The ADIC
Distributed AML Server

DAS V3.12 Administration Guide

Advanced Digital Information Corp

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Introduction

Overview

This document contains the information and instructions necessary to set up and operate the Distributed AML Server (DAS) software for version 3.0 and higher. The topics discussed in this chapter are:

- Overview
- Intended Audience
- Organization
- Associated Documents
- Explanation of Symbols and Notes
- Assistance

Intended Audience

This guide is intended for use by system programmers and administrators working with the DAS software.

Organization

This publication contains the following chapters:

Chapter 1	Introduction - Notes on the use of the manual
Chapter 2	Description - Overview of the functions on the DAS
Chapter 3	Safety - Information on the safe operation of the DAS
Chapter 4	Installation and Configuration - Explanation of the tasks necessary for installation and configuration
Chapter 5	DAS Commands - Alphabetic list of all administrator commands
Chapter 6	Messages - List of all messages and the relevant actions necessary
Chapter 7	Utilities - Description of further utilities for working with the DAS
Chapter 8	Communication Applications - Description of the communication applications.
Chapter 9	DAS ACI Firewall - Description of the configuration of the DAS ACI firewall software.
Appendix A	Application Notes - Information on the installation of certain applications
Index	

Accociated Documents

You may wish to reference the following documents:

- DAS V3.12 Release Notes
- DAS V3.12 Interfacing Guide

Explanation of Symbols and Notations

The following four types of notation identify important information or instructions by using distinctive font styles.

<1> + <2>	Press these keys simultaneously.
Italics	Headline, e.g., Chapter 2, *Introduction* File name, e.g., *PROINST.EXE* Dialog segment, e.g., *Media Identifier*
Bold	Terms appearing on the AMU graphical user interface Special Term, e.g., **Manage Users** Operating element/key on the operating panel or the keyboard of the AMU software.
`Courier`	Command line appearing in the operating system input window, e.g., `[C:\]cd SDLC` Directory structure e.g., `C:\SDLC`

Assistance

If problems cannot be solved with the use of this document or if recommended training is desired, contact the ADIC Technical Assistance Center (ATAC).

Toll free phone (North America)	1.800.827.3822
Toll free phone (Western Europe & Japan)	00.800.9999.3822
Toll free phone (rest of world)	AT&T Direct Access Code + 1.800.827.3822
Email address (North America)	techsup@adic.com
Email Address (outside North America)	ATAC@adic.fr

2

Description

Overview

The following sections provide an introduction to the DAS environment, structure, administrative commands, and functions. Refer to Figure 2-1 .

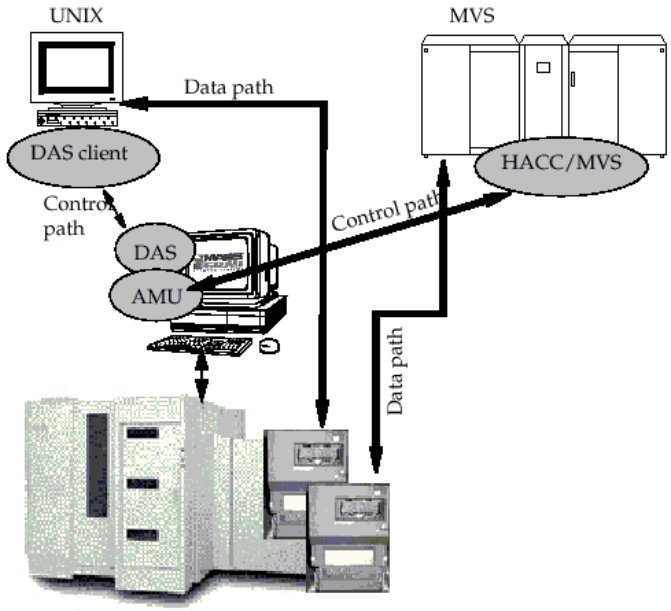


Figure 2-1 UNIX and MVS with Shared AML

The DAS software is a client/server software product designed to provide shared access to an ADIC AML system by up to 50 separate clients. This means that the clients can run on entirely separate platforms while using various media in the AML system. The DAS software makes it possible for backup, document management or HSM applications to have direct access to the media in the ADIC AML systems.

DAS Working Environment

The AML system is controlled by the AML Management Unit (control path). The data from the applications is sent directly to the drives independently of this (data path). The DAS software supports a wide variety of UNIX systems, and also the BS2000 and Windows NT. Connection to other operating systems such as MVS, VM or Tandem is made across another interface of the AMU.

Structure of the DAS Software

The DAS software comprise two main components:

- Server function
- ACI function (AML client interface)

DAS Client

The client software consists of a library of functions and an administration program (*dasadmin*). The software is available for various platforms. A new client simply requires the standard TCP/IP functions with ONC RPC (Remote Procedure Calls) support and an ANSI C compiler. The applications access the open interface (ACI). See Figure 2-2 .

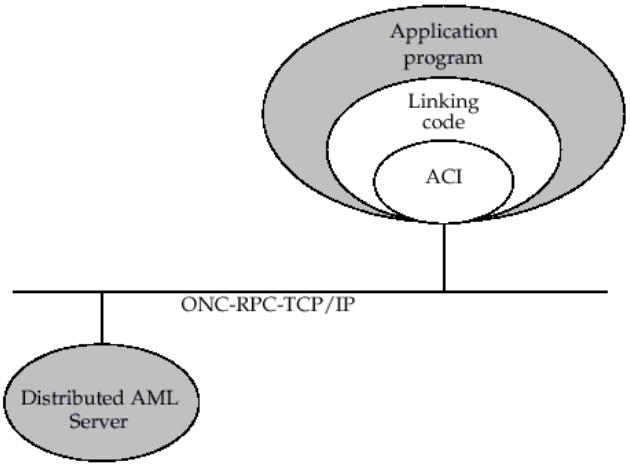


Figure 2-2 DAS Structure

Each client can be assigned specific access privileges to the AML.

- Functions (basic functions, extended or all functions)
- Drives
- Volsers (Volume Serial Number)
- Ranges of the I/O units
- Scratch pools

DAS Server

The server software is installed on the AMU, which is a computer running OS/2. See Figure 2-3 .

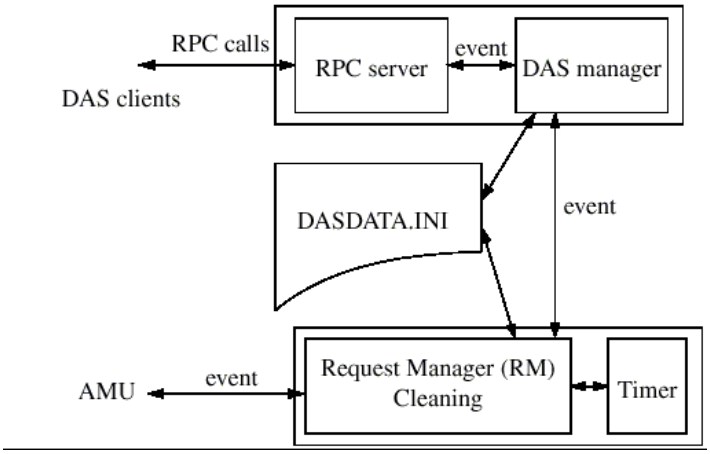


Figure 2-3 Modules in the DAS

The DAS server software is divided into three parts:

- RPC server
- DAS manager
- Request Manager.

The RPC server is responsible for communicating with the clients on the TCP/IP network and converts the requests and responses into the appropriate format.

The DAS manager controls access privileges and priorities and sends the authorized requests to the Request Manager.

The Request Manager sets up the AMU commands and sends these commands to the AML Management Software (AMU).

The *dasdata.ini* file is used to save information about drive allocation, volser allocation and foreign assignment.

Command Processing

The following is a simplified representation of one possible sequence of commands:

- The application reserves a drive in the DAS for a mount.
- The application requests a medium from a daemon for this mount.
- The daemon generates the mount request for the medium and sends it together with drive, media type and volser through the ACI to the DAS.
- DAS generates a mount command for the AMU.
- The AMU acknowledges the procedure to the DAS on conclusion of the process.
- DAS passes the response on to the calling daemon.
- The application writes data to, or reads data from, the medium.
- The application requests the daemon to unload the drive if this is successful.
- The daemon sends the unload command to the drive, and the dismount command to the DAS through the ACI.

- DAS executes the command through the AMU and sends an acknowledgment to the daemon.

DAS Commands

DAS administrator commands can be divided into four areas:

- Media management
- DAS management
- Client management
- Scratch pool management

Media Management

- Mount and dismount
- Change sides on the optical disk in the drive
- Insert and eject
- Inventory
- View the available media
- View the media status
- Catalog or remove foreign media
- Clean the drive
- Insert and eject the cleaning cartridge

DAS Management

- Delete command
- View outstanding commands
- Activate and deactivate barcode reading for mount, move and eject from DAS
- Shut down DAS
- Shut down AMU

Client Management

- Reserve/release a drive for a client
- Reserve/release a volser for a client
- Modify access privileges for client
- Modify execution parameters

Scratch Pool Management

- Add volser to the scratch pool
- Remove volser from the scratch pool

- Get volser from the scratch pool
- View scratch pool information

DAS Functions

The DAS Software passes on all permitted Distributed AML client requests to the AML Management Software and facilitates AML system administration by means of the dasadmin program and the configuration file config. In detail, the following individual operations are executed on DAS:

- Communication with the ACI
- Communication with the AMU
- Configuration Management
- Client Authorization
- Command verification
- Error handling
- Mount and dismount media in the AML
- Work with foreign media
- Insert media in the AML
- Eject media from the AML
- HICAP support
- Scratch pool management
- Support of the dual AMU
- Services for drive cleaning

Communication with the ACI

The AML Client and the DAS software communicate using ONC RPC. Data is interpreted identically on all platforms through XDR data conversion protocol.

There may be a delay between the command being sent to the AML system and full acknowledgment (from a few seconds to a few minutes if the drives are busy at the time or if the AMU command queue is full). For this reason, the RPC calls are setup so that the DAS calls the relevant client back when the command has been completed. The RPC request is organized by the **TCP/IP Portmapper**.

Communication with ACI Client

Communication with the ACI is implemented using the OS/2 Event mechanism. Compliance with the response time following a command call is monitored by a timer. A command is timed out or repeated if the command is not executed within the prescribed time.

The client is notified immediately when a command has been successfully completed. A decision is made whether it is worth repeating the command or an appropriate error message should be sent to the client, if an error occurs. The client will be notified if DAS error handling is unsuccessful. An exception is made for an inventory command which requires a large amount of time. This command will always be acknowledged immediately and the client will receive no further feedback following a positive or negative conclusion.

Configuration Management

ADIC AML systems can be configured with a wide variety of storage systems, drives and I/O units. This information is stored in the AMU in a configuration file (Refer to the *AMU Reference Manual*).

The DAS software can access the AMU configuration data to get media and system information.

In addition to this configuration data which is loaded from the file config when the program is started, DAS requires further parameters of its own. These parameters are:

- Parameters for each client
  - Operating parameters
  - Access privileges for
    - drives
    - volser
    - I/O units
    - scratch pool
- Assignment of drives to volsers
- DAS Server statement

Client Authorization

Each client that has access to the DAS software must be authorized for the command. Authorization is implemented by:

- Comparison of the client name with the sender's TCP/IP address (assignment in the config file is by TCP/IP address or host name)
- Granting access privileges (complete or restricted)
- Assignment of privileges for devices (drives, volsers, I/O units, scratch pools)

WARNING The potential to limit access to media, drives and I/O units allows secure use of different applications on one AML system.

Command Verification

Client requests are checked for:

- Command format and command syntax
- Parameter validity (drive, volser, I/O range etc.)

Error Handling

All client requests are buffered in DAS so that in the event of a communication error, the command can be resumed without loss of data, therefore avoiding unnecessary error handling measures. As soon as a client request is received by the DAS software:

- Command buffered (in RAM; this information is lost if there is a mains outage)
- Command to the dual AMU relayed to the dual DAS (if dual AMU is installed)
- Receipt confirmation sent to the client
- Command written to the AMU log file
- Command passed on to the AMU
- Response from AMU awaited for the preset time
- Client informed about the request status

The status of the drives and the cataloged foreign media are stored in the system file *dasdata.ini*.

Mount and Dismount Media in the AML

Mount and dismount are the basic AML functions for selecting the media from the archive using volsers, inserting the medium in the drives and returning it to the archive after use.

Working with Foreign Media

There is no need to mount media which are to be inserted in a drive in the AML only once and for a short time; instead such media can be introduced directly from the I/O unit into the drive as foreign media even without a barcode label. This means that media which already have an existing volser in the archive can be handled.

The areas in the I/O used for foreign media unit must be defined in the AMU configuration.

A symbolic volser can be assigned a coordinate using the catf command (Refer to the AMU Reference Manual); this can then be used to perform a mount. See Figure 2-4 .

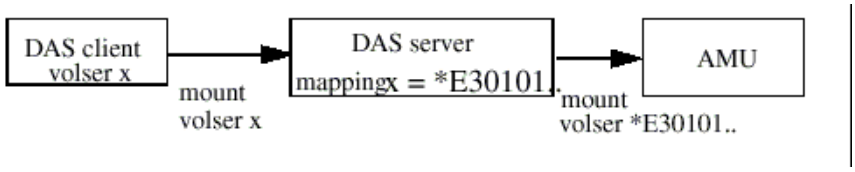


Figure 2-4 Assignment of Symbolic Volsers for Foreign Media

Inserting Media in the AML

The insert function through the I/O unit of the AML system can be used if new media is required in the AML (scratch media or for replacing seldom-used media). The DAS server allows clients with full access privileges (administrator) to insert media.

Ejecting Media from the AML

The eject function can be used through the I/O unit of the AML system to eject media which is no longer needed or not needed at present. The slot in the archive is retained for the volser if ejection is temporary, otherwise “Null volser” is entered and the slot becomes available for other volsers.

Scratch Pool Administration

DAS supports the creation of scratch pools to administrate media which are released for rewriting. The administrator can use the scratch pools to assign the media to be used to the individual applications. DAS supports:

- The addition of volsers to a scratch pool
- The removal of volsers from the scratch pool
- Mounting a scratch medium from a scratch pool
- The output of the volser for the next available scratch medium
- The output of information to the scratch pool

HICAP Application

The large I/O unit of the AML/J system is known as HICAP (High Capacity). This I/O unit has the unusual feature that the archive is open while media are added and the robotic controller in the archive is shut down for safety reasons.

The request to open the HICAP is sent from the AMU to the DAS software. DAS reacts to this as follows:

- All new commands from clients which require the robotic controller are rejected with the EHICAPINUSE message.
- Commands remain in the queue; the timer sets longer time-outs for these commands.

The commands from the queue are processed when the AML/J system is available. The clients are not informed of this new status.

Dual AMU Support

Important components can be implemented redundantly to give increased protection against breakdown of the total ADIC AML system. Including a second PC (dual AMU) brings the dual function of the DAS into operation. See Figure 2-5 .

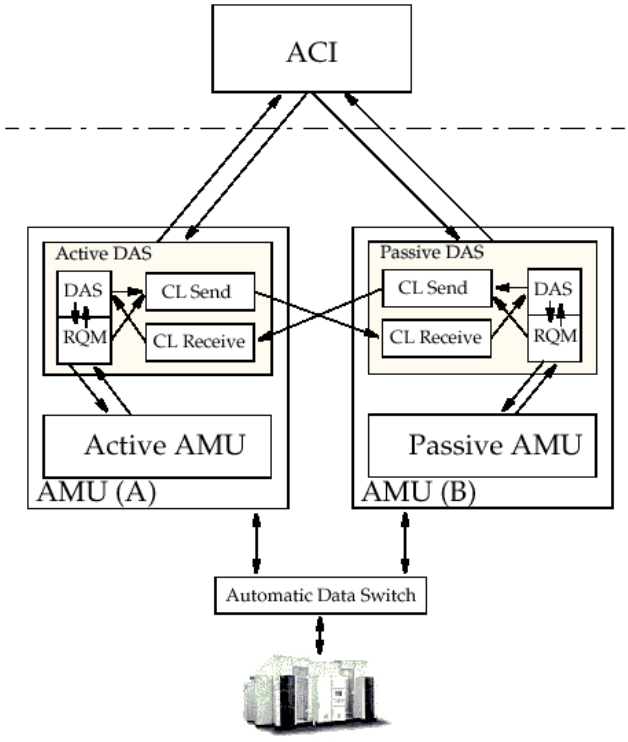


Figure 2-5 Structure of Dual AMU Support

At run time, only one AMU and one DAS are active, while the second AMU is passive. The active server is detected automatically and the DAS command is sent to that server.

The *dasdata.ini* is updated automatically on the passive DAS. In case of a switch, the passive DAS has all actual information about the drive allocation, volser allocation and foreign assignment. If the passive DAS is down, no updates are made between the dasdata.ini files. If the ACI cannot find the active DAS, the ACI sends the command to the passive DAS and the passive DAS sends the command to the passive AMU. This only works if the AMU routing is working.

The passive AMU can be switched to active by using the switch command. The switch command can be executed as normal or with the force option. Force means an immediate switch through the passive server without first synchronizing the AMU database with the previously active AMU.

The DAS software refuses new client commands by means of ESWITCHINPROG during the switching process. All commands copied to the previously passive server are checked or executed, and the clients are sent relevant acknowledgment following successful switching.

3

Safety

Overview

Knowledge and observance of these instructions is imperative for the safe operation of the ADIC AML systems.

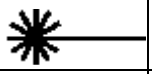
Avoid danger when maintaining and operating the machine by behaving in a safety-conscious manner and acting judiciously.

NOTE **In addition to the safety instructions in this guide, local and professional safety rules apply.**

Hazard Alert Messages

ADIC classifies hazards in several categories. Table 3-1 shows the relationship of the symbols, signal words, actual hazards, and possible consequences.

Table 3-1 Hazard Alert Messagess

Symbol	Damage to	Signal Word	Definition	Consequence
	Persons	**Danger**	Imminent hazardous situation	Death or serious injury
		Warning	Potential hazardous situation	Possible death or serious injury
		Caution	Less hazardous situation	Possible minor or moderate injury
	Persons		Imminent hazardous electrical situation	Death or serious injury
	Persons	**Caution**	Less hazardous situation	Possible minor or moderate injury
	Material	**Attention**	Potential damaging situation	Possible damage to the product or environment
	Material	**Static Sensitive**	Potential electronic damaging situation	Possible damage to the product
		**Note**	Tips for operators	No hazardous or damaging consequences
			Important or useful information	No hazardous or damaging consequences

Validation

These instruction are valid for ADIC AML systems.

Supplementary safety provisions for any components used on the machine are not invalidated by these instructions.

NOTE **Any other manufacturer's documentation forms part of the AML documentation.**

4

Installation and Configuration

Overview

This chapter describes how to:

- Install the DAS software on the AMU PC (OS/2 operating system)
- Configure the server software
- Install the ACI software on a UNIX computer and on Windows NT
- Setting up the working environment for the ACI

Installing the DAS Software

The DAS software for OS/2 is supplied on a diskette with an install program dasinst.cmd, an install file and the decompression program. The DAS software for OS/2 also contains the ACI for OS/2 software together with the server and the administrator program dasadmin. ADIC recommends the use of the install program for the installation, but a manual install is also possible.

Installation Using Dasinst.cmd

Step 1 If the DAS is running (window DAS/2 in the list task): Stop DAS with
`C:> \das\bin\dasadmin shut now`.

Step 2 Insert the diskette containing the DAS software in the floppy drive of the AMU PC and start the install program.

Step 3 Select the install option.

1	New Installation of DAS Server Software (Installation without backup of an older Version)
2	DAS Software Update from DAS 3.x to 3.x
3	DAS Software Update from DAS 1.30x to 3.x
4	DAS Software Update from DAS 1.20x to 3.0
5	Deinstallation of the last update
6	Deinstallation of complete DAS
7	End

Step 4 Follow the steps of the install program.
Choose option Y, if you have a DUAL-AMU. More parameter for DUALDAS will be requested afterwards.

NOTE **The following step is for DUALDAS only.**

Step 5 Enter the TCP/IP name of the DUAL-AMU. (for the environment variable DAS_PARTNER).
Enter the TCP/IP address in the form xxx.xxx.xxx.xxx. (assignment host name and IP address will be written in the file *hosts*)

Step 6 Copy all the client software into the `c:\das\aci` directory and follow the instructions.

Step 7 Remove the diskette from the drive

Installation Without the Install Program

You can skip this section if you have used the install program with success

Step 1 Backup any DAS software (if present), and delete all files from the `c:\das` directory.

Step 2 Create the directory on your hard disk if it does not exist.
```
md das
```

Step 3 Change to the directory.
```
cd das
```

Step 4 Insert the diskette containing the DAS software in the floppy drive of the AMU PC and copy the DAS software into the DAS directory.
```
C\DAS:> copy a:\*.zip
```

Step 5 Remove the diskette from the drive.

Step 6 Unzip the DAS software.
```
C\DAS:> a:\unzip *.zip
```

Step 7 Copy all the tar files from the second and third floppy to the `c:\das\aci` directory.

Step 8 After installation is complete, the manual update of the *config.sys* file is necessary Refer to *Editing the Config.sys File*.

Configuring the Server Software

The following sections provide information on editing the server software.

Editing the Config.sys File

ADIC recommends that the following amendments be made in the config.sys file so that the administrator functions can be accessed on the OS/2 computer. The Libpath and the variables DAS_SERVER, DAS_CLIENT and DAS_PARTNER will be written by the installation program.

Step 1 Open the *config.sys* file in the editor.
```
C\:> epm c:\config.sys
```

Step 2 Append or add the following lines in config.sys.
```
LIBPATH=...C:\DAS\BIN;
SET DAS_SERVER=AMUA,AMUB
SET DAS_PARTNER=AMUB
SET DAS_CLIENT=AMUADMIN
SET DAS_EJECTAREAFULL=1
```
Refer to Installation and Configuration.

Step 3 Save *config.sys*.

Step 4 Restart the OS/2 computer to activate the changes to the configuration.

NOTE **This restart is only necessary after a new installation.**

Editing the Startup.cmd File

ADIC recommends that the following amendments be made in the startup.cmd file so that the DAS software is started automatically on the OS/2 computer during startup.

Step 1 Open the *startup.cmd* file in the editor.
```
C\:> epm c:\startup.cmd
```

Step 2 Append or add the following lines in *startup.cmd*.
```
call tcpstart
das\tools\os2sleep 20
CD \AMU
call AmuStart
cd \das
tools\os2sleep 20
call DasStart
cd bin
start DAS/2 AmuClient
exit
```

Step 3 Save *startup.cmd*.

NOTE **This sample file for the startup.cmd is installed under `c:\das\tools\startup.smp`. An explanation of the individual points in the *startup.cmd* file can be found in the AMU Reference Manual**

Editing the Config File

The *config* file contains all settings for access privileges, drive assignment and command options. A sample of this file is stored as `c:\das\etc\config.smp` during installation.

Step 1 For manual and first time installation, copy the *config.smp* sample file to *config*.
```
C\:> copy \das\etc\config.smp das\etc\config
```

Step 2 Open the *config* file in the editor.
```
C\:> epm \das\etc\config.
```

Step 3 Append or add to *config* the required information.

Step 4 Save *config*.

Configuration File

This section describes editing the config file and editing the statement structure.

Structure and Syntax of Config

Entries in the config file are structured according to the following scheme.

```
Statement_name                    Keyword_name1 =
               Keyword_parameter1,
                                  Keyword_name2 = ...
```

There are three types of statements here:

- Client statement
- DriveToVol statement
- Server statement

Any line may contain a maximum of 100 characters. No special characters are permitted for variables in the file (except for the TCP/IP host names and client names). The special characters -, _, + and $ may be used in the TCP/IP host name and client name. The layout of the file (order of statements, blank lines and spaces) is free, although ADIC recommends the structure of the sample file as giving a clearer overview. Comment lines may be added if they begin with the "#" character.

Definition of Ranges

Devices are assigned to the individual clients by the definitions in the *config* file. This assignment is made in logical ranges in the AML. A logical range can be:

- a list of individual objects
- a continuous range
- an individual object
- keyword ALL

```
range =       item |
              item, item, ... |
              item-item |ALL # contains all objects
```

Definition of Volser Ranges

The definition of the volser ranges is a special form of the definition of logical ranges. The following rules apply for the volsers:

- A volser can have up to 16 alphanumeric characters
- Lowercase and uppercase letters (no special characters) and the numerals 0 to 9 are valid characters.
- The number and type of characters at the beginning and end of a range definition must match (e.g. ABC001 - ABC999, or 0001001 - 5638516, or 00aaAAa - 99zzZZZ).
- "a - Z" ranges also contain the numerals 0 to 9

Options

This section describes the avoid volume contention and dismount options.

Avoid Volume Contention Option

This option defines the error handling for a mount command on a volser which is not located at the home position or drive on which is loaded with a cleaning cartridge.

avc: The command is immediately acknowledged negatively for a mount command on a volser which has the attribute *Mounted, Reverse_Side_Mounted, Ejected* in the AMU database or if there is a cleaning cartridge in the drive.

no_avc: For a mount command on a volser which has the attribute *Mounted, Reverse_Side_Mounted, Ejected* in the AMU database or if there is a cleaning cartridge in the drive, the command is placed in the command queue and suspended until

- The volser is shifted to the home position by a dismount command.
- DAS is terminated.

The default (no specification in the *config* file) is **no_avc**.

Dismount Option

This option defines the reaction to a mount command on a drive that is already occupied.

dismount: The command is immediately acknowledged negatively for a mount command on a drive which has the attribute *Occupied*.
This requires that the client sends a dismount command.

no_dismount: The command is placed in the command queue and a dismount command is automatically generated on this drive for a mount command on a volser which has the attribute *Occupied* in the AMU database.

The default (no specification in the *config* file) is **no_dismount**.

The Client Statement

A client statement is required for each client that accesses the server. The maximum possible number of client statements is 50.

Syntax

Below the syntax of the client statement is shown.

```
client client_name = client-name
      , hostname = workstation_network_name | ,ip_address = ip
      address
      [, requests =(basic | extended | complete)]
      [, options=([avc|no_avc][,dismount|no_dismount])]
      [, volumes = ((volume range),(volume range),...)]
      [, drives = ((drive range))]
      [, inserts = ((insert area range))]
      [, ejects = ((eject area range))]
      [, scratchpools = (( scratchpools range ))]
```

Refer to Table 4-1 for an explanation of the keywords in the client statement

Table 4-1 Client Statement

Keyword	Explanation
clientname	Name of the client (the name must not be the client's TCP/IP name). The following rules apply for the client name: • The client name may consist of up to 64 characters • Lowercase and uppercase letters and the numerals 0 to 9 and the special characters -, _, + and $ are valid characters in the client name. • The client name is case-sensitive The client name DAS_SUPERVISOR has the special privilege of reserving drives and undoing volsers.
host_name	The name of the relevant IP address of the client. The name must be resolved either through the hosts file or through a domain name server. The following rules apply for the names: • The host name may consist of up to 64 characters. • Lowercase and uppercase letters, the numerals 0 to 9 and up to 6 stops are valid characters in the host name.
ip_address	The IP address of the client The IP address has the format xxx.xxx.xxx.xxx.
requests	Access privileges for the client. • *basic*: only mount and dismount commands are permitted • *extended*: mount, dismount and all status commands are allowed • *complete*: all commands are permitted
options	Flow control option, refer to *Options*. • dismount or no_dismount: Automatic KEEP command • avc or no_avc (avoid volume completion) wait for the KEEP command of a volume which is already in use.
volumes	Assignment of the volser ranges available to the client Up to 10 volser ranges can be assigned per client
drive range	Assignment of drives available to the client in a range, e.g. (DRV_VHS, DRV_DLT, DRV_3480), or (DLT1 - DLT4) or (ALL). The name must match that in the description field of the AMU configuration.

Table 4-1 Client Statement

Keyword	Explanation
insert area range	Assignment of ranges available to the client (Logical Range) in the I/O unit for inserting media, e.g. (I01, I07, I66) or (I01 - I37) or (ALL). The coordinates are assigned in the AMU configuration. It is possible to interleave other operators or ejection fields with insertion fields.
eject area range	Assignment of ranges (Logical Range) in the I/O unit available to the client for ejecting media, e.g. (E01, E09, E99) or (E05 - E47) or (ALL). The coordinates are assigned in AMU configuration. It is possible to overlap with other users or other insertion fields.
scratch pools range	Assignment of scratch pools available to the client. Scratch pool administration is configured in AMU configuration. Assignment can be by • media type • client or client group. Different media types cannot be managed together in one scratch pool. The following rules apply for the scratch pool names. • The pool name may consist of up to 16+1 characters. • Lowercase and uppercase letters (no special characters) and the numbers 0 to 9 are valid characters in the pool name. • The keyword ALL gives access to all scratch pools. • The keyword DEFAULT gives access to all default scratch pools. • Default scratch pool names are formed from a combination of the word DEFAULT and the AMU media type, e.g. DEFAULTC0

The DriveToVol Statement

The DriveToVol statement can be used for any drive in the AML system. Volser ranges are assigned to specified drives by this statement. Media type (AMU) verification is independent of this statement.

Syntax

Below an example of the DriveToVol statement is shown.

```
DriveToVol drive = drive-name, volsers
           =((volumerange),(volumerange),.)
```

Each drive needs its own, complete statement. Drive ranges are not possible.

Table 4-2 gives an explanation of the keywords used in the DriveToVol statement.

Table 4-2 Drive to Volser Range

Keyword	Explanation
drive-name	Name of the drive to which volsers are to be assigned. (Drive name according to configuration in AMU)
volume range	Range of volsers to be assigned to the drive

The Server Statement

The server statement can be entered once in the config file. This sets optional parameters for operating the dual DAS and for error handling. The server statement is required.

Syntax

Below an example of the server statement is shown.

```
server                          [ dualdas_port = port_number ]
                                [, retry_keep = retry_number ]
                                [, timeout_move = time]
                                [, timeout_ei = time],
                                [logging_off = command]
```

See Table 4-3 for an explanation of the keywords used in the server statement.

