# **OmniPayments**

OmniOffender User's Guide V2.4 November 10, 2015

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## 1 Introduction

OmniOffender is an easy to use, fast, interactive performance monitor. OmniOffender displays the CPU utilization of the system by CPU and process. OmniOffender will automatically detect and display potential system bottlenecks.

System resources monitored and displayed are:

- CPU time utilization by interrupt handler, system processes, and user processes.
- CPU resource usage by memory, IPC, interrupts, or TNS usage.
- Process utilization of CPU time, messages per second, pages of memory, page faults, receive queue depth.
- Disc utilization, request rate, I/O rates, receive queue depth by volume.
- File activity.

The displays may be bar graphs, or tabular, for all CPUs of the system, or a subset. OmniOffender may be used interactively in conversational mode or with automatic updates at specified intervals in multi screen block mode.

OmniOffender is a non-priv MEASURE application which is safe to use. It does not use privileged code to get measurement data. It does not MUTEX or access counters directly. It uses system and MEASURE callable procedures.

OmniOffender is much faster to use than MEASURE. It will automatically and very quickly configure the required measurement using MEASURE callable procedures.

#### 1.1 Only Two Commands!

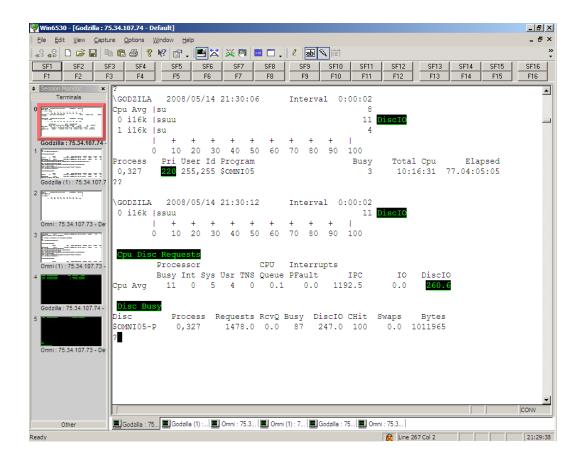
The only two commands necessary are the <ENTER> or <RETURN> key, and the "?" mark key.

<Enter> or <RETURN> will sample all CPUs and display the default report. The default report will display CPU busy, which processes are using the most CPU time, and any potential bottlenecks.

"?" will detail any bottleneck warnings. Bottleneck warnings are underlined on the terminal to the right of the CPU bar graph.

Monitored resources are: ready queue depth, memory queue depth, page life in seconds, send busy time, I/O rates, etc.

Note the "??" in the display below – the second "?" is the ? command requesting detail for the DiscIO warning.



#### 1.2 HELP

Type 'HELP' for a general introduction.

Type 'HELP ALL' for a complete help listing.

Type 'HELP < command >' command specific help.

#### 1.3 Command Overview

This section will give an overview of commands; detail command descriptions can be found in the next section.

Command entry is case insensitive.

The use of UPPER/lower case in command syntax is to indicate required characters.

Commands are:

Cpu, CPUS, DELAY, Disc, DISCS, ENV, EXIT, FC, File, FILES, GO, HELP, LOG, MEASURE, PRocess, QUIT, REPort, SAMple, STATS, STatus, Window, and '?'.

<RETURN>, <ENTER>, Cpu, Disc, or Process will sample the CPUs, processes, and discs and display the default report.

File will sample the CPUs, processes, discs, and files for the busiest processes AND display the file report.

SAMple will sample the CPUs, processes, discs, and files but displays nothing.

REPort can be used to display the most recent sample data collected by <RETURN>, Cpu, Disc, File, PRocess, or SAMple command.

Commands that control the displays:

REPort, DELAY, GO, Window, CPUS, DISCS, FILES

To display CPU activity:

Cpu [ BAR | BUSY | INTS | IPC | IPU | MEM | TMF | TNS ] [(<cpu-list>)]

To change the CPU selection criteria:

CPUS (<cpu-list>)

To display CPU info:

Cpu I NFO

To display program activity:

PRocess [ BUSY | FLTS | MEM | MSGS | RCVQ | TIME ] [(<cpulist>)]

STatus { cpu | cpu, pin }

To display disc activity:

Disc [ BAR | BUSY ] [(<cpu-list>)] [(<disc-list>)]

To display DISC path info:

Disc I NFO

To change the disc selection criteria:

DISCS { BUSY > <number> | RESET | (<disc-list>) }

To display file activity:

```
File [ ACCESSED | BUSY | BYTES | DISC | ESCALATIONS | INFO |
LOCKS | MSGS | READS | RECORDS | TIMEOUTS | UPDATES
| WRITES | WRITEREADS
]
```

To change file selection criteria:

FILES { ALL | NONE | [ (<device-type-list> ]) }

Typing '?' after a warning will present the detailed report with the appropriate statistics.

The process busy time is displayed as a percent of a CPU's available processor time.

CPU time in the bar graph is displayed as:

'i' = interrupt handler process time.
's' = process time of processes at priority 200 and above.
'u' = user process time
't' = TNS time.

DISC time in the bar graph is displayed as:

'w' = write qbusy time 'r' = read qbusy time More detailed information can be obtained with one of the display commands, or the default report can be changed.

Commands generally display either events per second, percent of a CPU per sample, or Queue counters. Queue counters (state time counters) display the number of items times how long each item was queued, each second.

The display commands can be restricted to search only certain CPUs or discs. Each command accepts a CPU list and/or a disc list at the end of the line, or a default CPU or disc list can be specified with the CPUS or DISCS command.

The syntax is for a <cpu-list> and <disc-list>:

```
<cpu-list> ::= { * | <cpu> [ , <cpu> ... ] | <cpu>/<cpu> }
```

<disc-list> ::= {  $* | $<vol> [, $<vol> ... ] }$ 

For example:

Cpu BUSY, MEM (0/3)

will display CPU busy and memory statistics for CPUs 0, 1, 2 and 3;

Disc BUSY (0, 1) (\$\*)

will display all discs in CPUs 0 and 1 overriding the default CPU and disc lists.

#### 1.4 Understanding Windows

A window is a 6530 conversational page. Eight windows of 24 lines are allowed. Conversational page mode is used when periodic sampling is enabled with the 'GO' command.

For VT100 only Window 1 is available.

Windows are used to create multiple reports which can be viewed by paging with the terminals next and previous page keys.

For example, the following specifies 6 windows. W 1, which matches the default, followed by the other CPU display options. "delay 60" specifies a 60 Second update interval when the GO command is used.

# **OmniPayments**

w 1, 24, cpu bar \*, pr busy \*
w 2, 24, cpu busy
w 3, 24, cpu int
w 4, 24, cpu ipc
w 5, 24, cpu mem
w 6, 24, cpu tns
delay 60

After entering "GO", OmniOffender will, every 60 Seconds (the interval was specified in the earlier "DELAY 60" command), display the specified 6 reports beginning with W 1, which matches the default report. Use the page up/down keys to view the remaining 5 reports. Each time the reports are displayed, the display will be homed to the first report.

