The VMSECURE package provides users with directory maintenance capabili-
ties plus additional capabilities relating to file system security.

The VMSECURE rules facility will allow you to explicitly state which
users can have access to your minidisks (providing more security than
simply using link passwords). You can also review who is linking to
your disks in their directories. The VMSECURE menu facility will
simplify the interface to the security system such that you will no
longer need to memorize or lookup commands.

VMSECURE will tell you when you last logged on and from what terminal
address. This will help you determine if someone else has been logging
into your account.

VM users can get access to VMSECURE functions by typing in the command
VMSECURE with no options. This command can only be used if you are
using a fullscreen terminal. Fullscreen terminals are those who get
access to VM via the VM1S1 connection or through remote 3278 IBM
terminals. If you are using a TTY device (VM1TWX or X.25 connections)
see the section on the MAINT subcommand. The MAINT subcommand can also
be used by fullscreen terminals; this allows bypassing of the menu
system.

After typing VMSECURE, when prompted, type your logon password and press
enter (in this document when it says press enter, this means press
return if you are on an HP terminal). This will display the USER
selection menu shown below.

```
+---------------------------------------------------------------------------
' Release 2.0  85/03/03        V M S E C U R E          (c) 1985, VM Software, Inc
'
'                        * * * User Selection Menu * * *
'
'                    Userid: $OSUSER      Manager: ADMSTR
'
'              + - - - - - - - - - - - - - - - - - - - - - +
'              '                                           '
'              '  Selection:         For Device: 191       '
'              '                                           '
'              + - - - - - - - - - - - - - - - - - - - - - +
'
'                              Selections:
'
' 1 Logon Storage Size and Password    7 Define a Link to Another User's Minidis
' 2 Minidisk Link Mode and Passwords    8 Review/Remove Links By Other Users
' 3 Virtual Machine Options             9 Account Number and Distribution Code
' 4 Logical Line Editing Symbols       10 Delete a Link to Another User's Minidis
' 5 IPL System Name and Parameters     11 Review the Directory Entry
' 6 Screen Colors and Highlighting
' ------------------------------------------------------------------------------
' PA1: Cancel      PF1: Help        PF3: Quit       PF10: Print        PF12: En
+---------------------------------------------------------------------------
```

In the SELECTION field, type the number that corresponds to your selection. The selections and their uses are described briefly below:

1. Use Selection 1, Logon Storage Size and Password, to change the password or the default logon storage size associated with your userid. (** see Note C.)

2. Use Selection 2, Minidisk Link Mode and Passwords, to change the link mode for one of your minidisks and to change the read, write, and multiple passwords associated with the minidisk. (** see Note C.)

3. Use Selection 3, Virtual Machine Options, to select options associated with a userid and to enter a virtual CPUID to be associated with your userid.

4. Use Selection 4, Logical Line Editing Symbols, to change the terminal logical line editing symbols established by default when you log on to VM.

5. Use Selection 5, IPL System Name and Parameters, to define, change, or remove the name of the system loaded at logon as well as the parameters to be passed to that system.

6. Use Selection 6, Screen Colors and Highlighting, to change the colors and highlighting of 3279 color terminals.

7. Use Selection 7, Define a Link to Another User's Minidisk, to add a link to another user's minidisk.

8. Use Selection 8, Review/Remove Links by Other Users, to review or remove links that other users may have defined to your minidisk noted on the top of the menu screen.

9. Use Selection 10, Delete a Link to Another User's Minidisk, to delete a link to another user's minidisk in your directory entry.

10. Use Selection 11, Review the Directory Entry, to review your directory entry.

Notes:
A. The default virtual device address, 191, displays in the
    FOR DEVICE field. A virtual device address is required
    for Selections 2, 7, 8, and 10. If a virtual device
    address other than 191 is desired, type that address in
    the field.
B. Press ENTER to display the selected screen.
    When a screen is initially displayed, the cursor is
    positioned at the first non-blank data entry field. To
    perform a function, enter the data requested on the screen.
    Some fields on the screen may already have a value; these
    are default values provided where VMSECURE can anticipate
    the values you might want to enter. Default values can be
    overridden by placing the cursor at the field and entering
    the desired value. Some fields on the screen are left blank.
    In most cases, you do not have to fill in each field since
    VMSECURE can calculate the necessary values from data
    you have already entered.
    Most of the screens require that you enter at least one
    value. If VMSECURE determines that no fields were modified,
    the function is not performed and the menu is redisplayed.
    ****

    *** When you have finished entering data, press ENTER. ***
    ****

    If VMSECURE determines that you have left an essential field
    blank (that is, remaining values cannot be determined until
    a value is supplied for that field), the cursor is
    repositioned at that field. You must do one of the
    following:
            a. Enter a value to continue
            b. Press PA1 to cancel the VMSECURE command
            c. Press PF3 to quit the screen without performing the
                function.

C. Logon passwords and link passwords will not be displayed on your
    screen for security reasons. When you change your link passwords
    via Selection 2 from the main menu, be sure and delete the password
    that is currently in the field. Use the EOF key or DELETE LINE
    key on your terminal. In the case where the old password is longer
    than the new one, if you do not blank out the field first,
    the end of the old password will be appended to your new password.

