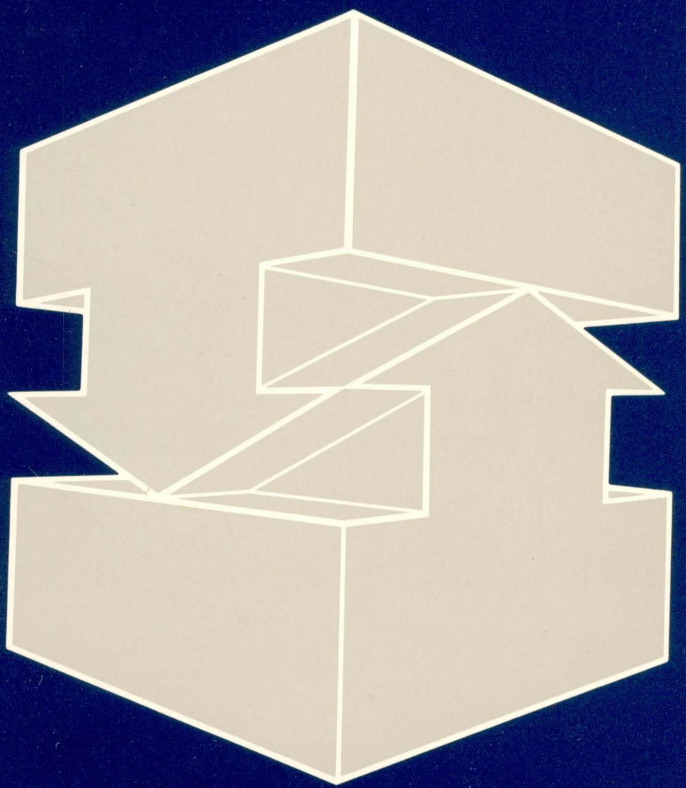
intel®

iDIS™ SYSTEM ADMINISTRATION REFERENCE



Order Number: 138269-002

iDIS™ System Administration Reference

iDIS™ SYSTEM ADMINISTRATION REFERENCE

Order Number: 138269-002

Copyright 1986, Intel Corporation
All Rights Reserved

CAUTION

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A Computing Device pursuant to Subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user, at his own expense, will be required to take whatever measures may be required to correct the interference.

Other Intel literature may be obtained from:

Literature Department
Intel Corporation
3065 Bowers Avenue
Santa Clara, CA 95051
(800) 548-4725

The information in this document is subject to change without notice.

Intel Corporation makes no warranty of any kind with regard to this material, including, but not limited to, the implied warranties to merchantability and fitness for a particular purpose. Intel Corporation assumes no responsibility for any errors that may appear in this document. Intel Corporation makes no commitment to update nor to keep current the information contained in this document.

Intel Corporation assumes no responsibility for the use of any circuitry other than circuitry embodied in an Intel product. No other circuit patent licenses are implied.

Intel software products are copyrighted by and shall remain the property of Intel Corporation. Use, duplication or disclosure is subject to restrictions stated in Intel's software license, or as defined in ASPR 7-104.9(a)(9).

No part of this document may be copied or reproduced in any form or by any means without the prior written consent of Intel Corporation.

The following are trademarks of Intel Corporation and its affiliates and may be used only to describe Intel products:

Above™
BITBUS™
COMMputer™
CREDIT™
Data Pipeline™
FASTPATH™
Genius™
i®
Δ_{1}™
ICE™
iCEL™
iCS™
iDPB™
iDIS™
I²ICE™
iLBX™
i_{m}®
iMDDX™
iMMX™
Insite™
Intel®
int$_{e}$l®
int$_{e}$lBOS™
Intelevision™
int$_{e}$ligent Identifier™
int$_{e}$ligent Programming™
Intellec®
Intellink™
iOSP™
iPDS™
iPSC™
iRMX™
iSBC®
iSBX™
iSDM™
iSXM™
KEPROM™
Library Manager™
MAP-NET™
MCS®
Megachassis™
MICROMAINFRAME™
MULTIBUS®
MULTICHANNEL™
MULTIMODULE™
ONCE™
OpenNET™
OTP™
PC BUBBLE™
Plug-A-Bubble™
PROMPT™
Promware™
QueX™
QUEST™
Quick-Pulse Programming™
Ripplemode™
RMX/80™
RUPI™
Seamless™
SLD™
UPI™
VLSiCEL™
4-SITE™

REV.	REVISION HISTORY	DATE
-001	Original Issue.	9/86
-002	Editorial changes.	11/86

CONTENTS

CHAPTER 1 INTRODUCTION

Page

Introduction 1-1
System Administration Duties 1-1
Network Administration 1-1
Reference Manuals 1-2
  iDIS™ Manuals 1-2
  Host Communication Manuals 1-2
  XENIX Operating System Manuals 1-3

CHAPTER 2 iDIS™ ADMINISTRATION MENU REFERENCE

Introduction 2-1
Menu Description 2-1
  Menuname 2-2
  Menu Title 2-2
Environment Message Line 2-2
  Selections 2-3
  qdef—Define user actions 2-3
  1 Through 8 2-3
  Pending Transactions 2-3
  Date and Time 2-3
  Physical Login Location 2-3
  Universal Menu Command Line 2-4
  Prompt Line 2-4
  Mail Status 2-5
Form Description 2-5
  Moving Around in a Form 2-5
  Editing the Fields 2-6
Dynamic Lists 2-7
Menu Definitions 2-9
  Asettop—Maintenance and Setup Functions 2-10
  Asystop—System/Resource/User Maintenance and Setup 2-13
  Afinst—Software Installation and Deletion 2-15
  Anettop—Sub-Network Node Maintenance 2-17
  Alnatop—Logical Network Maintenance and Setup 2-20
  Auser—User or User Template Setup 2-23
  Agrp—Group and Group Workarea Maintenance 2-26
  Apub—Public Workarea Maintenance 2-28
  Arsrc—Resource Maintenance 2-30
  Atrans—Transaction Operations 2-33
  Atempl—User Template Maintenance 2-35
  Atemplm—Modify Template 2-37

Page
Atemplmm—Modify Menu System Characteristics 2-40
Atemplmp—Modify Shell Profiles, Mailrc, Current Resource 2-42
Atemplmmm—Modify Menu 'User' Characteristics 2-44
Arsasg—Sort Resource Assignments 2-46
Arsrsc—Sort the Resources 2-48
Form Definitions 2-50
Agrpi—Initialize a Group 2-51
Arspec—Specify the Resources 2-53
Araspec—Assigning a Resource 2-59
Initialize a User Form 2-61

CHAPTER 3 STARTUP AND SHUTDOWN

Introduction 3-1
Booting Up a System 3-1
Autoboot 3-2
Other Ways to Boot Up 3-3
Power Up Tests 3-4
Board Initialization 3-4
Making Sure File Systems are Mounted 3-5
Booting After a Crash or Improper Shutdown 3-6
Shutdown 3-8
Maintenance Mode Shutdown 3-9
Disconnecting and Reconnecting the XENIX Networking Software 3-9
Disconnecting the Networking Software 3-9
Re-connecting the Networking Software 3-10

CHAPTER 4 USERS, GROUPS & PUBLIC WORKAREAS

Introduction 4-1
System Login IDs 4-2
Initializing Users 4-3
Different File Systems 4-4
System Security 4-4
About Groups 4-4
About Public Workareas 4-5
Network Considerations 4-5
Setting Up a New User 4-6
Deleting a User 4-9
User Template Maintenance Procedures 4-10
Creating a New User Template 4-10
Modifying User Templates 4-11
Modifying the Template Comment File 4-12
Changing the iDIS™ File and Menu Development Editors 4-12
Modifying Template Menu System Characteristics 4-13
Initializing a Template Menu System Access 4-13
Modifying Menu System Characteristics for a Given Template 4-13
Modifying Menu System Deauthorization 4-14
Modifying Menu System Login 4-15

Page
Modifying the Menu System Profile File 4–15
Modifying the Menu System Home File Path 4–16
Modifying the Template Shell Profiles 4–16
Modifying the Template C Shell Profile 4–16
Modifying the Login Shell Profile 4–17
Modifying the Template mailrc File 4–18
Modifying the Standard XENIX Shell 4–19
Modifying the Template Current Resource File 4–20
Modifying the Template Resource Access Rights 4–21
Modifying the Template Login Shell and Menu System Subshell 4–22
Completing Template Modification 4–22
Setting Up a New Group 4–22
Deleting a Group 4–25
Adding New Members to a Group 4–26
Deleting Members from a Group 4–27
Setting Up a Public Workarea 4–27
Deleting a Public Workarea 4–28

CHAPTER 5 PRINTER ADMINISTRATION

Introduction 5–1
iDIS™ Printer Administration 5–1
Is the Printer Operating? 5–1
The Printer Capability File 5–2
The Printer Queue 5–3
Fixing the Print Spooler 5–3
XENIX Printer Administration 5–4
Network Consideration 5–6
Special Printer Procedures with Q-OFFICE 5–6

CHAPTER 6 DISTRIBUTED RESOURCE MANAGEMENT

Introduction 6–1
Printers as Resources 6–1
Backup Devices as Resources 6–2
File Systems as Resources 6–2
Application Software as a Resource 6–2
Development Software as a Resource 6–3
Communication Software Resources 6–3
iDIS™ Execution and User Nodes 6–4
Network Administration 6–4
Specifying and Assigning a Printer 6–5
Setting Up Flexible Disk Drives 6–7
Setting Up Directories as Backup Devices 6–8
Setting Up a Streamer Tape Drive 6–10
Setting Up a 9-Track Tape Device 6–12
Setting Up a New File System 6–14
Setting Up Application Software as a Resource 6–16
Setting Up a New Menu System for a Developer 6–18

Page
Setting Up tty Passthrough Connections 6–20
Setting Up the Host Definition File 6–20
Controlling Access to the Host Definition File 6–23
Setting Up a Modem or Virtual Terminal in tty Passthrough 6–25
Setting Up a Host Communication Resource 6–26
Setting Up a 3274 SNA Host Communication Gateway 6–27
Setting Up the Key Operator Resource 6–28
Changing a Key Operator's Span of Authority 6–28
Adding Key Operator Authority for a User 6–29
Removing Key Operator Authority from a User 6–32
Unassigning Users from a Resource 6–33
Deleting a Resource 6–34
Assigning User's to iDIS™ Execution Nodes 6–35

FIGURES

4-1 Deauthorization Specification 4–14
4-2 Login Characteristics 4–15
4-3 Standard iDIS™ Menu Profile File 4–16
4-4 Default Menu System Home Path 4–17
4-5 Standard C Shell Profile File 4–18
4-6 Standard C Shell Login File 4–18
4-7 Standard Template mailrc File 4–19
4-8 Template Standard XENIX Shell File 4–20
4-9 Template "Current Resource" File 4–20
4-10 Form for Modifying Template Resource Access Rights 4–21
4-11 Form for Modifying Template Login Shell and Menu System Subshell 4–23

1 INTRODUCTION

intel

1.1 Introduction

The iDIS™ product is an integrated set of software applications connected with an easy-to-use hierarchical menu system that masks the XENIX command language from non-technical users. The iDIS iBASE product provides a menu-driven environment for system administration, network administration, as well as user applications and productivity tools such as electronic mail, personal calendar, data conversion tools, and on-line help facilities.

This manual provides detailed reference information on the system and network administration features of the iDIS product. Chapter 2 provides a reference to all administration menu functions and was written to make menu information as accessible as possible. The ensuing Chapters 3 through 6 are task-oriented sections that provide step-by-step instructions for most administrative tasks that you may have to perform.

1.2 System Administration Duties

The extensive set of menus provided by iDIS successfully buffers administrators from the operating system in almost all duties required for multi-user operation. Common administration functions such as user authorization, archiving, and printer administration are provided along with special resource control features that give the administrator control of the use and accessibility of many of the system physical devices and software. Additionally the user environment can be easily tailored to fit a wide spectrum of user needs and expertise levels.

1.3 Network Administration

Included in the iDIS iBASE software are menus specifically designed to set up systems and software throughout a local area network, as well as extended system administration functions that can be performed across the network. The iDIS Network features a variety of distributed processing and file sharing capability that takes advantage of the transparent file access and increased processing availability to get maximum performance from network components.

Also, iDIS provides network administration functions for a hierarchy of administrators designed to coincide with the hierarchy of both large and small network environments.

To take full advantage of the network environment, it is highly recommended that you plan your network according to the *OpenNET™ Planning and Design Guide* provided to you when you first purchased your Intel systems.

1.4 Reference Manuals

iDIS™ Manuals

The following manuals are a complete list of the iDIS documentation for release 2.0:

Getting Started with iDIS™, Order Number 136972
Getting Started with iPLAN, Order Number 137763
Getting Started with iDB, Order Number 137765
Getting Started with iWORD, Order Number 137767
Getting Started with iMENU, Order Number 137761
Getting Started with iPC, Order Number 138044
iBASE User's Reference, Order Number 137724
iPLAN User's Reference, Order Number 137764
iDB User's Reference, Order Number 137766
iDB Developer's Reference, Order Number 137769
iWORD User's Reference, Order Number 137768
iMENU Developer's Reference, Order Number 137762
iDESK User's Reference, Order Number 137996
iPC-iDIS™ Installation and User's Reference, Order Number 138045
Key Operator Tutorial, Order Number 138267
Key Operator User's Reference, Order Number 138268
iDIS™ Installation and Configuration Guide, Order Number 138270
iDIS™ System Administration Reference, Order Number 138269

Host Communication Manuals

SNA 3270 Emulation Installation Manual, Order Number 138653
SNA 3270 Emulation User's Manual, Order Number 138652
3270 BSC 188 Binary Synchronous Communication Emulation Software Administration Manual, Order Number 138380
3270 BSC 188 Binary Synchronous Communication Emulation Software User's Manual, Order Number 138381

VPM 188 Virtual Protocol Machine Administration Manual, Order Number 138362

RJE 188 Remote Job Entry Workstation Emulation Software Adminstration Manual, Order Number 138369

RJE 188 Remote Job Entry Workstation Emulation Software User's Reference, Order Number 138370

XENIX Operating System Manuals

XENIX Operating System Documention,, Order Number 173258

Overview of the XENIX 286 Operating System, Order Number 174385

XENIX Installation and Configuration Guide, Order Number 174386

XENIX 286 Reference Manual, Order Number 174390

XENIX 286 User's Guide, Order Number 174387

XENIX 286 Programmer's Guide, Order Number 174391

XENIX 286 System Administrator's Guide, Order Number 174389

XENIX 286 Text Formatting Guide, Order Number 174541

XENIX 286 Visual Shell User's Guide, Order Number 174388

XENIX 286 Communications Guide, Order Number 174461

XENIX 286 Device Driver Guide, Order Number 174393

XENIX 286C Library Guide, Order Number 174542

2 iDIS™ ADMINISTRATION MENU REFERENCE

2.1 Introduction

This chapter provides menu reference for all the iDIS administration menus. The intent of this chapter is to allow the administrator to quickly find and use any of the menus and forms required for administrative activities. Many of the functions are also covered in the following procedural chapters. Related procedures are referenced within the individual menu descriptions.

In the iDIS iBASE package a MENU SELECTION MAP is provided showing the menu hierarchy for all iDIS menus. This manual covers all menus shown under the Asettop selection.

When you make a selection from a menu, there are four types of screens that may appear:

- Menus—are characterized by the menu title, several selections available from the middle of the screen, and the `Which action?` prompt.
- Forms—are screens with blank fields where you enter data for a specific purpose.
- Dynamic lists—contain a list of items to choose from (such as selecting a printer), the list can change depending on function, configuration, etc.
- Application software—Some selections invoke either iDIS application software (such as iDB, iPLAN, etc) or other non-Intel products.

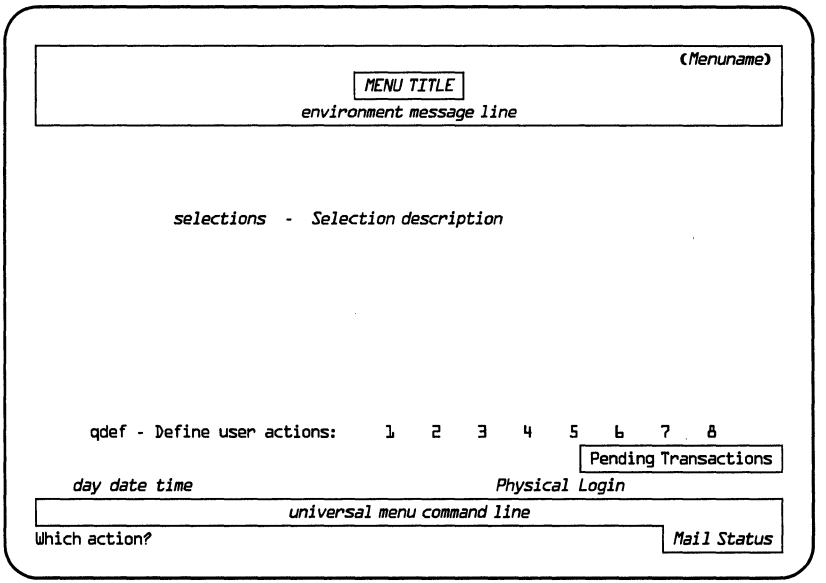
In this chapter all the administrative menus are covered as separate items. Some of the more complex forms are shown separately, but in general the forms are described in the selection on its parent menu. All dynamic lists are described as part of the parent menu selection. In the administrative menus, there are no selections that invoke application software.

2.2 Menu Description

The iDIS menu system provides an easy interface to the system and to application software. Within each menu there is a general set of

commands that you may perform in addition to the selections available.

The example menu that follows illustrates some of the common features of the iDIS menus.



PPS1-762

Menuname

Is a mnemonic representation of the menu. All of the iDIS administration menunames are listed in the menu map (provided with the iBASE package) and in the menu description.

Menu Title

Shown at the top of each screen, the title indicates the menu's function.

Environment Message Line

This line indicates the user name (login ID) that you used to login, the workarea that you are active in, and the node (network only) where the workarea resides.

Selections

Enter the first letter of the selection and <cr> to select a menu, form, or dynamic list.

qdef—Define user actions

Select the "qdef" selection to set up the user-defined actions (1 through 8). The user-defined actions let you access a chosen menu and selection within that menu from any other menu (a shortcut to commonly used menus). The user-defined functions can also be easily redefined with the same "qdef" selection.

The system allows you to define most authorized menus and selections that take you to a form, application software, or dynamic list. You cannot choose a menu and selection that takes you to another menu, or the administration menus.

1 Through 8

Once the user-defined function has been defined with the "qdef" selection, it provides a shortcut to menus and menu selections from anywhere in the menu system. Simply enter the number, then <cr> to go to the defined menu and menu selection.

Pending Transactions

Only appears when an administrator performs a function that requires a batch update of system or network files.

Date and Time

The date and time are updated each time the screen is refreshed.

Physical Login Location

This item only appears when your system is part of a network. This displays the name of the node where your terminal is physically connected (tty passthrough is an exception, showing the local execution node).

Universal Menu Command Line

This is a help line that displays common global commands that you may enter in a particular menu. Not all of the commands are available to all users from all menus. The commands listed include:

`.b` Go back to the previous menu.

`!` Enter the XENIX operating system. You will be the same user with iDIS environmental variables while in XENIX. To return to iDIS, enter < **CTRL-d** >.

`:` Go to the site menu. The site menu is a set of commonly used selections accessible from anywhere in the menu system.

`.s` Go back to the top menu that you are authorized to access.

`.?` Go to the general help screen. This help provides information on how to use the iDIS menu system.

`.l` Logs out of iDIS. If you are in another menu system under iDIS (such as menu development), enter **.l** to exit from that system.

There are other universal commands that are not shown in the command line (they are listed in the general help), but are generally available.

`:m` Go to the mail menu.

`?` This command displays help for the particular menu, selection, form, or dynamic list that is currently selected.

`.t` Allows you to change the terminal type that is selected for you (only for your current session).

`.r` If a menu display is overwritten, scrolled, or erased (your terminal gets turned off), enter **.r** to repaint the screen.

Prompt Line

The prompt line indicates `Which action?` and the cursor. You make selections by entering the first letter of a selection (on some menus there may be two selections starting with the same letter and you must enter the first two letters), using the arrow keys to scroll through the selections, entering a universal command, or a series of selections (separated by spaces) that move through the menu system (this is known as select ahead). To use select ahead in most circumstances, you need only enter the first letter of each selection. For example, **s s r r** takes you to the specify resource form from the Top menu. The menu map may be helpful in entering the selections.

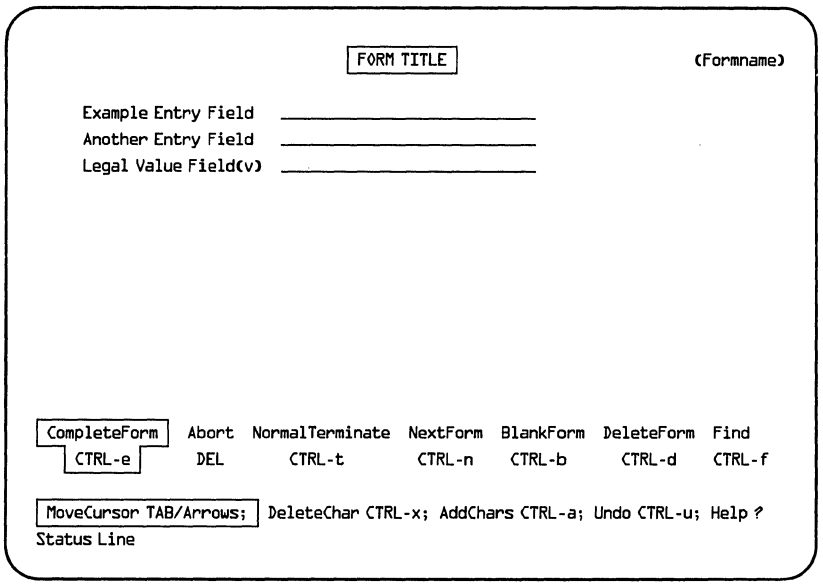
Mail Status

The mail status displays "you have mail" in reverse video only when there are messages in your system mailbox.

2.3 Form Description

In the iDIS menu system, a form is a screen designed for entering information into the system. Forms have their own set of syntax and rules of operation.

An example form is shown below, with some of the general commands and guidelines described.



PPS1-757

Moving Around in a Form

To move from one field to another in a form, use either the arrow keys (up or down) or the forward or back tab key. The <**HOME**> key moves the cursor to the top left field. To move the cursor within a field, use the right or left arrow keys.

Editing the Fields

When you have moved into a field, you may insert text by simply typing the information in. There may be a special circumstance in some fields where certain characters are not accepted (special characters like @!*&$, for example). In addition, there are Control keys you may enter to edit the fields:

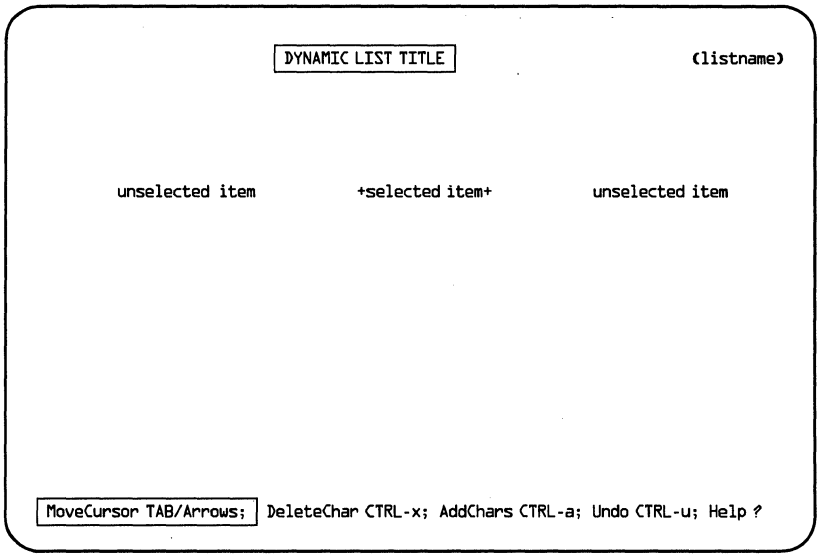
< **CTRL-a** >	Insert text into a field. It shifts any characters to the right of the cursor to the right as it inserts text.
< **CTRL-x** >	Deletes the character on the cursor.
< **CTRL-u** >	Restores the original contents of a field.
< **TAB** > < **BACKTAB** > < **HOME** > < **cr** >	If you enter information over existing characters in a field, and press one of these keys, it will move to either the next (< **TAB** > and < **cr** >), previous (< **BACKTAB** >), or top left (< **HOME** >) field and delete any characters to the right of the cursor.
< **CTRL-e** >	Closes the form and completes the operation. If you have not entered all required data, the terminal "beeps" and indicates you must complete required fields.
< **DEL** >	If you are in a non-empty field, < **DEL** >: 1. deletes the contents of a field if the cursor is on the first or beyond the last character in the field. 2. deletes the character on the cursor and all characters to the right if the cursor is on any character except the first in the field. If you are in an empty field, < **DEL** > aborts the current session and returns you to the parent menu.

In some forms, data that you previously entered is available for you to view, modify, and add to. In these types of forms, an extra set of commands is used to access the data.

< **CTRL-b** >	Creates a blank form allowing you to create a new entry into the database.
< **CTRL-d** >	Removes the displayed entries from the database.
< **CTRL-f** >	Find an entry. If you are looking for a particular entry in the database, you may enter one or several characters in the field, press < **CTRL-f** >, and the system will find the entry that matches what you entered. If there is no match the system will indicate that the entry cannot be found.
< **CTRL-n** >	Scrolls through the entries in the database, one form at a time.
< **CTRL-t** >	Escapes from the form back to the parent menu. This selection is the normal form termination. If a < **DEL** > has been performed, < **CTRL-t** > will cause the results of the < **DEL** > to be saved, i.e., the field(s) contents will be deleted.
< **CTRL-e** >	In these types of forms, < **CTRL-e** > enters newly entered data into the system.

2.4 Dynamic Lists

Dynamic lists are screens that appear where the selectable items are dependent on your specific configuration or operation. Dynamic lists also have their own format and syntax rules. There are two types of dynamic lists: those that allow only a single selection, and those that allow multiple selections. A sample single-selection dynamic list is shown below, with a description of the syntax following.



PPS1-758

For a single-selection dynamic list, you may enter:

Arrow Keys **< BACKTAB >** **< TAB >**	To move the cursor between selections.
< DEL >	To exit the list without selecting and return to the parent menu.
< cr >	To select the highlighted item and perform intended action.

For a multiple-selection dynamic list, you may enter:

Arrow Keys **< BACKTAB >** **< TAB >**	To move the cursor between selections.
< CTRL-f >	To select an item under the cursor. A selection is indicated by the + character in front of and at the end of the selection. The + marks do not show up on the selection while the cursor is on the selection. When **< CTRL-f >** is pressed and the cursor is not on an item, all items in the list will be selected.
< CTRL-x >	To "unselect" the highlighted item. When the cursor is moved, the + marks indicating a selection will be gone.

< **cr** >	To select the item under the cursor, close the dynamic list, and perform the intended function using the selected items.
< **DEL** >	Aborts the process and returns you to the menu that displayed the dynamic list selection.

2.5 Menu Definitions

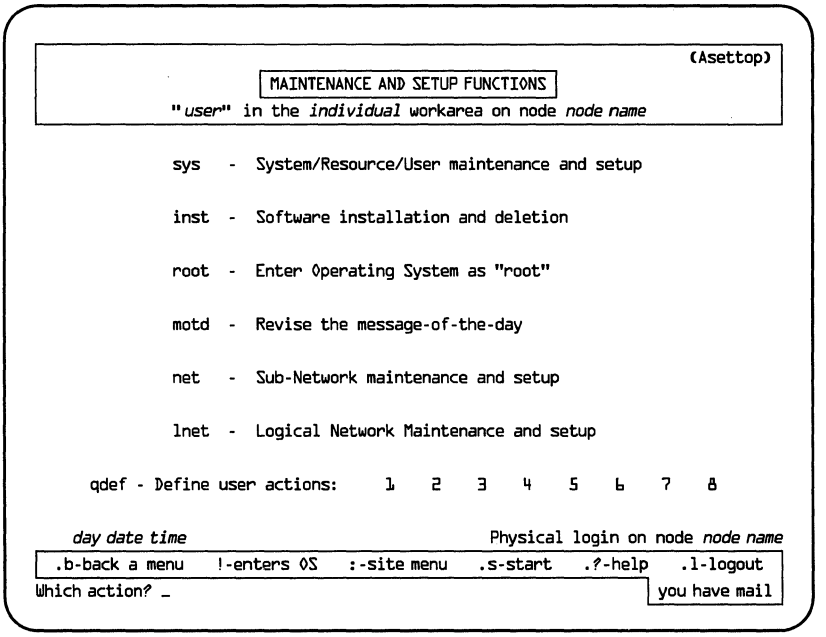
The following list of menus covers all the administration menus in the iBASE product:

Assettop	Agrp	Atemplmm
Asystop	Apub	Atemplmp
Afinst	Arsrc	Atemplmmm
Anettop	Atrans	Arsasg
Alnatop	Atempl	Arsrsc
Auser	Atemplm	

All of the menus are found in the idis login, except Alnatop which can be found in the ilna login.

The following menu descriptions provide reference information on those menus listed above.

Asettop—Maintenance and Setup Functions



PPS1-724

Parent Menu: Top

Asettop is the pinnacle menu for the administrative and configuration functions that are available within iDIS. You must be either the iDIS administrator (idis) or the network manager (ilna) to use this menu.

