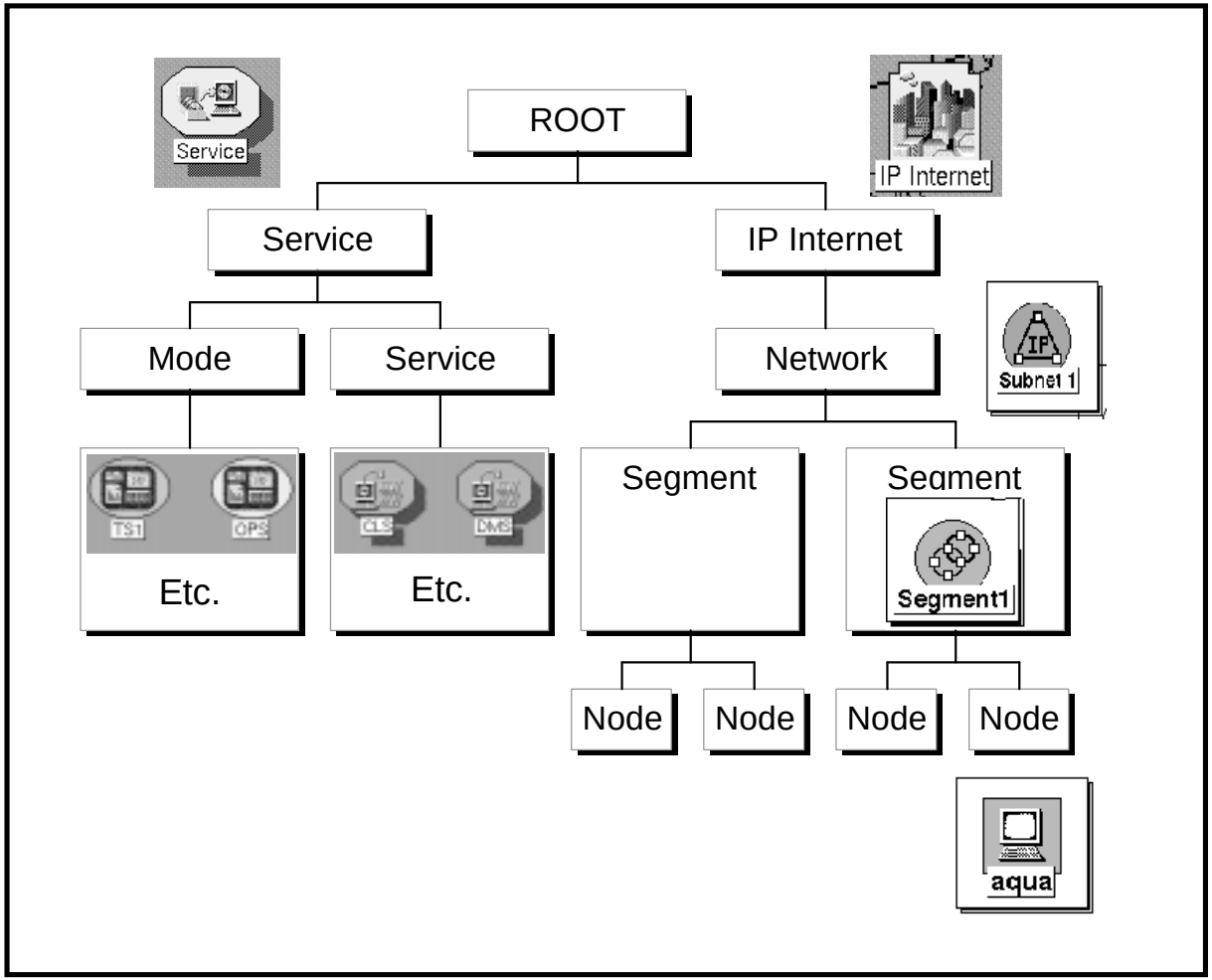
About OpenView
HP OpenView
Close
Help

GDAAC
Map Edit Locate View Performance Configuration Fault Misc Options Administer Help
IP Internet
Service
New Object Holding Area
GDAAC (Read Only)

