SOLUTION BRIEF

Business Client
Client Security and Manageability

# Optimize Management and Security of Client Devices

## Improve service quality, reduce service operation costs, and safeguard the enterprise by enabling a consistent, policy-driven approach for managing smart, connected business devices

Intel® Active Management Technology (Intel® AMT) provides a consistent approach to management across the enterprise for IT business devices and the emerging Internet of Things.

**Authors:**
Martin Lloyd,
Enterprise Solution Architect,
Influencer Sales Group,
Intel Corporation

Jim Henrys,
Director, Solutions Thought Leadership and Play Management,
Influencer Sales Group,
Intel Corporation

### Executive Summary

Across industries, service providers of all types—including systems integrators, outsourcers, and in-house IT departments—are today responsible for managing and securing an increasingly large and diverse array of devices, ranging from traditional business desktops, notebooks, and servers to Internet of Things (IoT) systems such as retail point-of-sale terminals, digital signs, vending machines, and even ATMs. To deliver technology support services that meet or exceed service-level agreements (SLAs), service providers require new approaches to management that can address the challenges of maintaining security, gaining real-time remote access to devices, integrating management systems, automating tasks, and more.

While many organizations have sought to address these challenges, their approaches can lack consistent, secure, and policy-driven management. They find it difficult to control costs and support geographically dispersed devices while also "delighting" device users with a strong experience. Many organizations have tried to achieve operational excellence, aligning support services with the needs of the business through the implementation of standard best-practice methods such as those defined by ITIL (IT Infrastructure Library) Version 3*. These efforts have often produced significant benefits for organizations.

Processes and functions associated with standard best-practice methods can be further enhanced and extended through automation by using key capabilities of Intel® Active Management Technology (Intel® AMT). Service organizations can now blend hardware-enhanced management and security capabilities with existing work processes to provide a consistent approach to delivering core services with an improved end-user experience while driving greater cost-efficiencies (Figure 1).

### Innovate, Integrate, and Enable Improvements to Service-Related Activities

Service organizations face mounting costs and complexity as they strive to manage and secure an increasing number of smart, connected devices—some of which are unattended and outside the corporate environment. Information technology today is increasingly extending past the typical collection of servers, storage systems, desktops, laptops, and mobile devices; organizations are implementing a broad array of devices to help track assets, assess equipment performance, monitor patient health, and provide a range of other vital functions.

The widening geographic distribution of devices and users presents another hurdle. Service organizations are searching for ways to manage these devices across countries and continents without deploying local support resources.

To further complicate matters, service organizations are often responsible for maintaining older client devices, which are retained to maximize their value and to delay new capital expenditures. Managing and securing those client devices can be more expensive than purchasing new ones with the latest technology.[1] The support burden rises as devices age.

Many organizations are searching for a single, consistent management solution that provides capabilities to streamline and centralize tasks so they can avoid escalating labor costs. An Intel AMT–based solution will work in concert with many existing environments and integrate easily with critical infrastructure components. It will also help enable organizations avoid new investments, minimize changes to existing processes, and reduce the need for additional training (Figure 2).

## Addressing a Broad Array of Service Operation and Service Transition Challenges

Service organizations and IT groups can address key challenges of systems management by taking advantage of capabilities enabled by Intel AMT, available with Intel® Core™ vPro™ processor–based devices.

### Incident Management

Organizations can improve incident management by using Intel AMT capabilities to remotely access and control unattended devices, regardless of their state or location. As long as a client system has a power source and a network connection, Intel AMT can automatically connect and authenticate operators.