NOTE

The idis login will only see the sys, inst, root, motd and net selections on this menu, and ilna will only see the root and lnet selections.

Selections

sys—System/Resource/User maintenance and setup (Asystop)

Includes the user, group, public workarea, and distributed resource management functions and provides access to the selections that perform network synchronization.

inst—Software installation and deletion (Afinst)

This selection allows you to install an iDIS software feature on your system. If you are on the network, you may install an iDIS feature on any iDIS execution node in the network. There are additional selections that allow you to display a list of iDIS software that is on your system (or any node in the network), and to delete an iDIS software feature from your system or network.

NOTE

This selection does not perform installations for non-iDIS software packages.

root—Enter Operating System as "root"

The root selection allows you to enter XENIX as root if you know the password, which is the first prompt. If you know the password a new shell (sh) is executed, and you will be in the home directory. You should note, however, that you will **not** retain all the environmental variables of iDIS.

To return to iDIS press <**CTRL-d**> at the XENIX prompt.

You should never attempt a shutdown after entering XENIX from this selection. If you attempt to shutdown from here, essential system files may be lost, the system may hang, and cause enough damage to require reinstallation of the software.

motd—Revise the message-of-the-day

The message-of-the-day is the first item a user sees after logging into a system. When you make this selection you will be placed in the text editor to modify the message.

net—Sub-Network maintenance and setup (Anettop)

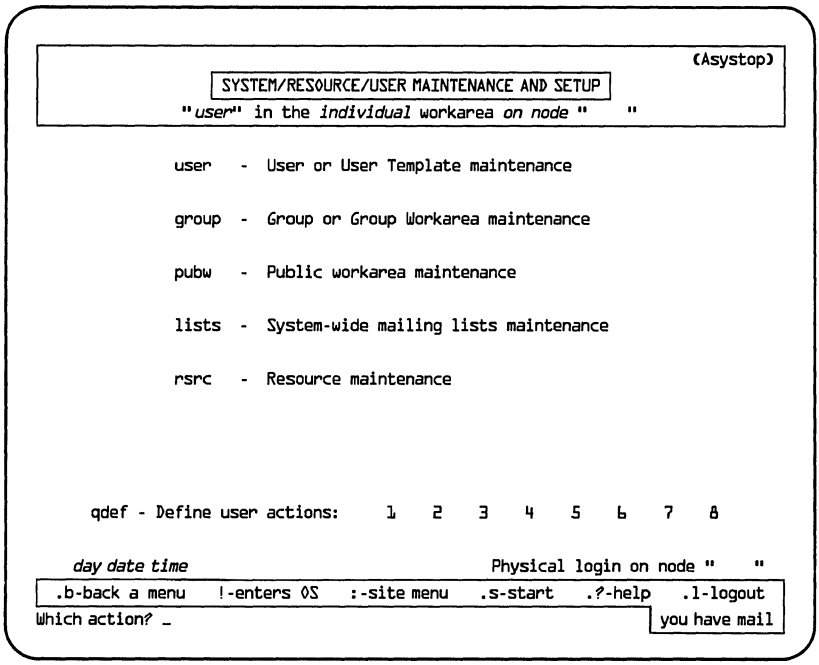
This selection only appears in a network environment for subnetwork administrators (idis login). The network setup selection allows you to add, modify or delete nodes within your subnetwork.

lnet—Logical network maintenance (Alnatop)

This selection is only available to the network manager (ilna login) on OpenNET networks. The network manager can initialize subnetwork master nodes, and public servers, modify the network mail

password, and update the network personnel directory from this menu.

Asystop—System/Resource/User Maintenance and Setup



PPS1-725

Parent Menu: Asettop
Select Ahead from Top: **s s**

The Asystop menu provides access to the functions that allow you to administer users, groups, workareas, and resources on a system or network.

Selections

user—User or User Template maintenance (Auser)

In order to have a multi-user environment, the system must recognize more than one user. This selection allows the administrator to initialize users on a system. The template feature allows you to customize the user's environment prior to initialization.

group—Group or Group Workarea maintenance (Agrp)

A group is a set of users that can share access to files. A group workarea is a directory accessible to any member of a designated group. This selection is used to create, delete or modify groups and group workareas.

pubw—Public workarea maintenance (Apub)

A public workarea is a directory where any user can keep, create or modify files from various iDIS applications. This selection allows the administrator to create and delete public workareas on a system or on a node in a network.

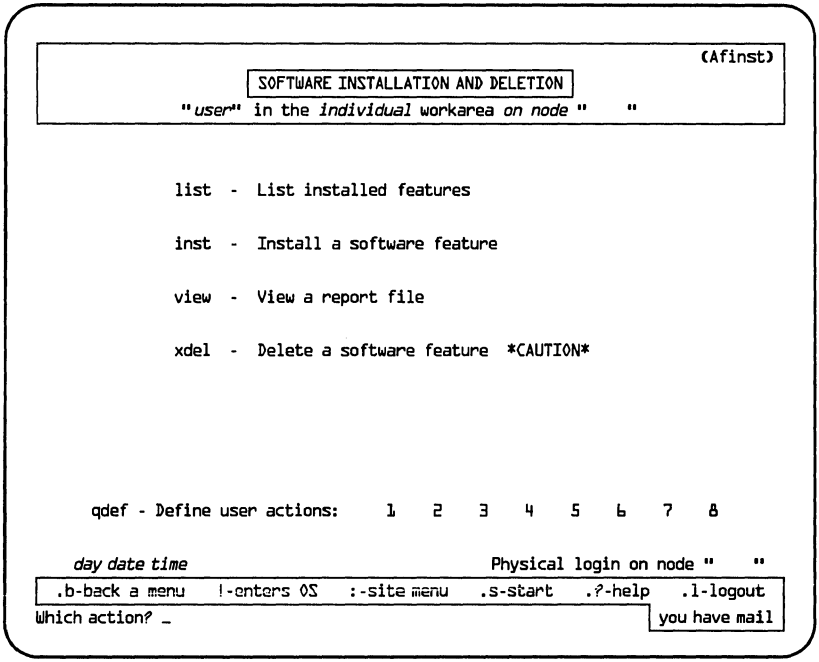
lists—System-wide mailing lists maintenance

The system-wide mailing list contains the aliases that all users on a standalone system or subnetwork can use. The list is in a file called /usr/lib/mail/mailrc and is automatically updated around the subnetwork.

rsrc—Resource maintenance (Arsrc)

This selection allows the administrator to manage many of the system resources such as printers, back-up devices, application software, networking functions, etc., and control user's access to them.

Afinst—Software Installation and Deletion



PPS1-726

Parent Menu: Asettop
Select Ahead from Top: s i

This menu provides selections for iDIS feature installation and deletion and viewing installation status information.

If you are on an OpenNET network, you may perform the feature installation on other nodes within the subnetwork. All of the following selections allow you to choose the target node(s) to execute the function on.

Selections

list—List installed features

This selection will display all installed iDIS software packages and their release level.

inst—Install a software feature

Make this selection to install an iDIS feature on a standalone system or any iDIS execution node within a subnetwork. You will be prompted to insert the diskettes onto your system.

After you have finished loading the software, if you are on the network, a dynamic list of nodes appears. Select the node(s) that you want the feature installed on. Press <**cr**> to begin installing the software on the selected nodes.

NOTE

Do not attempt to install non-iDIS software packages using this selection.

view—View a report file

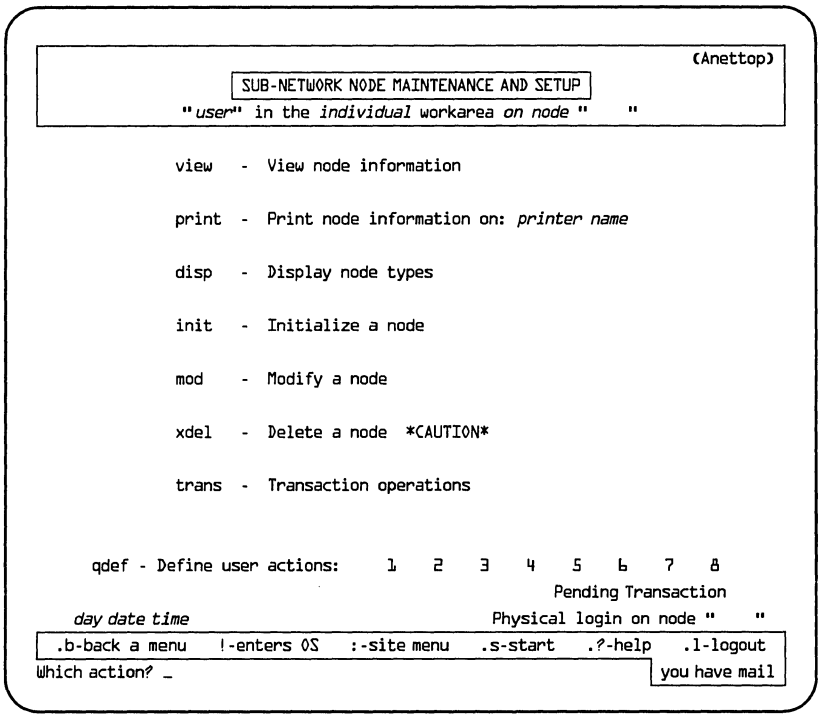
If you are in the network, a dynamic list of nodes will appear. Select the node(s) for which you wish to see the report file. Press <**cr**> to begin viewing.

This selection will then display the system log file that is kept for feature installations and deletions. You may scroll through the viewing editor (a XENIX program called "more") by either pressing the <**SPACE BAR**> to move one screen at a time or press <**cr**> to move one line at a time. To exit the report file, press **q**<**cr**>.

The report will show many status messages describing an installation of the features. Error messages are identified by a character other than " > " in column one.

xdel—Delete a software feature

This selection allows you to remove an iDIS feature from your system. This selection is useful if you are updating software or if you detect a problem with a software package that would be best resolved by reinstallation.



PPS1-727

Parent Menu: Asettop
Select Ahead from Top: **s n**

This menu is used for performing network maintenance on subnetwork nodes. These functions are mainly for the subnetwork administrator. Additional information on network concepts and procedures for using this menu can be found in Chapter 6.

Selections

view—View node information

This selection allows you to display node information for selected nodes. A dynamic list of all the nodes within a subnetwork, the logical network master, and all public node names is displayed. Select the node(s) that you want to display. Then press < **cr** > to display

the node name, Ethernet address, and node description for each node selected.

print—Print node information

This selection allows you to print information for selected nodes. A dynamic list of all subnetwork nodes, the logical network master, all subnetwork masters, and public node names will appear. Select the nodes that you want to print. When all nodes have been selected, press <**cr**>. The node name, Ethernet address, and node description will be printed for each selected node on the assigned printer.

disp—Display node types

This selection displays network configurations.

init—Initialize a node (Aaddnode)

This selection installs the required iDIS iBASE on iDIS execution and iDIS user nodes and updates the rest of the subnetwork to acknowledge the new node. On execution and user nodes, XENIX 3.4 (Update 1) and XENIX Networking Software R2.0 must have been installed. Also, this selection updates the rest of the network when adding a PC node (the PC network software must be installed at the PC).

When you make this selection, the Aaddnode form is displayed. Enter the new node name, the type of node you are creating (an iDIS user node, iDIS execution node, or personal computer), the new node's Ethernet address, and the node password (optional on a PC node).

This selection requires a transaction to be scheduled to complete the operation (the **trans** selection). For more information refer to the *iDIS™ Installation and Configuration Guide,* Chapter 3.

mod—Modify a node (Amodnode)

This selection converts an iDIS user node to an iDIS execution node. You must make sure that the networking software is enabled on the node you are going to modify before making this selection. When you make this selection, you will be prompted to enter the node name. You then must schedule a transaction (the **trans** selection) to complete this operation.

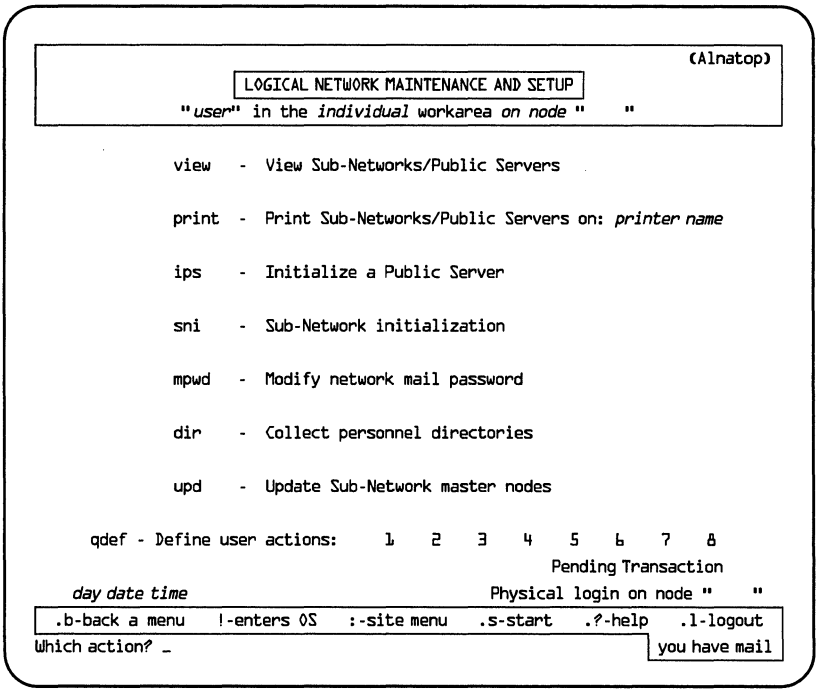
xdel—Delete a node (Adelnode)

Make this selection to remove iDIS execution or user nodes from the subnetwork. The node should have the XENIX Networking

Software enabled. Users should not access this node during the deletion process. A form will appear, and you must enter the name of the node to be deleted. When complete, you must schedule this transaction to complete operation (the **trans** selection).

trans—Transactions operations (Atrans)

When an init, mod, or xdel function is performed, the transaction must be scheduled to complete the operation. When a transaction is scheduled and it completes, the network configuration files are updated on all the nodes in the subnetwork. One application covers all outstanding transactions. A "Pending Transactions" message will appear in the lower right corner of the menus anytime there are outstanding transactions.



PPS1-728

Parent Menu: Asettop
Select Ahead from Top: **s l**

The Alnatop menu is only available from the ilna login. This menu provides the network initialization and configuration functions for the logical network administrator.

Selections

view—View Sub-Networks/Public Servers

Select view to display information on the subnetwork master and public server nodes. A dynamic list will appear displaying all sub-network master and public server node names. Select the nodes that you want to display. Press <**cr**> and the subnetwork or public server node name, Ethernet address, node description and range of assigned user and group ID numbers are displayed for each node

selected. Information is displayed for each node one at a time; press < **cr** > for next display.

print—Print Sub-Networks/Public Servers

Select print to print the node name, Ethernet address, node description (subnetwork master, public server, or logical network master), and the range of assigned user and group ID numbers for the selected nodes. A dynamic list will appear displaying all the subnetwork master and public server node names. Select the nodes you want to print information on and press < **cr** > .

ips—Initialize a Public Server (Aaddps)

This selection initializes a public server node in the network. The public server node must have the XENIX R3.4 (Update 1) and XENIX Networking Software R2.0 installed and enabled to communicate with the logical network master node. Refer to the *iDIS™ Installation and Configuration Guide,* Chapter 3, for installation procedures. When complete, the update operation (upd) must be performed to propagate the new public server network information to other nodes in the network.

sni—Sub-Network initialization transactions (Aaddsn)

The subnetwork master node must be initialized before the subnetwork nodes can be installed. This selection initializes the subnetwork master. Any additional subnetwork initialization is performed at the subnetwork master (from the Anettop menu). To perform this initialization, the new subnetwork master must have XENIX R3.4 (Update 1) and XENIX Networking Software R2.0 installed and enabled. Refer to the *iDIS™ Installation and Configuration Guide,* Chapter 3, for installation procedures. When the initialization is complete the update operation must be performed to propagate the subnetwork master network information to other nodes in the network.

mpwd—Modify network mail password

The network mail password is the security mechanism that allows mail to be sent between subnetworks without allowing users access to files on other subnetworks. Make this selection to modify the password. You will be asked to enter the new password (5 to 8 characters), then re-enter the password to verify. You then must perform a subnetwork update (upd) in order for the new password to be implemented.

dir—Collect personnel directories

When this selection is made, the personnel directories found at each subnetwork master node are examined for new entries and combined to form an updated directory that is propagated to all subnetwork masters. This can be a lengthy process in large networks and should generally be performed when system/network utilization is low.

upd—Update Sub-Network master nodes

You must update the network after performing the public server initialization (ips) or subnetwork master initialization (sni) functions or changing the mail password (mpwd) to complete the operation.

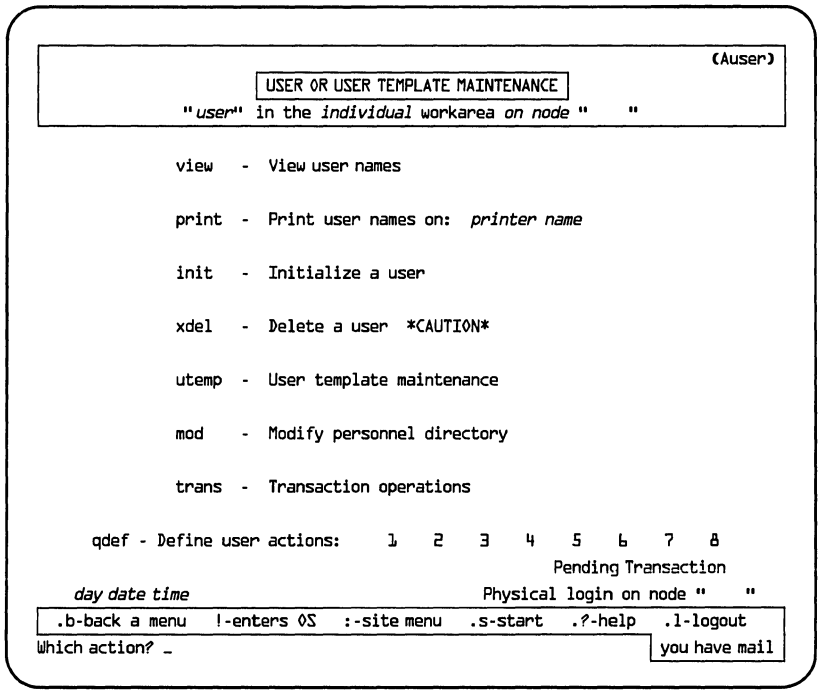
When the selection is made, you will be asked if you want to schedule the update or perform it immediately. If a master node is not operational or network traffic is heavy, you may want to schedule it later.

After performing the update, the mail should be viewed for update status messages. If a node did not receive the update, the update must be reapplied when the node is accessible.

NOTE

The update selection must also be performed whenever the ilna login is changed.

Auser—User or User Template Setup



PPS1-729

Parent Menu: Asystop
Select Ahead from Top: **s s u**

This is the top menu for all the user administration functions within iDIS. For detailed user administration information and procedures refer to Chapter 4.

Selections

view—View user names

Select view to display all current user IDs on a standalone system or subnetwork. The list will include system, iDIS, and XENIX user IDs.

print—Print user names

Select print to list all current user IDs on a standalone system or subnetwork on the current printer. The list will include system, iDIS, and XENIX user IDs.

init—Initialize a user (Auseri)

Select init to define a new user. The Initialize a New User form appears (additional information is available in the Auseri form definition—later in this chapter. You must enter as a minimum the login ID and first and last names of the user to complete the form. You may also specify the user type (iDISuser, KeyOperator, etc.) the user's HOME Node (for network only), and HOME File System (for systems with multiple Winchester drives or SMD drives). You must schedule this transaction before the user can log into the system/network. Additional actions you may have to perform are assign resources to the user and make him/her a member of a group.

xdel—Delete a User (Auserx)

Deletes a user from the system or subnetwork. This selection removes the user from the user definition file and lets you confirm that you want to remove the user and his files. You must schedule a transaction to complete this operation. System users such as root, idis, ilna, etc., may not be deleted.

utemp—User template maintenance (Atempl)

Select user template maintenance to customize existing templates or define new ones. When you initialize a user, you must specify the user type which defines that user's access to iDIS and other system functions. There are four default types of users: iDISuser, iDISdeveloper, XENIXuser, and KeyOperator.

mod—Modify personnel directory

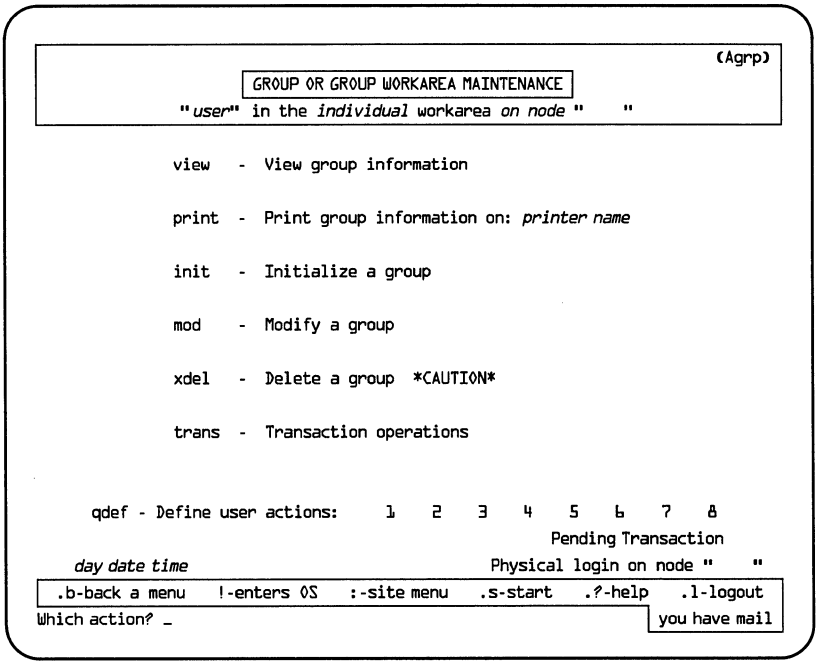
This selection allows you to edit the personnel directory file that contains the personnel information entered during user initialization. The directory contains the first, middle, and last names, office phone number and location, and other comments for each user.

trans—Transaction operations (Atrans)

Whenever init and xdel transactions are performed, the tranactions must be scheduled. One application will cover all outstanding trans-

actions. A "Pending Transactions" message will appear in the lower right corner of the menu anytime there are outstanding transactions.

Agrp—Group and Group Workarea Maintenance



PPS1-730

Parent Menu: Asystop
Select Ahead from Top: **s s g**

This menu provides access to functions designed for creating, deleting, and modifying iDIS groups. For additional procedures and information on the group menus and functions, refer to sections 4.6 and 4.13.

Selections

view—View group information

The view selection displays all the groups on your standalone system or subnetwork. Select the group(s) and press <**cr**> to display group members. Other useful information displayed is group ID number and the pathname for the group workarea (if there is one).

print—Print group information

Select print and a list of all system or subnetwork groups is displayed. Select a group (or all groups) to print all group member names on the assigned printer.

init—Initialize a group (Agrpi)

The init selection will display the Group Initialization form. Enter the group name, group manager, and specify whether to build a group workarea. Optional information can be entered to select HOME Node and HOME File System. This selection requires you to schedule the transaction. Refer to the Agrpi form reference for complete information.

mod—Modify a group

The selection allows you to change the group manager for any of the existing groups or add a group workarea for a group that does not have one. First, a dynamic list of the groups appears. Select the group that you want to change. First you will be asked if you want to change the group manager. Then you will be asked if you would like to add a group workarea (if one doesn't already exist).

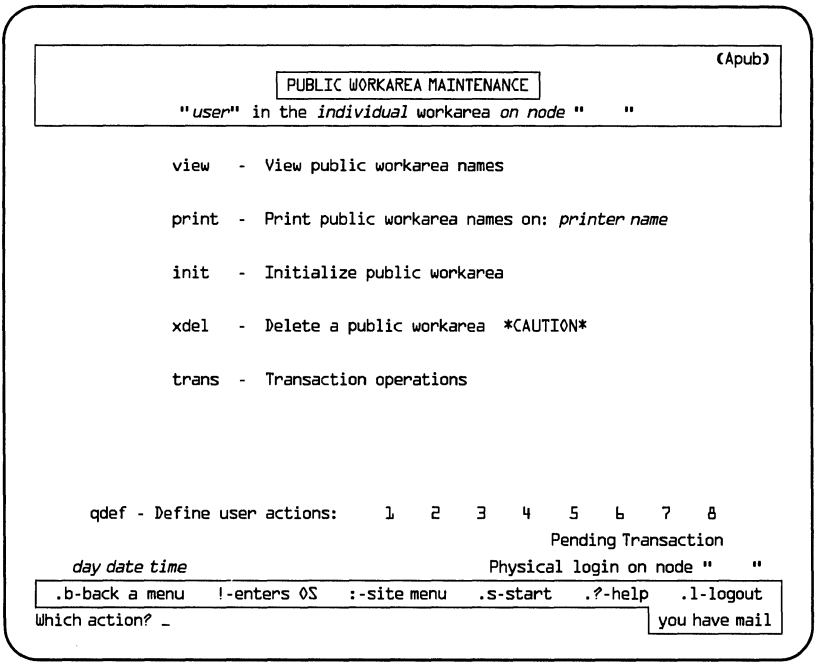
xdel—Delete a group (Agrpxd)

This selection will delete the group, the group workarea, and all the files found in the group workarea (you may want to perform backups on this workarea before deleting it). When you make the selection you must enter the workarea that you want to delete.

trans—Transaction operations (Atrans)

When you have completed any group initialization, modification, or deletion, you must apply the transaction before the operation is complete. A "Pending Transactions" message will appear in the lower right corner of the menu anytime there are outstanding transactions.

Apub—Public Workarea Maintenance



PPS1-760

Parent Menu: Asystop
Select Ahead from Top: **s s p**

Public workareas are designated directories in the file system where all users are allowed unrestricted access to their contents. In the network environment, iDIS allows you to create public workareas on the different file systems and nodes in the subnetwork that all users within the subnetwork can access.

Selections

view—View public workarea names

When selected, view will display the name and pathname of all the public workareas on the system or subnetwork.

print—Print public workarea names

Prints all the system or subnetwork public workarea names and their pathnames on the assigned printer.

init—Initialize a public workarea (Apubi)

When selected, displays the Public Workarea Definition form. You must enter the public workarea name. If you do not enter the optional HOME Node and HOME File System entries (press <**SPACE BAR**> until the correct one appears), the local node and the /usr files system will be used as the default.

When you complete this form, the transaction must be applied or scheduled before the operation is complete.

xdel—Delete a public workarea (Apubxd)

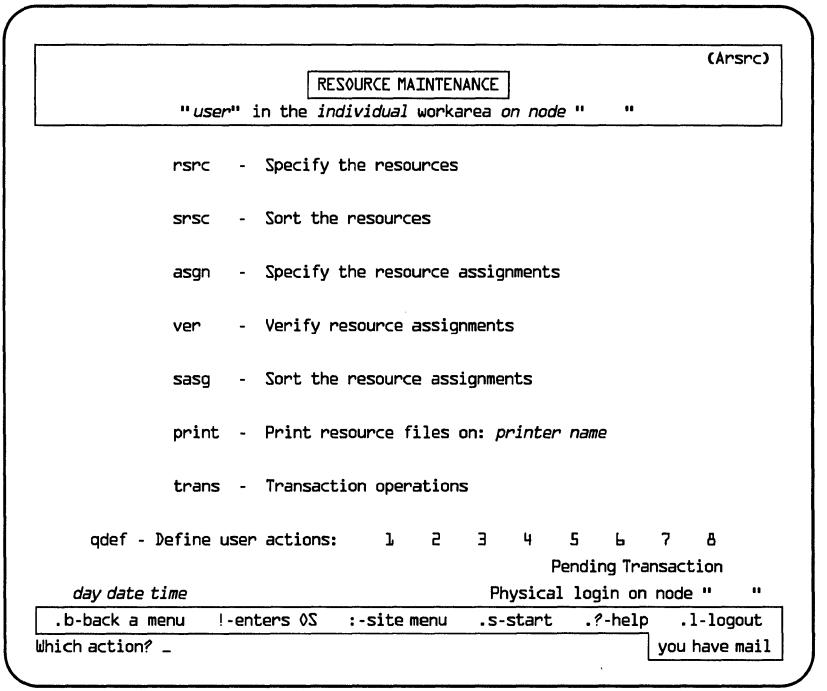
This selection allows you to delete an existing public workarea on your system or subnetwork. All files in the workarea are deleted (backup any files you wish to save BEFORE using this selection).

When you complete this form, the transaction must be applied or scheduled before the operation is complete.

trans—Transaction operations (Atrans)

This selection allows you to schedule a transaction anytime you initialize or delete a public workarea. A "Pending Transactions" message will appear in the lower right corner of the menu anytime there are outstanding transactions.

Arsrc—Resource Maintenance



PPS1-731

Parent Menu: Asystop
Select Ahead from Top: **s s r**

The Distributed Resource Management facilities allow you to administer the access and use of the network resources. Resources may include application software, archive devices (such as tape or flexible disk), virtual terminal and communication capabilities, printers, and the iDIS menu system.

Refer to the Resource Specification and Assignment procedures in Chapter 6 for additional instructions for setting up resources.

