10 reasons to revisit VDI

WHITEPAPER

cloudhelix

Introduction

VDI (Virtual Desktop Infrastructure) will force one of two reactions from IT professionals. Depending on your experience, you're either scratching your head as to why it isn't widely adopted yet, or you're wondering when it will disappear for good.

As part of our partnership with HiveIO, a next-generation VDI provider, we explore the technology, what has held it back and what's changed over ten short questions.

1. What are the disadvantages of VDI?

For those who have experienced unsuccessful implementations, the list of disadvantages is probably quite long. In our experience, the grievances with VDI can be summarised in three categories…

Complexity

Traditional VDI platforms require a multitude of products from different vendors. Trying to get several vendors to work harmoniously will require the input of a consultant to fine tune your implementation. Unfortunately, this fine tuning is only as good as the day it's set. Once the consultant leaves, you're on your own.

When your organisation changes, you must rethink your VDI platform accordingly. If something goes wrong, the once well-orchestrated platform becomes three distinctly separate vendors blaming the other, leaving you stuck without a clear route forward.

The good news is that VDI no longer needs to be complex. It's come a long way in recent years and second generation VDI solutions alleviates this by integrating all components into a single platform. Thousands of organisations, including essential businesses such as hospitals, use solutions like HiveIO's Fabric as the backbone of their operation.

During the COVID-19 pandemic, the number of searches for the term VDI quadrupled according to Google. Interim solutions were implemented during the first 90 days of lockdown before transitioning to a permanent next normal once the organisation was ready. Over the next year, we expect to see more organisations adopting VDI to enable organisational flexibility, something we've all learnt the importance of in 2020.

Cost

VDI can cost more than traditional desktops if not managed correctly. Traditional solutions required expensive hardware in the data centre and specialist skills to manage the environment. Again, the consultants needed to make the various components of a traditional VDI solution work in harmony drives up cost and drags out timelines.

Again, this is changing with the advent of new technologies from providers like HiveIO. Their solution is installed on any commodity x86 server in the data centre over the course of hours (rather than weeks and months) and simple to administer, requiring zero training. No consultants, 6-month project plans or specialist hires needed.

Steep learning curve

With traditional VDI, you need to get your team certified or hire someone who has the certifications you need. Both of these options are expensive, adding thousands to an already tight IT budget, often ruling out the technology for many organisations. Fortunately, next gen solutions like Hive Fabric can be managed by IT generalists without any specialist training.

2. What are the advantages of VDI?

- **A consistent, reliable working environment**
  No dependency on location or endpoint device. Log in to the environment from anywhere in the world and pick up where you left off.

- **Simplified Management**
  Use a few templates to manage thousands of end users. Provide remote support across the entire organisation.

- **Scale easily, change quickly**
  Take on remote staff, or onboard hundreds of new users in one fell swoop. On the flip side, downsize overnight if and when required.

- **Elevated security**
  Allow remote access via controlled protocols such as RDP. More secure than VPN connections, these protocols make for a much smaller attack surface, allowing tighter control on what comes in and out of the network.

- **A secure data centre**
  We spend time and energy ensuring a data center is secure, so why does so much data reside outside of it? With VDI, all data remains in the data centre. Data integrity is intact and you're no longer reliant on the security of each endpoint.

- **Cost savings**
  With the heavy lifting happening in the data centre, you can extend the life of existing equipment and endpoints, reduce the need for hands-on IT support and improve the efficiency of your staff with consistent, reliable experiences.

- **Remain complaint**
  HIPAA, FCA and PRA regulations follow strict data protection standards. VDI puts a fence around how your end users can use applications, what data is shared with them and how it's stored on the corporate network.

During the COVID-19 pandemic, the number of searches for the term VDI quadrupled according to Google. Many companies implemented interim solutions at the start of lockdown, assuming things would begin returning to normal after a few months, and existing IT systems would suffice. Unfortunately, we know now that we're in this for the long haul. Over the next year, we expect to see more organisations adopt VDI to increase organisational flexibility, something we've all learnt the importance of in 2020.

3. Whats changed?

The technology has been around years, however, it's the new generation of tools that are flattening the cost and removing the complexity. Alongside better tooling, there are three global trends driving increased adoption.

Remote Work

You've heard enough about COVID-19 so we'll save you the back story. Overnight, IT teams had to find a solution for their newly remote workforces, putting VDI in the spotlight. Going forward, it's hard to imagine that remote working won't form some part of every organisation's IT strategy, even once lockdown is long gone.