To display the current report configuration enter "w". Assuming the above, the following is displayed

?w
Window[ 1 ] 24 lines
 Cpu BAR \*
 PRocess BUSY \*
Window[ 2 ] 24 lines
 Cpu BUSY \*
Window[ 3 ] 24 lines
 Cpu INT \*
Window[ 4 ] 24 lines
 Cpu IPC \*
Window[ 5 ] 24 lines
 Cpu MEM \*
?

To reset a report enter "w <window-number>". For example, the following will reset window 6 and display the report configuration:

```
?w 5; w
Window[ 1 ] 24 lines
    Cpu BAR *
    PRocess BUSY *
Window[ 2 ] 24 lines
    Cpu BUSY *
Window[ 3 ] 24 lines
    Cpu INT *
Window[ 4 ] 24 lines
    Cpu IPC *
?
```

The following will display a good summary of the system.

w 1, 24, cpu bar \*, pr busy \*
w 2, 24, pr busy
w 3, 24, disc busy
w 4, 24, file busy
delay 60

### 1.5 Sampling Explained

<RETURN>, <ENTER>, Cpu, Disc, or Process will sample CPUs, processes, and discs and then display the default report. File activity is NOT sampled in these instances to reduce CPU consumption by OFFENDER.

File will sample CPUs, processes, discs, and files for the <u>busiest</u> processes AND display the file report.

SAMple will sample the CPUs, processes, discs, and files but displays nothing. Option NOFiles will suppress file sampling.

Periodic sampling (initiated by the GO command), will always sample CPUs, processes, and discs. Files are only sampled if one or more of the windows displays a file report.

REPort can be used to display the most recent sample data collected by <RETURN>, Cpu, Disc, File, PRocess, SAMple command or by periodic sampling.

Displayed report values are computed by taking the difference between the current sample and the previous sample. As files are <u>not</u> sampled by <RETURN>, Cpu, Disc, or PRocess, there may be no values to display or the displayed values may be very misleading.

To examine file activity use:

- SAMple and REPort File or
- REPort File immediately after periodic sampling which includes one or more file reports.

# OmniPayments

## 2 Commands

Command entry is case insensitive.

The use of UPPER/lower case in command syntax is to indicate required characters.

For example, "CPU" in the CPU command may be entered as "C" or "CPU" using any mix of upper and lower case.

### 2.1 Cpu [<cpu-report-option-list>] [(<cpu-list>)]

Displays the selected CPU activity report/s for the specified CPUs.

```
<cpu-report-option> ::= { BAR | BUSY | INFO | INTS | IPC | IPU |
MEM | TMF | TNS
}
```

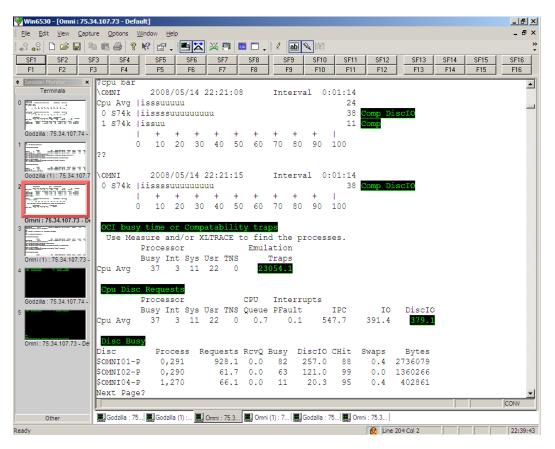
<cpu-list> ::= { \* | <cpu> [ , <cpu> ... ] | <cpu>/<cpu> }

- BAR (default) a bar graph of CPU time as follows:
  - i interrupt handler process time.
  - s process time for priority 200+ processes.
  - u process time below priority 200.
  - t TNS time.
- BUSY displays summary of key queues and CPU times.
- INFO displays CPU info. This may NOT be used in periodic sampling.
- INTs displays CPU interrupt rates.
- IPC displays local node message system statistics.
- IPU displays CPU IPU statistics (J-Series only).
- MEM displays CPU and process memory statistics.
- TMF displays CPU TMF statistics.
- TNS displays CPU time and emulation trap rate.

Sample outputs are shown below.

# **OmniPayments**

#### Cpu BAR report.



The underlined values for CPU 1 are potential performance issues. Use the '?' command as in the above example for additional information.

# OmniPayments

Cpu BUSY, INTs, and IPC reports.

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Cpu BUSY and I PU report; the I PU report is not available on H-Series.

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# OmniPayments

Cpu MEM, TMF, and TNS reports.