Selections

rsrc—Specify the resources (Arspec)

This selection displays a form for defining or modifying a resource specification. In this form you enter a name for the resource, and

enter information that identifies its location and function to the system. Resources can include:

application software
directories
flexible disk drives
file systems (Winchester drives)
iDIS execution node (network only)
iDIS key operator functions
3274-SNA Host Communication Software
3271-BSC Host Communication Software
HASP 188 Host Communication Software
RBTE 188 Host Communication Software
VPM 188 Host Communication Software
Network administrators functions
Subnetwork administrators functions
printers
9 track tape drives
menu development system
streamer tape drives
virtual terminal over the network
virtual terminal using a modem

If you are in the network environment, after you complete the Specify a Resource form, you must apply the transaction (the **trans** selection) to complete the operation. This copies the resource specification file to all nodes of your subnetwork.

srsc—Sort the resources (Arsrsc)

This selection displays the Sort Resource Assignments menu, which allows you to rearrange the order of the contents of the resource specification file by resource name, resource type, or node name.

asgn—Specify the resource assignments (Araspec1)

This selection allows you to authorize users access to resources which have been defined. You may make as many assignments per resource as desired. The assignments may be made by node, by group or by login ID. Refer to Chapter 6.

If your system is in the network environment, you must apply or schedule the transaction to complete the operation.

ver—Verify resource assignments (Arspec)

This selection allows you to display a list of resources of a specific type which are available to a specific login ID. To display the list you must enter the login ID and indicate the resource type you are

interested in. You may select the resource types by pressing the < **SPACE BAR** > until the desired value appears.

sasg—Sort the resource assignments (Arsasn)

This selection allows you to rearrange the order of the entries of the resource assignment file by resource name, resource type, or login ID.

Sorting the resource assignment file is useful if you have a large number of resources assigned and you want to scan the assignment entries.

print—Print resource files (Arprint1)

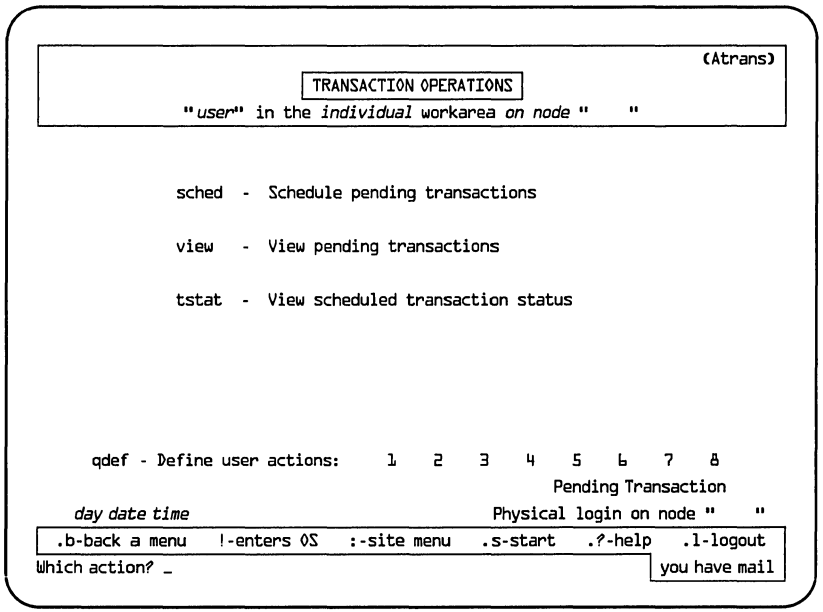
This selection allows you to print the contents of the resource specification and assignment files.

If there are large numbers of resources defined and/or assigned, it may be useful to use the sort selections before printing, to assist you in locating specific entries.

trans—Transaction operations (Atrans)

The apply transactions functions appear only in the network environment. The transaction process causes the resource specification and assignment files to be copied to all nodes on the subnetwork (called network synchronization). It must be executed after performing the **rsrc** or **asgn** selection. The transaction can either be applied immediately, or scheduled for a later time when network traffic is lower and/or all nodes are enabled.

Atrans—Transaction Operations



PPS1-732

Parent Menus: Auser, Agrp, Apub, Arsrc, Anettop
Select Ahead from Top: **s s u t, s s g t, s s p t, s s r t, s n t**

In a standalone environment, the Atrans menu provides the function of batch processing of user, group, and public workarea administration transactions (i.e., multiple transactions in a single batch).

Within a network, applying and scheduling transactions provide batch processing and control over the network synchronization process for user, group, public workarea, distributed resource, and subnetwork administration. Network synchronization is the process of copying all network control files around the network or subnetwork.

Selections

sched—Schedule pending transactions

Make this selection to schedule the defined operation(s).You will be asked to either apply the transaction immediately, or to defer it to a later time.

In a network environment, it is recommended that you maintain scheduled times to apply transactions and make sure that all nodes are enabled at that time to facilitate transaction completion.

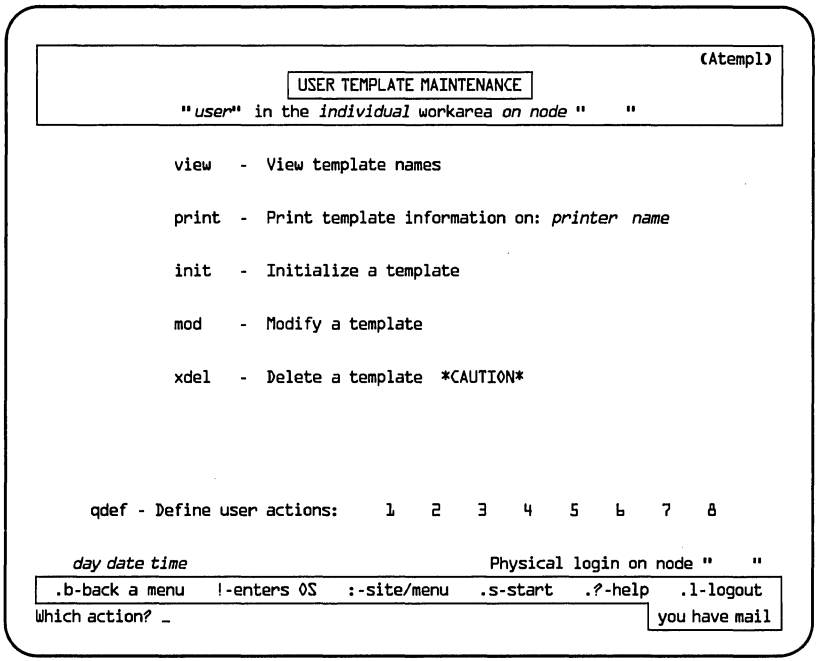
view—View pending transactions

This selection displays only those transactions that have not been already scheduled. Pending transactions may be viewed only on the node where the transaction was defined.

tstat—View scheduled transaction status

This selection displays lists of deferred transactions (those scheduled for later) and transactions in progress. In a network environment, the transaction status displays for each node.

Atempl—User Template Maintenance



PPS1-761

Parent Menu: Auser
Select Ahead from Top: **s s u u**

The User Template Maintenance menu is used to maintain user templates. A template is used to define default characteristics when users are initialized or created. There are four standard templates provided with the iDIS software: (1) iDISuser, (2) iDISdeveloper, (3) XENIXuser, and (4) KeyOperator. Each of these templates provide a standard set of system defaults. These standard templates can be copied and modified to build custom templates. The characteristics defined by a template include such items as specifying the editor for mail and file management, menu selections denied to a user, and whether or not a user can access the XENIX operating system from the menu system. For a detailed description of the four standard templates, refer to section 4.3.

Selections

view—View template names

This selection brings up a list of all templates currently on the system.

print—Print template information on: *printer name*

This selection prints a report of the characteristics of each template. A printer must be assigned before this selection can be executed.

init—Initialize a template (Atempli)

This selection is used to create a template tailored to the requirements of your particular environment. You begin by selecting a name for the new template. After this has been done, a dynamic list is brought up with the names of the existing templates. You are then asked to choose one of these templates as a model for the new template at which time the new template is initialized. After this has been done, the system completes the initialization process and returns you to the Atempl menu. You must now use the **mod** selection to tailor the new template to suit your requirements.

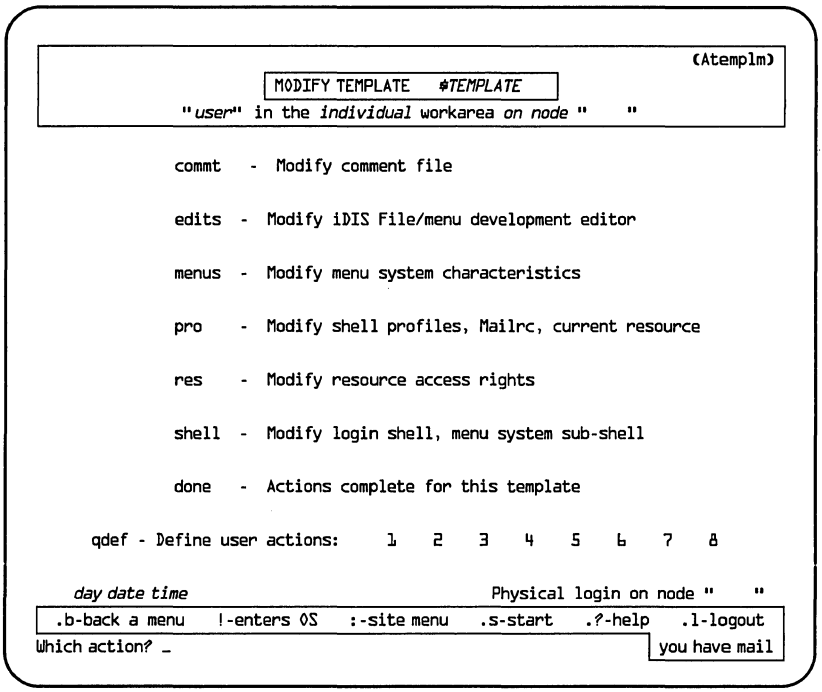
mod—Modify a template

This selection brings up a dynamic list of existing templates. Select the template you wish to modify and refer to section 4.12.

xdel—Delete a template (Atemplx)

This selection brings up a dynamic list of existing templates. You can select a template to be deleted from the system. Once the template has been deleted, it cannot be recovered. For this reason, it may be advisable to make a backup copy of the template before deleting it.

Atemplm—Modify Template



PPS1-733

Parent Menu: Atempl
Select Ahead from Top: N/A

This menu provides the means for modifying an existing user template to meet the particular requirements of a site. Templates are the mechanism used for specifying the default characteristics a user will have when initialized. These characteristics include:

1. The login shell (human interface) assigned to the user.
2. The particular menus and/or menu selections a user will *not* be able to access.
3. Whether or not the user can enter the operating system from a menu system.
4. The file editors the user will have available.

Selections

commt—Modify comment file

The comment file provides a brief description of the salient characteristics and uses of the template. As such, it can be used for any purpose desired, including a modification history log. It is used for information only.

edits—Modify iDIS file/menu development editor

This selection allows you to specify the text editors to be used for iDIS file operations and iMENU development. iDIS file operations include such items as mail message composition and editing the message-of-the-day. The iMENU editor is used for menu and form modification and other operations associated with menu development. Even if a user is not a menu developer, he will still have a menu development editor specified. vi is the default text editor.

menus—Modify menu system characteristics (Atemplmm)

This selection displays the menu which allows you to modify a menu system's access characteristics. Menu systems available include iDIS, iMENU and any site-developed menu system.

pro—Modify shell profiles, Mailrc, current resource (Atemplmp)

This selection displays a menu that allows you to modify the characteristics of the various profiles that are executed when a user logs on the system or performs mail operations. It also provides the capability to associate default resource specifications (such as the current printer) with the template.

res—Modify resource access rights (Atemplmr)

This selection allows you to specify resource assignments that are made automatically when a user is initialized. This can eliminate an extra administrative task. However, note that if you do specify resource assignments, each added user will create at least one entry in the resource assignment file (see section 4.12.5). Thus, it may be better to use the "wild card" capability offered directly by the resource assignment maintenance facility.

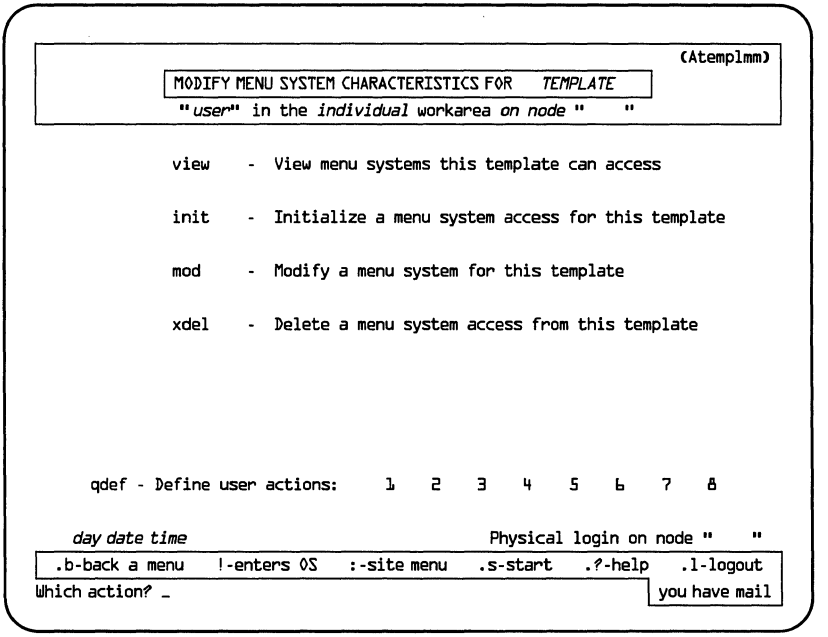
shell—Modify login shell, menu system sub-shell (Atemplms)

This selection allows you to specify the shell (human interface) the user has when he logs onto the system and when entering the operating system from iDIS (if authorized).

done—Actions complete for this template

This selection indicates that you are finished with template modifications (i.e., there are no transactions that need to be scheduled to make the modifications take effect).

Atemplmm—Modify Menu System Characteristics



PPS1-734

Parent Menu: Atemplm
Select Ahead from Top: N/A

This menu provides the means of modifying a menu system's access characteristics to meet specific site requirements. The menu system access characteristics are comprised of the following items:

1. What menus and menu selections a user will not see.
2. Whether or not the user can access the site menu or enter the operating system.
3. The user's menu system profile file.
4. Where the menu system home directory is located.

Selections

view—View menu systems this template can access

This selection displays a dynamic list of menu system names this template can access.

init—Initialize a menu system access for this template (Atemplmmi)

This selection displays a dynamic list of menu systems and prompts you to specify which system access you wish to initialize access to, or a NEW menu system which was not included in the list.

After selecting a menu system from the list, you will be able to view a list of templates which currently have access to the specified menu system. Select the template which most closely approximates your intended use.

If you select "NEW" you will be prompted for the name of the new menu system. You will then be presented with a form where you must enter the path representing the new menu system's home directory. You may now use the "mod" selection to make further changes.

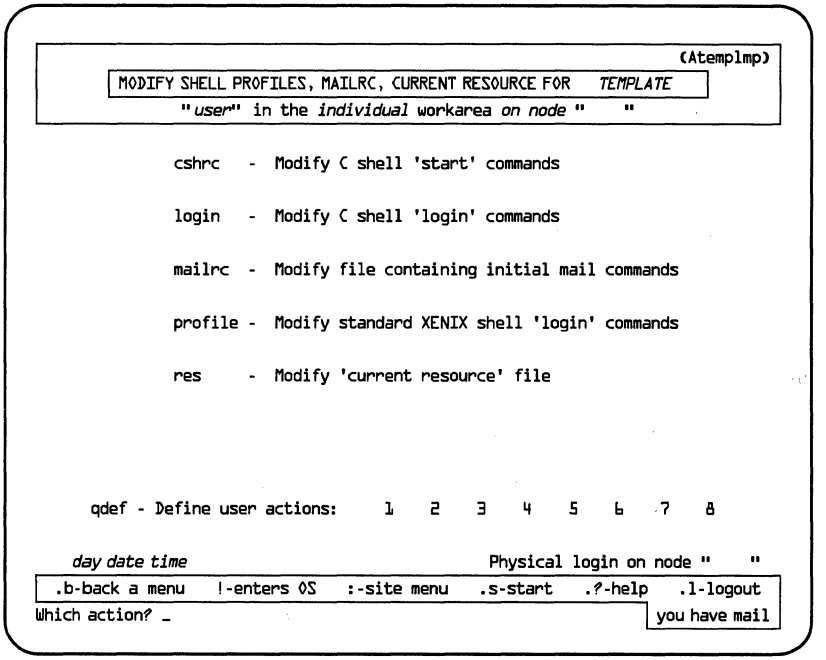
mod—Modify a menu system access for this template (Atemplmmm)

This selection displays a dynamic list of menu systems and prompts you to specify which one you wish to modify access to. After making this selection, the Atemplmmm menu is brought up. This menu provides selections which allow you to modify the menu system's deauthorization file, the system login file, user profiles, and home directory location.

xdel—Delete a menu system access for this template

This selection allows you to delete a menu system access currently assigned to this template.

Atemplmp—Modify Shell Profiles, Mailrc, Current Resource



PPS1-735

Parent Menu: Atemplm
Select Ahead from Top: N/A

This menu provides the means for modifying the profiles that are executed when a user logs in or performs mail operations. It is also possible to assign default resource specifications (such as current printer) to the template.

Selections

cshrc—Modify C shell 'start' commands

This selection places you in the template's C shell (.cshrc) file. This file is automatically executed every time a C shell is executed. In most cases this profile will not get executed unless a user has a C shell specified as either his login shell or his menus' system subshell. Refer to the XENIX programmer's reference manual for further details regarding the C shell .cshrc file.

login—Modify C shell 'login' commands

This selection is used to modify (via your text editor) the template's C shell .login file. This file is automatically executed when the user logs onto the system. However, the user must have the C shell specified as his login shell for this file to be executed. Refer to the XENIX programmer's reference manual for further details regarding the C shell .login file.

mailrc—Modify file containing initial mail commands

This selection is used to modify (via your text editor) the template's .mailrc file. This file is executed every time a user uses the XENIX mail facilities. It also contains various options that control the operation of the mail system. Refer to the *XENIX 286 User's Guide* and the *iBASE User's Reference* for more information regarding the mail commands that may be placed in this file.

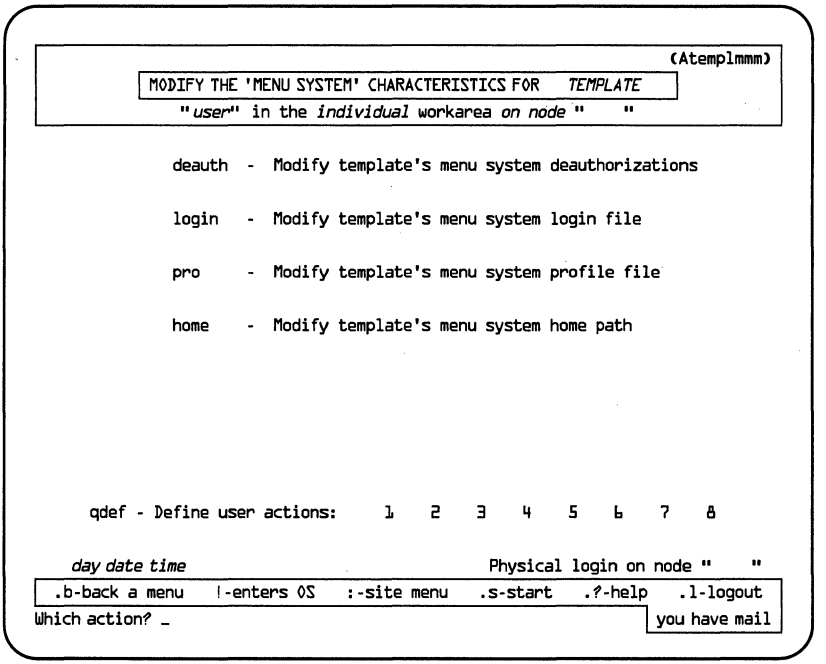
profile—Modify standard XENIX shell 'login' commands

This selection is used to modify (via your text editor) the template's .profile file. This file is automatically executed when a user logs onto the system or when he/she enters the shell from the iDIS menu shell. The file contains various settings that control the execution of the standard XENIX shell. This profile is executed when a user has the iDIS shell, the standard XENIX shell or the visual shell specified as his login shell. Refer to the *XENIX 286 Reference Manual* and *XENIX 286 System Administrator's Guide* for more information regarding the standard XENIX shell login commands.

res—Modify 'current resource' file

This selection is used to modify (via the text editor) the current resource settings for various system resource types (such as a printer). Typically, a user's current resources are unassigned until the user specifically chooses the particular resource he desires. It is possible for you to specify the current resource here, so that the user need not make the initial resource selection. To do this, you will need to specify the resource's unique name in the appropriate resource type entry.

Atemplmmm—Modify Menu 'User' Characteristics



PPS1-736

Parent Menu: Atemplmm
Select Ahead from Top: N/A

This menu provides the mechanism for modifying an existing menu system's access characteristics for a template. The menu system access characteristics are comprised of the following items:

1. What menus and menu selections a user will *not* see.
2. Whether or not the user can access the site menu or enter the operating system.
3. The user's menu system profile file.
4. Where the menu system home directory is located.

Selections

deauth—Modify template's menu system deauthorizations

This selection is used to modify the menu system deauthorizations for a particular menu system. The deauthorization file contains a list of the menus and/or menu selections that a user cannot see (or select), when the menus are displayed.

login—Modify template's menu system login file

This selection is used to maintain the information that will be added to a menu system's login file when a user is initialized. This information consists of:

1. The user's pinnacle or starting menu.
2. Whether or not the user can enter the operating system.
3. Whether or not the user can access the site menu.

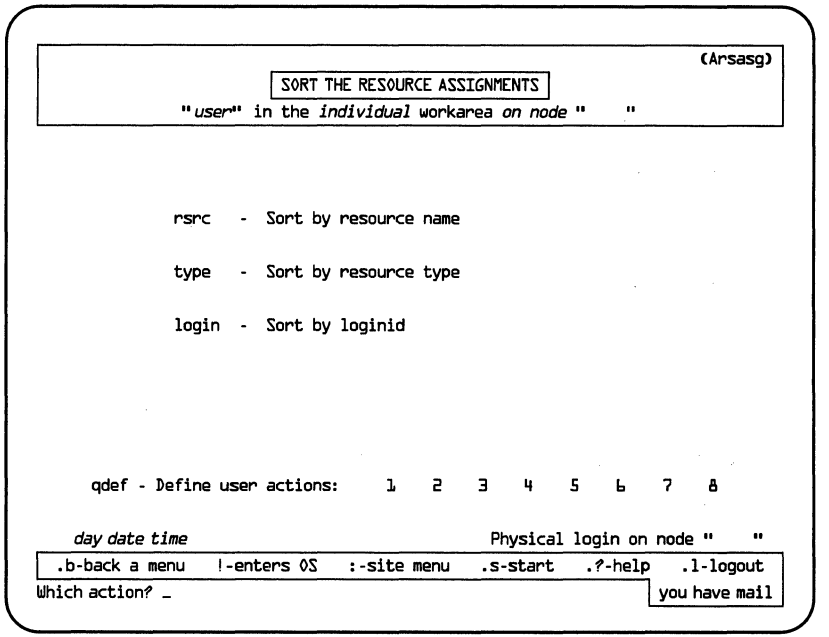
pro—Modify template's menu system profile file

This selection allows you to maintain the profile that is executed when a user enters a menu system. Refer to the *iMENU Developer's Reference* manual for further details on what information can be included in a profile.

home—Modify template's menu system home path

This selection allows you to specify the home directory of the menu system. This information is required so that the user initialization transactions will know where to place their control information. The directory path must *not* include the node name (for networked systems). For example, the path to the iDIS menu system is /usr/iDIS/idis.

Arsasg—Sort Resource Assignments



PPS1-737

Parent Menu: Arsrc
Select Ahead from Top: **s s r sa**

This menu allows you to rearrange the order of the assigned resources within the resource assignment file. Sorting the file aids in finding specific entries if a large number of resource assignments have been made.

In the Assign a Resource form, then, you may enter either a resource name or login ID, and press < **CTRL-f** > to quickly find the first resource assignment within the sorted category. Then press < **CTRL-n** > to scan through the assignments.

Selections

rsrc—Sort by resource name

This selection will rearrange the resource assignment entries within the resource assignment file by resource name, arranging the resource names in alphabetical order.

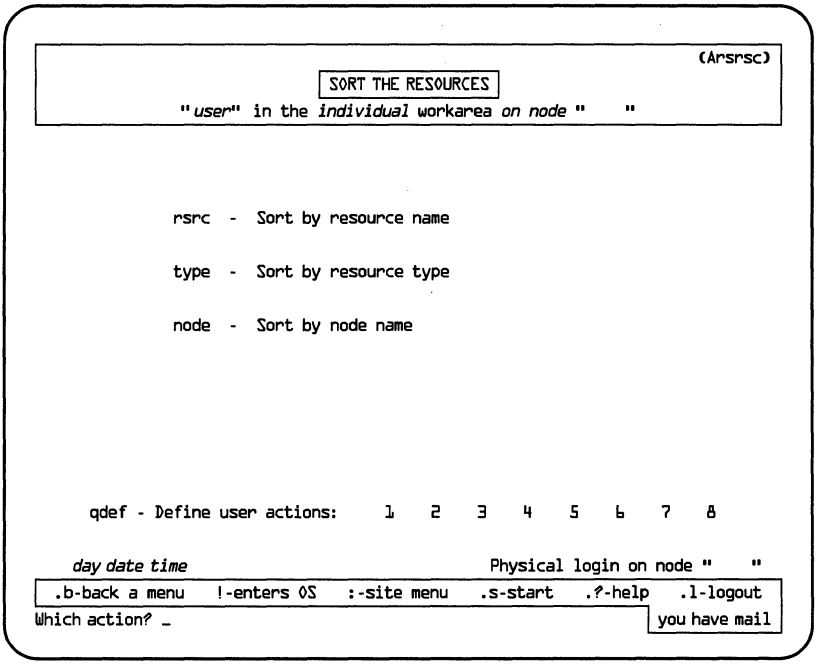
type—Sort by Resource type

This selection will rearrange the resource assignment entries within the resource assignment file by resource type, grouping all resources of the same type together (printers, tape drives, for example), and arranging the types in alphabetical order.

login—Sort by loginid

Sorting by login ID will cause the resource assignment entries to be rearranged in alphabetical order according to login ID (the third entry in the specify resource form).

Arsrsc—Sort the Resources



PPS1-738

Parent Menu: Arsrc
Select Ahead from Top: **s s r sr**

The Sort the Resources menu allows you to rearrange the order of the resource specification entries within the file. It is useful to sort the resource file if there is a large number of existing resources.

In the Specify a Resource form, then, you may enter either a resource name, resource type, or node name (whatever you sorted by) and press <**CTRL-F**> to quickly find all the resources within the sorted category. Then press <**CTRL-n**> to scan through the specifications.

Selections

rsrc—Sort by resource name

This selection will rearrange the resources within the resource file by resource name, arranging the resource names in alphabetical order.

type—Sort by resource type

This selection will rearrange the resources within the resource file by resource type, grouping all resources of the same type together, and arranging the types in alphabetical order.

node—Sort by node name

This selection is useful only in the network environment. Sorting by node name will cause the resource specification entries to be rearranged with all resources grouped together by node, and the nodes arranged in alphabetical order.

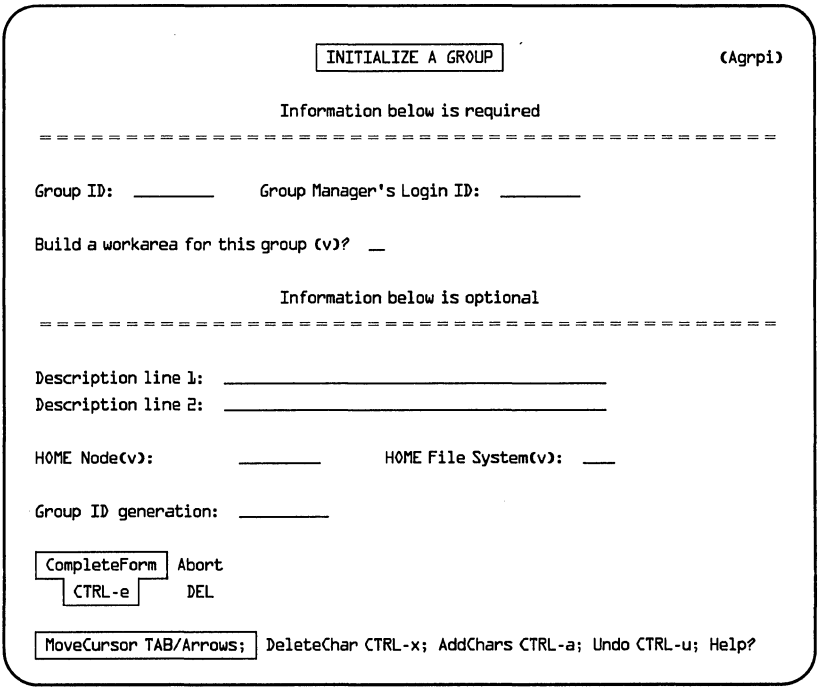
2.6 Form Definitions

The following pages provide reference information for the four following forms:

Agrpi
Arspec
Araspec
Auseri

Note that not all forms are covered in this section. These forms are included because they have several entries that require specific information which is provided. Other forms may be very simple to use (refer to their parent menus) or be part of the installation process (refer to the *iDIS™ Installation and Configuration Guide*). Refer to section 2.3 for complete information on using the form commands.

