



HP COMPAQ BUSINESS PC MANAGEABILITY

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Table of Contents:

Introduction	1
ASF	2
Intel AMT	2
DASH	2
Use Case – Asset Management	3
Use Case – Remote Remediation Services	4
Use Case – Proactive Management Services	5
For more information	8

Introduction

Corporate IT departments face tough challenges in providing large scale PC management. These challenges can become increasingly costly in terms of time, manpower, and budget. The widespread physical location of systems, system power state or a non-functional operating system can lead to inaccurate or even impossible management.

Management technologies are now available to ease client management with platform resident hardware and firmware solutions. HP offers the following solutions:

- ASF
- AMT
- DASH

AMT and DASH give corporate IT departments the means to remotely manage multiple clients in an Out-Of-Band (OOB) environment. OOB manageability allows PC control and configuration regardless of the system power state or presence of an operating system.

OOB manageability only requires that a platform be connected to a network and to a power source. Note: An OOB managed system must be connected to a power

source but does not have to be turned on. AC power from a wall socket or DC power from a battery are both acceptable.

ASF

Alert Standard Format (ASF) was the computer industry's initial attempt to standardize out-of-band management capabilities. Introduced in 2001, ASF is an older standard with limited functionality and industry support.

The goals of ASF are to provide the following:

- Advanced warning and system failure indication from managed clients to remote consoles.
- OS-absent functionality such as a presence heartbeat.
- OS-absent remote control capability such as remote power and boot control.
- Ensure interoperability between vendors of alerting and corrective-action devices.

Intel AMT

Intel Active Management Technology (AMT) is an Intel initiative to provide OOB manageability for desktop PCs and notebooks. AMT was introduced in 2006 and has continual development from Intel.

The goals of Intel AMT are to provide the following:

- OOB access with built-in manageability in the chipset.
- Asset management for tracking and inventory.
- Remote remediation services with redirection and remote control.
- Proactive management services with alerts, event logging and reporting.

Intel AMT is available on systems with Intel vPro Technology

DASH

DASH (Desktop and mobile Architecture for System Hardware) is an initiative to define protocols and processes for over-the-wire management of desktops, workstations, laptops, and converged devices.

DASH is defined by the Distributed Management Task Force (DMTF), an industry organization leading the development of management standards. A number of companies provided input into the creation of the specification including:

- Hewlett-Packard
- Intel
- AMD
- Broadcom

DASH is an alternative to Intel AMT and shares many of the same features and goals as Intel AMT. However, Intel AMT is proprietary to Intel and can only be used with high-end Intel desktop and mobile chipsets, whereas DASH is compatible with any chipset providing certain requirements are met.

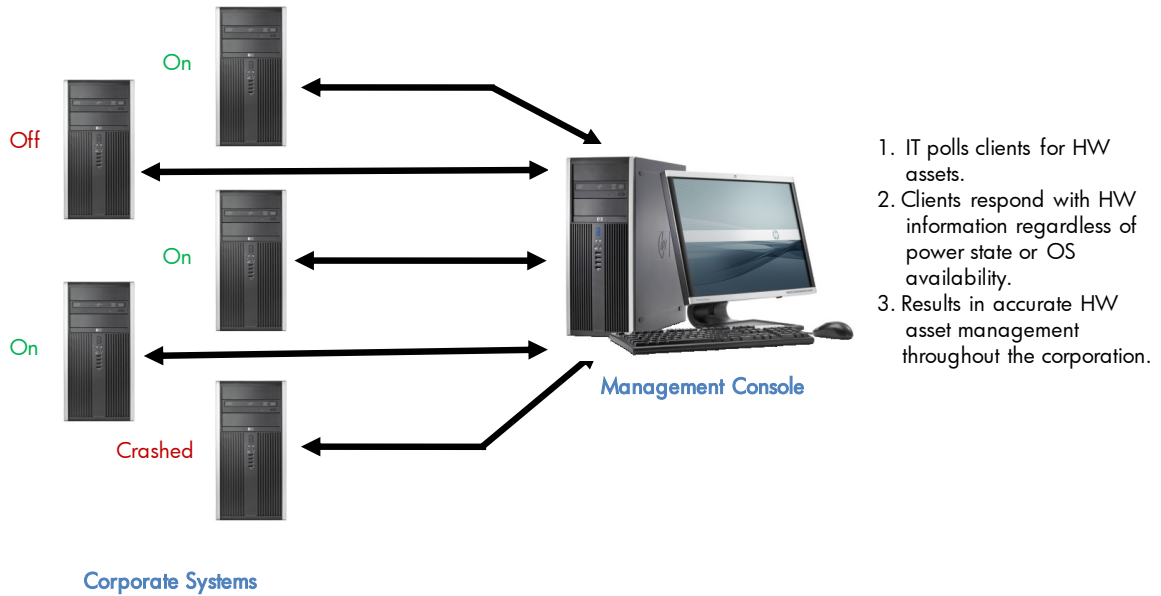
Intel AMT v3.2 and later contain DASH support although the level of support is dependent on the Intel AMT version.

