User Guide

VirOp for IMS

Virtual

Operator

for

Image **M**anagement **S**ervices

Bestell-Nr. DOC F00 013

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1 Before You Begin Working with this Manual

1.1 Explanation of Symbols and Notes

The following symbols and highlighted passages draw attention to important information.



Explanation of these symbols (+ “Hazard Alert Messages” from page 1 - 2)

Information/Advice

Information important for understanding this introduction.

“abcd” Headline e.g. section 2 “Configuration”
File name or directory names e.g. “etc/config”

`ABCD` Information displayed on screen

- Software messages displayed on screen
- Commands
- User (root)
- Variable names, including environment variables

`[abc]` Parameters which are optional are shown enclosed in square brackets `[ ]`

\+ Reference to a description

- either on another page (+ page 1 - 1)
- or another manual (+ DAS message manual)

abcd Variable

- Variable command parameters
- Variable values referenced in software

1.2 Hazard Alert Messages

We classify the hazards in several categories. The following table shows the relation of symbols, signal words, the actual hazard, and its possible consequences.

Symbol	Damage to ...	Signal word	Definition	Consequences
	**Material**	**ATTENTION!**	potentially damaging situation	possibly damaging to: • the product • its environment
		Information	tips for users and other important/useful information and notes	no hazardous or damaging consequences for persons or property
		-	identifies the address of your contact person	no hazardous or damaging consequences for persons or property

1.3 Assistance

If you cannot solve problems using this Manual, please contact your contract partner:

For Europe and Africa:

GRAU Storage Systems GmbH & Co.
Eschenstrasse 3
89556 Boehmenkirch
Germany

For all other countries:

EMASS Inc.
10949 East Peakview avenue
Englewood, CO 80112
U.S.A.

We will be pleased to help you.

United States

emass Technical Assistance Center (ETAC) 1-88-827-3822

Europe and Africa

Weekdays between 07.00 and 19.00

CUSTOMER HELPDESK

Telephone:	+(49) 73 32 - 8 3-360
Telefax:	+(49) 73 32 - 8 3-3 67
CompuServe:	100142,3011
E-Mail:	CHD@CCMGATE.GRAU.DE

At all other times - weekends, night-time etc.

Central hotline:	+(49) 69 - 75 90 92 46
Mobile telephone:	+(49) 1 72 - 2 00 89 88

1.4 About this Manual

1.4.1 Purpose

This guide presents the program VirOp for IMS (the DAS Client on Windows-NT for IMS Software).

1.4.2 Audience

This guide is intended for DAS Administrators using the VirOp for IMS.

If you cannot solve a problem,

- call a specialist
- ask for information from your service partner or GRAU Storage Systems or EMASS Inc.

1.4.3 Related Publications

You may wish to reference the following documents:

• AMU Installation Guide	DOC E00 003
• AMU Problem Determination Guide	DOC E00 007
• AMU Reference Guide	DOC E00 005
• DAS Administration Guide	DOC F00 010
• DAS Interfacing Guide	DOC F00 011

1.5 Copyright

1.6 Product Observation

We are obliged by law to monitor our products even **after** delivery to the customer.

Therefore please communicate every point of interest.

- modified set-up data
- experiences with the product
- repetitive faults
- difficulties with this manual

For Europe and Africa:

GRAU Storage Systems GmbH & Co.
Eschenstrasse 3
89556 Boehmenkirch
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For all other countries:

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2 Product Description

2.1 About VirOp for IMS

VirOp (Virtual Operator) for IMS (Image Management Service) is the interface between the Software IMS from FileNet and the DAS Software from GRAU Storage Systems.
All IMS request relating the operation of the drives will piped through the VirOp to the DAS Software. The DAS Software manages the commands for the connected libary. The interface is working like an operator ("the virtual operator").
.