Agrpi—Initialize a Group



PPS1-739

Parent Menu: Agrp
Select Ahead from Top: **s s g i**

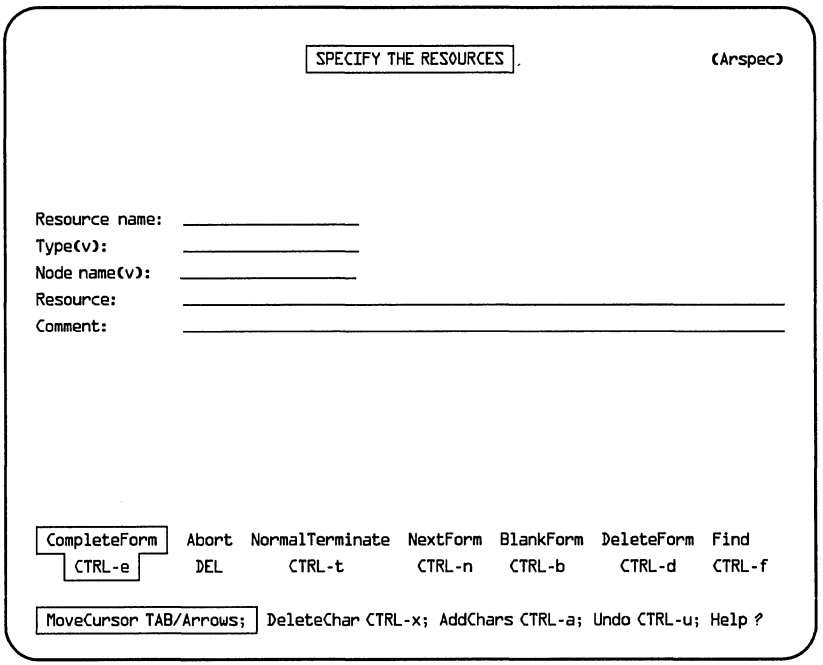
This form is used to create new groups (and group workareas) on a system or in a subnetwork. There are step-by-step procedures found in Chapter 4 for setting up groups and group workareas.

Field	Enter
Group ID	The Group ID must be from 3 to 8 lowercase letters or numbers and must begin with a letter. Special characters are not permitted.
Group Manager's Login ID	This is the Login ID of the person allowed to maintain the group membership list. When specified he automatically becomes a member of the group.

Field	Enter
Build a workarea for this group (y or n)?	The group workarea is a file system directory where common group files are kept. Enter <**y**> if you want the group to have a common area to maintain shared files. Enter <**n**> if it is not necessary to have a workarea for the group.
Description	Optional information that is entered into the system's personnel directory for the group.
HOME Node(v)	The HOME Node is the system where the group files will reside. This entry has no meaning on a standalone system or if you have chosen not to build a workarea. When the screen first appears the entry is blank. To change nodes, press the <**SPACE BAR**> until the appropriate node appears.
HOME File System(v)	The HOME File System is the file system that the system group files will be located on within a node. Defaults to /usr. This selection is only useful when several Winchesters or SMD drives are attached to the system and if you have chosen to build a workarea. Press the <**SPACE BAR**> until the appropriate file system appears.
Group ID Generation	Each group has a unique number attached to all files owned by group members. This number is unique for each group and determines which group a file belongs to. Normally, the system assigns this number when the group is created (**automatic** generation). However, in the network environment it may be useful to assign specific numbers to specific locations. The possible range that can be entered is that range assigned when the subnetwork was initialized.

To complete the group definition, press <**CTRL-e**> when all the fields have been specified. The system will then indicate that the transaction is being built.

Arspec—Specify the Resources



PPS1-740

Parent Menu: Arsrc
Select Ahead from Top: **s s r r**

This form allows you to specify a resource to the system. When you have specified the resource, you then must assign it to the users that you want to have resource access (make the **asgn** selection in the Resource Maintenance menu). See the next page for a list of resource types.

In the network environment, when you complete the Specify a Resource form, you must then schedule the transaction (which copies the new resource information around the subnetwork).

For a step-by-step procedure on specifying resources, refer to Chapter 6.

Field	Enter
Resource Name	The resource name is a name that you designate. It can be up to 14 alphanumeric characters (no spaces).
Resource Type	Select the resource type by pressing the < **SPACE BAR** > to scroll through the permitted values or enter the first few characters of the desired resource type. The values include:

3271BSC-gate	The 3271 Bisynchronous host communication software.
3274SNA-gate	3270 SNA host communication software.
5-in. diskette	Standard flexible diskette on a System 286/310.
8-in. diskette	Standard flexible diskette on a System 286/380.
9tracktape	Optional external ½" tape drive subsystem.
HASP188-gate	Remote Job Entry Workstation Emulation Software.
RBTE188-gate	Remote Job Entry Workstation Emulation Software.
application	Non-iDIS application software or iMENU developed menu systems for iDIS users.
directory	A directory within a file system to be used for archiving (backup and restore).
file-system	Additional Winchester or SMD drives on a system for work-area location.
iVPM188	Virtual Protocol Machine host communication software.
idis	For network environments only, sets up a node as an iDIS execution node. This allows users from other nodes to use iDIS on the node selected in the **Node Name:** field. This type of entry is only used by the system and should not be changed by the administrator.

Field		Enter
	keyoperator	Specifies the key operator on a specific node.
	lognetadmin	The logical network administrator iDIS functions. This type of entry is for system use only.
	menudev	Menu development system. This may either be the iDIS menu system or another menu system to be developed. This selection requires that the iMENU development software be installed.
	printer	A serial or parallel printer connected to your system or to a node in the subnetwork.
	streamertape	The ¼″ cartridge tape drive that may be either located in the 311 Peripheral Expansion Chassis or in the System 286/310.
	subnetadmin	The functions that are available as the idis login in the network environment.

	vt-lan	Sets the resource as TTY passthrough in the network environment. The remote capability file must contain the vt entry as shown below:
		`resource_name| comment field:\`
		`:vt:`

Field		Enter

	vt-phone	Selects a modem connected to a configured communication port for using tty passthrough. The /etc/remote file must be configured for the correct modem parameters as shown below:
		`modem_name| comment field:\`
		`:dv=/dev/cul**:br#1200:\`
		`:pn=774-7734`
		where
		`/dev/cul**` represents the modem port call unit ID. For example, if you have the modem configured on port c7 then dv = /dev/ttyc7.
		`:br#1200` is for a baud rate of 1200.
		`pn=774-7734` is an example phone number.

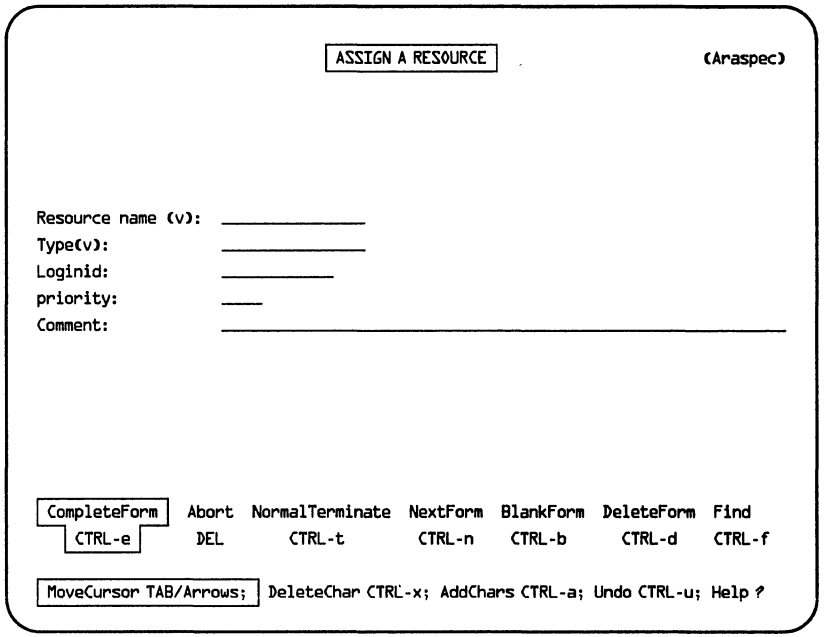
	vt-remote	Selects an alternate "/etc/remote" file name that may contain both vt-lan and vt-phone type entries. Enter an alternate file name (other than /etc/remote) in the **Resource:** entry. This option allows the System Manager to specify different "sets" of tty passthrough connections for different users or groups of users.
Node Name		On standalone systems this entry has no meaning. In the network mode press the < **SPACE BAR** > to scroll through the node names or enter the first few characters of the desired node name that your system is permitted to access. Select the node name where the resource is physically located.

Field	Enter
Resource	The resource entry required by the system is dependent on the resource type (the second entry in defining a resource). Enter the resource according to the table below (if it's not listed below, no entry is required):
	5-in. diskette `/dev/rdvf0`
	8-in. diskette `/dev/df0`
	9tracktape `/dev/rxyt0`
	application — enter the pathname of the command that invokes the application software. For example: `/usr/vi` invokes the vi text editor.
	directory — Enter the pathname of the directory to be used for archiving. Do not include the node name if you are on the network.
	file-system — The file system resource is set up automatically at installation. If you have to add a device later, enter, for example: `/dev/usr`, `/dev/usr1`, or `/dev/usr2`.
	menudev — The menu system base directory and the directory where the programs and shell scripts reside, separated by a semicolon. For example, for the iDIS menu system, enter: `/usr/iDIS/idis;/usr/iDISbin`
	printer — Printer name as configured in the printcap file. You may view this file in the site menu printer operations. For example, if you are going to use the default printer, the first line in the printcap file contains: `lp|lp| Parallel Printer:\`

Field		Enter
		The entry in the resource field (first field in the above entry) would be:
		`lp`
	streamertape	`/dev/rmt0`
	vt-remote	Full pathname of the remote capability file (instead of the /etc/remote file).
Comment		Entering data into the comment field is optional. This entry will appear to users in dynamic lists where the resource is used.

In order for anybody to use these resources, you must assign them to users (using the **asgn** selection on the Arsrc menu).

Araspec—Assigning a Resource



PPS1-741

Parent Menu: Arsrc
Select Ahead from Top: s s r a

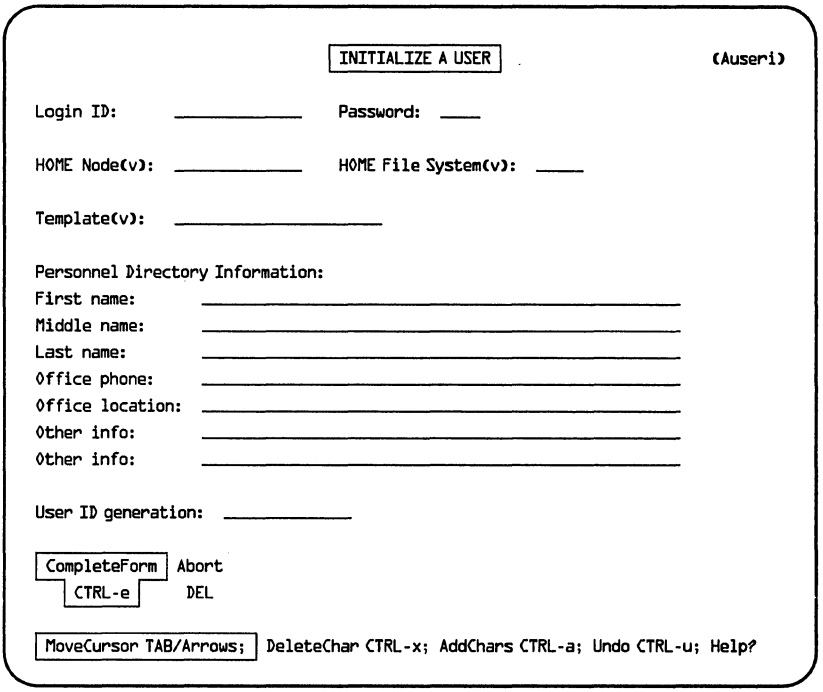
This form allows you to assign access of a specified resource to users on the system or the subnetwork. This function should only be performed after specifying a resource in the **rsrc** selection under the Arsrc menu.

For a step-by-step procedure on performing an assign, refer to Chapter 6.

Field	Enter
Resource Name	The resource name must already be specified with the **rsrc** selection in the Resource Maintenance menu. Press the <**SPACE BAR**> to scroll through resource names, or enter the first few chararacters of the resource name to enter the desired resource name.

Field	Enter
Type	Type is the resource type as specified in the specify a resource form. This field is for display only.
Login ID	The login ID specifies the users on the system or subnetwork who are allowed to access the specified resource. Enter one of the following:
	User's Login ID — Enter one user's login ID. Only the specified user has access to the resource.
	* — Enter an asterisk to allow all users to access the resource.
	-G *group name* — Allows all users that are members of the group *groupname* to access the resource.
	-N *nodename* — Allows all users whose home node is *nodename* to access the resource.
priority	The priority field specifies the order in which to offer this resource to the user relative to other resources of the same type. Currently, the priority entry needs to be entered only for the idis resource type. Permitted values include:
	Blank, 0-99 — A numerical value that rates the resource against the other resources of the same type that the user(s) have been assigned to. Blank is the highest priority, 0 is next highest.
	Minus (-) — A minus sign indicates that the user(s) identified in the login ID entry are NOT allowed to use the specified resource.
	Any other character — Causes the entry to be ignored.
Comment	This field is an optional comment field to clarify any information given. No data is required.

Auseri—Initialize a User Form



PPS1-289

Parent Menu: Auser
Select Ahead from Top: **s s u i**

In the Initialize a User form, you define a user to the system or network. The Login ID, First Name, and Last Name entries must be entered before the form can be completed. When finished you must apply the transaction (using the **trans** and **sched** selections in the Auser menu) before the system will recognize the new user.

For a step-by-step procedure in creating a user, refer to Chapter 4.

Field	Enter
Login ID	The Login ID for a new user must be a unique name from 3 to 8 lowercase letters or numerals and must start with a letter. Special characters and spaces are not allowed.

Field	Enter
	If you have many users on your system or network, and you do not know if a Login ID is unique or not, use the view or print selections from the Auser menu to get a list of user names.
Password	Enter either yes or no in the password field (default is yes). If you answer no, a password will not be created. If you answer yes, after the form is completed you will be prompted to enter a password. When you enter the password, it will not be displayed. The password can be 5 to 8 characters, any character or number on the keyboard. For secure systems, it is recommended that you use at least one special character, and periodically change the password with the **cpw** selection in the Site Administration menu.
HOME Node	In the standalone environment, the standard entry is **XENIX3.4.** In the network environment, a user's terminal may be physically connected to one node, but his home directory with his environmental information and user files may be on another node. If you do not change this field, the node that you are presently logged in on will be the node selected for the user's HOME Node. To change the HOME node, either press the < **SPACE BAR** > until the correct node appears, or press the first letter of the intended node.
HOME File System	When you have a 311 Peripheral Expansion Chassis with additional Winchester drives, or an SMD disk drive attached to your system, there are additional file systems that are available that can be used as data storage as well as home directories. In the network environment, the file system is that specified on the node in the HOME Node field. The additional file systems will have pathnames of /usr1, /usr2, /usr3, etc. To specify the user's home directory to a second or third drive, press the < **SPACE BAR** > until the correct file system appears.

Field	Enter
Template	This entry specifies the default authorities that the user will have when initialized. Unless you have created additional templates, (with the **User template maintenance** selection in the Auser menu) the following user types are available: **iDISuser**—is allowed to access the iDIS features, file management menus, mail, and any additional application software you may have available within iDIS. **KeyOperator**—has the same functions available as the iDIS user, plus additional capabilities to monitor the status of the system, kill user processes, perform printer administration, enter XENIX, and perform workarea backups. **XENIXuser**—is a user that is going to only use the XENIX shell and not access the iDIS menus. Typically this user needs to access only a certain application software package not in the iDIS menu system, or to perform XENIX development. **iDISdeveloper**—is allowed the same functions as the iDIS user, plus all programming features of both iDIS and iMENU and enter the XENIX operating system. **NOTE** iMENU must be installed to use the iDISdeveloper template. To select the template, press the < **SPACE BAR** > until the intended user type appears in the field or enter the first letter of the user template.
First Name **Middle Name** **Last Name** **Office phone** **Office location** **Other info**	Personnel Directory Information is used in the mail facilities. Only the first and last names are required to complete the form. The more information you provide the more useful the directory becomes to users.

Field	Enter
User ID Generation	Each user has a unique number attached to files that identifies the files as his/hers. Normally, the system assigns this number when the user environment is created (automatic generation). However, in the network environment it may be useful to assign specific numbers to specific locations. The possible range that can be entered is that user ID range assigned when the subnetwork is initialized.

When you complete the form press <**CTRL-e**>. You will be asked if you want to add another user. You may add as many users at once as required, but you only need to schedule a single transaction for all outstanding user definitions.

3 STARTUP AND SHUTDOWN

3.1 Introduction

Within the normal operation of your system or network, the system or network administrator must occasionally bring the system up and down for a variety of reasons. In a typical environment, the systems are left on all the time, unless there is a specific reason for shutting the system down. This may not be true in all environments, however. In some areas, unreliable power may make it more practical to periodically bring down the systems (at night, for instance). If the power in your area is unreliable, a power protection device is recommended on any systems. Also, like any computer system, power cycling (turning on and off) causes additional wear. If you must bring your systems down at night or weekends, we suggest performing the shutdown procedures but not powering the systems off. This will provide file system protection without causing system fatigue.

The following guidelines provide information for performing normal boot ups and shutdowns, but also provide some information for problems occurring in improper shutdowns, crashes, or boot problems.

3.2 Booting Up a System

Booting up a system is the process that enables the computer to begin operations. The word "boot" originated with the phrase to "pull yourself up by your bootstraps", which is descriptive of a computer initialization. When the system is first powered on, there are no programs within memory that can be executed. The programs that the system needs to function are on the Winchester disk drive. Booting up loads the programs (or operating system) from the Winchester to the system memory.

There are several different methods that you may use to boot your system, and the method you use will depend on the state of your system and what you are trying to accomplish. The great majority of the time you will probably want to use the easy method called the autoboot. If your system is indicating that problems are occurring, you may want to use a different method. Several methods are described in the following section, and you may need to use some of the different methods, depending on the state of your system.

3.2.1 Autoboot

The autoboot is the easiest method of booting the system. When you first power your system on (or you press the RESET, marked "R", button on the front of the system) you simply wait for approximately three minutes while the system performs its tests and loads the software into memory. An asterisk will first appear, then after about 30 seconds the System Confidence Tests will run. If the confidence tests pass (refer to the Power Up Test description in section 3.2.3 if they fail), the system will indicate:

```
Loading :w0:
```

The Intel licensing agreement will appear, a message indicating memory allocation, then the board initialization status messages will appear (more information is available in section 3.2.4). Next, you will see the message:

```
Type Ctrl-d to proceed with normal startup,
(or give root password for system maintenance).
(If there is no input in 30 seconds, the system
will automatically go into multi-user mode.)
Password:
```

Either enter the root password for maintenance mode or press <**CTRL-d**> (or do nothing) to start normal operation. For normal operation, the date and time will appear:

```
Current System Time is Fri May 2 17:15:25 MST 1986
Enter new time ([yymmdd]hhmm):
```

If the date and time are correct press <**cr**>.

If the date is correct and time is not, enter ***hhmm*** where:

hh	represents the hour (24 hour clock)
mm	is minutes

If both the date and time are incorrect enter ***yymmddhhmm***, where:

yy	is the last two digits of the year
mm	is the number of the month (02 is Feb., for example)
dd	is the day of the month

An example entry would be:

```
8605051030
```

which represents May 5 1986 10:30 AM.

The last prompt in a normal boot up sequence is the login prompt:

```
login:
```

This completes the boot up procedure.

3.2.2 Other Ways to Boot Up

Letting the system autoboot is the easiest method and requires the least amount of interaction. It also takes the longest time. One method of speeding up the process is right after pressing RESET, when the asterisk appears on your console screen, within twelve seconds enter **U** (< **SHIFT-u** >). You will then be asked to enter a period (.) or press < **cr** > . Normally you would just press < **cr** > and the system would boot just as it had done in the autoboot sequence. If for some reason you wanted to get to the system monitor, you would enter (.). Then when the System Confidence Tests are complete, you would see the monitor prompt (a period), instead of the boot process automatically occurring.

```
iSDM 286 Monitor, (ISO)Vx.y
Copyright 1984 Intel Corporation
.
```

In a normal boot, you would simply type **b**, then < **cr** > . There may be times when you may want to boot from a different XENIX kernel (the "heart" of the operating system, XENIX allows you to build different kernels to fit your hardware/software configuration) or device other than the Winchester. When performing a XENIX installation, you must boot from the flexible boot diskette. To do this, enter:

```
b :wf0:xenix.f<cr>
```

where:

`:wf0:`	represents the flexible disk drive
`xenix.f`	is the XENIX kernel that gets loaded from the diskette.

Also, you may want to boot from another XENIX kernel on the Winchester when you are having boot failures. Typically, there are several kernels residing on your Winchester. You may want to try entering:

```
b xenix.old<cr>
```

You may also try the xenix.w kernel. You should only try to boot from these kernels if you cannot boot any other way, since they do

not have the system configuration programmed into them. If you can boot from these kernels, you will have to remake the kernel (**cd /sys/conf** < **cr** > , **make xenix** < **cr** > , **mv xenix /xenix** < **cr** >) in order to have the configuration information restored.

3.2.3 Power Up Tests

As the system is booting, the first items to appear will be the System Confidence Tests. They perform basic tests on the system hardware. The processor, memory, and peripheral devices are checked. These tests will indicate PASS or FAIL. If there is a failure the autoboot will stop after the power up tests. This does not always mean that there has been a breakdown in the hardware. There are several reasons that could cause a test to FAIL, other than a hardware problem.

1. Sometimes the Winchester takes a little longer than normal to spin up causing the Winchester Subsystem test to fail. This may be especially true in low power areas. Simply press RESET and give it another try. It should boot on the second attempt.
2. If you have a flexible diskette in the drive, and it is not a boot diskette, the FLEXIBLE DISK DRIVE test will fail. Simply remove the diskette and press RESET to try again.
3. If the system had been operating and you press RESET to boot rather than powering your system off (after shutting the system down properly) an unknown system state can occur that prevents successful power-up tests. In this case, power the system OFF and ON and the error condition may go away.

If several attempts to BOOT are unsuccessful, and the System Confidence Tests continue to fail, call your Intel Service Representative.

3.2.4 Board Initialization

After the system successfully completes the power-up tests, it will start to load the XENIX operating system. The first thing that will appear is the licensing agreement statement. Next, the memory allocation storage status will apear:

```
Kernel Memory = xxx.xk
Buffers = xxxk
User Memory = xxx.xk
```

These indicate how the RAM memory board's space is allocated. The kernel memory is the size of the XENIX operating system that is loaded onto RAM. The buffers size is the amount of additional

space that the kernel needs to perform operations that require buffering. This parameter can be changed to suit the needs of your users. User memory is the memory available for application programs (including iDIS) and any user data required (text storage in a word processing program for example).

Next, the board initialization routines are executed. Messages will appear indicating if the boards are initialized. The exact message that appears will depend on the boards that are in your system. The messages for an example system are shown below:

```
iSBC 214/215G @ WUA 0100 level 5 Found
iSBC 188 at F90000 board 0 v1.1 Initialized
Console Found
Lp      Based 00C8 level 71 found
iSBC 552 R2.0 at I/O Port 08A4 Wakeup Address 0x01040 found
        Firmware: V3.0 Driver: @(#) 552 x014 Ethernet Address
        00AA 0000 023B
Session version: @(#) session x011
iSBC 214/215g controller 0 Firmware: IS0-N V2.1
```

The board initialization messages on your system may be different than that shown, depending on your exact hardware configuration. The above example is for a system with a iSBC 215G Winchester Controller, an iSBC 188 Terminal Communications board (8 user), and an iSBC 552 OpenNET Communciations Board. The processor board(s) and memory board(s) are not included in these messages. Additional messages include the initialization for the console and line printer devices (on the processor board).

If a board message indicates NOT FOUND, a problem exists. It may be that the XENIX operating system was incorrectly configured for a board that is not really there. Refer to the configuration procedures in the *System Administrator's Installation Guide,* and make sure that the hardware configuration matches what was configured with the System Configuration program (scp). If the configuration matches, or this is a board that was previously working and is now not working, continue with the boot procedure, shutdown the system and re-boot. Check to see if the board is found or initialized. If that doesn't work, call your Intel Service Representative.

3.2.5 Making Sure File Systems are Mounted

Sometimes it may be useful to verify that the file systems are mounted properly. When the boot up sequence is completing (just before the login prompt), a status message will appear indicating the file systems that are mounted:

```
/       (/dev/root ):   2200 blocks     3799 i-nodes
/usr    (/dev/usr  ):   9815 blocks     12799 i-nodes
```

Additional file systems may appear if you have additional Winchester or SMD drives. If you missed the message, you can also display the file system status within iDIS. Just select, from the Top menu:

key<cr>	Key operator functions
disp<cr>	Key operator display information
disk<cr>	Display available disk space

A file system status message will appear.

3.2.6 Booting After a Crash or Improper Shutdown

Occasionally a system crash or operational error occurs that causes an improper shutdown (somebody presses the RESET button by mistake). The next time that you boot the system, a recovery procedure is automatically run to repair any damage that may have occurred to your file system. After the board initialization routines, you will be asked:

```
The system was not shut down properly, and the
root file system should be cleaned.
(cleaning will occur automatically in 30 seconds.)

Proceed with cleaning (y/n)?
```

Answer **y**.

Occasionally, if there has been a severe crash, running this cleanup program can hang the system again. If this occurs repeatedly, answer **n**, enter maintenance mode, perform backup on any files that specifically need it, then shut down and perform a software reinstallation.

When the clean up program does run, it appears as follows:

```
/dev/rroot
** Phase 1 -- Check blocks and Sizes
** Phase 2 -- Check Pathnames
** Phase 3 -- Check Connectivity
** Phase 4 -- Check Reference Counts
** Phase 5 -- Check Free Blocks and Cylinder Groups
```

If there are any problems with the file system, there will be additional messages that appear such as:

```
UNREF FILE I=## OWNER=username MODE=######
SIZE=##### MTIME=Mon dd time year
CLEAR?
```

```
Cylinder Group #: MISSING BLKS IN FREE LIST
BAD FREE LIST
SALVAGE?
```

Answer **y** should you encounter these messages.

You should be forewarned that under certain conditions files may be deleted. If an essential system file is deleted, it may cause a fatal crash that will require a XENIX installation.

When the system has run into difficulties, you may see a message such as:

```
***** BOOT XENIX *****
***** DO NOT sync *****
```

In this case, push RESET and reboot. The system should run the cleanup program again, hopefully with better results.

If you have a severe crash and the system will not boot at all, you may have to try booting from another kernel (see section 3.2.2). If you can boot from another kernel, then you should enter system maintenance mode, immediately back up all files that need it, and then try to run the scp program to recreate your configuration. If you cannot run the scp program, then a software reinstallation may be required.

If the system runs through the cleanup with no errors, then the cleanup may be repeated for any user file systems that you have on your system. If you have any file system that was not cleaned automatically, then, while in system maintenance mode, enter:

```
fsck /dev/usrx<cr>
```

where *usrx* is any file system that has not yet been cleaned (/usr, for example). If all the file systems clean successfully (it doesn't ask you any repair questions), then press < **CTRL-d** > to enter multi-user mode (normal operation).

Typically when the file system has crashed there will be some cleanup, and you will have a message such as:

```
***** File System Was Modified *****
```

and the boot will continue. In this case it is a good idea to enter maintenance mode and run fsck on all file systems once more.

3.3 Shutdown

The XENIX operating system has a utility that performs all the steps required to shut down your system. This may seem like a simple task, but with the many processes running on the system, users accessing different files, software and resources on systems across the network, there are many steps required to shutdown a system without destroying a file or disrupting the network. There is a special login in XENIX that allows any user with the shutdown password to bring down the system. Under normal circumstances, all that is required to shut down the system is to enter at the login prompt:

```
shutdown<cr>
```

When the password prompt appears, enter the password or < **cr** > if there is no password. If you are on the network, there will be a warning message, and you will be asked if you want to continue, answer **y** < **cr** > . Then you will be asked the number of minutes to shut down. Enter a number between 0 and 9, then < **cr** > . You may then broadcast a message to system (or subnetwork) users before shutting down.

NOTE

In a network environment, users screens may be disrupted when broadcasting a message.

The system will be brought down automatically. Another shutdown method is as the root user in XENIX, enter:

```
/iDISboot/shutdnlogin<cr>
```

Never shut down the system as the root user from the DIS menu systems. If you do this essential iDIS system files may be lost, requiring reinstallation.

The final message that will appear on the system console is:

```
** Normal System Shutdown **
```

Now you may power the systems off if desired. A good rule to remember is to always power the System 310 (or 380) off last. Power any peripheral chassis, printers, external tape drives off before turning your system off.

3.3.1 Maintenance Mode Shutdown

If the system is in Maintenance Mode and you wish to shut down the system, enter the following:

```
nfc abort<cr>
nfs abort<cr>
```

These are only if you have enabled networking software

```
sync;sync<cr>
```

```
cd /<cr>
```

Check to see if there are additional file systems mounted:

```
mount<cr>
```

If there are additional file systems (other than /dev/root), unmount them as follows:

```
umount /dev/usrX<cr>
```

where *usrX* may be usr2, usr3, etc. Perform this on any and all file systems you mounted in maintenance mode.

```
sync;sync<cr>
sleep 20<cr>
haltsys<cr>
```

Wait for the ** Normal System Shutdown ** message before powering any equipment off. Always power off all external peripherals (311 chassis, SMD disk drives, 9-track tape) before powering off your System 310 (or 380).