Table 4-3 Optional Parameters

Keyword	Explanation
dualdas_port	TCP/IP port address for communication between the active DAS and the passive DAS. (Default: 5000) The default value must be modified if another application is occupying port 5000.
retry_keep	Number of internal iterations of the dismount command for an AMU error of type “Cartridge not ejected from drive for.<0420>. **WARNING The dismount manager in the AMU software is equally capable of executing this error handling. Make sure that the command is configured so that it is not timed out as a result of too many iterations.**
timeout_move	Time in seconds, between the start of a mount or dismount command and the response. If the command needs more time, the response is ETIMEOUT. Default: 1800. **WARNING For higher values, change the timeout values for the client. Change the environment variables on the client.**
timeout_ei	Time in seconds, between the start of a insert or eject command and the respond. If the command need more time is the response ETIMEOUT. Default: 1800. **WARNING For higher values, change the timeout values for the client. Change the environment variables on the client.**
logging_off	Used to switch off log messages for DAS commands, use the name of the DAS ADMIN command. **WARNING Currently, only the listd commands are supported.**

Configuration File

An example below shows the combined use of all of the previously defined statements.

```
client                          client_name = DAS_SUPERVISOR,
```

```
                                hostname = AMU,
                                requests = complete,
                                options = (no_avc,no_dismount),
                                volumes = ((ALL)),
                                drives = ((ALL)),
                                inserts = ((ALL)),
                                ejects = ((ALL)),
                                scratchpools = ((ALL))
client                          client_name = dasadmin,
                                hostname = unixhost,
                                requests = extended,
                                volumes = ((ALL)),
                                drives = ((ALL)),
                                inserts = ((ALL)),
                                ejects = ((ALL)),
                                scratchpools = ((ALL))
DriveToVol                      drive = DLT01,
                                volsers = ((000001),(000004 -
            000999))
DriveToVol                      drive = ODISK01,
                                volsers = ((000002),(00A - 99B))
DriveToVol  drive = Drive2,
                                volsers = ( (000002),(000007 -
            000010) )
server                          dualdas_port = 5000,
                                retry_keep  = 5,
                                timeout_move = 1800,
                                timeout_ei = 1800,
                                logging_off = listd
```

DAS Configuration in AMU

The settings must be compatible in order for DAS to function correctly with the AMU. The settings in AMU with regard to the DAS software are described below. You can find precise information on the AMU configuration in the AMU Reference Manual.

The settings are made in the Admin - Configuration... menu. See Figure 4-1 .

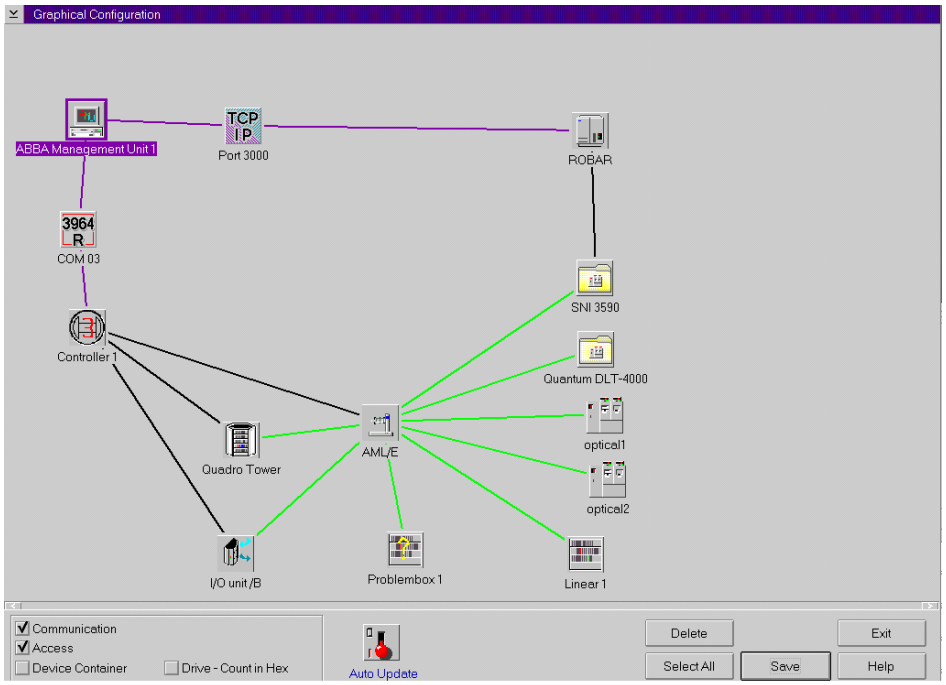


Figure 4-1 Graphical Configuration Window

DAS is not shown as the host in AMU configuration.

Drives

Step 1 Open the Drive Configuration window by double-clicking on the drive icon. Refer to Figure 4-2 .

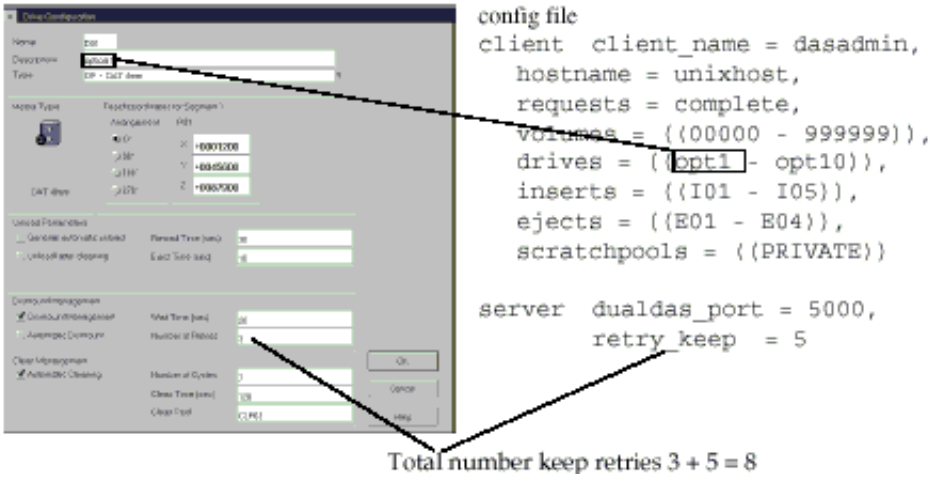


Figure 4-2 AMU-DAS Configuration for Drives

Step 2 Modify the configuration

Step 3 Finish configuration by clicking **OK**

I/O Unit

Step 1 Open the EIF-Configuration window by double-clicking on the I/O unit icon. See Figure 4-3 .

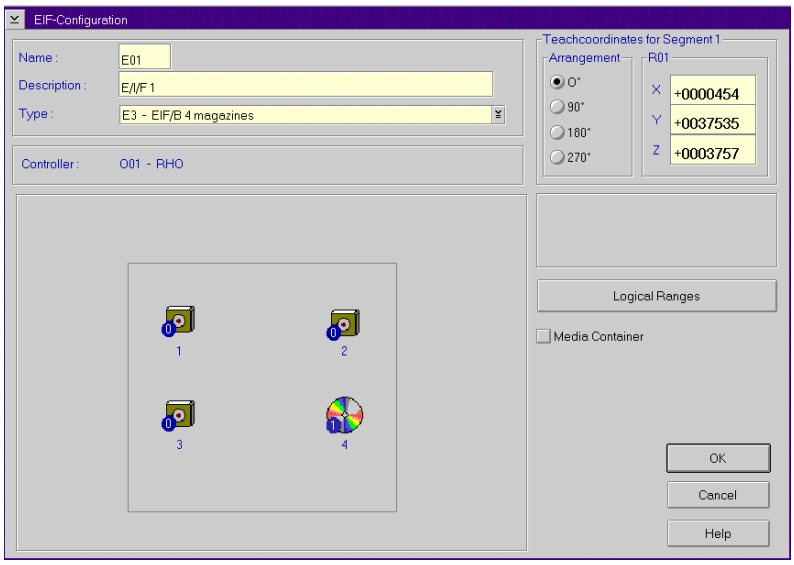


Figure 4-3 EIF-Configuration Window

Step 2 Open the relevant window by clicking on the Logical Ranges field. See Figure 4-4 .

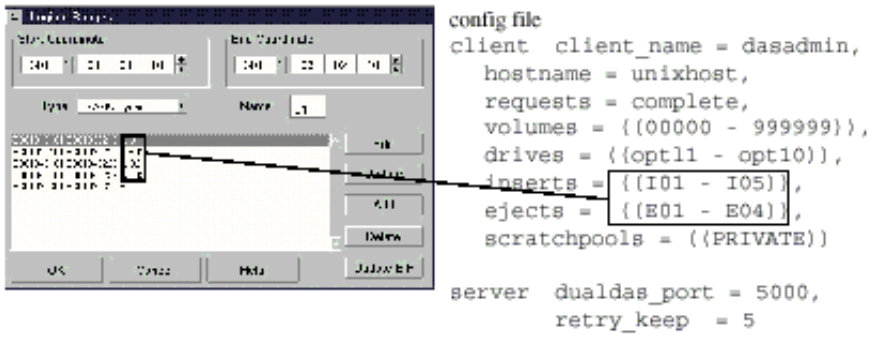


Figure 4-4 AMU-DAS Configuration for EIF Ranges

Step 3 Modify the configuration.

- Add insertion ranges (Type: AMU Dynamic, Name: Ixx, where xx is 01-99)
- Add ejection ranges (Type: AMU Dynamic, Name: Exx, where xx is 01-99)
- Add foreign mount ranges (Type: Foreign)

WARNING Each name may only be defined once in the list. Ranges of type AMU Dynamic may interleave. It is not permissible to interleave ranges of type foreign and HACC Dynamic.

Step 4 Quit the Logical Range window by clicking **OK**

Step 5 Quit EIF-Configuration window by clicking **OK**

Step 6 Save the changes by clicking **Save**

Step 7 Open *EIF-Configuration and Logical Ranges* window once more

Step 8 Modify the database with **Update EIF**

Scratchpools

Step 1 Open Admin Scratch Pool.. from the menu. Refer to Figure 4-5

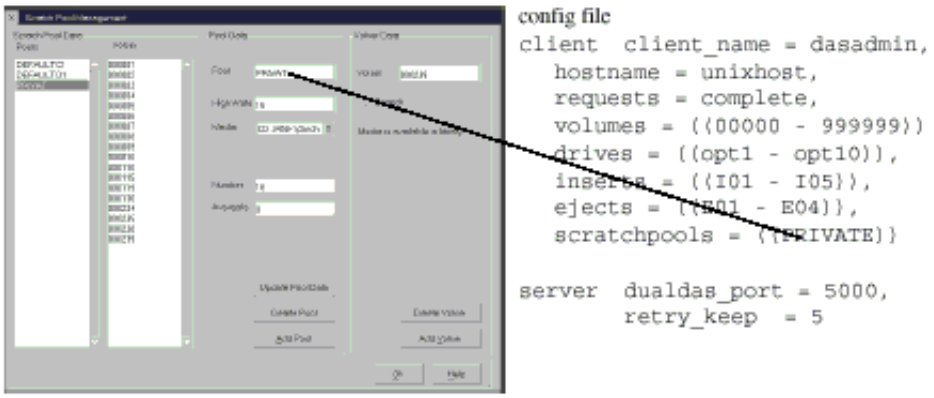


Figure 4-5 Scratchpool Configuration

Installing the ACI Software

This section describes the process for installing the ACI software for a UNIX-client and for a Windows NT client

UNIX-Client

During the DAS installation, the ACI software is copied into the `c:/das/aci` directory. The desired tar file can be copied with a FTP program to the UNIX machine.

Step 1 Create the directory for the ACI software.
`mkdir /usr/local/aci`

Step 2 Copy the ACI software to the directory created (ftp from the AMU) or (configuration of the OS/2 ftp). Refer to the AMU Installation Guide.

```
$ cd /usr/local/aci
$ ftp amu_hostname
userid> useid
password> password
ftp> bin
ftp> get das/aci/filename
ftp> quit
```

Step 3 Decompress the files to the `/usr/local/aci` directory.
`tar -xvf /usr/local/aci/`*`filename`*

Microsoft Windows NT Client Using RPC

Step 1 Create the `c:\aci` directory.

Step 2 Enter the *ACI for and Windows NT* disk in the drive a:

Step 3 Unpack the file *aci zip-file* into the `c:\aci` directory.

Step 4 Copy the file *aci.dll, ezrpc32.dll, winrpc32.dll* and *dasadmin.exe* into your Windows system directory. (On Windows NT 4.0 it is the: `\winnt\system32` directory).

Step 5 Open Control Panel/System/Environment.

- Extend the path environment variable with ACI installation directory c:\aci.
- Define the environment variable DAS_SERVER. The value is the hostname where DAS-server is running.
- Define the environment variable DAS_CLIENT. The value is the clientname of the NT client which is defined in the DAS config file on the OS/2 computer.

Step 6 Change to the `c:\aci` directory.

Step 7 Install the portmapper by typing portinst. The portmapper should be set to start automatically during the start of NT.

Step 8 Remove the disk from the a: drive.

Step 9 Reboot the NT machine.

Microsoft Windows NT Client Using RSH

This section describes the process for configuring DAS clients on the OS/2 PC. For further information refer to *Configuration DAS Client on the OS/2 PC* of the DAS Interfacing guide for Windows 95/NT.

Configuration DAS Client on the OS/2 PC

Step 1 Enter the disk in the AMU-PC

Step 2 Open an OS/2 window and enter.

```
copy a:aci.cmd c:\os2
```

Step 3 Edit the C:\DAS\ETC\CONFIG file.

```
C:> epm c:\das\etc\config
```

Step 4 Add a new client to the list of DAS clients.

WARNING For Dual AMU operations, it is recommended that both AMU client_names should be added to the configuration file.

client_name:	alphanumeric name for authorization
ip_address / hostname:	TCP/IP identification of OS/2 PC (AMU)
requests:	complete
options:	(avc, dismount)
volumes:	up to 10 ranges of the media names
drives:	alphanumeric names similar to the Description in the Graphical Configuration in the AMU

Step 5 Select TCP/IP and TCP/IP Configuration Icon to open the Window TCP/IP Configuration

Step 6 Configure and Start the RSH daemon on the AMU PC

Step 7 Configure the Security for the RSH (Add the HOST-Name of the Windows-NT machine to the list “HOST authorized to use RSH”)

Step 8 Configure and Start a Telnet Deamon on the AMU PC (optional for VirOp Administrator menu)

Step 9 Save the CONFIG file on a floppy for print out.

Step 10 Close all applications on the AMU PC and restart the PC.

Configuration Windows for the ACI Client

Step 1 Set the necessary environment variables:

WARNING The following configuration is only necessary if you work with the *dasadmin* command line.

See Table 4-4 for an explanation of the variables in configuring Windows for ACI.

Table 4-4 Variables

Variable	Explanation
DAS_SERVER	TCP/IP Identification of the AMU (OS/2) PC for the commands
DAS_CLIENT	Name for authorization of the command related to the configuration in file config on the AMU (OS/2) PC
ACI_MEDIA_TYPE	Default media type for the commands

WARNING Start the environment variables on the startup with *AUTOEXEC.BAT* or your on login script.

Configuration of the UNIX-Client Software

Configuration of the client is dependent on the platform used and the application which is to access the AML system. Instructions on certain points can be found in the *Applications*.

For use of the ACI

- the library files must be made accessible to the system (set *LIBPATH* or create an association)
- the environment variables must be set.

The two examples of environment variable configuration follow.

Example of the C Shell

Alternatively the variables can also be entered in the *.cshrc* file to make the values universally valid.

```
setenv DAS_SERVER AMUA,AMUB
setenv DAS_CLIENT dasadmin
setenv ACI_MEDIA_TYPE DECDLT
setenv ACI_TIMOUT_MOVE 1800
setenv ACI_TIMOUT_EI 1800
```

Example of the Korn and Bourne Shell

Alternatively the variables can also be entered in the .profile (Korn shell) or .login (Bourne shell) file to make the values universally valid.

```
DAS_SERVER=AMUA,AMUB; export DAS_SERVER
DAS_CLIENT=dasadmin; export DAS_CLIENT
ACI_MEDIA_TYPE=DECDLT; export ACI_MEDIA_TYPE
```

```
ACI_TIMOUT_MOVE=1800; export ACI_TIMEOUT_MOVE
ACI_TIMOUT_EI=1800; export ACI_TIMOUT_EI
```

Installation and Configuration

The environment variables listed must be set for each client. Refer to Table 4-5 .

Table 4-5 Environment Variables for DAS

Parameter	Parameter Type	Explanation
DAS_SERVER	required for ACI	TCP/IP Identification of the AMU (OS/2) PC for the commands
DAS_CLIENT	required for ACI	Name for authorization of the command related to the configuration in file config on the AMU (OS/2) PC
ACI_MEDIA_TYPE	optional for ACI	Default media type for the commands
DAS_EJECTAREAFULL	optional for DAS	Reaction to the AMU message <1157>. There is no free eject position in EIF-device. 1: message to the client (new command to continue) 2: no message to the client (automatic continuation once the range has been opened and cleared)
DAS_PARTNER	required for DAS if Dual-AMU installed	information for the Server software, where the Dual-DAS is installed.
ACI_TIMEOUT_MOVE	optional for ACI	Time for the ACI to wait for the response to the commands mount and dismount. Default: 1800 seconds
ACI_TIMEOUT_EI	optional for ACI	Time for the ACI to wait for the response to the commands insert, insert2, eject, eject2, ejectcl. Default: 1800 seconds

5

DAS Commands

Overview

The DAS administrator can use the commands to set up and monitor the AML system. This chapter provides full explanation of all commands in alphabetical order. A brief illustration of the syntax can be obtained online by entering the command using the **-h** option

DAS Commands

DAS commands are divided into:

- Client management
- Media management
- DAS management
- Scratch management

All these commands are called with *dasadmin*

- from the `C:\DAS\BIN` directory on the OS/2 client
- from the `/usr/local/aci/admin` directory on the UNIX client
- from the system directory `\winnt\system32`

Client Management Commands

This section provides a list and an explanation of the client management commands. See Table 5-1 .

Table 5-1 Client Management Commands

Command	Explanation
allocd	changes drive reservation for clients
allocv	reserves volsers for a client
listd	displays drive assignment for up to 16 drives
listd2	displays drive assignment for up to 250 drives
listd3	displays drive assignment for up to 250 drives
listd4	displays drive assignment for up to 380 drives
listf	displays information about foreign volsers
listv	displays volser reservations
scop	temporarily modifies the working parameters
scop2	temporarily modifies the working parameters
scap	temporarily modifies access privileges
show	displays current access privileges and operating parameters
show2	displays current access privileges and operating parameters

Table 5-1 Client Management Commands

Command	Explanation
typelist	shows all drives or specific drives with matching media type

Media Management Commands

This section provides a list and an explanation of the media management commands. See Table 5-2 .

Table 5-2 Media Management Commands

Command	Explanation
catf	catalogs foreign media
carry	move cartridge from one slot to another
cell_info	displays information about devices and cartridges in the system
clean	cleans drive
dismount	removes a cartridge from a drive and returns it to its original position
eif_conf	displays information about logical ranges in the EIF
eif_info	displays information about logical ranges in the EIF
eject	ejects cartridges from the AML (limited numbers)
eject2	ejects cartridges from the AML
eject3	ejects cartridges from the AML
ejectcl	ejects cleaning cartridges from the AML
ejectcom	the specified volser will be completly moved to the EIF
flip	flips the optical disk in the drive
getvolsertodrive	displays the configured assignment of volsers to drives
getvoltoside	displays information on the association of volsers to an optical disk.
insert	inserts a few cartridges in the AML
insert2	inserts many cartridges, including cleaning cartridges, in the AML
mount	load cartridge with a volser into a drive
inventory	AMU database of the whole AML system checked and corrected
partinventory	AMU database of part of the AML system checked and corrected
qvolsrange	displays the volser from the AMU database for a specified range
rmf	removes foreign media from the catalog
unload	the robotic controller in the AML system operates the buttons on the drive (e.g. **unload** button)
view	displays information from the AMU database relating to a volser
view2	displays current information for the specified volser range
volserinventory	for inventory of a single volser

DAS Management Commands

This section provides a list and an explanation of the DAS management commands. See Table 5-3 .

Table 5-3 DAS Management Commands

Command	Explanation
barcode	deactivates the AML barcode reader for the mount, carry and eject commands
cancel	deletes a command from the command queue
email	sends the message via email
killamu	terminates AMU software (DAS, AMU and OS/2)
list	displays the DAS command queue
list2	provides enhanced information on executing requests
qversion	displays the DAS and ACI version
pausedas	transfers dasadmin to a passive state
pausedrive	logically sets a tape drive into "disable/enable" state
robhome	makes the AML system inactive
robstat	makes the AML system active or queries status
shutdown	shuts down the DAS software
snmp	sends the message via SNMP
switch	switches between active and passive DAS for dual DAS

Scratch Management Commands

This section provides a list and an explanation of the scratch management commands. See Table 5-4 .

Table 5-4 Scratch Management Commands

Command	Explanation
scr_get	displays the next available scratch volser from the scratch pool
scr_info	displays information relating to the scratch pool
scr_insert	inserts a cartridge and adds it to the scratch pool
scr_mount	places the next available scratch cartridge in the drive
scr_set	adds cartridges in the AML system to the scratch pool
scr_set_range	adds volser range in the AML system to the scratch pool
scr_unset	changes cartridge status from scratch to unscratch

Command Description

Reserve Drive (allocd)

The **allocd** command changes the reservation status of a drive for a client.

```
dasadmin allocd drive UP|EXUP|FUP|DOWN|FDOWN client
```

```
dasadmin all drive UP|EXUP|FUP|DOWN|FDOWN client
```

Refer to Table 5-5 for a list and an explanation of the parameters for the **allocd** command.

Table 5-5 Parameters for the Allocd Command

Parameter	Explanation	
drive	drive whose status is to be changed	
UP, FUP, EXUP, DOWN, FDOWN	new reservation status	
	UP	normal reservation of empty drive.
	FUP	reserve a drive even if it is already reserved by another client or occupied.
	EXUP	exclusive reservation, can only be undone by the client itself or by DAS_SUPERVISOR.
	DOWN	remove the normal status of a reservation from empty drive.
	FDOWN	remove reservation even if the drive is reserved by another client or occupied.
client	name	change reservation status for the client.
	SHARED_ACCESS	change reservation status for all clients.

This function is used in the management of drives with shared usage. Only one client can use a drive at a time. Mount and dismount commands issued by other clients are rejected. A drive must be released by its previous user before a client can normally use it.

NOTE The drive can only be put in the DOWN status by FDOWN if the drive is occupied.

Also, refer to *Display Drive Assignment (listd4)*.

Reserve Volsers (allocv)

The **allocv** command reserves the specified volser(s) for a client.

```
dasadmin allocv volserrange UP client
```

```
dasadmin allocv DOWN client
```

Refer to Table 5-6 for a list and an explanation of the parameters for the **allocv** command.

Table 5-6 Parameters for the Allocv Command

Parameter	Explanation	
volserrange	range of volsers to be reserved	
UP, DOWN	new reservation status	
	UP	reserves the specified volser/volsers
	DOWN	removes the reservation of all volsers for the client
client	name of client under which the reservation is to be made	

NOTE The reserved volser can be only released by the client itself or the client DAS_SUPERVISOR.

Activate/Deactivate the Barcode Reader (barcode)

The **barcode** command activates or deactivates the barcode reader of the specified robotic controller for mount, and eject commands, but only for those commands sent by the DAS to the AMU.

```
dasadmin barcode robotnumber ON|OFF
```

Barcode reading remains active for inventory and insertion even when barcode reading is deactivated.

Refer to Table 5-7 for a list and an explanation of the parameters for the **barcode** command.

Table 5-7 Parameters for the Barcode Command

Parameter	Explanation	
robotnumber	number (R1 or R2) of the robotic controller whose barcode reader is to be deactivated	
ON, OFF	new reader status	
	ON	barcode reader activated
	OFF	barcode reader deactivated

Cancel Command (cancel)

The **cancel** command deletes commands from the DAS command queue.

```
dasadmin cancel request-id
```

```
dasadmin can request-id
```

Refer to Table 5-8 for an explanation of the parameter for the **cancel** command.

Table 5-8 Parameter for the Cancel Command

Parameter	Explanation
request-id	DAS sequence number (displayed using the **list2** and **list** commands). Refer to *Display All Active Commands (list2)*

Move a Medium to the Slot (carry)

The **carry** command moves medium from one slot to another and re-assigns the medium home position in AMU database if necessary.

```
dasadmin carry sourcecoor targetcoor [volser]
```

Refer to Table 5-9 for a list and an explanation of the parameters for the **carry** command.

Table 5-9 Parameters for the Carry Command

Parameter	Explanation
sourcecoor	logical coordinate in the library the volser is to be moved from, e.g. T104320908
targetcoor	logical coordinate in the library the volser is to be moved to, e.g. T105010310.
volser	the volser that should be moved. If the *sourcecoor* contain volser other than specified, the command fails.

In some cases, the **carry** command works similar to the other media move commands. The details are described at Table 5-10 .

Table 5-10 Details for the Carry Command

Source slot	Target slot	Analog	Medium home position	Medium state
Storage	Storage	none	Changes to target slot	Stored
Storage	I/E	none	Remains unchanged	Stored
Storage	Drive	Mount	Remains unchanged	Mounted
I/E	Storage	Insert	Changes to target slot	Stored
I/E	I/E	none	Remains unchanged	Stored
I/E	Drive	Mount	Remains unchanged	Mounted
Drive	Storage	Dismount	Changes to target slot	Stored
Drive	I/E	Dismount	Remains unchanged	Stored
Drive	Drive	none	Remains unchanged	Mounted

Also refer to *Retrieve a Medium from the Drive (dismount)*, *Eject Media (eject3)*, *Insert Media (insert2)*, and *Load a Medium in Drive (mount)*.

Catalog Foreign Volume (catf)

The **catf** command creates the association between the symbolic volser and the slot in the I/O unit.

```
dasadmin catf [-t media-type] volser coordinate
```

Refer to Table 5-11 for a list and an explanation of the parameters for the **catf** command.

Table 5-11 Parameters for the Catf Command

Parameter	Explanation
media-type	media type, e.g. 3590. Refer to *Media Types.*
volser	symbolic volser to be assigned to the cartridge in the foreign cartridge range in the I/O unit. A **mount** command is now possible for this volser.
coordinate	10-digit logical coordinate in the I/O unit locating the cartridge, e.g. E101020310.

Place the foreign media in the foreign range of the I/O unit. Now set up an assignment to a symbolic volser using the dasadmin **catf** command (not required as a barcode on the cartridge and may already exist as a volser in the database).

Place the cartridge in the drive using th**e mount** command and the symbolic volser. Remove the cartridge from the I/O unit after use and remove the symbolic volser from the catalog using the **rmf** command.

Also refer to *Remove a Foreign Medium (rmf).*

WARNING This version does not have a command to display occupied symbolic volsers. Make a careful note of this assignment; you will need the symbolic volser again for the rmf command.

The coordinate in the I/O unit must be defined in the AMU database for the catf command

- Attribute: empty
- Type: foreign

Get Device Information (cellinfo)

The **cellinfo** command displays information about devices and cartridges in the system.

```
dasadmin cellinfo  device [ mediatype [ attributes ] ]
dasadmin ci device [ mediatype [ attributes ] ]
```

Refer to Table 5-12 for a list and an explanation of the parameters for the **cellinfo** command.

Table 5-12 Parameters for the CellInfo Command

Parameter	Explanation	
Device	S	Storage
	ST	towers
	SL	lineardevices
	P	all problemboxes
	D	all drives
	E	all eject areas (logical ranges)
	I	all insert areas (logical ranges)
	Exx	the ejectarea "xx" (e.g. "E01")
	Ixx	the insertarea "xx" (e.g. "I01")
	STxx	the tower “xx“ (e.g. “T01“)
	SLxx	the lineardevice “xx”
mediatype	Elements media type. Refer to *Media Types*.	
attributes	Slot attributes value:	
	O	occupied ("Occupied" or "Temp Here" attribute)
	Y	marked empty ("Empty" or "Initial" or "Temp Away")
	M	mounted ("Mounted" or "In Jukebox")
	J	ejected
	U	undefined
	E	truly empty ("Marked empty" or "Total Ejected")
	““	all slots

Drive Cleaning (clean)

The **clean** command triggers a single drive cleaning operation in the specified drive.

```
dasadmin clean drive
```

Refer to Table 5-13 for an explanation of the parameter for the **clean** command.

Table 5-13 Parameter for the Clean Command

Parameter	Explanation
drive	drive to be cleaned immediately

The AMU manages the cleaning cartridge and controls the amount of time spent by the cleaning cartridge in the drive. The AMU clean manager must be configured already.

NOTE Only clean the drives when they need to be cleaned. Unnecessary cleaning damages the drives.

Also, refer to *Insert Media (insert2)* and *Eject Cleaning Media (ejectcl)*.

Retrieve a Medium from the Drive (dismount)

The **dismount** command retrieves a medium from the drive and returns it to its original position (home position) in the library.

```
dasadmin dismount [-t media-type] volser | -d drive
```

```
dasadmin dism [-t media-type] volser | -d drive
```

Refer to Table 5-14 for a list and an explanation of the parameters for the **dismount** command.

Table 5-14 Parameters for the Dismount Command

Parameter	Explanation
media-type	media type, e.g. 3590. Refer to *Media Types.*
volser	volser for the medium to be returned from the drive to the home position
drive	alternative parameter for the drive from which the medium is to be removed

The **dismount** command will not function if the medium has not been unloaded from the drive.

NOTE Number of retries can be configured in the AMU configuration.

Also refer to *Load a Medium in Drive (mount)* and *Move a Medium to the Slot (carry).*

View the Logical Ranges Configuration (eif_conf)

The **eif_conf** command shows the currently configured logical ranges in the I/O unit.

```
dasadmin eif_conf
```

The command returns all the insert/eject areas that are configured for the client in a logical library.

Display Logical Ranges in EIF(eif_info)

The **eif_info** command provides information about logical ranges (in EIFs).

```
dasadmin eif_info [areaname]
```

```
dasadmin ei [areaname]
```

Refer to Table 5-15 for an explanation of the parameter for the **eif_info** command.

Table 5-15 Parameters for the Eif_info Command

Parameter	Explanation
areaname	Specific logical range

```
dasadmin eif_info E01
```

```
Name E01
    MediaType = 3480    TotalSlots 30 FreeSlots 29 UndefSlots 0
    MediaType = OD-Thin TotalSlots 48 FreeSlots 48 UndefSlots 0
    MediaType = VHS     TotalSlots 8  FreeSlots 8  UndefSlots 0
    MediaType = BETACAM TotalSlots 16 FreeSlots 16 UndefSlots 0
```

Eject Media (eject3)

The **eject3** command causes the specified volser(s) to be placed in the I/O unit of the library system.

```
dasadmin eject3 [-c] [-t media-type] volserrange area
```

```
dasadmin ej3 [-c] [-t media-type] volserrange area
```

Refer to Table 5-16 for a list and an explanation of the parameters for the **eject3** command.

