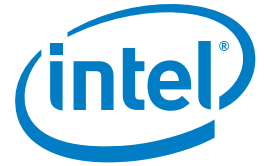


CASE STUDY

Intel® Core™ i5 and i7 vPro™ processors
Manufacturing
Mobility in the Enterprise



Efficiently Managing a Global Fleet of PCs

Air Products refreshes client systems with Intel® Core™ vPro™ processors to improve remote management, tighten security, and deliver outstanding performance

Air Products decided to refresh more than 18,000 employee client systems worldwide to upgrade the operating system (OS) and take advantage of the latest processing technologies. The IT group selected desktops and laptops with Intel® Core™ i5 and i7 vPro™ processors running Microsoft Windows 7*. Administrators anticipate that Intel vPro technology will help them resolve more software-related issues remotely, while Intel security technologies will help protect data stored on client systems and the network. The new processors also will help deliver the performance for a full range of tasks, from running productivity software to conducting processor-intensive engineering simulations, while preparing the enterprise for desktop virtualization.



CHALLENGES

- **Refresh the OS.** Replace an outdated operating system for which support was soon ending.
- **Enhance remote management.** Improve remote diagnostics and problem resolution for the company's global fleet of 18,000 desktops and laptops.
- **Improve security.** Protect data from loss and theft, especially for the growing number of mobile systems.
- **Increase performance.** Deliver the performance required for a broad range of productivity and engineering tasks.

SOLUTION

- **Client systems with Intel® Core™ i5 and i7 vPro™ processors.** Air Products is refreshing its client fleet with desktop and laptop systems equipped with Intel Core i5 and i7 vPro processors and running Windows 7*. Administrators will manage systems with Intel vPro technology and Microsoft System Center Configuration Manager* (SCCM) software.

TECHNOLOGY RESULTS

- **Fewer systems sent in for repair.** Intel vPro technology can help administrators resolve more issues remotely, avoiding the need for employees to send their computers in for repair.
- **Protected data.** Using Intel® Advanced Encryption Standard New Instructions (Intel® AES-NI) technology with Microsoft BitLocker* encryption can help sustain system performance while encrypting hard drives. Intel vPro technology helps IT stop viruses from reaching the network.

BUSINESS VALUE

- **Enhanced performance.** Moving to the latest Intel processors allows users to achieve outstanding performance across a full range of productivity and engineering applications.



"Intel® vPro™ technology will enable us to access system files before the OS boots, which should help us resolve a greater percentage of software problems remotely."

– Bob Elward,
Director, Infrastructure Engineering,
Air Products

Air Products serves a diverse range of industries, from manufacturing and energy to food and personal care. The company supplies hydrogen for fuel-cell vehicles, gases used to produce fluorescent lights, materials required for fabricating semiconductors, nitrogen used for storing fruit, and more.

To develop new products, manage processes, and maintain close contact with customers, the company's global workforce of more than 18,000 people relies heavily on desktop and

laptop computers. The Air Products IT group regularly refreshes those client systems to make sure the PCs continue to support employee productivity and innovation.

Recently the IT group decided it was time to update the operating system (OS) running on clients. "We were using Microsoft Windows XP*, but support for that OS will end in 2014," says Bob Elward, director of infrastructure engineering at Air Products. "Moving to Windows 7 would enable us to access the



Intel® Core™ vPro™ processors help streamline remote management

ongoing support we need and provide employees with a more stable platform.”

Enhancing security was a top priority. “Currently we use the Microsoft Encrypted File System (EFS)* to encrypt certain directories on each system,” says Elward. “We want to make it easier to encrypt the entire drive so we can protect information from loss or theft no matter where employees place their files.”

The IT group also saw an opportunity to improve system management with this refresh. Administrators use SCCM to manage the globally dispersed PCs, but they need additional functionality to enhance remote diagnostics and problem resolution. “Administrators often remotely access computers from our centralized help desk and try to resolve issues while the operating system is running,” says Elward. “We want a solution that will let us access system files before the OS boots up, so we can resolve challenging software issues without requiring users to send in their computers.”

Delivering Performance for a Full Range of Applications

After evaluating client systems from multiple vendors, the Air Products team selected desktops and laptops equipped with Intel Core i5 and i7 vPro processors and running Windows 7. The company will refresh approximately 6,000 systems in the first six months and continue to replace older systems on a quarterly basis.



“The Intel Core i5 vPro processors deliver the robust performance we need to handle just about all of our employees’ tasks,” says Elward. “Meanwhile, the Intel Core i7 vPro processors provide engineers with the extreme performance required for compute-intensive simulation applications. We expect to see significant performance improvements with multithreaded engineering applications.”

Enhancing Data Security with Intel Technologies

To protect data, the Air Products team will be implementing Microsoft BitLocker drive encryption technology, a feature of Windows 7, to encrypt the entire hard drive on client systems. Intel AES-NI technology will help sustain client system performance while encrypting that data. “As employee mobility increases, so does the possibility of computer loss and theft,” says Elward. “With Microsoft BitLocker drive encryption and Intel AES-NI technology, we can better protect data without affecting the performance experienced by users.”

Meanwhile, Intel vPro technology can help administrators prevent viruses from reaching the network. “Currently we shut down the switch port when we need to sever the connection between a computer and the network,” says Elward. “We look forward to exploring the potential advantages of shutting down the computer’s network interface card with Intel vPro technology.”

Sustaining Productivity by Resolving More Problems Remotely

The Air Products team expects that Intel vPro technology will allow tech support staff to resolve more difficult software-related issues remotely. “Intel vPro technology will enable us to access system files before the OS boots, which should help us resolve a greater percentage of software problems remotely,” says Elward. “The IT staff can save time, and we can help sustain worker productivity.”

SPOTLIGHT ON AIR PRODUCTS

Founded in 1940, Air Products produces atmospheric gases, process and specialty gases, performance materials, equipment, and services for organizations in a wide range of industries, including food and beverages, personal care, energy, transportation, and semiconductors.

Setting the Stage for Desktop Virtualization

For some of the refreshed clients, the Air Products team plans to gradually introduce desktop virtualization. Intel Core vPro processors include built-in hardware-assisted virtualization capabilities, such as Extended Page Tables, that help reduce virtualization overhead and deliver the performance users expect from their PCs.

“With desktop virtualization, we can give employees the flexibility to do personal work alongside corporate work on the same PC without affecting performance or compromising security,” says Elward. “By selecting the latest Intel technology with this refresh, we can help ensure that the client systems will be ready for desktop virtualization when we are.”

Staying Close to Customers and Promoting Work-Life Balance

Refreshing client systems will help keep employees productive wherever they are located. “To sustain close relationships with customers and to enable employees to work and live where they choose, we need to support a highly dispersed fleet of client systems,” says Elward. “By refreshing computers with the latest Intel processor technologies, we gain the performance, remote management functions, flexibility, and security capabilities we need to support that global workforce.”

Find the solution that’s right for your organization. Contact your Intel representative, visit [Intel’s Business Success Stories for IT Managers](#), or explore the [Intel.com IT Center](#).

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