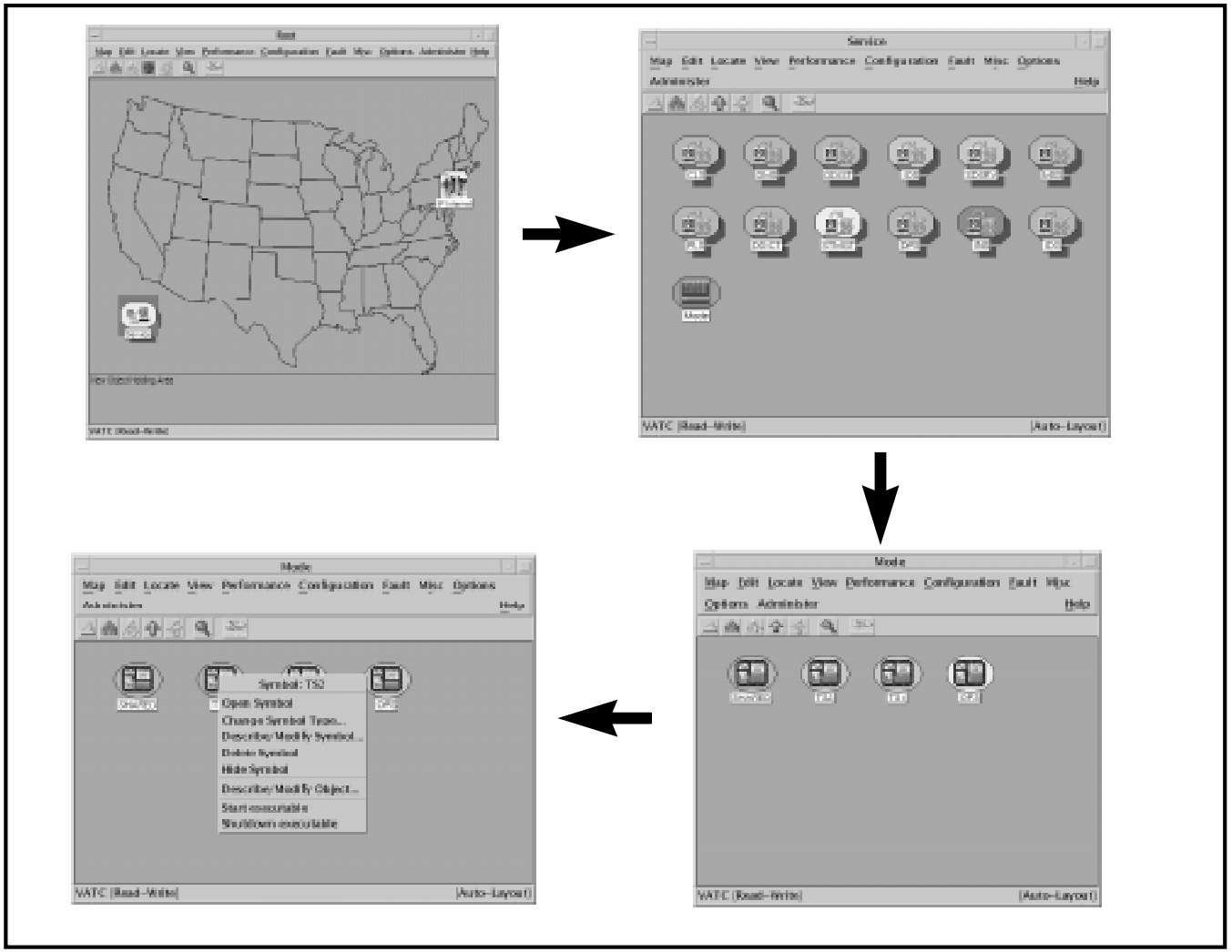
HP OpenView - Closing screens



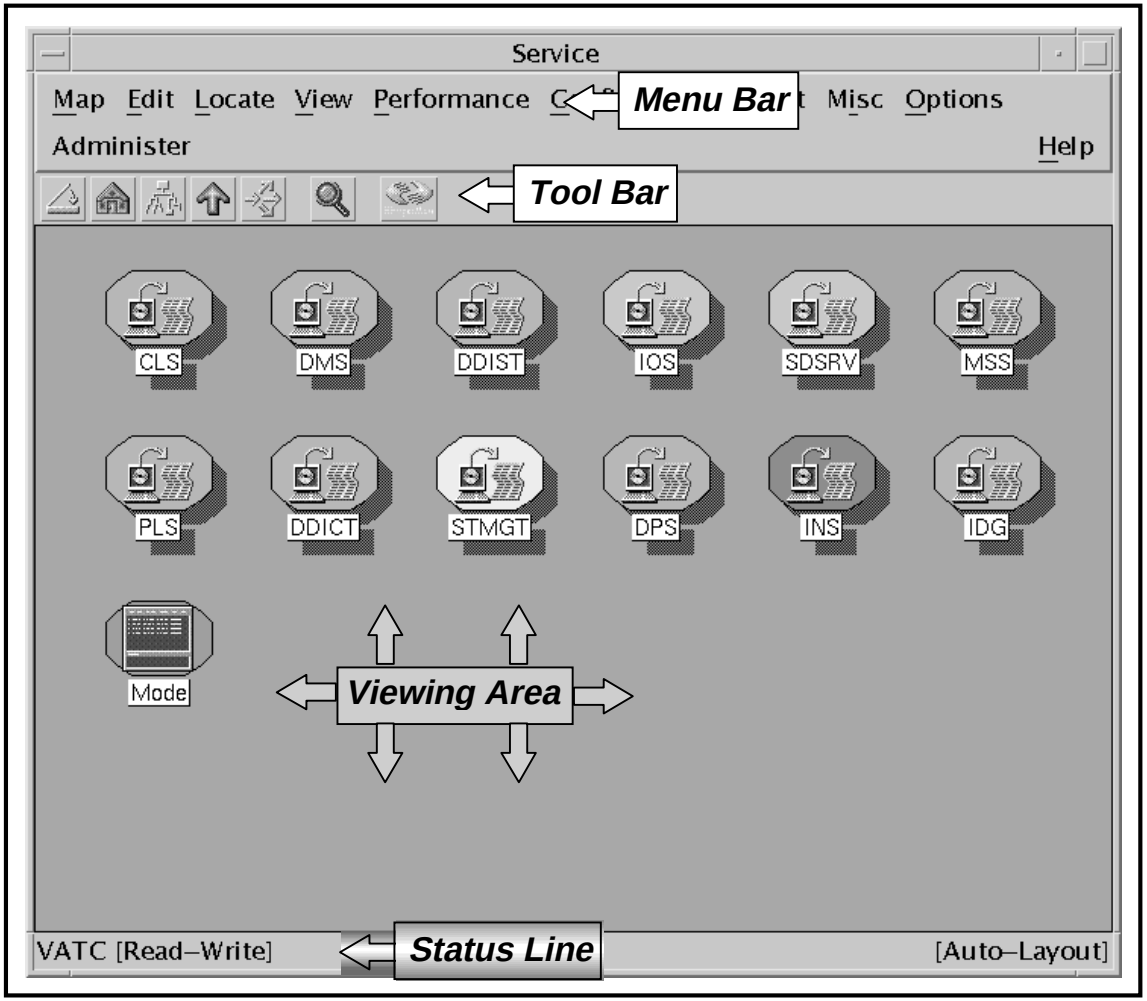
HP OpenView - Hierarchy



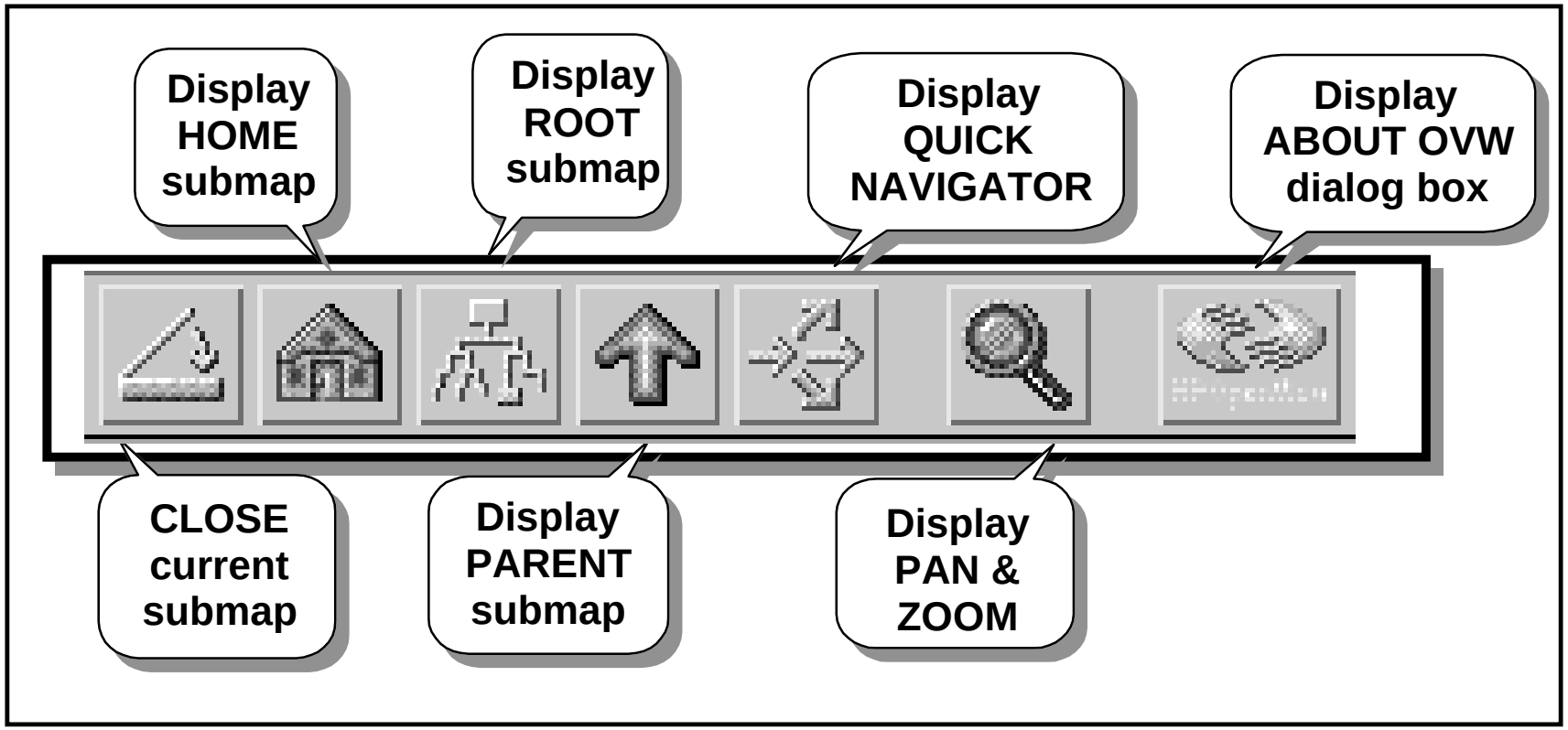
HP OpenView - Hierarchy



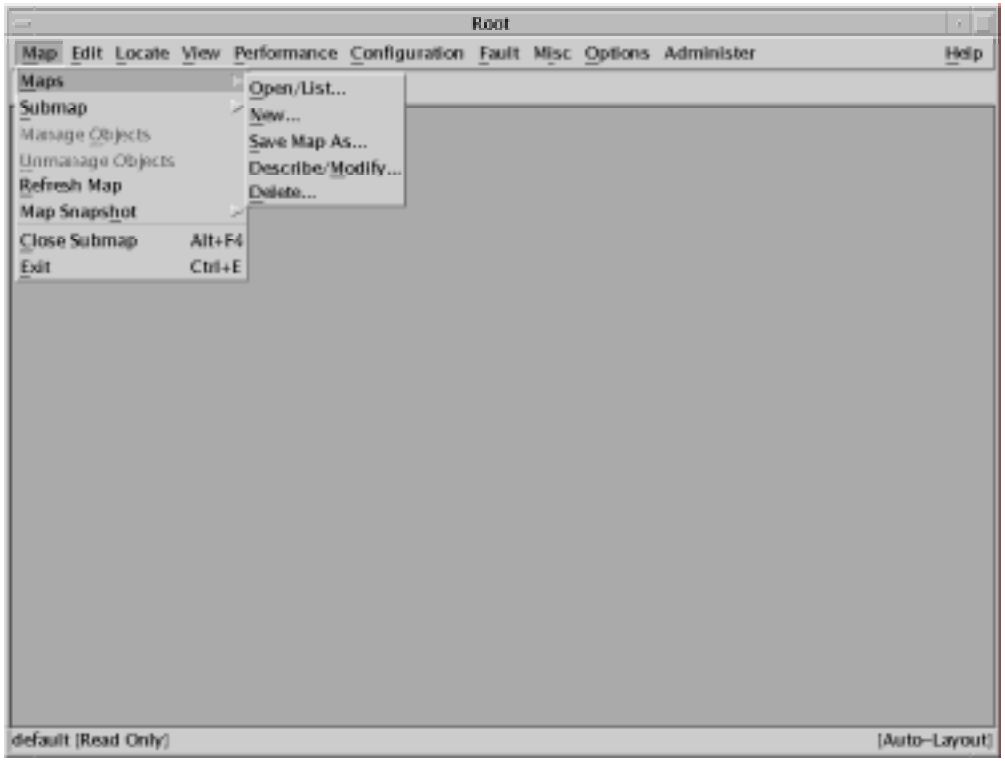
HP OpenView - Submap parts

