

# HP OpenVMS

---

## PERFDAT V4.7

### Release Notes

November 2015

**Revision/Update Information**  
**Software Version**  
**Operating System Version**

New manual.  
HP PERFDAT V4.7  
OpenVMS AXP V7.3-2 & higher  
OpenVMS IA64 V8.2 & higher



**Hewlett Packard**  
Enterprise

---

**November 2015**

© Hewlett-Packard Enterprise, 2015. All rights reserved.

Hewlett-Packard Company makes no warranty of any kind with regard to this material, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Hewlett-Packard shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material.

This document contains proprietary information, which is protected by copyright. No part of this document may be photocopied, reproduced, or translated into another language without the prior written consent of Hewlett-Packard Enterprise. The information contained in this document is subject to change without notice.

HPE, the HPE logo and OpenVMS are trademarks of HP.

VSI OpenVMS is a trademark of VMS Software Inc.

Microsoft, MS-DOS, Windows, and Windows NT are trademarks of Microsoft Corporation in the U.S. and/or other countries.

All other product names mentioned herein may be trademarks of their respective companies.

Confidential computer software. Valid license from HPE required for possession, use or copying.

Hewlett-Packard Enterprise shall not be liable for technical or editorial errors or omissions contained herein. The information is provided “as is” without warranty of any kind and is subject to change without notice. The warranties for Hewlett-Packard Enterprise products are set forth in the express limited warranty statements accompanying such products. Nothing herein should be construed as constituting an additional warranty.

Customer may not modify or reverse engineer, remove, or transfer the software or make the software or any resultant diagnosis or system management data available to other parties without HPE’s or its authorized service provider’s consent. Upon termination of the services, customer will, at HPE’s or its service provider’s option, destroy or return the software and associated documentation in its possession.

Printed in Austria.

---

## Contents

Preface .....	4
PERFDAT Installation Release Notes .....	6
1.1 Upgrade Path .....	6
1.2 Kit Content .....	6
Supported Versions .....	8
2.1 Supported OpenVMS versions .....	8
2.2 Discontinued OpenVMS support .....	8
New Features .....	9
3.1 VSI OpenVMS V8.4 1H1 support .....	10
3.2 HP PERFDAT OpenVMS data collector .....	10
3.2.1 New DEVICE statistics .....	10
3.2.2 New DEVICE.IOSIZE statistics .....	10
3.2.3 New DEVICE.FILE statistics .....	10
3.2.4 New DEVICE.PROCESS statistics .....	11
3.2.5 New DEVICE.PROCESS.FILE statistics .....	11
3.2.6 New SCSPORT.VC statistics .....	11
3.2.7 DEVICE.IOSIZE metric histogram .....	12
3.2.8 DSA device write I/O response time – iLOTime statistic .....	13
3.2.9 Device full state causes OpenVMS data collector to stop .....	13
Bug Fixes .....	14
4.1 Online performance alerting .....	14
4.1.1 Alert clear notification not triggered .....	14
Important OpenVMS patch advisory .....	15

---

# Preface

## Audience

This manual is intended for all system managers who have installed HP OpenVMS PERFDAT on their systems. Read this manual before you install, upgrade or use version V4.7 of HP PERFDAT.

## Document Structure

- Chapter 1 contains installation information
- Chapter 2 contains support information
- Chapter 3 New Features
- Chapter 4 Bug Fixes
- Chapter 5 contains OpenVMS patch advisories

## Related Documents

The manuals listed below are available in support of this version:

- HP PERFDAT V4.7 – Upgrade and Installation Manual
- HP PERFDAT V4.7 – Architecture and Technical Description
- HP PERFDAT V4.7 – DQL\$ Reference Manual
- HP PERFDAT V4.7 – PERFDAT\_MGR Reference Manual

All manuals are in *Portable Document Format* (PDF) and are included in the PERFDAT047.A installation kit.

Extract the *PERFDAT\_OPENVMS\_DOCU\_V47.ZIP* file using the OpenVMS BACKUP utility. Then transfer this file to a system such as a PC and UNZIP this file in order to access the individual manuals.

## Conventions Used in this Manual

- |                  |   |
|------------------|---|
| <i>Special</i>   | in examples indicates text that the system displays or user type input. |
| UPCASE           | in a command represents text that you have to enter as shown.           |
| <i>Lowercase</i> | indicates variable information that a user supplies.                    |

<i>Italics</i>	
[ ]	in a command definition, enclose parts of the command that a user can omit.
Key	indicates a named key on the keyboard; for example, RETURN
CTRL/x	is the symbol used to represent the pressing of a control key. It indicates that the user holds down the key marked Ctrl and simultaneously pressing the appropriate key.

---

## PERFDAT Installation Release Notes

This chapter contains information you need to know before installing or upgrading to HP PERFDAT V4.7.

