CASE STUDY

Nerdio Powers Government Agency's Data-Driven Approach to Energy Security

Discover how Nerdio and Microsoft Azure Virtual Desktop helped a small engineering team make a big impact for the Department for Energy Security and Net Zero, delivering robust data analytics capabilities while cutting AVD costs by 80%.

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Department for
Energy Security
& Net Zero

The Department for Energy Security and Net Zero (DESNZ) is a government agency in the UK charged with delivering security of energy supply to the country and moving Britain towards energy sovereignty — consuming more home-grown, cleaner energy. Particularly in 2023, amid the cost of living crisis, the organization's primary focus has been on easing energy prices and maintaining affordability.

To do so, data analysts across DESNZ use a powerful cloud-based analytical service (CBAS) to ingest and process copious amounts of data and create reports, dashboards, and web apps that inform policy recommendations.

"I work with a very small group of engineers responsible for managing about 1,000 users and ensuring analysts on relatively low-spec, government-issued laptops are able to crunch terabytes of data," said Emilie MacMullen, Product and Infrastructure Manager, DESNZ. "We needed a platform that was not only reliable and secure, but automated enough that its management didn't consume all my team's time."

When MacMullen first joined the organization, DESNZ was on a private cloud with designs to migrate to Azure and take ownership of its own estate. Once the transition began, the platform delivery team deployed Microsoft Azure Virtual Desktop (AVD), which provided the computing power the analysts needed. However, they encountered challenges with the intensity of the manual orchestration required to manage the platform.

In addition to having to rely on engineers to manually check the health of all the virtual machines (VM) in the host pool, MacMullen also had to outsource patching to a managed service provider (MSP). Costs continued to mount with VMs running 24/7, and the recovery process from a crashed VM was slow and arduous, resulting in unhappy users.

AMPING UP GREATER EFFICIENCY WITH NERDIO

Following these initial hurdles with AVD, CoreAzure, a trusted Microsoft Solutions Partner, organized a Nerdio demo for MacMullen and her team.

"While we originally approached Nerdio to help us save money with its platform's demand-based Auto-scaling feature and were thrilled at the idea of only paying for the compute we use, the demo team went on to list feature after feature that each sparked a new level of excitement in my team," MacMullen exclaimed. "With Nerdio Manager for Enterprise, we would also be able to automate so many tasks and empower the help desk to improve VM support."

MacMullen's team was able to install Nerdio Manager quickly and easily from the Azure Marketplace, which removed the procurement barriers often encountered in government settings. After the rollout, the amount of time the engineers were able to save thanks to the dynamic automation features of the platform was significant, enabling them to focus more on the modernization of the estate and project work vital to the department's mission:

Image management
Once a repetitive, time-consuming task, the image release process went from a tedious quarterly slog to a regular monthly cadence that would ensure employees have access to more up-to-date software and tools.

"We never would have been able to accomplish this if the engineers still had to do the process manually," MacMullen noted. *"We're also considering managing our applications with Nerdio's Intune integration. DESNZ still uses Windows AD, but a 2024 focus is to make Entra ID our primary source of truth, which the Intune integration can also help facilitate."*

Patching
Nerdio Manager automates the patching process, so not only was MacMullen able to bring that maintenance in-house and avoid paying an MSP, but it still didn't end up on her engineers' plates. The patching all happens in the background to improve security and performance without any hands-on requirements.

Auto-scaling
"The Auto-scaling feature was what really piqued our interest in Nerdio as a cost-saving exercise. It creates the potential for the product to pay for itself incredibly quickly by eliminating wasted resources, and it's one more thing my engineers don't have to worry about," said MacMullen. "Nerdio Manager also gives us access to extremely granular controls so we can customize our environment and ensure users running jobs in the background of their machines — while technically disconnected — don't get kicked off."

From an end-user perspective, the transition to AVD and Nerdio has been seamless. As is ideal in these situations, they remained largely oblivious to the migration while benefiting from faster help desk responses.

KNOWLEDGE IS POWER

The benefits of Nerdio Manager for Enterprise also extended to reporting — a critical component for a data-centric agency like DESNZ. Nerdio's built-in management tool provides instant insight into how VMs are being used and how much they're costing the organization.

"Our MSP used to provide a weekly report, but from a finance perspective, that's completely pointless," MacMullen commented. *"The user-friendly dashboard in the Nerdio platform, however, gives management an actionable snapshot of the environment and costs without having to dig through the Azure portal. It even provides custom recommendations on how you can save money, like where to reserve instances and optimize utilization or whether to use VMs versus managed instances."*

As a direct result of implementing Nerdio and leveraging these suggestions, DESNZ reduced its AVD costs by 80%, with even greater savings possible in the future with further customization.

"Ultimately, the more cost-effective we can make our operation, the more we can address projects that might not have had funding otherwise," continued MacMullen. *"In civil service, where every penny is scrutinized, we want to make sure we're creating as much of an impact as possible with taxpayer money."*

A SUSTAINABLE PARTNERSHIP

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For DESNZ, its work with Nerdio has proven to be much more than a technical collaboration; it's a strategic partnership built on furthering the initiatives of the organization. The ongoing training and the continuous new releases keep MacMullen's team engaged and invested.

"Working with the Nerdio team has been absolutely phenomenal," declared MacMullen. *"Their knowledge of not only the product, but Azure in general, is commendable. Regular meetings with the Nerdio team have proven to be super helpful and extremely edifying. Furthermore, Nerdio's responsiveness to tickets and product suggestions reflects its commitment to its customers and continuous improvement. They constantly impress a group of incredibly discerning engineers at every juncture."*

MacMullen concluded by saying, *"Nerdio Manager for Enterprise is a well-thought-out product and an invaluable asset for small teams. As more features are unveiled in the future, we plan to continue exploring new ways to get the most out of the platform with our incredible Nerdio team."*

ABOUT THE DEPARTMENT FOR ENERGY SECURITY AND NET ZERO

Securing our long-term energy supply, bringing down bills and halving inflation. The Department for Energy Security and Net Zero (DESNZ) is focused on the energy portfolio from the former Department for Business, Energy and Industrial Strategy (BEIS).

ABOUT NERDIO

Nerdio adds value on top of the powerful capabilities in Azure Virtual Desktop, Windows 365, and Microsoft Intune by delivering hundreds of features that simplify management, ensure efficient operations, and lower Azure compute and storage costs by up to 80% via automation.

Enterprise IT professionals can deliver and maintain a wide range of virtual Windows endpoints and Windows applications across hybrid workforces with ease and fine-tune end-user computing (EUC) approaches for maximum effectiveness using powerful monitoring and analytics capabilities.

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