

EXPERT VDI TIPS
AND TRICKS:

4 Steps to Implement, Remediate and Optimize Virtual Desktops Fast

Enhance user
productivity, secure
data and accelerate
business in a work
from anywhere world.



The Case for Virtualizing Desktops

Everyone is talking about the new “work from home” era and the “future of work.” But what does it really mean for how today’s business needs to support workers and their computing requirements? There are a few trends to consider.

First, workers like clocking in from home. Most workers are still working remotely, and it doesn’t appear that will change anytime soon. In fact, a recent [Gallup poll](#) found that the majority (56%) of U.S. workers were “always” or “sometimes” working remotely at the beginning of 2021. This has only declined just slightly from the peak of the work from home paradigm in April of 2020 when 70% were punching in from home. This is an indicator that workers are reluctant to go back to the office full time, with 44% of those working remotely reporting they would still prefer it even after all the pandemic restrictions are lifted.

Second, given that workers are accessing data outside of the typical security of the corporate firewall, new security protections need to be put into place to safeguard data and applications to accommodate the new roaming work approach. A report from [SonicWall](#) found that between 2019 and 2020 ransomware cyberattacks rose 62% worldwide and as much as 158% in North America. And the cost of ransomware is up sharply as well. The [FBI](#) reports that cyberattack complaints rose 20% between 2019 and 2020 while the collective cost of ransomware attacks rose more than 200% in 2020 to \$29.1 million.

Third, IT teams don’t have the bandwidth or resources to support the needs of remote workers, not to mention the increased security risk they present. A study by [Ivanti](#) found that half (50%) of IT professionals admitted they lack sufficient IT staff and talent to fight off cyberattacks and 52% claim their organization has suffered staff shortages in the past year. Furthermore, a [Deloitte](#) study recently reported that as much as 80% of IT’s time is spent resolving problems, rather than pro-actively working on strategic priorities. That leaves a thin amount of resources to properly and securely support the new volume of remote workers.



Finally, IT teams lack the skills and expertise they need to address these demands. Global Knowledge found that globally the IT skills gap issue has increased by 155% in three years and the effect is costing companies as much as \$22,000 per year, per employee. That has driven a high demand for skilled IT talent across every technology area, particularly in the areas of cybersecurity and end user computing.

These factors together have created a perfect storm for virtual desktop technology. Implementing virtual desktop infrastructure (VDI), particularly where workspaces, applications and data can be access via the cloud such as a cloud workspace or desktop-as-a-service (DaaS) solution, have become one of IT's highest priorities for 2021. A survey from [Spiceworks](#) concurs. It found that 69% of companies over 1,000 employees have or are implementing VDI for their end user computing environments in 2021. That compares to 50% in 2020.

If you are like these organizations and implementing VDI to support your remote workforce has become a priority, but it's still hard to get your arms around, we've outlined these four steps to speed your VDI adoption. They can provide secure, high-performance access to data and apps for your remote workers, while lightening the burden on IT staff.

1. Assess Your Scope

Before you begin your virtual desktop project, it's critical to understand the full scope of your environment, including size, user requirements, application demands, use cases and more. By starting with a full VDI assessment you can quickly identify you needs, and perhaps more importantly rule out technologies that don't align with your requirements.

TIP

It's advisable to use a team of VDI experts to perform a formal assessment of your environment before scoping your virtual desktop project. VDI professional services experts will have field-proven expertise they can apply to your specific environment which can help you pinpoint barriers and challenges early and avoid remediation costs later.

During your assessment process, it important to not forget to include the end user's voice. End users know what they like and how they like to work. Including end user representatives in your assessment phase will ensure that you capture their distinct requirements early in the process so that you don't have to overcome new challenges later. It will also help ensure that your VDI project is more readily adopted by your end users which will ultimately deliver a much higher return on investment for your virtual desktop strategy.

Other factors to include in the assessment phase include scoping your high-performance application requirements, audio/visual and collaboration tool needs (such as Teams, Zoom and others), security policy and compliance requirements, mobile device access needs and device compatibility considerations.

A formal assessment will result in a detailed analysis that will outline environment requirements across key categories to ensure a robust VDI solution is ultimately delivered.

These categories should include:

- **Hosting Type** - the assessment will guide decision making in the type of VDI delivery infrastructure required to best support users and business goals, whether on-premises, public cloud or hybrid. It will also outline the types of infrastructure and technology the implementation will use to support those goals
- **User Experience** - the assessment should clearly prioritize important characteristics needed to support the desired user experience, including logon times, access requirements, work hours, application support and more. The impact of each user experience criteria should be weighted against cost, security and stability of the environment to ultimately make the proper selections.
- **Data Types** - the assessment should fully evaluate the data types and data activity of the environment, including an outline of heavy and light data loads (and traffic times) along with any critical data types that require specific compliance practices or policies.
- **Performance** - the assessment should outline key criteria and service level agreements required of the VDI environment so that the proper high-performance technology infrastructure can be applied where needed to ensure users remain happy and productive.
- **Workplace Flexibility** - the assessment should articulate the specifics of the work environment and what flexibility needs to be accommodated including work-shifting, device access, work locations, shared workspaces and more.

