



The ADIC Distributed AML Server

Release Notes

Version 3.12

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Contents

Requirements	5
Updates	8
Update from UNIX Server DAS 1.x	8
Update from UNIX Server DAS 1.2x	8
Update from OS/2 Server DAS 1.30x	8
Update from OS/2 Server DAS 3.01	8
Update from OS/2 Server DAS 3.02	8
DAS Installation and Configuration	9
DAS Server Installation	9
DAS Server Configuration	9
ACI Installation	10
ACI Configuration	10
DAS/ACI New Features	10
Version 3.12	10
Version 3.11	12
Version 3.10E	14
Version 3.10A	15
Version 3.02	15
Version 3.01	16
DAS 3.01.2 Fixpack	18
Corrections and Resolved Issues	19
Version 3.12	19
Version 3.11	20
Version 3.10E	20
Version 3.10A	21
Version 3.02	22
Version 3.01	23
Generic DAS Server Changes	23
Generic ACI Changes	23
Addressed Problem Logs	23
Addressed Change Requests	23

Known Issues 24

Release Notes

This release note covers the Version 3.12 release of the DAS software. For questions about any of these notes, call the ADIC Technical Assistance Center at the appropriate number:

USA 00-827-3822
Europe/Africa 00-800-9999-3822

Requirements

The diskette of this DAS server and client version contains a complete version of DAS V3.1, and replaces previously installed versions of DAS software.

Three diskettes are delivered with this version. One contains the OS/2 DAS Server and the OS/2 DAS client, and the other two contain the clients (ACI) for UNIX or NT platforms.

The following releases are required:

Table 1 Hardware/Software Requirements

Hardware/Software	Version
Processor	Intel compatible 350 MHz or higher
Memory	64 MB or more
IBM OS/2	OS/2 Warp 4.0 with FP 15 or higher
IBM MPTS	ver. 6.0 or higher
IBM TCP/IP for OS/2	ver. 4.3.1 or higher
IBM DATABASE 2	DB/2 7.0.1 or higher
AMU	3.12

Client interfaces from earlier ACI revision levels are also maintained and supported. See Table 2 for a list of all platforms ACI 3.1 can run on.

Table 2 Platforms for ACI 3.1

Platform	Version	Bits
Compaq Tru64	4.0 (static)	64 bit
Compaq Tru64	4.0 (dynamic)	64 bit
Compaq Tru64	5.1 (static)	64 bit
Compaq Tru64	5.1 (dynamic)	64 bit
Compaq Tru64	5.1a (static)	64 bit
Compaq Tru64	5.1a (dynamic)	64 bit
HP UNIX	10.20 700 (static)	32 bit
HP UNIX	10.20 700 (dynamic)	32 bit
HP UNIX	10.20 800 (static)	32 bit
HP UNIX	10.20 800 (dynamic)	32 bit
HP UNIX	11 (+z)	32 bit
HP UNIX	11 (static)	32 bit
HP UNIX	11 dynamic	32 bit

Table 2 Platforms for ACI 3.1

Platform	Version	Bits
HP UNIX	11 (static)	64 bit
HP UNIX	11 (dynamic)	64 bit
HP UNIX	11i (static)	32 bit
HP UNIX	11i (dynamic)	32 bit
HP UNIX	11i (static)	64 bit
HP UNIX	11i (dynamic)	64 bit
IBM AIX	4.3.3 (static)	32 bit
IBM AIX	4.3.3 (dynamic)	32 bit
IBM AIX	5.1 (static)	32 bit
IBM AIX	5.1 (dynamic)	32 bit
Linux Red Hat	6.2 (static)	32 bit
Linux Red Hat	6.2 (dynamic)	32 bit
Microsoft Windows NT / Windows 2000	4.0 dll	
OS/2 Warp Connect	3.0, 4.0	
SGI IRIX	6.2 (static)	32 bit
SGI IRIX	6.2 (dynamic)	32 bit
SGI IRIX	6.2 (static)	64 bit
SGI IRIX	6.2 (dynamic)	64 bit
SGI IRIX	6.5 old (static)	32 bit
SGI IRIX	6.5 old (dynamic)	32 bit
SGI IRIX	6.5 new (static)	32 bit
SGI IRIX	6.5 new (dynamic)	32 bit
SGI IRIX	6.5 (static)	64 bit
SGI IRIX	6.5 (dynamic)	64 bit
Sun Solaris	7 (static)	32 bit
Sun Solaris	7 (dynamic)	32 bit
Sun Solaris	7 (static)	64 bit
Sun Solaris	7 (dynamic)	64 bit
Sun Solaris	8 (static)	32 bit
Sun Solaris	8 (dynamic)	32 bit
Sun Solaris	8 (static)	64 bit
Sun Solaris	8 (dynamic)	64 bit
Sun Solaris	9 (static)	32 bit
Sun Solaris	9 (shared)	32 bit
Sun Solaris	9 (static)	64 bit
Sun Solaris	9 (shared)	64 bit

