Chapter 11

VAXsimPLUS(SDD) and AES

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11.1 Introduction

VAXsimPLUS, also called Symptom Directed Diagnosis (or SDD), is a major step toward total fault management on Digital systems. Fault managment allows you to predict device failures, based on the detected error rate for that device. Thus making it possible to perform proactive or scheduled maintenance before catastrophic failures occur.

The latest version of VAXsimPLUS is V1.5-127. This supports more discs and tapes and is a lot simpler to install. It uses SYSMAN to install and initially start. (See Section 11.4.2 for more details). Note that this version only runs with VMS 5.0 and above. If V1.2A (previous version) is running on site, it is only worth upgrading if the customer is going to VMS 5.4 or if VAXsimPLUS has stopped due to the expiry date being reached.

Advanced Electronic Support (or AES) is a newer service offering. It provides the customer with a direct electronic link with DEC. Note that, although AES works in conjunction with VAXsimPLUS, it is a separate product. Many sites have VAXsimPLUS, fewer currently have AES. (See Section 11.14 for more details).

11.2 Hardware Options Supported

11.2.1 Display

The following devices can be displayed by VAXsimPLUS V1.5:

- .CPUs: 11/730, 11/750, 11/780, 4XXX, 62XX, 82XX, 83XX, 85XX, 86XX, 8700, 88XX, 9XXX, MicroVAX 2000, MicroVAX 3XXX, VAXstation 2000, VAXstation 3XXX, VAXFT3000
- .BI Nodes: CIBCI, CIBCA, CIXCD, DRB32-M, DRB32-C, DMB32, DWBUA, KDB50, KDM70, KFBTA, KFSQA
- .Disks and Disk Controllers: ESE20, ML11, RA60, RA80, RA81, RA82, RA70, RA90, RA92, RAM_DISK, RCXX, RDXX, RFXX RK06, RK07, RL01, RL02, RM80, RM03, RM05, RP04, RP05, RP06, RP07, RRDXX, RS04, RVXX, RX01, RX02, RX33, UDA50/UDA50A, KDB50, HSC50, HSC70
- .Tapes and Tape Controllers: TA78/79, TA81, TA90/90E, TE16, TF70, TK50, TK70, TS11, TSU05, TSV05, TU16, TU45, TU70, TU71, TU72, TU73, TU77, TU81

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11.2.2 Analysis

The following devices are analysed to FRU level by VAXsimPLUS V1.5

- .CPUs: 4000, 6000-4XX, 9000, VAXFT3000
- .Memory: 9000
- .Adapters: CIXCD, KFBTA, RV20P, XJA (9000)
- .Disks: ESE20, RA60/70/80/81/82/90/92, RF30/31/71/72, RV20/60/64
- .Tapes: TA90/90E, TF70
- .Comms: DEMNA

11.3 Functional Description

VAXsimPLUS consists of three major components:

- VAXsimPLUS monitor
- VAXsimPLUS fault manager
- VAXsimPLUS display

The **monitor** is a detached system process VAXSIM_MONITOR , running on each node.
It attaches itself directly to the VMS ERRFMT process using a mailbox interface, where it obtains and accumulates new error and event data.
Being the active part of VAXsimPLUS, it remains in a hibernation state until it is needed to process and update data from the system error log.
When an error is detected, the monitor immediately updates its historical database, and if the error causes a threshold to be exceeded, it notifies the fault manager software.

The **Fault Manager** then runs failure analysis algorithms and when it determines a failure pattern, it sends recovery suggestions to the customer and isolation reports to Field Service.
The customer is instructed to call Customer Service if necessary.

Because it knows about all the nodes in the Cluster all the error logs are examined for the failing device. In this way duplicate entries are ignored and a total picture is obtained.

If **AUTOCOPY** is enabled then an automatic shadow copy of the failing drive is initiated .
When the copy is complete the failing drive is dismounted and operation continues on the nominated spare.

The **Display** is a graphic representation of the state of the system at any given time, it has Five levels

11.4 Installation

The installation manual says VAXsimPLUS can be installed from the System or field account.
Make sure YOU use the System account.

