

CUSTOMER SUCCESS STORY | WHITNEY BAILEY COX & MAGNANI, LLC (WBCM)

WBCM PROVIDES FULLY 3D CAPABLE VIRTUAL WORKSTATIONS WITH NVIDIA VIRTUAL GPU TECHNOLOGY



Left: ICC Route 29 Interchange, Prince Georges , MD
Right: Recreation Pier, Baltimore, MD



Delivering consistently great user experiences improves productivity and collaboration for remote workforces.

ABOUT WBCM



Allentown Building, Harrisburg PA

FIVE REASONS FOR NVIDIA VIRTUAL GPU

- > Enables high-quality, no-compromise Windows 10 user experience
- > Delivers fully 3D-capable virtual workstations that follow employees, wherever they are
- > Facilitates better collaboration between geographically dispersed offices
- > Allows remote workers to access designs from the job site
- > Improves agility for provisioning new employee desktops

Whitney Bailey Cox & Magnani, LLC (WBCM) is a full-service, multidiscipline architecture, engineering, and construction (AEC) firm with more than 200 employees serving the Mid-Atlantic region and beyond, from five offices in three states. For over 40 years, it has provided engineering design and construction administration services for a wide range of projects. WBCM has worked with a variety of federal, state, and private companies and organizations including the National Institutes of Health, the US Army Corps of Engineers, the Baltimore Ravens, Lockheed Martin, and the Ritz-Carlton Company. From interior and landscape design to marine, transportation, industrial, and structural engineering, WBCM has won numerous awards and received extensive repeat business from Fortune 500 companies and state and federal agencies as a result of its outstanding work.

SUMMARY

- > WBCM is a full-service, multi-discipline AEC firm serving the Mid-Atlantic region.
- > The company's growing reputation led to more remote projects across the U.S. and an increase in hiring.
- > Users experienced declining quality and user experience the further they were from headquarters.
- > NVIDIA virtual GPU technology helped lower latency, increase performance, and improve user experiences for a remote workforce.

CUSTOMER PROFILE



Organization
Whitney Bailey
Cox & Magnani,
LLC (WBCM)

Industry
AEC

Location
Maryland and
Pennsylvania

Employees
200

Website
<https://wbcm.com/>



Left: Coal Pier, Baltimore, MD

Middle: Frederick Avenue Bridge, Baltimore, MD

Right: Rec Pier Hotel and Marina, Baltimore, MD

PRODUCTS

Graphics Acceleration:

NVIDIA® Quadro® Virtual
Data Center Workstation
(Quadro vDWS)

Hypervisor:

Citrix
XenDesktop, Citrix XenServer

Monitoring:

Goliath
Performance Monitor

GPU: NVIDIA GRID™ K1, K2
and Tesla® M10

Server: Dell R730

CHALLENGE

Running an AEC firm for more than 40 years is no small feat. Over those years, WBCM has seen both the size and the complexity of their projects increase. As the firm's reputation for quality spread, they began to work on more remote projects across the US. With a small IT department of four, Chris Calaf, VP of Information Technology at WBCM, has had to keep up with the technology advances and new applications that its engineers, architects, and designers need to deliver such a diverse project portfolio. Today, the company relies heavily on applications like AutoCAD, Plant 3D, Civil 3D, MicroStation, ArcGIS, and Revit.

With 200 engineers simultaneously accessing the network, Calaf and his team struggled to manage latency. Employees were also experiencing a significant decline in quality and user experience the further they were from headquarters. Collaboration between offices became bottlenecked as teams tried to copy, save, and exchange files. And remote workers in the field were unable to access designs on the job site. All of these factors, combined with a hiring spurt, made provisioning new staff and managing IT costs a challenge for the team. "We knew that we needed to provide better access, consolidate resources, and ensure higher availability and agility when it came to provisioning resources," Calaf explained. "We needed something that would align with the work we were doing. VDI was the solution."

“One of the things that we’ve always stressed in this entire [VDI] process is the user experience. I can never take a workstation off an employee’s desk if they don’t have the same experience as they would in the physical world.”