See Table 3 for a list of supported media types.

Table 3 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
3490 E	1/2 inch Tape	C0	3480
NCTP	1/2 inch Tape (Philip new compatible tape product)	C0	3480
SD-3	1/2 inch Tape (STK-Redwood)	C0	3480
STK-Eagle	1/2 inch Tape (STK-Eagle)	C0	3480
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
3590 E	1/2 inch Tape 3590 Condor, double capacity	C2	3590
LTO 1	LTO Ultrium L1	C3	LTO
LTO 2	LTO Ultrium L2	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
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

Table 3 Supported Media Types

Type	Description	AMU	DAS Type
Digital BetaCAM-Large	Digital Tape Format (like DTF-L)	V9	BETACAML
DVCL	DVD	VB	DVCL
DVCM	DVD	VB	DVCM

Updates

Updating any of these products should be performed by authorized and trained personnel.

Update from UNIX Server DAS 1.x

The update from UNIX DAS 1.x to DAS/2 3.1 should be performed by trained customer personnel. The update requires that the UNIX host DAS server is replaced with OS/2 DAS server software (AMU controller). AMU configuration changes, as well as client DAS_SERVER environment variable changes, are necessary. The AMU configured DAS host is no longer required.

Update from UNIX Server DAS 1.2x

The update from UNIX DAS 1.2x to DAS/2 3.1 should be performed by trained customer personnel. The update requires AMU configuration changes. The AMU configured DAS host is no longer required.

Update from OS/2 Server DAS 1.30x

The update from UNIX DAS 1.30x to DAS/2 3.1 should be performed by trained customer personnel. The update does not require AMU configuration changes.

Update from OS/2 Server DAS 3.01

The update from UNIX DAS 3.01 to DAS/2 3.1 should be performed by trained customer personnel. The update does not require AMU configuration changes.

Update from OS/2 Server DAS 3.02

The update from UNIX DAS 3.02 to DAS/2 3.1 should be performed by trained customer personnel. The update does not require AMU configuration changes.

DAS Installation and Configuration

Installation and configuration of the DAS products should be performed by authorized and trained personnel.

DAS Server Installation

Perform the following steps to install DAS:

- Step 1** Press <Ctrl>+<TAB> to determine if the DAS Server is running.
- The task list appears. If DAS is running, stop all operations via DAS commands.*
- Step 2** Open an OS/2-window and change the destination directory `c:\das\bin`. Type `cd c:\das\bin` then <ENTER>
- Step 3** Stop the DAS Server by typing `dasadmin shutdown`.
- Step 4** Insert the DAS diskette into drive A: of the AMU computer.
- Step 5** Change to drive A:. Type `A:` then <ENTER>
- Step 6** Type `dasfinst` then <ENTER>
- Step 7** Decide which feature of the installation program to install. Type the corresponding installation option number.
- Step 8** Follow the instructions of the installation program.

If DAS is being updated, do not reboot the PC or re-configure DAS

For a new installation, continue with the DAS Server Configuration and then reboot the PC.

DAS Server Configuration

For more detailed information about DAS, refer to the *DAS Administration Guide*. Follow the steps for the DAS Server configuration.

- Step 1** For DUAL DAS, the environment variable `DAS_SERVER` must be specified with the hostname or IP-address from one of the AMU-PC and, separated by a comma, the hostname or IP-address from the other AMU-PC.

Example: DAS_SERVER=activehostname, passivehostname,

— or —

DAS_SERVER=passivehostname, activehostname

- Step 2** Ensure that the hostnames from the DAS Server and DAS Clients are set in the hosts file.
- Step 3** Configure the *clientstatements* in the DAS *config* file.
- Step 4** If necessary, configure the drive to volser attachments in the DAS config file.