It requires 13,500 blocks to install, however this goes down to 5000 blocks when installed.

50 Global pages are required for the installation, but only 24 are used.

INSTALL LIST/GLOBAL/SUMMARY will inform you of global pages available.

To increase Global page count get the system manager to do the following :-

Add ADD_GBLPAGES 50 to SYS$SYSTEM:MODPARAMS.DAT then run autogen by

$@SYS$UPDATE:AUTOGEN SAVPARAMS REBOOT

Note

This will cause the system to reboot

Check that the Customer does not use any private DCLTABLES. (Ask the System Manager).
Quick check is **$ dir/dat sys$share:dcltables.exe**

11.4.1 UAF Quotas

- PRCLM 4
- ASTLM 24
- BIOLM 18
- BYTLM 33,000
- DIOLM 18
- ENQLM 30
- FILLM 20

Note

If Mail isn't working, try increasing FILLM to 100. This is because errorlogs are large and account doesn't have enough space to run analysis

You are now ready to SET DEF to SYS$UPDATE and perform an @VMSINSTAL.

11.4.2 @VMSINSTAL

During the installation you will be asked a number of questions, answer them as follows:

Name of Product?	SDD015
UIC for SDD$MANAGER?	Take default. If default is in use, see system manager for an alternative. This account has SYSTEM type priviledges, but is locked by the VaxSim process so other users cannot use it
SDD directory?	Take default. If installing on a cluster with separate system discs see Installation Manual
Want to install VAXsimPLUS?	Yes!
SYSMAN installed on Cluster?	Yes if true. If not see Installation Manual
System types/serial nos.?	Supply these for all nodes. (Install now checks all errologs)
Want to install SPEAR?	Yes if 8600, as can be used to analyze Snapshots via VSR. No for other systems

Now have a cup of coffee. Rest of installation takes between 20 and 60 minutes depending on your system.

11.5 Post Installation Duties

If this is installed on a common system disk then add the following to SDD$STARTUP.COM in SYS$MANAGER

$ define/system/executive vaxsim$errlogs sys$sysdevice:[sys*.syserr]errlog.*;*

Advise the Customer not to rename the errlog files anything else other than ERRLOG.something (*Not literally*)
In the case of a non common system disk then seperate each path to the errlog files with a comma.

Make the root, specific for single node machines. (i.e SYS1 not SYS*)

11.5.1 Vax 86xx Specific

For Vax86xx the .cdf files need to be copied from the console

Assume the 86XX is on SYS1 root.

```
$ CREATE/DIR SYS$SYSDEVICE:[SYS1.SYSMAINT.CDF]
$ SET DEF SYS$SYSDEVICE:[SYS1.SYSMAINT.CDF]
$ MC SYSGEN
SYSGEN> CONNECT CONSOLE
SYSGEN> EXIT
$ EXCHANGE COPY CSA1:*.CDF/TRANSFER=RECORD SYS$COMMON:[SYSMAINT.SDD]
```

Have system manager define the CDF area as a system wide symbol by including the following in SYSTARTUP_V5.COM:

```
$DEFINE/SYSTEM CDF SYS$COMMON:[SYSMAINT]
```

11.6 Finalising the Installation

The System account must not be flagged disuser and the queue manager must be running.

The site specific startup files must be modified to start VAXsimPLUS Get the system manager to add the following after the Queue Manager has started :-

```
$ @SYS$MANAGER:SDD$STARTUP.COM
```

If the Vaxsim command is not known after installation then do the following

```
$ INSTALL REPLACE SYS$SHARE:DCLTABLES/SHARE/OPEN/HEADER
```

then log out and back in again.

This must be checked on all nodes.