3.4 Disconnecting and Reconnecting the XENIX Networking Software

There are two special logins, netoff and neton, in the iDIS system to allow the XENIX Networking and vt software to be disconnected and reconnected without shutting the system down.

3.4.1 Disconnecting the Networking Software

To disconnect a given node from the subnetwork, enter at the login prompt:

```
netoff<cr>
```

Because users who are working on other subnetwork systems may be using workareas or software which are located on the system whose networking software is being disconnected, this action **can** affect users elsewhere. Thus, the system will issue a warning message and ask you whether you want to continue. Answer **y**.

Next you will be asked how many minutes before the networking software is disconnected. Answer with a number between 0 and 9.

Then, you will be asked whether a message is to be broadcast to the subnetwork that this node's networking software is to be disconnected. If there are other users on the subnetwork, you should answer **y**. Only answer **n** if you are sure that there are no other users on the subnetwork, or that they are not using data or software located on this system.

When this dialogue is completed, the networking and vt software will be turned off on that node, which will prevent users not currently on the network from using it. The clock will now begin to tick, counting down time until the specified number of minutes has elapsed. Once the time has expired, the network and vt software will be aborted and network support will be disconnected.

Please note that, unlike the shutdown login, there are no minute-by-minute countdown messages. Only one message is sent to users to warn them that the networking software is being disconnected.

Disconnecting the network relative to a specific node does not affect the network or vt support on other network nodes.

3.4.2 Re-connecting the Networking Software

To reconnect the networking software on that node, enter at the login prompt:

```
neton⟨cr⟩
```

The XENIX networking and vt software will be re-connected without further prompting.

This is only necessary if the networking software has been disconnected as described in section 3.4.1. When the system has been booted, the networking software will be connected automatically.

4 USERS, GROUPS & PUBLIC WORKAREAS

intel

4.1 Introduction

The iDIS software and XENIX operating system were designed to allow multiple users to access a system simultaneously. This multi-user ability requires that the system be able to recognize and keep track of each individual user that accesses its resources. The system recognizes a user by login ID (user name) assigned to each user account and by an assigned user ID number that is associated with all of that user's files for identification.

One advantage of a multi-user environment is the ability for users to share files. To maintain a secure system, you must be able to select who may share files. A group is a set of users allowed to share files among themselves. Also, there can be special directories set up (in iDIS they are called group workareas) where common files used by group members are stored. Only group members have access to that group's workarea.

Systems also may have files that contain data that should be available to all users, i.e., no security is required on these files. iDIS provides directories called the public workareas where files that are accessible to all users are kept.

Administration is the process of creating and maintaining the system files that control the login IDs, group names and workareas, and public workareas on a system or subnetwork. iDIS provides a complete set of menus for performing the administrative duties in the standalone and network environment. This chapter provides specific instructions using the iDIS menus to perform all the duties required with the administration of users, groups, group workareas, and public workareas. In addition, there is a maintenance section that explains the files that control the user, group, group workarea, and public workarea and how they should generally appear. There are alternate methods for performing many of the iDIS administrative functions using the XENIX operating system. You should, however, always use the iDIS facilities, since many of the XENIX methods are incompatible with iDIS.

4.2 System Login IDs

When you first install and set up your system or network, the administrative login IDs are already established and are required for correct operation and installation and should never be deleted from the system. They are described below:

NOTE

When the iDIS software is installed, these system logins do not have passwords. Passwords should be assigned before going into multi-user operation.

idis Is the system administration login ID on an iDIS system. Use this login ID to perform administrative functions since this login ID has many of the powers of the superuser.

In the network environment, the idis login also performs subnetwork administration.

root Is the XENIX operating system superuser. Since root has authority to all parts of the operating systems and files, extreme care should be used when logged in as root, since essential system files can be inadvertantly destroyed.

ilna Is only used in the network environment. The logical network administration functions are performed from this login.

There are also several "ready made" demonstration login IDs provided by iDIS to help in getting started with iDIS. You may want to try and log in as these users and try some of the features and functions in order to gain familiarity with each type of user. This may assist you in deciding the type of login ID that you want to create for users that will actually be using the system.

ademo This login ID is associated with the iMENU development system. You may access the sample accounting menu system provided either as a user or a developer. The user is allowed to utilize the functionality of the sample menu system, while the developer may design new menus, perform maintenance, etc.

When you first log in as ademo, you are in the XENIX operating system. If you want to restrict access to the ademo login ID, you may enter the XENIX 'passwd' command to create a password for this user.

idev This login is associated with the iMENU application development package. When you log in as idev you are allowed to access the iMENU software that performs menu maintenance, modification, etc., on menu systems.

ikey This login is a sample login ID for a key operator which allows limited administrative functions.

iuser This login ID is a typical iDIS user that may access any of the iDIS applications, file management, mail, etc. It may be used to allow new users to begin learning the system.

4.3 Initializing Users

Before "real users" can log into the system and productively perform work you must initialize these users. Refer to the Setting Up a New User procedures in section 4.9.

Before setting up a user, you should have a good idea of the capabilities he will have in order to create the right type of user environment. When initializing the user, you will select a "template" for the user that contains default settings that determines the functionality that a user is allowed to access. There are four standard templates that are provided with iDIS:

iDISuser The iDIS user is the normal user you would create on a typical system. He is allowed access to the Top menu and site menus, but cannot access the key operator, set up, or developer selections. He is allowed to back up and restore his own files, and delete his files from the printer queue. He may also access any of the iDIS applications installed and any non-iDIS applications that he is assigned to. The iDIS user is not allowed to access the XENIX operating system. This resembles the iuser demonstration login ID.

iDISdeveloper The iDIS developer has the same rights as the iDIS user plus menu development. Also, he is allowed access to the XENIX operating system. iDISdeveloper resembles the idev login ID.

XENIXuser The XENIX user does not have access to the iDIS menu system. The XENIX user will be operating in the XENIX environment.

KeyOperator The key operator has the same functionality as the iDIS user plus he is allowed to enter the key operator menus which allow him to kill user processes, perform full printer administration, and monitor the status of the system and/or subnetwork. The key operator may also enter the XENIX operating system. This login ID resembles the ikey demonstration login ID.

If the functionalities of these templates are not appropriate for your site, you may easily modify them or create new ones. With the User Template Maintenance menus (see section 4.11), you may modify the default settings for such things as the default iDIS editors, resource access rights, login shell and menu system, etc. Any subsequent users that you initialize with the modified or new template will have the new functionality that you have defined.

4.4 Different File Systems

When you initialize a user on the system, a directory is created called his individual workarea. This is the user's home directory where the login and control files and any iDIS or application workareas reside. The default file system that is used in creating the individual workarea is /usr. If you have additional hard disks (Winchesters in a Peripheral Expansion Chassis or an SMD drive) you may wish to set up the user's home directory on one of the other hard disks to balance the utilization of disk space. Group workareas and public workareas may also be placed on alternate file systems.

4.5 System Security

After system installation and set up, but before the system goes into multi-user operation, you should make the administration login IDs secure by giving them passwords. Within iDIS, you must change the password for idis and ilna (if you are in the network). For XENIX, you must change the password for root. To modify a password in idis, use the site function **:adm cpw** < **cr** > from any menu. In XENIX use the **passwd** command as root.

When creating a user, it is recommended to always create a password. When you create a password, an encrypted entry is entered into the password file. The entry is encrypted so even if people can read the password file, they cannot get the password information. It is **very** important to remember the password.

After the user has been set up, he may change his own password within iDIS. This option (select **:adm cpw** from any menu) is useful for periodically changing passwords to maintain optimum security. If the administrator wishes to maintain passwords, the site administration password selection, like any other menu selection, can be disabled prior to the initialization of the user with the Modify Template menus (see section 4.12).

4.6 About Groups

Groups are collections of users that are allowed to share files. When you create a group, creating a group workarea is optional. Group

file sharing within iDIS is only allowed within group workareas. If a group workarea is not created, the main purpose for having a group is the ability to mail to all group members by sending mail to the group name.

When the administrator creates a group, a group manager is specified. The group manager is then responsible for maintaining the group membership list. If the administrator wants to control group membership lists, he should specify himself (idis) as the group manager.

The group name is similar to a user name (or login ID). It must not conflict with names of other users or groups. When a group workarea is created, its structure is similar to an individual workarea, with subdirectories for iDIS features and applications.

4.7 About Public Workareas

Public workareas and group workareas are similar, except that with public workareas there is no restriction on who may use them. The public workarea names must be different than any existing user, group, or other public workarea name. The workarea will have the same structure as the individual and group workareas, with subdirectories for all iDIS features and applications. iDIS provides a public workarea called "samples" in the user file system containing examples for several iDIS application packages.

4.8 Network Considerations

If you have a network environment, there are additional considerations in initializing users, groups, group workareas, and public workareas. There is one additional administrative role available in the network environment to allow the distribution of the administrative functions. A login ID supplied with iDIS, called ilna, is the logical network administrator and provides the functionality to perform network configuration and maintenance. Another administrative role is the sub-network administrator, and is generally associated with the idis login. The key operator role can perform administrative functions on multiple nodes.

When a login ID is created, a user ID number is assigned that identifies all the user's files. The login ID and the user ID numbers are information that is used all around the network. Normally the user ID number is generated automatically by the system when you create a user. The system allocates 200 user IDs by default for every subnetwork that is added to the network. This allocation limits you to about 160 subnetworks on a network before allocated user ID

numbers run out. In larger networks you may want to decrease the number of allocated user ID numbers per subnetwork, but it should be done when you are planning your network. The allocation of the range of user IDs occurs when you initialize a subnetwork. Refer to the *OpenNET™ Planning and Design Guide* for further details.

When you initialize a user, there is an entry in the User Initialization form for specifying the user ID rather than letting the system generate one automatically. If you enter a user ID number (rather than letting it generate automatically) it should stay within the allocated range specified when that node or subnetwork was initialized.

The same allocation events take place with groups and group ID numbers. However, since there are usually fewer groups on the network than users, in most cases you will not have to be concerned with group ID allocation.

When a user is initialized within the network environment, the adminstrator can specify which node within the subnetwork will be the user's home node (where his files physically reside). The subnetwork administrator should perform some planning before initializing users to try to balance both the utilization of disk space and of processing time. An attempt should be made to evenly distribute the users on all user and execution nodes.

The group workareas and public workareas were also designed to be accessed across the network. The subnetwork administrator should try to determine where the majority of the users' workareas will reside, and try to place the workareas on nodes to minimize network traffic, yet maintain sufficient disk space. A secondary consideration is if a workarea is going to be quite large, it may be useful to place it on a node where there is a tape backup device.

4.9 Setting Up a New User

The following procedures are for creating users in the iDIS environment. You must log in as idis to perform these procedures.

1. Log in as idis.
2. When the iDIS Top menu appears, make the following selections in the following menus:

Top	**set**
Asettop	**sys**
Asystop	**user**
Auser	**init**

   or, to select ahead enter **s s u i** <**cr**> from the Top menu.

3. The Initialize a User menu will appear on the screen (as shown in Chapter 2). Use < **TAB** > to move between the fields. The Login Id, First Name, and Last Name entries must be entered before the form can be completed. Enter each item as directed below:

Login Id — Login ID can be from 3-to-8 lowercase letters or numerals and must start with a letter. Special characters (such as !@#&#) are not allowed.

Password — Password is an optional entry. Select either **yes** to set up a password, or **no** for no password. If you select **yes**, you will be prompted for the password after you complete the form (so it won't appear on the screen).

HOME Node(v) — The HOME Node is the node where the user's files will reside. This entry has no meaning on a standalone system.

When the screen first appears the node that appears is the node that you are logged in on. To specify nodes, press the < **SPACE BAR** > until the appropriate node appears.

HOME File System(v) — The file system that the user's files are located on within a node. Defaults to /usr. This selection is only useful when multiple Winchesters are attached to the system. Press the < **SPACE BAR** > until the appropriate file system appears. In the network environment, the file system is that specified on the node in the HOME Node field.

Template(v) — This field specifies the authority that the user will have when initialized. Unless you have created additional templates, (see section 4.11) the following user types are available:

iDISuser—is allowed to access the iDIS features, file management menus, mail, and any additional application software you may have available.

KeyOperator—has the same functions available as the iDIS user, plus additional commands to monitor the status of the system, kill user processes, and perform archival backups.

XENIXuser—is a user that is going to only use the XENIX shell and not access the iDIS menus. Typically this user needs to only access a certain application software package, or to perform software development.

iDISdeveloper—is allowed the same functions as the iDIS user, plus all programming features of both iDIS and iMENU (if included in your system). Note that you must set up the menu system as a resource (see procedure in section 6.17).

Scroll through the user type templates by pressing the <**SPACE BAR**>, until the appropriate one appears.

`Personnel Directory Information:` items that are included in the personnel directory. This information is available for browsing by all users. It is valuable in finding a user ID when sending or receiving mail. Only the first and last names are required to complete the form. You can use the other optional entries to include pertinent information.

`User ID generation:` each user has a unique user ID number. All files have a user ID number attached that identifies the owner of the file. Normally, the system assigns this number when the user environment is created (automatic generation). However, in the network environment it may be useful to assign specific numbers to specific locations. The possible range that can be entered must be within the valid range specified when the subnetwork is initialized.

To complete the user definition, press <**CTRL-e**> when all the fields have been specified. If you said "yes" to the password option, you will be asked to enter the password for the user. The password must be at least five characters long. The system will indicate that the transaction is being built, then display:

```
Do you wish to initialize another user (y or n)?
```

If you wish to add another user, enter **y** <**cr**> and repeat step 3. If not, enter **n** <**cr**> and then <**cr**>.

4. When the Auser menu appears again, you will see a "Pending Transactions" message at the bottom right of the menu. To actually set up the user(s) you defined in step 3, you must apply those transactions. Select **trans** <**cr**> from the Auser menu.

5. When the Atrans menu appears, you should select view to make sure that all the user definitions you created are present. If they are not there, repeat step 3. If present, press <**cr**> to display the Atrans menu again.

6. Select **sched** < **cr** > to schedule the transactions. You will be asked if you want to defer the transaction to a later time or apply it immediately. If your system or network is being heavily used, it might be better to schedule the transaction for a time of lower system utilization.

NOTE

You should monitor the progress of the transaction with the **tstat** selection in the Atrans menu.

7. Once the transaction has completed, you should go to the Top menu (enter **.s**). Select the **mail**, and **read**. Read each item to ensure that all the transactions occurred successfully. If an error message occurred, remove the user (section 4.10) and repeat steps 1 through 6 for that user.

This completes the procedure for setting up the user. Refer to Chapter 6 to make sure that the resource assignments have been made. It may be a good practice to log in as the new user to make sure that the process worked as expected.

4.10 Deleting a User

The following procedures are for deleting users in the iDIS environment. You must log into idis to perform these procedures. The user's files should be archived before you delete the user, since this procedure will delete all of the user's files.

1. Log in as idis.
2. When the iDIS Top menu appears, make the following selections in the following menus:

Top	**set**
Asettop	**sys**
Asystop	**user**
Auser	**xdel**

Or, to select ahead enter **s s u x** < **cr** > from the Top menu.

3. The Delete a User form will appear on the screen. Specify the login ID of the user you wish to delete and press < **CTRL-e** >. The system will ask:

```
Confirm that you wish to delete the files of user
Enter y or n
```

If you answer **n**, the operation is cancelled; the user will not be deleted. Enter **y** to delete the user. After the deletion has occurred you will be asked:

```
Do you want to delete another user?
```

If **y** < **cr** >, repeat this step. If **n** < **cr** >, press < **cr** > to display the Auser menu.

In the lower right-hand area of the screen, there should be a highlighted "Pending Transactions" message.

4. Select **trans**, then **sched** to schedule the transactions. You will be asked if you want to defer the transaction to a later time or apply it immediately. If your system or network is being heavily used, it might be better to schedule the transaction for a time of lower system utilization.

   NOTE

   You should monitor the progress of the transaction with the **tstat** selection in the Atrans menu.

5. Once the transaction has completed, return to the Top menu (enter **.s**). Select the **mail**, and **read**. Read each item to ensure that all the transactions occurred successfully. If an error message occurred, repeat steps 1 through 4 above for that user.

This completes the procedure for deleting a user. If the deleted user was designated as a group manager, you must change the group manager.

4.11 User Template Maintenance Procedures

To perform these procedures, you must be logged in as idis. Before beginning any of these procedures for the first time, review the complete description of the menus and selections involving templates in section 2.5.

4.11.1 Creating a New User Template

The first step for creating a new user template, involves choosing a name for the new template and then copying one of the existing templates (whose characteristics most closely match your requirements). The copying step or initialization process creates a new template identical to an existing template. The modification process (section 4.12) provides the procedures to tailor the new template to fit your requirements.

1. Log in as idis.
2. When the top menu appears, make the following selections in the following menus:

Top	**set**
Asettop	**sys**

Asystop **user**
Auser **utemp**

Or, to select ahead, enter **s s u u** < **cr** > from the Top menu.

3. When the Atempl menu appears, select "init—Initialize a template."
4. When the Atempli form appears enter the name you have chosen for the new template.

   Press < **CTRL-e** > to complete the entry.
5. A dynamic list of templates will appear and the system will prompt you to select one. Select the template whose characteristics most closely match the new template you are creating.

   The following messages will appear on your screen.

   One moment, building the *new template name* template ...

   The *new template name* template has been initialized.
6. You have now created a new template that is identical to the one you selected to copy. To customize the new template you must further modify it to match your individual site requirements. Press < **cr** > to continue.
7. From the Atempl menu, select "mod—Modify a template." A list of existing templates will appear.
8. Select ***template name*** that you initialized. Press < **cr** >.
9. The Modify Template menu (Atemplm) will appear.

4.12 Modifying User Templates

To begin any of the following procedures you must be at the Atemplm menu. The various template modifications from this menu are as follows:

Section	Procedure
4.12.1	Update template comment file
4.12.2	Reset default editor
4.12.3	Modify menu system characteristics
4.12.3.1	Initialize menu system access
4.12.3.2	Modify menu system access characteristics
4.12.3.2.1	Modify menu system deauthorization
4.12.3.2.2	Modify menu system login
4.12.3.2.3	Modify menu system profile
4.12.3.2.4	Modify menu system home path
4.12.4	Modify shell profiles
4.12.4.1	Modify C shell
4.12.4.2	Modify login shell

Section	Procedure
4.12.4.3	Reset mail defaults
4.12.4.4	Modify standard iDIS user profile
4.12.4.5	Modify current resource assignment file
4.12.5	Modify resource access rights
4.12.6	Modify login shell and menu system subshell
4.12.7	Completing modification

4.12.1 Modifying the Template Comment File

A comment file is provided with each template. There are no specific requirements for updating this file. However, it is useful to have the comment file serve as a log or summary that describes the essential characteristics of the template. After you have completed all modifications to a template, reflect these changes in the comment file.

1. From the Atemplm menu, select "commt—Modify comment file."
2. You will now be in the comment file set up for the *template name* template. Using appropriate text editor commands, enter information that describes the characteristics and/or changes you have made to the new template. Save all changes and exit the file.

4.12.2 Changing the iDIS™ File and Menu Development Editors

This selection allows you to specify the editor that will be used for all iDIS "text editor" operations. This includes such activities as mail message composition and file management edit operations.

1. From the Atemplm menu, select "edits—Modify iDIS file/menu development editor." A form (Atemplme) appears with the following entries:

```
iDIS file editor(V):  vi

Menu development editor(v):  vi
```

   The system default editor is vi. Other possible choices are Q-OFFICE, iWORD, and Lyrix. Successively press the < **SPACE BAR** > to display these choices for each field, and press < **TAB** > to toggle betweeen the iDIS file editor and menu development editor. Note that the menu development editor is specified whether or not a user is a menu developer.

   Make certain that the chosen editor is installed and accessible to the users.

2. Enter <**CTRL-e**> to complete the form, then <**cr**> to return to the parent menu.

4.12.3 Modifying Template Menu System Characteristics

From the Atemplm menu, select "menus—Modify menu system characteristics." The Atemplmm menu appears. You can initialize a menu system access for a template or modify an existing access from this menu. Menu access is defined as those menu systems the user is authorized to use. For example, the XENIXuser template has no menu system access; the KeyOperator and iDISuser templates provide only iDIS system access. The iDISdeveloper template has iDIS and iMENU access. In the event a new menu system were developed, user templates could be developed or modified to authorize access to the new menu system for subsequently initialized users.

4.12.3.1 Initializing a Template Menu System Access

1. From the Atemplmm menu select **init** <**cr**>. A dynamic list of menu systems will appear. Specify the menu system you wish to access, or **NEW** for a new menu system not on the list. Make the appropriate selection and press <**cr**>.
2. If you selected a menu system from the list, you will be able to view a list of templates which currently have access to the specified menu system. If you selected **NEW**, go to step 4. Select the template that most closely approximates your intended use. When the menu system access is complete, return to the Atemplmm menu by pressing <**cr**>.
3. Select **view** <**cr**> to verify that the menu system access you just initialized for this template appears on the list. Press <**cr**> to return to the Atemplmm menu. If further modification is required, refer to section 4.12.4.2.
4. If you select a new menu system, you will be prompted for the name of the new menu system. A form will be displayed where you must enter the path of the new menu system's home directory. The menu system access will be built. Return to the Atemplmm menu by pressing <**cr**>.
5. Select **view** <**cr**> to verify that the menu system access you just initialized for this template appears on the list. Press <**cr**> to return to the Atemplmm menu. If further modification is required, refer to section 4.12.4.2.

4.12.3.2 Modifying Menu System Access Characteristics for a Given Template

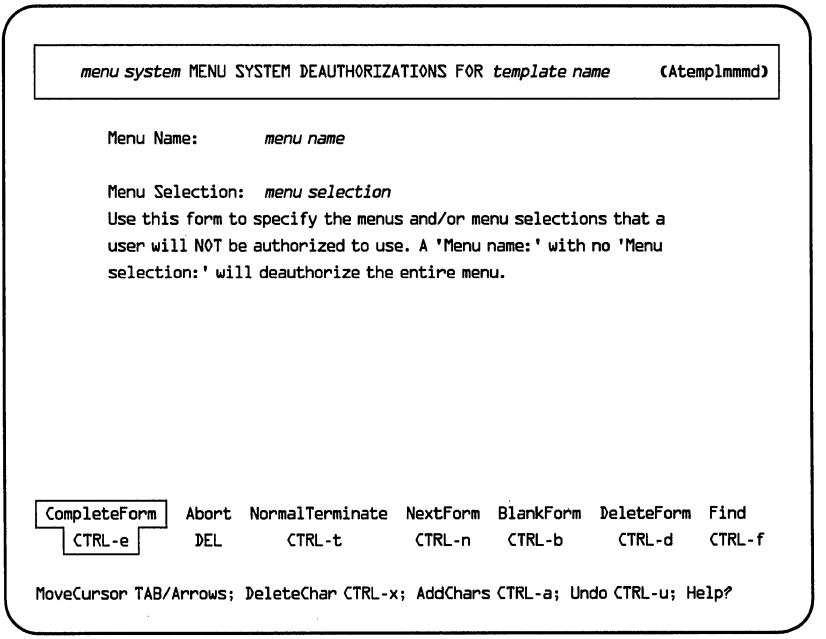
From the Atemplmm menu select "mod—Modify a menu system access for this template." A dynamic list (Atemplmmm) appears with

the names of the menu systems this template can access. Select the menu system whose access characteristics you wish to change. The Atemplmmm menu comes up with four selections: deauth, login, pro, and home.

4.12.3.2.1 Modifying Menu System Deauthorization

Deauthorization specifies what menus and menu selections a user will not see.

1. From the Atemplmmm menu, select "deauth—Modify template's menu system deauthorizations."
2. The Atemplmmmd form (Figure 4-1) appears. Specify the menus and/or menu selections that a user will not be authorized to use. If you specify a menu name without the menu selection, the entire menu will be deauthorized. After entering the appropriate values, press <**CTRL-E**> and then <**CTRL-t**> to complete the form.



PPS1-743

Figure 4-1. Deauthorization Specification

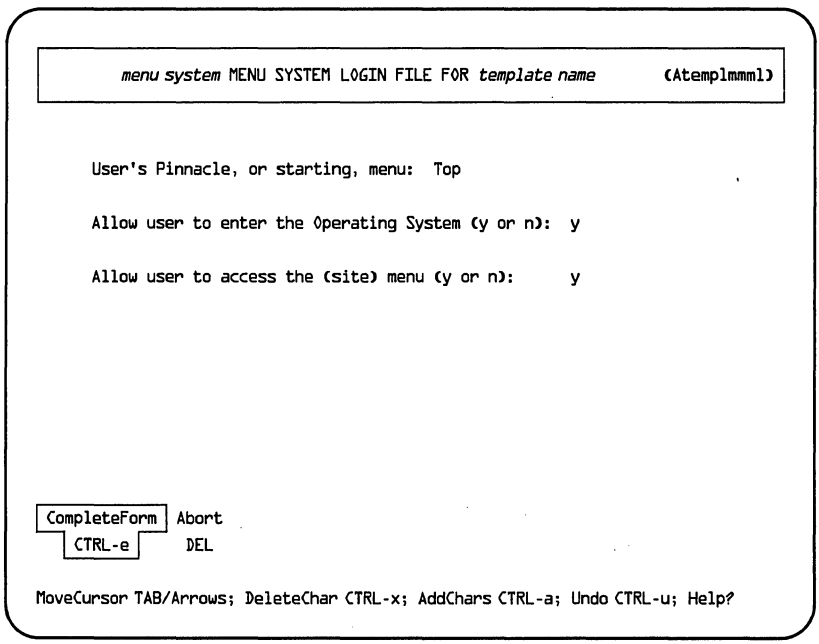
4.12.3.2.2 Modifying Menu System Login

The menu system login specifies a user's pinnacle (top) menu and whether or not the user can access the site menu or enter the operating system.

1. From the Atemplmmm menu, select "login—Modify template's menu system login file."
2. The Atemplmmml form (Figure 4-2) comes up. Specify the user's pinnacle menu, and whether or not the user can access the operating system or site menu.

4.12.3.2.3 Modifying the Menu System Profile File

Refer to the *iMENU Developer's Reference* for details on what information can be included in a profile and how the information is expressed.



PPS1-744

Figure 4-2. Login Characteristics

1. From the Atemplmmm menu, select "pro—Modify template's menu system profile file."
2. You are placed in the menu system's login profile file (Figure 4-3). Use your text editor commands to modify the profile file. Save all changes.

4.12.3.2.4 Modifying the Menu System Home File Path

Home directory information is needed so that the user initialization transactions will know where to place their control information.

NOTE

If you just completed template initialization (the home path is already specified), then you do not need to perform this procedure. Only use this procedure to change an existing template's home path.

1. From the Atemplmmm menu, select "home—Modify template's menu system home path."
2. The Atemplmmmh form (Figure 4-4) comes up. Redefine the menu system's home path.

4.12.4 Modifying the Template Shell Profiles

Selecting "pro—Modify shell profiles, mailrc, current resource" from the Atemplm menu, the Atemplmp menu comes up. Selections from this menu allow you to modify the various shell profiles that are executed when a user logs into the system or performs mail operations.

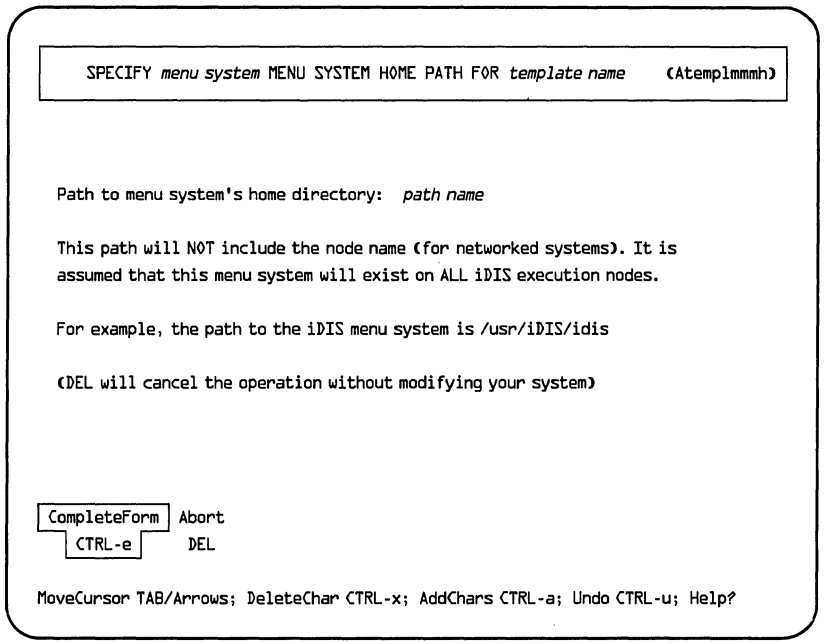
4.12.4.1 Modifying the Template C Shell Profile

This file is automatically executed every time a C shell is invoked. This profile will not be executed unless a user has the C shell specified as either his login shell or his menu subsystem shell. Refer to

```
: executed when user logs into menu system
:define "SHELL=/bin/sh" e
:define "FEDITOR=/bin/vi" e
:define "SEDITOR=/bin/vi" e
:define "EDITOR=\$iDISbin/FEdit" e

"/etc/Templates/template name/menusystems/iDIS/login.pro" 5 lines, 160
characters
```

Figure 4-3. Standard iDIS™ Menu Profile File



PPS1-745

Figure 4-4. Default Menu System Home Path

the appropriate XENIX programmer's reference manual for more information.