It is possible to configure in the DAS configuration file a relation between drives and volsers. For each drive that needs an attachment, a DriveToVol statement must be configured. This means that only the specified volsers can be mounted into drive Drive1

When no relation for a drive in the configuration file exists, each volume of the correct type can be mounted into the drive.

The statement is optional.

Step 5 If using DUALDAS, ensure that the port 5000 is not being used by another application. If the port is in use, change the port in the Server statement of the DAS config file.

ACI Installation

Perform the following steps to install ACI on the UNIX platforms.

Step 1 Copy the ACI tar file in the directory c:\das of the AMU PC

Step 2 Copy the tar file to the client host using FTP.

Step 3 Unpack the tar file using telnet or directly at the UNIX host

ACI Configuration

- Set the environment variable DAS_SERVER correctly. If using DUALDAS, the variable contains both DAS Server
- Set the DAS_CLIENT environment variable correctly
- Set the ACI_MEDIA_TYPE environment variable correctly.

DAS/ACI New Features

The newest additions to the DAS/ACI software are described in this section.

Version 3.12

 **CAUTION:** DAS 3.12 is required for AMU 3.12.

The following is a list of new features in this release of the DAS/ACI.

Long drive names support

Now the drive can have name up to 30 characters. The most functions (like aci_mount, aci_dismount) will work properly if they provided with long name. However some functions were added when basic function doesn't support long names. Here is the list of such functions:

- aci_drivestatus5
- aci_list3
- aci_getvolsertodrive2
- aci_typelist2

New commands

hosttype	displays information about connected host software type (AMU or Scalar DLC).
list3	displays information about all commands in the DAS command queue. The list3 command supports long drive names. The commands for one client only are displayed.
listd5	displays information about status of one or all drives. This command was introduced to support long drive names and show drive pause mode.
listv2	queries ownership of the volser. It supersedes the command listv (removed limitation in 50 output records and added one extra parameter for volser).
rpctest	performs quick checking of running portmapper.
typelist2	shows all drives with matching media type. This command was introduced to support long drive names.
viewc	view current information for the specified coordinate from the AMU/Scalar DLC database. This command returns the information about only one coordinate per time, but it returns also 'next-coordinate' reference so it can be used to cycle through all available coordinates.

Command enhancements

inventory, partinventory	Now these commands need explicit option to run. See DAS Administration Guide for details.
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Naming enhancements

- now it's possible to use volsers with first '*'.
- now it's possible to use underscore symbol ('_') in pool names.

Timeout improvements

ACI_TIMEOUT_MOVE	optional for ACI	Time for the ACI to wait for the response to the commands mount, dismount, unload. Default: 1920 seconds
ACI_TIMEOUT_EI	optional for ACI	Time for the ACI to wait for the response to the commands insert, eject, eject2, eject3, ejectcl. Default: 1920 seconds
ACI_TIMEOUT_INSERT	optional for ACI	Time for the ACI to wait for the response to the commands insert2, volinv. Default: 3720 seconds
ACI_TIMEOUT_RQM	optional for ACI	Time for the ACI to wait for the response to the commands barcode, catf, cancel, carry, clean, flip, robhome robstat, scr_set, switch, unload, pause_das, pause_drive, volsertoside. Default: 660 seconds
ACI_TIMEOUT_INFO	optional for ACI	Time for the ACI to wait for the response to the commands listd, listd2, listd3, listd4, qvolrange, listf, scr_get, scr_info, view, view2, cellinfo, typelist, listv. Default: 660 seconds

Version 3.11

 **CAUTION:** DAS 3.11 is required for AMU 3.11.

The following is a list of new features in this release of the DAS/ACI.

Add a mechanism to put dasadmin in a idle state where it would queue requests but not pass them on to the aml (helps with maint.)

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 stays active 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.

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

Get slot counts from AML

The “cellinfo” command displays information about used and free slots in devices, storage units, EIFs etc

Generate tape lists based on media type

The “typelist” comand shows all drives or specific drives with requested media type

Ability to logically disable/enable a tape drive

The “pausedrive” comand enable or disable robot access to the specified drive. It can be used for maintenance purposes.

Add list and range capability to the "view" command for multiple tapes

The “view2” command displays current information for the specified volser range from the AMU/SDLC database.