Chris Calaf,
VP of Information
Technology,
WBCM

SOLUTION

For Calaf and his team the goal was clear—he wanted no compromise in the technologies being delivered to his users. The team wanted to make sure that the technology aligned with their business, all of their employees were billable, and applications were fully utilized. “Once we saw the NVIDIA virtual GPU partnership with Citrix and Autodesk was gaining momentum, we felt it was a technology stack that was more attainable for a company like us. So, we started digging into virtual desktops a little deeper.”

To start, Calaf did a complete hardware refresh and introduced employees to VDI and what he called the WBCM Cloud. The team upgraded to Citrix XenServer and Citrix XenDesktop, added NVIDIA virtual GPU technology, and leveraged Goliath Technologies Performance Monitor to proactively troubleshoot. Next, Calaf began a refresh to NVIDIA Tesla M10 GPUs and the latest GPU virtualization software, the Quadro vDWS and GRID vPC. The refresh to Tesla M10 with Quadro vDWS and vPC was driven by the increased graphics requirements of their Windows 10 environment and the increased use of the latest engineering design packages.

“We’ve gone from designers and engineers having graphics acceleration to everyone having graphics acceleration—even standard accounting and marketing,” said Calaf. “The typical back office, accounting, marketing, and HR workforce was using non-graphical workstations and with the newly upgraded environment, they now benefit from having a virtual GPU profile. This enables them to use Windows 10 as expected, and benefit from all of the security features.” The firm hasn’t purchased a new workstation since they deployed VDI. Every employee has a virtual desktop.

Calaf explained his VDI environment, “We recently moved to a new headquarters and didn’t want to build a full data center. So VDI was important. It was much more cost effective to pay someone for cooling, heating, and power versus building a data center. Because of vGPU technology, we can provide connectivity to our users from a secure data center facility 20 miles away, which is much less expensive than building a full data center.”

Today WBCM is 90% virtualized with two offices completely on VDI. Calaf’s goal is to become 100% virtualized. For a firm of this size and project complexity, the benefits are real. Calaf clarified, “The fact that we have been able to set up these two offices with little extra capital or skill

“We attribute a lot of our success to sitting down with our employees, learning the inner workings of the products they used, and understanding that...to be successful, we need to provide them the best user experience possible. With NVIDIA virtual GPU technology, we can deliver on our promise.”

Chris Calaf,
VP of Information
Technology,
WBCM

To learn more about NVIDIA
virtual GPU solutions visit:
www.nvidia.com/virtualgpu

needed, was very beneficial. There is no infrastructure in those offices, just terminals, printers and a firewall.” This, combined with easier provisioning of new employees, allows the IT team to become more agile.

Allowing remote access has ensured that WBCM can meet the demands of a new kind of remote workforce. “Remote access was something that we felt would be necessary to retain or recruit new staff. Prior to vGPU, we weren’t able to do that for a certain level of staff. Now, any employee we hire has the ability to work remotely. Another benefit is being able to have our employees’ fully capable 3D workstations “follow” them wherever they go, including when working at a client’s office. Without VDI, we had to worry about copying large files back and forth, which could pose version control challenges. Now, we just say ‘Here’s Citrix XenDesktop’ and go from there. It helps with centralization and loss of property.” Virtualization has also helped the company keep projects on track from a profitability standpoint. During a series of winter snowstorms, more than 60 employees were able to log into work remotely, at the same time, with no decline in user experience.

For Calaf, the move to virtualization has been a passion and the ability to work with the users has been extremely rewarding. “I feel that we’ve been successful. I attribute that to my staff because we are all hands-on and like the challenge. When we talk to colleagues at other firms, they are surprised at the performance that we are able to achieve and can’t believe that 100% VDI is possible. We attribute a lot of our success to sitting down with our employees, learning the inner workings of the products they use, and understanding that in order to be successful, we need to provide them the best user experience possible. One of the things that we’ve always stressed in this entire process is the user experience. We are not successful unless we can provide employees with a VDI user experience they’d expect in the physical world. I can never take a workstation off an employee’s desk if they don’t have the same experience as they would in the physical world. With NVIDIA and Citrix, we can deliver on our promise.”

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