Table 5-16 Parameters for the Eject3 Command

Parameter	Explanation
-c	complete eject option (the volser lost its home position in the AMU database and becomes ‘unloaded’)
media-type	media type, e.g. 3590. Refer to *Media Types.*
volserrange	range of volsers to be ejected, e.g. 000001 - 000815 or 00001A, 00002A.
area	logical range in the I/O unit for ejection, e.g. E07

The appropriate message will be displayed in the AMU log if the I/O unit is full. Ejection will continue automatically once the I/O unit has been cleared and closed.

With the environment variable DAS_EJECTAREAFULL=1 the command will be canceled (with the message *EAREAFULL*), if the eject area is full.

Eject Media (eject2)

The **eject2** command causes the specified volser(s) to be placed in the I/O unit of the library system.

```
dasadmin eject2 [-c] [-t media-type] volserrange area
```

```
dasadmin ej2 [-c] [-t media-type] volserrange area
```

NOTE **The command can only display up to 100 volsers when ejecting. Therefore, use the eject3 command. For compatibility reasons, the eject2 command continues to be supported.**

Refer to Table 5-17 for a list and an explanation of the parameters for the **eject2** command.

Table 5-17 Parameters for the Eject2 Command

Parameter	Explanation
-c	complete eject option (the volser lost its home position in the AMU database and becomes ‘unloaded’)
media-type	media type, e.g. 3590. Refer to *Media Types.*
volserrange	range of volsers to be ejected, e.g. 000001 - 000815 or 00001A, 00002A.
area	logical range in the I/O unit for ejection, e.g. E07

The appropriate message will be displayed in the AMU log if the I/O unit is full. Ejection will continue automatically once the I/O unit has been cleared and closed.

With the environment variable DAS_EJECTAREAFULL=1 the command will be canceled (with the message *EAREAFULL*), if the eject area is full.

Eject Media (eject)

The **eject** command causes the specified volser to be placed in the I/O unit of the library system.

```
dasadmin eject [-c] [-t media-type] volserrange area
```

```
dasadmin ej [-c] [-t media-type] volserrange area
```

NOTE The command can display only a small number of volsers when ejecting. Therefore, use the eject3 command. For compatibility reasons, the eject command continues to be supported.

Refer to Table 5-18 for a list and an explanation of the parameters for the **eject** command.

Table 5-18 Parameters for the Eject Command

Parameter	Explanation
-c	complete eject option (the volser lost its home position in the AMU database and becomes ‘unloaded’)
media-type	media type, e.g. 3590. Refer to *Media Types.*
volserrange	range of volsers to be ejected, e.g. 000001 - 000815 or 00001A, 00002A.
area	logical range in the I/O unit for ejection, e.g. E07

The appropriate message will be displayed in the AMU log if the I/O unit is full. Ejection will continue automatically once the I/O unit has been cleared and closed.

With the environment variable DAS_EJECTAREAFULL=1 the command will be canceled (with the message *EAREAFULL*), if the eject area is full.

Eject Cleaning Media (ejectcl)

The **ejectcl** command causes the AMU Clean Manager to eject all used cleaning media in the specified clean pool.

```
dasadmin ejectcl cleanpool area
```

Refer to Table 5-19 for a list and an explanation of the parameters for the **ejectcl** command.

Table 5-19 Parameters for the Ejectcl Command

Parameter	Explanation
cleanpool	name for assigning cleaning media for the Clean Manager, e.g. P04
area	logical range in the I/O unit for ejection, e.g. E07

The appropriate message will be displayed in the AMU log if the I/O unit is full. Ejection will continue automatically once the I/O unit has been cleared and closed.

With the environment variable DAS_EJECTAREAFULL=1 the command will be canceled (with the message *EAREAFULL*), if the eject area is full.

Eject Media Complete (ejectcom)

The **ejectcom** command places the specified volser(s) in the I/O unit of the library system and unload them.

```
dasadmin ejectcom [-t media-type] volserrange area
```

NOTE Actually, this command has the same effect as eject3 with the -c option.

Refer to Table 5-20 for a list and an explanation of the parameters for the **ejectcom** command.

Table 5-20 Parameters for the Ejectcom Command

Parameter	Explanation
media-type	media type, e.g. 3590. Refer to *Media Types.*
volserrange	range of volsers to be ejected, e.g. 000001 - 000815 or 00001A, 00002A.
area	logical range in the I/O unit for ejection, e.g. E07

The appropriate message will be displayed in the AMU log if the I/O unit is full. Ejection will continue automatically once the I/O unit has been cleared and closed.

With the environment variable DAS_EJECTAREAFULL=1 the command will be canceled (with the message *EAREAFULL*), if the eject area is full.

Also refer to *Eject Media (eject3)*.

Send Email Message (email)

The **email** command sends email message.

```
dasadmin email address message
```

```
dasadmin email address @file_message
```

Refer to Table 5-21 for a list and an explanation of the parameters for the **email** command.

Table 5-21 Parameters for the Email Command

Parameter	Explanation
address	email address the message should be sent to.
message	the message text
file_message	the file that contains a message to sent. If the file is not in the same folder with *dasadmin.exe*, the filename among with the complete path should be in double quotes.

Also refer to *Send SNMP Message (snmp)*.

Flip Optical Disk in the Drive (flip)

The **flip** command turns an optical disk over so that the reverse side can be read or written to.

```
dasadmin flip drive
```

Refer to Table 5-22 for an explanation of the parameter for the **flip** command.

Table 5-22 Parameter for the Flip Command

Parameter	Explanation
drive	drive where the disk must be flipped, e.g. Drive1

Display Volsers Assigned to Drive (getvolsertodrive)

The **getvolsertodrive** command displays a list of all volsers assigned to the drive.

```
dasadmin getvolsertodrive [drive]
```

The assignment is configured in the *config* file. Refer to.

Refer to Table 5-23 for an explanation of the parameter for the **getvolsertodrive** command.

Table 5-23 Parameters for the Getvolsertodrive Command

Parameter	Explanation
drive	drive whose volsers are to be displayed, e.g. Drive1

Display Volsers of the Optical Disk (getvoltoside)

The **getvoltoside** command displays both volsers for an optical disk.

```
dasadmin getvoltoside volser
```

Refer to Table 5-24 for an explanation of the parameter for the **getvotoside** command.

Table 5-24 Parameters for the Getvoltoside Command

Parameter	Explanation
volser	one of the volsers for the optical disk, the associated sides of which are to be displayed, e.g. OD001A

Insert Media (insert2)

The **insert2** command causes the AMU to place all media in the specified insertion range in slots in the library. The volsers of the inserted media are displayed.

```
dasadmin insert2 -n area
```

```
dasadmin insert2 -c area cleanpool
```

Refer to Table 5-25 for a list and an explanation of the parameters for the **insert2** command.

Table 5-25 Parameters for the Insert2 Command

Parameter	Explanation
-n	normal insertion (data media)
-c	inserts cleaning media
area	logical range in the I/O unit for ejection, e.g. E07
cleanpool	name for assigning cleaning media for the Clean Manager, e.g. P04

Place the media in the I/O unit in the logical range for insertion before starting the insert command (Refer to the *AMU Reference Manua*l). AMU will analyses changes in the I/O unit automatically once the I/O unit has been closed. The insert command can be used to:

- return a known volser in the AMU database to its home position, independent of the attributes (ejected, empty, occupied, mounted) of the slot; the barcode reader recognizes a volser which is already entered in the AMU database.
- place an unknown volser in the next free slot; this depends on the existence in the AMU database of slots of the relevant media type having the status

Volser 0000000000000000

Attribute empty

Type AMU Dynamic

- place a medium in the problem box if it is not suitable for insertion at present
  - illegible barcode
  - AML full
  - slots in the AML already reserved for other volsers

The output of the **insert2** command indicates which volser(s) were successfully inserted and which, if any, were not.

Insert Media (insert)

The **insert** command causes theAMU to place all media in the specified insertion range at slots in the library. The volsers of the inserted media are displayed.

```
dasadmin insert area

dasadmin in area
```

Refer to Table 5-26 for an explanation of the parameter for the **insert** command.

Table 5-26 Parameter for the Insert Command

Parameter	Explanation
area	logical range in the I/O unit for insertion, e.g. E07

Place the media in the I/O unit in the logical range for insertion before starting the insert command (Refer to the *AMU Reference Manua*l). AMU will analyses changes in the I/O unit automatically once the I/O unit has been closed. The insert command can be used to:

- return a known volser in the AMU database to its home position, independent of the attributes (ejected, empty, occupied, mounted) of the slot; the barcode reader recognizes a volser which is already entered in the AMU database.
- place an unknown volser in the next free slot; this depends on the existence in the AMU database of slots of the relevant media type having the status

  Volser 0000000000000000

  Attribute empty

  Type AMU Dynamic

- place a medium in the problem box if it is not suitable for insertion at present
  - illegible barcode
  - AML full
  - slots in the AML already reserved for other volsers

NOTE **Use the insert2 command instead of this command. This command experiences difficulties with large I/O units with long volsers (16-digit) since the buffer for displaying the inserted volser is restricted. For compatibility reasons, the insert command continues to be supported.**

Initialize Library Elements (inventory)

The **inventory** command causes the library system to compare all slots (towers and racks) with the entries in the AMU database and to update the database in the event of any variances.

```
dasadmin inventory
```

If the volser found in the occupied slot has a valid home position in the AMU database, the old home position is saved; if the volser home position is invalid or volser has no home position, the **inventory** command assigns to it a new home position in a first free storage slot of the appropriate type. The volsers with an attribute 'ejected' or 'unloaded' changes their state to 'stored'. The volsers not found in the library after **inventory** changes their state to 'offline'. The problem box is not inventoried.

NOTE The inventory function is intended for testing and startup. An error function will only be displayed in the AMU log during operation which will not returned to the calling process.

Also refer to *Initialize Element Range (partinventory)* and *Display All Active Commands (list2)*.

Shut Down the AMU PC (killamu)

The **killamu** command is used to:

- move the robotic controllers in the AML system to their home position
- shut down all programs on the AMU PC
- shut down the OS/2 operating system

```
dasadmin killamu
```

WARNING Inform all administrators using the AML system before starting the command. The command may cause disruption to their operation.

WARNING DAS sends a positive acknowledgment, before the process is complete. Wait at least 5 minutes following the positive acknowledgment before switching off the power supply. Switching off the power supply to the AMU PC too soon can lead to loss of data.

NOTE Restart the AMU kernel with START KRN/S.

Also refer to *Shut Down DAS (shutdown)*.

Display All Active Commands (list2)

The **list2** command displays all commands in the DAS command queue. The **list2** command provides enhanced information about executing requests. The commands for one client only are shown.

```
dasadmin list2 client
```

Refer to Table 5-27 for an explanation of the parameter for the **list2** command.

Table 5-27 Parameters for the List2 Command

Parameter	Explanation
client	client for which the active commands are to be displayed.

```
dasadmin list2 CLIENT

list2 for client: CLIENT successful
client = CLIENT
```

```
            request = 1
            individ_no = 0
            type = PINV
            StartCoord = LW01010101
            EndCoord = LW01020101
client = CLIENT
            request = 7
            individ_no = 0
            type = MONT
            volser = 100001
            drive = Drive1
client = CLIENT
            request = 9
            individ_no = 0
            type = EJEC
            areaname = E01
            volserrange = 100002-100005
client = CLIENT
            request = 12
            individ_no = 0
            type = SETS
            volser = 100004
            poolname = Pool2
```

Refer to Table 5-28 for an explanation of the return status associated with the **list2** command.

Table 5-28 Explanation of Returned Status for List2 Command

Display	Explanation
client	client for which the active commands are to be displayed.
request	sequence number of the DAS commands
individ_no	not used

Table 5-28 Explanation of Returned Status for List2 Command

Display	Explanation	
type	MONT	**mount** command
	KEEP	**dismount** command
	INVT	**insert** command
	MOVE	**eject** command
	PINV	**inventory/partinventory** command
	SHUT	AMU shut down (**killamu**)
	INCL	Insert Clean
	EJCL	Eject Clean
	BACO	Barcode on/off
	CLDR	**clean** command
	EJEC	**eject2** command
	VINV	**volserinventory** command
	SETS	**scratch_set** command
	GETS	**scratch_get** command
	FLIP	**flip** command
volser	medium used in the operation (mont, keep, move, ejec, sets, gets)	
drive	drive used in the operation (mont, keep, cldr, flip)	
areaname	insert/eject area used in the operation (invt, move, incl, ejcl, ejec)	
poolname	pool used in the operation (incl, ejcl, sets, gets)	
volserrange	media used in the operation (invt, move, ejec, vinv)	
startcoord	start coordinate used in the operation (pinv)	
endcoord	end coordinate used in the operation (pinv)	

NOTE **The *volser, drive, areaname, poolname, volserrange, startcoord, endcoord* parameters are new in the list2 command.**

Also refer to *Cancel Command (cancel).*

Display All Active Commands (list)

The **list** command displays all commands in the DAS command queue. The commands for one client only are displayed.

```
dasadmin list client
```

NOTE **This command is supported for compatibility reasons, it is limited with only a small number of commands. Use the list2 command instead.**

Refer to Table 5-29 for an explanation of the parameter for the **list** command.

Table 5-29 Parameters for the List Command

Parameter	Explanation
client	client for which the active commands are to be displayed.

```
dasadmin list CLIENT

list for client: CLIENT successful
client = CLIENT
            request = 1
            individ_no = 0
            type = PINV
client = CLIENT
            request = 7
            individ_no = 0
            type = MONT
```

Refer to Table 5-30 for an explanation of the return status associated with the **list** command.

Table 5-30 Explanation of Returned Status for List Command

Display	Explanation	
client	client for which the active commands are to be displayed.	
request	sequence number of the DAS commands	
individ_no	not used	
type	MONT	mount command
	KEEP	dismount command
	INVT	insert command
	MOVE	eject command
	PINV	inventory command
	SHUT	AMU shut down (killamu)
	INCL	Insert Clean
	EJCL	Eject Clean
	BACO	Barcode on/off

Display Drive Assignment (listd4)

The **listd4** command displays the current drive assignment and status of reservations by the clients. If the drive is not specified, all drives assigned for the client will be displayed. All drives (maximum of 380) will be displayed if a client is not specified.

```
dasadmin listd4 [clientname] [-d drivename]

dasadmin ld4 [clientname] [-d drivename]
```

Refer to Table 5-31 for a list and an explanation of the parameters for the **listd4** command.

Table 5-31 Parameters for the Listd4 Command

Parameter	Explanation
clientname	client for which the reserved drives are to be displayed
drivename	drive that should be displayed

```
dasadmin listd4 Client -d Drive1

listd4 for client: successful

drive: Drive1
amu drive: 01
st: UP
type: 2
sysid:
client: CLIENT
volser:
cleaning 0
clean_count: 0
mount: 0
keep: 0
SerialNumber: CX701M24
```

Table 5-32 explanes the return status associated with the **listd4** command.

Table 5-32 Explanation of Returned Status for Listd4 Command

Display	Explanation
drive	drive name in DAS *(Description* from the AMU configuration)
amu drive	drive number in DAS *(Name* from the AMUconfiguration)
st	reservation status of the drive
type	drive type *(Type* from the AMU configuration)
sysid	not used
client	client which has reserved the drive
volser	volser, if the drive is currently occupied
mount	if a volser is displayed, and mount=1 and keep=0 then the drive is logically occupied but the mount is not physically complete
	if a volser is displayed, and mount=0 and keep=0, then the drive is logically occupied and mount is physically complete
keep	if a volser is not displayed, and mount=0 and keep=1, then the drive is logically empty but the keep may not be physically complete
	if a volser is not displayed, and mount=0 and keep=0 then the drive is logically empty and the keep is physically complete

Table 5-32 Explanation of Returned Status for Listd4 Command

Display	Explanation	
cleaning	current cleaning activity:	
	0	drive is not being cleaned
	1	cleaning medium is located in the drive
clean_count	number of mount commands until the next drive clean	
serial number	drive serial number	

NOTE The *serial number* parameter is new in the listd4 command.

Display Drive Assignment (listd3)

The **listd3** command displays the current drive assignment and status of reservations by the clients. If the drive is not specified, all drives assigned for the client will be displayed. All drives (maximum of 250) will be displayed if a client is not specified.

```
dasadmin listd3 [clientname] [-d drivename]
```

```
dasadmin ld3 [clientname] [-d drivename]
```

NOTE Use the listd4 instead of this command. For compatibility reasons, the listd3, listd2, and listd commands are still supported.

Refer to Table 5-33 for a list and an explanation of the parameters for the **listd3** command.

Table 5-33 Parameters for the Listd3 Command

Parameter	Explanation
clientname	client for which the reserved drives are to be displayed
drivename	drive that should be displayed

```
dasadmin listd3 Client

listd3 for client: successful

drive: Drive1
amu drive: 01
st: UP
type: 2
sysid:
client: CLIENT
volser:
mount: 0
keep: 0
cleaning 0
clean_count: 0

drive: OD512
amu drive: 02
st: UP
type: H
sysid:
client: CLIENT
volser: OD0001
mount: 0
keep: 0
cleaning 0
clean_count: 6
```

Table 5-34 explanes the return status associated with the **listd3** command.

Table 5-34 Explanation of Returned Status for Listd3 Command

Display	Explanation
drive	drive name in DAS *(Description* from the AMU configuration)
amu drive	drive number in DAS *(Name* from the AMU configuration)
st	reservation status of the drive
type	drive type *(Type* from the AMU configuration)
sysid	not used
client	client which has reserved the drive
volser	volser, if the drive is currently occupied
mount	if a volser is displayed, and mount=1 and keep=0 then the drive is logically occupied but the mount is not physically complete
	if a volser is displayed, and mount=0 and keep=0, then the drive is logically occupied and mount is physically complete
keep	if a volser is not displayed, and mount=0 and keep=1, then the drive is logically empty but the keep may not be physically complete
	if a volser is not displayed, and mount=0 and keep=0 then the drive is logically empty and the keep is physically complete

Table 5-34 Explanation of Returned Status for Listd3 Command

Display	Explanation	
cleaning	current cleaning activity:	
	0	drive is not being cleaned
	1	cleaning medium is located in the drive
clean_count	number of mount commands until the next drive clean	

NOTE The *mount* and *keep* parameters are new in the listd3 command.

Display Drive Assignment (listd2)

The **listd2** command displays the current drive assignment and status of reservations by the clients. If the drive is not specified, all drives assigned for the client will be displayed. All drives (maximum of 250) will be displayed if a client is not specified.

```
dasadmin listd2 [clientname] [-d drivename]
```

```
dasadmin ld2 [clientname] [-d drivename]
```

NOTE Use the listd4 instead of this command. For compatibility reasons, the listd3, listd2, and listd commands are still supported.

Table 5-35 for a list and an explanation of the parameters for the **listd2** command.

Table 5-35 Parameters for the Listd2 Command

Parameter	Explanation
clientname	client for which the reserved drives are to be displayed
drivename	drive that should be displayed

```
dasadmin listd2 Client
```

```
listd2 for client: successful
```

```
drive dlt01 amu drive: 01 st: DOWN type: E sysid: client: volser:
cleaning 0 clean_count: 0
```

```
drive: vhs01 amu drive: 02 st: DOWN type: V sysid: client:
volser: cleaning 0 clean_count: 0
```

Refer to Table 5-36 explanes the return status associated with the **listd2** command.

Table 5-36 Explanation of Returned Status for Listd2 Command

Display	Explanation
drive	drive name in DAS *(Description* from the AMU configuration)
amu drive	drive number in DAS *(Name* from the AMU configuration)
st	reservation status of the drive
type	drive type *(Type* from the AMU configuration)
sysid	not used

Table 5-36 Explanation of Returned Status for Listd2 Command

Display	Explanation	
client	client which has reserved the drive	
volser	volser, if the drive is currently occupied	
cleaning	current cleaning activity:	
	0	drive is not being cleaned
	1	cleaning medium is located in the drive
clean_count	number of mount commands until the next drive clean	

Display Drive Assignment (listd)

The **listd** command displays the current drive assignment and status of reservations by the clients. If the drive is not specified, all drives assigned for the client will be displayed. All drives (maximum of 15) will be displayed if a client is not specified.

```
dasadmin listd [clientname] [-d drivename]
```

```
dasadmin ld [clientname] [-d drivename]
```

Refer to Table 5-37 for a list and an explanation of the parameters for the **listd** command.

Table 5-37 Parameters for the Listd Command

Parameter	Explanation
clientname	client for which the reserved drives are to be displayed
drivename	drive that should be displayed

```
listd for client: successful
```

```
drive dlt01 amu drive: 01 st: DOWN type: E sysid: client: volser:
cleaning 0 clean_count: 0
```

```
drive: vhs01 amu drive: 02 st: DOWN type: V sysid: client:
volser: cleaning 0 clean_count: 0
```

Table 5-38 explanes the return status associated with the **listd** command.

Table 5-38 Explanation of Returned Status for Listd Command

Display	Explanation
drive	drive name in DAS *(Description* from the AMU configuration)
amu drive	drive number in DAS *(Name* from the AMU configuration)
st	reservation status of the drive
type	drive type *(Type* from the AMU configuration)
sysid	not used
client	client which has reserved the drive
volser	volser, if the drive is currently occupied

Table 5-38 Explanation of Returned Status for Listd Command

Display	Explanation	
cleaning	current cleaning activity:	
	0	drive is not being cleaned
	1	cleaning medium is located in the drive
clean_count	number of mount commands until the next drive clean	

NOTE The maximum number of drives displayed is 15.

Display Foreign Volser (listf)

The **listf** command displays the information about foreign volser. All foreign volsers are displayed (up to 300) if no volser specified.

```
dasadmin listf [volser]
```

```
dasadmin lf [volser]
```

Refer to Table 5-39 for an explanation of the parameter for the **listf** command.

Table 5-39 Parameter for the Listf Command

Parameter	Explanation
volser	the foreign volser that should be displayed

```
dasadmin listf 000026
```

```
volser = 000026
coordinate = L801010302
media = 3480
attrib = M
```

Table 5-40 explanes the return status associated with the **listf** command.

Table 5-40 Returned Status for Listf Command Explanation

Display	Explanation
volser	queried volser (search criterion in theAMU database)
coordinate	10-digit logical coordinate specifying the slot.
media	volser media type. Refer to *Media Types*

Table 5-40 Returned Status for Listf Command Explanation

Display	Explanation	
attrib	current status of the slot (attributes)	
	O	occupied (slot occupied, medium is in its home position)
	E	ejected (slot empty, medium has been placed in the I/O unit)
	M	mounted (slot empty, medium has been placed in a drive)
	I	initial (attribute not used)
	J	in jukebox (slot empty, optical disk has been placed in the jukebox)
	R	reverse mounted (slot empty, optical disk has been placed in a drive)
	Y	empty (slot empty, no medium defined for the slot)
	U	undefined (special attribute, used by HACC/MVS)
	T	temp here (slot occupied, medium in the problem box)
	A	temp away (medium temporarily not at the specified coordinates)

Display Volser Reservation (listv)

The **listv** command displays all reserved volsers for the client. All reserved volsers for all clients will be displayed if no client is specified.

```
dasadmin listv [client]
```

Refer to Table 5-41 for an explanation of the parameter for the **listv** command.

Table 5-41 Parameter for the Listv Command

Parameter	Explanation
client	client for which the reserved volsers are to be displayed

Load a Medium in Drive (mount)

The **mount** command places the medium with the specified volser in a drive. The drive can be specified or will be selected by DAS such that:

- it is suitable for the media type
- it is reserved for the executing client **(allocd)**
- it is assigned to the volser (**getvolsertodrive**)
- it has the least number of uses *(Use Count* AMU database value).

```
dasadmin mount [-t media-type] volser [drive]
```

```
dasadmin mo [-t media-type] volser [drive]
```

Refer to Table 5-42 for a list and an explanation of the parameters for the **mount** command.

Table 5-42 Parameters for the Mount Command

Parameter	Explanation
media-type	media type, e.g. 3590. Refer to *Media Types.*
volser	volser for the medium to be placed in a drive (also symbolic volsers for foreign mount)
drive	name of the drive (AMU description) for the **mount** command. The parameter can be omitted if the reservation or media type make the drive clear or if the drive with the least use is to be used.

Also refer to *Retrieve a Medium from the Drive (dismount)* and *Move a Medium to the Slot (carry)*.

Initialize Element Range (partinventory)

The **partinventory** command causes the library system to compare the specified slots (towers and racks) with the entries in the AMU database and to update the database in the event of any variances.

```
dasadmin PartInventory [sourcecoor] [targetcoor]
```

```
dasadmin pinvt [sourcecoor] [targetcoor]
```

Refer to Table 5-43 for a list and an explanation of the parameters for the **partinventory** command.

Table 5-43 Parameters for the PartInventory Command

Parameter	Explanation
sourcecoor	logical coordinates in the library at which the inventory is to begin, e.g. T104320908
targetcoor	last slot in the inventory, e.g. T105010310. This slot must be in the same components (storage tower, rack etc.) as those specified in *sourcecoo*r.

WARNING The PartInventory function is intended for testing and start-up. An error function will only be displayed in the AMU log during operation (and not returned to the calling process). The entire database will be overwritten with a symbolic volser "*Ixxxx" if the barcode reader malfunctions.

Also refer to *Initialize Library Elements (inventory)*.

Pause DAS AMU Communication (pausedas)

The **pausedas** command will pause the DAS AMU Communication (all current commands in the queue will be finished and new commands start to queue only, without execution). The robot will stay in active state and can start move by command from configured hosts (e.g. ROBAR or HACC/MVS), clean request from DCI drive or inventory request from closed EIF.

All commands sent by ACI clients will not be transmitted to robot but will be accumulated in the queue up to aci_pause_das ("OFF") function enquire.

```
dasadmin pausedas action
```

WARNING This command may be executed only by the clients with set "pause_das" option.

Refer to Table 5-44 for a list and an explanation of the parameters for the **pausedas** command.

Table 5-44 Parameters for the Pausedas Command

Parameter	Explanation	
action	ON	pause DAS
	OFF	return DAS to the normal mode

Disable Robot Access to Drive (pausedrive)

The **pausedrive** comand enables or disables robot access to the specified drive. It can be used for maintenance purposes.

```
dasadmin pausedrive drive action [-force]
```

All functions which will try to use the disabled drivee will fail, and `d_errno` will be equal to `EINVALIDDEV`.

WARNING This command may be executed only by the clients with set "pause_drive" option.

Refer to Table 5-45 for a list and an explanation of the parameters for the **pausedrive** command.

Table 5-45 Parameters for the Pausedrive Command

Parameter	Explanation	
drive	the drive name to disable/enable, e.g. Drive1	
action	ON	disable drive
	OFF	enable drive
-force	allows to disable an occupied drive	

Query the Software Version (qversion)

The **qversion** command displays the version of:

- DAS software (AMU-DAS server)
- ACI software (on the local platform)

```
dasadmin qversion
```

Query the Volser Ranges in the Library (qvolsrange)

The **qvolsrange** command causes the AMU database query for a specified volser range.

```
dasadmin qvolsrange beginvolser endvolser [client]
```

Refer to Table 5-46 for a list and an explanation of the parameters for the **qvolsrange** command.

Table 5-46 Parameters for the Qvolsrange Command

Parameter	Explanation
beginvolser	first volser in the range to be displayed.
endvolser	last volser in the range to be displayed.
endvolser	number of volsers to be displayed
client	optional parameter to show the volsers for a client other than the local one

```
dasadmin qvolsrange 0000018 999999 5
```

```
next volser 000368
count 5
more data
volser 000018 media 3480 attrib Occupied
volser 000025 media 3480 attrib Occupied
volser 000026 media 3480 attrib Mounted
volser 000079 media 3480 attrib Occupied
volser 000083 media 3480 attrib Occupied
```

Refer to Table 5-47 for an explanation of the return status associated with the **qvolsrange** command.

Table 5-47 Returned Status for Qvolsrange Command Explanation

Display	Explanation
next volser	next volser belonging to the range which cannot be displayed at present (count)
count	number of volser to be displayed, limited by count parameter in the command
more data	not all volsers are represented by the specified range
volser	1- to 16-digit volume serial number
media	media type for the coordinates belonging to the volser, e.g. 3590. Refer to *Media Types*

Table 5-47 Returned Status for Qvolsrange Command Explanation

Display	Explanation
attrib	attributes of the coordinates belonging to the volser • Occupied • Mounted • Ejected • Empty • Reverse Side Mounted • In Jukebox • Initial • Temp Here • TempAway • Undefined (all other AMU database attributes)

To request a complete list of a client's defined volser range, do not specify a *beginvolser* or *endvolse*r, but enter an empty string in double quotes.

```
dasadmin qvolsrange "" count client
```

Remove a Foreign Medium (rmf)

The **rmf** command removes a link between a symbolic volser and a slot in the I/O unit.

```
dasadmin rmf [-t media-type] volser coordinate
```

Refer to Table 5-48 for a list and an explanation of the parameters for the **rmf** command.

Table 5-48 Parameters for the Rmf Command

Parameter	Explanation
media-type	media type, e.g. 3590. Refer to *Media Types.*
volser	symbolic volser to be assigned to the cartridge in the foreign cartridge range in the I/O unit. A mount command is now possible for this volser.
coordinate	10-digit logical coordinate in the I/O unit locating the cartridge, e.g. E101020310

Also refer to *Catalog Foreign Volume (catf).*

Deactivate Robotic Controller in the library (robhome)

The robhome command moves the robotic controller to its home position and sets its status to *inactiv*e. All further commands from all other host systems to this robotic controller are acknowledged negatively (AMU message: *The desired robot is not available <1138>*). The robotic controller can be reset to *active* using the robstat command.

```
dasadmin robhome robotnumber
```

Refer to Table 5-49 for an explanation of the parameter for the **robhome** command.

Table 5-49 Parameter for the Robhome Command

Parameter	Explanation
robotnumber	number (R1 or R2) of the robotic controller to be set to inactive.

Activate Robotic Controller in the Library (robstat)

The **robstat** command can either change the status of the robot (online/offline) or display the actual status on the screen.

```
dasadmin robstat [robotnumber] action
```

Refer to Table 5-50 for a list and an explanation of the parameters for the **robstat** command.

