

# **doc/VMMInformer**

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# Chapter 1

## doc/VMMInformer

### 1.1 doc/VMMInformer.guide

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VMMInformer
(Graphical statistics program for use with VMM)
  User's Guide
  Version 1.0
  $Date: 95/05/11 22:23:42 $
  written by Torsten Ebeling
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```

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### 1.2 doc/NerveEX.guide/COPYRIGHT

#### 0. COPYRIGHT and AUTHOR

IMPORTANT NOTICE: This program is copyrighted by Torsten Ebeling, but can be freely distributed, provided that the following rules are

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## 1.3 doc/VMMInformer.guide/INTRODUCTION

### 1. INTRODUCTION

I'm really fed up with writing manuals. This manual will be very short. VMMInformer is a utility which displays information about VMM either as text or graphic. That's it.

VMMInformer requires VMM 2.1 or greater to be installed and running on your system. VMM is a virtual memory manager written by Martin Apel. VMM is available on AMINET and several PD/Shareware Disks or CDs.

## 1.4 doc/VMMInformer.guide/INSTALLATION

### 2. INSTALLATION

VMMInformer requires at least OS2.04 to run. VMMInformer also requires VMM 2.1 or greater to be installed and running on your system.

Execute the following steps to install VMMInformer:

- Copy
-

VMMInformer

to your preferred path for utilities.

- Copy VMMInformer.prefs to ENVARC: or generate your own preferences file.

Now change the preferences file at will.

I added three example preferences files to this archive in the prefs directory. Use these preferences files to get a first impression about the possibilities of VMMInformer.

VMMInformer tries to read the file specified as argument in the command line first. If you didn't specify a prefs-file it will try to read ENV:VMMInformer.prefs and after that ENVARC:VMMInformer.prefs.

See

Prefs-File syntax  
for more details on that.

## 1.5 doc/VMMInformer.guide/VMMINFORMER

### 3. VMMINFORMER

There is not much to explain about VMMInformer:

TEMPLATE: VMMInformer [prefs-file]

- At the top of the window all strings with the selected variables are displayed.
- Below the strings the graphical display begins. If you have defined any graphics you can change the size of the window with the sizing-gadget, otherwise there is no sizing-gadget visible.

See

Prefs-File syntax  
for more details on that.

## 1.6 doc/VMMInformer.guide/PREFS\_SYNTAX

### 4. PREFERENCES FILE - SYNTAX

IMPORTANT: DON'T edit the first line in the preferences file.

IMPORTANT: The declaration blocks must be defined in the following

- order:
1. "TASK/WINDOW"
  2. "VARIABLES"
  3. "STRINGS"
  4. "GRAPHIC"

IMPORTANT: The syntax of the preferences file will be checked but not all errors will be recognized by the parser.

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Possible errors during preferences file parsing:

Error no.:	Description:
1	out of memory
2	couldn't open config file
3	SYNTAX error
4	undefined identifier or use out of BEGIN ... END
5	argument missing
6	ULONG argument missing: ULONG required
7	BOOLEAN argument missing: "TRUE" or "FALSE" required
8	quote mark missing
9	invalid argument
10	total memory failure in 2 minutes ;-)
11	"ARRAY" is not a valid variable name
12	invalid use of variable
13	variable name not found
14	invalid array offset
15	no graphic defined

\*\*\*\*\*

Description of the preferences file syntax.

"//" starts a comment line

<BYTE>	:
<UBYTE>	:
<UWORD>	:
<ULONG>	:
<BOOLEAN>	: "TRUE" oder "FALSE"
<STRING>	: Must be enclosed by quotes. I.e.: "test test test" The string must be entered in printf-style format. A maximum of 6 variables is allowed. In title strings only one variable is allowed.
<VAR>	: One of the variables defined below (except d).
<FUNCTION>	: For the definition of functions you must use RPN-format. You can use the following variables for your calculations:

- a) Variables defined in the VMStat-structure:
- VMSize : Size of virtual memory
  - VMFree : Size of free virtual memory
  - Faults : Page faults up until now
  - PagesWritten : Pages written up until now
  - PagesRead : Pages read up until now
  - NumFrames : Actual no. of used frames
  - PagesUsed : Pages used on device
  - PageSize : Pagesize
  - TrapStructsFree: No. of free TrapStructs

See "VMM.guide" for more details.

- b) 4 more variables concerning free memory and the time:

- PUBLIC\_FAST\_Free: Free PUBLIC FAST memory
- CHIP\_Free : Free CHIP memory
- CurrentSeconds : Current time (seconds)
- CurrentMicros : Current time (micros)

c) All key variables:

Only SECONDS and MICROS may be of interest. (see below)

d) Constants: i.e. 1, 45, 100000, ... (no negative values)

e) All "ARRAY"-variables defined.

f) All variables defined with "DEFINE" (functions).

IMPORTANT: variables in e) and f) must be defined  
before they are used!!!

SYNTAX of functions:

IMPORTANT: Only ULONG variables are used for  
calculations. In complex calculations round  
off errors can occur. This doesn't mean your  
processor is faulty (INTEL outside). ALL  
variables are stored as ULONG integers.

All functions MUST be entered in RPN-format!