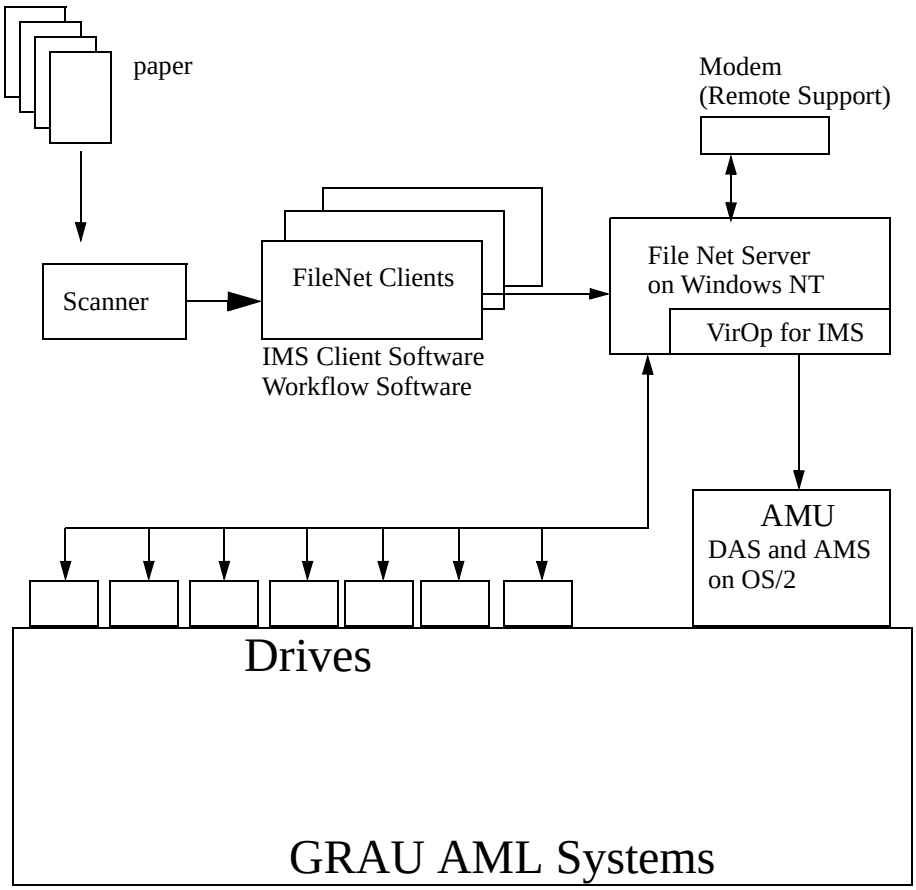

Fig. 2-1: FileNet IMS - Integration

2.2 VirOp for IMS Features

- Programm code is completely in 32 bit Microsoft Windows NT architecture
- Distributed with an easy installation and configuration program
- Program includes an administration tool
- Software provides an interactive mode with build in DAS functions
- Program runs normally in an automatic mode for unattended operations
- Program provides a graphical user interface

2.3 Hardware Requirements

You need for operating the following hardware (minimum):

- Pentium 100 MHz
- 16 MB RAM
- 1 MB Harddisk Space

2.4 Compatibility

2.4.1 Software

The programm is tested with the following releases:

- Microsoft Windows NT 3.51 and 4.0
- FileNet IMS for Windows NT 3.30
- GRAU Storage Systems DAS 1.30

2.4.2 Drives

All drives which are

- supported by IMS for Windows NT 3.30
- supported by DAS 1.30
- have a eject button on the front of the device

are supported by ACI for IMS

3 Installation and Configuration

3.1 Installation of VirOp on Windows NT

Step 1 Close all running applications

Step 2 Insert the disk "Virtual Operator for IMS" in drive a:

Step 3 Select via Start and Execute the File A:\setup.exe

Step 4 Following the installation procedure

Step 5 Remove the disk drive a:

3.2 Configuration of the DAS Client on the OS/2 PC

Step 1 Insert the disk in the drive a: of theAMU-PC

Step 2 Open an OS/2 window and enter:

```
C:> a:\os2setup
```

Step 3 Login the Service menue of the AMS software
(+ AMU Reference Guide)

Step 4 Open the AMU Graphical Configuration and select the IMS related drives

Step 5 Change in the Configuration dialog in the field Description the drive name to LIBRARYx (x stays for an alpha counter of the drive)
e.g. LIBRARYA, LIBRARYB, ..

