

# Giving Remote Workers Access to Resources They Need



*As organizations shift to remote work, they need to rethink how they manage users, applications and devices. **Chip Carr**, senior manager of public sector for NVIDIA, discusses how virtualization and other strategies can simplify IT management and create a consistent user experience regardless of a worker's location or device.*

## **What challenges do organizations face around growing use of remote work?**

There are five basic considerations for a remote work infrastructure: security, IT management, productivity, mobility and communication. During the pandemic, remote workers may not have had time to get an approved device, so they connected with their own device from a home network. Different users connected at different speeds and with different device capabilities. IT had to scramble to manage associated hardware and software to ensure remote workers could be productive.

## **How can organizations take remote work to the next level?**

They need to provide the same secure, reliable access to computing resources whether people work remotely or in the office. Consistent, secure access helps organizations overcome disruption. We saw that with our customers that had implemented GPU-enabled virtual desktop solutions prepandemic. They switched to remote work without missing a beat. Their workers simply connected from home and they were productive on day one. Delivering GPU-accelerated virtual machines also provides higher user density, simplifies and centralizes IT management,

and enhances security because data and applications reside in the data center, not on end-user devices.

## **What approaches support remote work modernization?**

In the past, you issued a worker a laptop so they could work remotely, and then they connected into the VPN. All their applications and data ran on the laptop. That's impractical when you have to manage potentially thousands of users, their devices and their applications. To maintain consistency and continuity, organizations must shift to a centralized, software-defined approach, where IT staff control applications, security settings and the delivery of computing resources from the data center.

## **How can organizations optimize processes to support remote and hybrid work?**

Centralized IT management and virtualization technology are critical to manage infrastructure and address changes quickly and at massive scale — whether that's to patch a vulnerability across all user devices, upgrade applications or deploy additional computing resources. IT can make a change once via software and then distribute it to everyone's device within minutes with minimal downtime. Software can monitor network traffic and resource utilization in aggregate and then automatically allocate resources as needed so organizations don't have to invest in higher-performance user devices or purchase more hardware. In addition, organizations can isolate workloads and systems for security or other purposes, meaning multiple workloads and operating systems can run on the same device.

## **How does artificial intelligence (AI) and graphic processing unit (GPU) technology support workers in remote analysis of images, graphics and other visuals?**

Modern remote work infrastructure enables developers and researchers to remotely train robots and develop AI applications for image classification, object detection, image translation and more. Take the example of a public utility that maintains power lines that run through trees. Workers typically inspect the lines to make sure tree limbs won't damage lines in a high wind. A better approach is to embed a high-performance, low-power GPU into a drone that uses the power of AI to inspect lengths of hard-to-access power lines in real time.

## **What advice do you have for organizations as they move into the future with AI?**

AI is transforming how computers perform perceptual tasks such as computer vision, pattern detection, speech recognition and behavior prediction. These improvements make it possible to automate labor-intensive jobs. Agencies can start moving down this path by identifying critical manual tasks that take an inordinate amount of time and then determining whether part or all of these tasks can be automated. Organizations can often automate upfront tasks such as gathering and preparing data for analysis. Done manually, these tasks can consume as much as 80 percent of an analyst's time. By leveraging large amounts of data, organizations can build models to predict and refine internal processes that set a course for the future.

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