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Godzila       2008/07/24       21:53:27       Interval       0:00:10         Godzila       Total       Home       Remote       HomeNet       Abort Bkout         Trans       Trans       Trans Queue       Trans Queue       Trans Queue       Trans Queue         Omni: 75.34.107.73-Te       0       0.16k       6.4       6.4       75.0       0.0			
2       Total       Home       Remote       HomeNet       Abort Ekout         Trans       Trans       Trans Queue       Trans Queue       Trans Queue       Trans Queue       Trans Queue         Omni: 75:34.107.73 - De       0       116k       6.4       6.4       75.0       0.0       <		CODZILA 2008/07/24 21.52.27 Tetores1 0.00.10	
Trans       Trans       Trans       Queue       Trans       Queue <td< td=""><td></td><td></td><td></td></td<>			
Omni: 75.34.107.73 - De       0 i16k 6.4 6.4 75.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0         0 mil(1): 75.34.107.73 - De       0 i16k 6.4 6.4 75.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0         0 mil(1): 75.34.107.73 - De       0 mol(1): 75.34.107.73 - De         0 mil(1): 75.34.107.73 - De       0 i16k 9.0 1.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0		Trans Trans Queue Trans Queue Trans Queue Trans Queue	
Omni: 75.34.107.73 - Der       0 + 10 k       11.4       11.4       11.4       54.0       0.0		Cpu Avg 8.9 8.9 64.0 0.0 0.0 0.0 0.0 0.0 0.0	
3       1 116k       11.4       11.4 54.0       0.0       1       16.4       9       0       1       7       0       0.0<	Omni : 75.34.107.73 - Det	0 i16k 6.4 6.4 75.0 0.0 0.0 0.0 0.0 0.0 0.0	
Omni(1):7534.007.73-       GODZILA 2008/07/24 21:53:37 Interval 0:00:10         Processor       Emulation         Busy Int Sys Usr TNS       Traps         Cpu Avg 54 0 3 50 0 0.0       0 i16k 99 1 5 93 0 0.0         1 i16k 9 0 1 7 0 0.0       ?         S       NSBLDE1 (1)- Defaut         Other       Godzila .75         Godzila .75       Godzila (1):			
Omni(1): 75.34.107.73-       Processor       Emulation         Busy Int Sys Usr TNS       Traps         Cpu Avg 54       0       3       50       0       0.0         NSBLDE1: 15.178.197.71       0       1       16k       9       1       7       0       0.0         NSBLDE1 (1) - Defaut       0       1       7       0       0.0       0.0       1       16k       9       1       7       0       0.0         0       0       1       16k       9       1       7       0       0.0       0       1       16k       9       1       7       0       0.0       0       1       16k       9       0       1       7       0       0.0       0       1       16k       9       0       1       7       0       0.0       0       1       0       0       1       0	Extenses		
Omni (1): 75.34.107.73-       Busy Int Sys Usr TNS       Traps         Cpu Avg       54       0       3       50       0       0.0         0       i16k       9       1       5       93       0       0.0         NSBLDE1 (1) - Default       I       i16k       9       1       7       0       0.0         0       i16k       9       1       7       0       0.0       0       1         NSBLDE1 (1) - Default       I       i16k       9       0       1       7       0       0.0         Other       Godzila : 75.       Godzila (1) :       Omni : 75.3       Omni (1) : 7       NSBLDE1 ()       NSBLDE1 ()			
Cpu Avg 54 0 3 50 0 0.0 0 116k 99 1 5 93 0 0.0 1 116k 9 0 1 7 0 0.0 1 116k 9 0 1 7 0 0.0 2 3 5 NSBLDE1 (1) - Default Other Godzila .75. Godzila (1) Omni : 75.3 Omni (1) : 7 NSBLDE1 : NSBLDE1 ()	Omni (1) : 75.34.107.73 -		
0         i16k         99         1         5         93         0         0.0           NSBLDE1         15.178.197.71         i16k         9         0         1         7         0         0.0           S         NSBLDE1 (1) - Default         9         0         1         7         0         0.0           Other         Godzila         75         Godzila (1) :         0mni : 75.3         0mni (1) : 7         NSBLDE1 ()	4		
IIIIIIIIII       1 116k       9 0 1 7 0 0.0         S       NSBLDE1 (1) - Default       1 116k       9 0 1 7 0 0.0         Other       Godzila (1) : I Omni : 75.3 I Omni (1) : 7 I NSBLDE1 : I NSBLDE1 ()			
NSBLDE1 : 15:178:197.70     ?       S     NSBLDE1 (1) - Default       Other     Godzila : 75       Godzila : 75     Godzila (1) :			
NSBLDE1 (1) - Defaut           Image: Convert state s		2	
Other         Godzila (1) :  Omni : 75.3   Omni (1) : 7   NSBLDE1 :   NSBLDE1 (	5	-	
Other         Godzila (1) :  Omni : 75.3   Omni (1) : 7   NSBLDE1 :   NSBLDE1 (			
Other         Godzila (1) :  Omni : 75.3   Omni (1) : 7   NSBLDE1 :   NSBLDE1 (			
Other	NSBLDE1 (1) - Default		
Other			-
			CONV
	Other	Godzilla ; 75 Godzilla (1) Omni : 75.3 Omni (1) : 7 NSBLDE1 : NSBLDE1 (	
	Ready		21:52:06

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Cpu INFO report.

?cpu info

CPU 0 1 2	Type 2 11 11 11	SubT 3 3 3	Name NSX-D NSX-D NSX-D	Memc 65400 65400 65400	MB MB	16 16	age KB KB KB	Sysr NS7 NS7 NS7	X1	Inter 11 11 11	rna 3 3 3	l Info 1(X86) 1(X86) 1(X86)
3	11	3	NSX-D	65400	MB	16	KB	NS7	Xl	11	3	1(X86)
4	* * *	down	* * *									
5	* * *	down	* * *									
6	* * *	down	* * *									
7	* * *	down	* * *									
8	* * *	down	* * *									
9	* * *	down	* * *									
10	* * *	down	* * *									
11	* * *	down	* * *									
12	* * *	down	* * *									
13	* * *	down	* * *									
14	* * *	down	* * *									
15	* * *	down	* * *									

#### 2.2 CPUS

Displays the list of CPUs to be sampled.

?cpus
Cpus : 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
?cpus

## 2.3 CPUS (<cpu-list>)

Establishes the list of CPUs to be sampled.

<cpu-list> ::= { \* | [ - ] <cpu> [ , <cpu> ... ] | [ - ] <cpu>/<cpu> }

- \* Marks all CPUs to be sampled.
- - Subtracts CPUs from the already established list. This is used when there are configured down CPUs that should be ignored.

?cpus

```
Cpus : 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15

?cpus (-2)

Cpus : 0, 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15

?cpus (-10/14)

Cpus : 0, 1, 3, 4, 5, 6, 7, 8, 9, 15

? cpus (*)

Cpus : 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15

?
```

### 2.4 DELAY <number>

Establishes the default sample interval in seconds which is activated by GO.

The sample interval should be >= 10 seconds although the lower limit is one second.

A delay of zero will turn off sampling.

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### 2.5 Disc [<disc-report-option-list>] [(<cpu-list>)] [(<disc-list>)]

Displays the selected disc activity report/s:

```
<disc-report-option> ::= { BAR | BUSY | INFO }
<disc-list> ::= { $* | $<vol> [ , $<vol> ... ] }
```

<cpu-list> ::= { \* | <cpu> [ , <cpu> ... ] | <cpu>/<cpu> }

• BAR (default) a bar graph of disc busy time.

w - disc write qbusy time.

r – disc read qbusy time.

• BUSY Displays the following disc volume statistics.

Disc Busy – Total time that the disc was reading or writing.

- IOs Physical IOs per second. Includes reads, writes, and control operations
- Bytes Bytes transferred per second to and from the disc.
- Reqs Logical disc requests. May not result in a physical IO if it was for control information or a hit in the disc cache.
- Chits Cache Hits. Percentage of cache hits for both reads and writes on all four DP2 disc caches.
- RcvQ the receive queue average depth of the head disc process. Queue length, not queue time is displayed.
- INFO Will display DISC path info.

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Disc BAR and BUSY reports. Note the command "discs busy > 2", this overrides the default threshold of 20% and was done so as to create output.