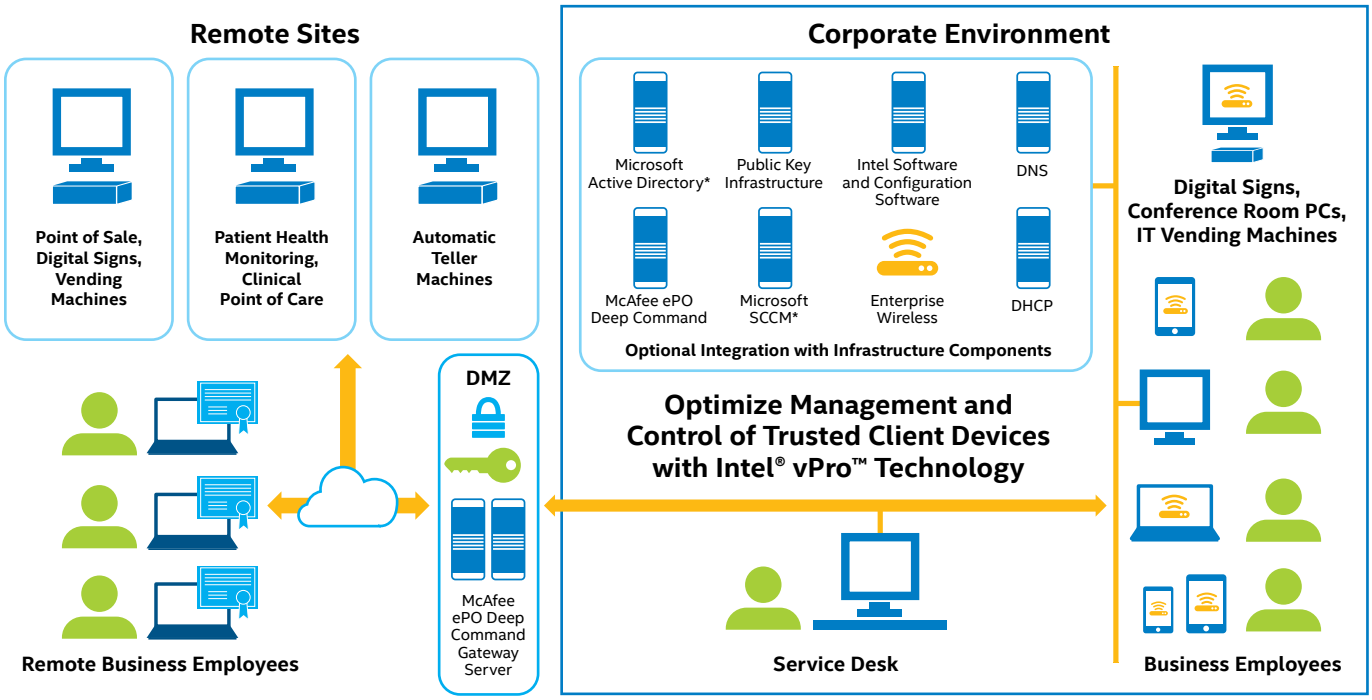


Figure 1. Intel® Active Management Technology can help IT service organizations improve service quality and reduce costs

Those operators can then initiate and monitor progress of a system rebuild, reimage a system, collect hardware asset data, reset a forgotten disk encryption passphrase or VPN personal identification number (PIN), or provide a temporary work environment. The ability to remotely access and control devices can help reduce employee downtime by eight hours for a single repair[2] while enabling service organizations responsible for client system management to meet rigorous SLAs for uptime.

**Service Asset and Configuration Management**
Traditional software auditing tools are often unable to reach a percentage of client systems. Intel AMT can help service organizations address that limitation by supporting enhanced configuration management processes. Authenticated and authorized operators can gain out-of-band access to important service asset and configuration information that is securely stored, tamper-resistant, and persists across reboots, even when the operating system is rebuilt.