Budget Cuts

Millions of businesses are facing financial hardship while also spending unforeseen budget to enable a remote workforce. Operating COVID-safe offices, with new cleaning protocols and PPE requirements, adds an entirely new cost centre to the mix. A successful VDI reduces the reliance on physical offices, helping to reduce the cost of supporting offices and employees.

Cyber Attacks

Unfortunately, the temporary solutions put in place to support remote working during lockdown increase the likelihood of security vulnerabilities… and attackers know this.

VDI puts a fence around your organisation's data and end users. The virtual desktop session, applications and the OS all run from a secure location. Traffic is restricted to a well-defined, tightly-controlled access method, making it much harder to penetrate. VDI has always offered better security but now, with users spread across the world, the control it enables is essential.
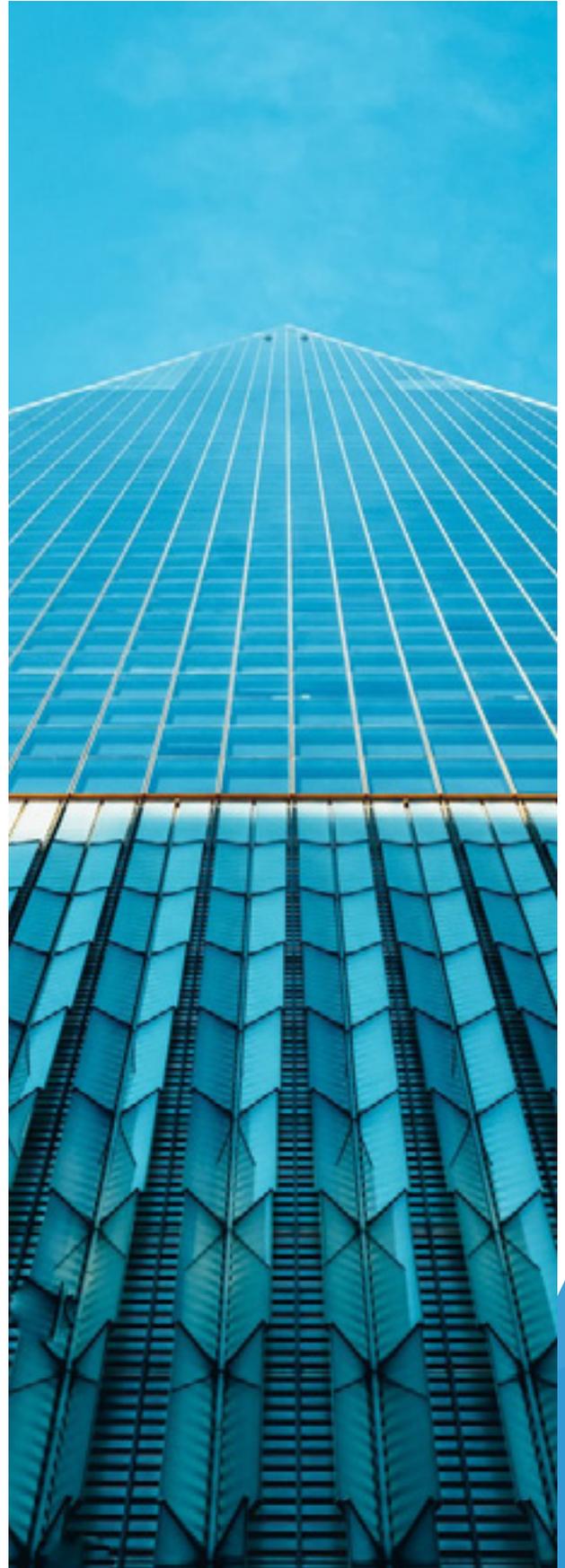
4. Why isn't VDI widely adopted?

While it's been around for years, it hasn't reached widespread adoption because it's been so hard to get it right. This has meant that, typically, it's only been well-funded companies that have favoured it. Today, the second wave of solutions on the market are much better at working out of the box. The team at HiveIO have seen a range of use cases where funding is limited but the need is critical – such as hospitals, universities, fire brigades – who are now fully onboard with VDI and aren't looking back.