Step 6 Save the changed configuration.

Step 7 Edit the file C:\DAS\ETC\CONFIG by entering:

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

Step 8 Add a new client to the list of DAS clients
(Details + DAS Administration Guide)

- client_name: IMS
- ip_adress or hostname: TCP/IP identification of OS/2 PC (AMU)
- requests: complete
- options: (avc, dismount)
- volumes: up to 10 ranges of media names
- drives: LIBARYA .. LIBARYZ equal to the Description in the Graphical Configuration in the AMU

Example:

```
client  client_name = IMS,
#       ip_address = 192.63.193.60,
        hostname = AMU,
        requests = complete,
        options = (avc,dismount),
        volumes = ((OD0001 - OD9999)),
        drives = ((LIBRARYA-LIBRARYZ))
```

Step 9 Select TCP/IP and TCP/IP Configuration Icon
to open the Window TCP/IP Configuration

Step 10 Configure and Start the RSH daemon on the AMU PC

Step 11 Configure the Security for the RSH (Add the HOST-Name of the Windows-NT machine in the list "HOST authorized to use RSH")

Step 12 Configure and Start an Telnet Deamon on the AMU PC (optional for VirOp Administrator menue)

Step 13 Save the CONFIG file on a floppy for print out.

Step 14 Close all applications on the AMU PC and restart the PC

3.3 Configuration of IMS for the VirOp for IMS

Step 1 Define for each OSAR a own drive with the related name:
1. OSAR - LIBRARY A - drive ONE
2. OSAR - LIBRARY B - drive TWO ...

Step 2 Set all drives in the library to MANUAL MODE.

Step 3 Set the Screen resolution to 600 x 800

3.3.1 Media Names

The media names on IMS are equal to the Volser (Volume Serial Number) in the archive (Barcode label). You can configure the numerical counter with a Prefix.

3.3.2 OSARS

On your IMS Server you can define aso many OSARS as IMS allows.
For each OSAR define a separate library - this means a separate drive.
In the automatic mode (virtual operator) VirOp for IMS will serve all currently open OSAR's.

3.3.3 Drives

Library definitions in OSAR's are related to drives. In the following table you will find a example for the relation between libary and drives.

OSAR	LIBARY	DAS Drive Name
1	LIBRARY A	LIBRARYA
2	LIBRARY B	LIBRARYB
3	LIBRARY C	LIBRARYC
4	LIBRARY D	LIBRARYD

Information

Set all drives in the Library to MANUAL MODE in the IMS software.

3.3.4 Eject

The eject is an command for the drive to bring the media out of the drive. This command will commonly beeing sent from the Host software on SCSI.
The other way is a command for the robot to press an eject button (if available on the drive)
We recommended for IMS, the second way (eject by robot), because IMS can not force an eject to drives in MANUAL MODE.

Information

The Technical Support of GRAU Storage Systems or EMASS has to configure the automatic eject on keep by robot (+ Maintenance Guide).

3.3.5 Wait State on Eject

If you try to dismount an media interactively, it could be that the media is in a wait state and IMS has not released the media yet. It takes 2 or 3 minutes before IMS will release the media.

3.3.6 Telnet in VirOp for IMS

The VirOp Administrator menu uses the standard telnet program fom Microsoft Windows NT for an optional telnet session onthe OS/2 PC.

You have to configure the releated deamons one the OS/2 PC to activate this feature.
If you want use another telnet program,
please set the environment variable TELNET with drive and path of the favorite programm.

Example:

```
set TELNET=C:\Programme\TCPIP\Telnet.exe
```


Information

Start the environment variable on the startup with AUTOEXEC.BAT or your on login script.