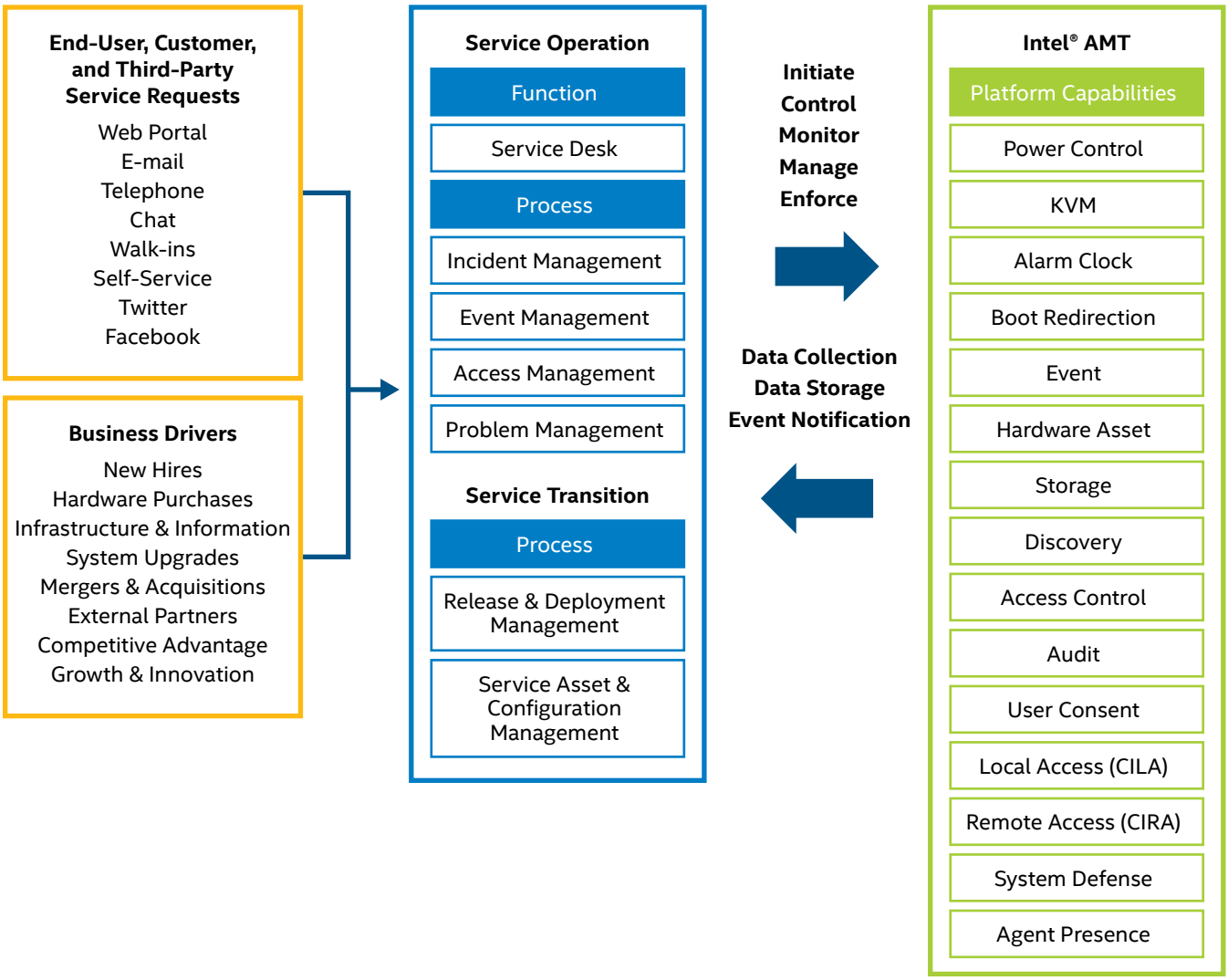


Figure 2. Intel® Active Management Technology can help streamline a range of service operation and transition processes

Service organizations can increase their reach to remote systems by defining policies that force an automatic "check-in" even when devices are powered off or outside of the enterprise. This capability provides a real-time view of service assets. Information can be automatically imported into a configuration management database (CMDB) to improve data quality for configuration items (CIs). The information can be used to identify changes in configuration, which can improve resolution time against SLAs. It also can be used to address key performance indicators (KPIs): service organizations can significantly reduce the average work effort and the frequency of verifying physical assets. They can also reduce the number of incidents where the underlying cause is inaccurate configuration management information.

**Release and Deployment Management**
Enabling Intel AMT can help protect organizations against unauthorized access and other security breaches by improving the efficiency and saturation of system updates. Service organizations can reduce the time and expense of mop-up activities, better meet SLA-defined availability requirements, minimize disruptions to the end user, and control deployment costs.

To help ensure client systems receive critical software updates and upgrades, regardless of their current power state and location, Intel AMT can be enabled to wake devices at predefined times and dates. Alternatively, service organizations can configure existing toolsets to wake systems more securely and remotely. This feature improves corporate compliance by increasing saturation of important updates. At the same time, it reduces the risk of noncompliant systems being on the corporate network and increases the security posture of client systems. Consequently, service organizations can significantly reduce the likelihood of breaches and enable end users to rapidly access new features and functionality.

## Reducing Costs and Minimizing Downtime

Service organizations can significantly reduce operational costs associated with managing, securing, and resolving client system problems. By implementing policy-driven automation of data collection and processing, capitalizing on tight integration with service-desk processes, and augmenting deployment tasks, service organizations can reduce costs—and help eliminate errors—by minimizing manual tasks.

Meanwhile, the ability to remotely diagnose and resolve many software-related issues for a large, geographically dispersed fleet of devices from a centralized location can help avoid or reduce the number of costly, time-consuming deskside visits required to diagnose and resolve software-related issues. According to one report, Intel AMT can help reduce deskside visits by up to 90 percent for remote employees.[3] As a result, organizations can reduce per-incident costs by up to 85 percent[4] and decrease employee downtime by 98 percent.[5]

Organizations can also maximize the value of their existing investments. Intel AMT is a mature technology that has been available in Intel vPro processors for more than a decade. In many cases, organizations can activate Intel AMT on these older devices and manage them in a consistent manner alongside new ones, using the same tools and avoiding the burden of incremental investments or additional technical resources.

