5 Critical Considerations

When Moving Your Windows App to the Cloud

The rise of the cloud shows no sign of slowing. With a total market forecast of over one trillion dollars by 2028, it is clear that businesses and enterprises of all sizes are betting that cloud technology can help propel them into the future.

The superior performance of the cloud makes this transition a natural fit for countless business use cases. Greater performance and scalability coupled with a customer-centric pricing model means the growth of the cloud should continue for the foreseeable future.

This rapid growth brings an even greater appetite for the cloud from customers and corporations. Decision-makers are increasingly zeroed in on applications, workloads, and data sets available in the cloud. Customers are familiar with the cloud and desire the benefits, and software publishers ought to accommodate their demands. Otherwise, the publisher may be left behind and become obsolete.

Challenges for Traditonal Applications

Satiating this hunger for cloud solutions is easier imagined than delivered in many instances. **Applications built before the cloud's existence are rarely able to "lift and shift" to new infrastructure.** Most fall into one of three categories, each of which with its own challenges for the future.

- Some of these applications are now obsolete. They have been replaced by new applications that currently work in the cloud.
- Other applications continue to thrive in non-cloud environments. In some sectors, customers need on-premises infrastructure for security or compliance reasons. For them, the cloud is not a viable option.
- A third category of traditional applications includes those built prior to the advent of the cloud that now need to migrate there.

For this last group, migrating these applications makes business sense, serves customer needs, and delivers better application performance. However, the path to the cloud for these applications, many of which were built using End-of-Life Windows operating systems, can seem complicated.

Who is This eBook for?

This eBook is for those that count Windows-based applications as key to their business. This eBook will prepare software publishers and independent software vendors (ISVs) for their own journey in migrating a Windows-based application to the cloud.

We will explore the benefits and drawbacks of moving a Windows-based application to the cloud. Further, we will detail five key considerations when migrating a Windows-based application to the cloud. These considerations include maintenance, cost, and security.

Applications Not Built for the Cloud

When considering applications that were not built for the cloud, it is important to consider if the cloud is appropriate and, if so, how a transition to the cloud might take shape. In these cases, a few key questions come to mind as cloud adoption accelerates across business and industry:

- What happens to this software as more workloads move from on-premises infrastructure to the cloud?
- Are these applications to be left behind?
- How do traditional applications find their way to this growing segment of infrastructure?

Migrating Windows-Based Applications to the Cloud

Thankfully, migrating Windows-based applications to the cloud is possible, and is often well-advised. But transitioning these applications to the cloud is easier said than done in many cases. Some applications need small modifications to work in the cloud. Other applications need complete refactoring. With a trusted cloud partner, Windows-based applications and ISVs can decide whether a jump to the cloud is the right move.

Should You... Stay on Legacy Infrustructure?

Before embarking on a migration of a Windows-based application to the cloud, it is critical to understand the reasons for moving in the first place. Getting the timing right to recognize all of the available benefits is only part of the equation. It is also important to recognize and manage against potential pitfalls and drawbacks.

Increased Customer Churn

Even if they do not know it explicitly, customers now expect the performance, reliability, and availability of the cloud. Every application they log into, from banking websites to email accounts, further conditions them to believe the applications they use are always on and working. Using on-premises or legacy infrastructure means there is a gap between customer expectations and reality.

More Revenue Regression

Legacy applications that do not run in the cloud lead to greater customer churn. Customers are looking for cloud-native experiences and will look for an alternative when they do not receive them.

Higher Costs and Supply Chain Issues with CapEx Infrastructure Model

Investing in your own infrastructure is not just about capital. It is also about ongoing costs to maintain hardware and the tax complications that come with such an investment over time. Keeping such a large capital investment as a Capital, instead of Operational, expenditure serves to complicate rather than simplify things for your accounting team.

Compliance and Legal Considerations

Traditional on-premises infrastructure must adhere to legal and regulatory compliance measures. With the cloud, these issues are addressed by the cloud provider. If you are operating your infrastructure on your own, these critical details fall to you. Above and beyond technical requirements, there are legal and administrative requirements that must be addressed by your team.