4 Administration

4.1 Program Start

Information

Make sure, that TCP/IP can resolve you configured hostname.

Step 1 Click on Start

Step 2 Selected the menu "Virtual Operator for IMS"

Step 3 Click on the Function "Virtual Operator for IMS"

Step 4 Confirm or Enter the to configuration parameters
(+ “Administration Menu” from page 4 - 1)

Step 5 Click on "Automatic mode" for normal operation

4.2 Administration Menu

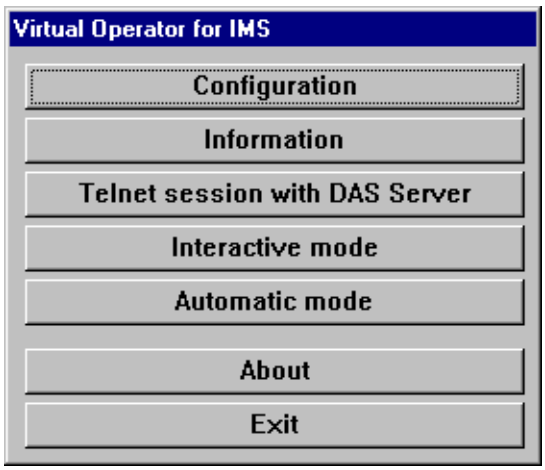

Fig. 4-1: Menu "Virtual Operator for IMS"

Command	Field	Explanation
Configuration		Open the Configuration dialog for VirOp for IMS.

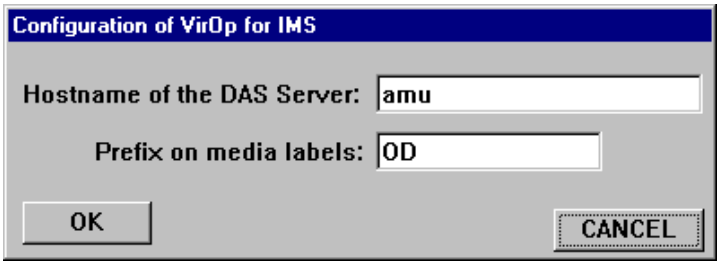

Fig. 4-2: Window "Configuration of VirOp for IMS"

Hostname of the DAS Server:	TCP/IP Identification of the AMU (OS/2 PC with DAS and AMS)
Prefix on media labels:	alphanumeric string to add on the volser (e.g. OD for Volser OD0815)
OK	Accept the selected parameters. The parameters will be saved in the file `aciims.ini` in the subdirectory `system32` in the Windows NT system directory (+ “Configuration File "ACIIMS.INI"” from page 5 - 7)

Command	Field	Explanation
Information		Open the menue for Status Informations of the VirOp for IMS. Same status informations will automatic collected by the program and the following window displayed the result.

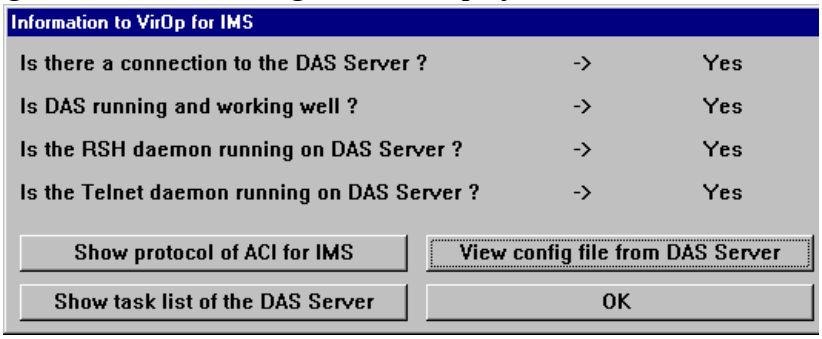

Fig. 4-3: Window "Information to VirOp for IMS"