HP recommends that you read the following manuals before installing or upgrading to HP PERFDAT V4.7:

- HP PERFDAT V4.7 – Release Notes (this manual)
- HP PERFDAT V4.7 – Upgrade and Installation Manual

### 1.1 Upgrade Path

You can upgrade directly to HP PERFDAT V4.7 from any HP PERFDAT V4.x release or any ECO level of HP PERFDAT V3.3. Use the command

```
$ MCR PERFDAT_MGR SHOW VERSION
```

to display the actual version of HP PERFDAT in use.

If you are still using HP PERFDAT V3.2 or an earlier version, it is recommended that you upgrade first to HP OpenVMS PERFDAT V3.3 and then to version V4.7. If you do not have version V3.3 please contact PERFDAT support

[PERFDAT@HPE.COM](mailto:PERFDAT@HPE.COM)

to obtain the necessary kit.

### 1.2 Kit Content

In order to reduce the size of the installation kit the ZIP file containing the NET-SNMP V5.1.2 packages (NET-SNMP\_512.ZIP) for Solaris 2.6, 7, 8 and 9 has been removed from installation kit PERFDAT047.A.

We recommend that these packages are installed on a Solaris system if you want to collect performance data from a Solaris system running one of

the operating system versions listed above with the HP PERFDAT SNMP extension.

The NET-SNMP V5.1.2 packages ZIP file can be downloaded from:

<http://www.perfdat.com/>

or

<http://www.hpperfdat.com/>

---

## Supported Versions

### ***2.1 Supported OpenVMS versions***

HP PERFDAT V4.7 supports the following OpenVMS versions:

- OpenVMS V7.3-2 AXP
- OpenVMS V8.2 AXP
- OpenVMS V8.3 AXP
- OpenVMS V8.4 AXP
- OpenVMS V8.2 IA64
- OpenVMS V8.2-1 IA64
- OpenVMS V8.3 IA64
- OpenVMS V8.3-1H1 IA64
- OpenVMS V8.4 IA64
- VSI OpenVMS V8.4 1H1 IA64

### ***2.2 Discontinued OpenVMS support***

The following OpenVMS versions are not supported by HP PERFDAT V4.7.

- OpenVMS V7.2-2 AXP
- OpenVMS V7.3 AXP
- OpenVMS V7.3-1 AXP

If you are still running HP PERFDAT on one of these OpenVMS versions and you need some of the new features provided by HP PERFDAT V4.7 please contact HP PERFDAT support (<mailto:PERFDAT@HPE.COM>). We will check if the required features can be back-ported to HP PERFDAT V3.3.



---

## **New Features**

This chapter contains information about new features of HP PERFDAT V4.7.

### 3.1 **VSI OpenVMS V8.4 1H1 support**

HP PERFDAT V4.7 is the first version of HP PERFDAT that supports VSI OpenVMS V8.4 1H1 on IA64.

### 3.2 **HP PERFDAT OpenVMS data collector**

#### 3.2.1 **New DEVICE statistics**

HP PERFDAT V4.7 provides new I/O average size statistics in the DEVICE metric as listed in table 3.1:

Tab. 3.1: New statistics of the DEVICE metric

Statistics	Description	Unit
iIOSizeAvg	Average IO size (read & write)	[kB]
iRdIOSizeAvg	Average read IO size	[kB]
iWrIOSizeAvg	Average write IO size	[kB]

#### 3.2.2 **New DEVICE.IOSIZE statistics**

HP PERFDAT V4.7 provides new I/O average size statistics in the DEVICE.IOSIZE metric as listed in table 3.2:

Tab. 3.2: New statistics of the DEVICE.IOSIZE metric

Statistics	Description	Unit
iIOSizeAvg	Average IO size (read & write)	[kB]
iRdIOSizeAvg	Average read IO size	[kB]
iWrIOSizeAvg	Average write IO size	[kB]

#### 3.2.3 **New DEVICE.FILE statistics**

HP PERFDAT V4.7 provides new I/O average size statistics in the DEVICE.FILE metric as listed in table 3.3:

Tab. 3.3: New statistics of the DEVICE.FILE metric

Statistics	Description	Unit
iIOSizeAvg	Average IO size (read & write)	[kB]
iRdIOSizeAvg	Average read IO size	[kB]
iWrIOSizeAvg	Average write IO size	[kB]

### 3.2.4 New DEVICE.PROCESS statistics

HP PERFDAT V4.7 provides new I/O average size statistics in the DEVICE.PROCESS metric as listed in table 3.4:

Tab. 3.4: New statistics of the DEVICE.PROCESS metric

Statistics	Description	Unit
iIOSizeAvg	Average IO size (read & write)	[kB]
iRdIOSizeAvg	Average read IO size	[kB]
iWrIOSizeAvg	Average write IO size	[kB]

### 3.2.5 New DEVICE.PROCESS.FILE statistics

HP PERFDAT V4.7 provides new I/O average size statistics in the DEVICE.PROCESS.FILE metric as listed in table 3.5:

Tab. 3.5: New statistics of the DEVICE.PROCESS.FILE metric

Statistics	Description	Unit
iIOSizeAvg	Average IO size (read & write)	[kB]
iRdIOSizeAvg	Average read IO size	[kB]
iWrIOSizeAvg	Average write IO size	[kB]

### 3.2.6 New SCSPORT.VC statistics

HP PERFDAT V4.7 provides new statistics in the SCS virtual circuit metric SCSPORT.VC as listed in table 3.6:

Tab. 3.6: New statistics of the SCSPORT.VC metric

Statistics	Description	Unit
iXmtWinFull	Xmt Window fullrate	[1/s]
iAvgRTT	Average round trip delay	[μs]
iCreditWait	Send credit wait rate	[1/s]
iBDLTWait	Buffer descriptor wait rate	[1/s]

### 3.2.7 DEVICE.IOSIZE metric histogram

This DEVICE.IOSIZE metric provides statistics per I/O size range and device.