Vaxsim/f set phone 0345 555455 *This is the number that appears in the mail message*

To preload the database i.e tell vaxsim about disks, perform the following

$set def sys$maintenance *assuming cluster common system disk*
$vaxsim/merge/incl=(dua*,mu*)/sin=**DATE** sys$sysdevice:[sys*.syserr]errlog.*;*

where date is 27 days ago

This produces a file called MEL.SYS next

```
$@SDD$EXE:VAXSIM$LOADER
sys$common:[sysmaint.sdd]vaxsim$cluster.dat
mel.sys
```

11.6.1 Mail

To add someone to the mailing list you use the following command

Vaxsim/f add [recipient_name] [group]
where the recipient name is in the format **NODE::NAME** and group is one of the following **MONITOR, FSE, CUSTOMER or ALL**

- The monitor list receives summary reports
- The Customer list receives recovery suggestions/user correctable problems
- The FSE list receives detailed analysis reports

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To examine how the mailing lists are set issue the commmand

$VAXSIM/F SHO MAIL

11.7 Autocopy

The **AUTOCOPY** database should be maintained by the customer

To examine the database use

$VAXSIM/A SHO CANDIDATE *or spare*

Disks that take part in Autocopy ie candidates and spares should not be DCL Mounted and Dismounted , but use VAXSIM/A DISMOUNT instead.

11.7.1 Autocopy Restrictions

Due to the restrictions of the VMS Volume Shadowing Software only 8 Shadow sets may exist on each HSC.

The following example illustrates the setup of 2 candidate drives and 1 spare.

$ mount/cluster 1dus110: /shadow=1dua10: important_data
$ mount/cluster 1dus120: /shadow=1dua20: More_important_data

This creates single member shadow sets

$vaxsim/auto add candidate 1dua10:
$vaxsim/auto add candidate 1dua20:

The spare is then added do default shadow a selected candidate 1dua10: in this instance.

$vaxsim/auto add spare 1dua30: 1dua10:
Now all that is needed in the startup file is one line to mount these drives

$vaxsim/auto assign drives

Now lets say drive 1dua20: begins to fail.
Autocopy dismounts drive 1dua30: from 1dus110: and adds it to 1dus120: and invokes a shadow copy.
When the copy is complete the failing drive 1dua20: is dismounted with the command

$ vaxism/auto dismount candidate 1dua20:
The drive is then repaired..

$ vaxsim/auto mount candidate 1dua20:
is used to return the drive to operation and invoke the shadow copy. When the copy is complete the spare is put back into it's original position with
$ vaxsim/auto dismount spare for 1dua20:

To maintain the Autocopy database the following commands are available
$ vaxsim/auto remove candidate *or spare*
$ vaxsim/auto delete candidate *or spare*
$ vaxsim/auto purge drives *wildstar delete of removed drives*
$ vaxism/auto sho history *This gives a history of autocopy drive pool*

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11.8 Ignoring Devices

Devices such as Fujitsu Disks may be ignored with the
$ VAXSIM/F IGNORE 255DUA14:

and the complement is

$ VAXSIM/F RECOGNIZE 255DUA14:

The use of these commands are to prevent the Expert Software from trying to ananyze a disk, whose characteristics are not known.

11.9 Fault Finding

Check the SDD$LOGS: directory for vaxsim_mail.log and vaxsim_evaluate. log

$ DIR/DATE SDD$LOGS:*.LOG will tell you when these were written.

Typing them will give more details as they are the batch job log files.

To check that the Batch Jobs executed you can check accounting.

$ ACC/USER=SYSTEM

Check the mailing list and that mail is allowed to be delivered to that address. (Info found in Authorize Flags field)

11.10 Call flow

1. Customer logs the call with the CSC quoting the VAXsimPLUS event code.
2. RDC or CSC update the branch with details of the call highlighting the fact that it is a VAXsimPLUS call.

   The call will contain the following:
   Recommended parts to replace and the order to replace them in.
   The theory codes that led them to that conclusion.
3. The above details are passed on to the engineer to confirm that the correct fault is being dealt with.
4. The engineer arrives on site along with spares. *After the spares have arrived in some cases* Replaces the recommended part, and verifies the fix where possible.
5. The engineer must place the mail message that is sent to the FSE mail list in the VAXsimPLUS envelope.
   The faulty module is then returned to Logistics along with the VAXsimPLUS envelope.
6. The engineer then does a Vaxsim/f repair update to the Customer's VAXsimPLUS database.

   ex.. $vaxsim/f repair dua4: 14-jan-1990:12:15 "Replaced Servo"
7. The LARS form is completed .