1. From the Atemplmp menu, select "cshrc—Modify C Shell 'start' commands."
2. You are placed in the template's C shell profile file (Figure 4-5). Use your text editor to modify this file. Save all changes.

4.12.4.2 Modifying the Login Shell Profile

This file is automatically executed when the user logs on the system and has the C shell specified as his login shell. Refer to the appropriate XENIX programmer's reference manual for more information.

1. From the Atemplmp menu, select "login—Modify C Shell 'login' commands."

```
# Copyright (C) Microsoft Corporation 1984
# Example .cshrc file for demonstration C-shell account.
# Commands here are executed each time csh starts up
set noclobber                          # don't allow '>' to overwrite
set history=20                         # save last 20 commands
set cdpath=(.)                         # directory search path for cd
alias v vi                             # quick command alias
alias m more                           # quick command alias
alias print 'pr -n \!:* x lpr'         # print command alias

"/etc/Templates/template name/cshrc" 9 lines, 421 characters
```

Figure 4-5. Standard C Shell Profile File

```
# Commands here are executed for a login shell only. This
# file need not contain any commands at all. See .cshrc.
#
stty ff0 -tabs erase \^h kill \^C      # set terminal characteristics
setenv  TERMCAP /etc/termcap           # terminal data base
setenv  SHELL/bin/sh                   # use regular shell for scripts
set termtype = 'tset - -r'             # initialize and report terminal mode
set ignoreeof                          # don't let control-d logout
set path=(. /bin /user/bin)            # execution search path
set prompt=\!%                         # set prompt string (interactive
                                       # shell only. Else delete this line.)

"/etc/Templates/template name/login" 11 lines, 547 characters
```

Figure 4-6. Standard C Shell Login File

2. You are placed in the template's C shell login file (Figure 4-6). Use your text editor to modify this file. Save all changes.

4.12.4.3 Modifying the mailrc File

This file is executed every time a user uses the XENIX mail facilities. It contains various options that control the operation of the mail system and also provides the users with their own personal mail distribution lists. Refer to the *XENIX 286 User's Guide* and the *iBASE User's Reference* for more information about the mail commands that can be placed here.

1. From the Atemplmp menu, select "mailrc—Modify file containing initial mail commands."

2. You are placed in the template's mailrc file (Figure 4-7). Use your text editor to modify this file. Save all changes.

4.12.4.4 Modifying the Standard XENIX Shell

This file is automatically executed every time a user logs on the system. This profile is executed when a user has the iDIS shell, the standard XENIX shell or the visual shell specified as his login shell. Refer to the appropriate XENIX user's guide for more information.

1. From the Atemplmp menu, select "profile—Modify standard XENIX shell 'login' commands."

2. You are placed in the template's standard XENIX shell file (Figure 4-8). Use your text editor to modify this file. Save all changes.

```
# Don't modify the 'set' lines unless you are familiar with the 'mail' functions
set page=22
set autoprint
set chron
set execmail
set dot
#--------------------------------#
# You can define personal distribution lists (aliases) so that, for instance,
# you can send mail to "cohorts" and have it go to a group of people.
# To do this you need to place a line such as the following after the line
# marked "BEGIN ALIASES".
#
# alias cohorts bill bob barry betty beth bobbi
#
# Note that the word alias must begin in column 1 of the line.
#
# If the list extends past one line, it must be continued with a '\'
# (space\). For example:
#
# alias largelist bill bob barry betty beth bobbi \
#  calr claude charles cary
#----------BEGIN ALIASES----------#

"/etc/Templates/template name/mailrc" 22 lines, 754 characters
```

Figure 4-7. Standard Template mailrc File

```
: 'standard iDIS user profile'
stty ffD -tabs erase \^h kill \^C
# Initialize and report terminal type
tset -r

"/etc/Templates/template name/profile" 4 lines, 111 characters
```

Figure 4-8. Template Standard XENIX Shell File

```
5-in-diskette:unassigned
8-in-diskette:unassigned
9tracktape:unassigned
printer:unassigned
streamertape:unassigned
directory:unassigned
curdev:unassigned
3214SNA-gate:unassigned
3270BSC-gate:unassigned
vpm188:unassigned

"/etc/Templates/template name/finder.cur" 10 lines, 220 characters
```

Figure 4-9. Template "Current Resource" File

4.12.4.5 Modifying the Template Current Resource File

The current resource file has two fields per line. The leftmost field is the resource type and the rightmost field is the name of the current resource. All templates initially have the resource names unassigned.

To establish a particular resource name as the current resource for a template, find the line with the resource type of interest and replace the word "unassigned" with the desired resource name.

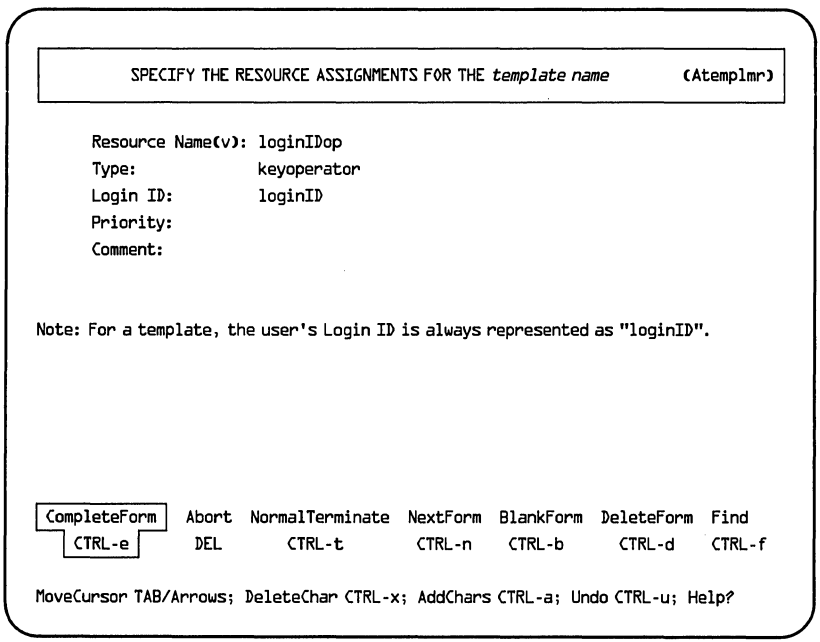
In addition, if the resource type is 5-in. diskette, 8-in. diskette, streamer tape, 9-track tape or directory, locate the line with "curdev" in the leftmost field and replace the word "unassigned" with that resource type.

1. From the Atemplmp menu, select "res—Modify 'current resource' file."
2. You are placed in the template's "current resource" file (Figure 4-9). Use your text editor to modify this file. Save all changes.

4.12.5 Modifying the Template Resource Access Rights

This form is used to specify resource assignments that are made automatically when a user is initialized with this particular template. It can save you an extra administrative task, i.e. the KeyOperator template performs the "keyoperator" assignment. However, be aware that if you do specify resource assignments, each user who is added will create at least one entry in the resource assignment file. The more entries you have, the longer it takes the system to search the assignment file. In some case, it may be better to use the "wild card" capability offered directly by the resource assignment maintenance facility.

1. From the Atemplm menu, select "res—Modify resource access rights."
2. The Atemplmr form (Figure 4-10) appears. Specify the resource assignments. To specify a resource, either press the < **SPACE**



PPS1-746

Figure 4-10. Form for Modifying Template Resource Access Rights

BAR > or enter the first letter of the resource you want to specify. Use the < **TAB** > key to toggle between the form fields. Refer to Chapter 2, the Araspec form, for priority information details.

4.12.6 Modifying the Template Login Shell and Menu System Subshell

This selection allows you to specify the template's login shell and menu system subshell. The login shell specifies the human interface when the user logs on the system. The choices for the login shell are:

- C shell
- iDIS shell
- standard XENIX shell
- visual shell
- other shell

Use "other shell" if you need to specify a shell not contained in the preceding list. If you do specify "other shell" you will need to specify the execution path name of the shell, e.g., /bin/ksh. Note that an iDIS menu system user is not required to have a login shell of "iDIS shell." He/she may have another shell and enter the command "/iDISboot/iDIS" to invoke the iDIS menu system.

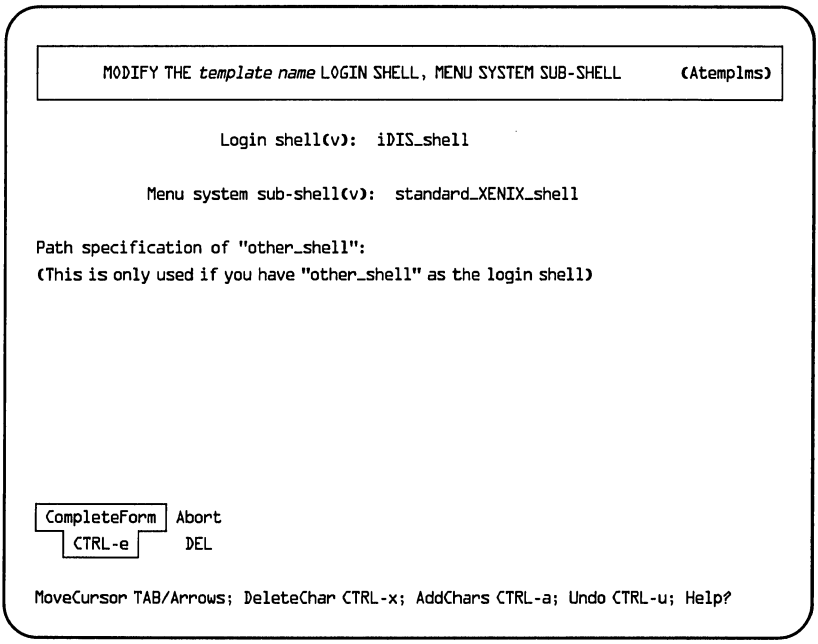
1. From the Atemplm menu, select "shell—Modify login shell, menu system sub-shell."
2. The Atemplms form (Figure 4-11) appears. Use the < **SPACE BAR** > to cycle through the standard selections and the < **TAB** > key to toggle between the login shell and menu system subshell specifications. Press < **CTRL-e** > to complete the form.

4.12.7 Completing Template Modification

To complete the modification, enter **done** < **cr** > from the Atempl menu.

4.13 Setting Up a New Group

In many instances, users want to legitimately access another user's files. One method of allowing shared access without defeating the security of the system is the group concept. A group is a defined set of users that share files and resources. In order for the group to take



PPS1-747

Figure 4-11. Form for Modifying Template Login Shell and Menu System Subshell

advantage of the group facilities you must first initialize it. The following procedures are provided for creating groups and group options. You must be logged in as idis to perform these procedures. When a group is initialized, a mail alias is created for this group.

1. Log in as idis.
2. When the iDIS Top menu appears, make the following selections in the following menus:

Top	**set**
Asettop	**sys**
Asystop	**group**
Agrp	**init**

   Or, using select ahead, enter **s s q i** <**cr**> from the Top menu.
3. The Initialize a Group form (Agrpi) will appear. The Group Id, Group Manager's Login ID, and "Build workarea" fields are required entries. Entry descriptions are listed below:

`Group ID`	This must be from 3 to 8 lowercase letters or numbers and must begin with a letter; special characters are not permitted.
`Group Manager's Login ID`	The Group Manager is the user who is allowed to maintain the group membership lists. The group manager must have already been created.
`Build a workarea for this group (y or n)?`	Enter **y** if you want the group to have a common area to maintain shared files. Enter **n** if it is not necessary to have a separate area for the group.
`Description`	Optional information that is entered into the personnel directory for the group.
`HOME Node(v)`	The HOME Node is the node where the group files will reside. This entry has no meaning on a standalone system or if you choose not to build a group workarea. When the screen first appears the field is blank. To change nodes, press the < **SPACE BAR** > until the appropriate node appears.
`HOME File System(v)`	The file system that the group files will be located on within the HOME Node. This entry has no meaning if a group workarea was not built. Defaults to /usr on the node you are logged into. This selection is only useful when multiple Winchesters are attached to the node specified in the HOME Node field. Press the < **SPACE BAR** > until the appropriate file system appears.
`Group ID generation`	Each group has a unique number associated with all files owned by group members. This number is unique for each group and determines which group a file belongs to. Normally, the system assigns this number (automatic generation). However, in a large network environment it may be useful to assign specific numbers to specific groups. The possible range that can be entered must be within the range of valid numbers for the subnetwork.

To complete the group definition, press < **CTRL-e** > when all the fields have been specified. The system will indicate that the transaction is being built, then you will see the message:

```
Do you wish to initialize another group? (y or n)
```

If yes, enter **y** < **cr** > and repeat step 3, or enter **n** < **cr** > and then < **cr** > to continue.

4. When the Agrp menu appears again, you will see a "Pending Transactions" message at the bottom right of the menu. To complete the group initialization transaction, it must be applied. Make the **trans** selection to schedule the transaction.

5. Select **sched** to schedule the transactions. You will be asked if you want to defer the transaction to a later time or apply it immediately. If your system or network is being heavily used, it might be better to schedule the transaction for a time of lower system utilization.

   NOTE

   You should monitor the progress of the transaction with the **tstat** selection in the Atrans menu.

6. Once the transaction has completed, you should check your mail messages. Select the **mail**, and **read**. Read each item to ensure that all the transactions occurred successfully. If an error message occurs, remove the group (section 4.14) and repeat steps 1 through 5 for that group.

This completes the procedure for setting up the group. Refer to the procedures in section 4.15 to add users to the group.

4.14 Deleting a Group

The following procedure removes a group from the system or subnetwork. The group mailing alias is deleted, and if a group workarea exists it will be deleted. All files in the group workarea will also be deleted. If you wish to save any of the data in the group workarea, make sure it is either archived or moved to another workarea before performing this procedure.

1. Log in as idis.
2. Make the following menu selections:

Top	**set**
Asettop	**sys**
Asystop	**group**

   Or, to select ahead, enter **s s g** < **cr** > from the Top menu.

3. You may have to view the group names to determine the group to delete. Select **view** from the Agrp menu. Once you have found the group to delete, press < **cr** > to return to the Agrp menu.
4. Select **xdel** to delete a group. A form will appear, enter the group name, then press < **CTRL-e** > . You will be asked to confirm that

you wish to delete the group. Enter **y** < **cr** > to proceed. If you enter **n** < **cr** >, the operation is cancelled.

5. You will be asked if you wish to delete another group. If you enter **y**, the Delete a Group form reappears.

6. When the Agrp menu appears again, you will see a "Pending Transactions" message at the bottom right of the menu. To complete removal of the group(s) you must apply those transactions. Make the **trans** selection from the Agrp menu.

7. Make the **sched** selection to apply a transaction. You will be asked if you want to defer the transaction to a later time or apply it immediately. If your system or network is being heavily used, it might be better to schedule the transaction for a time of lower system utilization.

NOTE

You should monitor the progress of the transaction with the **tstat** selection in the Atrans menu.

This completes the procedure for deleting a group.

4.15 Adding New Members to a Group

This must be performed by the group manager (the group manager may be the administrator).

1. Log in as the group manager.

2. From the Top menu, select the following:

```
Top     :
site    adm
Admin   lists
Amgml   add
```

   Or, to select ahead, enter : **a l a** < **cr** > from the Top menu.

3. The list of available groups will appear. Move the cursor to the group you are going to add users to and press < **cr** >.

4. The Amgmla form will appear. Specify the login IDs of the existing users that you want to add to the group. Press < **CTRL-e** >, then < **cr** > when you have completed the form.

5. Select **trans**, then **sched** to schedule the transactions. You will be asked if you want to defer the transaction to a later time or apply it immediately. If your system or network is being heavily used, it might be better to schedule the transaction for a time of lower system utilization.

4.16 Deleting Members from a Group

This must be performed by the group manager.

1. Log in as group manager.
2. Select:

   site `adm`
   Admin `lists`

3. The Maintain Group Membership List menu will appear. If you do not know the login ID(s) of the users that you want to remove from the group, enter **v** < **cr** > (to view), then select the name of the group, then < **cr** >. The login IDs of the members will appear. When the group membership menu list appears, select **x** < **cr** > to delete a login ID.
4. Specify the login IDs of the users you want to remove from the group and press < **CTRL-e** >.
5. Select **trans** from the Maintain Group Membership menu. Select **sched** to schedule the transactions. You will be asked if you want to defer the transaction to a later time or apply it immediately. If your system or network is being heavily used, it might be better to schedule the transaction for a time of lower system utilization.

   NOTE

   You should monitor the progress of the transaction with the **tstat** selection in the Atrans menu.

This completes the procedure for deleting a member from a group.

4.17 Setting Up a Public Workarea

To initialize a public workarea, perform the following steps.

1. Log in as idis.
2. Make the following selections from the following menus:

   Top `set`
   Asettop `sys`
   Asystop `pubw`

   Or, to select ahead, enter **s s p** < **cr** > from the Top menu.

3. You should now be in the Public Workarea Maintenance menu. You may want to display the names of the other public workareas to make sure that you are not trying to create a workarea

that already exists. To display the public workareas enter **view** < **cr** >. The screen displays:

```
Public workarea name          Pathname
====================          ========
```

and the existing public workareas will be listed. Press < **cr** > to continue.

4. To create a new public workarea, select **init** < **cr** > from the Apub menu. The Initialize a Public Workarea (Apubi) form will appear. First, enter the public workarea name. It may have from 3 to 8 alphanumeric characters (no special characters).

5. If you are in a network environment, you may wish to specify the home node for the public workarea. If you do not specify the home node, the default node is the node that you are now logged in on.

6. If you have a 311 Peripheral Expansion Chassis or SMD disk drive attached to the HOME Node, and you want the new public workarea to reside there, move the cursor to the HOME File System field and press the < **SPACE BAR** > until the file system appears that you want the workarea to reside on. The default file system is /usr. Note that this is a field of all possible file systems, and you should be careful NOT to choose one that does not exist.

7. Enter the optional description (if desired). This information will appear in the personnel directory. Press < **CTRL-e** > and you will be asked if you want to initialize another public workarea. Enter **y** < **cr** > to repeat steps 1 through 6. Enter **n** < **cr** >, then < **cr** > to continue. The Apub menu will appear. Make the selection to schedule a transaction. You will be asked if you want to defer the transaction to a later time or apply it immediately. If your system or network is being heavily used, it might be better to schedule the transaction for a time of lower system utilization.

NOTE

You should monitor the progress of the transaction with the **tstat** selection in the Atrans menu.

8. When you complete the transaction operations, read your mail to check the status. Make sure that it indicates a successful completion.

4.18 Deleting a Public Workarea

To delete a public workarea, perform the following steps. If you want to save any of the files that are in the public workarea, you must

archive them before performing this procedure. All files in the public workarea will be deleted.

1. Log in as idis.
2. Make the following selections from the following menus:

Top	**set**
Asettop	**sys**
Asystop	**pubw**

   Or, to select ahead, enter **s s p** <**cr**> from the Top menu.
3. You should now be in the Public Workarea Maintenance menu. If you do not know the exact name of the public workarea you want to delete, you may want to view the list of existing workareas. To display the public workareas enter **view** <**cr**>. The screen displays:

   ```
   Public workarea name          Pathname
   ====================          ========
   ```

   and the existing public workareas will be listed. Press <**cr**> to continue.
4. To delete a public workarea, enter **x** <**cr**> from the Apub menu. The Delete a Public Workarea form will appear. Enter the public workarea name, then press <**CTRL-e**>. You will be asked to confirm that you want to delete it. Enter **y** <**cr**>. You will be asked if you want to delete another workarea. Enter **y** <**cr**> and repeat steps 2 through 4 or enter **n** <**cr**>, then <**cr**> to continue.
5. When the Apub menu reappears, select **trans**. Select **sched** to schedule the transactions. You will be asked if you want to defer the transaction to a later time or apply it immediately. If your system or network is being heavily used, it might be better to schedule the transaction for a time of lower system utilization.

   NOTE

   You should monitor the progress of the transaction with the **tstat** selection in the Atrans menu.

6. When you complete the transaction operations, read your mail to check the status. Make sure that it indicates a successful completion.

5 PRINTER ADMINISTRATION

5.1 Introduction

Printer administration is the function of making sure that all printing devices on a system or network are kept running. This may include performing minor maintenance on a printer, checking cables, verifying and/or modifying software, or even checking the operational status of the network.

This chapter includes information required to perform routine printer administration, which is usually performed by a key operator, and maintenance and troubleshooting procedures that should be performed by the iDIS administrator or root superuser.

5.2 iDIS™ Printer Administration

The iDIS printer adminstration menus are available from the key operator menu selection and provide the basic print control functions. These functions are available to all of the administration login IDs, whereas the iDIS users perform a limited set of printer functions.

Before any printer administration can be performed, the printer must be specified as a resource and assigned to users via the Distributed Resource Management menus (see Chapter 6). Some software packages have independent printer queues (Q-OFFICE by Quadratron, Inc., for example) from the rest of iDIS. Refer to section 5.5 for help on fixing those problems.

To access the iDIS printer administration functions, log in as an iDIS administrator and select:

Top `key`
Aktop `ptr`

To select ahead, enter **k p** <**cr**> from the Top menu.

5.2.1 Is the Printer Operating?

If a printer has stopped operating, the first thing to check is the printer itself. Make sure that the printer is ONLINE, that it has

paper and that the ribbon has not run out. If you have a serial printer, make sure that the printer is on the port that is configured for a printer. Also, you may want to double check the switch settings on the printer. Sometimes wires within a print cable can break, and if no other recovery procedures fix your printer problem, then change the cable. An additional item to check is that the printer you specified as a resource is the same printer that was configured by the system. A way to check this is to make the **pcap** selection from the Printer Operations menu to display the printer capability file (/etc/printcap), which is described in the following section.

5.2.2 The Printer Capability File

The printcap file contains information that the system uses to control printer operations. In a network, each printer is controlled by the printcap file residing on the system it is physically connected to. In the printcap file, there is an entry for each printer that is located on the system. The entry is several lines long, and typically contains:

```
lp|C.Itoh CI-3500:\
    :ic:br#9600:fs#1:\
    :lp=/dev/ttyc2:sd=/usr/spool/lpd:\
    :bd=/bin:af=/usr/adm/slp.acct:\
    :if=/usr/lib/pf/ci3500f:\
    :of=/usr/lib/pf/ci3500f
```

where the following parameters are pertinent:

`lp`	is the device name used by the system. In this entry, lp is the default printer name. This value must match the resource entry in the resource specification file.
`br#9600`	is the baud rate of the printer. This is only used on serial printers. This value must match the setting on the printer. The baud rate shown is 9600.
`lp=/dev/ttyc2`	indicates that the printer is connected to serial port ttyc2. You must have the printer connected to the port defined here, and the port must be disabled.
`sd=/usr/spool/lpd`	is the name of the directory where the files are queued. This will vary if there is more than one printer on the system.

`if=/usr/lib/pf/ci3500f`
`of=/usr/lib/pf/ci3500f`

These are the input and output filter names for the printer. The print filter allows only specified characters to be sent to the printer.

Printer Name	Filter Name
C.Itoh CI-300	/usr/lib/pf/ci300f
C.Itoh CI-600	/usr/lib/pf/ci600f
C.Itoh CI-3500	/usr/lib/pf/ci3500f
C.Itoh F10-40/55	/usr/lib/pf/ci1055f
Mannesmann-Tally 440	/usr/lib/pf/mt440f
Silver Reed EXP500	/usr/lib/pf/exp500f
Silver Reed EXP550	/usr/lib/pf/exp550f
Silver Reed EXP770	/usr/lib/pf/exp770f
Smith Corona D-80	/usr/lib/pf/scd80f
Smith Corona D-200	/usr/lib/pf/scd200f
Smith Corona D-300	/usr/lib/pf/scd300f

5.2.3 The Printer Queue

If the printer is physically functional, select the **show** option from the Printer Operations menu. You will then have to select the printer queue that you want to examine. If the printer is not shown in the list to select from, then it has been deleted from the resource specification or assignment files. Refer to Chapter 6 and make sure that the printer is properly specified. An example status is shown below:

```
                    PRINT QUEUE - printer name
PRINTER STATUS: printer status message
job status      size    owner   filename
-------------------------------------------------------------
29    active    300     root    /etc/motd
30    1st       415     idis    /etc/drm/finder.rsrc
31    2nd       239     idis    /etc/drm/finder.assign
```

This example was generated by sending the resource and assignment files to the printer in the Resource Maintenance menu. The Printer Status message indicates the operational condition of the printer interface. The job number uniquely identifies the job to the system. The status indicates the file's rank or priority in the queue (in this example, finder.rsrc will print after /etc/motd) and will indicate if the job is active). Size is the number of bytes in the file, owner is the owner of the file, and filename is the name of the file to be printed.

5.2.4 Fixing the Print Spooler

There are several selections in the iDIS menus that allow you to fix print spooler problems should they occur. The first thing to check is

the PRINTER STATUS message from the show selection. Typical messages and their significance include:

lp is ready and printing

Indicates that the printer was successfully recognized and initialized. If the printer is not printing and this message appears, this can indicate that the printer spooler software is inactive, a printer error occurred after the print job was initiated, or an illegal control sequence in the file caused the printer to hang.

waiting for lpr to become ready (offline ?)

Indicates that the printer program cannot start the printer. First, check if the printer is offline, or may also indicate that there is a hardware problem (maybe the cable is loose).

If files sent from some time ago are still present in the queue then you should try to restart the printer with the "rest" selection in the printer operation menu.

If you printed a file that caused the printer to hang, then to fix the problem you should make the **halt** selection, then delete the file that caused the hang with the **xdel** selection. To eliminate the possibility that the printer is in a non-operational state, you should turn it off and then on to allow reinitialization. Finally, use the **rest** selection to restart the spooler.

If the printer is still not operating correctly, you must enter the XENIX operating system to make additional checks and corrections.

5.3 XENIX Printer Administration

If you have exhausted the iDIS printer administration functions without correcting printer problems, you then must enter XENIX as the superuser. You should take into consideration that caution must be exercised as the superuser. If you are using a serial printer, then you must also be concerned with the /etc/ttys file. This file contains information on the operational status of the serial ports. A portion of a typical ttys file would look like:

```
1console
1ttyf0
1ttyc0
1ttyc1
0ttyc2
1ttyc3
```

```
-
-
16ttyc7
```

Although not all the ports are listed, notice that port ttyc2 has the number 06 preceding it. The first number indicates whether the port is enabled (number "1") or disabled (number "0"). The port should be disabled for a serial printer (use the XENIX enable & disable commands to activate or deactivate, never change the number within the file). Even if the port appears to be disabled, enable, then disable the port to reset the communication software that controls that port. (Never do an enable/disable more than once in a minute).

If you have been printing with XENIX, and perhaps other applications packages and the printer stops working, it may be caused by the printer spooler (the software that allows you to queue files). Here is a series of steps that you may perform to get the spooler working again.

1. There is a simple step that you can perform that will isolate a problem between the printer daemon (the program that controls the printer) and queueing software and the operating system and hardware. Enter the following:

   ```
   cat /etc/ttytype >/dev/printer-device-name
   ```

   where *printer-device-name* is the name of the printer in question (the default printer name is lp). If you don't know the printer device name, look in the /etc/printcap file as shown in section 5.2.2. If the printer prints the file, then the problem lies in the printer daemon or print queueing software. Proceed to the following steps. If the printer still will not print, then the problem lies in the hardware or the printer driver of XENIX. Check your printer and connections, and shut down and power down the system. You may also want to check the printer switch settings and power the printer off and back on. Power the system back up and check if the problem has been fixed. If not, call your Intel Field Representative or the Intel hotline for assistance.

2. If the printer printed with the previous "cat" command, then there is a condition in the software queueing that is causing the problem. The first thing to check is the contents of the lpd directory:

   ```
   lc -a /usr/spool/printer-device-name<cr>
   ```

   Within the directory you should see the status file, some files that consist of cf####, and df#### which are the queued files, a

.seq file, and perhaps a file called lock (some applications software may also put additional lock files in the directory). You should remove the lock file(s) and issue the following commands:

```
lprm -<cr>
lpdrestart<cr>
```

3. The spool directory should be set up in a particular way to ensure proper operation. It must readable, writeable, and executable by all users. To check, enter:

```
l -d /usr/spool/printer device name<cr>
```

The printer spool directory entry should appear as follows:

```
drwxrwxrwxr  2 bin        bin       ###  ##:##  lpd
```

The default printer directory was shown in this example. If you are viewing a another printer, the directory will have another name (such as ci300pd). The items of interest are the:

`drwxrwxrwxr` indicates the lpd is a directory (d), that the owner has read, write execute permission (the first rwx), that the group has same permissions (second rwx), and all other users have same permissions (third rwx).

If the permissions are not shown exactly as above, enter:

```
chmod 777 /usr/spool/print spool dir<cr>
```

The second item of interest is the owner, which should always be bin. If bin is not the owner, then enter:

```
chown bin /usr/spool/print spool dir<cr>
```

5.4 Network Consideration

Using the printers across the network creates special conditions that may affect the way that you perform printer recovery. When you send a file to a print queue on another node in the network, the file is actually queued on the node where the printer is physically located. If you verify the print queue and the files that you sent to the printer are in the queue, then you can be sure that the files have made it across the network. You then should check the printer node as previously described as in a standalone system. If they have not made it to the queue, you may want to check the operational status of the network and the nodes involved.

5.5 Special Printer Procedures with Q-OFFICE

The Q-OFFICE word processing software package uses its own print spooling software, which sometimes can get out of step with the iDIS/

XENIX print spooler, and may require occasional corrections. In these procedures, you must be the superuser to perform the corrections.