Also, until recently, reliable internet connections have presented a challenge. VDI requires a fast connection, with the session essentially streamed from the data centre. If your employees can watch Netflix at home, which today will be the majority, they will be able to use VDI.
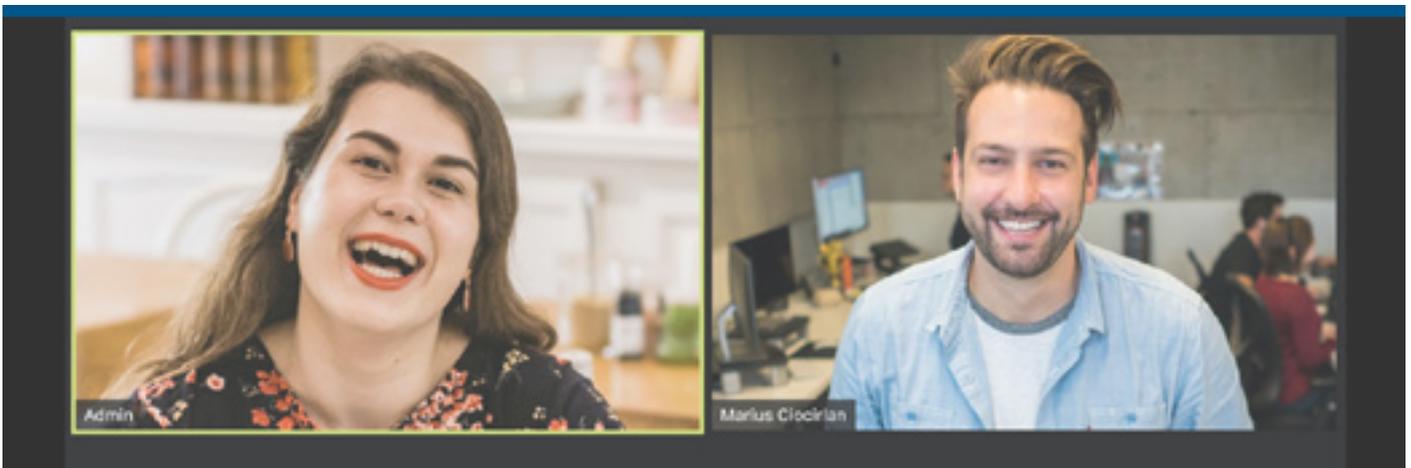
5. Can VDI handle local access to devices?

So far, we've covered off the key challenges and benefits from an IT perspective but have only loosely touched on end users. Common questions that come from the workforce include…

- How do I print to my local printer?
- Can I plug a USB device into my local drive?
- Can I use my laptop's camera for online meetings?

Today, with the right tools, all of these can be achieved without any specialist input. The benefit here is that it's up to the IT team to set these controls based on each user profile. For example, you can choose whether you allow USB drives, based on existing internal security policies. This can be changed and updated as and when required, keeping the organisation safe and the IT team in control.

6. Which end user devices do you need for VDI?

Traditional VDI solutions require vendor-specific devices with their own protocols (commonly PCOIP or HDX) that need to be installed, which increases the work for IT and leads to device limitations.

Hive Fabric tackles this challenge in two ways. Firstly, it uses one of the most widely used protocols, RDP, removing the device dependency somewhat. Secondly, HTML5 is utilised to deliver true multi-device experiences. This means you've got a one-size-fits-all solution that stops your teams worrying about device and OS compatibility.

7. What kind of end user devices do I need?

VDI enables IT teams to better align with corporate and regulatory requirements by restricting direct access to protected data and applications. The VDI environment and all related company data will never leave the data centre, making it easier to prove how you're protecting and managing data. Additionally, with Hive Fabric, all application usage transactions are published to a Message Bus, which can be used to:

- Detect anomalies – which could be a sign of an internal or external threat
- Detect unauthorised apps – which could consume bandwidth or highlight issues
- Gain insight into which applications are used, where, when and who by – which supports license management.

8. How does VDI keep me compliant?

VDI was traditionally deployed on-premise but today it can easily be delivered as a cloud service. We expect to see more companies favour the cloud after lockdown, which caused blockers, headaches and disruption for those still dependent on physical, on-prem infrastructure.

However, that doesn't mean that everything needs to be hosted in the cloud – the first step for off-premise may be to move your infrastructure into a data centre, enabling the benefits of cloud without giving up too much control. On the same token, used as part of a wider, hybrid environment, on-premise VDI solutions still have their place. As always, organisations will need to look at each workload, assess their needs and the wider IT strategy before making a decision, something Cloudhelix can help with if required.