   K 0.0 RA81 KB01234 CD VAXSIM 1.15.8.7
   K 1.5 RA81 KB01234 CR Servo Replaced
8. The call is closed.

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NOTE: THE REST OF THIS CHAPTER APPLIES TO VERSION 1.2 ONLY, AS THESE FEATURES HAVE BEEN REMOVED FROM VERSION 1.5

11.11 Testing (V1.2 only)

To test use **INJECTERR** in the sdd$exe directory

It runs on VMS Version 4.7, 5.0, 5.1, 5.2 and 5.3 and will inject errors against RA60, RA70, RA80, RA81, RA82, RA90, RF30 and RF71 disks.

INJECTERR is a program written in to inject DSA disk errors into a System Errorlog primarily for demonstrating the SDD Tools Kit functionality. It can also be used to verify correct operation of the Tools Kit after installation.

It should be noted that INJECTERR will leave errors in the System Errorlog file, but will NOT show up in the output of the SHOW ERROR command (Basically, it doesn't increment the Device's UCB error count field)

11.11.1 Set-up

INJECTERR resides in the SDD$EXE directory with the SDD Tools.
Before running INJECTERR you must set up your command tables by typing the following .
$ SET COMMAND SDD$EXE:INJECTERR.CLD
$ INJECT 255DUA2:/AFTER=::10/DELAY=::30/COUNT=15/TYPE=MEDIA /BELL

11.11.2 Injecterr Qualifiers

- /AFTER *Standard VMS Deltatime format [Default=10s]*
- /DELAY *Standard VMS Deltatime format [Default=10s]*
- /COUNT *Integer [Default=1]*
- /CLASS *Keyword of the following:-*
  HARD
  SOFT *[Default]*
  MEDIA
  INFO
- /BELL *Ring the bell on injection. [Default=BELL]*

11.11.3 Testing mail

To test Mail create a text file, EG: Test.txt, and then issue:

$VAXSIM/F MAIL SUM TEST.TXT

11.12 The Database (V1.2 only)

The database may be interrogated by setting default to SDD$EXE and then issuing the command @SDD$DUMP VAXSIM$CLUSTER.DAT

If for example a customer removes a disk drive, say 1dua5: then to prevent that disk from showing on the display anymore you can edit that entry from the database.

@SDD$FIX 0:$1$DUA5: *will remove that entry.*

Be carefull , as the Autocopy DataBase is contained within this file and you may delete the candidate or spare entry.

A manual analysis can be forced to give a report on a device that has continued operation after the initial message has taken place.
THIS SHOULD NOT NORMALLY BE NECESSARY
Take a fault on dua2:

$set def sys$maintenance *assuming cluster common system disk*

$vaxsim/merge/incl=dua2/sin=date sys$sysdevice:[sys*.syserr]errlog.*;* *where date can be upto 27 days ago*
This produces a file called MEL.SYS next
$ VAXSIM/F ANALYZE MEL.SYS
This will probably produce a new theory code which must be interpreted at the CSC.

11.13 Bug Fixes (V1.2 only)

VMS V5 produces 5 errors for every one.
Cure is to replace ERRORLOG.EXE availabel from myself.

Tape Drives log "Drive requested errlog" as a hard error.
Cure is to upgrade to CRONIC V39A on HSCs.

TA90 thresholds set wrong
Cure is edit SDD$STARTUP.COM and include the following lines

$ define/system/executive sdd$ta90_weccm_rate 1000
$ define/system/executive sdd$ta90_weccb_rate 500
$ define/system/executive sdd$ta90_reccm_rate 500
$ define/system/executive sdd$ta90_reccb_rate 250

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11.14 Advanced Electronic Support (AES)

AES is a new concept in servicing in that it provides the customer with a direct electronic link with DEC. The link is comprised of an application called DSNLINK which runs on the customer's VAX and a bi-directional dialup modem link to the CSC. The initiation and control of this link is more of less transparent to the user. DEC supplies DSNLINK and the modem (usually free of charge). **NOTE:** This link is in addition to the RDC link at present.