😻 Win6530 - [Omni : 75.34.107.73 - Default]	_ # ×
Ele Edit View Capture Options Window Help	- 🗗 ×
🔐 🔐 🗅 🖆 🖶 ங 📾 🎒 የ 🕺 🔛 🗶 💥 🖤 🖬 🗖 🦯 🦯 🚺 🔽 🕅	*
SF1         SF2         SF4         SF5         SF6         SF7         SF8         SF10         SF11         SF12         SF13         SF14         SF15	SF16
F1         F2         F3         F4         F5         F6         F7         F8         F9         F10         F11         F12         F13         F14         F15	F16
• Session Monitor × Pdiscs busy > 2	
Terminals Disk selection criteria	
Drive busy >= 2 %	
or Becaive 0 >= 2	
Godzia:75.34107.74- 2 disc bar	
GG02H8:/5.34.10/./4- /GISC Dar 1 2008/05/14 22:25:17 Interval 0:00:43	
Disc Busy RcvQ CHit DiscIO	
SOMNT01-P   rw 6 0.0 97 7.3	
Godzila (1):75.34.107.7 SOMNIO3-P   WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW	
2 ENDERTHING SOMNIO4-P   TITTTTTTTTTTTTTTWW 54 0.0 97 81.9	
Omni: 75.34.107.73 - Dt 2015C DUSY	
3 OMNI 2008/05/14 22:25:21 Interval 0:00:03	
Disc Process Requests RcvQ Busy DiscIO CHit Swaps Bytes SOMNIO1-P 0,291 13.4 0.0 4 4.0 95 0.0 91168	
Omni(1):75.34.107.73. \$OMNI03-P 0,289 0.0 0.0 0 0.0 0 0.0 0 0.0 0	
SOMNT04-P 1,270 831.1 0.0 28 87.5 96 0.0 828711	
2	
Godzilla : 75.34.107.74 -	
5 Martin Contraction Contraction	
Omni: 75.34.107.73 - De	
	-
	CONV
Other Godzilla : 75 Godzilla : 175 Godzilla : 75 Gomi : 75.3	
Ready	22:44:03

### 2.6 DISCS

Displays disc selection criteria.

?discs

```
Disk selection criteria
   Drive busy >= 20 %
or
   Receive Q >= 2
Discs : $*
?
```

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### 2.7 DISCS (<disc-list>)

Establishes the list of disc volumes to measure.

```
<disc-list> ::= { $* | <vol> [, $<vol> ... ] }
?discs ($system $oss $omni03)
Disk selection criteria
    Drive busy >= 20 %
or
    Receive Q >= 2
Discs : $SYSTEM, $OSS, $OMNI03
?
```

### 2.8 DISCS <discs-control>

Disks are displayed if they exceed the configurable amount of disk busy or if the receive Q is greater than 2.

Each selected disk and its mirror remain in the disk display until reset.

Selected discs are listed by LDEV.

The list can be reset using the RESET control which empties the disk display list.

<discs-control> ::= { BUSY > <number> | RESET }

- BUSY > <percent> Only disks busier than <percent> will be displayed. The default is 20%.
- RESET Resets the disk display, disks will be added again when they meet the selection criteria controlled by the BUSY control

```
?discs busy > 50
Disk selection criteria
   Drive busy >= 50 %
or
   Receive Q >= 2
Discs : $SYSTEM, $OSS, $OMNI03
?
```

# **OmniPayments**

🕎 Win6530 - [Omni : 75.3	34.107.73 - Default]	_ 🗗 🗙
<u>Eile E</u> dit <u>V</u> iew <u>C</u> aptu	ure <u>O</u> ptions <u>W</u> indow <u>H</u> elp	- 🗗 ×
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SF1 SF2 S	F3 SF4 SF5 SF6 SF7 SF8 SF9 SF10 SF11 SF12 SF13 SF14 SF15	SF16
F1F2F	F3 F4 F5 F6 F7 F8 F9 F10 F11 F12 F13 F14 F15	F16
Session Monitor ×     Terminals	?discs busy > 50	
0	Disk selection criteria	
	Drive busy >= 50 %	
a 1931-54-65	or	
Godzilla : 75.34.107.74 -	Receive Q >= 2	
	?discs reset	
Godzilla (1) : 75.34.107.7	Please wait, initializing disc measurement	
2	Ldev 98 \$OSS mirror path not configured	
	Ldev 99 \$0MNI04 mirror path not configured	
	Ldev 100 \$OMNI03 mirror path not configured	
Omni : 75.34.107.73 - De	Ldev 101 \$OMNI02 mirror path not configured	
3	Ldev 102 \$OMNI01 mirror path not configured	
	Ldev 103 \$G0614 mirror path not configured	
Omni (1) : 75.34.107.73 -	Disc count 7	
4		
	Disc measurement initialized	
Godzilla : 75.34.107.74 -	?discs	
5	Discs : \$*	
Omni : 75.34.107.73 - Der		
0mm - 73.34.107.13 - Be		
	Godzilla : 75 Godzilla (1) : Gomni : 75.3	
Other		
Ready	😥 Line 281 Col 2	22:51:36

### 2.9 ENV

Displays OFFENDER VPROC, measure status, logging status, and setting by CPUS, DISCS, and FILES commands.

```
?env
OmniOffender T0658L06^10NOV15
System: \OMNI2 DJR 078153 L15.02.00
Measure File: $SYSTEM.OFFENDER.DOFF24, permanent.
Logging is off
Cpus : 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15
Disk selection criteria
  Drive busy >= 20 %
or
  Receive Q >= 2
Discs : $*
File device type selection
 COMM : off
 DISC
         : on
 OPERATOR : off
 PRINTER : off
 PROCESS : off
 RECEIVE : off
```

# **OmniPayments**

```
SCSI : off
SYSTEM : off
TAPE : off
TERMINAL : off
?
```

### 2.10 EXIT

Terminates OFFENDER.

### 2.11 FC

Allows correction of the previous command.

### 2.12 File [<file-report-option-list>]

Displays FILE activity sorted by the specific FILE entity counter; FILE reports are available only for the busiest processes.

```
<file-report-option> ::= { ACCESSED | BUSY | BYTES | DISC |
ESCALATIONS | INFO | LOCKS | MSGS |
READS | RECORDS | TIMEOUTS |
UPDATES | WRITES | WRITEREADS
}
```

- ACCESSED SQL records accessed per second.
- BUSY (default) Displays files sorted by file busy percent.
- BYTES Message bytes send & received per second.
- DISC Physical disc reads per second.
- ESCALATIONS Number of locks escalating to a file level lock.
- INFO FILEINFO calls per second.
- LOCKS Number of lock requests that waited per second.
- MSGS Messages sent per second.
- READS File reads per second.
- RECORDS SQL records used per second.
- TIMEOUTS Number of timeouts or cancels per second.

**OmniPayments** 

- UPDATES File updates or replies per second.
- WRITES File writes per second.
- WRITEREADS File deletes or WRITEREADS per second.

Example File BUSY report.