The primary benefit of DaaS (that's cloud-based VDI) is that it puts more responsibility on a Managed Cloud Provider (like us) to build, maintain and manage the platform. It's an OpEx solution, with no hardware investment, which makes it easier to budget for and scale. In simple terms, we take care of everything but end user administration, keeping your IT team focused on the end users while we deal with the infrastructure and everything related to it. If you're not ready for full-blown cloud, consider moving into a data centre facility, getting realising the benefits of the cloud without jumping in with both feet.

In recent years, AWS and Microsoft have launched their own hosted desktop environments (that's AWS Workspaces and Windows Virtual Desktop respectively). Initially, these look very cost-effective and simple. However, once you begin to build the environment, it gets complex, and once you begin to spin up more demanding desktops, it gets expensive.

If your organisation already uses the public cloud, the complexity won't be a problem and the fact you already have an environment will mean the costs will be lower. However, for organisations new to the public cloud, this might not be the right path forward but certainly worth exploring. The good thing about these public cloud providers is that they guarantee huge, global coverage and a wealth of other services. If we see their costs lower over time, it may become a very compelling solution.

On-premise VDI, where the organisation installs and manages the environment themselves, provides the most control but has historically required capital investment and the skillset to build and manage the platform. However, with Cloudhelix's Converged Cloud Stack appliance, we can deliver the entire infrastructure stack, built and production-ready, to any, global location (office, DC or data room), managing the whole environment remotely on your behalf. This has a range of benefits, from ensuring data sovereignty to edge computing to removing capital costs. If on-premise VDI is something you're considering, we can take you through how we approach on-premise, hybrid and edge deployments using the Stack. Simply get in touch today to speak with our experts.

9. Where should I host my VDI platform?

Most modern CPUs are powerful enough to run regular business applications, however, if certain users require more computing power, this can be tweaked centrally by the IT team, which will alleviate performance issues for most users.

For staff using specialist, resource-intensive programmes – such as CAD, Autodesk or Houdini – you no longer need to invest in expensive endpoints. Instead, 2nd generation VDI solutions are GPU-enabled, leveraging GPU cards in the data centre to power intensive applications and deliver them via VDI.

In the past, these applications have been a sticking point for VDI adoption. GPU cards may be expensive but a single server can power many endpoints, making VDI in 2020 an option for a range of industries such as architecture, video production and more.

10. Best industries for VDI

VDI today is simpler to implement today and comes without the upfront costs it once did, meaning that essentially any organisation with end users is a suitable candidate. VDI comes into its own when large groups of users are regularly changing location or device and need a consistent, familiar experience each time they log in.

According to Gartner, the top three adopters of VDI by industry are Financial Services, Higher Education and Healthcare. From trading floors to libraries to hospitals, end users in each of these sectors are regularly on the move and carrying on the same work from different places.

We believe that as the Total Cost of Ownership for VDI continues to fall, we'll see it take hold in more industries, especially those with a greater need for security, compliance and data sovereignty.
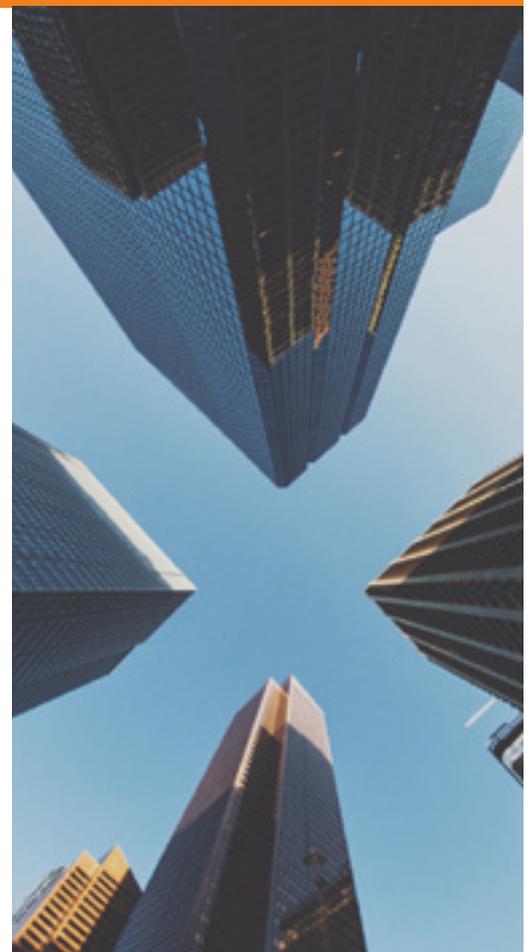
The future of end user computing

All of the pieces of the puzzle are in place for widespread adoption of VDI. The availability of high-speed internet. Improvements in technology. A huge shift to remote working. Increased cloud adoption. The need to achieve more with less.