The following operators are allowed: +, -, \*, /, %

Examples:

i) Size of free virtual memory:

- DEFINE VMUsed = VMSize VMFree -

ii) No. of pagefaults during an update cycle:

- ARRAYFaults = Faults

- DEFINE Faults\_per\_update = ARRAYFaults(0) ARRAYFaults(-1) -

iii) No. of faults during 1 second:

- SECONDS = 20

- MICROS = 500000

- ARRAYFaults = Faults

- DEFINE Update\_Micros = SECONDS 1000000 \* MICROS +

- DEFINE Faults\_per\_update = ARRAYFaults(-1) ARRAYFaults(0) -

- DEFINE Faults\_per\_second = Faults\_per\_update 1000000 \* ←  
Update\_Micros /

--> START OF PREFERENCES FILE

\*\*\*\*\*

"BEGIN TASK/WINDOW" starts the definition of the task and window  
specific variables.

"VERSION = <UBYTE>" Version of preferences file format. DON'T EDIT

"REVISION = <UBYTE>" Revision of preferences file format. DON'T EDIT

"PRIORITY = <BYTE>" Priority of VMMInformer task (-128 bis 127).



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"LEFT = <UWORD>"      Left edge of window.
"TOP  = <UWORD>"      Right edge of window.
"WIDTH = <UWORD>"     Width of window.
                      (The height depends on the contents of the window.)

"ZOOMED = <BOOL>"     Open window zoomed (TRUE) or unzoomed (FALSE).
"ZOOMED_LEFT = <UWORD>" Left edge of the zoomed window.
"ZOOMED_TOP  = <UWORD>" Right edge of the zoomed window.

"BACKFILLCOLOR = <UBYTE>" Background color (pen no.)
"PANELCOLOR    = <UBYTE>" Panel color      (pen no.)
"TEXTCOLOR     = <UBYTE>" Text color       (pen no.)

"END" ends this definition.

*****
"BEGIN VARIABLES" starts the declaration of the variables.

"SECONDS = <ULONG>"
"MICROS  = <ULONG>" Update the window every x seconds and y micros.

"ARRAY<ident> = " Declaration of a variable which can be used in
                  calculations later. All values of this variable
                  are stored in an array. (Up to the actual screen
                  size). <ident> is the name of this variable.
                  The name must follow directly after the keyword
                  "ARRAY".
                  I. e.: "ARRAY0", "ARRAYVMFree", "ARRAYStarTrek", ...

                  Alphanumeric and numeric characters are allowed.
                  You can access the last value stored in the array
                  as follows:
                  - ARRAY<ident>(-1)
                  The value in parentheses can be between the
                  current screen width - 1 and 0 (a negative number).

"DEFINE <var> = <FUNCTION>" This defines a new variable which will be
                            recalculated every update cycle. <var>
                            is the name of this variable. After you
                            have defined this variable you can access
                            it in the following calculations. You
                            can't access a variable which has not
                            been defined before it is used for the
                            first time.

"END" ends this declaration.

*****
"BEGIN STRINGS" starts the definition of strings.

"TITLE = <STRING>[, <VAR>[, <VAR>]...]" Window title
"ZOOMTITLE = <STRING>[, <VAR>[, <VAR>]...]" Window title in zoomed state.

"TEXT = <STRING>[, <VAR>]" Strings defined in this way are displayed
                            at the top of the window in order of
                            their definition. <STRING> is the string
                            to be displayed in the window and <VAR>

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                                is the linked variable. <VAR> is optional.
"END" ends this definition.

*****
"BEGIN GRAPHIC" starts the definition of graphical displays.

"AUTOSCALE = <BOOLEAN>" TRUE  enables autoscale option.
                        FALSE disables autoscale option.
                        (see "EXCEED_COLOR").

"SHIFT = <UWORD>" Shift the graphic <SHIFT> pixels to the left when
                    the right window border is reached.

"COLOR      = <UBYTE>" Default color for the graphical display. (pen no.)
"EXCEED_COLOR = <UBYTE>" Color which is used to mark that the value
                        exceeds the graphical display.

"GRAPHIC = <VAR>" Variable which is displayed as graphic. The
                  graphics will be displayed one underneath the
                  other after all strings have been displayed in
                  the window.

"GRAPHIC_COLOR = <UBYTE>" Overrides the default pen no..
"GRAPHIC_HEIGHT = <UWORD>" Overrides the default height.
"GRAPHIC_AUTOSCALE = <BOOL>" Overrides AUTOSCALE option.

    "GRAPHIC_AUTOSCALE", "GRAPHIC_COLOR" und "GRAPHIC_HEIGHT" are always
    only in reference to the previously defined graphic.

"END" ends this definition.

*****
--> END OF PREFERENCES FILE

```

## 1.7 doc/VMMInformer.guide/TROUBLESHOOTING

### 5. KNOWN BUGS

This is the first release and there are no known bugs in this version. This doesn't mean there aren't any unknown bugs. If you find any bugs please mail them to me.

If VMM isn't able to start correctly for some reason, VMMInformer may hang. This is not an error but is due to VMMInformer waiting for a response from VMM which isn't able to respond.

## 1.8 doc/VMMInformer.guide/PLANS

### 6. FUTURE PLANS

- Rework the preferences file syntax.

## 1.9 doc/VMMInformer.guide/ACKNOWLEDGMENTS

### 7. ACKNOWLEDGMENTS

I would like to thank Martin Apel for providing me with ideas and helping me with problems.

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