AES provides the customer with the following services:

Name	TLA	Use
Interactive Text Search	ITS	Customer can access DEC's problem/solution databases. Similar to DECTEL.
Electronic Site Request	ESR	Customer can log a call directly from his terminal.
System Initiated Call Logging	SICL	If VAXsimPLUS deems a fault call necessary it automatically causes AES to log one.
Electronic Site Manager	ESM	Customer or DEC can build and display H/W and S/W configuration information.
On-line Patch Access	N/A	Customer can request patches and receive them directly over the link.
Two-way File Transfer	N/A	Files can be sent to or received from DEC. (EG: Errorlogs, but NOT dumpfiles).
Flash Mail	N/A	DEC can send customer "blitz" type information.

11.15 AES Notes for FS engineers

The following notes explain the use of AES, on customer sites, for Field Service engineers. They assume you are using a VT style terminal. If you have a DECwindows terminal, the menus appear as windows from which the options can be "pulled down". **NOTE:** These notes are for those of you not trained as AES installers. AES installation is quite involved and should **only** be attempted by trained engineers. Also, before using AES yourself, make sure it's OK with the customer.

To access AES, login to FIELD and type the following:

$ @AES$SYSTEM:AES

The Main Menu is displayed:

1. AES Help
2. Control
3. Information
4. Service Request
5. Configuration

An explanation of the various submenus follows.

11.15.1 The Control Menu

Selecting item 2 from the Main Menu will bring up the control menu:

1. AES Help
2. DSN Monitor Batch
3. DSN Monitor Network
4. DSN Register
5. DSN Authorize
6. DSN Start
7. DSN Stop
8. VAXsimPLUS Start
9. VAXsimPLUS Stop

11.15.1.1 DSN Monitor Batch

Monitors the DSN$BATCH queue which is used when you mail a service request to the CSC. Use this option to see your mail on the batch queue. If you do not receive a log No. for the call you are trying to log within approx 15 mins look at this queue as it may point to a failure in sending the mail. Use Ctrl Z to exit.

11.15.1.2 DSN Monitor Network

Monitors the DSNlink network, Allows you to monitor the network link to the CSC and tell when your mail has been successfully transferred. Use Ctrl Z to exit.

11.15.1.3 DSN Register

Used to register a new modem telephone number with the CSC. It should only be used by trained AES Installing Engineers. If you need to change the modem number talk to one of them.

11.15.1.4 DSN Authorize

Authorizes the Remote Diagnosis Centre (RDC) to log into a specified machine for a period of time. If you require RDC to gain access to a machine then select this option. At the first prompt, Remote Login, press return. At the next prompt, Time, enter a time and date when RDC can have access to this machine. At last prompt select which node you wish RDC to be able to log onto. All that is then required is for you to inform RDC over the telephone of a Username and Password they can use.

11.15.1.5 DSN Start and DSN stop

These commands start and stop the DSNlink software. Only use when specifically asked by a customer.

11.15.1.6 VAXsimPLUS Start and VAXsimPLUS stop

These commands start and stop VAXsimPlus (SDD). Again, only use when specifically asked by a customer.

11.15.2 The Information Menu

Selecting item 3 from the Main Menu will bring up the information menu:

1. AES Help
2. DSN Interactive Text Search
3. DSN Videotex
4. VAXsimPLUS
5. Crash Log

11.15.2.1 DSN Interactive Text Search

This option will create a link to the CSC and give you access to a list of databases. Once the link is established you will get an ITS> prompt. The following commands are useful:

EXIT	Return to information menu
HELP	Online ITS help
SHOW DATABASES	Lists all the available databases
OPEN database name	Lists documents in database
SEARCH string	Narrows down list of documents by searching for all those containing string "string"

Once you have a managable list of documents, select the one you want to read by typing its number. You can also EXTRACT and PRINT (locally) the document.