These benefits are not limited to enterprise IT environments. Manufacturing, energy, retail, healthcare, education, and government sectors can derive similar savings and increase the manageability and security posture of their client fleet with Intel AMT.

## Implementing and Integrating Intel AMT with Industry-Standard Tools

Service organizations can easily enable Intel AMT platform capabilities to rapidly capitalize on efficiency and cost savings by deploying a simple, more secure package that controls access to manageability and security features as well as operational parameters. Once a profile is configured, it can be more securely distributed using traditional tools such as Microsoft System Center Configuration Manager*.

The freely available and fully supported Intel® Setup and Configuration Software (Intel® SCS) provides scalable components and utilities that can be used to discover, configure, and maintain Intel platform capabilities on the network. Intel SCS offers flexible features and capabilities to enable IT service organizations to take a fine-grained approach to integrating with complex information security and privacy solutions, as well as other infrastructure touch points.

Intel offers implementation guides to help optimize the management and control of client systems. Additionally, organizations can draw upon a healthy ecosystem of over 500 independent software vendors that provide products and solutions used by systems integrators (SIs) and value-added resellers (VARs) to expose and use Intel AMT capabilities. These SIs and VARs continue to successfully support large-scale customer implementations across government, healthcare, transportation, education, and finance sectors.

## Summary

Managing a large, diverse, and geographically dispersed fleet of client systems can be complex and time-consuming. With the increasing prevalence of smart, connected devices that are beginning to appear within the enterprise across industries, technology service organizations will face an explosive demand for a consistent approach to device management and security.

Using Intel AMT, service organizations can take simple and effective steps to enable more manageable client systems. They can streamline operations and create a consistent approach to managing a broad spectrum of devices. Powerful platform capabilities can help service organizations meet user needs, minimize downtime, and safeguard the enterprise. Service organizations can draw upon available solution reference architectures, implementation guides, and readily available tools from Intel and others to successfully activate Intel AMT and begin to realize its major benefits.

## For More Information

**Intel AMT**
www.intel.com/content/www/us/en/architecture-and-technology/intel-active-management-technology.html

**Intel vPro Technology**
www.intel.com/content/www/us/en/architecture-and-technology/vpro/vpro-technology-general.html

**Managed Service Providers**
msp.intel.com

[1] Techaisle, "The Ageing PC Effect: Exposing Financial Impact for Small Businesses," 2013, http://b2btools.intel.com/smbportal/img/assets/the_aging_pc_effect_-_exposing_financial_impact_for_small_businesses.pdf

[2] Principled Technologies, "Change your desktops, change your business," report commissioned by Intel, March 2015, www.principledtechnologies.com/Intel/Desktop_upgrade_0315_v3.pdf

[3] As reported by some managed services providers (MSPs) for customers using the KVM Remote Control feature to support Intel vPro technology–based systems. Principled Technologies, "Change your desktops, change your business," report commissioned by Intel, March 2015, www.principledtechnologies.com/Intel/Desktop_upgrade_0315_v3.pdf

[4] Based on a comparison of a deskside visit for a Dell OptiPlex All-in-One Desktop* or Dell OptiPlex Micro PC Desktop* (each equipped with Intel Core i5 vPro processors) versus a five-year-old HP Compaq Elite Convertible Minitower PC* (equipped with Intel Core 2 Duo vPro processors). The All-in-One and Micro PC enabled use of KVM Remote Control capabilities, which were not available for the Minitower PC. All systems were running the Windows 7* operating system. The comparison assumes $.6635 per-minute IT cost using an average annual total compensation estimate of $82,809 for a help-desk support senior-level position, as reported by salary.com. The metric appears in Principled Technologies, "Change your desktops, change your business."

[5] Based on a comparison of a deskside visit for a Dell OptiPlex All-in-One Desktop* or Dell OptiPlex Micro PC Desktop* (each equipped with Intel Core i5 vPro processors) versus a five-year-old HP Compaq Elite Convertible Minitower PC* (equipped with Intel Core 2 Duo vPro processors). The All-in-One and Micro PC enabled use of KVM Remote Control capabilities, which were not available for the Minitower PC. All systems were running the Windows 7* operating system. The comparison assumes $.4483 per minute end-user cost using an estimated average annual total per employee compensation of $55,594 (including salary and benefits), as reported by the Social Security Administration for 2013. The metric appears in Principled Technologies, "Change your desktops, change your business."



Printed in USA 0516/EP/TDA/XX/PDF ♻ Please Recycle 333608-002US