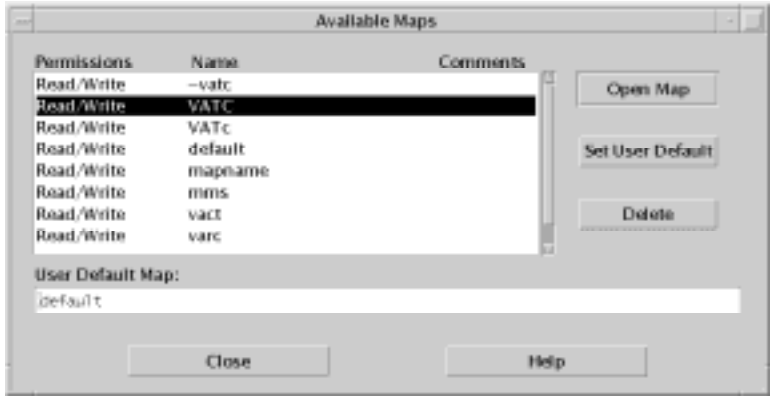


HP OpenView - Toolbar



HP OpenView - Map select

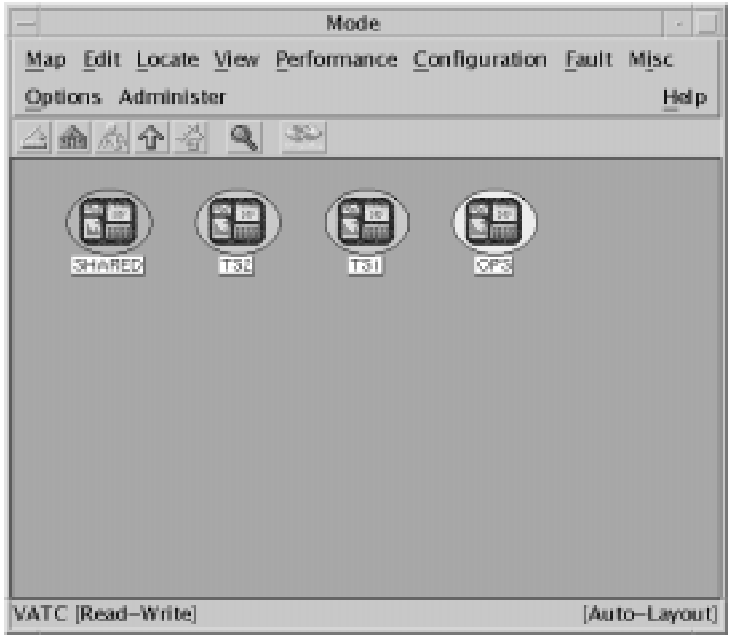


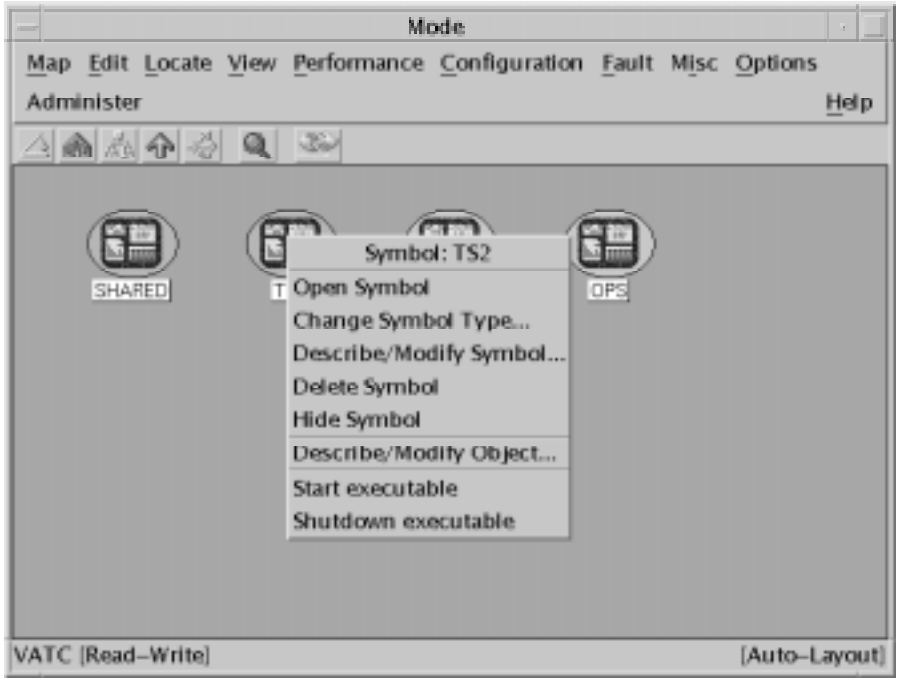


HP OpenView - Root map

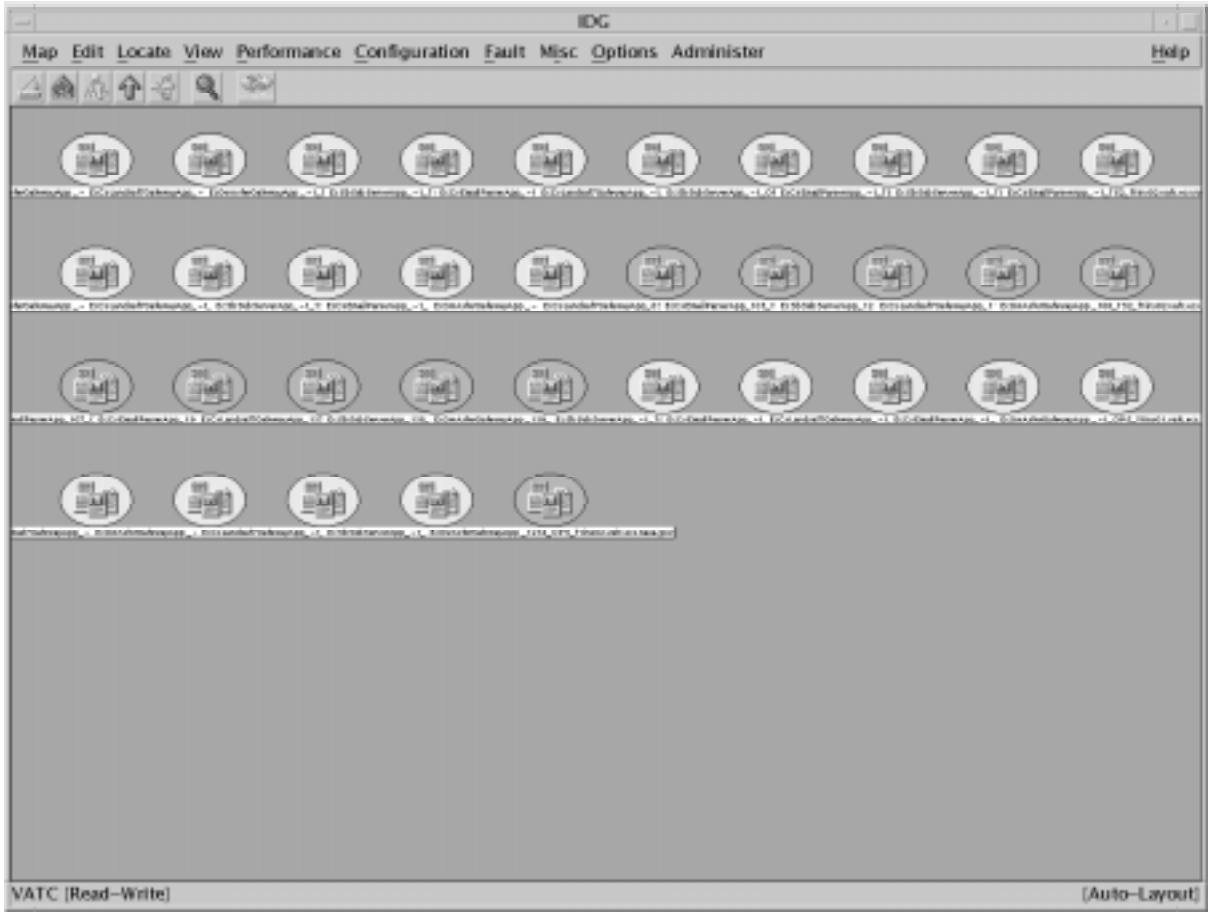
HP OpenView - Service submap