New method to return EIF information configured in AMU

The “eif_info” command provides information about logical ranges (in EIFs) and associated mediatype.

New commands

scop2	makes temporary changes to the DAS
show2	displays either the access privileges of a client or its operating parameters. The comand displays drive ranges.

Enhancements in “allocv” command

Now “allocv” command can deallocate only one range, not all volsers

Drives ranges for client (like volser ranges) in DAS configuration file.

Now DAS has the ability to support drive ranges (like volser ranges) in configuration file for client's parameter "drives"

Dasadmin help enhanced

Now dasadmin has completely reviewed and enhanced help system with examples of command usages.

aci_email() function support

The email statement can be entered once in the config file.

```
email                user = user-name,
                    smtp_server = workstation_network_name |,
                    ip_address = ip address
                    [,smtp_port = values]
                    [,timeout_smtp = values]
```

New media type MEDIA_AUTO

MEDIA_AUTO is the special mediatype provided to simplify operation with meditypes. It can be used in any situation when DAS can determine the meditype (for example, the existing volser name has been given). In such a case this mediatype (MEDIA_AUTO) will be replaced by actual mediatype inside of DAS.

To use this ability set the environment variable ACI_MEDIA_TYPE to MEDIA_AUTO.

New environment variables

ACI_TIMEOUT_INFO	Time for the ACI to wait for the response to the commands: listd, listd2, listd3, listd4, qvolsrange, listf, scr_get, scr_info, view, view2, cellinfo, typelist, listv Default: 600 seconds
ACI_TIMEOUT_INSERT	Time for the ACI to wait for the response to the commands: insert2, volinv. Default: 3600 seconds
ACI_TIMEOUT_MISC	Time for the ACI to wait for the response to the commands: allocd, allocv, eif_conf, eif_info, invt, pinvt, list, list2, email, qversion, scr_unset, shutdown, getvoltodrive, scap, scop, scop2, show, show2 Default: 120 seconds
ACI_NO_PRINT_ERROR	If this variable is set ACI library will not print error messages to stderr
ACI_TIMEOUT_RQM	Time for the ACI to wait for the response to the commands barcode, catf, cancel, carry, clean, flip, robhome, robstat, scr_set, switch, unload, pause_das, pause_drive, volsertoside. Default: 600 seconds

New options added for client statement in DAS config file

insert or no_insert	if the mount is requested and volser is in 'Ejected' state then the mount normally fails. However with active 'no_insert' option the system accepts mount command but delays its execution until volser is physically available or time-out occurs. Default value: insert
clean or no_clean	if this option is active (no_clean) then system delays response for dismount command if cleaning is active after current dismount. The system delay such responses until cleaning is finished. This option is provided to solve the following situation: application requires dismount and after response "dismount is finished successfully" check drive state (with listd command). At this point

drive should be empty but if cleaning was required then drive can be occupied by the clean cartridge. So application gets answer "drive is occupied" that can break internal application logic.
Default value: clean

New statements added for client in DAS config file

permission_pause = ([pause_drive] [,pause_das])
 pause_drive if this option determines client has permission to issue pausedrive command.
 pause_das if this option determines client has permission to issue pausedas command.

Version 3.10E



CAUTION: DAS 3.10E is required for AMU 3.10E.

The following is a list of new features in this release of the DAS.

Additional commands in dasadmin 3.10E:

- email (supported only in Scalar DLC systems)
- snmp (supported only in Scalar DLC systems)

PR89 - "'view' at only one drive at once"

There is an additional parameter in listd, listd2, listd3 commands:

dasadmin listd [clientname] [-d drivename]

If "-d" was specified then information will be shown only for this drive.

PR78 (ET40571) - "Command display foreign does not exist".

A new command "listf" was introduced to display foreign volsers.

PR94 - "Multiple pinvt with dasadmin must be available".

In previous versions only one "pinvt" dasadmin command could be executed per all dasadmin sessions. Now several "pinvt" commands can be issued.

PR75 - "DAS doesn't have an interface to return EIF configuration"

A new dasadmin command "eif_conf" was introduced in DAS 3.10E to display these logical ranges.

PR92 - "Inventory by volser with DAS".

A new dasadmin command "VolserInventory" was introduced in DAS 3.10E to have ability to inventory only one volser.