11.15.2.2 DSN Videotex

Used to obtain software patches over the AES link. Creates a link to the CSC and takes you into a VTX system. You can search through the patch database (in a similar way to ITS>) and, if you find the one you want, have it copied to the customer site via the AES link. **BEWARE:** Normally only the customer should request a patch. Some are very large and all come with a major disclaimer. Don't request or install patches yourself.

11.15.2.3 VAXsimPLUS

Invokes VAXsimPlus.

11.15.2.4 Crash Log

Examines the crash files written in CLUE$OUTPUT. Will give you a list of previous crashes. Select the crash you wish to look at by typing in its number. The crash details are then displayed. For a more indepth look at the crash, type SHOW ALL n (where n is the number of the crash in the directory) at the CLUE_DISPLAY> prompt.

This option is used mainly by RDC to help them look at crashes. Type HELP for help and EXIT to return to the information menu.

11.15.3 The Service Request Menu

Selecting item 4 from the main menu will bring up the service request menu:

1. AES Help
2. DSN Mail
3. Mail
4. DSN Copy

11.15.3.1 DSN Mail

Allows you to log a call either for the customer with the CSC or for yourself with Telesupport. You are presented with a template which should filled in as follows:

Select Log_Request. You will be prompted for your name and a telephone number which you can be contacted on. In the subject field enter a brief description of the fault. The DSN Address field should be chosen from the list shown in Table 11–1 below. The CC (carbon copy) field can be left blank. (There is a CC_RECEPIENT list already set up in AES). You will be asked if the details are correct. Then select the system you wish to log the call on from the list which appears in the lower screen. You will be asked again if the details are correct, and then dropped into an editor. This is where you enter a detailed problem description including option type and serial number.

Please Note! If you are logging a telesupport call, identify yourself with your badge number as well as the call details. Do not pass on the telesupport addresses to the Customer, they are for your use only. You can only send a maximum of 30 blocks in your first mail (approx 5 pages of text) so do not include large files in your first mail

After entering your fault description all you need to do is exit from the editor with Ctrl Z. Then at the *, type EXIT, which saves your text to a temporary file. You should now get a small window in the middle of the screen which gives you the option of sending the mail/ modifying the header/ modifying the text or canceling the whole mail. If you select Send Message you will receive a copy of the mail you have just sent. This is *not* confirmation that a call is logged. You should receive a second mail with a Service Request (SRQ) Number attached within approx 15 minutes. This *is* the confirmation of the logged call. The first five digits of this number is your log number.

You may receive further mails concerning your call or you may find, in the case of telesupport calls, that CSC telephone you on site. If you wish to reply to any of the mails simply enter MAIL, select the mail you want and type REPLY. This will reply to the selected mail.

11.15.3.2 Mail

Use this option to enter VMS mail, from here you can read all your mail.

11.15.3.3 DSN Copy

Used to copy files to/from the CSC. For example: If the CSC want more information regarding a problem they may ask you to copy part of the errorlog to them. Create a file containing the required information. Then enter DSN Copy. You will be asked for the Service Request (SRQ) Number and the file which you wish to copy.

DSN Copy only allows you to copy up to 500 blocks to the CSC. If you need to send more contact the CSC as they can override this limit.

Table 11–1: Current valid DSN Addresses

DSNlink Mail Address	Product/Service covered
DSN%HELP	Help With Using DSNlink Mail
DSN%OPENCALLS	List of Open Service Requests
DSN%DISKS_HARDWARE	Disk storage hardware service request
DSN%TAPES_HARDWARE	Magnetic tape storage hardware service request
DSN%PRINTERS_HARDWARE	Hard copy device hardware service request
DSN%COMMUNICATIONS_HARDWARE	Communications device hardware service request
DSN%SYSTEMS_HARDWARE	System hardware service request
DSN%HARDWARE	Other Hardare service request, not included above
DSN%PC_COMMS_SOFTWARE	Personal computer communications software
DSN%COMMS_SOFTWARE	All other communications software
DSN%PC_OFFICE_AUTOMATION	Personal computer office automation products