HP OpenView - Mode server control

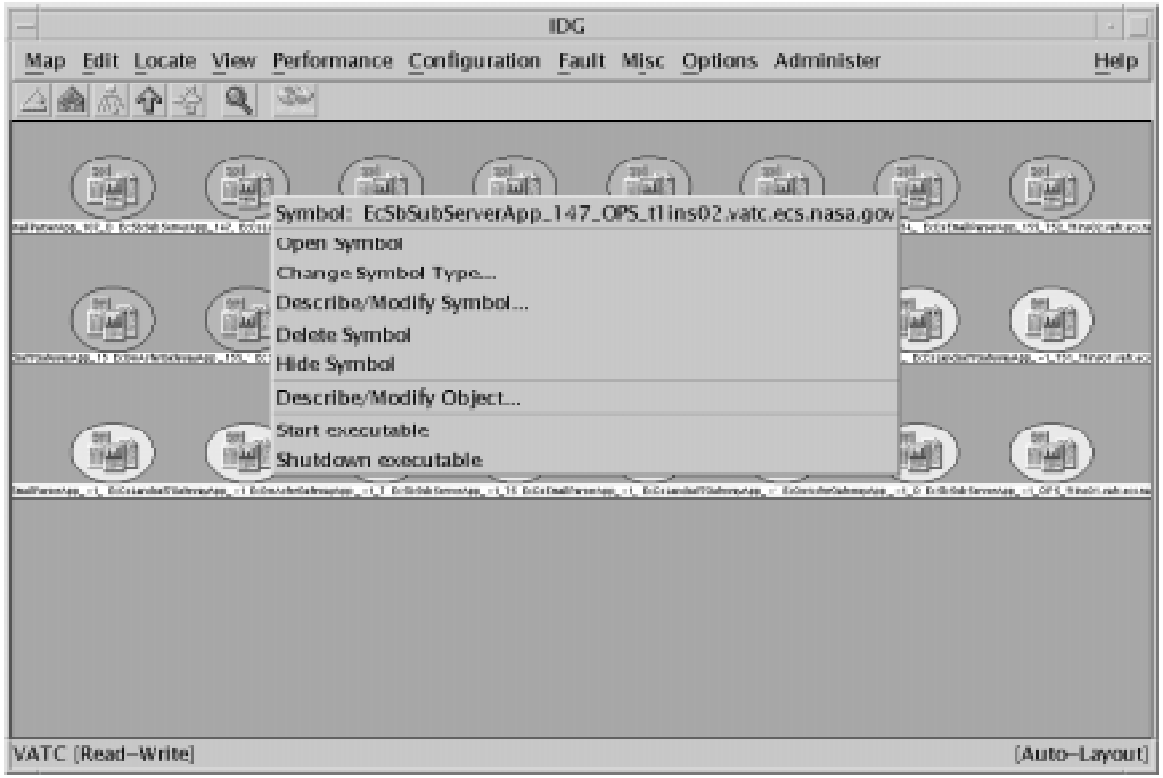




HP OpenView - System server control



HP OpenView - Server control



HP Openview Lab

setenv DISPLAY (IP address)
setenv ECS_HOME /usr/ecs

cd /usr/ecs/OPS/COTS/OV/bin

ovw -map xxxx &

Secure Shell (ssh)