The XENIX/iDIS software uses a print spool directory for the default printer called /usr/spool/lpd. There can be additional spooler directories for additional printers. The Q-OFFICE printer spooler uses a separate directory to store queued files in /usr/spool/Qspool. When printing from this spooler, a lock is placed in the XENIX/iDIS print spool directory. A common problem that can occur is the Q-OFFICE printer software is interrupted, leaving the locks in the spool directories, preventing Q-OFFICE and iDIS printing for that printer. The following set of procedures provides a guideline for restoring the ability to print with Q-OFFICE in the iDIS environment.

1. As the superuser, run Q-OFFICE, select the supervisory functions, and clean the print queue for the printer causing problems. Send the files to the printer again to see if the problem is corrected.
2. If the printer is still not printing, select the Q-OFFICE Define a Printer and check to see that the printer device name is correctly entered (do they match the printcap entry?). Refer to the Q-OFFICE documentation for further details.
3. List the spooler directory for that printer by entering:

   ```
   lc -a /usr/spool/printer<cr>
   ```

   You should see a file called .seq, several files that begin with cf and df (these are the enqueued files) a status file, and a lock file. A typical problem is that the Q-OFFICE print program does not delete the lock as it should. To delete, enter:

   ```
   rm /usr/spool/printer.spool-dir/lock<cr>
   ```

   If this does not correct the problem, try also removing any locks in the Qspool directory:

   ```
   rm /usr/spool/Qspool/*.lck
   ```

   If the printer is still not printing, hardware, operating system or Q-OFFICE software problems are indicated. Call the appropriate Customer Support organization for further directions.

6 DISTRIBUTED RESOURCE MANAGEMENT

6.1 Introduction

The Distributed Resource Management (DRM) functions of iDIS are designed to allow you to easily specify the functionality and devices that you want users to access, without having to configure network software, or having to worry about where the devices or software is physically located.

Within the DRM menus, you define the resources that you want the users on the system or subnetwork to access. Then you assign those resources to users. This allows you to control which users may access defined resources.

In this chapter, you will be introduced to each type of resource available, and provided with specific instructions for each type of resource.

When your system or network is first installed, the installation programs automatically set up default resources. These include:

idis	The iDIS iBASE software
/usr, /usr2, /usr3	User file systems
5-in. diskette	Flexible drive for archive purposes
8-in. diskette	Flexible drive for archive pruposes
streamer tape	Tape drive for archive purposes
printer	Serial or parallel line printers
keyoperator	ikey login ID
lognetadmin	Logical network administrator login ID ilna.

Only the resources applicable to your system are built. When you are performing modifications or additions to resources, you must take care not to delete any existing ones, as they are essential to system operation.

6.2 Printers as Resources

A system or network can have several serial and/or parallel printers connected and configured that are available to users. The DRM feature determines which printer(s) can be accessed by different users

for the iDIS menus and application packages. This allows the administrator control over printer access and allows him to "decommission" a printer (while it's being repaired, for example) without removing it as a resource (saving time when it is working again).

6.3 Backup Devices as Resources

On a standalone iDIS system, there may be a 9-track or streamer tape device, a flexible disk drive, or a directory on a hard disk that may be available for backup and restore operations. You may want to allow some users to archive files with the flexible disk drive, some users to archive on a Winchester or SMD drive, and only the administrator to archive with the tape device.

Within the network environment, there can be several back up devices available to users within a subnetwork. There may be one 9-track tape device that you only want the sub-network administrator to use to perform backups, there could be several streamer tape devices useful for key operators to do daily or weekly backups of a particular node, and there are flexible disk drives and hard disk space that should be available to everybody to back up their own personal files or their groups' files.

One method of backing up files is to establish a group or public workarea as a backup workarea, then allow the administrator(s) to backup the Winchester disk to available tape resources. This provides for quick backup times for the users because of the relatively fast access speed of archiving to a hard disk while still having the security of having tape backup.

6.4 File Systems as Resources

There is a wide variety of configurations of hard disk drives that can be attached to a given system. These disk drives form new file systems that can be accessed and utilized for user, group, and public workareas. iDIS requires that the file systems be set up as resources before iDIS workareas can be initialized on them. File systems are automatically set up and assigned as resources during the installation process.

6.5 Application Software as a Resource

If you have added additional, non-Intel software on your system or subnetwork and you want to be able to use the same administrative and control functions that iDIS provides to control access, you must specify and assign it as a resource.

Additional software can include other vendors' application packages, or software you develop. If you are using the iMENU development software, you must first specify and assign the new menu system as a menu development resource. Then when completed by the developers, you may specify and assign it as an application resource for the end user.

6.6 Development Software as a Resource

The iMENU Development Software package is configurable under the DRM. The iMENU software is a set of tools for modifying existing menu systems or creating new ones. Setting up the iMENU software under DRM control allows the administrator to control which menu systems a developer may access.

Typically you may have one developer assigned to the iDIS menu system for routine modifications to perform site-specific customization and another developer assigned to a new menu system where a new set of applications is being integrated into the menu system. After the new menu system is developed and ready for the end user, the administrator must assign it as an application to the end users.

6.7 Communication Software Resources

The communication facilities that can be put under DRM control are the terminal emulation (tty passthrough) via modem or local area network, and several host communication software packages.

The tty passthrough features, found under the iDIS remote operations menu, allow users to log in and execute on remote systems as if they were physically connected to them. When performing tty-passthrough with a modem, you must have a modem configured for dial-out on one of the serial communication ports. The easiest method of modem configuration is with the scp program (refer to the *System Administrator's Installation Guide* for the scp information).

The local area network terminal emulation (called virtual terminal), requires an operational network and the presence of the virtual terminal consumer and server software residing on the nodes that will be communicating.

Both the modem and network versions of the tty passthrough program require that you establish these connections in a special remote capability file. A special feature of the DRM allows you to configure remote connections within capability files available to specific users. Detailed instructions on the design of the file can be found in the tty passthrough procedure found in section 6.18.

The 3274 Host Communication package is an optional package designed to communicate with a mainframe using the 3274 SNA protocol. It is designed to use an iSBC 88/45 communication board port and a high-speed bisynchronous modem. Refer to the *SNA 3270 Emulation User's Manual* for details on product configuration.

If you are using the 3274 SNA host communication product in the network environment, the DRM facility establishes only the 3274 user functions as a network resource, not the administrative functions. To perform host communication administration, you must be at the node where the connection is physically located.

There is an additional set of host communication products that can be controlled with the DRM facilities that use the iSBC 188/48 communication board. To use any of these host communication products you must use the VPM 188 software (Virtual Protocal Machine). The products that utilize this software include 3270 BSC 188—a cluster controller, display terminal and printer emulator software package, HASP 188 and RBTE 188—remote job entry workstation emulation software packages.

6.8 iDIS™ Execution and User Nodes

There are features within iDIS which allow you to specify certain nodes as iDIS execution nodes and other nodes as user nodes. An iDIS execution node contains the full set of iBASE software; an iDIS user node contains only a minimal subset of the software. Both types of nodes can contain user workareas.

When a user logs into iDIS, the DRM is used to determine the execution node that will be accessed. Each user is automatically assigned to a default execution node. The default execution node assigned by the system depends on the HOME Node type (user or execution node) for that user. If a user's individual workarea (his HOME Node) is on an execution node, then that same node is used as his execution node. If a user's individual workarea (his HOME Node) is on a user node, the subnetwork master is assigned as his execution node.

The administrator can use the DRM features to change or add to these default assignments, and can specify the priority of access for each execution node if more than one is assigned.

6.9 Network Administration

Within a large network, a small team of administrators working together may be required to keep the network operating. The top network manager must then be able to designate who can perform

network administration on specific nodes. This designation function is handled within the DRM. There are three administration roles within iDIS: the logical network administrator, the subnetwork administrator and the key operator. The key operator is set up to perform the key operator functions on only his designated home node. In the DRM, the key operator functions can be assigned to an existing key operator for nodes other than his home node. This provides the ability for one user (or login ID) to perform key operator functions on several nodes in a network.

6.10 Specifying and Assigning a Printer

When iDIS is first installed, it uses the XENIX configuration information from the system configuration program scp to build the default resources. Printers are among the default resources automatically built. If you are adding a printer after installation, however, you must first configure the printer with the scp program in XENIX, then perform the following procedure to set up the printer in iDIS:

1. Log in as idis and enter the following to go to the Resource Maintenance menu.

   ```
   Top      set
   Asettop  sys
   Asystop  rsrc
   ```

   Or, to use select ahead enter **s s r** < **cr** > from the Top menu.

2. When the Resource Maintenance menu appears, make the **rsrc** selection to display the Specify a Resource form. Enter < **CTRL-b** > to select a new form. Enter a printer resource name (up to 14 characters) descriptive of the printer resource.

3. Press < **TAB** > to move to the resource type field. Press **p** and printer should appear. Move the cursor to the node field.

4. Only select a node if you are connected to the network environment. To select a node either enter the first few letters of the node name, or press the < **SPACE BAR** > to scroll through the accessible nodes. Select the node where the printer is physically located.

5. Move the cursor to the resource field. Enter the printer name. The default printer name is **lp**. If you do not know the printer name, exit the resource form (press < **DEL** > twice), and display the printcap file from the printer operations menu (enter **.s k p p** < **cr** >). The first entry for each printer field is the printer name. More information can be found in section 5.2.2.

6. Press <**TAB**> to move to the comment field and enter any information appropriate for this resource. This information is optional and appears whenever the resource is used in a dynamic list.

7. Press <**CTRL-e**>, <**CTRL-t**> and then <**cr**>. You will return to the Resource Maintenance menu.

8. Make the **asgn** selection from the Resource Maintenance menu. When the Specify the Resource Assignments form appears, enter <**CTRL-b**> to select a new form, then complete the following entries:

   Resource name(v) Press the <**SPACE BAR**> to scroll through the resources or press the first few letters of the resource name you created in the resource form.

   Press <**TAB**> to move to the loginid field.

   Loginid: Enter either a user's login name or:

*	to allow all users access.
-G ***groupname***	to allow group members of *groupname* access.
-N ***nodename***	to allow all users with the home node *nodename* access.

   priority Normally not used; a minus (−) indicates that the use of this resource by the specified logins is NOT permitted.

   Comment: This information is optional.

9. When you have completed entering information in the form press <**CTRL-e**>. If you need to make multiple assignments, repeat step 8. Press <**CTRL-t**> and then <**cr**> when finished with assignments.

10. If you are in a network environment, when the Resource Maintenance menu appears, select the **trans** function and then **sched** to schedule the transactions. The resources you have just specified and assigned will not be identified to the subnetwork until the transactions have been completed.

NOTE

You should monitor the progress of the transaction with the **tstat** selection in the Atrans menu.

This completes the instructions on setting up a printer. Before the printer can be used, each assigned user must make the change printer selection in the print administration menus.

NOTE

When a user selects a printer, any application software that uses the standard XENIX lpr command (such as iPLAN) will use the selected printer.

6.11 Setting Up Flexible Disk Drives

The flexible disk drives that reside either in a system or attached to a peripheral expansion chassis should be available to most users as an archive device.

When your system is installed, the standard floppy device name (/dev/rdvf0) will automatically be set up in the resource file. It will be assigned to all users whose workareas are on the system. You do not need to perform any setup procedures if the default conditions are acceptable. If you are adding a new flexible drive (in a peripheral expansion chassis, for example) you will have to specify the resource, assign it to users, then schedule the transaction.

1. Log in as idis and enter the following to go to the Resource Maintenance menu:

   Top **set**
   Asettop **sys**
   Asystop **resrc**

   Or, to use select ahead enter **s s r** < **cr** > from the Top menu.

2. Make the **rsrc** selection in the Arsrc menu to display the Specify a Resource form. Enter < **CTRL-b** > to select a new form. Enter the resource name (up to 14 characters). Create a name that is descriptive of the floppy drive resource.

3. In the type field, press **5** or **8** and either the 5-inch diskette or 8-inch diskette entry appears, respectively. Press < **TAB** > to go to the node name field.

4. Only select a node if you are connected in the network environment. To select a node either enter the first few letters of the node name, or press the < **SPACE BAR** > to scroll through the accessible nodes. Select the node where the flexible disk drive is physically located.

5. When the correct node name is entered, press < **TAB** > to go to the resource field. Enter **/dev/dvf0** for 5-inch or **/dev/df0** for 8-inch flexible disk drives.

6. Press < **TAB** > to move to the comment field and enter any information appropriate for this resource. This information is optional and appears whenever the resource is used in a dynamic list.

7. Press <**CTRL-e**>, <**CTRL-t**> and then <**cr**>. You will return to the Resource Maintenance menu.
8. Make the **asgn** selection in the Resource Maintenance menu.
9. When the Specify the Resource Assignments form appears, enter <**CTRL-b**> to select a new form, then complete the following entries:

   Resource name(v) Press the <**SPACE BAR**> to scroll through the resources or press the first few letters of the resource name you created in the resource form.

   Press <**TAB**> to move to the loginid field.

   Loginid: Enter either a user's login name or:

*	to allow all users access.
-G *groupname*	to allow group members of *groupname* access.
-N *nodename*	to allow all users with the home node *nodename* access.

   priority Normally not used, a minus (−) indicates that the use of this resource by the specified logins is NOT permitted.

   Comment: This information is optional.
10. When you have completed entering information in the form press <**CTRL-e**>. If you have additional resources to assign, repeat step 9. If not press <**CTRL-t**> and then <**cr**>.
11. If you are in a network environment, when the Resource Maintenance menu appears, select the **trans** function and then **sched** to schedule the transactions. The resources you have just specified and assigned will not be identified to the subnetwork until the transactions have been completed.

NOTE

You should monitor the progress of the transaction with the **tstat** selection in the Atrans menu.

This completes the instructions for setting up the flexible disk drives as archive devices. Before users can perform backup and restore operations, they must first use the change backup device selection under the Backup and Restore menu.

6.12 Setting Up Directories as Backup Devices

This procedure is to set up a directory (on Winchester or SMD drive) as an archive device. The directory may be on the same drive as

users, it may be on an external drive, or it may be on a drive on another node in the subnetwork.

Although you may set up a directory that is on the same device as the files that users will be archiving, it is much more practical to use a directory on another drive (if one drive fails, your data will still be safe). Make sure that the directory you are setting up is on a drive that is configured and operating.

NOTE

You should already have created the directory that you want to use as a backup device (enter **mkdir *directory name*** in the XENIX operating system), and changed the permissions (with the **chmod** command in XENIX) to allow the desired groups and users access to the directory. Alternatively, you may create a group or public workarea as the backup directory.

Perform the following steps to set up an archive directory:

1. Log in as idis and enter the following to go to the Resource Maintenance menu:

   Top **set**
   Asettop **sys**
   Asystop **rsrc**

   Or, to use select ahead enter **s s r** < **cr** > from the Top menu.

2. Make the **rsrc** selection in the Arsrc menu to display the Specify a Resource form. Enter < **CTRL-b** > to select a new form. Enter a resource name (up to 14 characters) descriptive of the directory resource.

3. Move the cursor to the resource type field. Press the < **SPACE BAR** > until the directory resource type appears. Press < **TAB** > to go to the node name field.

4. Only select a node if you are in the network environment. To select a node enter either the first few letters of the node name, or press the < **SPACE BAR** > to scroll through the accessible nodes. Select the node where the backup directory is physically located.

5. Move the cursor to the resource field. Enter the full pathname of the directory to be used for backup (/usr2/backup, for example). Do not include the node name.

6. Move the cursor to the comment field and enter any information appropriate for this resource. This information is optional and appears whenever the resource is used in a dynamic list.

7. Press < **CTRL-e** >, < **CTRL-t** > and then < **cr** >. You will return to the Resource Maintenance menu.

8. Make the **asgn** selection in the Resource Maintenance menu. When the Specify the Resource Assignments form appears enter < **CTRL-b** > to select a new form, then complete the following entries:

   Resource name(v) Press the < **SPACE BAR** > to scroll through the resources or press the first few letters of the resource name you created in the resource form.

   Press < **TAB** > to move to the loginid field.

   Loginid: Enter either a user's login name or:

*	to allow all users access.
-G *groupname*	to allow group members of *groupname* access.
-N *nodename*	to allow all users with the home node *nodename* access.

   priority Normally not used; a minus (−) indicates that the use of this resource by the specified logins is NOT permitted.

   Comment: This information is optional.

9. When you have completed entering information in the form press < **CTRL-e** > . If you have additional resources to assign, repeat step 8. If not, press < **CTRL-t** > and then < **cr** > .

10. If you are in a network environment, when the Resource Maintenance menu appears, select the **trans** function and then **sched** to schedule the transactions. The resources you have just specified and assigned will not be identified in the subnetwork until the transactions have been completed.

NOTE

You should monitor the progress of the transaction with the **tstat** selection in the Atrans menu.

Before users can perform the backup and restore functions, they must first use the change backup device selection in the Backup and Restore menu. Refer to the archive operations in the *Key Operator User's Reference* for further information.

6.13 Setting Up a Streamer Tape Drive

The streamer tape drive is a device that may either be in the system or a peripheral expansion chassis. It uses standard ¼-inch cartridge tape as the backup media. In order to use the tape, it must already

be configured into the XENIX operating system with the scp configuration program. If the tape device was present at the time of iDIS installation, then the device was automatically specified as a resource and assigned to all users on the system. Otherwise, perform the following procedure.

1. Log in as idis and enter the following to go to the Resource Maintenance menu:

   Top **set**
   Asettop **sys**
   Asystop **rsrc**

   Or, to use select ahead enter **s s r** <**cr**> from the Top menu.

2. Make the **rsrc** selection in the Arsrc menu to display the Specify a Resource form. Enter <**CTRL-b**> to select a new form. Enter a name that is descriptive of the streamer tape resource.

3. Move the cursor to the resource type field. Press the <**SPACE BAR**> until the streamer tape resource type appears. Press <**TAB**> to go to the node name field.

4. Only select a node if you are connected to the network environment. To select a node either enter the first few letters of the node name, or press the <**SPACE BAR**> to scroll through the accessible nodes. Select the node where the streamer tape is physically located.

5. Move the cursor to the resource field. Enter **/dev/rmt0**.

6. Press <**TAB**> to move to the comment field and enter any information appropriate for this resource. This information is optional and appears whenever the resource is used in a dynamic list.

7. Press <**CTRL-e**>, <**CTRL-t**> and then <**cr**> to exit the form. You will return to the Resource Maintenance menu.

8. Make the **asgn** selection in the Resource Maintenance menu. When the Specify the Resource Assignments form appears enter <**CTRL-b**> to select a new form, then complete the following entries:

   Resource name(v) Press the <**SPACE BAR**> to scroll through the resource names or press the first few letters of the resource name you created in the resource form.

   Press <**TAB**> to move to the loginid field.

   Loginid: Enter either a user's login name or:

*	to allow all users access.
-G *groupname*	to allow group members of *groupname* access.

-N *nodename*	to allow all users with the home node *nodename* access.
priority	Normally not used; a minus (−) indicates that the use of this resource by the specified logins is NOT permitted.
Comment:	This information is optional.

9. If you have additional resources to assign, repeat step 8. When you have completed entering information in the form press < **CTRL-e** >, < **CTRL-t** > and then < **cr** >.

10. If you are in a network environment, when the Resource Maintenance menu appears, select the **trans** function and then **sched** to schedule the transactions. The resources you have just specified and assigned will not be identified to the subnetwork until the transactions have been completed.

NOTE

You should monitor the progress of the transaction with the **tstat** selection in the Atrans menu.

When the transaction has completed, the tape drive should be ready for use. Before users may operate the tape drive, they need to select it from the Administrative Backup and Restore menu. Refer to the *Key Operator Reference* for tape operating instructions.

6.14 Setting Up a 9-Track Tape Device

The 9-track tape device is an external tape drive. It must first be configured into the XENIX operating system using the procedure in the *System Administrator's Installation Guide.* Once the tape drive has been configured, you may set it up as a resource on the system or network. To set up the tape drive perform the following:

1. Log in as idis and enter the following to go to the Resource Maintenance menu:

   Top **set**
   Asettop **sys**
   Asystop **rsrc**

   Or, to use select ahead enter **s s r** < **cr** > from the Top menu.

2. Make the **rsrc** selection in the Arsrc menu to display the Specify a Resource form. Enter <**CTRL-b**> to select a new form. Enter a resource name (up to 14 characters) for the tape drive.
3. In the type field, press the <**SPACE BAR**> until the 9-track resource type appears. Press <**TAB**> to go to the node name field.
4. Only select a node if you connected to the network environment. To select a node either enter the first few letters of the node name, or press the <**SPACE BAR**> to scroll through the accessible nodes. Select the node where the tape drive is physically connected.
5. Move the cursor to the resource field. Enter **/dev/rxyt0**.
6. Move the cursor to the comment field and enter any information appropriate for this resource. This information is optional and appears whenever the resource is used in a dynamic list.
7. Press <**CTRL-e**>, <**CTRL-t**> and then <**cr**> to exit the form. You will return to the Resource Maintenance menu.
8. Make the **asgn** selection in the Resource Maintenance menu. When the Specify the Resource Assignments form appears enter <**CTRL-b**> to select a new form, then complete the following entries:

   `Resource name(v)` Press the <**SPACE BAR**> to scroll through the resource names or press the first few letters of the resource name you created in the resource form.

   Press <**TAB**> to move to the loginid field.

   `Loginid:` Enter either a user's login name or:

*	to allow all users access.
-G ***groupname***	to allow group members of *groupname* access.
-N ***nodename***	to allow all users with the home node *nodename* access.

   `priority` Normally not used; a minus (−) indicates that the use of this resource by the specified logins is NOT permitted.

   `Comment:` This information is optional.
9. When you have completed entering information in the form press <**CTRL-e**>. Repeat step 8 if you have multiple assignments to the tape resource. Press <**CTRL-t**> and then <**cr**> when all assignments have been made.
10. If you are in a network environment, when the Resource Maintenance menu appears, select the **trans** function and then **sched**

to schedule the transactions. The resources you have just specified and assigned will not be identified to the subnetwork until the transactions have been completed.

NOTE

You should monitor the progress of the transaction with the **tstat** selection in the Atrans menu.

This completes the 9-track resource assignment procedure. Assigned users will be able to use the tape drive after using the change device selection in the backup and restore menu.

6.15 Setting Up a New File System

When a system is first installed, the installation routines automatically build the initial file system resources. Only when additional Winchesters or SMD drives are added after installation does the administrator have to add the new file system into the resource specification file.

This file system specification is used when new users, groups, group workareas, and public workareas are built. The new file system should already be specified and assigned before initializing any users, groups, etc., whose names will be on the new file system. To add a file system, perform the following steps.

1. Log in as idis and enter the following to go to the Resource Maintenance menu:

   Top **set**
   Asettop **sys**
   Asystop **rsrc**

   Or, to use select ahead enter **s s r** < **cr** > from the Top menu.

2. When the Resource Maintenance menu appears, make the **rsrc** selection in the Arsrc menu to display the Specify a Resource form. Enter < **CTRL-b** > to select a new form. Enter the file system name (up to 14 characters).

3. Move the cursor to the resource type field. Press the < **SPACE BAR** > until file system appears. Press < **TAB** > to go to the node name field.

4. Only select a node if you are connected to the network environment. To select a node either enter the first few letters of the node name, or press the < **SPACE BAR** > to scroll through the accessible nodes. Select the node where the new file system is physically located.

5. Move the cursor to the resource field. Enter the pathname of the file system (examples: **/usr**, **/usr1**, **/usr2**).

6. Move the cursor to the comment field and enter any information appropriate for this resource. This information is optional.

7. Press <**CTRL-e**>, <**CTRL-t**> and then <**cr**>. You will return to the Resource Maintenance menu.

8. Make the **asgn** selection in the Resource Maintenance menu. When the Specify the Resource Assignments form appears, enter <**CTRL-b**> to select a new form, then complete the following entries:

   `Resource name(v)` Press the <**SPACE BAR**> to scroll through the resource names or press the first few letters of the resource name you created in the resource form.

   Press <**TAB**> to move to the loginid field.

   `Loginid:` Enter either a user's login name or:

*	to allow all users access.
-G ***groupname***	to allow group members of *groupname* access.
-N ***nodename***	to allow all users with the home node *nodename* access.

   `priority` Normally not used; a minus (−) indicates that the use of this resource by the specified logins is NOT permitted.

   `Comment:` This information is optional.

9. When you have completed entering information in the form press <**CTRL-e**>. If you have additional assignments, repeat step 8. Press <**CTRL-t**> and then <**cr**> when all assignments have been made.

10. If you are in a network environment, when the Resource Maintenance menu appears, select the **trans** function and then **sched** to schedule the transactions. The resources you have just specified and assigned will not be identified to the subnetwork until the transactions have been completed.

NOTE

You should monitor the progress of the transaction with the **tstat** selection in the Atrans menu.

This completes the file system resource assignment procedures. To set up workareas within the new file system, you must perform user, group, group workarea, or public workarea initialization procedures and assign the new file system to those workareas. Refer to Chapter 4 for those procedures.

6.16 Setting Up Application Software as a Resource

The application resource is for adding non-Intel software packages that have not been already incorporated into the iDIS menu system. The following list includes all of the non-Intel software packages that are already accommodated by the iDIS menu system:

Lyrix*
Q-OFFICE*
Trajectories
Graffhopper*
High Tech Business Graphics*
PBG 200*
File-It*
Informix*
MCBA Accounting*
Cost Master

These software packages do not need any setup within the DRM. If your software is NOT on the list, then you must perform the following procedure.

Before performing the following procedure you must make sure that the software is installed and working. Also, you must know the full pathname of the command that invokes the software.

1. Log in as idis and enter the following to go to the Resource Maintenance menu:

   Top set
   Asettop sys
   Asystop rsrc

   Or, to use select ahead enter **s s r** < **cr** > from the Top menu.

2. Make the **rsrc** selection in the Arsrc menu to display the Specify a Resource form. Enter < **CTRL-b** > to select a new form. Enter a resource name descriptive of the application.

3. Move the cursor to resource type. Press the < **SPACE BAR** > until the application resource type appears. Press < **TAB** > to go to the node name field.

*Lyrix is a registered trademark of The Santa Cruz Operation, Inc.; Q-OFFICE is a registered trademark of Quadratron, Inc.; Graffhopper is a registered trademark of Data Business Vision, Inc.; High Tech Business Graphics is a trademark of LatiCorp, Inc.; PBG 200 is a trademark of Pacific Basin Graphics; File-It is a trademark of Relational Database Systems, Inc.; Informix is a registered trademark of Relational Database Systems, Inc.; MCBA Accounting is a registered trademark of MCBA, Inc.

4. Only select a node if you are connected to the network environment. To select a node either enter the first few letters of the node name, or press the < **SPACE BAR** > to scroll through the accessible nodes. Select the node where the application is physically located. When the correct node name is entered, press < **TAB** > to go to the resource field.

5. Enter the full pathname of the program that invokes the application program. For example, if you were going to invoke the vi editor you would enter **/bin/vi**.

6. Press < **TAB** > to move to the comment field and enter any information appropriate for this resource. This information is optional and appears whenever the resource is used in a dynamic list.

7. Press < **CTRL-e** >, < **CTRL-t** > and then < **cr** >. You will return to the Resource Maintenance menu.

8. Make the **asgn** selection in the Resource Maintenance menu. When the Specify the Resource Assignments form appears, enter < **CTRL-b** > to select a new form, then complete the following entries:

   Resource name(v) Press the < **SPACE BAR** > to scroll through the resource names or press the first few letters of the resource name you created in the resource form.

   Press < **TAB** > to move to the loginid field.

   Loginid: Enter either a user's login name or:

*	to allow all users access.
-G *groupname*	to allow group members of *groupname* access.
-N *nodename*	to allow all users with the home node *nodename* access.

   priority Normally not used; a minus (−) indicates that the use of this resource by the specified logins is NOT permitted.

   Comment: This information is optional.

9. When you have completed entering information in the form press < **CTRL-e** >. Repeat step 8 if you need to make multiple assignments. Press < **CTRL-t** > and then < **cr** >.

10. If you are in a network environment, when the Resource Maintenance menu appears, select the **trans** function and then **sched** to schedule the transactions. The resources you have just specified and assigned will not be available to users on other nodes until the transactions have been completed.

NOTE

You should monitor the progress of the transaction with the **tstat** selection in the Atrans menu.

When completed, users will be able to access the new application under the additional software menu site-specific selection.

6.17 Setting Up a New Menu System for a Developer

These instructions assume that you have already installed the iMENU software under the Software Feature Installation procedures in the *iDIS™ Installation and Configuration Guide.*

When you initially build the menu system, you should assign it to iDIS developers so they can build the set of menus and programs required. The following procedures assume that you are only assigning developers at this time. After development is complete, and you want users to access the new menu system, you must specify the menus system as a site-specific application and assign it to any users needing access. Refer to section 6.16 to specify and assign a site-specific application.

1. Log in as idis and enter the following to go to the Resource Maintenance menu:

   Top **set**
   Asettop **sys**
   Asystop **rsrc**

   Or, to use select ahead enter **s s r** < **cr** > from the Top menu.

2. Make the **rsrc** selection in the Arsrc menu to display the Specify a Resource form. Enter < **CTRL-b** > to select a new form. Enter a name for the new menu system (up to 14 characters). Move the cursor to the resource type field.

3. In the resource type field, press the < **SPACE BAR** > until "menudev" appears. Press < **TAB** > to go to the node name field.