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Table 11–1 (Cont.): Current valid DSN Addresses

DSNlink Mail Address	Product/Service covered
DSN%OFFICE_AUTOMATION	All other office automation products
DSN%DATABASE_SOFTWARE	All database products
DSN%TRANSACTION_PROCESSING	All transaction processing products
DSN%UCX	VMS to ULTRIX connection product
DSN%ULTRIX	ULTRIX operating system and layered products
DSN%PROGRAMMING	All languages and systems programming
DSN%GRAPHICS	All Graphics related products
DSN%VMS	VMS operating system and layered products
DSN%RSX	RSX operating system and layered products
DSN%RT	RT11 operating system and layered products
DSN%RSTS	RSTS/E operating system and layered products
DSN%DSM	DSM operating system and layered products
DSN%SOFTWARE	All other software not covered above
DSN%DSN	DSNlink specific service request
DSN%TELESUPPORT_DISK	Disk storage hardware telesupport calls
DSN%TELESUPPORT_TAPE	Magnetic tape storage hardware telesupport calls
DSN%TELESUPPORT_PRINTER	Hard Copy device hardware telesupport calls
DSN%TELESUPPORT_SYSTEMS	Systems hardware telesupport calls
DSN%TELESUPPORT_PARTS	Parts queries, part Nos etc
DSN%TELESUPPORT_AES	AES telesupport calls
DSN%TELESUPPORT	All other telesupport calls

11.15.4 The Configuration Menu

Selecting item 5 from the Main Menu will bring up the Configuration Menu:

1. AES Help
2. Customer Information
3. Update LAN Configuration
4. View LAN Configuration
5. View LAT Terminals
6. View Cluster Hardware
7. View System Hardware
8. View Cluster Software
9. View Registered Licenses
10. View Loaded Licenses
11. View HSC Configuration
12. View Inventory Reports
13. Update System Configuration
14. Toggle Print Option
15. View Special Instructions

This menu is used by the customer to keep an updated record of all hardware and software on their site. Do not use the Update options unless specifically asked to do so. You can however use any of the View options. Option 14 allows you to change the output from View to Print. (You will be prompted for a printer queue). This allows you to print off any of the configuration files.

If you are lucky enough to be using AES from a windows terminal, there is an extra configuration option called "Cluster Topology", which will draw quite impressive pictures of your systems.

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F A C T F L A S H

Options Affected: Tricom 10/42 Modem for AES
Submitted By: Dave Bazley
Date: 15-Jun-1993
Filing Instructions: File at end of Chapter 11, VAXsimPLUS(SDD) and AES, remove previous version dated 5-Jan-1993

Tricom 10/42 (AES) Modem setup

Trained or not, you may be asked to replace the modem used by AES. It is a Tricom Tornado 10/42 and requires a very specific setup to work properly.

Always use the settings shown below, as supplied by Pete Alvis (AES support @UVO) 19-Mar-92.

SWITCH SETTINGS:

a. Front Switch 2 DOWN, ALL others UP

b. Rear Switches ALL UP

NOTE: You have to "ping" off a strip of plastic to see the front switch.

CONFIGURATION COMMANDS:

To enter these commands, connect an ordinary VT type terminal (set to RS-232, Data Leads Only) to the DTE port of the modem.

```
AT&F            Factory Reset
ATS7=54         Carrier Wait
AT\X1           Pass ON/XOFF
AT\J0           Speed Adjust Disabled
ATS0=2          Auto Answer after 2 rings
AT\N0           Normal Mode MNP off
AT&C1           CD follows Carrier
AT\D3           DSR follows off hook, CTS follows CD
AT&D2           DTR controlled from DTE
AT:T14=10       Wait 1 sec after CD before sending connect message
AT@C1           Connect Mesage follows CD
ATX0            HAYES connect messages
AT$D2           Disable Diagnostics
ATV0            Short Messages
AT*E1           Enable Remote Configuration
ATE0            No Echo
AT*W            Save Configuration

AT\S            Display Settings
ATZ             Reset and load saved settings
```

NOTE: After you set ATE0 (No echo), you only get a "0" in response to commands.