On-line help is available for all VMSECURE commands, either from
the VMSECURE menu via the PF1 key or from CMS by typing HELP VMSECURE.

The MAINT subcommand for TTY devices

Users who get access to VM via the VM1TWX lines or through X.25
connections must use the MAINT subcommand for VMSECURE.

The format of the VMSECURE command becomes: VMSECURE MAINT function options
where the functions are listed and discussed briefly below.

1. DEFINE vaddr1 vaddr2
    Use the DEFINE function to change the virtual address of
    one of your minidisks to a new address. "vaddr1"
    specifies the existing virtual address of the minidisk,
    and "vaddr2" specifies the new address.
2. DELETE vaddr
    Use the DELETE function to delete your directory link to
    another user's minidisk. "vaddr" specifies the virtual
    address of the directory link you wish to remove.
3. DISTRIB newdist
    Use the DISTRIB function to change the distribution code
    associated with your spooled output.
4. HELP
    Use the HELP function to display a brief list of the
    MAINT subcommand functions and their operands.
5. LINK ownerid ownervaddr yourvaddr mode
    Use the LINK function to set up a directory link to
    another user's minidisk. Directory links are performed
    for you at logon. To define a directory link, you must
    know the appropriate minidisk password for the other
    user's minidisk and specify a virtual address not used
    by your virtual machine. If the Rules facility is
    installed, a rule must exist that allows you to link to
    the other user's minidisk.
6. MGRID
    Use the MGRID function to determine who your directory
    manager is.
7. MINIDISK vaddr
    Use the MINIDISK function to modify the link mode and
    read, write, or multiple passwords for your minidisks.
    "vaddr" specifies the virtual address of one of your
    minidisks.
8. PASSWORD
    Use the PASSWORD function to change your logon password.
9. REVIEW
    Use the REVIEW function to review all directory control
    statements in your directory entry. The REVIEW function
    provides information about existing directory links and
    all virtual addresses associated with your userid. This
    information is needed for the DEFINE, DELETE, LINK,
    MINIDISK, and RLINK functions.
10. RLINK vaddr
    Use the RLINK function to review and optionally remove
    any directory links that other users may have defined to
    one of your minidisks. This function is particularly

useful when you determine that data on your minidisk
should no longer be shared with other users. You should
review any existing directory links to determine if the
user should still have access to your minidisk. You
must specify the virtual address for your minidisk.
11. STORAGE sizeK'sizeM
    Use the STORAGE function to change the amount of virtual
    storage your userid is set up with at logon. Virtual
    storage can be modified after logon with the CP DEFINE
    STORAGE command.
12. TERM keyword ON'OFF'char'hex
    Use the TERM function to modify the terminal logical
    line editing symbols set for your userid at logon. The
    symbols that can be modified are: line end, line
    delete, character delete, and escape character.

VMSECURE Rule writing

In addition to the capabilities already discussed in this memo, VMSECURE also
provides users with the ability to write rules that control the access to
virtual machines and minidisks.

A VMSECURE rule is statement in the rules database that specifies whether
certain CP commands are to be accepted (ACCEPT) or rejected (REJECT).

You can specify rules for the following CP commands:

    . AUTOLOG
    . LINK
    . SPOOL
    . TRANSFER

The CP command you will be most concerned with is the LINK command which allows
users to access each other's minidisks.

Creating Rules

To initiate the writing of a rule, use the command VMSECURE RULES. This will
put you into XEDIT with a file called USERID USRRULES A0 where userid is your
userid. After you are done editing your rules file, use the FILE command to
leave the editor. This will save all of your changes to disk. If you wish to
leave the editor without saving your changes use the QQUIT command.

All rules go through the following hierarchy of rule evaluation.

    1. Explicit System rules - over ride rules are discussed below
    2. Explicit Group rules   - these are written by a group manager
    3. User specified rules   - these are written by the user
    4. Default group rules   - these are written by a group manager
    5. Default system rules   - default rules are discussed below

The general VMSECURE rule statement format is:

```
ACCEPT GROUPID AUTOLOG
REJECT USERID  LINK <VADDR <MODE>><( OPTIONS...<)>>
               SPOOL
               TRANSFER
               TAG NODEID
                                   OPTIONS:
                                   --------
                                   GROUP
                                   LOGPASS
                                   NOPASS
```

Some sample rules and explanations of what they do are listed below.

1. ACCEPT $OSUSER LINK 191 RR (NOPASS
   allows userid $OSUSER to link r/o to my 191 disk with no password

2. REJECT * LINK 192 *
   Reject any links from any user to my 192 disk
   If you write a rule such as this one you will need to write a rule
   explicitly saying that you can access your own disk.
   The rule would be ACCEPT userid LINK 192 * (NOPASS where
   userid would be your userid.

