HPE Data Collection Daemon (DCD) Release Notes

VMware ESXi

Version: 2.1.0.0

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About this document

This document provides details of the currently supported features, enhancement, installation, patches, bugs fixed across releases (if any), known problems, issues, their workarounds, policy details, and documentation details for Data Collection Daemon (DCD) on VMWare ESXi.

Revision History

The following table lists all the details about this document and its release history.

Date	**Document details**
6th June 2018	Initial release of DCD for VMware ESXi.
1st October 2018	Updated for 1.2.5 Release
13th May 2019	Updated for 2.0.0.0 Release
24th Sept 2019	Updated for 2.1.0.0 Release
14th July 2022	Updated for 2.1.0.0 Release

Table 1: Revision History

Acknowledgments

Open source tools

jsoncpp version 1.8.4: https://github.com/open-source-parsers/jsoncpp

Table of Contents

Introduction

This document discusses the most recent product information on Data Collection Daemon (DCD) which is supported on HPE Superdome Flex server running VMware ESXi host operating system.

Data Collection Daemon (DCD) is an agentless service for HPE Mission Critical Superdome Flex Servers. DCD proactively monitors the health of hardware components that are visible to running operating system instance and reports any errors to management firmware running on Rack Management Controller (RMC) of Superdome Flex. The management service running on RMC processes the data and serves it out of band to client applications.

Features Supported

This version of DCD includes the following major features on VMware ESXi:

- DCD collects inventory data for below listed components: ESXi Hypervisor
  SAS/SATA Controller - MegaRAID 9361-4i Controller
  Physical Drives - Superdome Base Chassis Drives (Internal Only)
  RAID volumes (Logical drives) hosted by MegaRAID 9361-4i Controller
  Ethernet devices – Intel adapter, Broadcom adapter and Mellanox adapter
- DCD proactively monitors the health of the MegaRAID 9361-4i Controller, attached drives,RAID volumes and Ethernet devices and forwards state change events to RMC.
- Logging is supported in DCD to log messages at different logging levels.
- DCD can push the inventory to RMC immediately upon request from RMC.
- A command line utility “dcdCli” is provided to test the DCD Event Infrastructure.

For more details on supported cards and drives, please refer to HPE Superdome Flex Documentation. For more details on supported inventory and events, please refer to README which is part of DCD documents in the /opt/hpe/dcd/ folder on product installation.

Enhancements and Defect Fixes

The following changes were introduced in DCD version 2.1.0.0:

- Added PartNumber field for LSI MegaRAID 9361-4i in DCD Inventory JSON.
- Modified PartNumber field in DCD Inventory JSON for physical disk drives controllers to use the Spare Part Number.
- Updated part number information reported for specific models of HPE Ethernet adapters.
- Fixed the issue of DCD IPv4Addresses field not being Redfish-compliant when no IPv4 address is configured on the managed server.
- Fixed issue of RAID10 logical volume (configured on LSI MegaRAID 9361-4i) incorrectly showing volume type as “RAID01” in the inventory string.
- Fixed the issue of physical location field for Ethernet device, Drives and Storage Controller being displayed as FFFFFFFFFFFFFFFF in inventory and events.
- Integrated with newer version of storelib libstorelib.so.07.1203.0100.0000.

The following changes were introduced in DCD version 2.0.0.0:

- Added support to inventory and monitor Ethernet devices.
- Added support for VMWare ESXi 6.7.

The following changes were introduced in DCD version 1.2.5:

- Added support for two or more MegaRAID 9361-4i controllers per partition.
- Integrated with newer version of storelib libstorelib.so.07.0309.0100.0800.
- Fixed issue of DCD events not being generated if the inventory-refresh happens at a time when a stream of events from MegaRAID 9361-4i are being processed by DCD.
- Fixed issue of missing inventory on a partition where it takes DCD a long time (several minutes or more) to inventory the partition's hardware configuration.

Prerequisites

DCD requires VMware ESXi device drivers to be installed on the Superdome Flex:

- For VMware ESXi 6.5 and 6.7, the drivers are available from HPE vibsdepot and can be used to build custom VMware vSphere distributions.

Refer the following Technical Whitepaper for detailed information: Running VMware vSphere on HPE Superdome Flex Family of Servers.

Supported Hardware and Software

DCD runs on all hardware models of HPE Superdome Flex Systems.

Supported Firmware:

- DCD requires HPE Superdome Flex firmware version 2.5.x or later.
- To enable all features introduced in this version of DCD, it is required to upgrade to HPE Superdome Flex firmware version 3.10.x.

Supported Operating Systems: This version of DCD is supported on HPE Superdome Flex native system with the following Operating Systems:

- VMWare ESXi 6.5 U1
- VMWare ESXi 6.5 U2
- VMWare ESXi 6.7 U1
- VMWare ESXi 6.7 U2
- VMWare ESXi 6.7 U3

Installation

Download the DCD offline bundle for VMware ESXi from the following location:

http://vibsdepot.hpe.com/superdome/sdflex/dcd/

DCD can be installed from the offline bundle using the following command:

```
# esxcli software vib install –d <absolute-path-to-DCD-offline-bundle>
```

To verify if DCD is installed and started, please follow below commands on VMWare ESXi distributions:

- You can use "`esxcli software vib list | grep -i dcd`" to verify if DCD is installed.
- DCD service details and status can be checked using the following command:

```
# /opt/hpe/dcd/scripts/dcd_service.sh status
```

Known Problems and Workarounds

1) In DCD inventory and events for RAID volumes, the "DeviceName" parameter is an empty value. This is a known behavior.

2) DCD will not process logical volume deletion if they are deleted using "storcli delete vall" command.

3) DCD will not provide physical location in the inventory and events for Ethernet devices in the Base IO. This is a known behaviour.

Troubleshooting

- If DCD service does not start after successful installation, please check the syslog (`/var/log/syslog.log`) for any indication of failures. Use the following command to check if the DCD daemon process is running:

```
ps -TCcjstv | egrep -w "(WID|dcdExecutive)"
```

- The "dcdCli" command line utility enables customers to trigger test event from DCD. Test event help validate DCD's ability to monitor and generate events for supported hardware. The DCD test event feature can be used as follows:

```
dcdCli [-h][-t <Event-ID> | --test-event <Event-
```

`ID>]` Example of sending DCD test event:

```
[root@h2-606:/opt/hpe/dcd/bin] dcdCli -t 708
dcdCli: Test Event sent to RMC. Please check logs for details.
[root@h2-606:/opt/hpe/dcd/bin]
```

- For further details about troubleshooting DCD please refer to README.

Support Information

You can report defects related to Data Collection Daemon (DCD) by contacting your local Hewlett Packard Enterprise representative.