VAX HOTLINE

VMS V5 Installed on the VAX 8800

The VAX 8800 was recently upgraded from VMS version 4.7 to version 5, joining the VAX 6230 to form a VAXcluster. The primary difference between the old and new VMS is support for symmetric multiprocessing on systems with multiple CPUs (both the 8800 and 6230 have multiple CPUs). The upgrade also provides

- some command enhancements and new qualifiers
- new and enhanced MAIL commands
- improved tape-mount and label verification support in the BACKUP program

Any program that ran on version 4.7 will continue to run on the new VMS.

Version 5 was installed despite an expected slowdown in response time. The lack of stable network software limited the VAX 8800 to operating from only one CPU, delaying responses. This option was necessary in order to begin administrative use of the 6230, which requires version 5. The Center staff is testing a newer release of the network software and should have it installed this week, restoring full operation and faster response times.

To date, VMS version 5 appears to be stable. The only known problems have resulted from a change in VMS handling of so-called "captive" accounts, affecting users with account budgets. BACKUP utility users should also be aware that the program now enforces tape-label verification, unless the qualifier /IGNORE=LABEL is specified. Any additional problems with version 5 should be reported to the Consulting Office (Room 207, x4402) or via VAX MAIL, addressed to CONSULT.

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Online Library Catalog Debuts

VAXcluster users and those with workstations on UOnet can now search the U of O Library's catalog from the comfort of their home or office. The Knight Library staff is currently installing JANUS, an online catalog system that enables users to locate books by subject, author, or title.

JANUS is designed to be used most effectively on VT100-compatible terminals and microcomputers, though it can be used from other terminals. The system contains information on approximately 550,000 books, journals, videotapes, and sound recordings in the Library's collections, or on order. It also provides up-to-date information on which issues of journals have been received.

JANUS software is being installed and maintained solely by the U of O Library. Computing Center consultants and staff are not the appropriate persons to field questions on this system. Questions should be directed to the following Library personnel:

- **remote access** - Rick Gates, x3049
- **content, use of system** - reference librarians at Knight (x3053) and other branches
- **future enhancements, extra terminals, circulation** - Alice Allen or George Shipman, x3056

The Library will publicize developments in the JANUS system as they unfold. Watch future issues of *Computing News* for more information on JANUS.

help with disk repair, file conversions...

Center Sets Hours for Micro Services

Users needing help with file/format conversions and disk repair may now come to the Consulting Office (Room 207) during certain designated hours. These services are available at no charge, Tuesday through Thursday, from 2 to 4 pm.

The conversion service is designed to assist people in transferring microcomputer files from one format to another, or from one computer type to another. The disk repair service aids those who need to recover files or "trashed" disks. A variety of equipment and software is available to handle both 3.5" and 5.25" disks, and several formats.

These services are geared to situations requiring less than an hour of consulting help, or for training users to perform the procedures themselves. Those who have longer, periodic, or regular needs for these types of services will be referred to others who can provide them for a fee.

Discover Benefits of Shareable RTLs

Many users who develop their own VAX programs are familiar with VMS's libraries of pre-written routines, or Run-Time Libraries (RTLs). Most, however, are not aware that there are two types of RTL: an object library and a shareable image form of the same library.

When you link a program, the linker searches the object library for required routines, unless otherwise requested. Object library routine code is automatically included in the executable program (EXE) file. When you use the shareable RTL, a single image is executed dynamically at run time, with no code included in the EXE file.

There are four major advantages to using shareable RTLs:

- program files are smaller and cost less to store
- updates to RTL routines are automatically included in the program without relinking
- shareable programs can be created
- less system memory is used, since one copy of any routine is shared

To link a program using a shareable RTL,

1) First, create a linker options file containing entries for each library you want to use. For example, call it LINK_SHARE_RTL.OPT, and put it in a subdirectory [.TOOLS], as follows:

```
! LINK options file for shareable RTLs
!
sys$share:vaxcrtl.exe/shareable ! c
sys$share:cobrtl.exe/shareable    ! cobol
sys$share:forrtl.exe/shareable    ! fortran
```

2) Then, define a logical name in your LOGIN.COM file to identify the linker options file, e.g.,

```
$ define link_rtl [username.tools]link_share_rtl.opt
```

3) Include this name and add an options qualifier whenever you link a program:

```
$ link filename(s),link_rtl/options
```

STAT CORNER

SAS Updates

There's lots of news for SAS users this month: a new version of SAS was installed on the VAX...new SAS/STAT (PC) procedures are available...and a new SAS reference book has arrived in the Documents Room.

Version 5.18 Installed

All VAX/VMS SAS users are now running under SAS version 5.18. New features include

- logical name SAS$INIT instead of SAS$USROPT (for commands to be executed automatically at entry)
- PROC MODECLUS, a procedure for clustering observations based on non-parametric density estimates
- a new LOGLIN statement in PROC CATMOD to specify log-linear model effects
- SUGI procedure PROC QUANT1, to perform analyses based upon Hayashi's Type I quantification theory for multidimensional categorical data
- a NODUPLICATES option for PROC SORT
- a micro-to-host link that allows you to execute VAX 8800 SAS/Graph commands from a microcomputer (output is displayed on a CGA or EGA PC managed by SAS/PC 6.03).
- SAS/Graph drivers for PostScript devices at 72/150/300/720/1200 DPI
- ASCII-EBCDIC and EBCDIC-ASCII functions, and an informat to read IBM real binary data (important tools for reading IBM-format data tapes on the VAX with SAS).

For details about these and other new features, see *SAS Technical Report P-182,...Release 5.18*, available in the Documents Room (205), or order it directly from SAS's book sales department by calling (919) 467-8000.

New SAS/STAT 6.03 PC Procedures:

- PROC CORRESP, a weighted principal components analysis of contingency table data
- PROC LIFETEST, a procedure to handle right-censored data in computation of nonparametric estimates of survival distributions
- PROC PRINQUAL, a routine to obtain linear and nonlinear transforms of variables using alternating least squares
- PROC PROBIT, a maximum-likelihood estimation routine for discrete event data
- PROC TRANSREG, another alternating least squares routine

If you're currently leasing SAS/PC and would like to update your copy to include these routines, send 8 pre-formatted 5-1/4" DSDD floppy disks to Joe St Sauver at the Computing Center. You'll also need to order *SAS Technical Report P-179...* directly from SAS's book sales department (see phone number above).

New SAS Publication Arrives

The Documents Room has received a copy of Jay A. Jaffe's *Mastering the SAS System*, a comprehensive new book on the non-statistical aspects of SAS.