PR83 - "Real command cancellation in DAS is required".

There are two enhancements:

- DAS stores expiration information about all its commands. After a timeout expires, DAS wipes this command from its queue. In DAS 3.10E it will also send a cancellation command (PRGE) to AMU in order to purge this command from the AMU queue.

- A new command "list2" was introduced in DAS 3.10E to display enhanced information about its list of commands.

A new command "listd4" is added

This enhancement provides information about drive serial numbers.

ET38054 - "Enhancement in set_scratch command".

A new command "scr_set_range" is introduced in DAS 3.10E. This command can be used to add more than one volser to the scratch pool.

External table for mapping between AMU and DAS mediatypes.

In DAS 3.10E default mapping between AMU and DAS mediatypes can be changed (to work with new media types with ISVs who don't have linked the actual ACI).

Version 3.10A

The following is a list of new features in this release of the DAS.

ACI debug logging into a file

It is possible to access and perform debug logging at standard output or in a file.

ACI debugging is configurable via the environment variable: ACI_DEBUG_FILE

Shared access to drives

A client can allocate a drive in SHARED_ACCESS mode. This allows multiple Clients to access the drive.

The drivestatus command now has new key words EXUP and SHARED_ACCESS.

- Enter EXUP as a key word for the clientname to show all drives which are allocated in EXUP mode.
- Enter SHARED_ACCESS as a key word for the clientname to show all drives which are allocated in the SHARED_ACCESS mode

Version 3.02

The following is a list of new features in Version 3.02 DAS.

Up- and Down compatibility of DAS to ACI:

This means that ACI can now run with an older version of the DAS Server. This is not possible with version of ACI < 3.02. In order for ACI 3.02 to talk with DAS 3.x, no special options need to be considered. However, for ACI 3.02 to talk with DAS 1.3x, the environment variable 'SERVERVERSION' needs to be set to '1.3' on the system.

Extended mode

An extended mode is implemented, in addition to basis and complete. In this mode you can use the following commands:

- drive status
- drive status2
- drive status3
- volser status

- query version
- query volsrange
- get volser to side
- get volser to drive
- view
- keep
- mount

In order to get this mode to follow, configure the statement of the configuration file of DAS in the client: requests = extended,

ACI timeout

The timeout for some commands was set too short. This is corrected now.

Improved error handling

Extend the error mapping between DAS and AMU. Add following AMU errors:

- AMU_INF_DUAL_DUMMY_1333
- AMU_ERR_DRV_HWFALT

Improved logging of scratch

The 'scratch get' lists the found volser in the log. All scratch commands are listed separately in case of the 'received message' and the 'end message'.

Version 3.01

The following is a list of new features in Version 3.01 DAS.

- A new drivestatus command gives the physical status of a drive.

ACI function	aci_drivestatus3
dasadmin command	listd3

- Support of the SONY AIT media (sony_ait).
- New server configuration parameter that configures which DAS commands should not write log messages.

Currently this is only possible for the drivestatus commands (listd, listd2, and listd3).

- Switch the barcode reading by the robot either ON or OFF.

ACI function	aci_barcode
dasadmin command	barcode

- Completely shutdown the AMU PC Computer shutdown.

ACI function	aci_killamu
dasadmin command	killamu

- Support for the CLEANMANAGER in the AMU 3.0. Clean Drives:

ACI function	aci_cleandrive
dasadmin command	clean

- Mount a cleantape from a cleanpool to a drive
 - Insert cleantapes from IE facility to a cleanpool
 - Eject cleantapes from a cleanpool to IE facility
- New insert command that returns more information about inserted tapes. Insert Cleantapes.

ACI function aci_insert2
dasadmin command insert2

- New eject command that returns more information about ejected tapes. Eject Cleantapes.

