Solution brief

Strong and streamlined BIOS protection and management

HP BIOSphere and HP Sure Start

The challenge

Keeping business PCs in top condition is a major priority for enterprise, midsize, and small businesses. If organizations lack the solutions to efficiently configure, manage, and protect their technology, they often spend more time on routine tasks, manual work, and employee information technology (IT) issues. This can cause productivity to suffer for employees and IT teams and may result in PCs being more vulnerable to malicious hackers.

In 2012, viruses and malware cost organizations $8.9 million USD, up from $6.5 million in 2010.[1] Increasingly, these attacks are targeting computers' BIOS—the electronic set of instructions that PCs use to boot up—in order to disable the PC or gain access to confidential data inside the organization. Incidents that compromise or corrupt the BIOS not only tend to cost companies money, but also can slow down or halt important tasks and negatively impact customer loyalty and confidence.

Troubleshooting the aftereffects of a BIOS incident or attack is not enough. Companies need PC platform features that help IT administrators configure BIOS settings easily, stay proactive about device health, simplify ongoing management, and protect against attacks—without interrupting employee productivity. In the event of a breach, they also need a way to proactively restore the BIOS—so employees can get back to work fast.

Solution overview

HP is shipping its latest desktops and notebooks with comprehensive management and security software solutions—HP BIOSphere and HP Sure Start—that provide enhanced protection against malicious attacks and accidental errors that can compromise the BIOS. These complementary solutions also save time and effort for IT administrators with straightforward configuration and management.

HP's industry-leading firmware ecosystem, HP BIOSphere provides an architecture designed to prevent, detect, and repair attacks. Simple to customize, HP BIOSphere helps businesses streamline management tasks and safeguard PC firmware to help maintain productivity and protect sensitive information. The solution can be integrated with existing security protections, configured remotely, and easily managed via automated updates.

HP Sure Start—the industry's first and only self-healing technology solution—works within HP BIOSphere to provide an added level of security for 2013 HP EliteBooks and HP ZBooks. Developed with HP Labs, HP Sure Start stores a clean portion of the BIOS in memory that third-party software or firmware can't access. In the event the BIOS is corrupted, HP Sure Start can recover the BIOS boot block—allowing employees to get back to work with minimal downtime. This hardware-based solution also protects the notebook's unique data, such as its serial number and factory settings.

HP BIOSphere allows IT teams to centrally configure and update BIOS settings across a PC fleet in just minutes—saving time and helping provide a consistent user experience.

How HP BIOSphere works

Problem
The IT manager at a large company needs to update the BIOS on dozens of new PCs in multiple locations. Manually configuring each machine would take hours and distract his team from other critical tasks.

Solution
Using the HP BIOSphere configuration utility, the IT manager can set up a standardized BIOS on all new PCs from one central location. This automated process takes just minutes, resulting in lower IT costs and greater productivity.

HP BIOSphere: Simplify configuration, management, and security

Set up your PCs for success

- Configure customized BIOS settings for your PCs at the factory, so that they work seamlessly with your security policies.
- Put your organization's logo on the startup screen to provide a consistent experience for employees.
- Set up your BIOS for your environment—locally or remotely—with system preferences, boot options, and external port options.
- Ensure your PC components are running smoothly, using sophisticated system diagnostics.

Manage the BIOS with ease

- Keep your BIOS up to date easily—perform cloud updates to the BIOS directly from your network or from hp.com.
- Rely on the highest standards for firmware updates and protection, developed to National Institute of Standards and Technology 800-147 guidelines to ensure only HP digitally signed code can update the BIOS.[6]
- Reduce onsite IT maintenance—remotely manage and protect your PC fleet.
- Conveniently set the system BIOS to the latest version or back to the factory default.