Is there a connection to the DAS Server?	Check about the TCP/IP Communication to the AMU (OS/2 PC) (ping command worked well)
Is DAS running and working well?	Check of the DAS via the dasadmin command qversion. (+ DAS Administration Guide)
Is the RSH daemon running on DAS Server?	Check about the TCP/IP program RSHD on the OS/2 PC
Is the Telnet daemon running on DAS Server?	Check about the TCP/IP program telnetd on the OS/2 PC (optional)
Show protocol of ACI for IMS	Display in a browser a protocol file with the executed commands
Show task list of the DAS Server	Show all threads on the OS/2 PC (OS/2 command pstat)
View config File from DAS Server	Display the Configuration file in the DAS Server: config

Telnet Session	Activate a TELNET session to the OS/2 PC Use this feature for advanced diagnostic on the AMU-PC

Command	Field	Explanation
Interactive mode		Mode for test and information about the drives in the Library

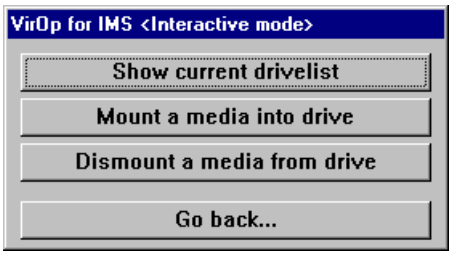

Fig. 4-4: Window " VirOp for IMS <Interactive mode>"

Show current drive-list

Open the information window about the drives in the library.

The window shows the first 12 drives in the library.

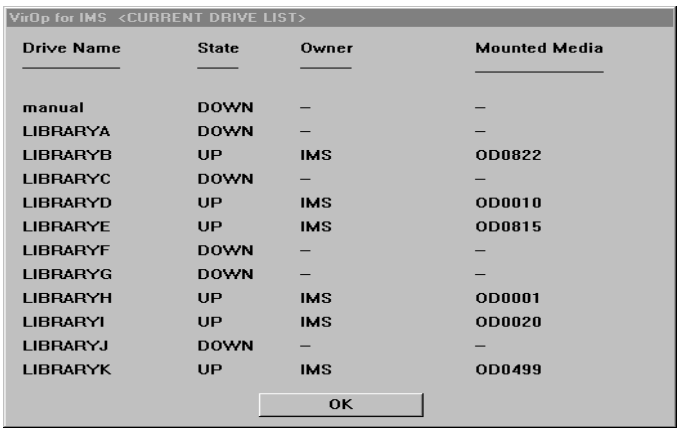

Fig. 4-5: Window " VirOp for IMS <CURRENT DRIVE LIST>

Drive Name	In DAS configured name of the drive (AMU Description)
State	UP drive are in the moment allocated by a owner (+ Owner). The VirOp for IMS allocated with a mount request automatic the drive and disallocated empty drives. DOWN drive are not allocated by a owner.A client have to allocate a drive, before the mount is possible.
Owner	Client which has allocated the drive. The Clients are configured with a Client_name in the DAS (for the VirOp is the Client IMS)
Mounted Media	Media name (Volser) wich actual is in the drive

Command	Field	Explanation
Mount a Media into drive	Open a Window for a mount dialog for IMS drives in the library.	

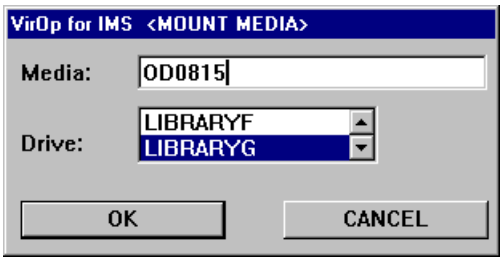

Fig. 4-6: Window VirOp for IMS <MOUNT MEDIA>

Media:	Field for the media name (Volser) which to be mount
Drive:	Listbox for select the drive where the media should be mounted.
OK	Proceed the selected mount action.

Dismount a media from drive — Open a window for the dismount (keep) dialog.