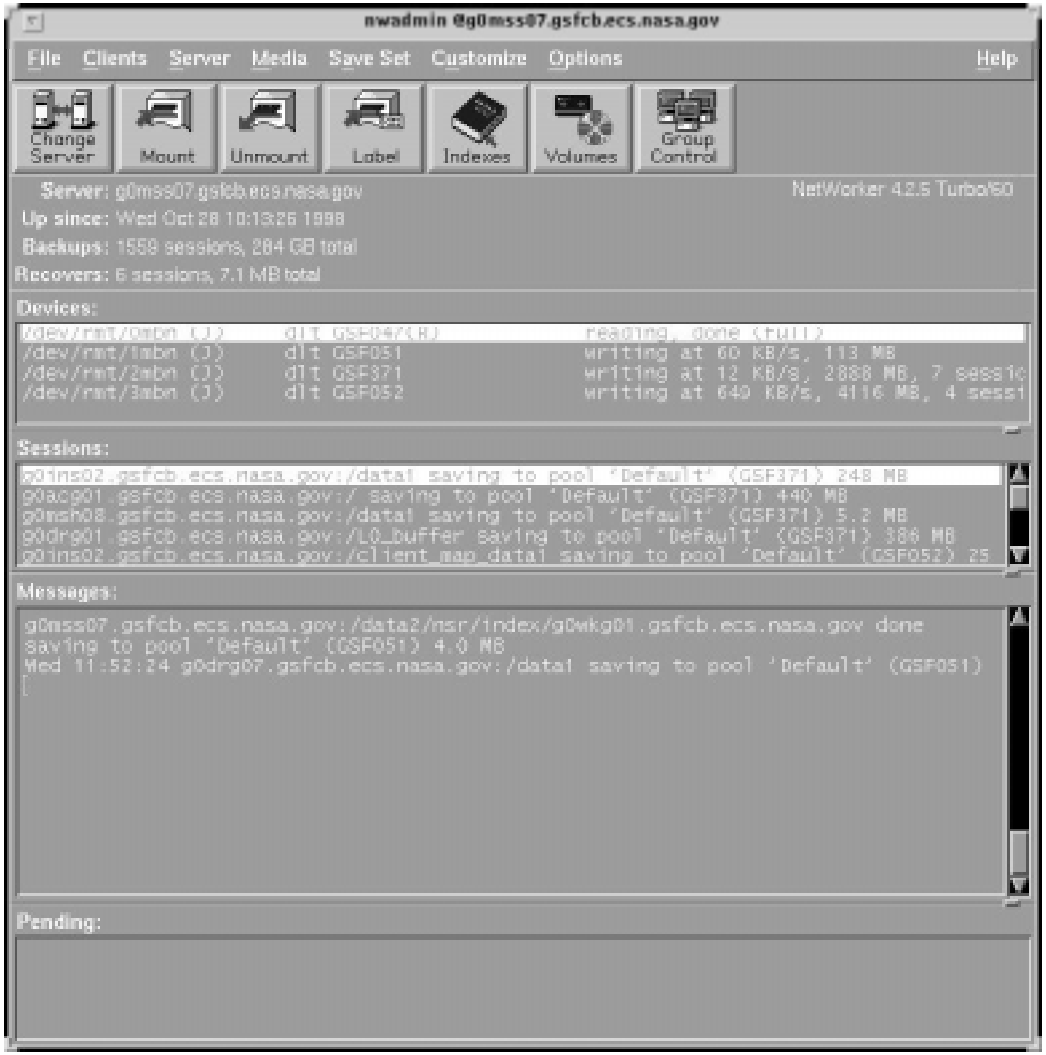
- Improves Network Security
  - Passwords not sent in the clear
  - Encrypts entire session