4. Only select a node if you are connected to the network environment. To select a node either enter the first few letters of the node name, or press the < **SPACE BAR** > to scroll through the accessible nodes. Select the node where the new menu system is going to be developed. Press < **TAB** > to go to the resource field.

5. Enter the menu base pathname and shellscript pathname, separated by a semicolon. These directories do not have to already exist.

   /usr/<menubase>;/usr/<shellscript>

NOTE

Although it is not required that you use the /usr directory (you may use /usr2, /usr3), using the root file system (/, /etc, /sys, /bin) is strongly discouraged.

The *menubase* and *shellscript* can be any directory name, but it is recommended that you make it descriptive of the new menu system. In the iDIS menu system the *menubase* menu is /usr/iDIS/idis and *shellscript* is /usr/iDISbin.

6. Move the cursor to the comment field and enter any information appropriate for this resource. This information is optional and appears whenever the resource is used in a dynamic list.

7. Press <**CTRL-e**>, <**CTRL-t**> and then <**cr**>. You will return to the Resource Maintenance menu.

8. Make the **asgn** selection in the Resource Maintenance menu. When the Specify the Resource Assignments form appears, enter <**CTRL-e**> to select a new form, then complete the following entries:

   Resource name(v) Press the <**SPACE BAR**> to scroll through the resource names or press the first few letters of the menudev resource name you created in the resource form.

   Press <**TAB**> to move to the loginid field.

   Loginid: Enter either a user's login name or:

*	to allow all users access.
-G ***groupname***	to allow group members of *groupname* access.
-N ***nodename***	to allow all users with the home node *nodename* access.

   priority Normally not used; a minus (−) indicates that the use of this resource by the specified logins is NOT permitted.

   Comment: This information is optional.

9. When you have completed entering information in the form press <**CTRL-e**>. If you have additional resources to assign, repeat step 8. If not press <**CTRL-t**> and then <**cr**>.

10. If you are in a network environment, when the Resource Maintenance menu appears, select the **trans** function and then **sched** to schedule the transactions. The resources you have just specified and assigned will not be identified to the subnetwork until the transactions have been applied.

NOTE

You should monitor the progress of the transaction with the **tstat** selection in the Atrans menu.

11. Next, return to the top menu (**.s** < **cr** >), and select the **dev** option. You will be able to select from a dynamic list the menu system that you want to access. Select the menu system you just created. You will be asked if you want to create the directories specified in step 5. Answer **y** < **cr** > .

12. When the develop screen appears, select **i** < **cr** > to intialize the menu system. The initial menu will appear. Select **ims** < **cr** > . You will be prompted for a password. Enter **develop** < **cr** > . The menu system's control files will be built. When complete, the new menu system is ready to be developed.

With completion, the developer can log in, select the **dev** selection from the Top menu, and be able to access the new development menus from the Topdev dynamic list.

6.18 Setting Up tty Passthrough Connections

The tty passthrough provides the facility to connect an iDIS system to a remote host computer. When a user makes the **tty** selection from the remote menu, a list of hosts is presented. When a host is selected, the connection is established.

There are two types of remote host connections: dial-up and virtual terminal. With dial-up, the remote system is called via modem. Virtual terminal accesses a remote host through the network.

Prior to using the tty passthrough program, a Host Definition File (HDF) must be set up. The file contains the information required by the tty passthrough to initiate connections to the remote hosts. Information includes the type of connection (virtual terminal or dial-up), and additional information for dial-up connections (modem type, tty port number, phone number, system the modem is connected to, etc.). A sample HDF has been included with the iDIS iBASE software in the file /etc/sample.remote.

6.18.1 Setting Up the Host Definition File

This section provides the procedures for setting up a Host Definition File (HDF). To perform this procedure, you must enter the XENIX shell and use the vi editor.

To set up a modem you must first have the modem configured using the System Configuration Program (scp). Refer to the *System Administrator's Installation Guide* for instructions on configuring a modem.

Each host connected via the tty passthrough program must have an entry in the HDF that defines the characteristics of that host. To set up the file, perform the following steps:

1. Log in as root. When the XENIX prompt appears, enter vi and create the HDF by typing:

   ```
   vi filename<cr>
   ```

   If you do not plan to use the distributed resource management facility, the file name must be /etc/remote. If you are using the distributed resource management, then the HDF can have any file name and reside in any directory that you desire. However, it is recommended that you keep the file in the /etc directory. The /etc/sample.remote file has a sample entry as follows:

   ```
   hayes|- 300 baud link to hayes modem:\
           :dv=/dev/ttyc0:br#300:\
           at:du:at=hayes:pn=at
   ```

2. To create a new entry in your file, enter:

   ```
   i
   ```

   This allows you to enter insert mode, then type in the attributes that make up an entry. You should make the following considerations before creating any entries:

   - The first item in an entry is always the host name, which begins in column one. This entry can have any chosen name, and is terminated by a vertical bar and then a dash.
   - The characters after the vertical bar and dash (|-) are comments used to describe the entry, but are not used in the program's operation.
   - The only line that begins in column one is the first line (the line containing the host name). Each succeeding line **must** begin after column one.
   - Each line that is not the last line in an entry must end with a backslash (\ ).
   - Each field (attribute) within a line must be separated by a colon (:).
   - Blank spaces are not allowed within lines.

   The attributes that can be used to define a host connection entry are as follows:

   at Modem type. Set to **hayes** or **rv2400** for Racal-Vadic.

   br Baud rate. Most common values are **300**, **1200**, or **2400**.

dv Is the name of the port device that is connected to the modem. It must be a serial port on a terminal communications board. This should be the same port as set up in the System Configuration Program (scp). In the network environment, this attribute can include the full pathname to the port on another node in the network. Also, a semicolon (;) can be used to separate a list of other ports to be used if the first one is busy.

du Indicates that the host must be dialed up. Entry must be present for a modem connection.

pd Pulse dial. Should only be used in areas where touch-tone phones are not available.

pn The phone number of the host that you are calling. Multiple phone numbers can be used if they are separated by a semicolon (;). If you are using a PBX which requires dialing a single digit for an outside line, the number could be indicated followed by a comma:

```
pn=9,555-1212
```

This will work for the Hayes modem, but others may have different requirements. Refer to the modem documentation.

The following attributes can be used (although they are not often required):

db Data bits. The number of bits per character. The default value is 7. The value should be set to 8 if using parity (**db#8**).

pa Parity. Can be set to odd, even or none. Default is none. An entry of this type would appear as **pa=odd** or **pa=even**.

ec Echo check. This paces the rate of file transfers by having the host return each character transmitted. It is only valid for XENIX-to-XENIX connections. The transfer takes longer, but it guarantees that the host will not be overrun when receiving data. The default is echo off.

sb Stop bits. Refers to the number of stop bits required for the connection. The default is 1. A sample entry would appear as **:sb#1:**.

3. When the entry is complete, to write and exit the entry press <**ESC**> and then **:x**.

4. In order for the file to be used it must be accessible by all users. Enter the following to set the file permissions allowing all users to read the file:

```
chmod 644 filename<cr>
```

where *filename* is the name of the Host Definition File.

Once you have completed building the Host Definition File, you can use these in the tty passthrough facility of iDIS if you named the Host Definition File /etc/remote and you want to allow all the entries in the file to be available to all users. If you want to restrict access to the file, or if you want to use a file other than /etc/remote, you must set up the DRM as described in section 6.18.2.

NOTE

In the network environment, if you want to allow access to a Host Definition File on a remote node, you must perform the DRM procedures in section 6.18.2. If you want to only use the /etc/remote file from the node the users are logged in on, then you do not have to set up the DRM.

6.18.2 Controlling Access to the Host Definition File

To use a Host Definition File other than /etc/remote, or to limit access of the connections within the file, you must use the iDIS DRM facilities.

1. Log in as idis and enter the following to go to the Resource Maintenance menu.

   Top **set**
   Asettop **sys**
   Asystop **rsrc**

   Or, to use select ahead enter **s s r** < **cr** > from the Top menu.

2. Make the **rsrc** selection to display the Specify a Resource form. Enter < **CTRL-b** > to create a new form. Enter a resource name (up to 14 characters) descriptive of the Host Definition File.

3. Move the cursor to the resource type field. Press the < **SPACE BAR** > until the vt-remote entry appears. Press < **TAB** > to move to the node name field.

4. Only select a node if you are in the network environment. Select the node where the Host Definition File resides by pressing the < **SPACE BAR** > until the node name appears.

5. Move the cursor to the resource field. Enter the full pathname of the Host Definition File.

6. Press < **TAB** > to move the cursor to the comment field and enter any information appropriate for this resource. This information is optional and appears whenever the resource is used in a dynamic list.

7. Press < **CTRL-e** >, < **CTRL-t** >, and then < **cr** >. You will return to the Resource Maintenance menu.

8. Make the **asgn** selection in the Resource Maintenance menu. When the Specify the Resource Assignments form appears, enter < **CTRL-b** > to select a new form, then complete the following entries:

Resource name(v)	Press the < **SPACE BAR** > to scroll through the resource names or press the first few letters of the resource name you created in the resource form.

Press < **TAB** > to move to the loginid field.

Loginid:	Enter either a user's login name, or:
	* to allow all users access.
	-G *groupname* to allow group members of *groupname* access.
	-N *nodename* to allow all users with the home node *nodename* access.
priority	Normally not used; a minus (-) indicates that the use of this resource by the specified logins is **not** permitted.
Comment:	This information is optional.

NOTE

Users should **not** be assigned to more than one Host Definition File. Also, if any users are not assigned to a Host Definition File, they will have access to all remote host connections in the /etc/remote file on their local systems. If the Host Definition File is not in /etc/remote, the unassigned user will not have access to any remote host connections.

9. When you have completed entering information in the form, press < **CTRL-e** >. If you have additional resources to assign, repeat step 8. If not, press < **CTRL-t** > and then < **cr** >.
10. If you are in a network environment, when the Resource Maintenance menu appears, select the **trans** function and then **sched** to schedule the transactions. The resources you have just specified and assigned will not be identified to the subnetwork until the transactions have been applied.

This completes the specification of the Host Definition File in the DRM resources. To be able to use this file, however, you must specify and assign the individual remote host connections in the Host Definition File to particular users. You must continue to section 6.18.3 and complete those procedures to make the tty passthrough operational.

6.18.3 Setting up a Modem or Virtual Terminal in tty Passthrough

This procedure allows the administrator to specify entries from the Host Definition File as resources and assign them to designated users. The Host Definition File must already be set up as a resource as described in section 6.18.2.

To establish a tty passthrough connection on the network, you must make sure that the network virtual terminal server is activated on the host node (the node you are trying to connect to) and the virtual terminal consumer software is active on the node the user is executing from.

To establish a modem connection, you must make sure that the modem is installed and configured with the System Configuration Program (scp).

1. Log in as idis and enter the following to go to the Resource Maintenance menu.

   Top **set**
   Asettop **sys**
   Asystop **rsrc**

   Or, to use select ahead enter **s s r** < **cr** > from the Top menu.

2. Make the **rsrc** selection in the Arsrc menu to display the Specify a Resource form. Enter < **CTRL-b** > to select a new form. In the resource name field, enter an appropriate resource name (up to 14 characters) for the remote host connection in the Host Definition File.

3. Move the cursor to the resource type field. Press the < **SPACE BAR** > until the vt-lan (for a virtual terminal connection) or vt-phone (for a modem connection) appears. Press < **TAB** > to go to the resource field (leave the node name field blank).

4. Enter the host name that you entered in the host definition file for this virtual terminal connection into the resource field. The entry must match the host name for the operation to occur correctly.

5. Move the cursor to the comment field and enter any information appropriate for this resource. This information is optional and appears whenever the resource is used in a dynamic list.

6. Press < **CTRL-e** >, < **CTRL-t** >, and then < **cr** >. You will return to the Resource Maintenance menu.

7. Make the **asgn** selection in the Resource Maintenance menu. When the Specify the Resource Assignments form appears, enter

< **CTRL-b** > to select a new form, then complete the following entries:

Resource name(v) Press the < **SPACE BAR** > to scroll through the resource names or press the first few letters of the resource name you created in the resource form.

Press < **TAB** > to move to the loginid field.

Loginid: Enter either a user's login name, or:

*	to allow all users access.
-G *groupname*	to allow group members of *groupname* access.
-N *nodename*	to allow all users with the home node *nodename* access.

priority Normally not used; a minus (-) indicates that the use of this resource by the specified logins is **not** permitted.

Comment: This information is optional.

8. When you have completed entering information in the form, press < **CTRL-e** > . If you have additional resources to assign, repeat step 7. If not press < **CTRL-t** > and then < **cr** > .
9. When the Resource Maintenance menu appears, select **trans** and then **sched** to schedule the transactions. The resources you have just specified and assigned will not be identified to the subnetwork until the transactions have been completed.

NOTE

You should monitor the progress of the transaction with the **tstat** selection in the Atrans menu.

When complete, assigned users will have access to network virtual terminal connections or remote systems via modem through the remote operations tty passthrough selection.

6.19 Setting Up a Host Communication Resource

There are two different sets of host communication products available that work with the iDIS DRM system. The 3274 SNA product is the only product used in this environment using the iSBC 88/45 SNA communication board. The resource procedures for this product are covered in section 6.19.1. There are several host communication products that work with the iSBC 188/48 communication board: VPM 188, 3270 BSC, RBTE 188, and HASP 188. Resource procedures for these products are covered in section 6.19.2.

6.19.1 Setting Up a 3274 SNA Host Communication Gateway

After you have installed the 3274 SNA Host Communication product, the gateway must be specified and assigned to the users before they may access it. Perform the following to set up and assign the 3274 SNA resource:

1. Log in as idis and enter the following to go to the Resource Maintenance menu.

   ```
   Top      set
   Asettop  sys
   Asystop  rsrc
   ```

   Or, to use select ahead enter **s s r** <**cr**> from the Top menu.

2. Make the **rsrc** selection to display the Specify a Resource form. Enter <**CTRL-b**> to select a new form. In the resource name entry create a name for the 3274 SNA gateway (it may be up to 14 characters).

3. Move the cursor to the resource type field and press the <**SPACE BAR**> until 3274SNA-gate appears. Press <**TAB**> to go to the node name field.

4. Only select a node if you are connected to the network environment. Select the node where the 3274 SNA product is physically installed. To select the node either enter the first few letters of the node name, or press the <**SPACE BAR**> to scroll through the accessible nodes.

5. Move the cursor to the comment field (skip the resource field) and enter any information appropriate for this resource. This information is optional and appears whenever the resource is used in a dynamic list.

6. Press <**CTRL-e**>, <**CTRL-t**> and then <**cr**>. You will return to the Resource Maintenance menu.

7. Make the **asgn** selection in the Resource Maintenance menu. When the Specify the Resource Assignments form appears, enter <**CTRL-b**> to select a new form, then complete the following entries:

   Resource name(v) Press the <**SPACE BAR**> to scroll through the resource names or press the first few letters of the resource name you created in the resource form.

   Press <**TAB**> to move to the loginid field.

Loginid:	Enter either a user's login name or:
	* to allow all users access
	-G *groupname* to allow group members of *groupname* access
	-N *nodename* to allow all users with the home node *nodename* access.
priority	Normally not used; a minus (−) indicates that the use of this resource by the specified logins is NOT permitted.
Comment:	This information is optional.

8. When you have completed entering information in the form press < **CTRL-e** >. If you have additional resources to assign, repeat step 7. If not press < **CTRL-t** > and then < **cr** >.
9. If you are in a network environment, when the Resource Maintenance menu appears, select the **trans** function then **sched** to schedule the transactions. The resources you have just specified and assigned will not be identified to the subnetwork until the transactions have been applied.

NOTE

You should monitor the progress of the transaction with the **tstat** selection in the Atrans menu.

The 3274 gateway will now be available to assigned users from the sna selection under the remote operations menu.

6.20 Setting Up the Key Operator Resource

There are two possible ways in which to set up the key operator resource. First, if you have initialized a user as a key operator as instructed in section 4.9, that user has, by definition, key operator authority on the local node only. If you want to allow the user authority on additional nodes (noted here as the "span of authority"), refer to section 6.20.1. If you have an existing user that does not have key operator authority that you want to have key operator authority, refer to section 6.20.2. Finally, if you want to remove key operator authority from a user, refer to section 6.20.3.

6.20.1 Changing a Key Operator's Span of Authority

This procedure assumes that the user has already been initialized as a key operator (refer to section 4.9). This procedure allows the key operator to have the key operator authority on additional nodes. To add the authority, perform the following:

1. Log in as idis and enter the following to go to the Resource Maintenance menu.

   Top **set**
   Asettop **sys**
   Asystop **rsrc**

   Or, to use select ahead enter **s s r** <**cr**> from the Top menu.

2. Make the **rsrc** selection in the Arsrc menu to display the Specify a Resource form. Press <**CTRL-n**> until the keyoperator resource for the given key operator appears.

   If you are adding a node to the key operator's span of authority, enter <**CTRL-c**>. Then move the cursor to the node name field, enter the node name where you want the key operator to have authority, and press <**CTRL-e**>. Repeat this for each node you are adding to the key operator's span of authority. When all nodes have been added, enter <**CTRL-t**> and then <**cr**> to complete the form.

   If you are deleting a node from the span of authority, scroll through the resource names until the key operator resource you are changing appears with the node name where you want to remove the authority. When the form appears, delete it by entering <**CTRL-d**>. Repeat this step for any other nodes that you want to delete. Enter <**CTRL-t**> and then <**cr**> to complete the form.

   NOTE

   If you are deleting all of the nodes that a key operator has authority over, you must also delete any assignments to that resource name in the Specify the Resource Assignments form.

3. When the Resource Maintenance menu appears, select **trans** and then **sched** to schedule the transaction. The resources you have just specified will not be identified to the subnetwork until the transaction has been completed.

   NOTE

   You should monitor the progress of the transaction with the **tstat** selection in the Atrans menu.

6.20.2 Adding Key Operator Authority for a User

If an existing user was initialized with the iDISuser or iDISdeveloper templates, and you wish to add key operator authority to that user, perform the following steps:

1. Log in as idis on the node from which this user obtains his iDIS execution software and enter the following to go to the Resource Maintenance menu:

   Top **set**
   Asettop **sys**
   Asystop **rsrc**

   Or, to use select ahead enter **s s r** < **cr** > from the Top menu.

2. Make the **rsrc** selection in the Arsrc menu to display the Specify a Resource form. Enter < **CTRL-b** > to select a new form. Enter a new key operator resource name (up to 14 characters) that identifies the key operator.

3. Press < **TAB** > to move to the resource type field. Press **k** and keyoperator should appear. Move the cursor to the node field. Press the < **SPACE BAR** > until the key operator's HOME node appears.

   NOTE

   This gives the key operator the default span of authority of his HOME node only. To change his authority, refer to section 6.20.1.

4. Move the cursor to the comment field and enter any appropriate information.

5. Press < **CTRL-e** >, < **CTRL-t** > and then < **cr** > to return to the Resource Maintenance menu.

6. Make the **asgn** selection from the Resource Maintenance menu. When the Specify the Resource Assignments form appears, enter < **CTRL-b** > to select a new form. Complete the following entries:

   Resource Name: Press the < **SPACE BAR** > to scroll through the resources until you find the key operator resource name.

   Press < **TAB** > to move to the loginid field.

   Loginid: Enter the login ID of the user you want to have the key operator authority.

   Press < **TAB** > to move to the comment field.

   Comment: This information is optional.

   Press < **CTRL-e** >, < **CTRL-t** > and then < **cr** > to complete the form.

7. When the Resource Maintenance menu appears, select **trans** and then **sched** to schedule the transaction. The resources you have just specified will not be identified to the subnetwork until the transaction has been completed.

NOTE

You should monitor the progress of the transaction with the **tstat** selection in the Atrans menu.

8. If you do not have iMENU, enter the following:

```
! <cr>
```

When the XENIX prompt appears, enter:

```
cd /usr/iDIS/idis/control<cr>
vi deauth.dat<cr>
```

When the file appears, find the entry which prohibits the new keyoperator from accessing the key operator menu and delete it. The entry will appear like:

user name;Top;key

To delete it, place the cursor on the line and press **dd** < **cr** >. Then exit the file by entering:

```
:x<cr>
```

When the XENIX prompt reappears, enter:

```
cd ..<cr>
MENUHOME=/usr/iDIS/menus/md;export MENUHOME<cr>
$MENUHOME/genacf.ss<cr>
```

When the process completes, return to the iDIS menu system (press < **CTRL-d** >).

9. If you have the iMENU software, use select ahead to enter the iMENU software. Enter **.s d** < **cr** >. When the list of menu systems appears, select the iDIS menu system.

NOTE

If the iDIS menu system does not appear, Refer to section 6.17 for those procedures.

When the develop menu appears, enter **d** < **cr** >. When the deauthorization menu appears, enter **e** < **cr** > to edit the file. When the file appears, find the entry which prohibits the new keyoperator from accessing the key operator menu and delete it. The entry will appear like:

user name;Top;key

To delete it, place the cursor on the line and press **dd** < **cr** >. Then exit the file by entering:

```
:x<cr>
```

Then press < **cr** > to return to the menu. Next, enter **a f** < **cr** > to generate the authorization control file.

This completes the procedure for adding the key operator authority to an existing user.

6.20.3 Removing Key Operator Authority from a User

To remove key operator authority from a user, perform the following steps:

1. Log in as idis on the node from which this user obtains his iDIS execution software and enter the following to go to the Resource Maintenance menu.

   ```
   Top       set
   Asettop   sys
   Asystop   rsrc
   ```

   Or, to use select ahead enter **s s r** < **cr** > from the Top menu.

2. Make the **asgn** selection from the Resource Maintenance menu. When the Specify the Resource Assignments form appears, press the < **SPACE BAR** > to scroll through the resources until you find the key operator resource name that you want to delete. Press < **CTRL-d** >, < **CTRL-t** >, and then < **cr** > to delete the entry and exit the form.

3. When the resource Maintenance menu appears, select **trans** and then **sched** to schedule the transaction. The resources you have just specified will not be identified to the subnetwork until the transaction has been completed.

   NOTE

   You should monitor the progress of the transaction with the **tstat** selection in the Atrans menu.

8. If you do not have iMENU, enter the following:

   ```
   cd /usr/iDIS/idis/control<cr>
   vi deauth.dat<cr>
   ```

   When the file appears, add an entry which prohibits the new key operator from accessing the key operator menu and delete it by entering:

   ```
   i
   user name;Top:key<cr>
   ESC
   ```

   Then exit the file by entering:

   ```
   :x<cr>
   ```

   When the XENIX prompt reappears, enter:

```
cd . .<cr>
MENUHOME=/usr/iDIS/menus/md;export MENUHOME<cr>
$MENUHOME/genacf.ss<cr>
```

When the process completes, return to the iDIS menu system (press < **CTRL-d** >).

9. If you have the iMENU software, use select ahead to enter the iMENU software. Enter **.s d** < **cr** > . When the list of menu systems appears, select the iDIS menu system.

NOTE

If the iDIS menu system does not appear, you must specify it as a resource for iDIS. Refer to section 6.17 for those procedures.

When the develop menu appears, enter **d** < **cr** > . When the deauthorization menu appears, enter **e** < **cr** > to edit the file. When the file appears, add an entry which prohibits the new key operator from accessing the key operator menu. For example, if you are using the vi editor, enter the following:

```
i
user name:Top;key<cr>
ESC
```

Then exit the file by entering:

```
:x<cr>
```

Then press < **cr** > to return to the menu. Next, select **a f** < **cr** > to generate the authorization control file.

This completes the procedure for deleting the key operator authority.

6.21 Unassigning Users from a Resource

Occasionally conditions will occur that will require the administrator to remove a resource's availability from users or from operation in general. The DRM facilities allow you to perform this without having to remove the entries from either the resource specification file or assignment file. This allows you to exclude the resource from operation, then reactivate it quickly and easily. Perform the following steps to unassign a resource:

1. Log in as idis and enter the following to go to the Resource Maintenance menu.

```
Top       set
Asettop   sys
Asystop   rsrc
```

Or, to use select ahead enter **s s r** < **cr** > from the Top menu.

2. Enter the Resource Assignment form by selecting **asgn** from the Resource Maintenance menu.

3. When the form appears, press < **CTRL-N** > until the assignment that you want to deactivate appears.

4. Move the cursor to the priority field and enter any letter (you may enter anything except numbers and -). Press < **CTRL-e** > when entered. Repeat this step on all assignments that you want to deactivate.

5. Press < **CTRL-t** > and then < **cr** > to return to the Resource Maintenance menu.

6. If you are on the network, select **trans**, then **sched** to apply the transaction.

NOTE

You should monitor the progress of the transaction with the **tstat** selection in the Atrans menu.

When complete, the resource will not be available to the users that you changed in the assignment form. To "reactivate" the resource after unassigning it, simply repeat the steps above, except remove the entry from the priority field. The resource will then be operational just as before.

6.22 Deleting a Resource

If you have a resource that is no longer in use and you want to delete it, perform the following steps:

1. Log in as idis and enter the following to go to the Resource Maintenance menu.

   Top **set**
   Asettop **sys**
   Asystop **rsrc**

   Or, to use select ahead enter **s s r** < **cr** > from the Top menu.

2. Make the **asgn** selection to display the Specify the Resource Assignments form. Scroll through the resources and delete (press < **CTRL-d** >) until all assignments for that resource are deleted.

3. Press < **CTRL-e** >, < **CTRL-t** >, and then < **cr** > to complete the form.

4. When the Resource Maintenance menu appears, make the **rsrc** selection to display the Specify a Resource form.

5. Press < **CTRL-n** > until the resource you want to delete appears. Press < **CTRL-d** > to delete the resource, then < **CTRL-e** > and < **cr** > to complete.

6. If you are in the network environment, select the **trans** function from the Resource Maintenance menu. Then select **sched** to schedule the transaction. The resource you have deleted will still be recognized in the subnetwork until the transaction operation is complete.

NOTE

You should monitor the progress of the transaction with the **tstat** selection in the Atrans menu.

6.23 Assigning User's to iDIS™ Execution Nodes

Perform the following to assign a user to a specific execution node:

1. Log in as idis and enter the following to go to the Resource Maintenance menu.

Top	set
Asettop	sys
Asystop	rsrc

Or, to use select ahead enter **s s r** < **cr** > from the Top menu.

2. Make the **asgn** selection. When the Specify the Resource Assignments form appears, enter < **CTRL-b** > to select a new form, then complete the following entries:

Resource name(v) Press the < **SPACE BAR** > to scroll through the resource names until the one corresponding to the execution node appears. For an execution node named "enode", the resource name will be "enode_didis" and the resource type will be "idis". Make a copy of the assignment entry by pressing < **CTRL-c** >, then amend the other fields as shown below.

Loginid: Enter either a user's login name or:

*	to allow all users access.
-G ***groupname***	to allow members of group *groupname* access.
-N ***nodename***	to allow all users with the home node *node name* access.

Priority	Choose a numeric value in the range 0–99 to prioritize this assignment (the lower the number, the higher the priority). Blank is also a valid value for this field, and denotes a priority even higher than zero, but its use is discouraged. When a user logs into iDIS, all assigned execution nodes are checked (in priority order) for accessibility, and the first available one is used.
Comment:	This information is optional.

Enter <**CTRL-e**>, <**CTRL-t**> and then <**cr**> to complete the form.

3. When the Resource Maintenance menu appears, select the **trans** function and then **sched** to schedule the transactions. The resources you have just assigned will not be identified to the subnetwork until the transactions are complete.

NOTE

You should monitor the progress of the transaction with the **tstat** selection in the Atrans menu.

This completes the procedures for adding a user to an iDIS execution node.

WE'D LIKE YOUR OPINION

Please use this form to help us evaluate the effectiveness of this manual and improve the quality of future documents.

To order publications, contact the Intel Literature Department (see page ii of this manual).

Fill in the squares below with a rating of 1 through 10:

POOR				AVERAGE					EXCELLENT
1	2	3	4	5	6	7	8	9	10

- ☐ Readability
- ☐ Technical depth
- ☐ Technical accuracy
- ☐ Usefulness of material for your needs
- ☐ Comprehensibility of material
- ☐ OVERALL QUALITY OF THIS MANUAL

If you gave a 4 or less (in any category), please explain here:

_____

_____

_____

What suggestions would you have for improving this manual?

_____

_____

If you would like us to call you for more specifics about this book, provide the following information. Please print clearly.

Name _____

Phone Number (_____) _____

Address _____

_____

_____

Thanks for taking the time to fill out this form.

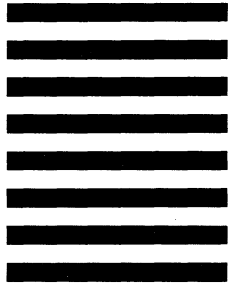
NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST CLASS PERMIT NO. 79 HILLSBORO, OR

POSTAGE WILL BE PAID BY ADDRESSEE

Intel Corporation
ISO Technical Publications, MS: EY2-06
5200 N.E. Elam Young Parkway
Hillsboro, Oregon 97124-9987



INTEL CORPORATION
3065 Bowers Avenue
Santa Clara, California 95051
(408) 987-8080

JAPAN
Intel Japan K.K.
5-6 Tohkohdai, Toyosato-cho,
Tsukuba-gun, Ibaraki, 300-26
Japan

FRANCE
Intel
5 Place de la Balance
Silic 223
94528 Rungis Cedex
France

UNITED KINGDOM
Intel
Pipers Way
Swindon
Wiltshire, England SN3 LRJ

WEST GERMANY
Intel
Seidlstrasse 27
8000 Muenchen 2
West Germany

2790/2.5K/0587/OSPS/DM/ISO