Table 5-50 Parameters for the Robstat Command

Parameter	Explanation	
robotnumber	number (R1 or R2) of the robotic controller to be set to inactive.	
action	START	sets the robotic controller defined by the robot number to active
	STAT	queries the status of the robotic controller

Set Client Access Privileges (scap)

Access privileges can be temporarily changed or additional temporary clients can be added using the **scap** command. A maximum of one range can be changed using the **scap** command.

```
dasadmin scap [±] [-t media-type] [-d drive-range] |
[-v volserrange] client
```

Refer to Table 5-51 for an explanation of the parameters for the **scap** command.

Table 5-51 Parameters for the Scap Command

Parameter	Explanation
±	determines whether the specified range is to be added or removed. The range is added without and with +.
media-type	media type, e.g. 3590. Refer to Media Types.
drive-range	drives for which client access is to be changed, e.g. DLT01 - DLT16.
volserrange	volser range for which client access is to be changed, e.g. 00001 - 99999
client	the client for which the changes apply

WARNING The changes will be lost when the DAS software is shut down. Only use this command if, at the time, you do not have access to the configuration config file, or you cannot restart DAS. Otherwise, you should always change the access privileges in the config file.

Make sure that the range specified does not overlap with an existing range. If, for example, the range 1 - 100 already exists and the range 5 - 20 is to be excluded, the range 1 - 100 must be excluded, then create new access to the ranges 1 - 4 and 21 - 100. DAS rejects all changes that do not correspond to existing ranges.

Set Operating Parameters (scop2)

The **scop** command makes temporary changes to the DAS operating parameters.

```
dasadmin scop2 [±avc][±c][±dism][±ins][±cl][ip][+] client
```

```
dasadmin scop2 -client
```

Refer to Table 5-52 for an explanation of the parameters for the **scop2** command.

Table 5-52 Parameters for the Scop2 Command

Parameter	Explanation
± avc	changes the optional Avoid volume contention parameter (wait for dismount); the default is -avc if the parameter is not specified.
± c	changes the access privileges (restricted or complete); the default is restricted privilege only (-c).
± dism	changes the optional dismount parameter (automatic dismount for the subsequent dismount); the default is +dism (no automatic dismount).
± ins	changes the optional insert wait (wait when Ejected volser will be physically available); the default is "+ins" (no insert wait).
± cl	changes the optional clean wait (delay the responces for dismount until cleaning after current dismount is finished); the default is "+cl" (no clean wait)
ip	temporarily changes the client's authorized IP address; the address must be specified in the form xxx.xxx.xxx.xxx, e.g. 192.131.23.10 or as an internet hostname. The parameter must be specified with the first scop command or in the event of changes to the IP address.
client	specifies the client to which the changes refer:
	+ access privileges assigned to new client
	- access privileges withdrawn from client
	access privileges or operating parameters of an existing client are changed if ± is omitted

WARNING The changes will be lost when the DAS software is shut down. Only use this command if, at the time, you do not have access to the *config* file, or you cannot restart the DAS. Otherwise, you should always change the access privileges in the *config* file.

Set Operating Parameters (scop)

The **scop** command makes temporary changes to the DAS operating parameters.

```
dasadmin scop [±avc][±c][±dism][ip][+] client
```

```
dasadmin scop -client
```

NOTE **Use the scop2 instead of this command. For compatibility reasons, the scop command is still supported.**

Refer to Table 5-53 for an explanation of the parameters for the **scop** command.

Table 5-53 Parameters for the Scop Command

Parameter	Explanation
± avc	changes the optional Avoid volume contention parameter (wait for dismount); the default is -avc if the parameter is not specified.
± c	changes the access privileges (restricted or complete); the default is restricted privilege only (-c).
± dism	changes the optional dismount parameter (automatic dismount for the subsequent dismount); the default is +dism (no automatic dismount).
ip-addr	temporarily changes the client's authorized IP address; the address must be specified in the form xxx.xxx.xxx.xxx, e.g. 192.131.23.10 or as an internet hostname. The parameter must be specified with the first scop command or in the event of changes to the IP address.
Client	specifies the client to which the changes refer:
	+ access privileges assigned to new client
	- access privileges withdrawn from client
	access privileges or operating parameters of an existing client are changed if ± is omitted

WARNING **The changes will be lost when the DAS software is shut down. Only use this command if, at the time, you do not have access to the *config* file, or you cannot restart the DAS. Otherwise, you should always change the access privileges in the *config* file.**

Next Scratch Medium (scr_get)

The **scr_get** command queries the next available scratch medium and sets it to unscratch.

```
dasadmin scr_get [poolname] [-t media-type]
```

Media from the default pool are called by specifying the media type, without a poolname.

Refer to Table 5-54 for a list and an explanation of the parameters for the **scr_get** command.

Table 5-54 Parameters for the Scr_get Command

Parameter	Explanation
poolname	specification of the pool name in the AMU database from which the scratch medium is to be taken.
media-type	required scratch medium media type, e.g. 3590. Refer to *Media Types*.

Scratch Pool Information (scr_info)

The **scr_info** command provides information on the current stock of scratch media in the scratch pools.

```
dasadmin scr_info [poolname] [-t media-type]
```

Information on the default scratch pool can be obtained by specifying the media type without the pool name.

Refer to Table 5-55 for a list and an explanation of the parameters for the **scr_info** command.

Table 5-55 Parameters for the Scr_info Command

Parameter	Explanation
poolname	specification of the pool name in the AMU database
media-type	required scratch medium media type, e.g. 3590. Refer to *Media Types*.

Insert Scratch Media (scr_insert)

The **scr_insert** command inserts the media from the insertion range of the media specified and sets them to scratch in the AMU database **(insert** and **scr_set** commands).

```
dasadmin scr_insert [-p poolname] [-t media-type] area
```

NOTE **Data stored on your media may be lost. This command automatically sets all media, without a confirmation prompt, inserted in the library system in the insertion range specified to scratch media. The data on the data medium is overwritten by the next scratch mount command.**

DAS automatically uses the default pool for the inserted scratch media if the pool name is not specified.

Refer to Table 5-56 for a list and an explanation of the parameters for the **scr_insert** command.

Table 5-56 Parameters for the Scr_insert Command

Parameter	Explanation
poolname	specification of the pool name in the AMU database from which the scratch medium is to be taken.
media-type	required scratch medium media type, e.g. 3590. Refer to *Media Types*.
area	logical range in the I/O unit for insertion, e.g. E07

Execute Scratch Mount (scr_mount)

The **scr_mount** command places a scratch medium from the specified pool (pool name or default) into the specified drive **(scr_get** and **mount** commands).

```
dasadmin scr_mount [-p poolname] [-t media-type] [drive]
```

DAS automatically uses the default pool for the media type specified if the pool name is not defined.

Refer to Table 5-57 for a list and an explanation of the parameters for the **scr_mount** command.

Table 5-57 Parameters for the Scr_mount Command

Parameter	Explanation
poolname	specification of the pool name in the AMU database from which the scratch medium is to be taken.
media-type	required scratch medium media type, e.g. 3590. Refer to *Media Types.*
drive	name of the drive (AMU description) for the **mount** command. The parameter can be omitted if the reservation or media type make the drive clear or if the drive with the least use is to be used.

Add Medium to the Scratch Pool (scr_set)

The **scr_set** command adds a volser to a scratch pool in the AMU database. This makes scratch media available for subsequent **scr_get** and **scr_mount** commands.

```
dasadmin scr_set [poolname] [-t media-type] volser
```

NOTE Data stored on your media may be lost. This command automatically sets the specified medium as a scratch medium without a confirmation prompt. The data on the data medium is overwritten by the next scratch mount command.

Refer to Table 5-58 for a list and an explanation of the parameters for the **scr_set** command.

Table 5-58 Parameters for the Scr_set Command

Parameter	Explanation
poolname	specification of the pool name in the AMU database to which the scratch medium is to be added.
media-type	required scratch medium media type, e.g. 3590. Refer to *Media Types.*
volser	volser for the medium to become the scratch medium

NOTE This command will be rejected with the message EOTHERPOOL if the medium already exists in another scratch pool.

This will be created in the AMU database if the specified pool name does not exist. The default scratch pool name will be used, e.g. DEFAULTV1, if no scratch pool name is specified.

Add Media to the Scratch Pool (scr_set_range)

The **scr_set_range** command adds a volserrange to a scratch pool in the AMU database. This makes scratch media available for subsequent **scr_get** and **scr_mount** commands.

```
dasadmin scr_set_range [poolname] [-t media-type] volserrange
```

NOTE **Data stored on your media may be lost. This command automatically sets the specified medium as a scratch medium without a confirmation prompt. The data on the data medium is overwritten by the next scratch mount command.**

Refer to Table 5-59 for a list and an explanation of the parameters for the **scr_set_range** command.

Table 5-59 Parameters for the Scr_set_range Command

Parameter	Explanation
poolname	specification of the pool name in the AMU database to which the scratch medium is to be added.
media-type	required scratch medium media type, e.g. 3590. Refer to *Media Types.*
volserrange	volserrange to become the scratch media

NOTE **This command will be rejected with the message EOTHERPOOL if the medium already exists in another scratch pool.**

This will be created in the AMU database if the specified pool name does not exist. The default scratch pool name will be used, e.g. DEFAULTV1, if no scratch pool name is specified.

Remove Medium from Scratch Pool (scr_unset)

The **scr_unset** command sets the medium specified by the volser to *unscratch* in the AMU database and removes the volser from the scratch pool. DAS automatically uses the default pool for the media type specified if the pool name is not specified. A scratch pool will be deleted when the last volser has been removed from the scratch pool.

```
dasadmin scr_unset [poolname] [-t media-type] volser
```

Refer to Table 5-60 for a list and an explanation of the parameters for the **scr_unset** command.

Table 5-60 Parameters for the Scr_unset Command

Parameter	Explanation
poolname	specification of the pool name in the AMU database from which the scratch medium is to be removed.
media-type	required scratch medium media type, e.g. 3590. Refer to *Media Types.*
volser	volser for the medium to unscratch

Display Client Parameters (show2)

The **show2** command displays either the access privileges of a client or its operating parameters.

```
dasadmin show2 [-op | -ac] client
```

Refer to Table 5-61 for a list and an explanation of the parameters for the **show2** command.

Table 5-61 Parameters for the Show2 Command

Option	Explanation
-op	displays the operating parameters of the client
-ac	displays the access privileges of the client
client	client for which the current parameters are to be displayed

```
dasadmin show2 Client6

client: Client6 operational parameters:
      ip_address: 127.0.0.1
      option     "complete access" status is ENABLED
      option     "avc"             status is ENABLED
      option     "dismount"        status is ENABLED
      option     "insert_wait"     status is ENABLED
      option     "clean_wait"      status is ENABLED
      permission "pause_das"       status is DISABLED
      permission "pause_drive"     status is DISABLED

access parameters for client: Client6
   volser-ranges:                ALL
   drive-ranges:                 ALL
```

Display Client Parameters (show)

The **show** command displays either the access privileges of a client or its operating parameters.

```
dasadmin show [-op | -ac] client
```

NOTE **Use the show2 instead of this command. For compatibility reasons, the show command is still supported.**

Refer to Table 5-62 for a list and an explanation of the parameters for the **show** command.

Table 5-62 Parameters for the Show Command

Option	Explanation
-op	displays the operating parameters of the client
-ac	displays the access privileges of the client
client	client for which the current parameters are to be displayed

Shut Down DAS (shutdown)

The **shutdown** command shuts down DAS operations, but not the AMU or the OS/2 operating system.

```
dasadmin shutdown [now]

dasadmin shut [now]
```

Refer to Table 5-63 for an explanation of the parameter for the **shutdown** command.

Table 5-63 Parameter for the Shutdown Command

Parameter	Explanation
now	DAS will be shut down regardless of any outstanding commands. All commands still waiting in the DAS command queue will be processed if the option is not specified.

WARNING Your applications will no longer be able to access the AML system after shut-down. Make sure that your application does not needed additional media from the AML system.

Also refer to *Shut Down the AMU PC (killamu)*.

Send SNMP Message (snmp)

The **snmp** command sends SNMP message.

```
dasadmin snmp message
```

```
dasadmin snmp @file_message
```

Refer to Table 5-64 for a list and an explanation of the parameters for the **snmp** command.

Table 5-64 Parameters for the Snmp Command

Parameter	Explanation
message	the message text
file_message	the file that contains a message to sent. If the file is not in the same folder with *dasadmin.exe*, the filename among with the complete path should be in double quotes.

Also refer to *Send Email Message (email)*.

Switch to the Passive AMU (switch)

The **switch** command switches the passive AMU to the active AMU and, if possible, the active AMU to passive AMU where dual AMU with dual DAS is in use. Any automatic switching device being used to control the robotic controller will also be switched.

```
dasadmin switch -n |-f
```

Refer to Table 5-65 for a list and an explanation of the parameters for the **switch** command.

Table 5-65 Parameters for the Switch Command

Parameter	Explanation
-n	normal switch with termination of all commands still running on the AMU. Only possible if the currently active AMU is still operational.

Table 5-65 Parameters for the Switch Command

Parameter	Explanation
-f	immediate switching (**force**) regardless of commands still running or a database that may not yet be synchronized. (Changes to the database for the last command may not yet have been transmitted to the dual AMU)

WARNING Only use the -f option if the -n option is no longer functioning. There is a risk that anomalies in the AMU database may be caused.

Display Drives by Media Type (typelist)

The **typelist** comand shows all drives or specific drives with matching media type.

```
dasadmin typelist [ media-type ]
```

Refer to Table 5-66 for an explanation of the parameter for the **typelist** command.

Table 5-66 Parameter for the Typelist Command

Parameter	Explanation
media-type	required media type, e.g. 3590. Refer to *Media Types.*

Operate Drive Buttons (unload)

The **unload** command causes the robotic controller to operate one or two buttons on the drive. Which buttons and how many buttons are operated is determined by the robotic controller configuration in the AML.

```
dasadmin unload drive
```

Refer to Table 5-67 for an explanation of the parameter for the **unload** command.

Table 5-67 Parameter for the Unload Command

Parameter	Explanation
drive	name of the drive (AMU description) for the **unload** command

Obtain Information on a Volser Range (view2)

The **view2** command displays current information for the specified volser range from the AMU database.

```
dasadmin view2 begin [end [cnt [mediatype [attr [client]]]]]
```

Refer to Table 5-68 for a list and an explanation of the parameters for the **view** command.

Table 5-68 Parameters for the View Command

Parameter	Explanation	
begin	first volser in the range to be displayed	
end	last volser in the range to be displayed	
cnt	maximum number of volsers to be displayed (default 1000)	
media-type	required media type, e.g. 3590. Refer to *Media Types.*	
attr	Slot attributes value:	
	O	occupied ("Occupied" or "Temp Here" attribute)
	Y	marked empty ("Empty" or "Initial" or "Temp Away")
	M	mounted ("Mounted" or "In Jukebox")
	J	ejected
	U	undefined
	E	truly empty ("Marked empty" or "Total Ejected")
	“”	all slots
client	optional parameter to show the volsers for a client other than the local one	

```
dasadmin view2 100001 100011 3
next volser 100004
count 3
more data
    volser = 100001  coordinate = T301010101   media = 3480
                     type = A                  attrib = M
                     use count = 1             crash count = 0
    volser = 100002  coordinate = T301010102   media = 3480
                     type = A                  attrib = O
                     use count = 0             crash count = 0
    volser = 100003  coordinate = T301010103   media = 3480
                     type = A                  attrib = O
                     use count  = 0            crash count = 0
```

Refer to Table 5-69 for an explanation of the return status associated with the **view2** command.

Table 5-69 Returned Status for View2 Command Explanation

Display	Explanation	
volser	queried volser (search criterion in the AMU database)	
type	type of slot (coordinate in the archive)	
	A	Dynamic (dynamic storage locations in the library system)
	S	storage (dynamic storage locations in the library system)
	N	clean (cleaning media storage locations)
attrib	current status of the slot (attributes)	
	O	occupied (slot occupied, medium is in its home position)
	E	ejected (slot empty, medium has been placed in the I/O unit)
	M	mounted (slot empty, medium has been placed in a drive)
	I	initial (attribute not used)
	J	in jukebox (slot empty, optical disk has been placed in the jukebox)
	R	reverse side mounted (slot empty, optical disk has been placed in a drive)
	Y	empty (slot empty, no medium defined for the slot)
	U	undefined (special attribute, used by HACC/MVS)
	T	temp here (slot occupied, medium in the problem box)
	A	temp away (medium temporarily not at the specified coordinates)
coordinate	10-digit logical coordinate specifying the slot	
use count	number of accesses to the slot (not volser) by the robotic controller	
crash count	not used	

Obtain Information on a Volser (view)

The **view** command displays current information for one volser from the AMU database.

```
dasadmin view [-t media-type] volser
```

NOTE **Use the view2 instead of this command. For compatibility reasons, the view command is still supported.**

Refer to Table 5-70 for a list and an explanation of the parameters for the **view** command.

Table 5-70 Parameters for the View Command

Parameter	Explanation
media-type	media type, e.g. 3590. Refer to *Media Types*.
volser	volser for the medium to view

```
dasadmin view 000026
```

```
volser = 000026
type = A attrib = M
coordinate = L801010303
Use Count = 8740
Crash Count = 0
```

Refer to Table 5-71 for an explanation of the return status associated with the **view** command.

Table 5-71 Returned Status for View Command Explanation

Display	Explanation	
volser	queried volser (search criterion in the AMU database)	
type	type of slot (coordinate in the archive)	
	A	Dynamic (dynamic storage locations in the library system)
	S	storage (dynamic storage locations in the library system)
	N	clean (cleaning media storage locations)
attrib	current status of the slot (attributes)	
	O	occupied (slot occupied, medium is in its home position)
	E	ejected (slot empty, medium has been placed in the I/O unit)
	M	mounted (slot empty, medium has been placed in a drive)
	I	initial (attribute not used)
	J	in jukebox (slot empty, optical disk has been placed in the jukebox)
	R	reverse side mounted (slot empty, optical disk has been placed in a drive)
	Y	empty (slot empty, no medium defined for the slot)
	U	undefined (special attribute, used by HACC/MVS)
	T	temp here (slot occupied, medium in the problem box)
	A	temp away (medium temporarily not at the specified coordinates)
coordinate	10-digit logical coordinate specifying the slot	
use count	number of accesses to the slot (not volser) by the robotic controller	

Table 5-71 Returned Status for View Command Explanation

Display	Explanation
crash count	not used

Initialize Volser (volserinventory)

The **volserinventory** command causes the library system to execute inventory-by-volser operation. Technically, that is the same as **view** and **partinventory** commands executed one after another.

```
dasadmin VolserInventory volser
```

```
dasadmin vinvt volser
```

Refer to Table 5-72 for an explanation of the parameter for the **volserinventory** command.

Table 5-72 Parameters for the VolserInventory Command

Parameter	Explanation
volser	volser to be inventoried

Also refer to *Obtain Information on a Volser Range (view2)* and *Initialize Element Range (partinventory)*.

6

DAS Messages

Overview

Messages from DAS are used to provide information regarding activities and faults in the server process on the AMU.

DAS Messages

All DAS messages are recorded in the AMU log. The messages are displayed

- in the AMU log window server
- in the AMU remote log program using telnet
- in the calling client process (error messages only)

DAS messages may be classified as:

- DAS information
- DAS software error messages
- DAS drive cleaning messages
- Client requests
  - Start of the request
  - Completion of the request
  - Error in processing the request

DAS ACI Messages

DAS ACI messages are error messages generated by the ACI software on the relevant client. No communication with the AMU has taken place in these cases. The error message is written to the client's default output device (console).

DAS Server Messages to the ACI

In the event of errors in command processing on the (DAS or AMU), the command is acknowledged to the ACI with a DAS error number (d_errno). The error name can also be linked using the derrno.h file.

Conventions in the Messages

- The explanatory text indicates possible causes and the reaction of the system.
- User Activities are instructions on how to rectify the error.

DAS Server Messages

The following messages originate from the DAS server and are only displayed there.

DAS0001

DAS/2 Version %1 is starting...

param %1 Version number of the DAS software

DAS ACI Message

EOK

Explanation

DAS has started and has begun to read the configuration data. In this situation the server is not yet able to correctly process any requests from clients. Initialization is completed, after about a minute, and is indicated by the message DAS0002 (DAS/2 ready.)

User Activities

If the message DAS0002 (DAS/2 ready) does not arrive after this message it means that the system was not able to start DAS successfully.

- Check the log for further DAS error messages.
- Check whether TCP/IP has been correctly configured on the portmapper.
- Check whether the AMU is active.
- Check, in the DAS/2 window, whether errors have occurred reading the *config* file.
- Terminate the DAS/2 program by pressing `<CTRL>+<C>`
- Check the DAS start behavior by starting it in an OS/2 window in the directory `c:\DAS` issuing the command `bin\das2`.
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS0002

DAS/2 ready.

DAS ACI Message

EOK

Explanation

DAS has successfully completed the initialization phase and is now ready to process commands.

User Activities

No activities required.

DAS0003

DAS/2 ended.

DAS ACI Message

EOK

Explanation

The DAS program has ended

User Activities

Start DAS again, if required. (dasstart)

DAS0100

DAS changed AMU media type [%1] to [%2] for [%3] DAS media type.

param %1	old AMU mediatype
param %2	new AMU mediatype
param %3	description DAS mediatype

DAS ACI Message

EOK

Explanation

Now you can create file `etc\mediatyp.map` to change default mapping. This file will be parsed on line-by-line basis and each line can contain <DAS_number> <AMU_mediatype> pair.

User Activities

This is a notification message. No user activities are necessary.

DAS3000

Internal DAS error in %1.

param %1	Name of the module reporting the error

DAS ACI Message

EDASINT

Explanation

A situation has occurred during command processing which cannot be rectified by the program.

User Activities

- Save the associated AMU log. Terminate DAS using <CTRL>+<C> then restart DAS.
- Contact the ADIC Customer Help Desk.

DAS3001

Open failed for file %1

param %1 file which caused the error.

DAS ACI Message

EDASINT

Explanation

DAS/2 cannot access a temporary file to terminate the current function.

User Activities

- Save the associated AMU log. Terminate DAS using <CTRL>+<C> then restart DAS.
- Contact the ADIC Customer Help Desk.

DAS3002

Read failed for %1.

param %1 file which caused the error.

DAS ACI Message

EDASINT

Explanation

DAS/2 cannot access a temporary file to load the necessary data and terminate the current function.

User Activities

- Save the associated AMU log. Terminate DAS using <CTRL>+<C> then restart DAS.
- Contact the ADIC Customer Help Desk.

DAS3003

Write failed for file %1.

param %1 file which caused the error.

DAS ACI Message

EDASINT

Explanation

DAS/2 cannot access a temporary file to save the necessary data and terminate the current function.

User Activities

- Save the associated AMU log. Terminate DAS using <CTRL>+<C> then restart DAS.
- Contact the ADIC Customer Help Desk.

DAS3004

Close failed for file %1.

File causing the error

param %1 file which caused the error.

DAS ACI Message

EDASINT

Explanation

DAS/2 cannot access a temporary file to close the file and terminate the current function.

User Activities

- Save the associated AMU log. Terminate DAS using <CTRL>+<C> then restart DAS.
- Contact the ADIC Customer Help Desk.

DAS3020

Internal request list problem.

DAS ACI Message

EDASINT

Explanation

DAS/2 cannot process the internal list of requests due to an error and therefore cannot continue command processing.

User Activities

- Save the associated AMU log. Terminate DAS using <CTRL>+<C> then restart DAS.
- Contact the ADIC Customer Help Desk.

DAS 3021

Cannot send to RQM module.

DAS ACI Message

EDASINT

Explanation

DAS/2 is not able to establish communication with the Request Manager module and therefore cannot process the command.

User Activities

- Save the associated AMU log. Terminate DAS using <CTRL>+<C> then restart DAS.
- Contact the ADIC Customer Help Desk.

DAS3022

Robot not ready for client %1 because Hicap in use.

param%1 name of the client which has started a command on the AML/J which cannot be executed

DAS ACI Message

EHICAPINUSE

Explanation

The robotic controller in the AML/J system is switched off while the door (HICAP) is open. DAS holds all outstanding robot commands in the command queue but does not accept any new commands.

User Activities

- Organize your operation so that no commands are sent to the AML/J while the I/O unit (HICAP) is being configured.
- Inform all other connected users before opening the HICAP.

DAS3023

AMU and DAS not ready for client %1 because switch is in progress.

param %1 name of the client which has started a command on the AML system that cannot be executed

DAS ACI Message

ESWITCHINPROG

Explanation

DAS has been informed by the AMU that the passive AMU is now active No new commands will be accepted during this switching phase, but those already in the command queue will be processed.

User Activities

- Inform all affected users before using the switch command.
- Repeat the rejected command once the switching procedure is complete.

DAS3500

No clean volser of media type %1 found.

param %1 cleaning cartridge media type not available.

DAS ACI Message

ENOTFOUND

Explanation

Error message from DAS 1.3., which controls DAS drive cleaning; this task has been taken over by AMU from DAS version 3.0.

User Activities

- Remove all lines referring to drive cleaning from the config file and restart DAS.
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS3501

Ejecting clean volser %1

param %1 volser for the cleaning cartridge

DAS ACI Message

EOK

Explanation

Message from DAS 1.3., which controls DAS drive cleaning; this task has been taken over by the AMU.

User Activities

- Remove all lines referring to drive cleaning from the config file and restart DAS.
- Contact the ADIC Customer Help Desk should this situation continue to arise.

DAS3502

Cleaning drive %1 with volser %2.

param %1 name of the drive being cleaned
param %2 volser for the cleaning cartridge

DAS ACI Message

EOK

Explanation

Message from DAS 1.3., which controls DAS drive cleaning; this task has been taken over by the AMU.

User Activities

- Remove all lines referring to drive-cleaning from the config file
- Contact the ADIC Customer Help Desk should this situation continue to arise.

DAS3503

Cleaning drive %1 with volser %2 ended.

nparam %1	name of the drive being cleaned
param %2	volser for the cleaning cartridge

DAS ACI Message

EOK

Explanation

Message from DAS 1.3., which controls DAS drive cleaning; this task has been taken over by the AMU.

User Activities

- Remove all lines referring to drive-cleaning from the config file
- Contact the ADIC Customer Help Desk should this situation continue to arise.

DAS3504

Cleaning drive %1 with volser%2 failed.

param %1	name of the drive being cleaned
param %2	volser for the cleaning cartridge

DAS ACI Message

EOK

Explanation

Message from DAS 1.3., which controls DAS drive cleaning; this task has been taken over by the AMU.

User Activities

- Remove all lines referring to drive-cleaning from the config file
- Contact the ADIC Customer Help Desk should this situation continue to arise.

DAS4000

Client %1 not defined to DAS.

param %1 client name taken from the environment variable of the ACI that has initiated the command.

DAS ACI Message

EBADCLIENT

Explanation

DAS/2 has received a command from a client not configured in DAS. The command is rejected.

User Activities

- Check whether the client name is specified in the config file using the same conventions (lowercase/uppercase) and whether DAS was restarted following the last amendment to the config file, or if the client is configured temporarily using the scap command.
- Check the client's environment variables and the setting in the application which uses the ACI.
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4001

Client %1 IP address not defined to DAS.

param %1 client name taken from the environment variable of the ACI that has initiated the command.

DAS ACI Message

ENOTAUTH

Explanation

DAS/2 has received a command from a client which is entered in the DAS configuration with a different IP address. The command is rejected.

User Activities

- Check whether the host name or the IP address is specified in the config file and whether DAS was restarted following the last amendment to the config file, or if the client has been temporarily configured using the scap command.
- Check the client's environment variables and the setting in the application which uses the ACI.
- Check the resolution of the host names (hosts file, domain name server)
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4002

Client %1 does not have the required access privilege.

param %1 client name taken from the environment variable of the ACI that has initiated the command.

DAS ACI Message

ENOTAUTH

Explanation

DAS/2 has received a command from a client without authorization. The client has restricted access privileges only. The command is rejected.

User Activities

- Check the client configuration in the config file.
- If necessary, change the statement requests for the client from restricted to complete. Restart DAS/2 following the changes.

DAS4003

Requested client %1 not defined to DAS.

param %1 client name specified in the command as a parameter

DAS ACI Message

EBADCLIENT

Explanation

The client name was not found when the parameter was compared with the DAS configuration.

User Activities

- Check whether the client name is specified in the config file using the same conventions (lowercase/uppercase) and whether DAS was restarted following the last amendment to the config file, or if the client has been temporarily configured using the scap command.
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4004

Requested drive %1 not defined.

param %1 drive name (description from the AMU configuration)

DAS ACI Message

ENODRIVE

Explanation

DAS/2 has received a command for a drive that is not defined for the client. The command is rejected.

User Activities

- Check whether the drive name is specified in the config file and whether DAS was restarted following the last amendment to the config file, or if the client has been temporarily configured using the scap command.
- Repeat the command when the configuration has been modified.
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4005

Requested volser %1 not defined.

param %1 volser from the command

DAS ACI Message

ENOVOLUME

Explanation

DAS/2 has received a command for a volser which is not defined for the client or has not been found in the AMU database.

User Activities

- Check whether the volser is located in the ranges specified for the client in the config file and whether DAS was restarted following the last amendment to the config file, or if the client has been temporarily configured using the scap command.
- Check the remaining parameters in the command, such as media type and pool name, and whether the volser with the relevant media type exists in the AMU database.
- Repeat the command when the configuration has been modified.
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4006

Requested area %1 not defined.

param %1 logical range in the I/O unit (e.g. I03)

DAS ACI Message

ENOAREA

Explanation

DAS/2 has received a command for a logical range in the I/O unit which is not defined for the client. The command is rejected.

User Activities

- Check whether the name of the range is specified in the config file and whether DAS was restarted following the last amendment to the config file, or if the client has been temporarily configured using the scap command.
- Repeat the command when the configuration has been modified.
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4007

Requested pool %1 not defined.

param %1 name of the scratch pool

DAS ACI Message

ENOTFOUND

Explanation

DAS/2 has received a command for a scratch pool that is not defined for the client. The command is rejected.

User Activities

- Check whether the name of the scratch pool is specified in the config file and whether DAS was restarted following the last amendment to the config file, or if the client has been temporarily configured using the scap command.
- Repeat the command when the configuration has been modified.
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4010

Client %1 does not have access to volser %2.

param %1 client name from the environment variable of the ACI initiating the command.
param %2 volser from the command

DAS ACI Message

ENOTAUTH

Explanation

DAS/2 has received a command for a volser that is not defined for the client.