2. Perform a Proof of Concept

Before jumping all in on your virtual desktop project, be sure to take the new prescribed infrastructure and criteria outlined in your assessment report for a test drive first. Most VDI solution providers and technology vendors will set up your selected technology for you to validate your application and desktop performance. But be certain that they don't simply arrange a standard proof of concept (PoC) for you that's "out of the box." A canned PoC won't reveal any necessary optimizations that might be needed for your specific use cases or put those customizations through the proper real-world testing you need to validate them.

The best VDI providers will actually stand up an environment based on your specific environment needs, applications, and criteria as outlined in your initial assessment - all with minimal investment and effort. This process is well worth any initial program outlay. You'll get a true hands-on demonstration of the environment you plan to deploy so that you can make any adaptations or optimizations first before proceeding to the implementation phase. This can save you hours of time and minimize cost later by testing everything you plan to implement first to prove its value.

TIP

Be certain that all technologies and solutions for your new environment have been tested and optimized together - with your specific criteria in mind. Your PoC should truly reflect your planned VDI architecture - end-to-end - so that you can spot problems before you put the solution in play. Plus, select a PoC lead provider for your environment so that you don't perform stand-alone PoCs for separate components of your environment. The testing environment should include all components - infrastructure, software, hardware and applications - that are planned for your production environment to best avoid surprises later.

3. Implement with Professionals

VDI environments can be complex and difficult to architect, particularly if you have elaborate criteria and business demands. Implementation is not often a step where you can “go it alone.” Building your VDI infrastructure and applying the separate technology solutions can create a messy situation, if you haven’t had years of practice and the experience of thousands of successful implementations.

To get to VDI time-to-value fast, be sure that your implementation is fully aligned with your initial scoping assessment and that you have thoroughly tested it - in every possible scenario during your PoC phase. This will ensure that your implementation can be completed quickly and that problems are avoided before they are ever put into production. For large VDI estates, consider phased implementation to optimize the environment at each step with a more controlled segment of users before full deployment is achieved.

TIP

Don’t use separate professional services for dedicated portions of your new environment. When different vendors are involved for components of your implementation, technology fingerprinting can arise when things don’t go as planned. This will slow down your deployment and stall implementation progress and your time-to-value. Instead, use a proven solution provider that is an expert across multiple VDI platforms and technology for your implementation process. They will have a complete view across your environment and experience with all your selected components. Then, should challenges arise, they will be much more effective at pinpointing the technology obstacle to remediate it fast.

4. Optimize, Customize and Secure

Like any valuable technology, it’s important to reevaluate and optimize your VDI solution once it’s in production. As priorities and business dynamics change, so too can the demands on your virtual desktops so it’s vital to treat them as living, breathing organisms that need consistent monitoring and remediation when needed.

Be sure to revisit your initial scoping assessment frequently and identify where items and priorities have changed. Then work to apply those changes with consistency to your new VDI infrastructure. If new priorities require customizations or new technology approaches, be certain to enlist experts to guide you through the process. Their insights and experience will often cut the costs of performing optimization and customization on your own. Just one expert tip can often save your hours, days and weeks of remediation and troubleshooting time.

Finally, don’t forget about your VDI security. Be certain to consistently apply security best practices and compliance processes to your virtual desktops so that you limit any risk of exposure. Virtual desktops are inherently secure and can help you minimize your ransomware attack surface, but even still security should never be taken for granted. New threats are produced every day and ensuring you have policies and security best practices in place to secure your cloud-based data is critical.

TIP

For environments where IT resources are limited and VDI talent is hard to hire, consider the value of a managed or co-managed VDI service. Here you can often get a whole team of experts to support you for less than the cost of hiring a single VDI engineer. With their support you can offload tedious and time-consuming tasks such as infrastructure upgrades, optimizing user experience, adding new features, resolving incidents and more. This can enable your teams to focus on other strategic priorities while knowing that your virtual desktops are in expert hands.

Another Way? VDI Appliances

If scoping, testing, building, implementing and managing your VDI estate sounds too overwhelming or complex for your business, there is another way. Many organizations are opting for the simplicity and lower cost of a virtual desktop hyperconverged (HCI) appliance. These HCI VDI appliances can deliver a guaranteed great desktop experience, without the implementation required of a more traditional VDI architecture.