Digital Internal Use Only

F A C T F L A S H

Options Affected: **Various**
Submitted By: **Dave Bazley for Paul Newby**
Date: **7-Sep-1993**
Filing Instructions: **File at end of Chapter 11, VAXsimPLUS(SDD) and AES**

VaxsimPlus Repair Log

Please read the following information, *even if your sites do not have VaxsimPlus installed.*

Recently there have been several occurrences where VaxsimPlus has remailed the customer and Basingstoke even though the faulty device has been repaired.

Example:

An RA90 begins to fail and logs a service request with the TSC. The call is diagnosed and an engineer replaces the failing FRU. Two days later or when VaxsimPlus is stopped and restarted the call is logged again. TSC diagnose the call and the engineer now replaces the second most likely FRU.

If the engineer or TSC were to look at the time span that the VaxsimPlus diagnoses covers, it becomes apparent that the second mail message is a duplicate of the first, and therefore no additional errors have occurred since the first FRU was replaced.

********** THIS IS NOT A BUG **********

VaxsimPlus will remail every two days if the VaxsimPlus repair log has not been filled out.

Therefore when repairing any Vax hardware please ask the customer if they are running VaxsimPlus. If they are then you must fill in the repair log as follows;

1. Log into the Vax using a privileged account ($ set proc/priv=syslck)
2. Type: $ Vaxsim/f repair
   This will prompt you for the device i.e.. 255DUA21:
   You will now be prompted for the date/time i.e.. 5-AUG-1993:17:00
   Finally you will be prompted for your action i.e.. "Rep HDA/Verify"
3. To verify your repair log type: $ Vaxsim/f show repair

```
    Device          Date/time              Action
$255$DUA21:   5-AUG-1993:17:00:00   "Rep HDA/Verify"
```

For further help on Vaxsim type Help Vaxsim at the $ prompt.

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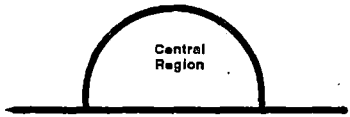

F A C T F L A S H

Options Affected: ALL RDC SYSTEMS
Submitted By: Jim Burnley
Date: 2-MAR-1990
Filing Instructions: FILE WITH APPENDIX C

RDC MODEMS REVISITED AGAIN

It has been noted that there is a flaw in my previous flash dated 1-DEC-1989. The modems when they leave the factory can be in one of two modes, the first is AT mode (using AT commands to set up the modem using a terminal) or V25 mode (entering commands from the front panel). After a lot of consultations with Dave Wrighton at RDC this is how the modem should be set.

1. Connect a VT type terminal directly to the modem using a BC22F cable (the one supplied with the RDC kit).
2. Set the terminal to speed 1200 8 bit no-parity.
3. Power up the modem
4. Type AT <CR> on the terminal
5. OK (is echoed)
6. Type ATV.25 (This disables AT mode and enables FRONT panel mode)
7. Using the modem front panel follow the sequence listed below:

Digital Internal Use Only

Depress key	Display readout
OPTION	OPTION:
1	1
ENTER	OP 01*1 (Forces modem to factory)
1	OP 01*1 (settings)
ENTER	OPTION:
2	2
ENTER	OP 02*1
3	OP 02*3
ENTER	OPTION:
3	3
ENTER	OP 03*1
2	OP 03*2
ENTER	OPTION:
19	19
ENTER	OP 19*1
3	OP 19*3
ENTER	OPTION:
26	26 (this option forces)
ENTER	OP 26*1 (answer mode)
3	OP 26*3
ENTER	OPTION:
ENTER	RESET
AUTO	

Then type the following On the terminal

1. Type AT <CR>
2. OK (echoed)
3. Type AT&W <CR>
4. Power cycle the modem

If all goes well then the modem should come finally with AUTO displayed. The only thing left to do is to contact RDC so that a link test can be performed.

Digital Internal Use Only