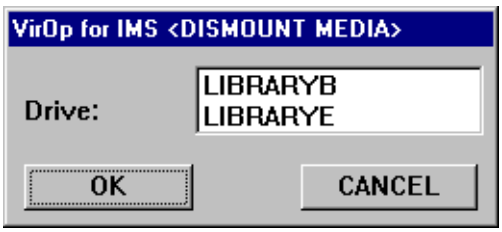

Fig. 4-7: Window "VirOp for IMS <DISMOUNT MEDIA>

Drive:	Listbox for select the drive where the media should be dismounted.
OK	Proceed the selected dismount action.

Go Back...	Close the window "VirOp interactive mode"
Automatic mode	Mode for active OSAR with the library.
About	Informations about the program and release of the program
Exit	Cancel the program VirOp for IMS

4.3 Log File

The following Example shows a part of the Logfile for the VirOp for IMS.

```
PROTOCOL  -  VirOp for IMS
=========================
.....................................................................

DATE / TIME...: Tue 28.01.97 11:04:29
OSAR..........: -
IMS SAID......: -
ACI DETERMINED: VOLSER: -     DAS-DRIVE: -
DAS REPLYED...: -
REMARK........: Automatic mode was STARTED !
.....................................................................
```

The Logfile is in the directory `C:\ACIIMS\` and has the name `aciims.log`

Field	Explanation	
DATE/TIME	Show date an time stamp of this log entrance	
OSAR	The OSAR which was the creator of the command	
IMS SAID	The message from IMS for the command	
ACI DETRMI-NED	VOLSER:	Media name for the command detected by VirOP
	DAS-DRIVE:	Drive name for the command detected by VirOP
DAS REPLYED	The answer message from DAS (also error message)	
REMARK	Other internal activity or comment	

4.4 Telnet

The Telnet feature is for remote diagnostic on the OS/2 PC.
For details about the programs on this PC and OS/2 commands + AMU Reference Guide and OS/2 manuals.

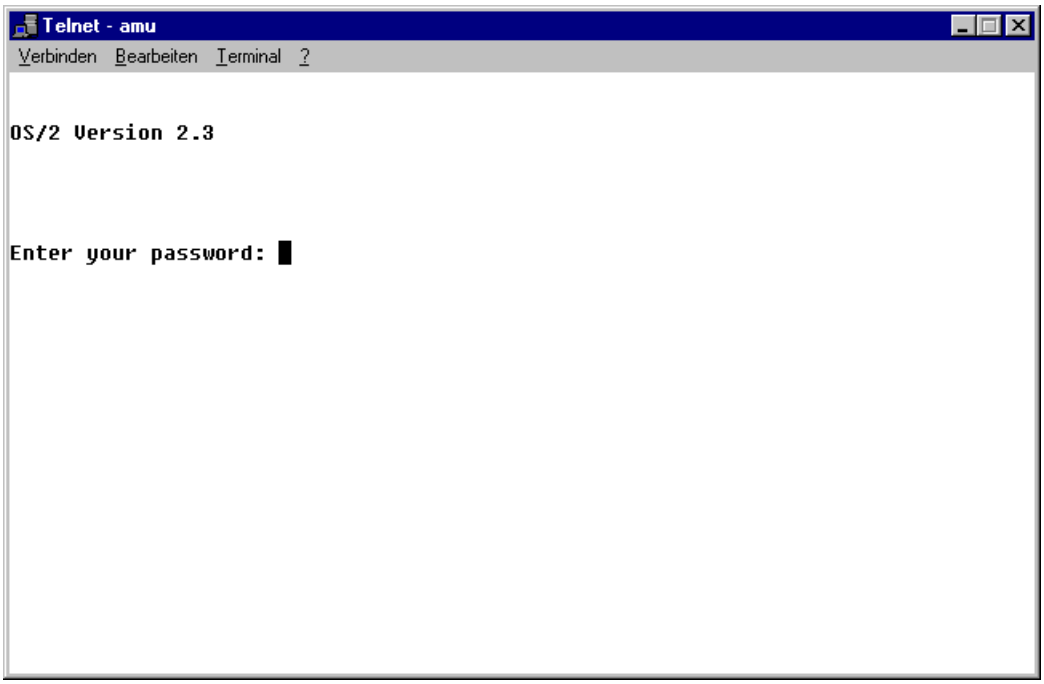

Fig. 4-8: Window "Telnet amu"

