

# Delivering Value with Intel® Core™ Processors using Intel® Solid-State Drives

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Balancing Act

Delivering Value

=

Reducing Costs

or

Increasing Revenue

# The Intel® Solid-State Drive Advantage

Improve Employee  
Satisfaction

+











Improve Total Cost  
Of Ownership

=

“A typical Office Worker utilizing an Intel SSD-enabled machine will be **10.2% more productive, saving the company \$8,175 annually** or \$24,525 over the typical 3 year lifecycle of a business laptop.”

- Jack Gold, J. Gold Assoc., Sept 2012

## SSD Comparison to Other Storage Technologies

	Intel® SSDs	Hard Disk Drives
Better Reliability		
Lower Total Cost of Ownership		
Faster Boot and Application Start Time		
Faster Responsiveness		
Self Encryption		

# Built-in Data Protection Features: Intel® SSD 520 Series

## Data Security with Encryption

- Self encrypting drives with 128bit AES Encryption Technology<sup>1</sup>
- Improve your performance, reduce software license costs

## Data Integrity with End-to-End Data Protection

- Protects data integrity while in transit from computer to SSD and back
- Improve your data reliability

## Data Protection with Secure Erase

- Executes secure erase command for user data, SSD reserved data, and retired block areas
- Improve your protection, reduce re-use or disposal costs




1. Not available on 60 GB and 120 GB SKUs

# Intel IT Client Encryption Solution: Intel® SSD + Intel® Core™ vPro™ processors



**IT@Intel White Paper**  
Intel IT  
IT Best Practices  
Intel vPro™ Technology  
June 2012



## Managing Intel® Solid-State Drives Using Intel® vPro™ Technology

**Executive Overview**

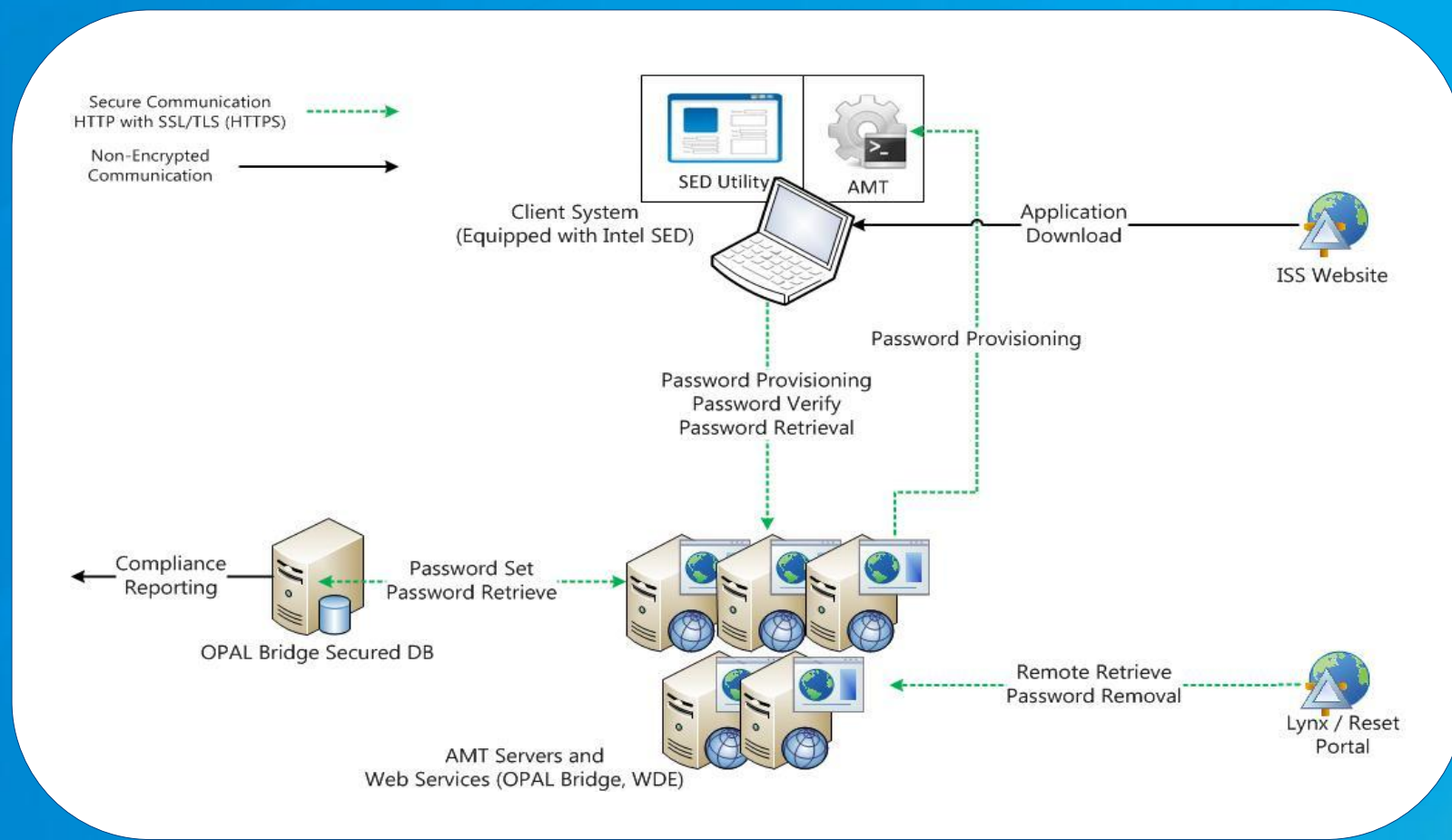
Intel IT has conducted a successful pilot project of our hardware-based whole-disk encryption (WDE) solution to replace our current software-based WDE solution on systems with self-encrypting drives. Compared to software-based WDE, our new hardware-based WDE solution improves user experience, increases encryption compliance, and reduces support issues. This new solution is based on two Intel technologies: self-encrypting Intel® solid-state drives (Intel® SSDs) and Intel® Active Management Technology (Intel® AMT), part of Intel® vPro™ technology.