Gone are the days of clunky and expensive solutions that require an all or nothing approach. Today, organisations can perfect remote working with VDI without jumping in with both feet. You can test and learn without investing in hardware, perfecting the service before scaling it as and when required. The newfound simplicity means it's fast to implement, enabling organisations to drive bigger outcomes in less time, progressing toward cloud maturity and nailing end-user compute once and for all.
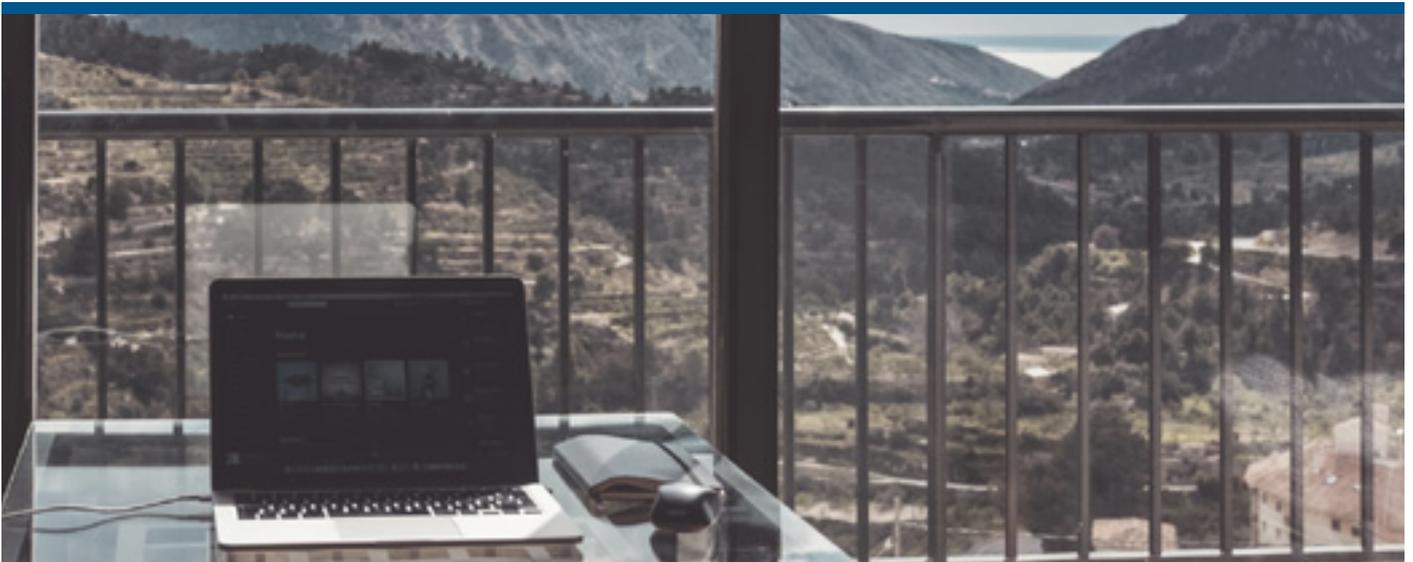
Our HiveIO Deployment Service

Cloudhelix offers a full end-to-end delivery service for HiveIO to help you realise the benefits of desktop virtualisation without any of the hassles associated with delivering it yourself. Supported by high-performance infrastructure either in the cloud or on-premise, we build your platform, deploy HiveIO and provide extensive support and management once live. All for a low, per user, per month cost.

Interested?

Email sales@cloudhelix.io or call 01273 987 920 today to start your journey.

Get in touch to find out how Cloudhelix can evolve your IT for good

Email

hello@cloudhelix.io

www.cloudhelix.io

Phone

01273 987920

Address

Cloudhelix - C/O Ekco Limited
Merlin House Brunel Road,
Theale, Reading, Berkshire,
England,
RG7 4AB