User Activities

- Check whether the volser is located in the ranges specified for the client in the config file and whether DAS was restarted following the last amendment to the config file, or if the client has been temporarily configured using the scap command.
- Repeat the command when the configuration has been modified.
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4011

Client %1 does not have access to drive %2.

param %1 client name from the environment variable of the ACI initiating the command.
param %2 drive name from the command

DAS ACI Message

ENOTAUTH

Explanation

DAS/2 has received a command for a drive that is not defined for the client. The command is rejected.

User Activities

- Check whether the drive name is specified in the config file and whether DAS was restarted following the last amendment to the config file, or if the client has been temporarily configured using the scap command.
- Repeat the command when the configuration has been modified.
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4012

Client %1 does not have access to area %2.

param %1 client name from the environment variable of the ACI initiating the command.

param %2 logical range in the I/O unit

DAS ACI Message

ENOAUTH

Explanation

DAS/2 has received a command for a logical range in the I/O unit which is not defined for the client. The command is rejected.

User Activities

- Check whether the name of the range is specified in the config file and whether DAS was restarted following the last amendment to the config file, or if the client has been temporarily configured using the scap command.
- Repeat the command when the configuration has been modified.
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4013

Client %1 does not have access to pool %2.

param %1 client name from the environment variable of the ACI initiating the command.

param %2 name of the pool

DAS ACI Message

ENOTFOUND

Explanation

DAS/2 has received a command for a scratch pool that is not defined for the client. The command is rejected.

User Activities

- Check whether the name of the scratch pool is specified in the config file and whether DAS was restarted following the last amendment to the config file, or if the client has been temporarily configured using the scap command.
- Repeat the command when the configuration has been modified.
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4020

Register request from client %1 for client %2.

param %1 client name from the environment variable of the ACI initiating the command.
param %2 client from the command

DAS ACI Message

EOK

Explanation

DAS/2 has received a command to change the parameters for a client temporarily. DAS/2 records this amended situation temporarily until the next time DAS is started or the AMU is switched off.

User Activities

This is a notification message. No user activities are necessary.

DAS4021

Register request form client %1 completed %2.

param %1 client name from the environment variable of the ACI initiating the command.
param %2 successful / unsuccessful

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the registration command.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4022

Requested client %1 still defined to DAS.

DAS ACI Message

EBADCLIENT

Explanation

DAS/2 has received the command to temporarily redefine an already defined client. The command is rejected.

User Activities

- Check whether the client is specified in the config file and whether DAS was restarted following the last amendment to the config file, or if the client has been temporarily configured using the scap command.
- Repeat the command when you have modified the configuration.
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4023

Add request for client %1 failed (MAXCLIENT).

param %1 client name from the environment variable of the ACI initiating the command.

DAS ACI Message

ENOSPACE

Explanation

DAS/2 has received a command to temporarily add a client to the DAS configuration. The command has been rejected because the maximum number of clients has been exceeded. The client can only be added by altering the configuration (config file).

User Activities

Modify the configuration:

- Remove a client that may not be need, or is not need at present
- Obtain the licence for additional clients
- Delete unneeded clients from the config file and specify the new client in its place.
- Restart the client.
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4024

The IP address or hostname %1 is not valid.

param %1 TCP/IP address or host name which can be resolved through the OS/2 TCP/IP software.

DAS ACI Message

EBADHOST

Explanation

DAS/2 has received a command with an invalid TCP/IP address or host name. The host name or the IP address is not defined in DAS (temporarily or in the config file) or the host name cannot be resolved by the TCP/IP configuration. The command is rejected.

User Activities

- Check whether the TCP/IP address or host name is specified in the config file and whether DAS was restarted following the last amendment to the config file, or if the client has been temporarily configured using the scap command.
- Repeat the command when the configuration has been modified.
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4030

Client access request from client %1 for client %2.

param %1 client name from the environment variable of the ACI initiating the command.
param %2 client from the command

DAS ACI Message

EOK

Explanation

DAS/2 has received the command to change the access privileges of a client.

User Activities

This is a notification message. No user activities are necessary.

DAS4031

Client access request from client %1 completed %2.

param %1 client name from the environment variable of the ACI initiating the command.
param %2 successful or not successful

DAS ACI Message

EOK

Explanation

DAS/2 has completed the command to change the access privileges.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4032

Volser range request failed for client %1 (MAXRANGE).

param %1 client name from the environment variable of the ACI initiating the command.

DAS ACI Message

ENOSPACE

Explanation

DAS/2 has received the command to add an additional volser range to the configuration. The maximum number of 10 volser ranges is already defined. The command is rejected.

User Activities

- Check the number of volser ranges defined for the client. Delete unneeded volser ranges.
- Modify the definition so that the limit of 10 volser ranges is not exceeded (e.g. ((100001, 100002, 100003, 100004, 200001, 200002,200003)) instead of ((100001 - 100004) , (200001 - 200003)).
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4033

Volser range %1 not defined for client %2.

param %1 volser from the command
param %2 client name from the environment variable of the ACI initiating the command.

DAS ACI Message

ENOTFOUND

Explanation

DAS/2 has received a command to return a list containing volsers within a range. However, the range is not defined for the client. The command is rejected.

User Activities

- Check whether the volser is located in the ranges specified for the client in the config file and whether DAS was restarted following the last amendment to the config file, or if the client has been temporarily configured using the scap command.
- Repeat the command when you have modified the configuration.
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4040

Drive access request from client %1 for drive %2 - %3.

param %1	client name from the environment variable of the ACI initiating the command.
param %2	first drive from the command
param %3	second drive from the command

DAS ACI Message

EOK

Explanation

DAS/2 has received a command to change the access privileges of drives in order to change the configuration temporarily.

User Activities

This is a notification message. No user activities are necessary.

DAS4041

Drive access request from client %1 completed %2.

param %1	client name from the environment variable of the ACI initiating the command.
param %2	successfully/unsuccessfully

DAS ACI Message

EOK

Explanation

DAS/2 has completed the command to change the drive access privileges.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4042

Drive %1 in use by another client.

param %1 drive name from the command

DAS ACI Message

EUPELSE

Explanation

DAS/2 has received a command to change the access privileges for the drives. However, the drive specified is presently occupied by another client. The command is rejected.

User Activities

- Use listd to check which client is currently using the drive
- Initiate a dismount on the drive
- Agree with this user the times when a certain drive is used and by whom
- Vacate the drive immediately you have finished using it
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4043

Drive %1 not owned by client %2

param %1 drive name from the command.
param %2 client name from the command

DAS ACI Message

EUPELSE

Explanation

DAS/2 has received a command to change the access privileges for the drives. However, the drive specified is not defined for the client. The command is rejected.

User Activities

- Check whether the drive name is specified in the config file and whether DAS was restarted following the last amendment to the config file, or if the client has been temporarily configured using the scap command.
- Repeat the command when you have modified the configuration.
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4044

Drive %1 is not empty.

param %1 drive name from the command.

DAS ACI Message

EDRVOCCUPIED

Explanation

DAS/2 has received a command to change the access privileges for a drive to DOWN. However, the specified drive is presently occupied by another client. The command is rejected.

User Activities

- Use listd to check which client is currently using the drive
- Initiate a dismount on the drive
- Agree with this user the times when a certain drive is used and by whom
- Vacate the drive immediately whenever you have finished using it
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4045

Drive %1 is exclusive up for another Client.

param %1 drive name from the command.

DAS ACI Message

EEXUP

Explanation

DAS/2 has received a command to change the access privileges for a drive to DOWN. However, the specified drive is presently exclusively occupied by another client. The command is rejected.

User Activities

- Use listd to check which client is currently using the drive
- Initiate a dismount on the drive
- Agree with this user the times when a certain drive is used and by whom
- Vacate the drive immediately whenever you have finished using it (the exclusively occupied drive can only be vacated by the client that has occupied it or by the DAS_SUPERVISOR client).
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4050

Foreign request from client %1 - coordinate %2, volser %3.

param %1 client name from the environment variable of the ACI initiating the command.

param %2 10-digit coordinate from the command
param %3 volser cataloged as foreign mount.

DAS ACI Message

EOK

Explanation

DAS/2 has received a command to change the access privileges of drives in order to change the configuration temporarily.

User Activities

This is a notification message. No user activities are necessary.

DAS4051

Foreign request from client %1 completed %2.

param %1 client name from the environment variable of the ACI initiating the command.
param %2 successful or with failure (%3)
param %3 ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has received the command to catalog a foreign-mount medium.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4052

Foreign volser %1, media type %2 added to DAS catalog.

param %1 volser cataloged as foreign mount.
param %2 media type of the foreign-mount slot

DAS ACI Message

EOK

Explanation

DAS/2 has executed the command to catalog a foreign-mount medium.

User Activities

This is a notification message. No user activities are necessary.

DAS4053

Foreign volser %1, media type %2 not stored in DAS catalog.

param %1	volser specified as foreign mount in the command.
param %2	media type in the command or environment variable

DAS ACI Message

ENOVOLUME

Explanation

Due to an error, the volser was not registered by DAS/2 as foreign mount in the dasdata.ini file during the catf command. The specified volser was not found in the dasdata.ini file during an rmf command, and the command was not executed.

User Activities

- Check that the media type and volser have been correctly specified in the command. There is no option in DAS for displaying the cataloged foreign-mount media.
- All cataloged foreign-mount media can be removed by deleting the dasdata.ini file (hidden in the directory). This will reset the current assignment of drives to clients (allocd) and the volser allocation.
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4054

Coordinate %1 not empty for foreign volser %2.

param %1	10-digit coordinate from the command
param %2	volser cataloged as foreign mount.

DAS ACI Message

ENOSPACE

Explanation

DAS/2 has received a command to catalog a foreign-mount volser but the slot is occupied or not available. The command is rejected.

User Activities

- Check the specification of the coordinates in the DAS command.
- Compare the coordinates in the AMU.
- Change the status to empty if the slot for the new foreign-mount volser is still free.
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4055

Coordinate %1 is not of type FOREIGN.

param %1 10-digit coordinate from the command

DAS ACI Message

ENOMATCH

Explanation

DAS/2 is receiving a command to catalog a foreign-mount volser but the slot is not of the foreign type. The command is rejected.

User Activities

- Check the specification of the coordinates in the DAS command.
- Compare the coordinates in the AMU.
- Change the type to foreign in the AMU configuration if the slot is to be used for a new foreign-mount volser. Activate the changes after saving the configuration using Update EIF.
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4056

Coordinate %1 does not match media type %2.

param %1 10-digit coordinate from the command
param %2 media type

DAS ACI Message

ENOMATCH

Explanation

While cataloguing a foreign-mount volser, DAS/2 has detected that the slot (AMU database) does not match the media type in the command (environment variable).

User Activities

- Check the command and the environment variable.
- Compare the specification with the AMU configuration (media type in the graphical configuration of the I/O unit).
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4057

Foreign volser %1 still mounted.

param %1 volser cataloged as foreign mount.

DAS ACI Message

EINUSE

Explanation

DAS/2 is to delete a foreign-mount volser, although the volser is presently in the drive. The command is rejected.

User Activities

- Check the volser in the command.
- Execute a dismount and remove the medium from the AML system before deleting the foreign-mount volser.
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4060

Mount request from client %1 - volser %2, drive %3.

param %1 client name from the environment variable of the ACI initiating the command
param %2 volser from the mount command
param %3 name of drive in which the mount is executed

DAS ACI Message

EOK

Explanation

DAS/2 has received a command to execute a mount.

User Activities

This is a notification message. No user activities are necessary.

DAS4061

Mount request from client %1 completed %2.

param %1 client name from the environment variable of the ACI initiating the command.
param %2 successful or with failure (%3)
param %3 ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the mount command.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4062

Drive %1 not active for client %2.

param %1	drive name from the command.
param %2	client name from the environment variable of the ACI initiating the command.

DAS ACI Message

ENODRIVE

Explanation

DAS/2 is to execute a mount for a client but the selected drive is not assigned (UP or EXUP status) for this client.

User Activities

- Check the drive name in the command.
- Compare the name with the list of drives (listd)
- Change the drive status to UP if necessary (allocd); this process is not executed automatically by all applications.
- Vacate the drive if it is already occupied by another client.
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4063

Drive %1 does not match type %2 for volser %3.

param %1	drive name from the command
param %2	media type of the volser %3 from the command or environment variable
param %3	volser from the command

DAS ACI Message

ENODRIVE

Explanation

While executing the command, DAS/2 has detected that the slot (AMU database) does not match the media type in the command (environment variable).

User Activities

- Check the command and the environment variable.
- Compare the specification with the AMU configuration (media type in the graphical configuration of the I/O unit).
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4064

Drive(s) not available for mount request from client %1.

param %1 client name from the environment variable of the ACI initiating the command.

DAS ACI Message

ENODRIVE

Explanation

DAS/2 has received an uncommitted mount request but has no assigned free drive available for the specified media type.

User Activities

- Check the command (media type, volser)
- Assign the necessary drives.
- The no_dismount option must be set in the config file if your application does not generate the dismount command.
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4065

Drive %1 is currently being cleaned.

param %1 drive name in the command

DAS ACI Message

EDRVOCCUPIED

Explanation

DAS/2 has received a mount command although drive-cleaning is presently in progress. The command is rejected.

User Activities

- Wait until the cleaning process has finished and then repeat the command.
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4066

Volser %1 not found in Drive-Volser attachment list.

param %1 volser from the command

DAS ACI Message

ENOTFOUND

Explanation

DAS/2 has received a mount command to a drive for which the volser is not authorized. The command is rejected.

User Activities

- Check the volser and drive in the command
- Compare these names with those specified in the configuration (DriveToVol statement)
- Check whether DAS was restarted following the last amendment to the config file.
- Repeat the command when the configuration has been updated.
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4070

Keep request from client %1 - volser %2, drive %3.

param %1 client name from the environment variable of the ACI initiating the command.
param %2 volser from the command
param %3 drive from the command

DAS ACI Message

EOK

Explanation

DAS/2 is receiving the command to execute a dismount.

User Activities

This is a notification message. No user activities are necessary.

DAS4071

Keep request from client %1 completed %2.

param %1 client name from the environment variable of the ACI initiating the command.
param %2 successful or with failure (%3)

param %3 ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the mount command.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4072

Volser %1 not mounted.

param %1 volser from the command

DAS ACI Message

ENOTMOUNTED

Explanation

DAS/2 is to unload a volser from the drive, although the volser is not in a drive (AMU database)

User Activities

- Check the command (volser)
- Check the volser with the entries in the AMU database and check the drive at its location
- Check the dismount manager setting.
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4080

Insert request from client %1 for area %2.

param %1 client name from the environment variable of the ACI initiating the command.
param %2 name of the logical insertion field from the command

DAS ACI Message

EOK

Explanation

DAS/2 is receiving the command to execute an insertion.

User Activities

This is a notification message. No user activities are necessary.

DAS4081

Insert request from client %1 completed %2.

param %1	client name from the environment variable of the ACI initiating the command.
param %2	successful or with failure (%3)
param %2	ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the insert command.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4082

Area %1 is not an insert area.

param %1	name of the logical insertion field from the command

DAS ACI Message

ENOAREA

Explanation

DAS/2 has received a command to a logical range in the I/O unit which is not defined as an insertion range in the AMU configuration. The command is rejected.

User Activities

- Check the range name in the command (e.g. I01)
- Compare these names with those specified in the I/O unit configuration in the AMU; repeat the command when the configuration has been updated
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4090

Eject request from client %1 - volser %2, area %3.

param %1	client name from the environment variable of the ACI initiating the command.
param %2	volser from the command
param %3	name of the logical ejection field from the command

DAS ACI Message

EOK

Explanation

DAS/2 is receiving the command to execute an eject.

User Activities

This is a notification message. No user activities are necessary.

DAS4091

Eject request from client %1 completed %2.

param %1	client name from the environment variable of the ACI initiating the command.
param %2	successful or with failure (%3)
param %3	ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the insert command.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4092

Area %1 is not an eject area.

param %1	name of the logical ejection field from the command

DAS ACI Message

ENOAREA

Explanation

DAS/2 has received a command to a logical range in the I/O unit which is not defined as an ejection range in the AMU configuration. The command is rejected.

User Activities

- Check the range name in the command (e.g. E01)
- Compare these names with those specified in the I/O unit configuration in the AMU; repeat the command when the configuration has been updated.
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4093

Area %1 cannot store media type %2.

param %1 name of the logical ejection field from the command
param %2 media type from the command or environment variable

DAS ACI Message

ENOMATCH

Explanation

While executing the command, DAS/2 has detected that the slot (AMU database) does not match the media type in the command (environment variable).

User Activities

- Check the command and the environment variable.
- Compare the specification with the AMU configuration (media type in the graphical configuration of the I/O unit).
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4094

Volser %1 not available.

param %1 volser from the command

DAS ACI Message

ENOVOLUME

Explanation

DAS/2 is receiving an eject command on a volser which is not registered in the AMU database or is not in its home position. The command is rejected.

User Activities

- Check
  - the volser in the command
  - whether the volser is located in its home position
  - whether the AMU database entries are correct
- Repeat the command
  - when the volser is located in its home position
  - when the database entries are correct
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4095

Volser %1 does not match media type %2.

param %1	volser from the command
param %2	media type

DAS ACI Message

ENOMATCH

Explanation

DAS/2 is receiving a command on a volser whose media type in the database does not match the media type in the command.

User Activities

- Check
  - the media type in the command
  - the volser in the command
- Check whether the volser may be registered a second time in the AMU database under another media type
- Compare the media type with the AMU configuration
- Repeat the command with the correct media type
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4096

Eject area %1 is full. Please empty...

param %1	name of the logical ejection field from the command

DAS ACI Message

EOK

Explanation

DAS/2 is receiving an eject command on a volser for whose media type there is no slot or no free slot in the ejection range of the AMU database. The command remains in the command queue until a range is made available.

User Activities

- Check the ejection range.
- Remove the cartridges occupying the ejection range in the I/O unit.
- Correct the configuration if the ejection range does not match the media type
- Repeat the command on the correct ejection range
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4100

Inventory request from client %1.

param %1 client name from the environment variable of the ACI initiating the command.

DAS ACI Message

EOK

Explanation

DAS/2 has received an inventory command. The command is executed in the background at low priority. However, the client receives confirmation that the command has started.

User Activities

This is a notification message. No user activities are necessary.

NOTE **The inventory command is intended only for servicing or starting up, not as a normal command to be used during processing. If there is a problem with barcode reading, then the volsers in the database are overwritten by volsers signifying that the barcode is illegible (e.g. *I0001).**

DAS4101

Inventory request from client %1 completed %2.

param %1 client name from the environment variable of the ACI initiating the command.
param %2 successful or with failure (%3)
param %3 ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the inventory command. The client is not informed of this

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4102

Inventory request already active.

DAS ACI Message

EINUSE

Explanation

DAS/2 is receiving the inventory command although there is another inventory command already active. The command is rejected.

User Activities

If you want to restart the inventory:

- Determining the sequence number using list
- Delete the sequence number using cancel
- Now start the inventory command
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4110

List request from client %1.

param %1 client name from the environment variable of the ACI initiating the command.

DAS ACI Message

EOK

Explanation

DAS/2 is receiving the command to execute list.

User Activities

This is a notification message. No user activities are necessary.

DAS4111

List request from client %1 completed %2.

param %1	client name from the environment variable of the ACI initiating the command.
param %2	successful or with failure (%3)
param %3	ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the list command.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4120

Cancel request from client %1.

param %1	client name from the environment variable of the ACI initiating the command.

DAS ACI Message

EOK

Explanation

DAS/2 is receiving the command to execute Cancel.

User Activities

This is a notification message. No user activities are necessary.

DAS4121

Cancel request from client %1 completed %2.

param %1	client name from the environment variable of the ACI initiating the command.
param %2	successful or with failure (%3)
param %3	ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the Cancel command.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4130

Shutdown request from client %1.

param %1	client name from the environment variable of the ACI initiating the command.

DAS ACI Message

EOK

Explanation

DAS/2 is receiving the command to execute shutdown.

User Activities

This is a notification message. No user activities are necessary.

DAS4131

Shutdown request from client %1 completed %2.

param %1	client name from the environment variable of the ACI initiating the command.
param %2	successful or with failure (%3)
param %3	ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has accepted the shutdown command; DAS/2 will shut down in a few seconds.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4140

Drive status request from client %1.

param %1 client name from the environment variable of the ACI initiating the command.

DAS ACI Message

EOK

Explanation

DAS/2 is receiving the listd or listd2 command.

User Activities

This is a notification message. No user activities are necessary.

DAS4141

Drive status request from client %1 completed %2.

param %1 client name from the environment variable of the ACI initiating the command.
param %2 successful or with failure (%3)
param %3 ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the list2 command.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4150

Client status request from client %1 for client %2.

param %1 client name from the environment variable of the ACI initiating the command.
param %2 client name from the command

DAS ACI Message

EOK

Explanation

DAS/2 is receiving the command to execute show.

User Activities

This is a notification message. No user activities are necessary.

DAS4151

Drive status request from client %1 completed %2.

param %1 client name from the environment variable of the ACI initiating the command.
param %2 successful or with failure (%3)
param %3 ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the show command.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4160

DAS version request from client %1.

param %1 client name from the environment variable of the ACI initiating the command.

DAS ACI Message

EOK

Explanation

DAS/2 is receiving the command to execute qversion.

User Activities

This is a notification message. No user activities are necessary.

DAS4161

DAS version request from client %1 completed %2.

param %1	client name from the environment variable of the ACI initiating the command.
param %2	successful or with failure (%3)
param %3	ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the qversion command.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4170

Volser range request from client %1.

param %1	client name from the environment variable of the ACI initiating the command.

DAS ACI Message

EOK

Explanation

DAS/2 is receiving the command to execute qvolsrange.

User Activities

This is a notification message. No user activities are necessary.

DAS4171

Volser range request from client %1 completed %2.

param %1	client name from the environment variable of the ACI initiating the command.
param %2	successful or with failure (%3)

param %3 ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the qvolsrange command.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4180

View request from client %1 volser %2.

param %1 client name from the environment variable of the ACI initiating the command.
param %2 volser number requested

DAS ACI Message

EOK

Explanation

DAS/2 is receiving the command to execute view.

User Activities

This is a notification message. No user activities are necessary.

DAS4181

View request from client %1 completed %2.

param %1 client name from the environment variable of the ACI initiating the command.
param %2 successful or with failure (%3)
param %3 ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the view command.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4190

Init request from client %1.

param %1 client name from the environment variable of the ACI initiating the command.

DAS ACI Message

EOK

Explanation

DAS/2 is receiving the command to execute init.

User Activities

This is a notification message. No user activities are necessary.

DAS4191

Init request from client %1 completed %2.

param %1 client name from the environment variable of the ACI initiating the command.
param %2 successful or with failure (%3)
param %3 ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the init command.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4195

SET Scratch request from client %1 completed %2.

param %1	client name from the environment variable of the ACI initiating the command.
param %2	successful or with failure (%3)
param %3	ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has completed the SET scratch command.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4196

GET Scratch request from client %1 completed %2.

param %1	client name from the environment variable of the ACI initiating the command.
param %2	successful or with failure (%3)
param %3	ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has completed the GET scratch command.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4197

UNSET Scratch request from client %1 completed %2.

param %1	client name from the environment variable of the ACI initiating the command.
param %2	successful or with failure (%3)
param %3	ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has completed the UNSET scratch command.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4198

INFO Scratch request from client %1 completed %2.

param %1	client name from the environment variable of the ACI initiating the command.
param %2	successful or with failure (%3)
param %3	ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has completed the INFO scratch command.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4199

GET Scratch request from client %1 : volser %2.

param %1	client name from the environment variable of the ACI initiating the command.
param %2	scratch volser

DAS ACI Message

EOK

Explanation

DAS/2 has started the GET scratch command.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4200

GET Scratch request from client %1.

param %1 client name from the environment variable of the ACI initiating the command.

DAS ACI Message

EOK

Explanation

DAS/2 is receiving a GET scratch processing command.

User Activities

This is a notification message. No user activities are necessary.

DAS4201

Scratch request from client %1 completed %2.

param %1 client name from the environment variable of the ACI initiating the command.
param %2 successful or with failure (%3)
param %3 ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the scratch command.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4202

SET Scratch request from client %1.

param %1 client name from the environment variable of the ACI initiating the command.

DAS ACI Message

EOK

Explanation

DAS/2 is receiving a SET scratch processing command.

User Activities

This is a notification message. No user activities are necessary.

DAS4203

UNSET Scratch request from client %1.

param %1 client name from the environment variable of the ACI initiating the command.

DAS ACI Message

EOK

Explanation

DAS/2 is receiving a UNSET scratch processing command.

User Activities

This is a notification message. No user activities are necessary.

DAS4204

Partial Inventory request from client %1, %2 to %3.

param %1 client name from the environment variable of the ACI initiating the command.
param %2 start coordinate from the command
param %3 end coordinate from the command

DAS ACI Message

EOK

Explanation

DAS/2 is receiving a partial inventory command.

User Activities

This is a notification message. No user activities are necessary.

DAS4205

Partial Inventory request from client %1 completed %2.

param %1	client name from the environment variable of the ACI initiating the command.
param %2	successful or with failure (%3)
param %3	ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the PartInventory command.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4210

Switch request from client %1.- Option %2.

param %1	client name from the environment variable of the ACI initiating the command.
param %2	option (-n for normal or -f for force) from the command

DAS ACI Message

EOK

Explanation

DAS/2 is receiving a switch command.

User Activities

This is a notification message. No user activities are necessary. DAS accepts no new commands until this switch command has ended.

DAS4211

Switch request from client %1 completed %2.

param %1	client name from the environment variable of the ACI initiating the command.
param %2	successful or with failure (%3)
param %3	ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the switch command.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4220

Clean drive request from client %1, for drive %2.

param %1	client name from the environment variable of the ACI initiating the command.
param %2	drive name from the command

DAS ACI Message

EOK

Explanation

DAS/2 is receiving a clean command.

User Activities

This is a notification message. No user activities are necessary.

DAS4221

Clean drive request from client %1 completed %2.

param %1	client name from the environment variable of the ACI initiating the command.
param %2	successful or with failure (%3)
param %3	ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the clean command.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4230

EjectClean request from client %1 - cleanpool %2, area %3.

param %1	client name from the environment variable of the ACI initiating the command.
param %2	clean pool name from the command
param %3	name of the ejection field from the command

DAS ACI Message

EOK

Explanation

DAS/2 is receiving a ejectcl command.

User Activities

This is a notification message. No user activities are necessary.

DAS4231

EjectClean request from client %1 completed %2.

param %1	client name from the environment variable of the ACI initiating the command.
param %2	successful or with failure (%3)
param %3	ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the ejectcl command.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4232

Eject area %1 is full. Please empty...

param %1 name of the logical ejection field from the command

DAS ACI Message

EAREAFULL

Explanation

DAS/2 is receiving an eject command for cleaning cartridges for whose media type there is no slot or no free slot in the ejection range of the AMU database. The command remains in the command queue until a range is made available.

User Activities

- Check the ejection range.
- Remove the cartridges occupying the ejection range in the I/O unit.
- Correct the configuration if the ejection range does not match the media type
- Repeat the command on the correct ejection range
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4240

Insertclean request from client %1 - for area %2, and cleanpool %3.

param %1 client name from the environment variable of the ACI initiating the command.
param %2 name of the insertion field from the command
param %3 clean pool name from the command

DAS ACI Message

EOK

Explanation

DAS/2 is receiving an insert command with the option for cleaning cartridges.

User Activities

This is a notification message. No user activities are necessary.

DAS4241

Insertclean request from client %1 completed %2.

param %1 client name from the environment variable of the ACI initiating the command.
param %2 successful or with failure (%3)
param %3 ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the insert2 command.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4242

Poolname %1 is an invalid Poolname.

param %1 name of the clean pool from the command

DAS ACI Message

ENOPOOL

Explanation

DAS/2 is receiving an insert command for cleaning cartridges with a clean pool name that has not been defined. The command is rejected.

User Activities

- Check the clean pool name in the command.
- Check the configured clean pool names in the AMU and compare the name with the name in the command
- Correct the configuration or the command
- Repeat the command with the correct clean pool name
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4250

Barcode request from client %1.

param %1 client name from the environment variable of the ACI initiating the command.

DAS ACI Message

EOK

Explanation

DAS/2 is receiving a barcode command.

User Activities

This is a notification message. No user activities are necessary.

DAS4251

Barcode request from client %1 completed %2.

param %1	client name from the environment variable of the ACI initiating the command.
param %2	successful or with failure (%3)
param %3	ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the barcode command.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

vDAS4260

KillAmu request from client %1.

param %1	client name from the environment variable of the ACI initiating the command.

DAS ACI Message

EOK

Explanation

DAS/2 is receiving a killamu command.

User Activities

This is a notification message. No user activities are necessary.

DAS4261

KillAmu request from client %1 completed %2.

param %1	client name from the environment variable of the ACI initiating the command.
param %2	successful or with failure (%3)

param %3 ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has started the killamu command. It may be several minutes until the command is completed.

User Activities

This is a notification message. No user activities are necessary if the command was successful. However, wait 5 minutes before switching off the power supply.

If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4270

Flip request from client %1.

param %1 client name from the environment variable of the ACI initiating the command.

DAS ACI Message

EOK

Explanation

DAS/2 is receiving a flip command.

User Activities

This is a notification message. No user activities are necessary.

DAS4271

Flip request from client %1 completed %2.

param %1 client name from the environment variable of the ACI initiating the command.
param %2 successful or with failure (%3)
param %3 ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the flip command.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4272

Drive %1 isn’t a correct drive for this flip request.

param %1 name of the drive from the command

DAS ACI Message

ENODRIVE

Explanation

DAS/2 is receiving a flip command for a drive not designed for optical disks and so the flip command is not supported. The command is rejected.

User Activities

- Check the drive name in the command.
- Check the configured drives in the AMU and compare drive configuration with the drive in the command
- Correct the configuration or the command
- Repeat the command with the correct drive
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4280

GetVolToSide request from client %1 - volser: %2.

param %1 client name from the environment variable of the ACI initiating the command.

param %2 volser from the command

DAS ACI Message

EOK

Explanation

DAS/2 is receiving a getvoltoside command.

User Activities

This is a notification that no user activities are necessary.

