



# SPK's vCAD Solution Increases Productivity, Security, and Savings

SPK helps a tech manufacturer to increase security and availability of its CAD systems and data by moving them to the cloud—while helping them to save \$30k per year.

## The Client

A well-known maker of power distribution units for IT racks and related equipment had recently acquired a design team overseas. Thus its nearly 75 CAD designers were now dispersed across the U.S., Thailand, and China.

This scattered setup—all too common these days—created a raft of issues for the company: Data security was paramount; they wanted it to reside in the U.S. Performance was another problem: How could, say, an on-prem server in a closet in China serve a globally dispersed team? And how could they provision hardware and software tools to their workforce (an issue magnified by any staff turnover), quickly and cost-effectively?

They knew they needed to move to a cloud-based solution. To get them there, they contacted SPK and Associates.

## Seeking Stronger Security And Performance

Data security and residency were primary concerns for this client. It wasn't just a regulatory concern (such as, say, GDPR). It was good old-fashioned, healthy corporate paranoia: Would you want all of that valuable IP residing on a single, aging server over in China? Not only was the hardware aging, but the software was out of date, too. It simply couldn't scale to meet the needs of the growing team.

The security and scalability constraints went hand-in-hand with performance concerns. Since the company's Solidworks PDM environment was hosted in China, their

U.S.-based CAD designers were suffering through glacial delays; for example, each PDM operation was taking five times longer than it would in a typical server setup.

## Provisioning Problems

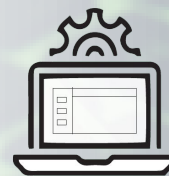
Given staff turnover, the prospect of provisioning new hardware and software for each user quickly snowballed. The company was spending far too much time setting up new users with the hardware and software tools they needed to simply start doing their jobs. In the best case, each new designer took hours to set up; unfortunately, it often took much longer. And when hardware is involved, there's more variability, in terms of procurement, burn-in, troubleshooting, and so on

## The SPK Solution

SPK first worked with this client to fully understand their requirements; for example, Solidworks PDM is difficult to deploy across globally dispersed teams because it's highly sensitive to network latency, which can degrade the user experience and hamper productivity.



Savings



Secure Data and IP



Performance Is Better For Everyone

So based on their specific needs, along with SPK's systems, networking, cloud, and Solidworks application experience, we architected a custom solution, which consisted of a suite of vCAD workstations, coupled with Solidworks PDM Cloud Hosting. To provide optimal performance for both their Asian and American employees, we co-located both of these solutions in Northern California.

The technologies we deployed to the customer's environment included:

- 3D accelerated desktop streaming in order to enhance user performance for CPU-intensive activities.
- Network security and auditing, thanks to the architecture and configuration implemented.
- Cloud-hosted Solidworks PDM, running on AWS.
- Microsoft SQL Server Standard, which SPK optimized and helped to properly manage, freeing up valuable time for overworked IT teams.

### Breakthrough Benefits:

So today, the company is getting all it wished for—and more.

- Data is secure and accounted for. The data resides safely and securely in the U.S., alleviating prior concerns about potential vulnerability and IP theft.
- Performance is better—for everyone. Thanks to the Nvidia-based T4 GPU, coupled with second-generation Xeon scalable processors in the vCAD instances (hosted in the cloud by Amazon, with their virtually unlimited hardware budget), all employees now enjoy faster performance, even for CPU-intensive FEA analyses. Notably, even the designers in China report faster response, even with the servers now in California, versus “down the hall”!
- Provisioning—and scaling—are lightning fast. Previously, it would take days to procure a physical workstation, and then hours to set it up. Today, a new user can be up-and-running in less than three minutes. The company simply requests that a new vCAD user is created, and then the user can configure his/her vCAD workstation up to the administrator's pre-configured limits. Speaking of admin privileges, they can now also easily inventory and manage the entire fleet of vCAD workstations for all users.

### As The Customer Put It:

“ This vCAD solution SPK has is a game changer! We can set up virtual desktops running our version of SolidWorks, connected to our PDM, in less than 20 seconds — at the touch of a button. And the performance using vCAD and PDM in the cloud is actually better than our on prem solution! ”

### Get A No-Obligation Initial Assessment

If your help desk needs help, contact SPK and Associates. We've helped others, and would love to help you, too. Reach out to us today at (888) 310-4540 or [info@spkaa.com](mailto:info@spkaa.com).