Vin6530 - [Omni : 75.3	4.107.73 - Default]								_ 8
le <u>E</u> dit <u>V</u> iew <u>C</u> apt	re <u>O</u> ptions <u>W</u> indow <u>H</u> elp								- 5
a 💭 🗅 🚅 🔛 🗉	) 🖻 🎒 🤋 🕺 🚰 🗸 🗖	🔀 💥 🎵 🗖 .	, l a	<u>b</u> 🔍 📰					
SF1 SF2 S	-3 SF4 SF5	SF6 SF7 SF8	SF9	SF10	SF11	SF12 S	F13   SF1	4 SF15	SF16
F1 F2 F	3 F4 F5	F6 F7 F8	F9	F10	F11	F12 F	13 F14	4 F15	F16
Session Monitor 🛛 🗙	2			· ·	/·				
Terminals	\OMNI 2008/05/	14 23:14:49	Inte	rval 0:0	0:01				
	Cpu Avg  suuu				12				
	0 S74k  suuuuuu				19				
	1 S74k  su				5				
Godzilla : 75.34.107.74 - I	+ +	+ + + +	+ ·	+ +					
	0 10 20	30 40 50 60	70	80 90 1	L00				
	Process Pri User	Id Program			Busy	Total Cp	u E	lapsed	
	0,646 150 30,2	255 ~TREL7/NEW_O	R_IM/0	mnirouter	c 10	0:05:0	1 15	:17:11	
Godzilla (1): 75.34.107.7	?file busy								
	1	Process	Busy	Msgs	Bytes	Reads	Writes	DiscRd	
	\$M01Q	1,671	98	0.0	136	0.0	0.0	0.0	
E7	\$ZTN1.#PTWRT67	0,1766	91	3.3	108	0.0	2.7	0.0	
0mni : 75.34.107.73 - De	?status 1,671								
	Process Pri User	Id Program			Busy	Total Cp	u E	lapsed	
	1,671 148 30,2	255 ~mqm/Shailes	h/MDAS	IM/MdaSir	n 0	0:00:0	0 0	:21:45	
	Process Name:	MDA							
Omni (1) : 75.34.107.73 -	Home Term:	ZTN1.#PTWRT6Y							
	Userid: N	IQM.MANAGER							
	Memory:	1 MB							
	Receive Queue:	0.0							
Godzilla : 75.34.107.74 - I		0							
	Receives/sec:	0.0							
	Sends/sec:	0.2							
		Process	-	Msgs	-				
0mni : 75.34.107.73 - De	\$OSS.#0001956	1,671	0	0.0	0	0.0	0.0	0.0	
	\$ZL01	1,671	0	0.0	0	0.0	0.0	0.0	
	\$YONK	1,671	0	0.2	333	0.0	0.0	0.0	
	\$M01Q	1,671	98	0.1	163	0.0	0.0	0.0	
	?								
									CONV
Other	Godzilla : 75 Godzilla (1) :	🔳 Omni : 75.3 🔳 Om	ni (1) : 7	Godzilla : 75	🔳 Omni : 7	75.3			
iv			1.4			Line 550 Col			23:33

Note the command "status 1,671" to obtain information regarding the process \$M01Q.

#### 2.13 FILES

Displays the device types for which file activity will be measured.

```
?files
```

File device type selection COMM : off DISC : on OPERATOR : off

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# **OmniPayments**

I	PRINTER	:	off
J	PROCESS	:	off
]	RECEIVE	:	off
:	SCSI	:	off
:	SYSTEM	:	off
5	TAPE	:	off
5	TERMINAL	:	off
?			

# 2.14 FILES [<device-type-list>]

Establishes the device types for which file activity will be measured.

- ALL Selects all device types.
- NONE Clears the list.

### 2.15 GO

Starts cyclic sampling and reporting.

q or <break> will terminate cyclic sampling and reporting.

Space bar or <enter> will report immediately.

Reports will be displayed in conversational page mode.

The first WINDOW will be at the 6530's page 0, the second at the next page and so forth.

For VT100 only one screen is available.

Multiple pages of reports can be specified with the WINDOW command and viewed with the terminal's local <page up> or <page down> keys.

## 2.16 HELP [ ALL | <command> ]

Use the "help" command to obtain syntax for ALL commands

```
HELP ALL
or a specific command
HELP <command>
<command> ::= { Cpu | CPUS | DELAY | Disc | DISCS | ENV |
EXIT | FC | File | FILES | GO | HELP | LOG |
MEASURE | PRocess | REPort | SAMple | STATS
| STatus | Window | '?'
}
```

### 2.17 LOG

Reports logging status.

```
?log
Logging is off
?
```

## 2.18 LOG [ TO ] <log-file>

Starts logging to <log-file>.

?log logfile
Logging to \$OMNI01.BILLD.LOGFILE
?

### 2.19 LOG STOP

```
Stops logging.
```

?log stop
Logging is off
?

### 2.20 MEASURE

Displays measure status.

```
?measure
Measure File: $SYSTEM.OFFENDER.DOFF24, permanent.
?
```

### 2.21 PRocess [<process-report-option-list>] [(<cpu-list>)]

Displays processes sorted by the requested metric.

- MSGS messages sent or received/Sec is >= 1/Second
- RCVQ average receive queue depth
- TIME total process time; this tends to favor I/O processes

# OmniPayments

Sample PRocess BUSY report.