DAS4281

GetVolToSide request from client %1 completed %2.

param %1	client name from the environment variable of the ACI initiating the command.
param %2	successful or with failure (%3)
param %3	ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the getvoltoside command.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4282

Volser %1 isn’t a volser with two sides.

param %1	name of the volser from the command

DAS ACI Message

ENODOUBLESIDE

Explanation

DAS/2 is receiving a gettovolside command for a volser which has not been found in the AMU database at slots for optical disks. The command is rejected.

User Activities

- Check the volser in the command.
- Check the configured media types in the AMU for the slot of the volser
- Check that the volser has not been registered twice (additionally for another media type)
- Correct the configuration or the command
- Repeat the command with the correct volser
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4290

Volser access request from client %1 - for volser %2 - %3.

param %1	client name from the environment variable of the ACI initiating the command.
param %2	first volser of the volser range in the command
param %3	last volser of the volser range in the command

DAS ACI Message

EOK

Explanation

DAS/2 is receiving an allocv command.

User Activities

This is a notification message. No user activities are necessary.

DAS4291

Volser access request from client %1 completed %2.

param %1	client name from the environment variable of the ACI initiating the command.
param %2	successful or with failure (%3)
param %3	ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the allocv command.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4292

Volsers assigned by another client.

DAS ACI Message

EUPELSE

Explanation

DAS/2 is receiving an allocv command a volser which has already reserved another client. The command is rejected.

User Activities

- Check the volser range in the command.
- Check the volser ranges that are already reserved (listv) and compare the range with the command. The ranges must not overlap.
- Correct the command
- Repeat the command with the correct volser range
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4293

Volsers not owned by client %1.

param %1 client name from the environment variable of the ACI initiating the command.

DAS ACI Message

EUPELSE

Explanation

DAS/2 is receiving an allocv command a volser which has no authorization for the client. The command is rejected.

User Activities

- Check the volser range in the command.
- Check the configuration of the volser ranges in the config file and compare the ranges in the command. Correct the command
- Repeat the command with the correct volser range
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4295

Client %1 has already an allocation

param %1 client name from the environment variable of the ACI initiating the command.

DAS ACI Message

EUPOWN

Explanation

DAS/2 is receiving an allocv command. The command is rejected.

User Activities

- Check the volser range in the command.
- Check the volser ranges that are already reserved (listv) and compare the range with the command. The ranges must not overlap.
- Correct the command
- Repeat the command with the correct volser range
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4296

Client %1 has no allocation

param %1 client name from the environment variable of the ACI initiating the command.

DAS ACI Message

EUPELSE

Explanation

DAS/2 is receiving an allocv command. The command is rejected.

User Activities

- Check the volser range in the command.
- Check the volser ranges that are already reserved (listv) and compare the range with the command. The ranges must not overlap.
- Correct the command
- Repeat the command with the correct volser range
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4297

The request is not allowed for the specified Client %1.

param %1 client name from the environment variable of the ACI initiating the command.

DAS ACI Message

EBADCLIENT

Explanation

DAS/2 is receiving an allocv command. The command is rejected.

User Activities

- Check the volser range in the command.
- Check the volser ranges that are already reserved (listv) and compare the range with the command. The ranges must not overlap.
- Correct the command
- Repeat the command with the correct volser range
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4300

Volser status request from client %1

param %1 client name from the environment variable of the ACI initiating the command.

Explanation

DAS/2 is receiving a listv command.

User Activities

This is a notification message. No user activities are necessary.

DAS4301

Volser status request from client %1 completed %2

param %1 client name from the environment variable of the ACI initiating the command.
param %2 successful or with failure (%3)
param %3 ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the listv command.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4302

No volser allocation.

DAS ACI Message

ENOVOLUME

Explanation

DAS/2 is receiving a listv command. The command is rejected.

User Activities

- Check the volser range in the command.
- Check the volser ranges that are already reserved (listv) and compare the range with the command. The ranges must not overlap.
- Correct the command
- Repeat the command with the correct volser range
- Contact the ADIC Customer Help Desk should the error continue to occur.

DAS4304

Volser Inventory request from client %1, %2

param %1	client name from the environment variable of the ACI initiating the command.
param %2	volser

Explanation

DAS/2 is receiving a volser inventory command.

User Activities

This is a notification message. No user activities are necessary.

DAS4305

Volser Inventory request from client %1 completed %2

param %1	client name from the environment variable of the ACI initiating the command.
param %2	successful or with failure (%3)
param %3	ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the volser inventory command.

DAS4350

eif_conf status request from client %1

param %1 client name from the environment variable of the ACI initiating the command.

Explanation

DAS/2 is receiving a eif_conf command.

User Activities

This is a notification message. No user activities are necessary.

DAS4351

eif_conf status request from client %1 completed %2

param %1 client name from the environment variable of the ACI initiating the command.
param %2 successful or with failure (%3)
param %3 ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the eif_conf command.

DAS4360

List foreign status request from client %1 - volser %2

param %1 client name from the environment variable of the ACI initiating the command.
param %2 volser

Explanation

DAS/2 is receiving a List foreign command.

User Activities

This is a notification message. No user activities are necessary.

DAS4361

List foreign request from client %1 completed %2

param %1 client name from the environment variable of the ACI initiating the command.
param %2 successful or with failure (%3)
param %3 ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the List foreign command.

DAS4400

Request volser to drive from client %1

param %1 client name from the environment variable of the ACI initiating the command.

Explanation

DAS/2 is receiving a getvolsertodrive command.

User Activities

This is a notification message. No user activities are necessary.

DAS4401

Request volser to drive from client %1 completed %2

param %1 client name from the environment variable of the ACI initiating the command.
param %2 successful or with failure (%3)
param %3 ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the getvolsertodrive command.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4402

No volser-drive attachment.

DAS ACI Message

ENODRIVE

Explanation

DAS/2 has terminated the getvolsertodrive command.

User Activities

This is a notification message. No user activities are necessary if the command was successful. If the message contains “with failure”, an error has occurred, the cause of which is given in another log message.

DAS4500

Pause DAS request from client %1 status %2

param %1	client name from the environment variable of the ACI initiating the command.
param %2	status ("ON", "OFF")

Explanation

DAS/2 is receiving a pausedas command.

User Activities

This is a notification message. No user activities are necessary.

DAS4501

Pause DAS request from client %1 completed %2

param %1	client name from the environment variable of the ACI initiating the command.
param %2	successful or with failure (%3)
param %3	ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the pausedas command.

DAS4502

****** *DAS now in the pause mode* ******

DAS ACI Message

EOK

Explanation

This is informational messages

DAS4510

Pause drive request from client %1 for drive %2 status %3

param %1	client name from the environment variable of the ACI initiating the command.
param %2	drive name
param %3	status ("ON", "OFF")

Explanation

DAS/2 is receiving a pausedrive command.

User Activities

This is a notification message. No user activities are necessary.

DAS4511

Pause drive request from client %1 completed %2

param %1	client name from the environment variable of the ACI initiating the command.
param %2	successful or with failure (%3)
param %3	ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the pausedrive command.

DAS4512

Drive %1 has been paused by %2 client.

param %1	drive name
param %2	client name who paused drive

DAS ACI Message

EINVALIDDEV

Explanation

- Check the drive name in the command.
- Check the configured drives in the AMU and compare drive configuration with the drive in the command
- Correct the configuration or the command

DAS4520

eif_info request from client %1

param %1 client name from the environment variable of the ACI initiating the command.

Explanation

DAS/2 is receiving a eif_info command.

User Activities

This is a notification message. No user activities are necessary.

DAS4521

eif_info request from client %1 completed %2

param %1 client name from the environment variable of the ACI initiating the command.
param %2 successful or with failure (%3)
param %3 ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the eif_info command.

DAS4530

cellinfo request from client %1

param %1 client name from the environment variable of the ACI initiating the command.

Explanation

DAS/2 is receiving a cellinfo command.

User Activities

This is a notification message. No user activities are necessary.

DAS4531

cellinfo request from client %1 completed %2

param %1	client name from the environment variable of the ACI initiating the command.
param %2	successful or with failure (%3)
param %3	ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the cellinfo command.

DAS4540

typelist request from client %1

param %1	client name from the environment variable of the ACI initiating the command.

Explanation

DAS/2 is receiving a typelist command.

User Activities

This is a notification message. No user activities are necessary.

DAS4541

typelist request from client %1 completed %2

param %1	client name from the environment variable of the ACI initiating the command.
param %2	successful or with failure (%3)
param %3	ACI error number

DAS ACI Message

EOK

Explanation

DAS/2 has terminated the typelist command.

DAS ACI Messages

The following messages provide information for DAS ACI generated by the ACI on the client.

ACI0001

Invalid value assigned to d_errno (%1).

param %1 value in the d_errno variable

Explanation

An ACI request has been canceled due to an error. The value given in the variable (d_errno) is invalid.

User Activities

- Search for the cause of the error in the AMU log.
- Contact the ADIC Customer Help Desk.

ACI0002

%1 not defined in the environment.

param %1 environment variable has not been found.

Explanation

A search was made for the DAS_SERVER and DAS_CLIENT environment variables when the ACI components was initialized in order to determine the AMU's IP address and to obtain information on the client's name. One or more environment variables were not found. The command is not sent to the server.

User Activities

- Set the environment variables and repeat the command
- Contact the ADIC Customer Help Desk should the error continue to occur.

ACI0003

%1 is an invalid hostname or IP address.

param %1 Value of the DAS_SERVER environment variable

Explanation

The DAS_SERVER environment variable was found when the ACI components were initialized. Evaluation of the variable produced an invalid IP address (incorrect syntax) or a host name which cannot be resolved into an IP address by the TCP/IP service (domain name server or local hosts file). The command is not sent to the server.

User Activities

- Check the DAS_SERVER environment variable.
- Test the resolution of the host name using the ping command on the host name.
- Repeat the command once you have corrected the environment variable or the host name resolution.
- Contact the ADIC Customer Help Desk should the error continue to occur.

ACI0004

Function clnttcp_create failed.

Explanation

An RPC error occurred in the clnttcp_create() function while the ACI components were being initialized; the cause may be a fault:

- in the TCP/IP communication, or
- in the DAS/2 program.

The command is not sent to the server.

User Activities

- Check the DAS_SERVER environment variable.
- Use a ping command to test whether you can reach the server specified in the environment variable; use a ping command on the host name to test the host name resolution.
- Check whether the DAS/2 operation exists on the AMU PC and is operating fault-free. (DAS/2 window with the DAS/2 ready message).
- Repeat the command once you have reestablished the communication or the DAS/2 program has been restarted.
- Contact the ADIC Customer Help Desk should the error continue to occur.

ACI0005

Function clnt_call (rc = %1) failed.

param %1 return value of the clnt_call function

Explanation

An RPC error occurred in the clnt_call() function while the ACI components were being initialized. The command is not sent to the server.

User Activities

Contact the ADIC Customer Help Desk.

ACI0006

RPC could not reply to NULLPROC.

Explanation

An RPC error occurred while the ACI components were being initialized. The error cannot be rectified by the ACI.

User Activities

Contact the ADIC Customer Help Desk.

ACI0007

RPC could not get arguments.

Explanation

An RPC error occurred in the svc_getargs() during RPC communication. The error cannot be rectified by the ACI.

User Activities

Contact the ADIC Customer Help Desk.

ACI0008

RPC could not reply to DAS.

Explanation

An RPC error occurred in the svc_sendreply() during RPC communication. The error cannot be rectified by the ACI.

User Activities

Contact the ADIC Customer Help Desk.

ACI0009

RPC could not free arguments.

Explanation

An RPC error occurred in the svc_freeargs() during RPC communication. The error cannot be rectified by the ACI.

User Activities

Contact the ADIC Customer Help Desk.

ACI0010

Function sysconf failed.

Explanation

An ACI error occurred in the sysconf() during command execution. The error cannot be rectified by the ACI.

User Activities

Contact the ADIC Customer Help Desk.

ACI0011

Error in function select: %1.

param %1 name of the function caused the error

Explanation

An internal ACI error occurred during command execution. The error cannot be rectified by the ACI.

User Activities

Contact the ADIC Customer Help Desk.

ACI0012

Function svctcp_create failed.

Explanation

An ACI error occurred in the svctcp_create() during command execution. The error cannot be rectified by the ACI.

User Activities

Contact the ADIC Customer Help Desk.

ACI0013

Failure obtaining RPC program number.

Explanation

An internal ACI error occurred during command execution. The error cannot be rectified by the ACI.

User Activities

Contact the ADIC Customer Help Desk.

ACI0014

Function svc_register failed.

Explanation

An internal ACI error occurred in the svc_register() during command execution. The error cannot be rectified by the ACI.

User Activities

Contact the ADIC Customer Help Desk.

ACI0015

RPC failed. DAS initial response is %1.

param %1 return value from the DAS

Explanation

An internal ACI error occurred during command execution. The error cannot be rectified by the ACI.

User Activities

Contact the ADIC Customer Help Desk.

ACI0020

%1 is not defined.

param %1 syntax of parameter from the command is incorrect

Explanation

A syntax error was detected by the ACI during command execution. The command is not executed.

User Activities

- Correct the syntax in your application and repeat the command.
- Contact the ADIC Customer Help Desk should the error continue to occur.

ACI0021

%1 %2 is longer than %3.

param %1	type of variable which caused the error
param %2	name of variable which caused the error
param %3	maximum permitted length of variable (character string)

Explanation

The number of characters in the specified variable is greater than the permitted maximum.

User Activities

- Amend the definition of the maximum permitted length and repeat the command.
- Contact the ADIC Customer Help Desk should the error continue to occur.

ACI0022

%1 %2 contains an invalid character.

param %1	parameter in the command
param %2	name of the parameter in the command

Explanation

Special characters which are not permitted for this parameter were discovered when the command was verified.

User Activities

- Check the parameter for special characters and remove theses.
- Repeat the command.
- Contact the ADIC Customer Help Desk should the error continue to occur.

ACI0023

Invalid %1.

param %1	invalid parameter

Explanation

The command failed due to an invalid parameter.

User Activities

- Check the parameter.
- Repeat the command.
- Contact the ADIC Customer Help Desk should the error continue to occur.

ACI0024

Hostname %1 is not correct.

param %1 host name in the command

Explanation

Evaluation of the variable produced an invalid IP address (incorrect syntax) or a host name which cannot be resolved into an IP address by the TCP/IP service (domain name server or local hosts file). The command is not sent to the server.

User Activities

- Test the resolution of the host name using the ping command on the host name.
- Repeat the command once you have corrected the host name resolution.
- Contact the ADIC Customer Help Desk should the error continue to occur.

ACI0025

Ping hostname <%1> Timeout.

param %1 a hostname or IP address.

Explanation

An TCP/IP error occurred in the ping_hosts() function while the ACI components were being initialized; the cause may be a fault:

- in the TCP/IP communication, or
- in the DAS/2 program.

User Activities

- Check the DAS_SERVER environment variable.
- Use a ping command to test whether you can reach the server specified in the environment variable; use a ping command on the host name to test the host name resolution.

Derrno Variable

The following variables are written to the derrno variable as a result of a command and can be read out by the application:

0 - EOK

The request was successful.

Explanation

The command has been completed without error; no further information available.

User Activities

No activities required.

1 - ERPC

An RPC failure occurred.

Explanation

A client could not send its request to the server or the server is not responding to the request.

User Activities

- Check
  - that the TCP/IP service portmapper has started on both the AMU and the client PC;
  - that the RPC service is functioning correctly. Start the rpcinfo -p command to view the status of the RPC service;
  - that the DAS_SERVER environment variable contains the host name or the IP address of the AMU;
  - that the host name is correctly resolved into the IP address in the TCP/IP network. Test the communication by pinging the host name;
  - that the DAS/2 program is running on the AMU.
- Contact the ADIC Customer Help Desk should the error continue to occur.

2 - EINVALID

An ACI parameter is invalid.

Explanation

One or more parameter in the command is invalid. The command was rejected by the ACI.

User Activities

- Compare the parameters in the command with the specification in the dasadmin online help program or in the ACI Interfacing Guide
- Correct the parameters and repeat the command.
- Contact the ADIC Customer Help Desk should the error continue to occur.

3 - ENOVOLUME

A volume of this type is not found.

Explanation

The volser specified in the command and its associated media type was not found in the AMU database or in the AML system at the relevant position.

User Activities

- Check
  - the volser in the command;
  - the AMU database (that the volser is present only once and has the appropriate media type);
  - the AML system (that the volser is located at the slot specified in the AMU database).
- Correct the command/database or insert the missing volser.
- Contact the ADIC Customer Help Desk should the error continue to occur.

4 - ENODRIVE

The drive is not defined in the AML.

Explanation

The requested drive was not found in the AMU configuration. The command is not executed.

User Activities

- Check that the names in the command or its application are for the drive with the configured name in the AMU configuration (Graphical Configuration - Drive Configuration - Description); be aware that a maximum of 9 alphanumeric characters are permitted for the drive name.
- Contact the ADIC Customer Help Desk should the error continue to occur.

5 - EDRVOCCUPIED

The requested drive is currently in use.

Explanation

The requested drive is registered in the AMU database as still occupied, and the no_dismount option has not been set. The command is not executed.

User Activities

- Check
  - whether the dismount command has failed;
  - whether it is the application that does not unload the drive (altering to the dismount option to no_dismount is necessary)
  - there is an error in the AMU database (check the drive).
- Contact the ADIC Customer Help Desk should the error continue to occur.

6 - EPROBVOL

The robot encountered a problem handling the volume.

Explanation

A command has failed due to a problem with the AML hardware. The AML system cannot solve the problem. The problem may be:

- a medium which has fall to the floor
- some mechanical resistance when loading the medium in the drive or in its storage place
- a damaged barcode or problems with the barcode-reading equipment
- a medium is in the gripper because the problem box in full

User Activities

- Check the AMU log (AMU error message for this problem)
- Rectify the problem following the operating instructions in the AMU manuals and hardware documentation.
- Contact the ADIC Customer Help Desk should the error continue to occur.

7 - EAMU

An unexpected response code was received from the AMU.

Explanation

The AMU reacts to a command with an unexpected error message, or there is an internal fault in the AMU.

User Activities

- Check the AMU log (AMU error message for this problem)
- Rectify the problem following the operating instructions in the AMU manuals and hardware documentation.
- Contact the ADIC Customer Help Desk should the error continue to occur.

8 - EAMUCOMM

DAS was unable to communicate with the AMU.

Explanation

DAS does not send acknowledgment of the command to the AMU.

User Activities

- Check that the AMU operations are functioning correctly
- Restart the OS/2 PC
- Contact the ADIC Customer Help Desk should the error continue to occur.

9 - EROBOT

The robotic system is not functioning.

Explanation

A command cannot be executed because the robotic controller status is offline. The cause of this may be a problem with the hardware or communication, or an offline command from a user.

User Activities

- Try to bring the robotic controller back online using the robstat command. Check the AMU log for the corresponding AMU error message if this is unsuccessful
- Rectify the problem following the operating instructions in the AMU manuals and hardware documentation.
- Contact the ADIC Customer Help Desk should the error continue to occur.

10 - EROBOTCOMM

The AMU was unable to communicate with the robot.

Explanation

Communication between AMU and a component used to control the AML has broken down.

User Activities

- Try the command a second time to see if the link reestablishes. Check the AMU log for the corresponding AMU error message if this is unsuccessful and restart the AML system.
- Rectify the problem following the operating instructions in the AMU manuals and hardware documentation.
- Contact the ADIC Customer Help Desk should the error continue to occur.

11 - ENODAS

DAS is not active.

Explanation

The DAS/2 program is not active

User Activities

- Check that the DAS/2 operation is active. Restart the DAS/2.
- Contact the ADIC Customer Help Desk should the error continue to occur.

12 - EDEVEMPTY

The drive did not eject a volume.

Explanation

The robotic controller could not grip the medium at the drive. The command is not executed.

User Activities

- Check that the drive has received a command to unload. Loading by the robotic controller may be necessary for your application and has to be defined in the AMU drive configuration.
- Check the drive. There may still be a medium in the drive.
- Check the timekeeping (if necessary, adjust the dismount manager parameters for the drive in the AMU configuration).
- Contact the ADIC Customer Help Desk should the error continue to occur.

13 - ENOTREG

The client is not registered with DAS.

Explanation

The command was received from a server for a client that has not been defined. The command is rejected.

User Activities

- Check whether the client is using the correct environment variables and that they have also been set in the DAS configuration file.
- Change the configuration file or the environment variable for the client
- Restart the DAS program following changes to the configuration file.
- Contact the ADIC Customer Help Desk should the error continue to occur.

14 - EBADHOST

The hostname or IP address is not valid.

Explanation

DAS/2 has received a command with an invalid TCP/IP address or host name. The host name or the IP address is not defined in DAS (temporarily or in the config file) or the host name cannot be resolved by the TCP/IP configuration. The command is rejected.

User Activities

- Check whether the TCP/IP address or host name is specified in the config file and whether DAS was restarted following the last amendment to the config file, or if the client has been temporarily configured using the scap command.
- Repeat the command when the configuration has been modified.
- Contact the ADIC Customer Help Desk should the error continue to occur.

15 - ENOAREA

The area name does not exist.

Explanation

DAS/2 has received a command for a logical range which is not defined as a logical range in the I/O unit in the AMU configuration, or has not been determined for the client in the DAS configuration. The command is rejected.

User Activities

- Check the range name in the command (e.g. E01)
- Compare these names with those specified in the I/O unit configuration in the AMU; repeat the command when you have updated the configuration
- Check the DAS configuration file config
- Contact the ADIC Customer Help Desk should the error continue to occur.

16 - ENOTAUTH

The client is not authorized to make this request.

Explanation

DAS/2 has received a command for which the client is not authorized.

User Activities

- Check the config file for this client:
  - the volser range
  - the drives
  - the access privileges (restricted or complete)

- Check whether DAS was restarted following the last amendment to the config file, or if the client has been temporarily configured using the scap command.
- Repeat the command when you have modified the configuration.
- Contact the ADIC Customer Help Desk should the error continue to occur.

17 - EDYNFULL

The archive does not have dynamic positions available.

Explanation

No more slots are available for new volsers to be inserted because:

- no slots of type AMU Dynamic exist in the AMU database
- the slot in the AMU Dynamic range are already full and reserved for temporarily ejected volsers
- the media in the I/O unit are of another media type

User Activities

- Check the AMU database for free slots with the parameters:

Type: AMU Dynamic

Attributes: Empty

Volser: 0000000000000000

- Contact the ADIC Customer Help Desk should the error continue to occur.

18 - EUPELSE

The drive is currently assigned to another client.

Explanation

DAS/2 has received a command to change the access privileges for the drives, but the specified drive is presently occupied by another client. The command is rejected.

User Activities

- Use listd to check which client is currently using the drive
- Initiate a dismount on the drive
- Agree with this user the times when a certain drive is used and by whom
- Vacate the drive whenever you have finished using it
- Contact the ADIC Customer Help Desk should the error continue to occur.

19 - EBADCLIENT

The client does not exist.

Explanation

DAS/2 has received a command from a client that is not configured in DAS or from a client with restricted access privileges. The command is rejected.

User Activities

- Check whether the client name is specified in the config file using the same conventions (lowercase/uppercase) and whether DAS was restarted following the last amendment to the config file, or if the client has been temporarily configured using the scap command.
- Check the client's environment variables and the setting in the application which uses the ACI.
- Check the client's privileges in the configuration.
- Contact the ADIC Customer Help Desk should the error continue to occur.

20 - EBADDYN

The dynamic area does not exist.

Explanation

DAS/2 has received a command for a logical range which is not defined as a logical range in the I/O unit in the AMU configuration, or has not been determined for the client in the DAS configuration. The command is rejected.

User Activities

- Check the range name in the command (e.g. E01)
- Compare these names with those specified in the I/O unit configuration in the AMU; repeat the command when you have updated the configuration
- Check the DAS configuration file config
- Contact the ADIC Customer Help Desk should the error continue to occur.

21- ENOREQ

A request with this number does not exist.

Explanation

A sequence number which is presently not in the DAS command queue was specified for the cancel command.

User Activities

- Check the outstanding commands using the list command and select the corresponding sequence number from it. Repeat the command with the correct sequence number
- Contact the ADIC Customer Help Desk should the error continue to occur.

22 - ERETRYL

Retry attempts exceeded.

Explanation

There has been an attempt to repeat a command automatically, despite there being problems in the command's execution. The maximum number of iterations has now been reached and the command could not be successfully executed.

User Activities

- Check the AMU log (AMU error message for this problem)
- Rectify the problem following the operating instructions in the AMU manuals and hardware documentation.
- Contact the ADIC Customer Help Desk should the error continue to occur.

23 - ENOTMOUNTED

The requested volser is not mounted.

Explanation

It has been determined for a dismount command that, according to the AMU database, there is no volser in the drive

User Activities

- Check the command (volser)
- Check the volser with the entries in the AMU database and check the drive at its slot
- Also check the dismount manager setting.
- Contact the ADIC Customer Help Desk should the error continue to occur.

24 - EINUSE

The requested volser is in use.

Explanation

A command for a volser has been started although, according to the AMU database, this volser is mounted, ejected, and/or inventory command has been started although an inventory is already underway.

User Activities

- Check the volser in the command.
- Wait until the volser is available once more or issue the appropriate command (the commands are only stored in the AMU command queue if the current database status permits the command.)

- Contact the ADIC Customer Help Desk should the error continue to occur.

25 - ENOSPACE

Not enough space available to add the requested range.

Explanation

DAS/2 has received a command to temporarily add a client to the DAS configuration. The command has been rejected because the maximum number of clients has been exceeded. The client can only be added by altering the configuration (config file). An additional reason may be that the slot is not specified in the I/O unit as Foreign and Empty when foreign-mount volsers were added

User Activities

- Modify your configuration
- Remove a client that may not be need, or is not need at present
- Obtain the licence for additional clients
- Delete unneeded clients from the config file and specify the new client in its place.
- Restart the client.
- Check the definition of the slot for the foreign-mount volser in the AMU database
- Contact the ADIC Customer Help Desk should the error continue to occur.

26 - ENOTFOUND

The range or object cannot be found.

Explanation

The command contains a parameter that was not found in the configuration or in the AMU database.

User Activities

- Check the command.
- Compare the parameters with the values from the configuration or the AMU database.
- Contact the ADIC Customer Help Desk should the error continue to occur.

27 - ECANCELLED

The request was canceled.

Explanation

A command has been deleted from the command queue by shutdown or cancel.

User Activities

You must restart if the command is still to be executed.

28 - EDASINT

An internal DAS error occurred.

Explanation

A situation has arisen during command processing in the DAS program which cannot be rectified by the program.

User Activities

- Save the associated AMU log. Terminate DAS using <CTRL>+<C> and then restart DAS.
- Contact the ADIC Customer Help Desk.

29 - EACIINT

An internal ACI error occurred.

Explanation

A situation has arisen during command processing in the ACI which cannot be rectified by the program.

User Activities

- Save the associated AMU log. Terminate DAS using <CTRL>+<C> and then restart DAS.
- Contact the ADIC Customer Help Desk.

30 - EMOREDATA

More data available.

Explanation

Valid data was returned for the qvolsrange command. This has determined that the specified range contains a number larger than the entries specified in the count. You can query the remaining data using another command.

User Activities

For further information about other volsers, start another command with the next volser specified. This process for collecting volser information can continue until d_errno returns 0.

31 - ENOMATCH

Command parameters do not match.

Explanation

While executing the command, DAS/2 has detected that parameters in the command are not correct, e.g. the slot (AMU database) does not match the media type in the command (environment variable).

User Activities

- Check the command and the environment variable.
- Compare the specification with the AMU configuration (media type in the graphical configuration of the I/O unit).
- Contact the ADIC Customer Help Desk should the error continue to occur.

32 - EOTHERPOOL

Volser defined to another pool.

Explanation

When a request was made to add a volser to a scratch pool, it was detected that this volser already belongs to another scratch pool. The command is rejected.

User Activities

- Check the pool name.
- Change the pool associated in the AMU if the volser is to change pools
- Contact the ADIC Customer Help Desk should the error continue to occur.

33 - ECLEANING

Drive is being cleaned.

Explanation

A command was started but this drive is presently being cleaned. The command is rejected.

User Activities

- Wait until drive-cleaning has finished and then repeat the command.
- Contact the ADIC Customer Help Desk should the error continue to occur.

34 - ETIMEOUT

The ACI request timed out.

Explanation

The command was timed out without a response being sent from the DAS program.

User Activities

- Check the status of the machine (robstat) and the AMU log for associated errors.
- Repeat the command.
- Contact the ADIC Customer Help Desk should the error continue to occur.

35 - ESWITCHINPROG

The AMU is not ready because AMU is starting a switch

Explanation

DAS has been informed by the AMU that the passive AMU is now active No new commands will be accepted during this switching phase, but the those already in the command queue are processed.

User Activities

- Inform all affected users before using the switch command.
- Repeat the rejected command when the switching procedure is complete.
- Wait for up to two minutes (until the switching process has finished) and then repeat the command.
- Contact the ADIC Customer Help Desk should the error continue to occur.

36 - ENOPOOL

The pool name is not defined.

Explanation

DAS/2 is receiving an insert command for cleaning cartridges with a clean pool name that has not been defined. The command is rejected.

User Activities

- Check the clean pool name in the command.
- Check the configured clean pool names in the AMU and compare the name with the name in the command
- Correct the configuration or the command
- Repeat the command with the correct clean pool name
- Contact the ADIC Customer Help Desk should the error continue to occur.

37 - EAREAFULL

The eject area is full.

Explanation

DAS/2 is receiving an eject command for cleaning cartridges for whose media type there is no slot or no free slot in the ejection range of the AMU database. The command remains in the command queue until a range is made available.

User Activities

- Check the ejection range.
- Remove the cartridges occupying the ejection range in the I/O unit.
- Correct the configuration if the ejection range does not match the media type
- Repeat the command on the correct ejection range
- Contact the ADIC Customer Help Desk should the error continue to occur.

38 - EHICAPINUSE

Robot is not ready because of a HICAP request

Explanation

The robotic controller in the AML/J system is switched off while the door (HICAP) is open. DAS holds all outstanding commands in the command queue but does not accept any new commands into the DAS command queue.

User Activities

- Organize your operation so that no commands are sent to the AML/J while the I/O unit (HICAP) is being configured.
- Inform all other connected subscribers before opening the HICAP.

39 - ENODOUBLESIDE

The volser has no two sides

Explanation

A command was issued that requires a double sided volser, however the volser used was not double sided.

User Activities

Verify the volser and correct it if necessary

40- EEXUP

The drive is EXUP for another client.

Explanation

The drive is currently allocated to another client.

