

# DASH remote Management on HP Z workstations

**Introduction:** The new HP Z400, Z600, and Z800 Workstations provide a new level of remote management capabilities through the support of the DASH 1.1 management standard when configured with the Broadcom NetXtreme Gigabit Ethernet Plus card. Full remote power on/off control, Out-Of-Band (OOB) management, USB media redirection, text console redirection, and sensor information are some examples of these new capabilities.

## What is DASH ?

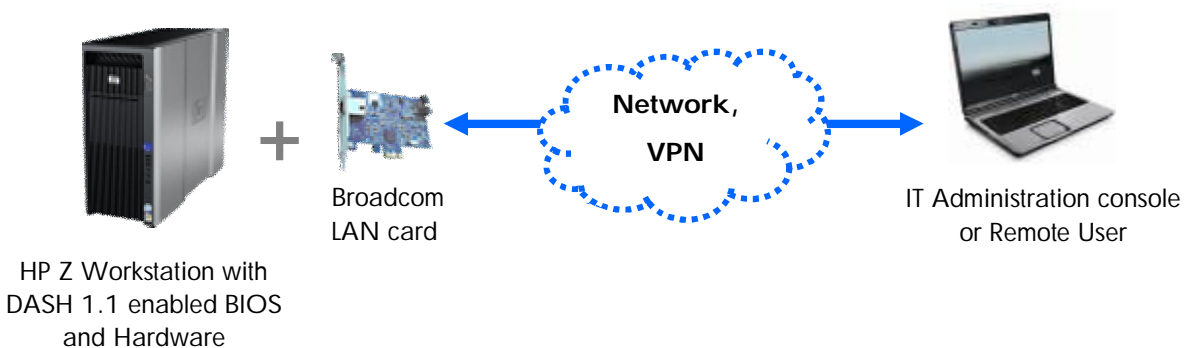
DASH (Desktop and Mobile Architecture for System Hardware) is an initiative to define standards and processes for over-the-wire management of desktops, workstations, laptops, and converged devices. It is defined by the Distributed Management Task Force (DMTF), an industry organization leading the development of management standards.

The DASH specification currently defines 2 versions: 1.0 and 1.1. The latter provides additional features like USB media redirection or text console redirection for instance, and is available on the new HP Z Workstations, when using the Broadcom NetXtreme Gigabit Ethernet Plus LAN card. This card includes a Management Controller that communicates with the system via the System Management Bus (SMBus), and a specific USB cable installed as a factory integrated option or HP Accessory Kit.

By using the auxiliary power present when the system is plugged into an AC outlet, the Management Controller is independent from the system's state and can monitor LAN traffic for DASH or ASF requests, and perform OOB tasks like power control, inventory, reporting system state, etc... Once the system is powered on additional services become available like remoting the BIOS post screen, additional event alerts, alternate boot paths, etc...

High level feature summary:

- OOB capabilities (*system can be managed in any power state from S0 to S5*)
- Boot redirection (*remote USB drive/key: USB media redirection, bootable ISO image hosted on http server, PXE boot*)
- Text redirection (*Serial-On-LAN: redirecting the BIOS screen, or DOS or Linux command shells, for remote viewing and keyboard control*)
- Full remote power control (*graceful and forced OS shutdowns, button power-on*)
- Event alerting
- Event logging
- Hardware and Software inventory
- Hardware reporting (*sensor state and value, like temperature and fan speed\**)



## Solutions

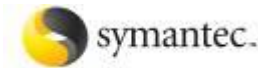
HP both developed and enabled a large set of tools and applications to take advantage of DASH on both HP Z Workstations and HP Business PCs. The solutions available cover a large spectrum of customer profiles, from the single professional user to large enterprises, and a large set of needs, from global turn-key solutions to programmable interfaces for custom applications.



### HP Software Solutions

- HP Client Automation: Basic, Standard and Enterprise

Designed for medium and large enterprises that require automated solutions for total system management of a large number of systems, from the hardware to the software level. Both HP Software Solutions and Symantec-Altiris now support DASH on HP Z Workstations and Business PCs



### Symantec Solutions

- Altiris Client Management Suite
- Altiris Out-Of-Band Management Solution
- Altiris Real-Time System Manager Solution
- HP Client Manager for Altiris



### HP Out Of Band Management Console

Web-based, remote management console that provides new DASH OOB management capabilities regardless of system power or OS state



### HP Client Manager Interface

With HP CMI users can manage HP systems through their own IT Management solution, by using scripts or API interfaces. HP CMI is based on industry standards (WMI, WBEM, SMBIOS, ACPI) and now includes support for DASH capabilities

## WebGui Management Console

Web browser based interface for basic remote system management, enabled in the LAN card, and accessible from virtually any web browser by just entering the card's IP address and logging in. It provides OOB DASH capabilities at the tip of a simple web browser without special infrastructure or software requirements.

## More Information

- Enabling DASH on HP Workstations: see the instructions in the HP Accessory Kit for the Broadcom NetXtreme Gigabit Ethernet Plus LAN card, or download that card's white paper from [hp.com](http://hp.com)
- HP Management central resource (*information, downloads, papers*): [www.hp.com/go/easydeploy](http://www.hp.com/go/easydeploy)
- DMTF web site (*DASH spec, papers, DASH 1.1 features and benefits*): [www.dmtf.org/standards/mgmt/dash/](http://www.dmtf.org/standards/mgmt/dash/)
- Note: *to access to the HP OOB Management Console software: go to easydeploy > HP Client Automation Center*

(\*): available after introduction