Eds       Life       Capture       Options       Window       Life       Life       Capture       Captu	🅎 Win6530 - [Omni : 75.3	4.107.73 - Default]	_ & ×
SFI       S	<u>Eile E</u> dit <u>V</u> iew <u>C</u> aptu	ure <u>O</u> ptions <u>W</u> indow <u>H</u> elp	_ 8 ×
F1         F2         F3         F4         F5         F6         F7         F8         F3         F10         F11         F12         F13         F14         F15         F16           *         Concist Control         *         Terminal         *         Terminal         *         Edge Concerss         Fri User Id Program         Busy         Total Cpu         Elapsed           1,565         150         255,255         SOMNIO4         19         1.09:59:59         68.07:49:33           0 cotals         78.4107.74         1         1.09:59:59         68.07:49:35         1,565         100         220         255,255         SOMNIO4         219         1.09:59:59         68.07:49:35         1,270         220         255,255         SOMNIO4         11         1.09:59:59         68.07:49:35         0,288         220         255,255         SOMNIO4         2         14         120         220         255,255         SOMNIO4         2         11         1.09:59:59         68.07:49:35         1,274         220         255,255         SOMNIO4         2         11:23:03         68.07:49:35         1,274         220         255,255         SOMNIO4         2         10:05:26         68.07:49:35         1,274	🚙 🔐 🗅 🚅 🖬 🖣	b 🗈 👙 🤋 🚱 🛛 🛄 🖾 💥 💷 🗖 🗖 🗶 🖉 🔟 🔍 🖻	
Construction         Process         Pri User Id Program         Busy Total Cpu         Elapsed           1,270         2055,255         SOMNIO4         19         1.09:59:59         68.07:49:33           0 pri busy         Total Cpu         Elapsed         1         1         1.09:59:59         68.07:49:33           1 process         Pri User Id Program         Busy         Total Cpu         Elapsed           1,270         220 255,255         SOMNIO4         19         1.09:59:59         68.07:49:33           1 pri busy         Total Cpu         Elapsed         1         1.09:59:59         68.07:49:35           1,270         220 255,255         SOMNIO4         11         1.09:59:59         68.07:49:35           1,224         220 255,255         SOMNIO4         2         9:43:35         68.07:49:35           1,220         220 255,255         SOMNIO4         2         10:05:26         68.07:49:35           1,220         220 255,255         SOMNIO4         2         10:05:26         68.07:49:35           1,220         220 255,255         SOMNIO4         2         10:05:26         68.07:49:35           1,280         220 255,255         SOMNIO4         2         10:05:26         68.07:49:35<	SF1 SF2 S	F3 SF4 SF5 SF6 SF7 SF8 SF9 SF10 SF11 SF12 SF13 SF14 SF15	SF16
Terminals       Process       Pri User Id Program       Busy       Total Cpu       Elapsed         1,565       150       255,255       SOMNIO4.2LE33C.POP       30       3:01:23       16.12:28:53         Goodale: 75.34.00774-       19       1.09:59:59       66.07:49:35       1,270       22         1,270       220       255,255       SOMNIO4       11       1.09:59:59       66.07:49:35         1,270       220       255,255       SOMNIO4       11       1.09:59:59       66.07:49:35         1,565       150       255,255       SOMNIO4       11       1.09:59:59       66.07:49:35         1,284       220       255,255       SOMNIO4       2       9:43:35       66.07:49:35         1,284       220       255,255       SOMNIO4       2       9:43:35       66.07:49:35         1,284       220       255,255       SOMNIO4       2       9:43:35       66.07:49:35         1,284       220       255,255       SOMNIO4       2       11:53:03       68.07:49:35         1,280       220       255,255       SOMNIO4       2       10:05:26       68.07:49:35         0mm: 75:34:107.73-       0mm: 75:34:107.74-       1       10:05:26	F1 F2 F	3 F4 F5 F6 F7 F8 F9 F10 F11 F12 F13 F14 F15	F16
0       Itelestication       Itelestication       Itelestication       Itelestication       Itelestication         0       Itelestication       Itelestication       Itelestication		?pr busy	
1,270       202       255,255       \$CMN104       19       1.09:59:59       68.07:49:33         Ppr busy       Process       Pri User Id Program       Busy       Total Cpu       Elapsed         1,270       220       255,255       \$CMN104       11       1.09:59:59       68.07:49:35         1,270       220       255,255       \$CMN104       11       1.09:59:59       68.07:49:35         1,270       220       255,255       \$CMN104       2       14.228:55       0,288       220       255,255       \$CMN104       2       9:43:35       68.07:49:35       1,274       20       255,255       \$CMN104       2       9:43:35       68.07:49:35       1,280       220       255,255       \$CMN104       2       11:53:03       68.07:49:35       1,280       220       255,255       \$CMN104       2       10:05:26       68.07:49:35       1,280       220       255,255       \$CMN104       2       10:05:26       68.07:49:35       1,280       220       255,255       \$CMN104       2       10:05:26       68.07:49:35       1,280       200       255,255       \$CMN104       2       10:05:26       68.07:49:35       1,280       200       255,255       \$CMN104       2       10:05:26 <td>Terminals</td> <td></td> <td></td>	Terminals		
Optimized With Mithammanne Godzila: 75 34:107.74 - 10       Ppr busy Process       Pri User Id Program Process       Busy Total Cpu Elapsed 1.09:59:59       Elapsed 6.07:49:35         1			
Typ: Duty:         Godzile: 75:34:10774         1			
1       200       255,255       \$ONNIO4       11       1.09:59:59       68.07:49:35         1,555       150       255,255       \$ONNIO4.2LE33C.POP       8       3:01:23       16.12:20:55         1,224       220       255,255       \$ONNIO4       2       9:3:35       68.07:49:35         1,224       220       255,255       \$ONNIO4       2       9:3:35       68.07:49:35         1,224       220       255,255       \$ONNIO4       2       11:53:03       68.07:49:35         1,280       220       255,255       \$ONNIO4       2       11:53:03       68.07:49:35         1,280       220       255,255       \$ONNIO4       2       10:05:26       68.07:49:35         1,280       220       255,255       \$ONNIO4       2       10:05:26       68.07:49:35         1,280       220       255,255       \$ONNIO4       2       10:05:26       68.07:49:35         20       0mmi: 75:34:107.73-0       0mmi: 75:34:107.73-0       0mmi: 75:34:107.73-0       0mmi: 75:34:107.73-0       0mmi: 75:34:107.73-0         00mmi: 75:34:107.73-0       0mmi: 75:34:107.73-0       0mmi: 75:34:107.73-0       0mmi: 75:34:107.73-0       0mmi: 75:34:107.73-0			
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0       0			
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2       1, 274       220       255, 255       \$OMNI04       2       11:53:03       68.07:49:35         1, 280       220       255, 255       \$OMNI04       2       10:05:26       68.07:49:35         0mmi (1): 7534:107.73-0       0       0       0       0       0       0       0         0mmi : 75.34:107.73-0       0			
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Omni: 75.34.107.73 - Di         Omni: 75.34.107.73 - Di         Godzila : 75.34.107.73 - De         Other         Godzila : 75		2	
3		<b>.</b>	
Omni (1): 75.34.107.73 -         4         Godzila : 75.34.107.73 -         5         Omni : 75.34.107.73 -         0         Other         Godzila : 75			
Omni (1) : 75.34.107.73 -         4         Godzila : 75.34.107.74 -         5         Omni : 75.34.107.73 - Der         Other         Godzila : 75         Godzila : 75         Other			
4 Godzila : 75.34.107.74 - 5 Comri : 75.34.107.73 - Der Other Godzila : 75 Godzila (1) Omni : 75.3. Omni (1) : 7 Godzila : 75 Omni : 75.3.			
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5         Comni : 75.34.107.73 - Der           0 mni : 75.34.107.73 - Der         Conv           Other         Godzila : 75           Godzila : 75         Godzila : 75	4		
5         Comni : 75.34.107.73 - Der           0 mni : 75.34.107.73 - Der         Conv           Other         Godzila : 75           Godzila : 75         Godzila : 75			
5         Comni : 75.34.107.73 - Der           0 mni : 75.34.107.73 - Der         Conv           Other         Godzila : 75           Godzila : 75         Godzila : 75			
Omni : 75.34.107.73 - Der	Godzilla : 75.34.107.74 -		
Other Godzila : 75 Godzila (1) Godzila (1) : Godzila : 75 Godzila : 75	5		
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Other	Omni : 75.34.107.73 - De		
Other			-
			CONV
	Other	Godzilla : 75 🖪 Godzilla (1) : 🗐 Omni : 75.3 🗐 Omni (1) : 7 🗐 Godzilla : 75 🗐 Omni : 75.3	
	1		23:54:35

Priority is highlighted when it has changed since previous measurement interval.

# **OmniPayments**

### 2.22 QUIT

Terminates OFFENDER.

### 2.23 REPort <report-option>

In previous versions REPort was equivalent to Window 1, 24, <report-list>.

REPort is used to display the most recent sample data collected by <RETURN>, Cpu, Disc, File, PRocess, SAMple command or by periodic sampling.

REPort <report-option>

- < report-option > ::= { '?' | Cpu | Disc | File | PRocess | STatus }
- REPort Cpu must be issued before REPort ?.
- REPort File will produce no output if file sampling has not occurred.