- sshsetup
  - Local Host Setup

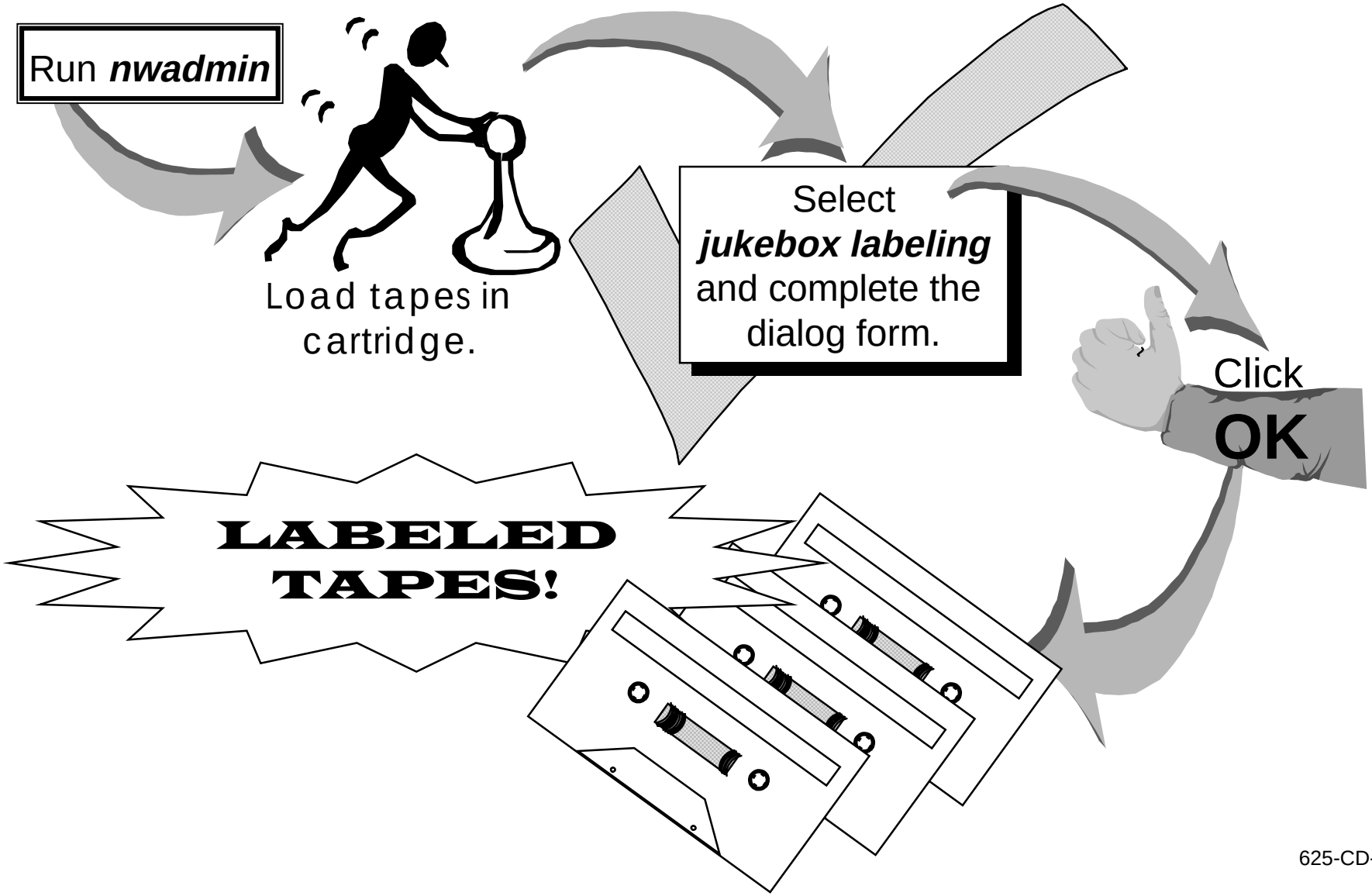
- sshremote
  - Remote Host Setup

- sshchpass
  - Change Password

Networker Administrator Main Screen

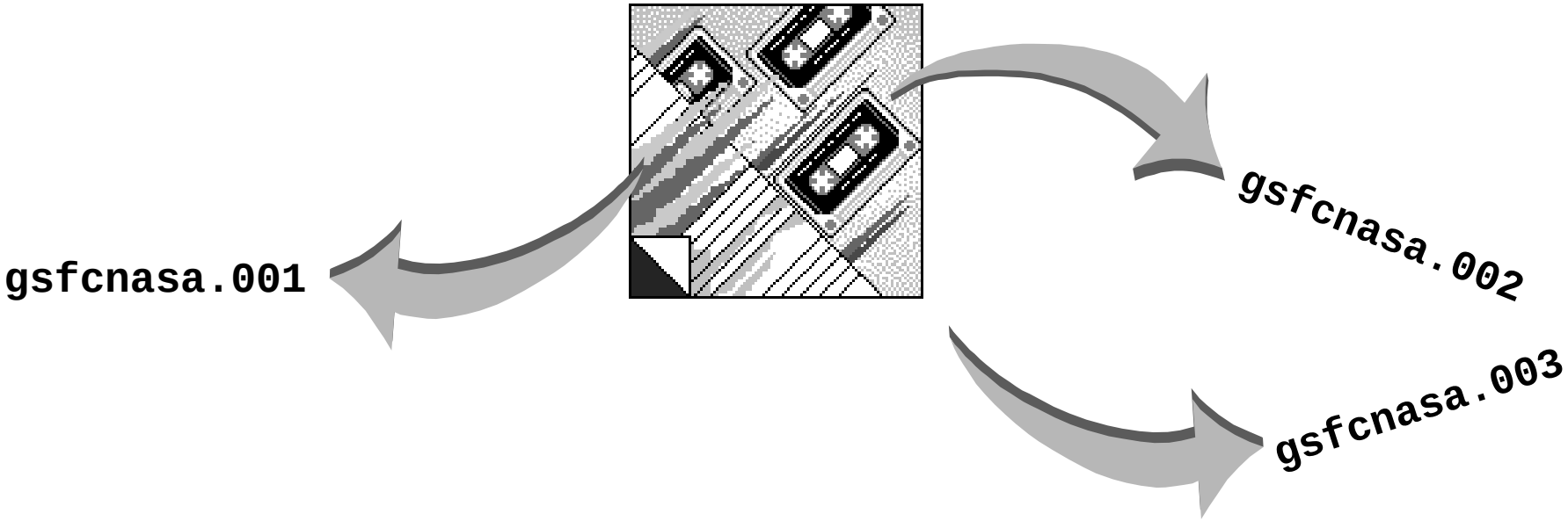


Tape Labeling Procedure

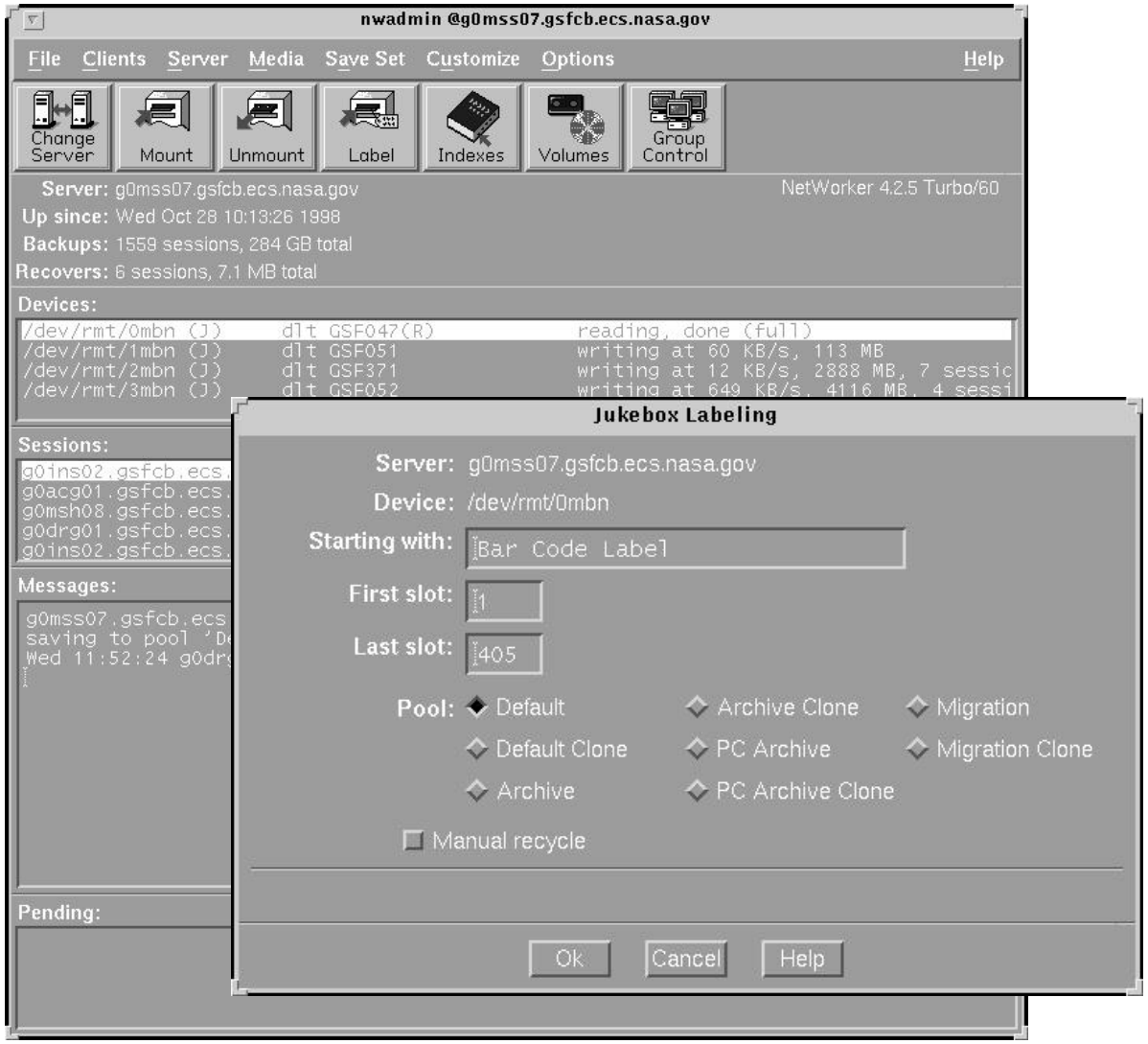


Tape Labeling

- **Creates a unique name for each tape**
- **Identifies tape to Networker**
- **Stores list of labels in memory (index)**