Thwart attackers with multipronged protection

- Squash threats almost instantly—HP BIOS Protection[2] helps prevent malware from updating the BIOS. If malicious code defeats the protections, this solution restores the BIOS to a known good state.
- Stop issues before they start by only letting authorized users start up the PC. With HP BIOSphere, you can use built-in pre-boot security features like Power-On Authentication with passwords or fingerprint identification.[3]
- Stay covered—HP Master Boot Record Security can back up and restore your Master Boot Record should it become corrupted or deleted. Also, desktop users can lock the Master Boot record to prevent it from being altered.

Protect data and identities—while keeping business moving

- Reduce IT intervention from lost passwords—users can quickly reset power-on passwords with HP SpareKey by answering personal questions.
- Keep unauthorized users from accessing data and prevent notebook hard drives from running without authorization, using HP DriveLock. For fast, secure access without entering a password, turn to HP Automatic DriveLock.[4]
- Find lost or stolen PCs fast—HP BIOSphere includes optional Absolute® Computrace software and the built-in Absolute persistence module to help IT administrators track a PC's location.[5]
- Destroy data on hard drives before system disposal and redeployment, using HP Secure Erase[6] or HP Disk Sanitizer.[7]

If a virus corrupts the BIOS on a notebook—preventing it from booting—HP Sure Start replaces the BIOS boot block from a separate memory within seconds, so the employee can get back to work.

How HP Sure Start works

Problem
An advertising executive travels to make a presentation at his client's office. His notebook's BIOS is attacked by an unknown virus. The BIOS is completely corrupted and his notebook is unbootable, so he can't access the files for his presentation.

Solution
HP Sure Start's crisis recovery mode replaces the corrupted BIOS boot block with a clean copy from a completely separate memory—all in a matter of seconds. The advertising executive can make his presentation on time.

HP Sure Start: Recover from threats fast

- Rely on the industry's first and only self-healing BIOS—HP Sure Start is a hardware solution independent of the CPU that minimizes downtime resulting from virus and malware attacks.
- Automatically detect corruption incidents and restore the BIOS almost instantly from a clean, protected copy of the BIOS boot block in a separate memory.
- Determine if there was an attack. With HP Sure Start's audit-log capabilities, you can find details about HP Sure Start events.

Why choose HP?

HP provides the right combination of hardware, software, and consulting expertise to help achieve your goals. We offer an industry-leading imaging and printing security framework to safeguard and manage data and documents throughout their life cycle. Contact your HP representative to get started identifying the solutions that will fit your business and help it thrive.

Learn more at
hp.com/go/protecttools

Developed with HP Labs

1 "2012 Cost of Cyber Crime Study," Ponemon Institute, October 2012, ponemon.org/library/2012-cost-of-cyber-crime-study.

2 May require a manual recovery step for recovery if all copies of BIOS are compromised or deleted. HP BIOS Protection auto-recovery feature is not supported on HP ElitePads or on HP Business Desktops introduced prior to 2013.

3 Desktop PCs only support password authentication. Power-On Authentication is not supported on HP ElitePad.

4 HP Automatic DriveLock is not available on desktop PCs.

5 Absolute agent is shipped turned off, and will be activated when customers activate a purchased subscription. Subscriptions can be purchased for terms ranging multiple years. Service is limited, check with Absolute for availability outside the United States. The Absolute Recovery Guarantee is a limited warranty. Certain conditions apply. For full details, visit: absolute.com/company/legal/agreements/computrace-agreement. Data Delete is an optional service provided by Absolute Software. If used, the Recovery Guarantee is null and void. In order to use the Data Delete service, customers must first sign a preauthorization agreement and either obtain a PIN or purchase one or more RSA SecurID tokens from Absolute Software.

6 For the methods outlined in the National Institute of Standards and Technology Special Publication 800-88.

7 For the use cases outlined in the Department of Defense 5220.22-M Supplement. Does not support Solid State Drives (SSDs). Requires HP Disk Sanitizer, External Edition for Business Desktops from hp.com. Requires Microsoft® Windows® on business desktops. Not available on business desktop BIOS. Network connection to the management server is required. With Windows 8.1, user must turn off Enhanced Protection Mode in Internet Explorer® 11 for shred on browser close feature.

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