4.5 Browser

With the browser will displayed the file "config" and the logfile "aciims.log"

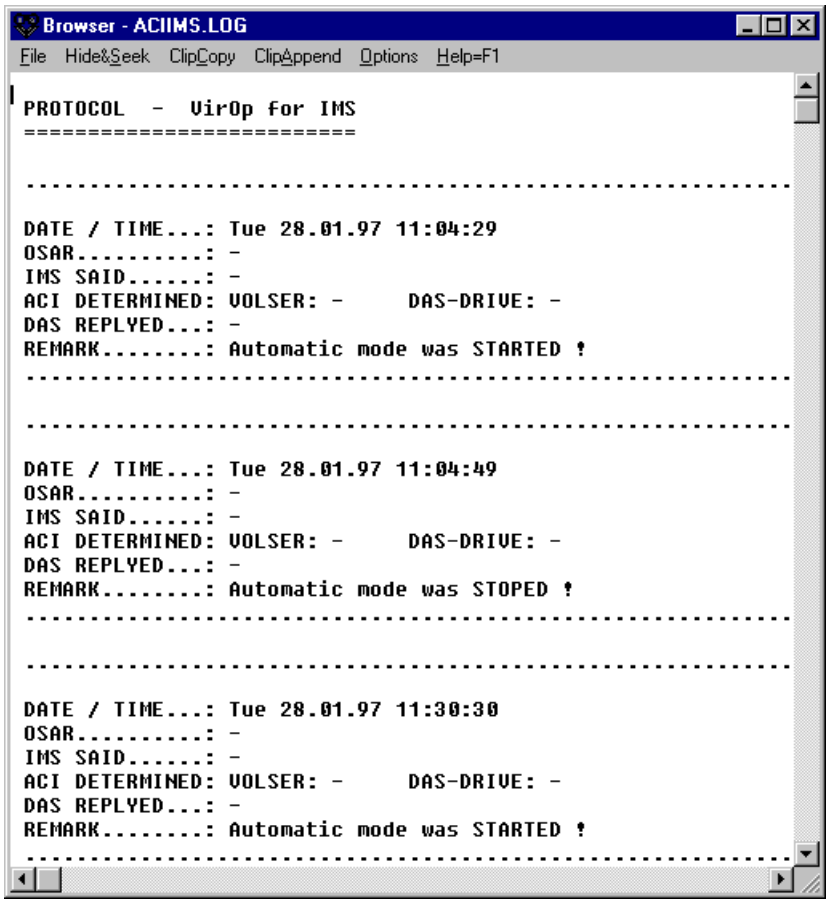

Fig. 4-9: Window "Browser ACIIMS.LOG"

5 Appendix

5.1 Error Messages

5.1.1 Message 1

Can't get config file!
RSH Daemon is not running on DAS Server.

Reason

The TCP/IP program rshd on the OS/2 PC works not correct.

Recovery

Check

- the rshd is running on the OS/2 PC
- the TCP/IP configuration for rsh on the OS/2 PC is correct
- the config file exist in on the OS/2 PC on C:\das\etc

5.1.2 Message 2

Can't get config file!
There is NO connection to DAS Server.

Reason

The TCP/IP connection to the OS/2 PC is not established.

Recovery

Check

- the connection with an ping command
- the TCP/IP address and the hostname for the OS/2 PC
- that TCP/IP is running on OS/2 (tcpstart)
- the network cable

5.1.3 Message 3

Can't open telnet session !
TELNET Daemon is not running on DAS Server.