User Activities

The client that has allocated the drive must deallocate the drive, otherwise the DAS_SUPERVISOR client should be used to deallocate the drive.

41- EPROBDEV

The robot has a problem with handling the device.

Explanation

The command could not be executed because the robot has a problem with the device handling

User Activities

Check the AMU log for a more detailed error message. For information about the error, refer to the AMU Administration Guide.

42- ECOORDINATE

One or more coordinates are wrong.

Explanation

DAS sent a command to the AMU with an illegal coordinate.

User Activities

Check the command description.

43- EAREAEMPTY

Area that is to be ejected is already empty.

Explanation

An INSERT command was issued but the I/E area is empty

User Activities

Verify that the volser has not already been inserted.

44- EBARCODE

Barcode read error.

Explanation

The barcode could not be read by the barcode reader on the robotic controller during a command. The command is not executed.

User Activities

None.

45 - EUPDOWN

Client tried to allocate volers that are already allocated.

Explanation

Not applicable

User Activities

Not applicable

46 - ENOTSUPPHCMD

Host command not supported

Explanation

DAS sent a command to the AMU that is not supported by the AMU.

User Activities

The AMU has a command exclusion feature that can be used to configured which DAS commands are supported. The command that was sent to the AMU is configured as a not supported host command. Refer to the AMU Administration Guide if this needs to be changed.

47 - EDATABASE

There was an error during reading and writing of the database.

Explanation

The AMU was unable to read or write the database

User Activities

Check the AMU log for a more detailed message. Also check the AMU error message. For further information refer to the AMU Administration Guide.

48 - ENOROBOT

The robot is not configured.

Explanation

The AMU could not execute the command because the wrong robot, or no robot is configured

User Activities

Check the AMU configuration

49 - EINVALIDDEV

The device is invalid.

Explanation

A command was sent with an illegal device.

User Activities

Check the device parameter and correct it if necessary.

50 - NO_ECODES

Number of error codes.

Explanation

Not applicable.

User Activities

Not applicable.

7

Utilities

Overview

The \das\tools directory contains files and programs intended for help when working with DAS.

NOTE **The functions in the \das\tools directory are add-ins and are not a constituent part of the software supplied, therefore are not guaranteed.**

RPC Test (TCP/IP Function)

In the event of a problem with communication between ACI and DAS, the RPC service can be tested with this function. The location of the problem can be determined directly from the test response if, before the test is run, the file *rpc* is copied to the \tcpip\etc (TCP/IP 2.0) or \mptn\etc (TCP/IP 3.0) directory.

```
rpcinfo -p
```

DAS is registered with the number 536875008 or 0x20001000. The ACI is registered with the number 1073747824 or 0x40000000. If more than one ACI is registered, the number will increase by one.

Here is an example of the responce of rpcinfo command.

```
program vers proto   port
536875008    1   tcp   1024  GRAU_DAS2_13
```

DAS Wait Program

The system must wait while the AMU programs (AMU, DAS) initialize, so that communications can be established correctly. The *os2sleep* program is called from the *Startup.cmd* file for this purpose.

```
os2sleep time
```

Time is the delay in seconds before batch processing is continued.

RPCPing Utility

Using RpcPing for testing RPC connectivity

The RpcPing utility was designed as an addition for ACI/DAS project. It can be used for testing of an RPC connection from one computer (ACI client, for example) to another.

The RpcPing utility is working like usual 'ping' utility but via the RPC protocol. This set contains two programs: 'rpcping' and 'servrpcping'.

Server part

The **Servrpcping** is needed because RPC protocol doesn't have a standard 'responser' (as IP protocol). This program must be run on one side of the 'link' and 'rpcping' on another.

This program has no additional command-line parameters. During startup it will check 'ACI_DEBUG' environment variable.

ACI_DEBUG values:

- 1 - it will print enter/exit in each function
- 2 - the same as (1) and some additional information
- 3 and more - the same as (2)

In addition, environment variable 'ACI_DEBUG_FILE' can be used to redirect debug output to the given file.

It's recommended to run **servrpcping** on server computer (DAS/2 or AMU). **Servrpcping** uses RPC program number 0x20002000.

Before starting this program you should ensure that portmapper is already running.

Client part

The **Rpcping** can be used as a usual 'ping' program. It will require host name or IP-address like command-line parameter.

'Rpcping' tries to connect to the host via RPC protocol and send sequenced requests. Each response will be printed on console with additional information like response time, failure code (for failed responses) etc.

Rpcping will run forever until you break it by <Ctrl>+<C>. After terminating 'rpcping' prints connection statistics: total number of requests, loss percentage and round-trip times.

During startup 'rpcping' checks 'ACI_DEBUG' environment variable.

ACI_DEBUG values:

- 1 - print enter/exit in each function
- 2 - the same as (1) and some additional information
- 3 - the same as (2) and some additional information
- 4 and more - the same as (3)

In addition, environment variable 'ACI_DEBUG_FILE' can be used to redirect debug output to the given file.

Implementation details

'Rpcping' generate data packets with 48 data bytes. These data bytes will be generated by some rules and CRC-signed. 'Servrpcping' will check these data packets and it's able to detect error or mismatches in received data.

'Rpcping' will also validates server reply.

Error messages

Both programs are able to detect various RPC errors and in some cases they can give suggestions and recommendations (like "portmapper isn't running" or "server isn't running"). In case of any error, file 'rpc_ping.out' will be created in current directory.

Recommendations for error recovery situations

- Check connection by usual 'ping' utility FROM BOTH SIDES.
- Run 'servrpcping' on server computer (computer with DAS/2 or AMU)
- Run `rpcping <server-name>` on client computer (computer with installed ACI client).
- See for error messages and recommendations.

Startup.smp

Startup.smp is a sample file for launching the AMU programs automatically. An explanation of this file may be found in the AMU Reference Manual.

DB/2 query tools

The `tools\db2` and `toolsdbm` directories contain some small utilities for querying the DB/2 database.

NOTE **Instructions on how to use these programs may be found in a "README" file in the DB2 directory. Use the programs in the `tools\db2` directory for the Database Manager version and those in the `tools\dbm` directory for older versions. (The version can be queried under OS/2 with the syslevel command)**

The following OS/2 command files are provided for querying and modifying the database.

- CNT2ZERO.CMD
- SHOWPOOL.CMD
- SHOWSCRATCH.CMD
- SHOWVOLSER.CMD

CNT2ZERO.CMD

The **CNT2ZERO.CMD** command sets the counter for use count and crash count (not used) to 0 for all volsers in the AML.

SHOWPOOL.CMD

The **SHOWPOOL.CMD** command displays the scratch pool information.

SHOWSCRATCH.CMD

The **SHOWSCRATCH.CMD** command displays the scratch volser for a specified pool.

SHOWVOLSER.CMD

The **SHOWVOLSER.CMD** displays the “scratch” status of a volser (scratch or non-scratch media).

8

Communication Applications

Overview

This section covers communication application. The following applications are discussed:

- ADSM VirOp software
- Arvserve VirOp software
- Networker NT

ADSM VirOp

This section describes the ADSM VirOp software.

Installation

The requirements for installing and executing the VirOp software are as follows:

- An ADIC AML library
- ADSM version 2
- a supported UNIX operating system (AIX, Solaris or HP/UX)
- ADIC DAS software.

The following platform dependent software releases are required:

Table 8-1 Software Release to Platform Requirements

Software	Version
AIX	AIX 4.14 or higher
SOLARIS	Solaris 2.51 or higher
ADSM	2 with PTF level 15, or higher version
DAS	1.30C7 or higher
AMU	2.40 or higher

The distribution files for the VirOp software are contained within a tar archive file. The tar file consists of a *Readme* text file, the VirOp executable, a setup script, and a utils directory of scripts. Procedures are listed to extract the file on either a UNIX machine or a PC.

To extract these files from a UNIX machine, proceed as follows:

Step 1 Place the diskette in the UNIX machine.

Step 2 On the UNIX machine `/usr/local/aci` directory exist, change to the directory. If the directory does not exist, create the `/usr/local/aci` directory and change to the directory.

Step 3 Use the tar extract command **tar -xvf /dev/...** where `/dev/...` is the file name where the diskette is mounted.

To extract these files from a PC, proceed as follows:

Step 1 Place the diskette in the PC.

Step 2 Copy the file to the desired directory.

Step 3 Change to the directory.

Step 4 On the UNIX machine `/usr/local/aci` directory exist, change to the directory. If the directory does not exist, create the `/usr/local/aci` directory and change to the directory.

Step 5 On the PC, use the FTP command to put the tar file on the UNIX machine at the `/usr/local/aci` directory.

Step 6 On the UNIX machine, use the tar extract command **tar -xvf tarfile**.

Run the setup script to install and configure the VirOp software step-by-step.

If any problems are experienced which are not resolved, contact ATAC.

Setup

The setup script manages both the installation and configuration of the VirOp product. The primary options of the setup are the Install, Configure Drives and Configure Libraries. The options may be chosen in any order.

Setup uses the EDITOR environment variable to choose a comfortable editor. If this variable is not set, a prompt is provided for the editor name. To avoid this prompt, ensure that the EDITOR variable is set to a comfortable editor.

Example export EDITOR=vi

The script creates files in the `/usr/local/aci` directory structure. This normally requires root privileges, so verify that root privileges are available prior to running setup.

Install Option

The install option moves the VirOp executable to the `/usr/local/bin` directory.

Configure Drives

Normally, with ADSM, the **Define Drive** admin command is used to associate a drive name with a special file e.g., DLT3 to `/dev/mt/3`.

When the library is defined as external, this no longer holds true. After ADIC library is defined as External to ADSM, ADSM only knows the drives inside the library by their special file name. When ADSM wants to mount a volume, it requests that the mount be on any available drive. The VirOp product is task with selecting a drive and responding with the respective special file name.

The VirOp product acts as a client to the ADIC DAS product to identify drives with DAS. This requires the configuration option to map drive names to special file names. This option steps through mapping setup. The descriptive drive name in the AMU should be used as the drive name.

Any mistakes entering the drive names can be corrected by editing the prepared configuration file. When complete, the mapping is saved in the `/usr/local/aci/VirOp_drives` configuration file.

Drive Naming

If the library is used by ADSM only, the naming convention is arbitrary. When the 1 - 9 characters and alphanumeric names are selected, setting these names in the AMU (the ADIC AML controller) is required.

Adding Drives

To add drives, run this option again. The option appends the new drives to the existing drives in the configuration file.

Ensure that All Drives are Defined

Ensure that all of the drives that ADSM could possibly use are in this mapping. If a drive is missing, any mount on the drive results in a syslog message. The message indicates that the VirOp product was unable to map the drive to a special file name. In such a case, the VirOp product cannot take the drive off-line. This leaves the volume in the drive and removes it from the available pool of drives.

Drive Availability

Drives are made available to ADSM by allocating them to the External library DAS client. See Configure Libraries. This is done by using the DAS dasadmin allocd command. With the VirOp product, the mount requests from ADSM are not drive specific. The VirOp product relies on the DAS software to select an available drive for the client. A drive is only available to a client if the physical requirements of the volume are met and it is allocated to the client. Therefore, allocate the drives that ADSM will access.

Configure Libraries

Conceptually, an ADSM external library is equivalent to a DAS client. Each external library defined to ADSM must have a DAS server and DAS client name associated with it. Depending on the configuration of a DAS client, this allows an external library definition to be a partition of a library or a whole library. To support ADSM V3, a new parameter is required when configuring the library. The library eject area must be supplied.

This option allows mapping of the external library name to the DAS server name, DAS client names and library eject area. When mapping is completed, the mapping is saved in the `/usr/local/aci/VirOp_libs` configuration file.

Defaulting External Libraries to DAS Clients

As a default option, the configuration file does not have to exist or it can have some of the external libraries defined. To completely default your library mapping, do not use this option. Otherwise, use the edit session and empty the configuration file contents. For those External libraries not in the configuration file, the VirOp product takes the external library name and use it as both the DAS server and DAS client name. For this default configuration to work, the TCP host name of the OS/2 PC running the DAS and AMU and the ADSM client must have the same name as the external library.

Multiple ADSM Servers

When two or more ADSM servers are running on the same host, the same library configuration file is read by the VirOp product. It is possible to run this arrangement in either of two ways. Either define the AML as one External library to both ADSM servers or define the AML as one (or more) External libraries for each server on the host. Running as one External library allows a single pool of drives to be made available to all ADSM servers. Defining different External libraries means there must be separate pools of drives for each External library.

Update Drive Config

This option starts an edit session with the `/usr/local/aci/VirOp_drives` drive configuration file.

Update Library Config

This option starts an edit session with the `/usr/local/aci/VirOp_libs` library configuration file.

Help

This option displays the *Readme* file.

ADSM Configuration

ADSM version 2 contains a new library type; EXTERNAL. The VirOp program uses this type to integrate ADSM with the ADIC libraries.

To define a library as External, enter an ADSM client session with either system or unrestricted storage privilege. For each External library to define, use the following template:

```
Define Library external library name EXTernal LIBType=EXTernal

EXTERNALManger=/usr/local/bin/virop
```

For a defined external library, the **define drive** command can not be used to define a drive. ADSM knows the drives by their special file name. The mapping is specified in the file VirOp_drives that is responsible for using the correct AMU drive name.

To make volumes available for ADSM, use the **define volume** command or the gcheckin script of the VirOp program. Ensure that the volumes are labeled. Refer to *Label Script*.

Scratch Handling

Scratch processing is straightforward for the VirOp software. ADSM provides the scratch management and VirOp software satisfies the requests to give and return scratch volumes.

When ADSM requires a new volume for a storage pool, it requests a mount of a scratch volume. When mounted, the volume is marked as non-scratch to the AMU database and ADSM assigns the volume to the storage pool. Once all data on a volume has expired, ADSM requests that VirOp software released the volume back into the scratch pool.

The default scratch pool is used to satisfy all ADSM scratch requests. The *label* script, refer to *Label Script*, can be used with the [-s] option. This option requests that, after the ADSM label have been written to the volume, it is added back to the default scratch pool.

It is not essential to use scratch volumes with ADSM. It is possible to define volumes to each storage pool and ADSM does not request any scratch volumes while space is available.

There are three methods to define volumes to a scratch pool:

- Use the dasadmin commands.
- Use the label script with the [-s] option. Refer to *Label Script*.
- Use the gcheckin script with the [-s] option. Refer to *Gcheckin Script*.

Required DAS Configuration

There are three steps to configuring the DAS product

Step 1 Configure a client statement for the ADSM client in the DAS config files.

Step 2 Use option=(no_avc,dismount) for the option.

Step 3 Use scratchpools=((ALL)) for the scratchpool.

DRM Support

VirOp software supports DRM with shell scripts. The shell scripts perform operations for moving DRM managed volumes in and out of the ADIC library.

Shell Scripts

The following sections describe the *drmsetup*, *gcheckin*, *gcheckout*, *geject* scripts, and *ginsert* scripts.

Drmsetup Script

The *drmsetup* script creates the environment necessary for the other scripts in the DRM support. The script prompts the user for the parameter values.

Example drmsetup

Parameter	Value
ADSM Client	Indicates the ADSM administrative client name for the DRM scripts

Parameter	Value
Password	Indicates the password of this client
ADSM Client Path	Indicates the path to dsmadcm
Media	Indicates the default media type that the DRM scripts use
Eject area	Indicates the default eject area that the DRM scripts use
Insert area	Indicates the default insert area that the DRM scripts use
Storage pool	Indicates the default storage poo that the DRM scripts use
Scratch pool	Indicates the default scratch pool that the DRM scripts use
DAS Server	Indicates the DAS server of the external library
DAS Client	Indicates the DAS client of the external library
Dasadmin	Indicates the directory path location of the DAS dasadmin utility commands

Once the appropriate values are set for these parameters, allow the setup script to append them to the user's *.profile* or *.cshrc* file in the user's home directory. If the Apply option is chosen, the following scripts with the proper variable are generated by drsetup in the `utils` directory.

Gcheckin Script

The gcheckin script is the ADIC version of the ADSM checkin command. To check in volumes, place those volumes in an insert area and execute the gcheckin script. If the parameters are not supplied on the command line, the script prompts the user for the parameter values.

Example gcheckin [-i insert area] [-p storage pool] [-s]

Parameter	Value
-i	Indicates the insert area is not the default insert area established by the drmsetup script.
-p	Indicates that the volumes are added to the storage pool
-s	Indicates that the volumes are added as scratch

Once inserted, the volumes will be added to the storage pool and made available.

Gcheckout Script

The gcheckout script is the ADIC version of the ADSM checkout command. If the parameters are not supplied on the command line, the script prompts the user for the parameter values.

Example gcheckout [-v volser] [-e eject area] [-s ADSM state] [-r|-n]

Parameter	Value
-v	Indicates the volume volser
-e	Indicates the eject area
-s	Indicates the ADSM state: unavailable, offsite, destroyed

Parameter	Value
-r | -n	[-r] indicates that the volume should be removed from the library (the default condition). [-n] indicates that the volume should remain in the library

The gcheckout script makes a volume unavailable to ADSM.

Geject Script

The geject script ejects volumes from the library. If the parameters are not supplied on the command line, the script prompts the user for the parameter values.

Example geject [-e eject area] [-f input file]

Parameter	Value
-e	Indicates the eject area
-f	Indicates that the list of volumes to eject is contained in input file

The script will read the input file list for a list of volumes, otherwise it will interactively ask for the volumes to eject. Additionally, an eject area can be specified or the default area will be used.

Ginsert Script

The ginsert script aids in the insertion of volumes. If the parameters are not supplied on the command line, the script prompts the user for the following parameter values.

Example ginsert [-i insert area] [-f input file]

Parameter	Value
-i	Indicates the insert area
-f	Indicates that the list of volumes to insert is contained in input file

The script scans the input file and prints the volumes to be inserted.

Label Script

The label script automates the mounting, labeling (dsmlable is the ADSM label program) and dismounting a range of volumes. Ensure that the DAS environment variables in the label script are set correctly. If not, change the variable in the script to the appropriate value.

NOTE The command ensures a six character volume label by padding the length with the 0 character.

Example label start-number stop-number label-prefix device-name drivename [-s]

Parameter	Value
start-number	a numeric range which when used with the stop-number parameter creates a range of volumes to be labeled

Parameter	Value
stop number	must be greater than the start-number parameter value
label-prefix	a prefix for all volumes in the range
device-name	the file name of the drive where the volume should be placed and the label should be written
drivename [-s]	the DAS name for the same drive. -s indicates that after the volume is labeled, it is made scratch in the default scratch pool of its media type

Example: Label 1 35 ADS /dev/mt/0 DLT0

The example runs dsmlabel against volumes ADS001 to ADS035 on drive DLT0

The command runs the labeling against one drive. If more drives are available, run multiple copies of the *label* script using a different volume range on a different drive.

If a problem occurs during labeling, the name of the last labeled volume is kept in the file *lastlabeled_drive-name* in the current directory. Once the problem is remedied, rerun the label script started from volume named in the *lastlabeled_drive-name file*.

Using EMM commands without ADSM

A method exists to test the EMM commands without running ADSM. Follow the steps to test the EMM commands without ADSM:

Step 1 Start the VirOp software by entering the virop command in the install directory.

Step 2 Issue the EMM INITIALIZE command to initialize the library.

NOTE **Use the ADSM Administrative Guide to find the proper syntax for the EMM commands**

Step 3 Enter the desired EMM command.

ARCSERVE VirOp for Novell

This section describes the ARCSERVE VirOp software.

To run Arcserve Novell together with the VirOp a patch including two DLLs is required. This patch can be obtained by ADIC.

Concept

The Arcserve Virtual Operator (ArcVirOp) serves as a link between ARCserve 6.x (German/ English) under Novell and DAS. The task of ArcVirOp is to convert ARCserve backup and restore commands into corresponding DAS/AMU commands and dispatch them.

For this task, ArcVirOp utilizes several files (namely, *ARCH$SRV.log, ArcVirOp.cfg, Drivepool.txt, Joblist.txt,* and *Medialist.txt*), and an ACI interface to the DAS/AMU.

The file ARCH$SRV.log is an output file of ARCserve. ARCserve writes all required backup and restore commands in this file. The output is written in English or German and has a uniform structure. This structure enables ArcVirOp to recognize and evaluate backup and restore commands and convert them into corresponding ACI calls to the DAS/AMU.

A configuration file provides text patterns necessary for ArcVirOp to correctly interpret ARCserve outputs. The user can use this file (*ArcVirOp.cfg*) to exactly specify the text patterns that the program shall respond to and the location of important information required for the output conversion. These are drive and media designations and serial numbers. When ArcVirOp reads a new ARCserve output and the text does not correspond to one of the configured text patterns, the text is skipped.

ArcVirOp generates the necessary ACI calls in text form and transfers them to the DAS/AMU via the ACI interface. The ACI interface is made available to the ArcVirOp in form of a *DLL*.

Schematic Structure of the Work Environment

Refer to Figure 8-1 for the schematic structure of the work environment.

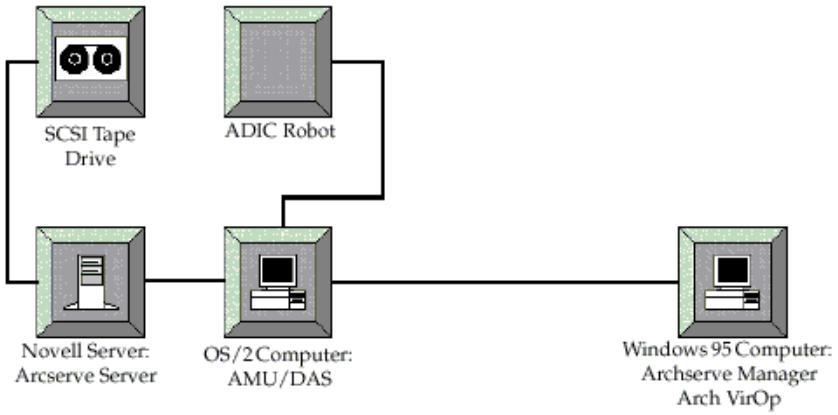


Figure 8-1 Schematic Structure of the Work Environment

Backup

When ArcVirOp recognizes a backup command, it determines the name of the device group (*DRIVE*) required for the ACI backup command from the text. In addition, ArcVirOp determines the serial number of the media following the **BACKUP** command. The required ACI command is generated using this data and transferred to the DAS/AMU via the ACI interface.

For a successful backup select the *Global Backup Options* menu. Once the menu appears, select the *Settings Menu*. From the *Settings* menu, select the *Eject Volume* option.

For a successful backup on several tapes, select the *Global Backup Option* menu. Once the menu appears, select *None* for the *Test Method* field. Otherwise, *Arcserve* does not eject tapes in the drive, and automatic operation cannot continue.

Restore

When ArcVirOp recognizes a **RESTORE** command, it determines the device group and the volume serial number from the read text string. The required ACI command is generated using this data and transferred to the DAS/AMU via the ACI interface.

Design

ArcVirOp is a WIN32 console application.

Object Diagram

The Virtual Operator has been developed and implemented in the object-oriented language C++, using the development environment Visual C++ 5.0. All Virtual Operator objects involved are explained using the following OMT diagram. Refer to Figure 8-2.

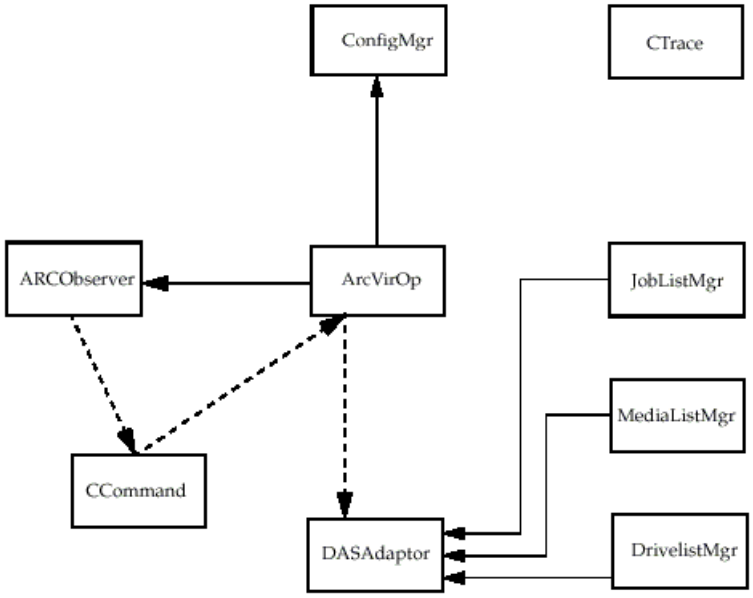


Figure 8-2 ArcVirOp Objects

The descriptions of the individual classes in the next sections emphasize the interaction between individual objects. The specific methods are essentially brief and self-explanatory and are not described in detail. However, the most important methods for the functional cohesion are listed in the sections about the classes and described briefly. For the design development, particular attention is given to the encapsulation of independent tasks in individual classes. Therefore, specifics about the structure of ACI calls and configuration files could be hidden from the actual process classes.

ArcVirOp

The class ArcVirOp is the core of the application. Only one object exists in this class. When instantiating this object, on the other hand, exactly one object is created in the class ConfigMgr, ARCObserver, and DASAdaptor. These objects are used in encapsulating specific tasks and invoked by ArcVirOp when required.

After starting ArcVirOp, the method recvCmd() of the object ARCObserver is perpetually invoked. When this method recognizes a new incoming command, it returns a corresponding newly created CCommand object. Next, the method executeCommand() of the object DASAdaptor is invoked. There, the new command is evaluated and the corresponding action performed.

ConfigMgr

The class ConfigMgr is used for managing all of the application configuration data. The entire information in the configuration file is retrieved and stored in this object. All other program objects can retrieve the required information via the access procedures of the object ConfigMgr later during the program flow.

MediaListMgr

The object MediaListMgr is responsible for the correct processing of the file Medialist. DASAdaptor creates an object in this class to read-in the file and for further managing. As required, DASAdaptor requests the next empty medium to be used via the method getNextMedia(). The object MediaListMgr persistently remembers this and, accordingly, writes the file Medialist constantly to the hard disk.

DriveListMgr

The object DriveListMgr manages the *Drivepool.txt* file.When a backup or restore instruction is recognized, the **Drivepool.txt** file is opened and the allocation of the device group drives is checked.

JobListMgr

The object JobListMgr manages current jobs. For it, the job number and the drive on which the job is executed is written to the Joblist.txt file. After the job execution, the entry is deleted from Joblist.txt. This enables DASAdaptor to dispatch specific dismount commands to the AMU.

ARCObserver

The object in this class searches in the Arcserve output file *ARCH$SRV.log* for new commands. The method recvCmd() searches in the newly written text for valid commands according to the syntax described in the configuration file. If the method finds a new command, a corresponding CCommand object is generated and returned to the caller.

DASAdaptor

The object DASAdaptor encapsulates ACI calls from the remaining program. For every newly generated command, ArcVirOpServer calls the method executeCommand() with the newly generated CCommand object. In this method, the CCommand object is evaluated, and the corresponding ACI call is executed.

Ctrace

The object Ctrace manages the log files and the corresponding entries. A current log file, ArcVirOp.log, and a log file from the previous day, *ArcVirOp.old*, is kept. Every night at 1:00 a.m., a new log file is created, and the log file that was current until that time is renamed into *ArcVirOp.old*, overwriting the existing valid *ArcVirOp.old* file.

Installation

The installation diskette contains all files required for a correct installation. In addition, the diskette also contains several DLLs that are necessary for the ArcVirOp operation. Some of these DLLs may already be located on the target computer (e.g., in the `..\WINDOWS` directory). We recommend copying the DLLs on the installation diskette into the target directory of ArcVirOp to ensure proper operation of the ArcVirOp. If the required DLLs are located in one of the system paths, ArcVirOp operation is also possible.

Installation Files

The installation diskette contains the following files:

ArcVirOp.exe	The program ”Arcserve Virtual Operator”
ArcVirOp.cfg	ArcVirOp configuration file (customization required)
Medialist.txt	Example of a media list file (customization required)
Drivepool.txt	Example of a drive list
Joblist.txt	Example of a job list
mfc42.dll	System DLL
Msvcrt.dll	System DLL
Msvcp50.dll	System DLL
Rcmd32.dll	System DLL
ACI.dll	Program DLL

Installation Procedure

Create the `x:\ArcVirOp` target directory for ArcVirOp.

Copy all files on the installation diskette into this directory (see comment above for DLL).

Copy the ACI.CMD file into the C:\OS2 directory of the AMU PC.

Customize the configuration file.

Customize *Medialist.txt*.

Customize *Drivepool.txt*.

No additional installation steps are necessary.

In order to automatically start ArcVirOp during system start, create a shortcut for *ArcVirOp.exe* in the Windows Startup folder.

Configuration

ArcVirOp is configured completely via the *ArcVirOp.cfg*, *Medialist.txt*, and *Drivepool.txt* files. These files can be edited with any editor.

Configuration Parameters

The configuration file must contain following parameters. See Table 8-2.

Table 8-2 Parameters for the Configuration File

Parameter	Description
ARCH_LOG_PATH	Path to ARCserve output file: Example: `ARCH_LOG_PATH=F:\\temp\ARCHLOG`
MEDIA_LIST_PATH	Path to the media list file. Example: `F:\\temp\MEDIALIST.TXT`
DRIVEPOOL_PATH	Path to the device group list file. Example: *Drivepool.txt*
JOB_LIST_PATH	Path to the job list file. Example: *Joblist.txt*
DAS_SERVER	DAS server name. Example: DASSERVER=AMU
DAS_CLIENT	DAS client name. Example: DASCLIENT=WIN95
ACI_MEDIA_TYPE	Name of the ACI media type used for all ACI calls. Example: 4MM
MOUNT_ERROR_ VOLSER	If an ACI **MOUNT** command fails, since the required volume is still in the drive, ArcVirOp automatically issues the **DISMOUNT** command. ArcVirOp recognizes this because of the ACI error text. This error text must be specified via this parameter. Example: mount failed the requested volser is in use.
MOUNT_ERROR_ DRIVE	If an ACI **MOUNT** command fails, since the required drive is still in use, ArcVirOp automatically issues the **DISMOUNT** command. ArcVirOp recognizes this because of the ACI error text. This error text must be specified via this parameter. Example: mount failed the requested drive is currently in use.
VOLSER_LENGTH	Length of the serial number used by the AMU
RETRY_INTERVAL	Time interval before a retry of a mount or a dismount is executed after a connect problem
RETRY_ATTEMPTS	Number of retries of a mount or a dismount after a connect problem between the ArchVirOp PC and the AMU before a backup or restore will be cancelled
[COMMAND_ SECTION]	Keyword, must be entered before specifying the backup and restore text pattern.