ACI function aci_ejectcl
dasadmin command ejectcl

- Eject2:

ACI function aci_eject2
dasadmin command eject2

- Switch the passive AMU and DAS to the active AMU and DAS. Switch the AMU:

ACI function aci_switch
dasadmin command switch

- Set the drives force UP and DOWN.
- Support HICAP.
- Support DUAL DAS as a redundant interface for Unix to Hosts interface that use TCP/IP.
- Support a command to flip a volume from side A to B or side B to A in a drive. Flip volumes:

ACI function aci_flip
dasadmin command flip

- Support volser attachment to either side A or side B. Get volser attachment to either side:

ACI function aci_getvolsertoside
dasadmin command getvolertoside

- Support a new drive access to allocate a drive with exclusive status. Get volser to drive attachment:

ACI function aci_getvolsertodrive
dasadmin command getvolsertodrive

- Exclusive driveaccess:

ACI function aci_driveaccess
dasadmin command allocd

- Support a command to allocate volsers. Volseraccess:

ACI function aci_volseraccess
dasadmin command allocv

- Volserstatus:

ACI function aci_volserstatus
dasadmin command listv

- Support the possibility to define a volser attachment to a drive in the config file.
- Support Log ID (1 .. 9999) for mount and dismount.
- Support a Server Statement in the configuration file to configure:
 - Port for DUALDAS
 - Retry for dismount
 - Timeout for mount and dismount
 - Timeout for insert and eject
- It is possible to configure a server statement in the following syntax in the DAS configuration file:

server	dualdas_port = port number, retry_keep = retry number, timeout_move = timeout value, timeout_ei = timeout value
Parameter	Value
dualdas_port	port number (5000)
retry_keep	retry number (xx .. yy)
timeout_move	timeout move (xx .. yy) in seconds for mounts and dismounts.
timeout_ei	timeout move (xx .. yy) in seconds for insert or eject requests.

For each change of the timeout value, also set the timeout in the environment variable at the aci to the same value.

timeout_move	ACI_TIMEOUT_MOVE environment variable.
timeout_ei	ACI_TIMEOUT_EI environment variable.

- If the error AMU_ERR_MEDIATYPEMISMATCH comes up, the eject returns ENOMATCH.
- If the error AMU_ERR_MEDIATYPEMISMATCH comes up, the insert returns ENOMATCH.
- Additional return values:

ESWITCHINPROGRESS	A request was issued during a switch
EHICAPINUSE	A request was issued during a HICAP request
ENOPOOL	The specified cleanpool doesn't exist
EAREAFULL	The eject area is full (eject cleantapes)
ENODOUBLESIDE	The volser does not have two sides
EEXUP	The drive is EXUP for another client
EPROBDEV	The robot has a problem with handling the device
ECOORDINATE	One or more coordinates are wrong
EAREAEMPTY	Area that is to be ejected is already empty.
EBARCODE	Barcode read error.
EUPDOWN	Client tried to allocate volsers that are already allocated.
EDATABASE	There was an error during reading and writing of the database.
ENOROBOT	The robot is not configured.
EINVALIDDEV	The device is invalid.

DAS 3.01.2 Fixpack

The following improvements have been made to DAS version 3.01 through the introduction of the Fixpack:

- Improved error mapping between AMU and DAS. See Table 4.

Table 4 Error Mapping

Error Code	Define Statement	d_error
1331	AMU_INF_DUAL_DUMMY_1331	EAMUCOMM
1332	AMU_INF_DUAL_DUMMT_1332	ESWITCHINPROG

- Improved logging regarding DUAL DAS and DUAL AMU
- Improved logging regarding scratch handling
- Support of two additional notifications from AMU
 - NTFY1336: Switching ADS failed. DAS starts roll back and does not continue the switch process
 - NTFY1337: Device (robot, tower) not ready, but switching succeeded. DAS continues the switch process

Corrections and Resolved Issues

The following section contains a list of corrections and the issues resolved.

Version 3.12

1. Now DAS will read configuration information about it's partner from AMU configuration rather than from DAS_PARTNER. So DAS_PARTNER variable is now obsolete. Note however that DUALDAS_PORT (in etc\config) is still valid.
2. Dual-DAS sockets code was separated to dedicated thread. Fixed in DAS3.11H3a
3. Error in robstat, scr_get and carry commands (can lead to the trap of DAS). Fixed in DAS3.11H3a.
4. The reason of DAS (and RQM) shutdown will now be printed in the log. Fixed in DAS3.11H3a
5. DAS_SUPERVISOR privilege on client basic.
Now it's possible to add in client definition (in config file) the following line:
supervisor = (yes/no)
For example

```
client client_name = Client1,
hostname = host01,
...
supervisor = yes,
...
```