3. ACCEPT $OSUSER LINK 191 RR (LOGPASS
   allows userid $OSUSER to link r/o to my 191 disk with
   their logon password

4. ACCEPT ENGSRV LINK 191 RR (GROUP NOPASS
   Accept any links from any user in the ENGSRV group with no link
   password

In the near future an announcement will be made about a VMSECURE rules writing
class for users.

Explicit System Rules - Override rules

Override rules are rules at the system level such that no group or individual
rule can override. These rules include:

. no user can link multiwrite (MW) to another user's minidisk
. VMBACKUP will be allowed to link to anyone's disk in order
  to run the backup job

Default Rules

Default rules take effect when no rule exists for a particular command for your userid. The system default rules are as follows:

. If there is no rule for a minidisk access, links will only be
  allowed if a valid link password is given. This is the same
  as the security on the system before VMSECURE was installed.
  If you have no minidisk passwords, no links will be
  allowed to your disk.

. Autologs will only be allowed if the valid logon
  password is supplied.

. All spool and tag commands will be accepted.

Public Disks

Users can link to the following minidisks with no passwords

```
$SYSTEM$ 190 19D (HELP DISK) 19E (SHARED CMS EXEC'S AND MODULES)
BIPOLE 191
BMDP 191 192
CCCUTILS 191
CMSNEWS 191
COMPILER 192 (COBOL)  194 (FORTRAN)        198 (PL1)
         398 (PL1)    199 (FORTRAN TO PL/1) 200 (BEST/1)
         203 (SCRIPT) 205 (PL/1 F)
EXPRESS 191
PASCAL 191 192
SASMAINT 201 (79.6) 192 (LISREL) 206 (82.3)
SIMSCPT 191
TEX 191 192
YCALC 191
```

7BIN7   7BIN7

$SDRITT   MVS1   J3875   ====>>> 7BIN7   <<<====
VMSECURE LISTING   004030
10:02:11 16MAY86   ELIT
L193.SR1   A   PRINTER4

```
            **      SSSSSSSSSS  DDDDDDDDD   RRRRRRRRRR    IIIIII   TTTTTTTTTTTT  TTTTTTTTTTTT
         *********  SSSSSSSSSSSS DDDDDDDDDD  RRRRRRRRRRR   IIIIII   TTTTTTTTTTTT  TTTTTTTTTTTT
        ************ SS      SS  DD      DD  RR       RR     II         TT            TT
        **   **   ** SS          DD      DD  RR       RR     II         TT            TT
        ***   **     SSS         DD      DD  RRRRRRRRRR      II         TT            TT
        ********     SSSSSSSSS    DD      DD  RRRRRRRRR       II         TT            TT
         ********    SSSSSSSSS    DD      DD  RR    RR        II         TT            TT
           **  ***          SSS  DD      DD  RR     RR       II         TT            TT
        **   **   **         SS  DD      DD  RR      RR      II         TT            TT
        ************ SS      SS  DD      DD  RR       RR     II         TT            TT
         *********   SSSSSSSSSSSS DDDDDDDDDD  RR       RR   IIIIII       TT            TT
            **       SSSSSSSSSS  DDDDDDDDD   RR       RR   IIIIII       TT            TT
```

```
END                                                                                                              END
END        JJJJJJ   33333333     88888888   777777777777  555555555555                            AAAAAAAAAA     END
END        JJJJJJ  3333333333    8888888888  777777777777  555555555555                           AAAAAAAAAAAA    END
END          JJ    33      33  88      88          77   55                                        AA        AA    END
END          JJ        33      88      88          77   55                                        AA        AA    END
END          JJ        33      88      88          77   55                                        AA        AA    END
END          JJ    33333      8888888888         77   555555555                                  AAAAAAAAAAAA    END
END          JJ    33333      8888888888        77    555555555                                  AAAAAAAAAAAA    END
END          JJ        33     88      88       77              55                                 AA        AA    END
END          JJ        33     88      88      77               55                                 AA        AA    END
END       JJ   JJ  33        33  88      88      77       55    55                                 AA        AA    END
END       JJJJJJJ  3333333333  8888888888  77         555555555555                              AA        AA    END
END        JJJJJJ   33333333     88888888   77            5555555555                             AA        AA    END
END                                                                                                              END
```

```
            777777777777  BBBBBBBBB       IIIIII   NN        NN  777777777777
            777777777777  BBBBBBBBBB      IIIIII   NNN       NN  777777777777
                    77   BB      BB        II      NNNN      NN           77
                    77   BB      BB        II      NN NN     NN           77
                   77    BBBBBBBBB         II      NN  NN    NN          77
                  77     BBBBBBBBBB        II      NN   NN   NN         77
                 77      BB      BB        II      NN    NN NN         77
                77       BB      BB        II      NN     NNNN        77
               77        BB      BB        II      NN      NNN       77
              77         BBBBBBBBBBBB     IIIIII   NN       NN      77
              77         BBBBBBBBBB      IIIIII   NN       NN      77
```

$SDRITT   MVS1   J3875
VMSECURE LISTING   004030
10:02:12 16MAY86   ELIT
L193.SR1   A   PRINTER4

7BIN7   7BIN7

****