How do you know if a VDI appliance is right for you? Consider these characteristics:

- You want a fantastic turnkey “work from anywhere” experience, that’s guaranteed, but don’t have strong VDI experience on staff or are a little intimidated by the hardware, software, and vendor selection process.
- You’re interested in saving, on average, 15-30 percent overall on VDI and ongoing support vs. tackling VDI on your own.
- You like the subscription model of the cloud but can’t or don’t feel comfortable having workloads in a third-party environment.



- You already have Citrix XenApp/XenDesktop or Citrix Virtual Apps and Desktops (CVAD) or VMware Horizon with hardware that is more than three years old.
- You're smarting from a poor VDI experience today because of undersized hardware that is still depreciating and hurting your ability to get the equipment to deliver a great VDI end-user-approved experience.

Indeed, VDI appliances are well suited to companies across industries - from healthcare, banking, and financial services to manufacturing, services, insurance, retail, government, and education. They are also a great fit for architecture, engineering, construction and media & entertainment organizations that have exceptionally graphics-intensive applications as they can be equipped to support even the highest performance demands.

TIP

If you think an HCI VDI appliance might be a good fit for your organization, take one out for a test drive. Be sure to select a provider that offers everything you need for VDI for life - including zero cost upgrades for Citrix or VMware Horizon, a complete self-contained hardware stack, plus lifetime management so it is fully deployed and managed for you. With the right solution, a VDI appliance can truly be an “easy button” for your virtual desktops.

Don't Forget the Experience

No matter the ultimate approach you select for deploying your virtual desktops, it's critical to remember the user. The employee experience for your VDI environments just might be the most vital metric for virtual desktop success. Consider this: according to Gartner, workers with a good UX are 1.5 times more likely than others to have high levels of work effectiveness, productivity and intent to stay. This can be essential in a time where employee retention and recruiting are of top priority.

In fact, a great computing user experience can help employees perform beyond their job requirements and keep business productivity high. This has been a challenge with remote work. According to an IGEL survey, 61% of IT professionals named user experience as their top challenge when moving employees to a remote work model. This is driving the adoption of technologies for employee experience management, which was ranked the highest (58%) by IT professionals in the priorities they have over the next 12 months.

How do you know your user experience is keeping users engaged and productive? Consider these five things:

- **Get Login Times Under 30 Seconds.** Users don't have patience. Once they login they want to get to work, so VDI environments that take more than 30 seconds to load will make users cranky, before they can even start to work. Be sure to optimize your environment to minimize login time so that users don't get frustrated.

TIP

If you're not sure where you rate, take [this free 30-second challenge](#). If you have slow logins, we'll get your login times under 30 seconds in just 8 hours or you'll be charged nothing.

- **Proactively Monitor User Experience.** Don't wait for your users to complain before you remediate issues. Monitoring user experience, day and night, with the ability to take action will help you get from reactive to proactive and solve user issues before they even become noticed.

TIP

There are some great monitoring solutions available for VDI environments, such as ControlUp, that can give you actionable insights into employee productivity so you can remediate them fast.

- **Empower Users with Training.** An uninformed user is an unproductive one. Be sure that you train users properly on the VDI solutions and applications they use day in and day out. If users are more versed in the tools they rely on, their experience will be much better overall.

TIP

Offer regular training sessions and self-service resources to allow users the ability to solve their own challenges. This will make them feel more empowered (and lighten the load on your IT resources).

- **Become a Help Desk Superstar.** Because remote workers don't have the luxury of just walking down the hall or catching IT in the break room, they still want to know they can get help easily when working from home. Remember too that work hours have extended in the work from home era. Employees now have greater access to their work resources any time of day and night - as such they may also demand help outside of the typical 9-5 operating hours.

TIP

Be sure to have adequate help desk staff to support your user population and offer support 24-hours a day so employees aren't waiting for the support they need.



- **Consider Managed VDI Services.** Delivering a great user experience takes experience. For the best result, consider a managed or co-managed option for your virtual desktop environment if the desktop virtualization skillset is not a strength. Experts can help you optimize VDI performance, guide you on OS versions and patching roll-ups to deploy or avoid, get the most out of the available features, resolve complex incidents and architect your environment and your applications for optimal performance.

TIP

At Whitehat Virtual we use a proven process and 1,500+ cataloged optimizations to deliver managed VDI with the best experience. [Learn more here.](#)

We all want VDI environments that enable employees to be productive, engaged and happy. To achieve this, you must deliver a good, consistent end-user experience, and optimize it to squeeze every drop of performance out of your VDI investment. Consider these factors when building your virtual desktop strategy and you'll be certain to delight your users with the secure, high-performance access the need to their data and apps, no matter where they want to work. 🍷