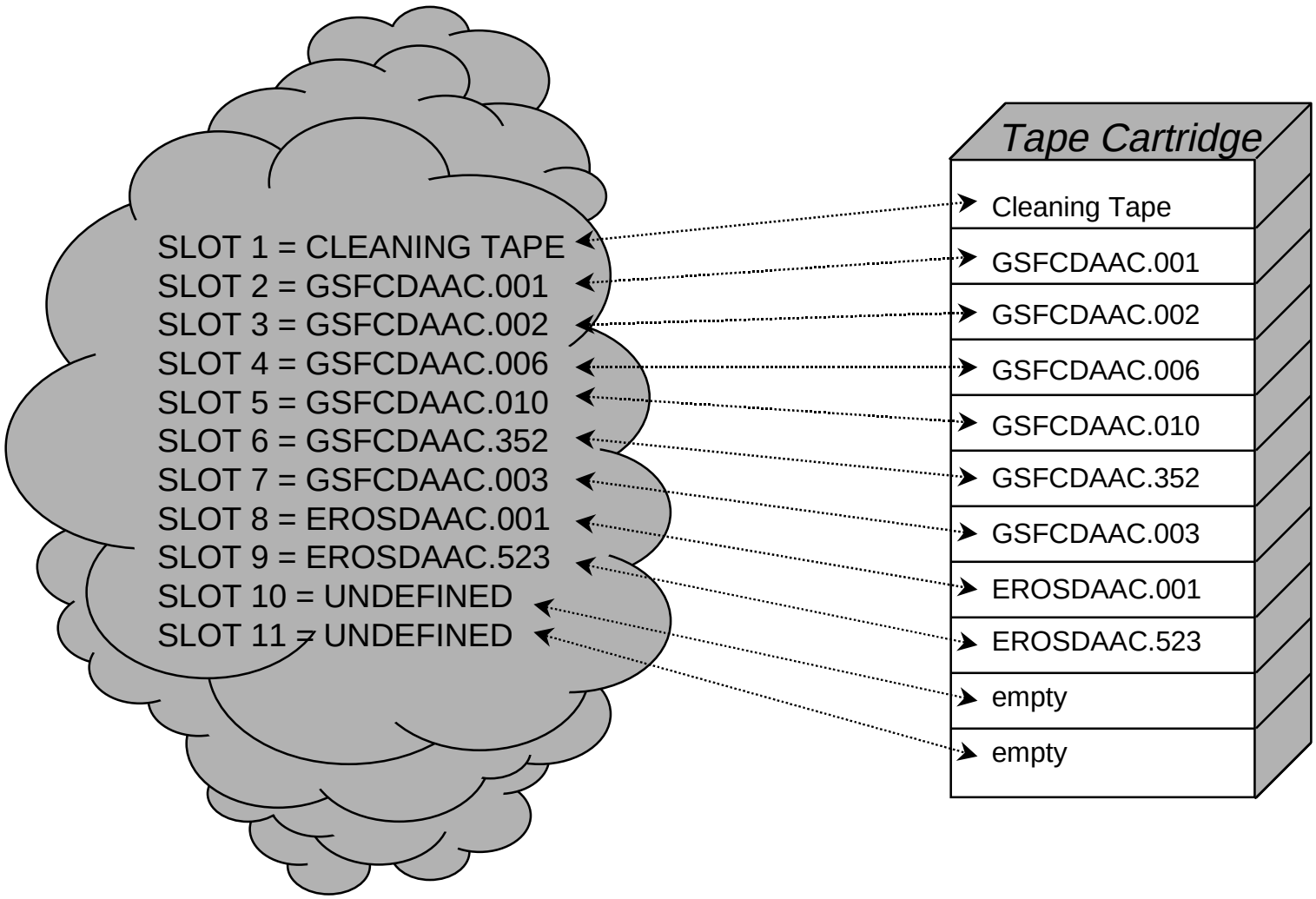
Jukebox Labeling Window (after clicking LABEL button)



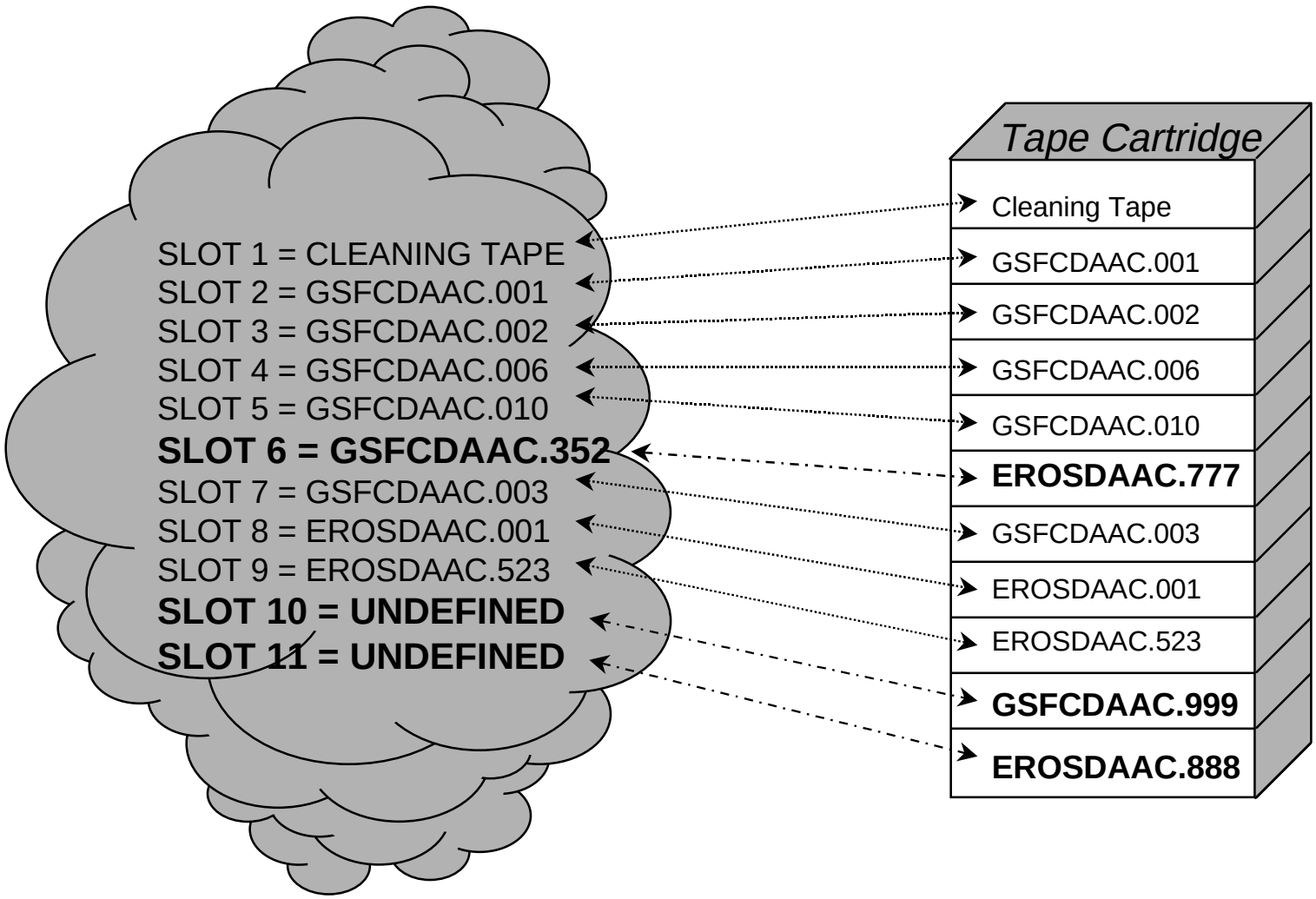
Tape Indexing

- Networker's way of identifying each tape's location in the jukebox
- Reads each tape's label and matches it to the jukebox slot
- Can be time consuming (2-3 minutes per tape)
- Must be performed after tapes are added, removed, or changed

