



## Success Brief

Intel® vPro™ Technology  
Intel® Active Management  
Technology (Intel® AMT)



“Intel® vPro™ technology is an invaluable tool in giving businesses the flexibility to manage and secure a high performance PC infrastructure efficiently and reliably.”

Twan van der Meer,  
TI Architect, Capgemini

# Transforming IT Support

## Capgemini puts Intel® vPro™ Technology through its paces

<b>Company</b>	Capgemini is a global leader in consulting, technology and outsourcing services.
<b>Challenge</b>	As a leading player in the global technology outsourcing market, Capgemini wanted to evaluate Intel® vPro™ technology in increasing the efficiency of PC management.
<b>Results</b>	The evaluation demonstrated that with Intel vPro technology-based PCs, IT benefits from unprecedented levels of remote management capability, significantly reducing the number of expensive deskside visits and achieving anti-virus software compliance.
<b>Impact</b>	Capgemini believes that the adoption of Intel vPro technology-based PCs will bring new levels of IT management and security for its own PC fleet as well as those of its customers.
<b>Next steps</b>	Capgemini is keen to test the security agent presence checking feature of Intel® AMT and to explore the remote reboot function to harness the processing power of PCs during off peak hours as part of a distributed computing model.

### Challenge:

Capgemini is a global leader in consulting, technology and outsourcing services. Working in partnership with its clients, it shares its experience, best practices and tools to enable them to deal with changing business and technology issues. Through its outsourcing business in the Netherlands, Capgemini manages 10,000 PCs on behalf of its clients while providing recommendations on PC management best practice to many more. Capgemini wanted to validate the new hardware-based capabilities of Intel® vPro™ technology in meeting three key challenges: inventory management, problem diagnosis and resolution, and virus protection.

It is essential from a security, management and regulatory perspective that businesses have complete and accurate PC inventories. Yet on average, businesses can't find up to 20% or more of their PC assets at any given time<sup>1</sup>. This is because IT departments are challenged with locating and auditing systems which have been switched-off, have been tampered with or have an operating system (OS) problem. Capgemini was keen to assess the value of Intel® AMT in reaching these inaccessible systems.

The organisation also wanted to establish how PCs with Intel vPro technology could improve problem diagnosis and resolution through support calls rather than deskside visits. An inoperable OS, corrupted application or crashed hard drive are typical problems that require one or two visits and are a drain on IT support.

Security is another critical challenge for businesses today and ensuring all systems have the latest anti-virus software and virus definition files can be a complex and time consuming task. Traditionally, IT has not been able to remotely push critical updates to switched off PCs. Instead, IT has to catch those PCs when they were switched on again, leaving them vulnerable to attack for dangerous lengths of time. Capgemini wanted to measure the effectiveness of Intel AMT in ensuring anti-virus software and virus definition files are kept up to date on all platforms.

<sup>1</sup> Source: Intel White Paper: 'Reducing Costs with Intel® Active Management Technology', published August 2005.

## Deployment:

Capgemini ran a series of evaluation tests to measure the effectiveness of Intel® vPro™ technology in a closed laboratory environment. The solution consisted of Microsoft\* Systems Management Server (SMS) 2003, Intel® AMT Add-on for SMS and desktop PCs featuring Intel vPro Technology with Intel AMT, Symantec\* Anti-Virus software with remote management console and loaded with typical office productivity software. In addition to the laboratory testing, Capgemini analysed two of its largest customers' infrastructure to estimate the impact of deploying Intel vPro technology.

## Results:

### Remote Discovery

During the evaluation, Capgemini was able to remotely and accurately inventory all Intel vPro technology-based PCs on the network, even if systems were powered-down or operating system (OS)-disabled. This was achieved through Intel AMT's out-of-band (OOB) capability - a secure, hardware-based communication channel that runs below the OS. Through OOB communication, the IT management console can access the critical hardware and software information that is secured and stored in nonvolatile memory. This is out of the reach of users, intruders, viruses and worms and ensures the information is reliable and tamper-free. Authorised technicians can access this data regardless of system state, as long as the PC is connected to a power source and network connected. Capgemini anticipates this will significantly reduce the need for the manual collection of data, resulting in significant cost savings.

### Remote Heal

Capgemini verified the ability of Intel AMT to remotely diagnose and solve PC problems. The company remotely rebooted systems to an IT diagnostics environment even when the OS or hard-drive had failed. After successfully using the remote boot function, Capgemini was able to diagnose and resolve system problems without the need for a desktside visit. The company was able to remotely heal software problems, like corrupt OS or application, by reloading clean software onto the PC.

## Impact:

Capgemini believes that the adoption of Intel® vPro™ technology-based PCs will bring new levels of IT management and security for its own PC fleet as well as those of its customers. The any-platform-state access gives IT unprecedented power to remotely discover, heal and protect its PC environment. The remote management capability reduces the need for costly desktside visits for asset auditing, problem diagnosis or problem resolution. It also increases compliance with anti-virus software policies, significantly reducing exposure to security risks. These benefits translate into more user uptime and a significant increase in the efficiency with which a fleet of PCs can be managed.



In the case of hardware failure, Capgemini was able to discover the problem remotely without a desktside visit. By accessing the inventory information held in nonvolatile memory, IT could determine the hardware item that needed repair or replacement. Capgemini estimates that these features will enable IT to resolve these problems through support calls, significantly reducing the number of time consuming and expensive desktside visits. For the two customer environments that it examined, Capgemini anticipates that desktside visits will be reduced by up to 7%.

### Remote Protect

Capgemini evaluated various features of Intel AMT designed to improve the security of a desktside PC environment. Using the remote discovery capability in conjunction with Symantec software, Capgemini was able to keep track of all the anti-virus software versions across the PC fleet. When out-of-date versions were discovered, the company remotely switched the PCs on and, through Microsoft SMS, pushed the latest files on to the systems. Capgemini expects that by using Intel vPro technology, businesses can achieve "Day Zero Virus Protection", and ensure new virus definitions are distributed and successfully installed as soon as they are released.

## Future:

While Capgemini has validated many of the features of Intel vPro including Intel AMT, the leading IT consultancy is eager to examine its ability to ensure that security agents stay active. PCs with Intel vPro technology have a "watchdog" timer built-in so third-party security software can confirm at specified intervals that the agent is still active. If an agent isn't checked in, the agent is presumed removed, tampered with or disabled and an alert can then be automatically sent to the IT console. Capgemini sees real potential in this feature in improving the reliability of presence checks and reducing the window of software vulnerability.

The IT organization is also excited about the possibility of using Intel vPro technology-based PCs during off peak hours as part of a distributed computing environment. By using the remote reboot function, businesses could harness the processing power of these PCs to support demanding computational applications.

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PCs with Intel vPro technology include Intel® Active Management Technology (Intel® AMT). Intel® AMT requires the computer to have an Intel® AMT-enabled chipset, network hardware and software, connection with a power source, and a network connection.

Data, results, and estimated improvements reported in this study are based on an evaluation of prototype Intel vPro technology equipment. Actual improvements in a production environment might vary. Other companies may see different results, depending on their IT service environment.

Intel does not control or audit the design or implementation of third party benchmarks referenced in this document.

\*Other names and brands may be claimed as the property of others. 0706/EW/RL/XX/PDF 314328-001EN