Use Case – Asset Management

Asset management is the ability to remotely manage many systems with a single console to detect and track PCs and their components.

Management technologies use hardware and software inventory capabilities that are available at all times to give an accurate response.

Figure 1: Asset Management

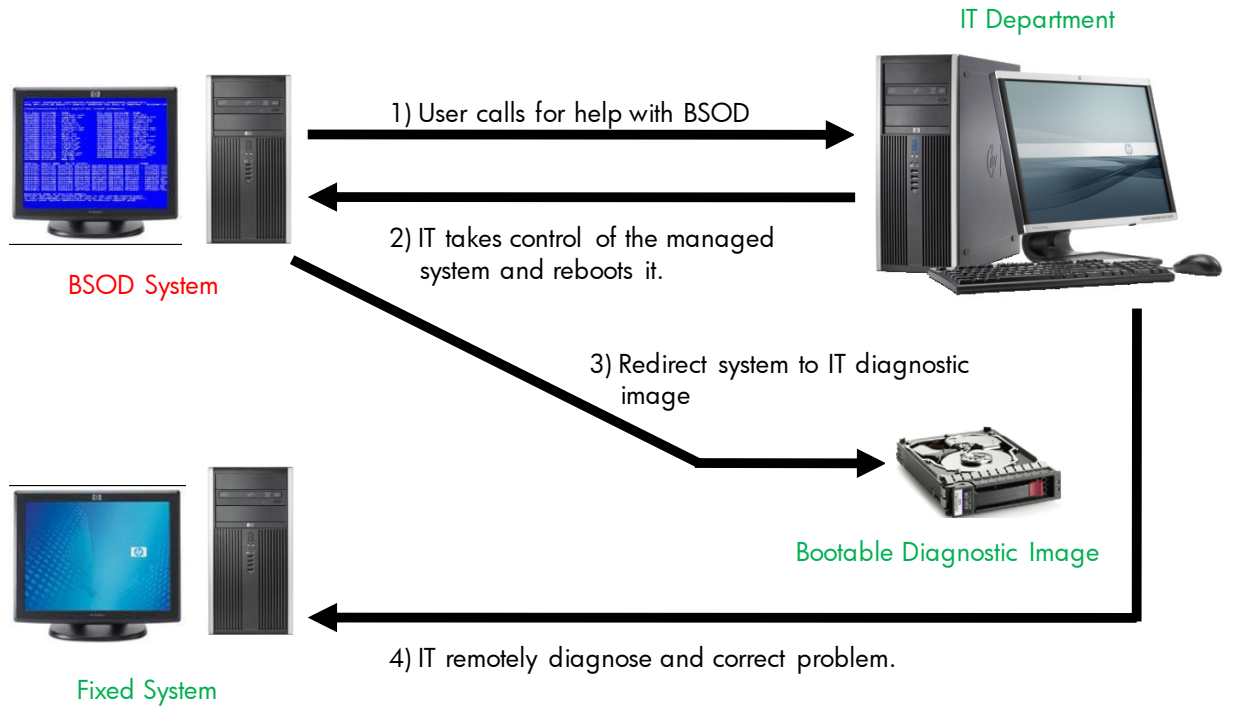


Use Case – Remote Remediation Services

Remote remediation is the ability to remotely diagnose and solve system malfunctions to reduce downtime and productivity loss.

Management technologies use media and text redirection along with remote power and booting to correct problems.

Figure 2: Remote Remediation

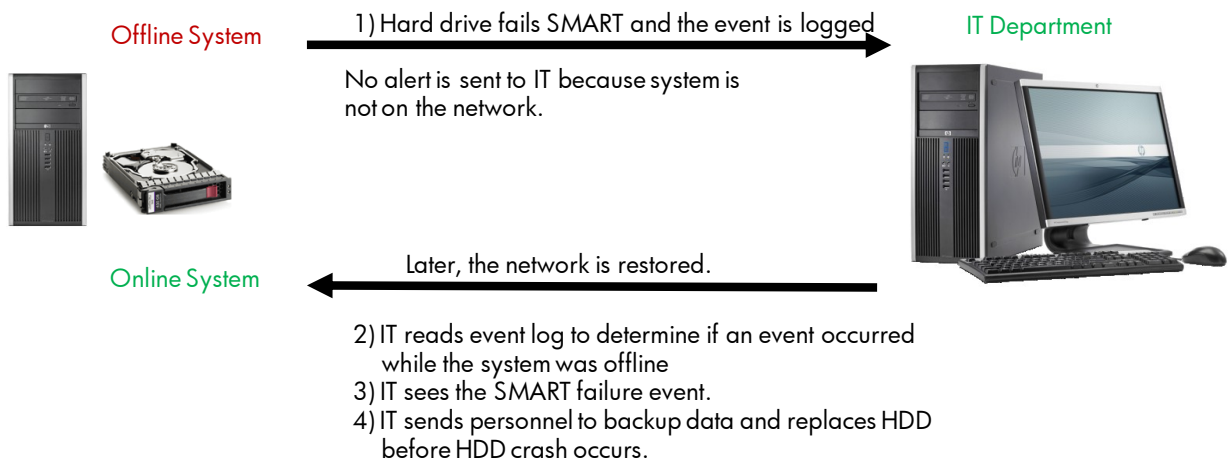


Use Case – Proactive Management Services

Proactive management is the ability to generate alerts on pre-determined events and log them for later analysis.