#### 2.24 SAMple <sample-option>>

SAMple will sample the CPUs, processes, discs, and files but displays nothing.

SAMple [ < sample-option > ]

- < sample-option > ::= { Files | NOFiles }
- Files, which is the default, will cause file sampling.
- NOFiles will suppress file sampling. In this case REPort File will produce no or misleading output. <u>Using this option is discouraged.</u>

**OmniPayments** 

### 2.25 STATS

Displays current sampling statistics -- this is developer info.

?stats Stats -- this is developer info. Errors are "normal" and expected! 0 CONFIG\_GETINFO\_BYNAME\_ errors 0 MEASREADACTIVE errors 0 MEASREADACTIVE warnings 4 CPU records 4 TMF records 1115 PCBs in use 1115 PCBS IN use 1115 sampled 0 new 0 changed 0 deleted 6 PROCESS\_GETINFOLIST\_ calls 0 PROCESS\_GETINFO\_ calls 0 MEAS\_READACTIVE\_ calls 0 File lists in use 0 new 0 deleted 0 Files in use 0 sampled Processes 0 MEAS\_READACTIVE\_ calls 0 sampled 0 new 0 changed 0 deleted 30 Disk volumes 60 sampled paths
0 updated paths

?

### 2.26 STatus <cpu> [ , <pin> ]

Displays detailed statistics for all processes in a CPU or for the specified process.

Sample STatus reports.

Win6530 - [Omni : 75.3	4.107.73 - Defa	ault]											_ 8 ×
<u>File E</u> dit <u>V</u> iew <u>C</u> aptu	ure <u>O</u> ptions	<u>W</u> indow <u>H</u> el	p										_ 8 ×
🚙 🔐 🗅 🖙 🔛 🗉	h 🖪 🖨 💡	N? 🗗 🗸		× 💷	🗉 🗖 💶	🖉 🚺							>>
SF1 SF2 S	F3 SF4	SF5	SF6	SF7	SF8	SF9	SF10	SF11	SF12	SF13	3 SF14	SF15	SF16
F1 F2 F	3 F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	F14	F15	F16
Session Monitor ×	?status (	0.6	·	·				·			_/	-	
Terminals	Process		er Id	Program				Busy	Total	Crou	Fl	apsed	
0	0,6	200 25						0			69.04:	-	
	Process 1		SZNU					-					
	Home Terr			OP.#CLC	т								
Godzilla : 75.34.107.74 -	Userid:			r.Super	-								
1	Memory:			160 KB									
	Receive (	Queue:		0.0									
	Max RcvQ	:		3									
Godzilla (1): 75.34.107.7	Receives	/sec:	6	737.4									
2	Sends/sec	c:		0.0									
	?status (	D											
	Process	Pri Us	er Id	Program	ι			Busy	Total	Cpu	Ela	apsed	
Omni : 75.34.107.73 - De	0,0	201 25	5,255	\$Monito	r			0	1:20	0:57	69.04:	17:03	
3	0,1	210 25	5,255	\$Memory	.Manage	er		0	0:02	2:01	69.04:	17:03	
n. · 1. · · · · · · · · · · · · · · · · ·	0,2	210 25	5,255	\$Msnger				0	1:0	7:48	69.04:	17:03	
	0,4	211 25	5,255	\$SYSTEM	.SYS01.	OSIMAGE		0	0:00	0:02	69.04:	17:03	
Omni (1) : 75.34.107.73 -	0,5	201 25	5,255	\$0				0	0:20	6:42	69.04:	17:03	
4	0,6	200 25	5,255	ŞZNUP				0	0:00	0:01	69.04:	17:03	
	0,7	200 25	5,255	\$Z0				0	0:48	8:06	69.04:	17:03	
	0,8	201 25						0			69.04:		
Godzilla : 75.34.107.74 -	0,9	200 25	1 C C					0			69.04:		
5	0,10			\$SYSTEM				0		4:46			
	0,11		1 C C	SYSTEM				0		5:22			
<u></u>	0,12			\$SYSTEM				0		1:30			
Omni : 75.34.107.73 - Der				\$SYSTEM				0		1:34			
	0,14			SSYSTEM				0		2:28			
	0,15			\$SYSTEM	.SYS01	OZKRN		0		1:38	69.04:		
	0,16	199 25	1 C C					0		0:49	69.04:		
	0,17	180 25		SYSTEM				0		0:43	69.04:		
	0,18	175 25	5,255	SSYSTEM	LSYS01	SCP		0	0:00	0:20	69.04:	17:03	
												J	CONV
Other	Godzilla : 75	5  🛄 Godzilla	ı (1) : 💻	Omni : 75.3	. 📃 Omni	(1) : 7 📃 🕻	iodzilla : 7	5 🛄 Omni	: 75.3				
eadv								[	😫 Line 19	81 Col 2			20:14:01

Max RcvQ has been deleted as it is always 0 (Measure support was deleted long ago).

# **OmniPayments**

### 2.27 Window

Displays the configured reports.

```
?Window
Window[ 1 ] 24 lines
   Cpu Interrupts *
   PRocess Busy *
?
```

"Window 1, 24, CPU BAR \*, PR BUSY \*" is the default report for window 1.

### 2.28 Window <number>

Clears the reports for the specified window.

Window <number>

?w		ß display current windows
Window[1] 24 lines		
Cpu Interrupts	*	
PRocess Busy	*	
?w 2 24 cpu ipc 24		ß add 2 <sup>nd</sup> window
Window[ 2 ] 24 lines		
Cpu IPC	24	
?W		ß display
Window[ 1 ] 24 lines		
Cpu Interrupts	*	
PRocess Busy	*	
Window[ 2 ] 24 lines		
Cpu IPC	24	
?W 2		β clear 2 <sup>nd</sup> window
?W		ß display
Window[ 1 ] 24 lines		
Cpu Interrupts	*	
PRocess Busy	*	
?		

# **OmniPayments**

### 2.29 Window <number> <window-size>

Changes the specified window size.

Window <number> <window-si< th=""><th>Ze&gt;</th></window-si<></number>	Ze>
?W	ß display current windows
Window[ 1 ] 24 lines	
Cpu Interrupts *	
PRocess Busy *	
?w 1 48	ß change window size
Window[ 1 ] 48 lines	
Cpu Interrupts *	
PRocess Busy *	
?W	ß display
Window[ 1 ] 48 lines	
Cpu Interrupts *	
PRocess Busy *	
?	

#### 2.30 Window <number> <window-size> <report-list>

For VT100 only Window 1 is available.

<number> ::= { 1, 2, ... 8 } <window-size> ::= { 1, 2, ... } Note: best if a multiple of 24 <report> ::= <item> [ , <size> ] Note: a <report-list> is limited to 10 reports <item> ::= { Cpu <cpu-report-option> | Disc <disc-report-option> | File <file-report-option> | PRocess <process-report-option> } <size> ::= { \* | 1, 2, ... }

Note: best if a multiple of 24. \* indicates use the rest of the window for the report.