Prior to V4.7 I/Os with a block size greater than 127 blocks were not counted in this metric. This metric contained the following elements:

Element Name	I/O size range
<b>IOSIZE001</b>	1 Blk
<b>IOSIZE004</b>	2 – 4 Blks
<b>IOSIZE016</b>	5 – 16 Blks
<b>IOSIZE032</b>	17 – 32 Blks
<b>IOSIZE064</b>	33 – 64 Blks
<b>IOSIZE127</b>	65 – 127 Blks

With V4.7, all I/Os up to a block size of 256 blocks are counted in this metric. Now it provides the histogram (elements in the metric) as listed below:

Element Name	I/O size range
<b>IOSIZE001</b>	1 Blk
<b>IOSIZE004</b>	2 – 4 Blks
<b>IOSIZE016</b>	5 – 16 Blks
<b>IOSIZE032</b>	17 – 32 Blks
<b>IOSIZE064</b>	33 – 64 Blks
<b>IOSIZE128</b>	65 – 128 Blks
<b>IOSIZE256</b>	129 – 256 Blks

### **3.2.8 DSA device write I/O response time – *iIOTime* statistic**

Prior to V4.7 the average physical I/O write response time (*iIOTime* statistic) of shadow sets was calculated based on the shortest write response time of its members. This had the impact that if the physical write response time of one shadow set member increased (i.e. due to a busy state of the array controller the shadow set member is accessed), the *iIOTime* statistic for the affected shadow set did not show up this increase of the physical write response time. Only the value of the *iRQTime* statistic increased.

With V4.7 the average physical I/O write response time of a shadow set represents the average write response time of its slowest member (longest physical write response time).

### **3.2.9 Device full state causes OpenVMS data collector to stop**

If, prior to V4.7, there was not enough disk space available (device full state) to create a new data file for a particular collection at day change, the OpenVMS data collector stopped this data collection but did not terminate (PERFDAT process was still available in the system list). At some customer sides this behavior had the impact that no OpenVMS data collection was running for several days until it was detected by system management.

If now the OpenVMS data collector detects a disk full state HP PERFDAT stops the affected data collection as was done prior to V4.7. In addition, if no other OpenVMS data collection is still running (keep in mind that the OpenVMS data collector can run up to 3 data collections in parallel), the process terminates.

---

## Bug Fixes

### 4.1 *Online performance alerting*

#### 4.1.1 Alert clear notification not triggered

The online performance alerting sub-system can be configured to send an alert clear notification whenever an alert condition for a particular statistic defined in an alert-block is no longer true and the actual value of the statistic has moved within the excepted range again.

If, prior to HP PERFDAT V4.7, more than one dedicated element was listed in the *ELEMENT:* tag of the alert block the alert clear notification was not triggered when the value of the statistic of one of these elements returned from the exception to the normal value.

This bug has been fixed with HP PERFDAT V4.7.

For detailed information about how to configure the online performance alerting sub-system please refer to the manuals:

- [HP PERFDAT – Architecture and Technical Description](#)
- [HP PERFDAT – PERFDAT\\_MGR Reference Manual – ENABLE ALERT](#)

---

## Important OpenVMS patch advisory

If one of the OpenVMS releases listed below is installed on your system:

- OpenVMS V8.3 AXP
- OpenVMS V8.3 IA64
- OpenVMS V8.3-1H1 IA64

please ensure that the following OpenVMS patches are also installed:

- OpenVMS V8.3 AXP           VMS83A\_SYS-V1000
- OpenVMS V8.3 IA64        VMS83I\_SYS-V0800
- OpenVMS V8.3-1H1 IA64   VMS831H1I\_SYS-V0300

These patches fix a bug in the OpenVMS PMS sub-system that may crash the system if the PMS sub-system is released by HP PERDAT.

The HP PERFDAT OpenVMS data collector allocates the PMS sub-system in order to provide the statistics for the following metrics:

- DEVICE
- DEVICE.IOTIMEHIST
- DEVICE.FILE
- DEVICE.PROCESS
- DEVCE.PROCESS.FILE

---

### Note

If you do not have these patches installed do NOT stop the HP PERFDAT OpenVMS data collector and do NOT upgrade HP PERFDAT (a HP PERFDAT upgrade implicitly stops the OpenVMS data collector) to V4.7 until you have installed these patches and you have rebooted your system.

---