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A new remote-work reality will mean long-term changes for how M&E gets business done. Welcome to Hollywood's new normal. P. 15

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Embracing Remote Work Improves Long-Term Resilience

It is possible to maintain productivity, security and cost control

Abstract: The transition to remote work was sudden and painful for many, but companies that have been moving in this direction have not only weathered the storm better than most, they have provided hopeful signs that there are long-term benefits on the other side.

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Companies around the world have been transitioning to remote work, and what was originally thought to be a measure required for a few weeks has quickly settled into a new normal for the foreseeable future. The question of what normal looks like on the other side of it all is still open, but the age of mass telework has been accelerated and we may never go back to the full-time traditional office setting we once accepted as "how work was done."

Many M&E companies have been shifting to remote computing gradually for the last few years, driven by a combination of factors that include the cost of real estate in urban centers, the need to diversify their talent pools, and the desire to take advantage of tax incentives in different jurisdictions. They've seen a number of benefits on the operational and financial front, not the least of which has been the agility to quickly shift their artists to home offices in the face of an un-

precedented global disruption to business as usual.

Crafty Apes, a Teradici customer for several years, recently shifted its artists to working from home by expanding its deployment of PCoIP technology, which it had already used to support artists in branch offices and other remote locations from centralized data centers.

"We had to go from an office full of people to everyone working from home, and we had to do it very quickly," said Tim LeDoux, founder and VFX supervisor for Crafty Apes. "Our artists are all now working from home, editing shots, doing their jobs, and all with a high degree of security, since we're just streaming the data and not sending any files home."

Others have found themselves in urgent transition, augmenting existing deployments with add-on infrastructure such as VPNs, and perhaps adjusting their expectations around usability or security protocols to make it work in the short term. But now that the

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initial adjustment period has passed, there may be a need to revisit the practicalities, such as cost-effectiveness or performance to ensure long-term feasibility.

Maintaining productivity remotely

To make remote work viable for the duration, artists need uncompromised access to graphics systems and full availability of tools such as Wacom devices. When user experience associated with these important resources is compromised, the risk to organizations is magnified, especially at a time when schedules and production budgets may already be strained.

Similarly, artists and other employees operating Linux applications within a predominantly Windows-based organization (or vice versa), could find themselves losing access to critical applications if they're shifted to a different operating system. However, many options exist that enable organizations to access both Linux and Windows applications, some even under a unified connection management scheme for operational efficiency.

Most M&E artists (and their IT teams) are all too familiar with tradeoffs between graphics quality, performance, and bandwidth. Some of the recent PCoIP Ultra enhancements Teradici introduced in 2019 go a long way to helping out – task workers can benefit from lossless text reproduction under default settings, while bandwidth-hungry video editors can be configured for NVENC encoding using chroma-subsampling, which can reduce network bandwidth by 75 percent or more.

Maintaining security priorities

As is the case with all crises, it seems, opportunists have resurfaced to exploit vulnerabilities in security practices. Opportunistic phishing scams are on the rise and IT departments should pay continued attention to cybersecurity alerts, especially those related to VPN deployments. This is no time to let down your guard.

But much like the tradeoffs between performance and bandwidth mentioned previously, tradeoffs exist between security and usability. Most employees will lose patience with clumsy implementations that slow them down and they will be tempted to look for shortcuts. And short-term workarounds increase risk with each day they remain in place.

There are solutions that minimize these tradeoffs. M&E studios using Teradici Cloud Access Software to connect artists to GPU-enabled virtual machines, for example, can maintain security compliance using our Cloud Access Connectors, which are supported by multifactor authentication and enable encrypted remote computing sessions into the secured data center without need for a VPN.

VFX studios and other enterprises using standalone deskside computers with integrated graphics or NVIDIA GeForce graphics in conjunction with PCoIP Remote Workstation Cards now have immediate options too — including deployment of either Cloud Access Software as mentioned or Remote Workstation Cards over VPN networks. These are important alternatives to removing workstations and computers from the four walls of corporate security. Corporate assets remain under strict control, while avoiding potentially severe productivity loss associated with dysfunctional workstations decoupled from storage networks.

Ultimately, the ability to maintain the data in a central data center or cloud and send only encrypted pixels to an endpoint device provides a high level of control and security in situations where employees are distributed remotely and working outside secured company facilities.

Maintaining cost control

When faced with a crisis, there is a tendency to put solutions in place quickly and worry about cost later — after all, missed production delivery targets can come at a very high cost. However, there are ways to manage costs too.

For example, using public clouds rather than investing in physical infrastructure can offer several advantages — they avert equipment delivery risks, are generally faster to set up, offer better uptime (particularly if you have no one in the office to maintain servers), and can be offered from multiple sites for better scalability and performance. They also allow for resource sharing, including shared GPU resources in some cases,

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with options to pay for only what you use. A subscription solution that includes software clients (with brokering and provisioning bundled in) can cost up to three times less than a private data center.

For Tangent Animation, based in Toronto and Winnipeg, that ability to provision GPU resources as needed was a key benefit of using cloud-based virtual workstations. "With Teradici Cloud Access Software and AWS we pay for just the GPU power we need," explained Ken Zorniak, Tangent Animation's president and CEO. "An artist can log into a Blender instance powered by multiple NVIDIA T4 GPUs running the Quadro Virtual Workstation for crowd work and later log into an instance with a single GPU for simpler animation. Managing our IT costs this way leaves more budget for artists and technical staff, leading to a better product."

In some cases, cloud-based virtual workstations can introduce productivity advantages and cost savings that would not be possible with a more centralized studio-based workplace. Afrokaans, a Teradici customer, filmed *Survivor South Africa: Island of Secrets* on location in Samoa and uploaded footage to the cloud each day, enabling editors based in South Africa to get to work on the production immediately, using Cloud Access Software to access virtual workstations from their homes. The process saved the company from having to rent post-production space and relocate staff for the six months of production.

Building resilience

At time of writing, we still don't have a clear view of the timeline for the current crisis. But one thing is certain: Even without a crisis, the ability to transition quickly between office-based and remote work creates a more resilient organization in the long run. It enables companies to be more flexible in their overhead costs and hiring strategies, and it can provide significant competitive advantages.

Teradici and its partners can help create and deliver solutions to transition your employees to work from home or address changes to requirements as you expand the number of employees working from home, and we can help you improve your business continuity and disaster recovery plans for virtualized and remote workforces. ∎