Reason

The TCP/IP program telnetd on the OS/2 PC works not correct.

Recovery

Check

- the telnetd is running on the OS/2 PC
- the TCP/IP configuration for telnetd on the OS/2 PC is correct

5.1.4 Message 4

Can't open telnet session !
There is NO connection to DAS Server.

Reason

The TCP/IP connection to the OS/2 PC is not established.

Recovery

Check

- the connection with an ping command
- the TCP/IP address and the hostname for the OS/2 PC
- that TCP/IP is running on OS/2 (tcpstart)
- the network cable

5.1.5 Message 5

Clientname [%1] is not defined on DAS Server !

%1 name of the configured client (default: IMS)

Reason

The DAS configuration on the OS/2 PC is not correct for VirOp for IMS.

Recovery

Check

- the config file exist in on the OS/2 PC on C:\das\etc
- the Client configuration is not correct defined
  (+ “Configuration of the DAS Client on the OS/2 PC” from page 3 - 1)

5.1.6 Message 6

Connection to DAS Server [%1] is OK
but thr RSH Daemon is NOT running !

%1 name of the configured DAS Server (TCP/IP Hostname)

Reason

The TCP/IP program rshd on the OS/2 PC works not correct.

Recovery

Check

- the rshd is running on the OS/2 PC
- the TCP/IP configuration for rsh on the OS/2 PC is correct

5.1.7 Message 7

DAS is NOT running on server !

Reason

The request get no answer from the DAS software .

Recovery

Check

- the DAS/2 is running on OS/2 PC
- the AMU (KRN) is running on OS/2 PC

5.1.8 Message 8

DAS is not working well on server !

Reason

The request get no answer from the DAS software .

Recovery

Check

- the wdc.cmd file in the directory c:\das\tools is available and ok.
- the DAS/2 is running on OS/2 PC
- the AMU (KRN) is running on OS/2 PC

5.1.9 Message 9

No access to the DAS Server amu!
Make sure the DAS Server is accessable!

Reason

The TCP/IP connection to the OS/2 PC is not established during the installation.

Recovery

Check

- the connection with an ping command
- the TCP/IP address and the hostname for the OS/2 PC
- that TCP/IP is running on OS/2 (tcpstart)
- the network cable

5.1.10 Message 10

NO access to the DAS Server [%1]
or RSHD is not running on DAS Server !

%1 name of the configured DAS Server (TCP/IP Hostname)

Reason

The remote shell request get no answer from the OS/2 PC .

Recovery

Check

- the rshd works correct and is configured
- the wdc.cmd file in the directory c:\das\tools is available and ok.
- the DAS/2 is running on OS/2 PC
- the AMU (KRN) is running on OS/2 PC

5.1.11 Message 11

Please configurate the system !

Reason

The Program is started without or wrong configuration.

Recovery

Check

- the configured hostname in the VirOp is correct
- the TCP/IP is running on the Windows NT
- the cable is connected to the OS/2 PC with the DAS
- the TCP/IP can resolve the Hostname of the OS/2 PC
- the OS/2 PC is active with TCP/IP and the DAS software
- the correct TCP/IP address is configured on the OS/2 PC

5.1.12 Message 12

RSHD is not running on DAS server !

Reason

The TCP/IP program rshd on the OS/2 PC works not correct.

Recovery

Check

- the rshd is running on the OS/2 PC
- the TCP/IP configuration for rsh on the OS/2 PC is correct

5.2 Configuration File "ACIIMS.INI"

The configuration will saved in the file "aciims.ini" in the subdirectory system32 in the Windows NT system directory.

Example:

```
[ACIIMS]
dasserver=amu
prefix=OD
```

Field	Explanation
`[ACIIMS]`	headline for ini file
`dasserver`	keyword for the configured hostname or IP address of the AMU (+ page 4 - 2)
`prefix`	optional alphanumeric prefix for media name. The complete media name can have 16 digit. (+ page 4 - 2)

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