Hardware-based WDE addresses our encryption challenges in the near term and offers the following benefits:

- Performance improvements, which can lead to greater employee productivity and job satisfaction.
- Integration with our client build process, which helps us achieve our goal of 100-percent mobile platform encryption.
- Fewer ServiceDesk calls because the encryption process is fast, easy-to-use, and users can recover their own systems.
- Increased return on investment for Intel technologies already in use, and the potential for significant reduction in software license fees.

The main components of our custom solution are Intel AMT-configured laptops with self-encrypting Intel SSDs and a password-management application. On the server side, the system comprises a secure password database for master passwords and other necessary data, a self-service system recovery portal, the ServiceDesk internet portal, and manageability web services. Our long-term encryption and data protection roadmap includes Opal-compliant drives and solutions. The Opal standard, published by the Trusted Computing Group, offers a set of mechanisms and protocols for self-encrypting drives (SEDs), including encryption, authentication, configuration and policy management. While we expect to eventually deploy Opal-compliant drives and related management software, the Opal-compliant ecosystem including out-of-the-box solutions, is immature. In the near term, our new hardware-based WDE solution offers valuable benefits until Opal-compliant drives and software become available.

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Demonstration: <http://communities.intel.com/docs/DOC-5668>

White paper available at: <http://communities.intel.com/docs/DOC-19512>

**Intel® IT managing ~90K Intel® SSDs with Intel® Core™ vPro™**

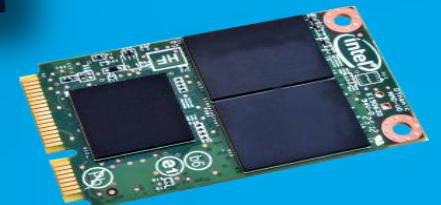
# Built for Business. Engineered for Security.



Intel® Core™ vPro™  
Processors



Intel® Solid-State  
Drives



*The Future is Bright*

The image shows a server room with rows of server racks. A blue overlay is positioned at the top, containing the text "Every High-performance HDD Will Be Replaced by an SSD". The server racks are filled with various components, including Intel Xeon processors and Intel SSDs. The room is well-lit, and the racks are arranged in a long aisle.

Every High-performance HDD Will Be Replaced by an SSD



# Storage Solution Evolution

## *Datacenter SSDs*



Cloud Computing



Datacenter Refresh



Web 2.0

### Servers, Storage, & Workstations

- Replacement for IO intensive 15K RPM HDDs
- Hybrid Storage – SSDs in front of HDDs for caching and swap files
- Storage Tiering – Combination of DRAM, SSDs and HDDs managed by software



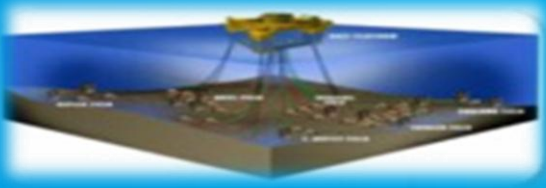
Financial Analysis



Digital Content

### Benefits

- Lower latency & Higher Throughput
- New levels of Reliability management
- Less Power & Smaller Footprint
- Faster Access to Data
- Lower TCO
- Energy & Space Savings



Energy Exploration

**IPDC**  
(Internet Portal Data Center)

**HPC**  
(High Performance Computing)

**FSI**  
(Financial Services Institute)

**Datacenter OLTP**

**Embedded**

\*Other names and brands may be claimed as the property of others.