 If this option (supervisor) is set to "yes", then this client will have privilege of DAS_SUPERVISOR client (ability to deallocate a volser, allocated by another client). This privilege can be checked by aci_client_status2() call. This function returns the structure aci_client_entry2. The field unOptions contains corresponding bit for supervisor privilege. You can use bitmask 0x4000 to select this bit. Fixed in DAS3.11H2.
6. Erroneous message "DAS x.xx is starting" after EJECT command. Fixed in DAS3.11H1.
7. A bug in scr_get/scr_set commands if ACI_MEDIA_TYPE=MEDIA_AUTO.
It was an error in MEDIA_AUTO mode of operation for scr_get and scr_set commands. There was possible wrap-around - use explicit type modifier (e.g. "-t 3480"). Fixed in DAS3.11H1.

- 8. Now it's possible to use volsers with first '*'.
- 9. Now it's possible to use underscore symbol ('_') in pool names.
- 10. Fixed error with pausedas command. It was possible to send the commands from the DAS queue several times when in das pause mode. Fixed in DAS3.12.
- 11. Fixed bug with unsuccessful switch. When AMU detects that it cannot complete soft switch command, it issue SWITCH ROLLBACK. DAS, however, was not aware about it and continue to stay in 'switching' state forever. Fixed in DAS3.12.
- 12. For customers, who want to see allocated SHARED_ACCESS drives as it is, the environment variable "DAS_WRAP_SHAREDACCES" was added. When this variable is set to non-empty value, DAS would respond rather with SHARED_ACCESS drive names then with client's name, when listd command was run without client name.

Version 3.11

Errors with parsing large config files

DAS can trap when one line of config file contains more then 100 chars.
Fixed in DAS 3.10E.1

Error in mount for exclusive and shared drives

A drive can be allocated with "Exclusive" or "shared" mode (for "Exclusive" mode there is an EXUP option in allocd command, for "shared" mode the client name "SHARED_ACCESS" should be used). When drive was allocated in one of these modes then a try to mount on such drive can lead to DAS failure.
Fixed in DAS 3.10E.2

Exclusive and shared drives

Fixed errors in work with exclusive and shared drives in other commands (not mount).
Fixed in DAS 3.11

Version 3.10E

Table 5 Problems solved with DAS 3.10E

Ticket Number	Description
ET60330	"Cleanpool with 16 chars doesn't work". There is a bug with incorrect setting of field value in AMU telegram, which will be fixed.
	In dasadmin "scr_insert" command another aci function with a larger buffer size for volsers can be used. The old aci function (aci_insert()) might have a problem with large EIF and double-sided (optical) volsers.
ET56507	"DAS/ACI timeout to 1st server when network is down". The ability of preliminary testing of connection with DAS server has been added. If DAS/2 and ACI clients will be started with the PORT_PING=<port> environment variable set then this ability will be activated.

Table 5 Problems solved with DAS 3.10E

Ticket Number	Description
ET33777	"Eject has limited number of volsers". "eject2" command in dasadmin has a limited buffer size for volsers (100 bytes). Now the "eject3" command is similar to "eject2" but has a buffer size of 512 bytes.
PR97	"Mount failed after issued PINVT". There is a bug in the DAS code, related to improper handling of RPC task number. Will be fixed.
	"Scr_set command works wrong". There is a bug causing improper handling of media types in the "scr_set" branch. This prohibited users from inserting cartridges in scratch pool if the use count of cartridges was not equal to zero.
PR82	"DAS:allocv: The manual says that a check of the Volser in the given range will be made as to one is available or mounted". DAS doesn't check the availability of the requested volser and could return a positive answer for a mounted volser. Will be fixed.
ET85105	"Multiple problem with scr_insert dasadmin command". There is a bug in the DAS insert command handler, which leads to a buffer overflow. In addition, the aci_insert() function has a limitation on buffer size (approx. 1 Kbyte). Operating a large EIF (mailbox) with optical (two-sided) volser this function could encounter problems. Now aci_insert2() function will be introduced (in ACI 3.10E) to fix this issue.
ET84186	"Improper DAS reaction on mount used drive". There is an old check for "mount while cleaning" condition, which is wrong.
	DualDAS issues. There are several issues related with Dual DAS system. There are errors in transferring control information between active and passive DASes
ET60326	"Scratch volumes are possible in more than one pool".
	"scr_set" doesn't create pool information in database. Will be added.
ET60325	"select of scratch volumes doesn't check information in database". Will be fixed in DAS 3.10E.