More help information is available for CPU, DISC , FILE, or PROCESS.

### 2.31 ?

'?' will report any problems noted during previous measurement cycle.

饕 Win6530 - [Omni : 75.3	4.107.73 - Default]	<u>_8×</u>
<u>Eile E</u> dit <u>V</u> iew <u>C</u> aptu	re <u>O</u> ptions <u>W</u> indow <u>H</u> elp	_ @ ×
🚙 🔐 🗅 🖨 🖬 🗉	a 🗈 👙 💡 😭 🗸 💻 🔀 💥 🖤 🔲 🗖 📜 🖉 📶 🔪 🗐	*
SF1 SF2 S	F3 SF4 SF5 SF6 SF7 SF8 SF9 SF10 SF11 SF12	SF13 SF14 SF15 SF16
F1 F2 F	3 F4 F5 F6 F7 F8 F9 F10 F11 F12	F13 F14 F15 F16
Session Monitor     X	\$	
Terminals	\OMNI 2008/05/15 20:33:07 Interval 0:00:32	<u> </u>
	Cpu Avg  isssssuuuuuuu 37	
	0 S74k  isssssssuuuuuuuuuu 49 Disclo 1 S74k  isssuuuuuu 26	
Godzilla : 75.34.107.74 - 1		
1	0 10 20 30 40 50 60 70 80 90 100	
	2.5	
Godzilla (1): 75.34.107.7		
2	OMNI 2008/05/15 20:33:15 Interval 0:00:32	
	0 S74k  isssssssuuuuuuuuuu 49 DiscIO	Offender User's Guide.v0.1.doc - Micr
	+ + + + + + + +   0 10 20 30 40 50 60 70 80 90 100	Offender oser's Guide.vo.1.doc - Mic
Omni : 75.34.107.73 - De	0 10 20 30 40 30 60 70 80 90 100	
5	Cpu Disc Requests	
	Processor CPU Interrupts	
Omni (1) : 75.34.107.73 -	Busy Int Sys Usr TNS Queue PFault IPC IO	DiscIO
4	Cpu Avg 49 3 19 26 0 0.7 0.0 683.8 156.2	150.7
	Disc Busy	Dutes
Godzilla : 75.34.107.74 -	Disc Process Requests RcvQ Busy DiscIO CHit Swaps SOMNI04-P 1,270 103.2 0.0 8 20.1 95 0.2	Bytes 292778
5	\$SYSTEM-P 0,257 1197.1 0.0 17 62.5 96 0.0	256349
	\$SYSTEM-M 0,257 0.0 0.0 17 87.0 0 0.0	356746
Omni : 75.34.107.73 - De	2	
0.11	Godzilla : 75 Godzilla (1) Godzilla (1)	j j jeouv
Other		
Ready	😫 Line	: 65 Col 2 20:50:48

Note the use of '?' to obtain information regarding disc I/Os.

### 3 Installation

OmniOffender is a MEASURE application which is safe to use. It does not use privileged code to get measurement data. It does not MUTEX, access counters itself, or fire up samplers. No calls to debug will be made.

OmniOffender is installed in \$SYSTEM.OFFENDER and needs to be progid'd to the super group if non-super group users are allowed to start the required measurement. Any operator id is fine. SUPER.SUPER should not be used.

Be sure to install the correct binary; there is a different binary for the H, J, and L releases of Guardian.

Use file and/or SAFEGUARD security to restrict access as is appropriate for the installation.

OmniOffender requires a license file which must be installed in \$SYSTEM.OFFENDER.LICENSE. The license file must be secured so OmniOffender can read it.

#### 3.1 Support

E-mail: <u>sales@OmniPayments.com</u>

Phone: 1-408-364-9915.

# **OmniPayments**

## 4 About OmniOffender

#### 4.1 Version 2.1

Version procedure: T0658G06^24JUL08 Version procedure: T0658H06^24JUL08 Version procedure: T0658J06^24JUL08

- Added support J-Series.
- Added Cpu I PU option (only supported on J-Series).
- Added Cpu TMF option.
- Cpu, Disc, File, and PRrocess options will default to BAR, BAR, BUSY, and BUSY respectively.
- Reports will print in the order input; for example Cpu BUSY, TMF will print the BUSY report first and TMF last. Previously the order was reversed.
- ENV command will report release and offender version.

#### 4.2 Version 2.2

Version	procedure:	T0658G06^26AUG08
Version	procedure:	T0658H06^26AUG08
Version	procedure:	T0658J06^26AUG08

• Changed to use standard Opsol License files.

#### 4.2.1 Version 2.2.1

Version	procedure:	T0658G06^17NOV08
Version	procedure:	T0658H06^17NOV08
Version	procedure:	T0658J06^17NOV08

• Fixed ABEND when license check fails.

#### 4.3 Version 2.3

Version procedure: T0658G06^07MAR11

Version procedure: T0658H06^07MAR11 Version procedure: T0658J06^07MAR11

- Cpu
  - o Added support for quad-core NB54000c system.
  - IPU option output is changed to allow support of quad-core processors.
  - TMF option output is changed. Average Response Time is displayed in place of queue time.
- CPUINFO
  - o A new command to display CPU info.
- Disc
  - Command output is changed. Discs will be listed in LDEV order. Previously the list was sorted in order the devices were added to the list.
  - Fixed command bug causing disc busy > 100%.
  - o Fixed command on blade systems.
- Disc
  - o A new command to display DISC info.
- PRocess
  - o FLTS will not include processes waiting on a page fault.
- PRocess MEM
  - Bug fix memory usage was incorrect.
- STatus
  - command will no longer report Max RcvQ; this is useless and not supported by MEASURE.

#### 4.4 Version 2.4

Version procedure: T0658H06^10NOV15 Version procedure: T0658J06^10NOV15 Version procedure: T0658L06^10NOV15

• Cpu

Bug fix -- in calculation of system busy time when a new process was detected. The bug caused system busy time to be incorrect and if less than 0 resulted in OFFENDER ABENDing.

• Cpu I NFO Added page size to display.

- **OmniPayments**
- Cpu TMF Bug fix -- in calculation of Average Response Time. The fractional part was truncated.
- ENV Command will display additional information.
- FILES A new command to select file types.
- PRocess

Bug fix -- OSS file name > 28 characters caused 100% CPU busy. If the file name is > 28 characters, the Guardian file name will be displayed.

- PRocess Bug fix -- OSS file name > 28 characters caused 100% CPU busy. If the file name is > 28 characters, the Guardian file name will be displayed.
- PRocess FLTS and MEM Added fault rate to the FLTS and MEM reports.
- SAMple A new command to sample the system; see section 2.24.
- REPort A new command to display data from the most recent sample; see section 2.23.
- Memory foot print is greatly reduced.
- Other minor display changes.
- Documentation changes and corrections.

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# **OmniPayments**

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