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IT@Intel: Improving Endpoint Device Management Efficiency

Intel® Endpoint Management Assistant is an enterprise-ready solution that Intel IT is using to remotely manage thousands of Intel Unite® hubs and digital signs worldwide, with additional use cases under investigation

> "Using our old third-party tools, this rollout across Intel would have taken weeks or months. Using Intel® EMA, we rolled it out in a weekend!"
>
> –Robert C., Intel IT Engineer

Executive Summary

Intel IT is responsible for managing all of Intel's endpoint devices—at 147 sites spread across 56 countries. Managing endpoints can be time-consuming and expensive, often requiring a technician to physically visit the devices to troubleshoot them. Examples of these devices include the following:

- The deployment of Intel Unite® software to more than 5,000 hubs, located in conference rooms worldwide. This technology simplifies conference room configuration by eliminating cables and adapters. It also encourages idea sharing because employees can share content directly from their laptops and tablets regardless of their locations around the world.
- Digital signs in multiple locations including lobbies, cafeterias, and common areas across all Intel sites. These signs provide timely and localized site and community information.

As part of our pursuit of continuous improvement, we collaborate with Intel's business units, which are constantly developing innovative solutions that have the potential to help us achieve our goals within our own IT environment. For example, we recently evaluated the capabilities of Intel® Endpoint Management Assistant (Intel® EMA) to determine if it could ease the management of multiple types of endpoint devices.

In 2019, we began a proof of concept using Intel EMA to manage approximately 500 Intel Unite hubs and 500 digital signs across four geographic regions. Based on our success, we deployed Intel EMA to manage all our Intel Unite hubs and more than 700 digital signs. The solution was implemented globally in just a few days, and it is saving Intel thousands of dollars annually in licensing and server maintenance costs.

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Business Challenge

Across the company, Intel IT manages many types of endpoint devices such as Intel® Unite hubs and digital signs. Intel Unite software, deployed on more than 5,000 hubs worldwide, boosts employee productivity and enhances collaboration—thereby contributing to Intel's competitive edge. Hundreds of digital signs located in lobbies, cafeterias, and other common areas help employees keep up to date with local information such as menus, conference room availability, and parking and traffic data.

If an issue arises with an endpoint device, we must troubleshoot it and fix the problem. Historically, we used a third-party tool to manage these endpoints. However, this tool did not support remote troubleshooting. If a problem occurred, we often had to send a technician to physically repair the device, increasing our support costs. Another ongoing problem was that it only showed the status of one device at a time. Identifying holistic, systemic problems—such as an outage in a whole building or a geographical region—was difficult.

Solution

Because Intel IT works closely with Intel's business units, we often discover innovative products that help solve our IT challenges. Such was the case with Intel® Endpoint Management Assistant (Intel® EMA). Intrigued with the possibility that it could simplify the management of various types of endpoint devices, we explored it as a replacement for our third-party support tool. Additionally, Intel EMA works with and eases the configuration of Intel® Active Management Technology (Intel® AMT); see the sidebar, "Simplifying Remote Endpoint Management."

In 2019, we conducted a proof of concept at four Intel sites using Intel EMA to manage about 500 Intel Unite hubs and 500 digital signs. This initial PoC helped us identify some software bugs and additional enterprise-level features that were missing in that Intel EMA version. We worked with the business unit to address these issues, such as improving the security features to meet Intel's rigorous internal security standards.

In 2020, we conducted a second proof of concept to test an updated version of Intel EMA in the same four sites. The implementation was stable, and we collaborated with the business unit to resolve minor problems with the new features. Subsequently, we rolled out a production version of Intel EMA for managing all Intel Unite hubs and digital signs across Intel campuses worldwide.

Simplifying Remote Endpoint Management

Bringing Together Intel® Technologies with Intel® vPro Platform-based Devices

To drastically improve incident management, Intel vPro® platform-based devices with Intel® Active Management Technology (Intel® AMT) allow organizations to remotely access and control unattended devices, regardless of their state or location. Any Intel vPro platform-based client system with a power source on a known network can be connected, and integrated KVM (keyboard, video, mouse) remote control simplifies viewing and solving issues.

For more information about Intel AMT, the Intel vPro platform, and how they work with Intel EMA, see Remote Manageability for the Modern Workforce.

"It's all here. This streamlines our process so much. I can see all the machines without having to use a bunch of different tools to manage remotely."

–Amanda H., Intel IT Engineer

Benefits of Intel® EMA

Intel® Endpoint Management Assistant (Intel® EMA) offers many benefits, including:

- Enables Intel AMT to operate outside the corporate firewall.
- Maximizes the manageability of the Intel vPro platform.
- Allows our team to do many tasks remotely, including initiating and monitoring the progress of a system rebuild, collecting hardware asset data, or initiating a power-on for the patching of a system.

Results

Expanding Intel EMA deployment from four locations and about a thousand endpoints to all of Intel—more than 5,000 Intel Unite hubs and 700 digital signs—was quick and stable. Using our traditional method for Intel AMT deployment, it potentially could have taken weeks or months to deploy to many thousands of devices. Using Intel EMA, we deployed to more than 5,000 Intel Unite hubs over a weekend.

In addition to being quick and easy to deploy, the new Intel EMA interface enables IT staff to see a holistic view of all endpoint devices in a building, floor, or region; we are no longer limited to viewing just one endpoint at a time. In addition to our holistic view of all the endpoints, Intel EMA gives us a richer view of the various endpoints compared to the third-party management tool.

For example, we can now see version numbers, hardware components, installed software, and the overall device health, and we can drill down to even more detail if necessary.

Intel EMA is deployed on virtual machines and does not require separate, physical servers. After its implementation, we retired the servers that were being used for Intel AMT. With the reduced data center footprint and elimination of licensing fees, we are now saving about USD 80,000 annually.

Next Steps

We are committed to continue working closely with the business unit to adhere to a roadmap of continual improvement to Intel EMA. We are also exploring other opportunities to deploy Intel EMA to further simplify and improve endpoint management at Intel. For example, we are hoping to soon use Intel EMA to manage the more than 100,000 laptops and tablets used by Intel employees.

Conclusion

The collaboration between Intel IT and the client business unit helped improve Intel EMA to make it ready for deployment at the enterprise level. We are now using Intel EMA to meet Intel IT's remote support needs, and we look forward to extending its deployment to additional use cases.

Related Content

If you liked this paper, you may also be interested in these related stories:

- Best Practices: Deploying the Intel Unite Solution paper
- Inside IT: Maximizing Meeting Efficiency with Intel Unite podcast
- Conference Room Collaboration using Intel® vPro™ Technology paper

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IT@Intel

We connect IT professionals with their IT peers inside Intel. Our IT department solves some of today's most demanding and complex technology issues, and we want to share these lessons directly with our fellow IT professionals in an open peer-to-peer forum.

Our goal is simple: improve efficiency throughout the organization and enhance the business value of IT investments.

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