Version 3.10A

Table 6 Problems solved with DAS 3.1A

Ticket Number	Description
- ET51731	A client named 'AMU' has access to a drive which is allocated from 'AMUCLIENT'
	Output of 'dasadmin ld' shows ,clientname EXUP' as clientname instead of only the clientname
	Scr_set possible for DTF large medium
- ET56697	Trap at das2 if a '-' was used as volserrange in the volser allocation command (allocv)
	Release of LogHandles in ExitList
	Possible to run two aci_function in one process under OS/2.
	Changes in socket termination.

Table 6 Problems solved with DAS 3.1A

Ticket Number	Description
	Wrong error codes in response of eject2 for some volsers. Each volser has now the correct error code.
	No check of media type during the view command
	Wrong response at the command scap with parameter '-v' if the volserrange was not found
- ET58331	DAS trap with insert2 if cleanpool is longer than 16 characters
- ET61441	Show command does not show all ranges if the Scap command with parameter '-v' removed a volser range which was placed in the middle of the list.

Version 3.02

Table 7 Problems which solved with DAS 3.02

Ticket Number	Description
ET36960	Cleaning failed during generic mount
ET30625	System error SYS3175 during unload
ET34707	Problems with generic mounts and cleaning
ET36164	command killamu does not work properly
ET39953	System error SYS3175
ET39997	listd display wrong data
ET40138 ET40182	Switch does not work properly
ET42411	eject2 does not display help informations
ET49149	Wrong positive returncode during eject

Generic mount fixes

- DAS does not choose a drive which is in the keep process
- Add action for NTFY 1311

Unload Trap

Sometimes DAS received a Trap during unload.

Switch-Command Processing

Improved Switch handling between DAS and AMU:

DAS reads some more notifications from the AMU in case of an switch.

- AMU_INF_DUAL_DUMMY_1337
- AMU_INF_DUAL_DUMMY_1336

Improved Switching of DAS: Sometimes DAS was still in SwitchMode even though the switch successfully ended.

Improved logging of switch

Some log-messages were added in order to enable a better analysis.

Correction of the killamu command

Fixed wrong behavior of Killamu.

It was the source of an incorrect ABBA/2 command, resulting in wrong behavior

Correction of the cancel command

The Cancel command was fixed. Earlier, it was not able to find the request to cancel.

Version 3.01

Table 8 Problems which solved with DAS 3.01

Ticket Number	Description
PR3825	Special characters in the hostname
PR3827	ENOMATCH error is returned instead of Error ENOVOLUME error when the media type is wrong in the view command

Generic DAS Server Changes

During startup, an error is reported if the environment HOSTNAME environment variable is not defined on OS/2.

Generic ACI Changes

None

Addressed Problem Logs

None

Addressed Change Requests

The following group of functions were added to provide information about a single drive. Refer to the *DAS Interface Guide* for detailed explanations of the functions.

- aci_drivestatus_one()
- aci_drivestatus2_one()
- aci_drivestatus3_one()

The following function was added to provide information about a single drive's serial number. Refer to the *DAS Interface Guide* for detailed explanations of the functions.

- aci_drivestatus4_one()

The following group of functions were added to enable large volser range processing. Refer to the *DAS Interface Guide* for detailed explanations of the functions.

- aci_eject3()
- aci_eject3_complete()

The following function was added to provide information about foreign volsers. Refer to the *DAS Interface Guide* for detailed explanations of the functions.

- aci_list_foreign()

The following function was added to provide information about foreign volsers. Refer to the *DAS Interface Guide* for detailed explanations of the functions.

- aci_eif_conf()

The following function was added to provide information about logical ranges within the Import/Export facility. Refer to the *DAS Interface Guide* for detailed explanations of the functions.

- aci_volser_inventory()

The following function was added to provide enhanced information about request executions. Refer to the *DAS Interface Guide* for detailed explanations of the functions.

- aci_list2()

The following group of functions were added to send email and snmp messages (supported only by the Scalar DLC software). Refer to the *DAS Interface Guide* for detailed explanations of the functions.

- aci_email()
- aci_snmp()

Known Issues

switch: If the communication between DAS of the active and passive AMU is interrupted, the new passive DAS works not correct and returned always with SWITCHINPROG.