Management technologies use event-based alerting along with event logging and reporting to aid IT departments in detecting failing systems and correcting the problem before an actual failure occurs.

Figure 3: Proactive Management



High Level Comparison of Management Choices

	ASF <i>Alert Standard Format</i>	AMT <i>Active Management Technology</i>	DASH <i>Desktop and mobile Architecture for System</i>
Sponsor	DMTF	Intel	DMTF
Description	Standard defined out-of-band PC management (when OS is not running)	Intel initiative delivering enhanced out-of-band management	Next generation standard for secure out-of-band and remote PC management based on web services (WS-management)
Introduced	v2.0 – 2001	v2.x – 2006 v3.x – 2007 v4.0/5.0 - 2008	v1.0 – March 2007 v1.1 – December 2007
Industry support	Weak PC supplier support Uses unpopular connection & transport methods (non-secure) Poor console adoption due to non-normative standard	HP has offered AMT-capable desktops and notebooks since 2006 Console support provided by HP Software, Altiris, Microsoft, LANDesk, and others	Co-chairs: HP and Dell Key contributors: AMD (ATI), Broadcom, Dell, HP, IBM, Intel, NVIDIA Monitoring companies include: Symantec, Avocent LANDesk, Lenovo, Microsoft, Symantec
OOB Management	No – System must first be remotely woken to S0	Yes – System can be managed in any power state S0–S5	Yes – System can be managed in any power state S0–S5
Remote Control	Limited – Only remote reboot and wake	Yes – Media and text redirection, remote wake, reboot, shutdown	Yes – Media and text redirection, remote wake, reboot, shutdown
Remote Boot	Yes-PXE	Yes – PXE and IDE Redirect	Yes – PXE and USB Redirect
Event alerting	Yes – Preset (restrictive)	Yes – Policy based (flexible)	Yes – Policy based (flexible)
Event logging	No	Yes	Yes
Asset Information	No	Yes – Hardware and software inventory	Yes – Hardware and software inventory
Non-Volatile Storage	No	Yes – 3 rd Party Data Store	Yes – Opaque Data Store
Secure Communication	Limited – pre-shared keys	Yes – TLS, Kerberos	Yes – Kerberos
Transport Layer	UDP – often blocked by routers	TCP – preferred routing protocol	TCP – preferred routing protocol
Remote Control Protocol	RMCP – UDP based and obscure	SOAP / WS-MAN – well known	WS-MAN – well known

HP Desktop Implementation

HP Desktop System	Management Capabilities
	AMT
HP Compaq dc7700p Business PC (vPro SKU)	ASF
HP Compaq dc7700p Business PC (non-vPro SKU)	ASF
	AMT
	DASH
HP Compaq dc7800p Business PC (vPro SKU)	ASF
HP Compaq dc7800p Business PC (non-vPro SKU)	ASF
HP Compaq dc5850 Business PC	DASH (with DASH capable up NIC)
	AMT
	DASH
HP Compaq dc7900 Business PC (vPro SKU)	ASF
HP Compaq dc7900 Business PC (non-vPro SKU)	ASF
	DASH (with DASH capable up NIC)
HP Compaq dc7900 Business PC (non-vPro SKU)	ASF
	AMT
HP Compaq 8000 Elite Business PC	DASH
	AMT
HP Compaq 6000 Pro Business PC	DASH
	ASF
HP Compaq 6005 Pro Business PC	DASH

For more information

Additional manageability resources are available online

vPro Setup and Configuration
for the dc7800p Business PC
with Intel vPro Processor
Technology White Paper

<http://bizsupport.austin.hp.com/bc/docs/support/SupportManual/c01159932/c01159932.pdf>

vPro Prerequisites and Trade-
offs for the dc7800p Business
PC with Intel vPro Processor
Technology White Paper

<http://bizsupport.austin.hp.com/bc/docs/support/SupportManual/c01159976/c01159976.pdf>

HP Compaq dc7800p
Business PC with Intel vPro
Processor Technology and
Virtual Appliances White
Paper

<http://bizsupport.austin.hp.com/bc/docs/support/SupportManual/c01159978/c01159978.pdf>

HP Business Notebooks and
Desktop PCs with Intel Centrino
Pro and Intel vPro Processor
Technology Web Site

http://www.hp.com/sbso/solutions/pc_expertise/article/cpro-vpro.html

Implementing Out-of-Band
Desktop Management with
DASH White Paper

<http://bizsupport1.austin.hp.com/bc/docs/support/SupportManual/c01944865/c01944865.pdf>



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