Tape Indexing
After Initial Inventory



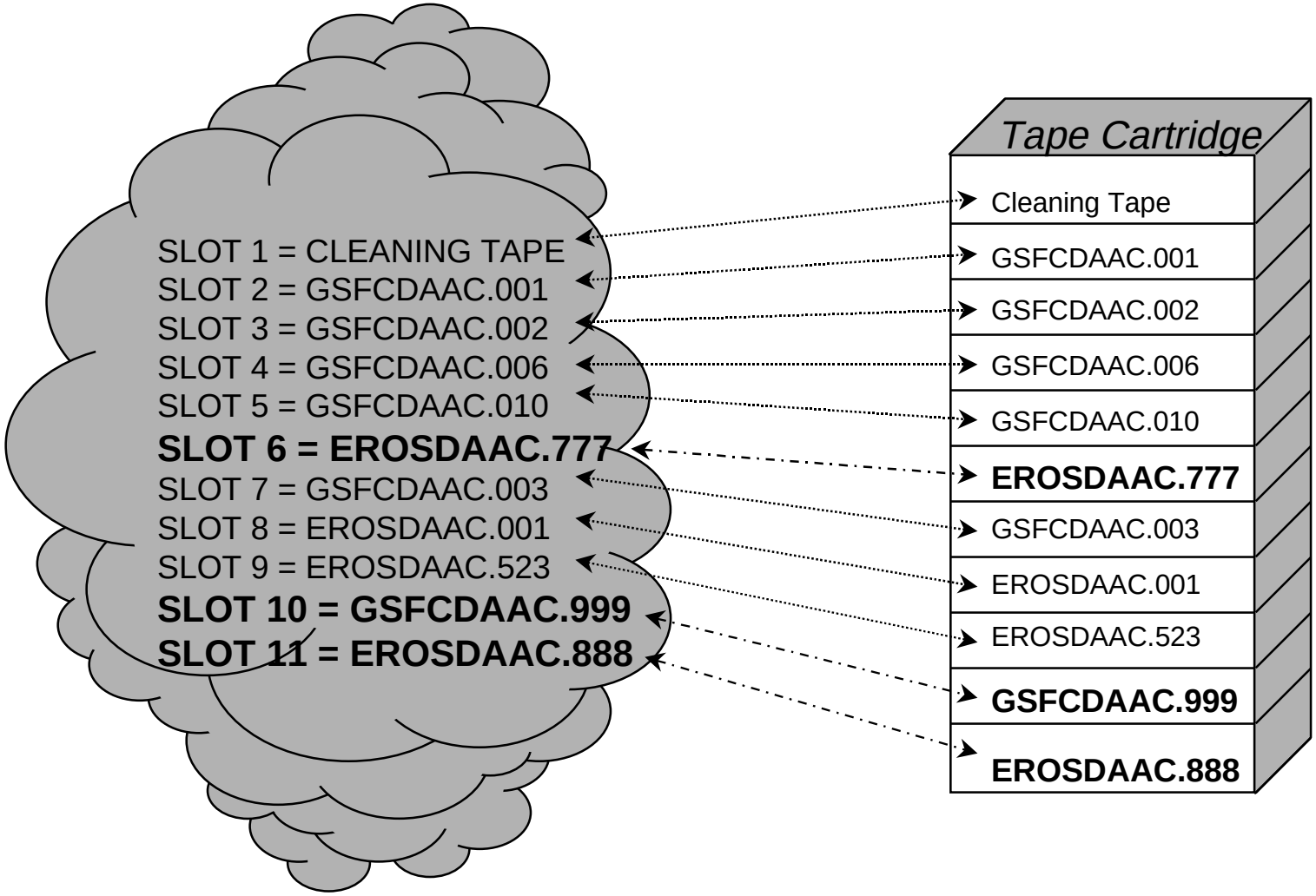
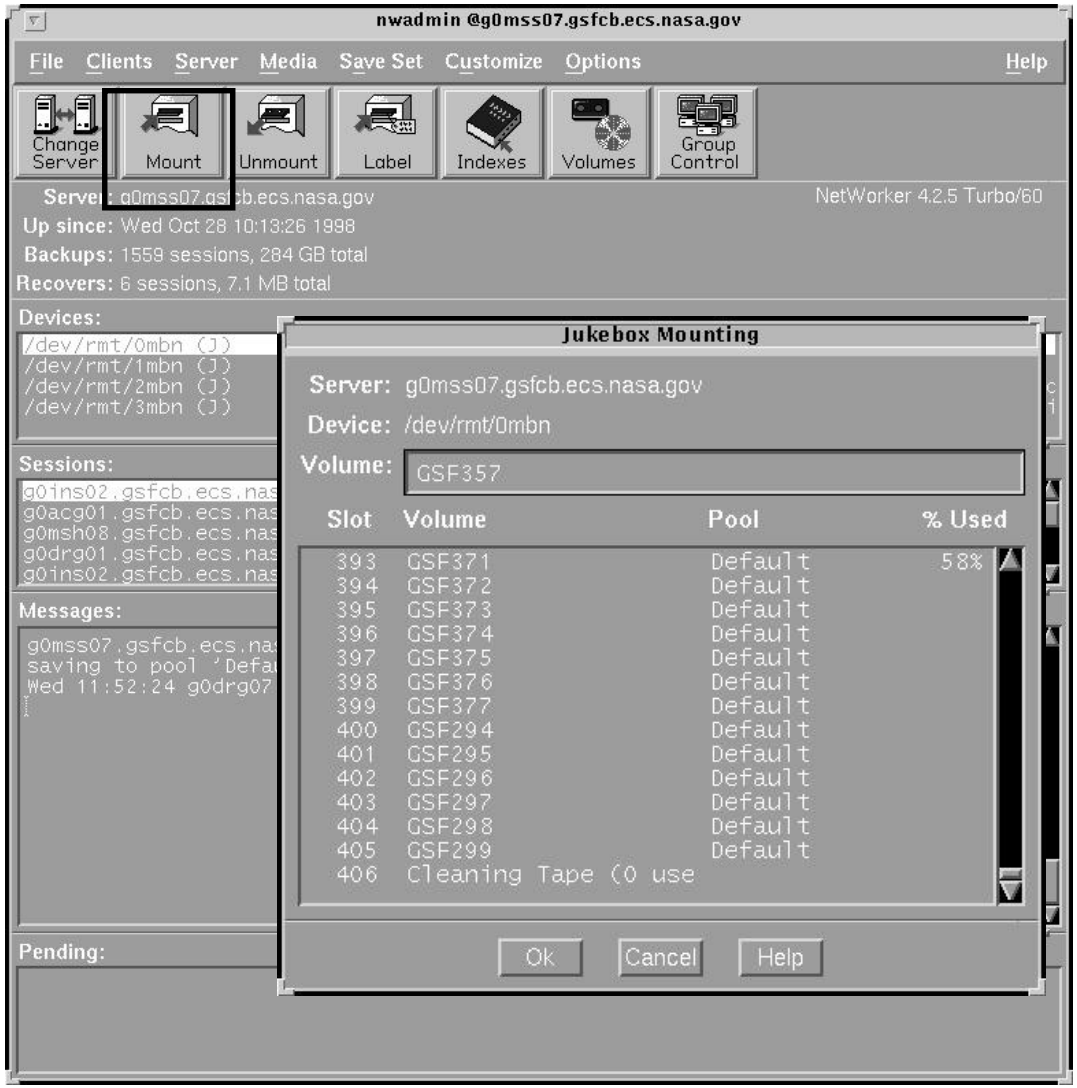
Tape Indexing
Tapes Changed But Not Re-Inventoried



Jukebox Mounting Window

Jukebox Inventory Window

Tape Indexing
After Re-Inventory



Jukebox Mounting Window (after clicking MOUNT button)