Table 8-2 Parameters for the Configuration File

Parameter	Description
BACKUP_ COMMAND	Keyword, the backup text pattern must be specified in the next line. Example: [%DATE] [%TIME] [%N] Please insert one of the following media in device group [%DRIVE]: The parameter [%DRIVE] is extracted from the text pattern. Generally, the other place holders are not needed, however, they must be specified.
BACKUP_ INCOMPLETE_ COMMAND	Keyword, the backup incomplete pattern must be specified in the next line. [%DATE] [%TIME] [%JOB] [%ERRORNR] job [%N} backup procedure incomplete.
RESTORE_ COMMAND	Keyword, the restore text pattern must be specified in the next line. Example: [%DATE] [%TIME] [%N] Insert medium [%S] serial number [%MEDIA] number [%N] from media DEFAULT in device group [%DRIVE]. The parameters [%MEDIA] and [%DRIVE] are extracted from the text pattern. Generally, the other place holders are not needed, however, they must be specified.
BACKUP_READY_ COMMAND	Keyword, the backup ready text pattern must be specified in the next line. Example: [%DATE] [%TIME] [%JOBNR] job [%N] backup was performed.
BACKUP_ABORT_ COMMAND	Keyword, the backup abort text pattern must be specified in the next line. [%DATE] [%TIME] [%JOBNR] [%ERRORNR] job [%N] backup procedure was aborted.
RESTORE_READY_ COMMAND	Keyword, the restore ready text pattern must be specified in the next line. [%DATE] [%TIME] [%JOBNR] job [%N] restore was performed.
RESTORE_ABORT_ COMMAND	Keyword, the restore abort text pattern must be specified in the next line. [%DATE] [%TIME] [%JOBNR] job [%N] restore was aborted.
BACKUP_STOPPED_ COMMAND	Keyword, the backup stopped text pattern must be specified in the next line. [%DATE] [%TIME] [%JOBNR] [%ERRORNR] job [%N] restore not finished.

Example File ArcVirOp.cfg

Below is an example of the *ArcVirOp.cfg* file.

```
// Path
ARCH_LOG_PATH=G:\ARCSERVE.6\ARCH$SVR.LOG
```

```
MEDIA_LIST_PATH=MEDIALIST.TXT
DRIVEPOOL_PATH=DRIVEPOOL.TXT
JOB_LIST_PATH=JOBLIST.TXT
// DAS
DAS_SERVER=TOWER
DAS_CLIENT=WIN95
ACI_MEDIA_TYPE=4mm
MOUNT_ERROR_VOLSER=mount failed: The requested volser is in use
MOUNT_ERROR_DRIVE=mount failed: The requested drive is currently
in use
// EXTRA
VOLSER_LENGTH=6
RETRY_INTERVALL=5
RETRY_ATTEMPT=180
//Definition of the formats for individual commands
[COMMAND_SECTION]
BACKUP_COMMAND
[%DATE] [%TIME] [%JOBNR] Please insert one of the following media
in device group [%DRIVE]:
RESTORE_COMMAND
[%DATE] [%TIME] [%JOBNR] Insert medium [%S] serial number
[%MEDIA] number [%N] from media DEFAULT in device group [%DRIVE].
BACKUP_READY_COMMAND
[%DATE] [%TIME] [%JOBNR] job [%N] backup was performed.
BACKUP_ABORT_COMMAND
[%DATE] [%TIME] [%JOBNR]  [%ERRORNR] job [%N] backup procedure
was aborted.
BACKUP_INCOMPLETE_COMMAND
[%DATE] [%TIME] [%JOBNR] job [%N] backup procedure incomplete
RESTORE_READY_COMMAND
[%DATE] [%TIME] [%JOBNR] job [%N] restore was performed.
RESTORE_ABORT_COMMAND
[%DATE] [%TIME] [%JOBNR]  [%ERRORNR] job [%N] restore procedure
was aborted.
RESTORE_STOPPED_COMMAND
[%DATE] [%TIME] [%JOBNR] [%ERRORNR] job [%N] restore not finished
```

For proper ArcVirOp operation, all configuration parameters must be parameterized correctly.

Example File Medialist.txt

Serial numbers of empty tapes should be entered in Medialist.txt. When Arcserve requests an empty tape, ArcVirOp always tries to read a serial number from the Medialist.txt file.

The length of the serial number must correspond to the specified VOLSER_LENGTH.

VOLSER_LENGTH=6

For example:

```
185004
185005
```

```
185006
185007
185008
185009
185010
```

Example File Drivelist.txt

This file must be edited by the user when device groups with several drives are created in Arcserve.

```
<Device group>=<DriveA> <DriveB> <DriveC>
DRVP_01=D01
DRVP_02=DO2
D01=D01 D02 D03
HUGO=D01 D02 D03
OTTO=D04 D05 D06
D01=D01
```

Example File Config of the DAS Server on the AMU Controller (OS/2 Computer)

Essentially, ArcVirOp is a DAS client that is connected to the DAS server via an ACI with a remote shell mechanism.

```
client client_name = AMUCLINET,
            hostname = AMU,
            request = complete,
            volumes = ((ALL)),
            drives = ((ALL)),
            inserts = ((ALL)),
            ejects = ((ALL)),
            scratchpools = ((ALL))

client client_name = WIN95,
            hostname = AMU,
            requests = complete,
            options = (avc, dismount),
            volumes = ((ALL)),
            drives = ((ALL)),
            ejects = ((ALL)),
            scratchpools = ((ALL))
```

Start-up

After ArcVirOp is installed successfully and configured correctly, the program can be started. The program can be started via the command line or via the graphical user interface.

ArcVirOp can be started with the **-d** (”debug”) option. With this option, ArcVirOp outputs all traces onto the screen.

Sequence of Operations

A normal sequence of operation is as stated.

- DAS/AMU is started
- ARC/SERV is started
- ArcVirOp is started

Error, Warnings and Information

The following section contains information on errors, warnings and information that is written into the log file and/or displayed on the monitor.

Message Construction

```
<(message type):(message number)> (message text)
```

Message Type

The types of messages fall into three categories:

- I : Information
- W : Warning
- E: Error

Messages

The following list of messages apply.

```
<I:1000> Main:: -> in
<I:1001> Main::Initialization
<I:1002> Main::Read configuration
<I:1003> Main::Initialization ready
<I:1004> Main::Waiting for commands ...
<I:1005> Main::Exit

<E:1000> Main::Abnormal program termination.

<I:2000> ARCObserver::recvCmd: -> in
<I:2001> ARCObserver::recvCmd: %d Bytes new
<I:2002> ARCObserver::recvCmd: No bytes to receive
<I:2003> ARCObserver::recvCmd: <- out - (%x)
<I:2004> ARCObserver::parseCommand: -> in
<I:2005> ARCObserver::parseCommand: <- out - (%#x) - _eofPos (%x)
<I:2006> ARCObserver::checkCommandList: -> in
<I:2007> ARCObserver::checkCommandList: LIST[%d]: %s <-> %s
<I:2008> ARCObserver::checkCommandList: <- out
<I:2009> ARCObserver::compareWords: -> in
<I:2010> ARCObserver::compareWords: <- out
<I:2011> ARCObserver::checkFile: -> in
<I:2012> ARCObserver::checkFile: <- out - (%l)
<I:2013> ARCObserver::scanBackupMedia: -> in
<I:2014> ARCObserver::scanBackupMedia -> fgets %s
```

```
<I:2015> ARCObserver::scanBackupMedia: -> sscanf nScanNumber %d
nMediaNumber %d Point %c Media %s Serial %s Pool %s Num %
<I:2016> ARCObserver::scanBackupMedia: -> szSerial %s
<I:2017> ARCObserver::scanBackupMedia: -> end of mediatable Before %l
Act %l Delta %l
<I:2018> ARCObserver::scanBackupMedia: -> fseek %l
<I:2019> ARCObserver::scanBackupMedia: -> lPosAct %l
<I:2020> ARCObserver::scanBackupMedia: <- out - Media found %d

<E:2000> ARCObserver::checkFile: Error by checkFile()

<I:3000> ConfigMgr::update: -> in
<I:3001> ConfigMgr::update: <- out - %d
<I:3002> ConfigMgr::parseConfigFile: -> in - File %s
<I:3003> ConfigMgr::parseConfigFile: <- out
<I:3004> ConfigMgr::parseConfigFile:
<I:3005> ConfigMgr::parseConfigFile: ARCH_LOG_PATH=%s
<I:3006> ConfigMgr::parseConfigFile: MEDIA_LIST_PATH=%s
<I:3007> ConfigMgr::parseConfigFile: DRIVEPOOL_PATH=%s
<I:3008> ConfigMgr::parseConfigFile: JOB_LIST_PATH=%s
<I:3009> ConfigMgr::parseConfigFile: DAS_SERVER=%s
<I:3010> ConfigMgr::parseConfigFile: DAS_CLIENT=%s
<I:3011> ConfigMgr::parseConfigFile: ACI_MEDIA_TYPE=%s
<I:3012> ConfigMgr::parseConfigFile: MOUNT_ERROR_VOLSER=%s
<I:3013> ConfigMgr::parseConfigFile: MOUNT_ERROR_DRIVE=%s
<I:3014> ConfigMgr::parseConfigFile: VOLSER_LENGTH=%d
<I:3015> ConfigMgr::parseConfigFile: <- out
<I:3016> ConfigMgr::buildCommandList: -> in
<I:3017> ConfigMgr::buildCommandList: BACKUP_COMMAND found
<I:3018> ConfigMgr::buildCommandList:RESTORE_COMMAND found
<I:3019> ConfigMgr::buildCommandList: BACKUP_READY_COMMAND found
<I:3020> ConfigMgr::buildCommandList: BACKUP_ABORT_COMMAND found
<I:3021> ConfigMgr::buildCommandList: RESTORE_READY_COMMAND found
<I:3022> ConfigMgr::buildCommandList: RESTORE_ABORT_COMMAND found
<I:3023> ConfigMgr::buildCommandList <- out

<E:3000> ConfigMgr::parseConfigFile: ConfigFile %s could not be opened

<I:4000> DASAdaptor::executeCommand: -> in
<I:4001> DASAdaptor::executeCommand: <- out - rc %d
<I:4002> DASAdaptor::executeBackup: -> in
<I:4003> DASAdaptor::executeBackup: try Media %s
<I:4004> DASAdaptor::executeBackup: Media is BLANK try MediaList.txt
<I:4005> DASAdaptor::executeBackup: try Drive %s
<I:4006> DASAdaptor::executeBackup: <- out - rc %d

<W:4000> DASAdaptor::executeCommand: -> wrong command identifier
<W:4001> DASAdaptor::executeBackup: Volser %s is in use! Retry with
another Volser.
<W:4002> DASAdaptor::executeBackup: no Blankmedia in Medialist.txt
<W:4003> DASAdaptor::executeBackup: Volser %s is in use! Retry with
another Volser.
<W:4004> DASAdaptor::executeBackup -> Drive %s is in use.
<W:4005> DASAdaptor::executeBackup: Dismount failed: <%d> - <%s>
```

```
<W:4006> DASAdaptor::executeBackup: Mount failed: <%d> - <%s>
<W:4007> DASAdaptor::executeBackup: Drivepool %s is not in Drivepool.txt
<W:4008> DASAdaptor::executeBackup: Retry Attempts = %d of %d

<E:4005> DASAdaptor::executeBackup: Backup Abort from ArcVirOp <%d>

<I:4007> DASAdaptor::executeRestore: -> in
<I:4008> DASAdaptor::executeRestore: try Drive %s
<I:4009> DASAdaptor::executeRestore: out - rc %d

<W:4008> DASAdaptor::executeRestore: Volser %s is in use.
<W:4009> DASAdaptor::executeRestore: Dismount failed: <%d> - <%s>
<W:4010> DASAdaptor::executeRestore: Mount failed: <%d> - <%s>
<W:4011> DASAdaptor::executeRestore: Drive %s is in use.
<W:4012> DASAdaptor::executeRestore: Dismount failed: <%d> - <%s>
<W:4013> DASAdaptor::executeRestore: Mount failed: <%d> - <%s>
<W:4014> DASAdaptor::executeRestore: Drivepool %s is not in
Drivepool.txt
<W:4015> DASAdaptor::executeRestore: Retry Attempts = %d of %d"

<E:4001> DASAdaptor::executeRestore: Restore Abort from ArcVirOp <%d>

<I:4010> DASAdaptor::executeBackupEnd: -> in
<I:4011> DASAdaptor::executeBackupEnd: <- out

<W:4015> DASAdaptor::executeBackupEnd: Job %d is not in Joblist.txt!

<I:4012> DASAdaptor::executeRestoreEnd: -> in
<I:4014> DASAdaptor::executeRestoreEnd: <- out - rc %d

<W:4016> DASAdaptor::executeRestoreEnd: Job %d is not in Joblist.txt!

<I:4015> DASAdaptor::executeAciCall: -> in, Command %s
<I:4016> DASAdaptor::executeAciCall: %s,%s,%s,%s
<I:4017> DASAdaptor::executeAciCall: aci_call success: %s
<I:4017> DASAdaptor::executeAciCall: <- out - rc %d - %s

<W:4017> DASAdaptor::executeAciCall: Error by aci_call: -1 - %s

<E:4001> DASAdaptor::executeAciCall: Error by aci_call: -2 - %s
<E:4002> DASAdaptor::executeAciCall: Error by aci_call: -3 - connection
problem
<E:4003> DASAdaptor::executeAciCall: Error by aci_call: -4 - syntax
failure
<E:4004> DASAdaptor::executeAciCall: Error by aci_call: %d - %s

<I:5000> DriveListMgr::checkDrivePool: -> in - Pool %s File %s
<I:5001> DriveListMgr::checkDrivePool: check %s
<I:5002> DriveListMgr::checkDrivePool: <- out - Found drives %s

<W:5000> DriveListMgr::checkDrivePool: Drivepool %s is not in
Drivepool.txt

<I:5003> DriveListMgr::readDriveList: -> in
```

```
<I:5004> DriveListMgr::readDriveList: Drivepool %s
<I:5005> DriveListMgr::readDriveList: -> out - rc %d

<W:5001> DriveListMgr::readDriveList: no valid Drivepool %s

<E:5000> DriveListMgr::readDriveList: fopen

<I:6000> JobListMgr::addJob: -> in - File %s jobNumber %d DriveName %s
<I:6001> JobListMgr::addJob: <- out
<I:6002> JobListMgr::removeJob: -> in - File %s jobNumber %d
<I:6003> JobListMgr::removeJob: check %d
<I:6004> JobListMgr::removeJob: <- out - sJobComment %s
<I:6005> JobListMgr::readJobList: -> in
<I:6006> JobListMgr::readJobList: job %s
<I:6007> JobListMgr::readJobList: <- out - rc %d

<E:6000> JobListMgr::readJobList: fopen

<I:6008> JobListMgr::writeJobList: -> in
<I:6009> JobListMgr::writeJobList: <- out - rc %d

<E:6001> JobListMgr::writeJobList: fopen

<I:7000> MediaListMgr::getNextMedia: -> in - File %s
<I:7000> MediaListMgr::getNextMedia: <- out - media %s
<I:7002> MediaListMgr::readMediaList: -> in
<I:7003> MediaListMgr::readMediaList: <- out - rc %d

<E:7000> MediaListMgr::readMediaList: fopen

<I:7003> MediaListMgr::writeMediaList: -> in
<I:7004> MediaListMgr::writeMediaList: <- out - rc %d

<E:7001> MediaListMgr::writeMediaList: fopen
```

Networker NT

This section describes the Networker NT.

Installation

For a detailed description, refer to the Networker Administration Guide.

Step 1 Install DAS and ACI

Step 2 Configure DAS and ACI

Step 3 Start the AMU and the DAS-Server

Step 4 Check the connection from ACI to DAS. This can be done by sending **dasadmin qversion**.

Step 5 Allocate the drives for the NT clients (**dasadmin allocd Drive UP clientname**)

Step 6 Install Networker as it is described in the Networker documentation

Configuration

Be sure that the SCSI-connections to the drive are correct. The number of devices that can be supported from the networker depends on the networker server configuration.

Step 1 Define the media type in the environment variable DAS_MEDIUM at Control Panel/ System/Environment.

Step 2 Add an ADIC Silo library to the Networker

- Change to the networker installation directory\nsr\bin directory
- Type jbconfig
- choose a STL Silo library as jukebox and SAS Silo types. Be sure that you know the hostname where the DAS-Server is running and where the STL-library (libstlemass.dll) is placed. Also be sure that you know the pathname of the devices (you can see this by typing inquire in the same directory) and the name of the devices used from AMU.

Step 3 Add volumes to Networker with the nsrjb-a-T 000/001-999 command. This is an example for a range from 000001 to 000999. Only the volsers exist in the library will be added.

Step 4 Define pools regarding the storage strategy

Step 5 Label volumes for defined pools

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ACI Firewall

Overview

This chapter describes the using of DAS/ACI version with firewall support.

DAS ACI Firewall

A DAS/ACI version with the firewall support can be used when DAS server resides behind firewall and ACI clients reside in front of firewall. Standard DAS/ACI version will not work because it uses RPC as default transport layer and RPC chooses to open TCP ports by itself in some range.

In firewall version of DAS/ACI only one configurable TCP port will be used, so firewall system can be tuned to allow data transfer via this port.

Configuring server (behind firewall)

There is an additional "aciwrapp.exe" program. It must be run on OS/2 computer behind firewall (it can be run on computer with DAS/2). It is recommended to run this program from startup.cmd to automatic startup.

Aciwrapp.exe uses the following environment variables:

- DAS_PORT (e.g. *DAS_PORT=4500*). This is a TCP port number. This port should be open on firewall. Aciwrapp.exe will receive and send data via this TCP port.
- DAS_SERVER (e.g. *DAS_SERVER=localhost*). This is a network name of computer where DAS/2 is running. If you use the same computer for DAS/2 then you can use '*localhost*' as value for this variable. You can use symbolic or numeric form of IP-address.

If you use separate computer for Aciwrapp.exe you must ensure that it has a running portmapper.

Configuring client

For clients you must use *aci_fw.dll* (and *.lib*) files instead of *aci.dll*. You need to recompile your program(s) with new *aci_fw.lib* to ensure proper behavour. You need not to change your source code, only relink with *aci_fw.lib*.

The client computer must have the following environment variables:

- DAS_SERVER (e.g. *DAS_SERVER=das2.bigcompany.com*). This is an address of computer where Aciwrapp.exe is running.
- DAS_PORT (e.g. *DAS_PORT=4500*). This is a TCP port number. This value must be the same as DAS_PORT on computer with running *Aciwrapp.exe*.

You should also use *dasadmin_fw.exe* instead of *dasadmin.exe* to use it functionality.

Configuring DAS

In DAS configuration file (*config*) you also should change *ip_address* or *hostname* values for clients which use firewall. The request from these clients will go rather from *aciwrapp* program then directly. So you should change this value to the address of computer with running aciwrapp (typically *localhost*).

Simple configuration scenario (TCP port 4500 is used)

On OS/2 computer you should:

Step 1 add "`start /c aciwrapp`" in *DasStart.cmd* file (or *startup.cmd*)

Step 2 add (or change) environment variables (in CONFIG.SYS)

- SET DAS_SERVER=localhost
- SET DAS_PORT=4500

Step 3 check *das\etc\config* file and for each firewall client alter host_name with 'localhost'

For each client you should:

Step 1 add (or change) environment variables

- set DAS_SERVER=<ip-address or name of DAS computer>
- set DAS_PORT=4500

Step 2 Relink client program with *aci_fw.lib* instead of *aci.lib*

Use *dasadmin_fw* instead of *dasadmin* (in script files) or copy dynamic library *aci_fw.dll* over *aci.dll* (program don't need to be relinked, this way can be used only with dynamic library, not static one); copy *dasadmin_fw* over dasadmin and use old scripts

On the firewall you should:

Step 1 Open TCP port 4500 for external access.

A

Application Notes

Overview

This appendix includes notes on the applications, information on media types, and DAS configuration.

Applications

This section gives instructions for the configuration of certain applications.

Omniback

Omniback is supplied by Hewlett Packard for the following operating systems:

- HP-UX 9.x
- HP-UX 10.x

Directory Path and Link

Before setting links, check the versions of the files previously installed.

The following links are required for Omniback with DAS. See Table A-1 .

Table A-1 Links Required for Omniback with DAS

HP-UX version	Original path	Linked path
9.x	`/usr/local/aci/lib/libaci.sl`	`/usr/omni/lib/libaci.sl`
10.x		`/opt/omni/lib/libaci.sl`
9.x, 10.x	`/usr/local/aci/admin/dasadmin`	`/usr/local/das/admin/mm`

WARNING Use the ln -s <original path> <linked path> command to set up the symbolic link. Check the new link with the command ls -l.

Environment Variables

The environment variables for Omniback are set in the following files. See Table 1-2 .

Table 1-2 Pathname by OS Version

HP-UX version	Path and Filename
9.x	`/usr/omni/.omnirc`
10.x	`/opt/omni/.omnirc`

Here are the variables definitions:

DAS_SERVER=TCP/IP Hostname AMU-PC

DAS_CLIENT=Variable def.in DAS-Server file CONFIG

Drives

The names of the drives in the Omniback configuration must match the assignments in the config file and the description in the graphical AMU configuration. For each drive is the configuration of a client in DAS necessary. Refer to Figure A-1 .

Options for file config: options = (no_avc,dismount)

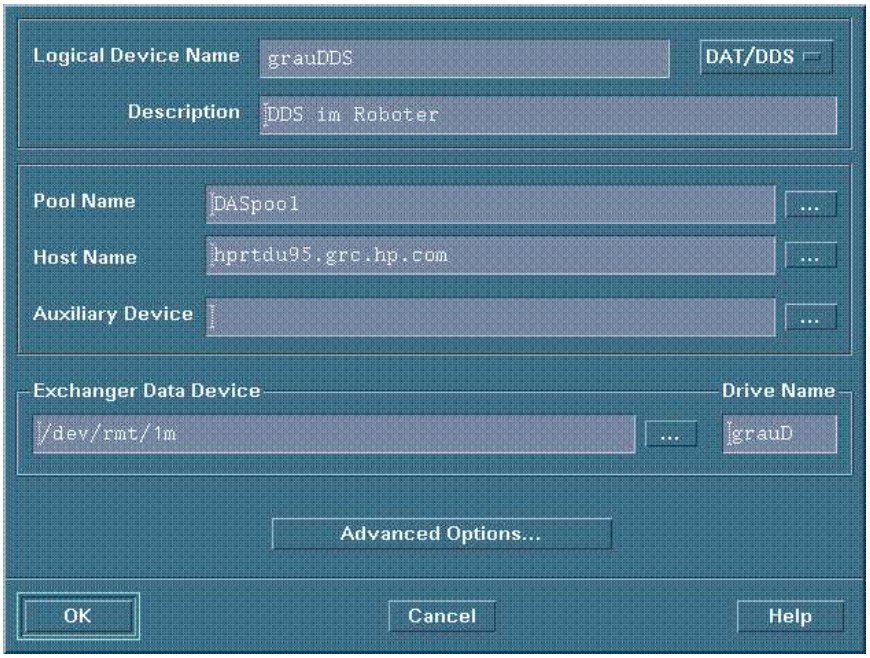

Figure A-1 Omniback Jukebox Configuration Window

Logical Ranges of the I/O unit

Access to the I/O unit for Omniback is defined in the file, see See Table 1-3 .

Table 1-3 Pathname by OS Version

HP-UX version	Path and Filename
9.x	/usr/omni/config/options/global
10.x	/etc/opt/omni/options/global

Here is an example of logical ranges definition:

DASCaps = “E01 I01“

The coordinates ranges for the Logical Ranges are specified in the AMU graphical configuration. Refer to the *AMU Reference Manua*l.

Networker

For the Clientname (Variable of the DAS Software) must be used the TCP/IP hostname. See Figure 1-2 .

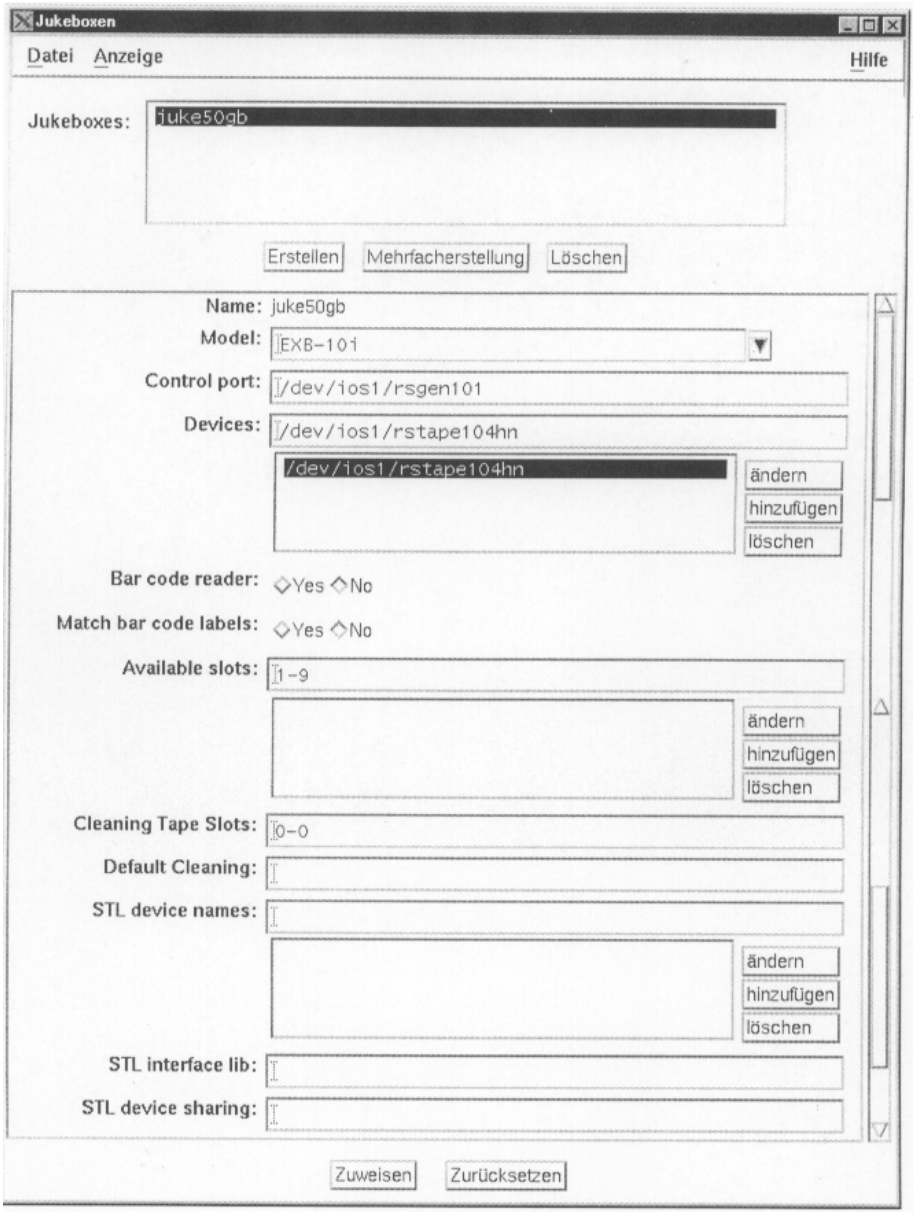

Figure 1-2 Networker Jukebox Configuration

ArcServ for Novell

Options for file *config* options = (no_avc,no_dismount)

Windows-Clients (Remote Shell)

Hostname and ip-address are not used in the Windows PC. The AMU hostname and IP-address must be used.

Media Types

See Table 1-4 for a list of supported media types.

Table 1-4 Supported Media Types

Type	Description	AMU	DAS Type
3480	1/2 inch Tape (different length available)	C0	3480
3490	1/2 inch Tape (different length available)	C0	3480
SD-3	1/2 inch Tape (STK-Redwood)	C0	3480
3490 E	1/2 inch Tape	C0	3480
3490E D-3	1/2 inch Tape (STK-Redwood)	C0	3490
DLT CompacTape-III	Digital Linear Tape	C1	DECDLT
DLT CompacTape-IV	Digital Linear Tape	C1	DECDLT
DLT Tape III XT	Digital Linear Tape	C1	DECDLT
DLT / SDLT	Digital Linear Tape	C1	DECDLT
3590	1/2 inch Tape (NTP - New Tape Product)	C2	3590
LTO	LTO Ultrium	C3	LTO
CD-Caddy	CD with enclosure	C6	CD
OD-R	Optical Disk 5 1/2	O0	OD-Thin
OD-512	Optical Disk 5 1/2	O1	OD-Thick
VHS	Video Home Service	V0	VHS
S-VHS	Super - Video Home Service	V0	VHS
8MM	8 mm Tape (different lengths available)	V1	8MM
8MM-54M	8 mm Tape 54 minutes	V1	8MM
8MM-112M	8 mm Tape 112 minutes	V1	8MM
8MM-160M	8 mm Tape 160 minutes	V1	8MM
Sony AIT	8 mm Tape (different lengths available)	V1	SONY_AIT
Sony AIT III	8 mm Tape (different lengths available)	V1	SONY_AIT
4MM-60M	Digital Audio Tape (DAT)	V2	4MM
4MM-90M	Digital Audio Tape (DAT)	V2	4MM
4MM-120M	Digital Audio Tape (DAT)	V2	4MM
4MM-125M	Digital Audio Tape (DAT)	V2	4MM
D1-S	D1 small tape	V3	D2
D2-S	D2 small tape	V3	D2

Table 1-4 Supported Media Types

Type	Description	AMU	DAS Type
D1-M	D1 medium tape	V4	D2
D2-M	D2 medium tape	V4	D2
DTF-S	DTF-Small tape, (Digital Tape)	V6	DTF
DTF-L	DTF-Large tape, (Digital Tape Format)	V7	DTF
BetaCAM-Small	Analog Tape Format	V8	BETACAM
Digital BetaCAM-Small	Digital Tape Format (like DTF-S)	V8	BETACAM
BetaCAM-Large	Analog Tape Format	V9	BETACAML
Digital BetaCAM-Large	Digital Tape Format (like DTF-L)	V9	BETACAML
DVCL	DVD	VB	DVCL
DVCM	DVD	VB	DVCM

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