IT and Engineering Teams Handle All Infrastructure

Time spent managing and maintaining traditional infrastructure pulls your team away from maintaining and upgrading the application itself. This matters because your application, not built for the cloud, will be falling further behind competitors that are cloud-native.

Should You... Move To The Cloud?

Migrating a Windows-based application to the cloud can be transformative for a business. From improved application performance to more compatibility with customer needs, the adoption of cloud technology as the underlying infrastructure of a Windows-based application can be a winning proposition for all parties.

Better Scalability, Flexibility, and Elasticity

By its very nature, the cloud allows for more agility and burst capacity than legacy infrastructure. Applications that have variable resource needs or need an architecture that adapts to user requirements will benefit from being in the cloud. Conversely, running this type of application in a traditional environment not only creates a poor user experience but also increases the burden on the team maintaining the application and exposes the application to the greater likelihood of unscheduled downtime.

Optimal Infrastructure Resource Utilization

The cost model of the cloud allows users to pay for only resources they consume. When there is a traffic burst, the customer pays for resources to serve that traffic. Yet, when there are resources sitting idle, the customer does not pay for unused capacity. Conversely, with traditional infrastructure, resources must be paid for whether they are in use or not.

Tax Benefits with Cutting-Edge OpEx Infrastructure Model

Cloud infrastructure counts as an operating expenditure whereas traditional infrastructure often counts as a capital expenditure. Capital expenditures are subject to amortization and depreciation. While capital expenditures provide some tax benefits over time, operating expenditures recognize their value with regard to taxes as soon as the bill is paid.

Highly Performant and Easily Testable Engineering Environments

From staging to testing to deployment, the cloud provides environments for engineers and technologists to work efficiently. These environments are simple to both deploy and delete, giving developers a space to do their best work without compilation or onerous additional expense.

IT and Engineering Teams Offload Infrastructure Management

If IT and engineering teams are focused on managing and maintaining infrastructure, then they are not focused on optimizing applications and serving customers. With a cloud deployment, your technical resources are focused on continuing to optimize the application. This is of critical importance when you consider the application, not born in the cloud, likely needs additional support or refactoring compared to a cloud-native application.

The Right Time to Migrate to the Cloud

Internal Impact

Once your team has decided to move to the cloud, you must determine the best time for the cloud migration. First, you must evaluate the internal impact of the migration:

- Do you have the resources to perform the migration yourself or will you need a third party to lend a hand?
- Does the application create and store data too quickly to be refactored or modernized without incurring data loss?
- Is data loss something you can solve by performing any code changes offline or in a staging environment and then syncing later?
- If not, and customers lose data, is that reason enough to avoid the migration? How much data loss would be acceptable?

External Impact

Next, you must consider the external impact of the migration. External considerations around timing are all about your customer:

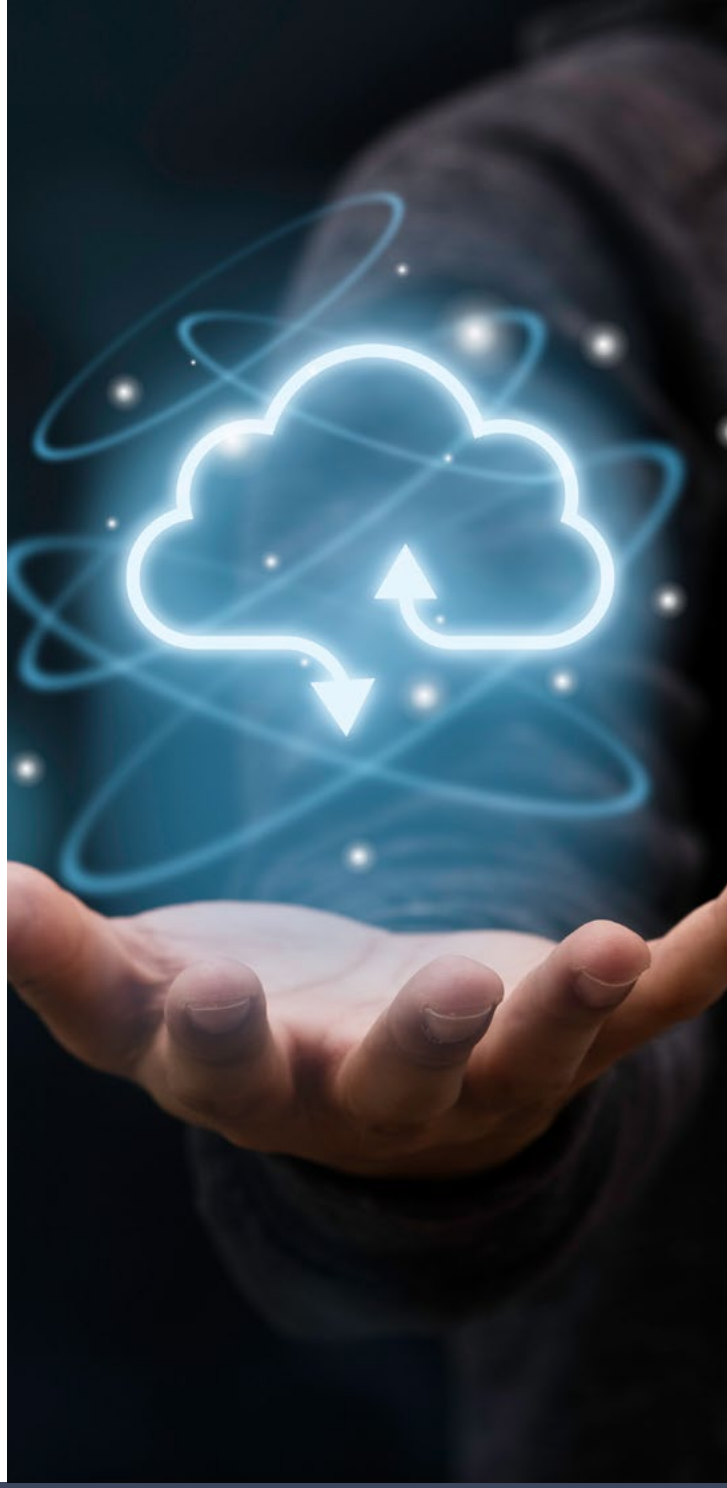
- What will onboarding and training look like?
- A move to the cloud will require at least some communication and onboarding of customers, even if changes are minimal. How will you handle migrating their data to ensure security and privacy while also maintaining data fidelity?
- Does a migration to new infrastructure impact current terms of service, master services agreements, or statements of work?

In some cases, such a migration could void contracts altogether. Plan for and manage any potential internal or external disruptions as you consider when it might be the right time to migrate your Windows-based application to the cloud.

Ready to Move to the Cloud?

As you begin your cloud migration, think through the following five considerations. Doing so will help map out your specific case, and path, to transition your Windows-based applications to the cloud.

1. **Who Will Manage and Maintain Your Cloud Infrastructure?**
2. **Which Cloud Providers Should You Use?**
3. **What Will the Ongoing Engineering Costs be Once the Migration is Complete?**
4. **What Will the Ongoing Infrastructure Costs be as the Software Footprint Changes?**
5. **How Will You Secure Your Application and Infrastructure?**



1. Who Will Manage and Maintain Your Cloud Infrastructure?

Service and support for your application will change significantly when migrating to the cloud. And while this is true for customers, it is also true for your internal team and processes. When considering a cloud migration, you must identify who will manage and maintain the new cloud environment.

Will you need to invest in cloud-capable engineers and technicians? Your engineering team may have only been working at the application level. Ensuring the application works correctly in the cloud will require DevOps resources and software engineers. You will need to consider what that looks like and how much budget to allocate to be successful.

How Liquid Web Helps Solve This Issue

If you choose to leverage VMware Private Cloud with Liquid Web, you gain access to 24/7/365 support from The Most Helpful Humans in Hosting®. These are no ordinary system administrators. They are Windows, Cisco, and Red Hat Linux Certified technicians ready to help in 59 seconds or less.

2. Which Cloud Providers Should You Use?

"Migrating to the cloud" is about as specific as declaring "We are buying a vehicle!" The details matter a great deal, and those details start with considering which cloud providers you will utilize.

Public clouds like like Amazon Web Services (AWS) or Google Cloud Platform (GCP) provide excellent technology, sure. But these options also require cloud engineers and technicians to manage the infrastructure. From updates and patches to ensuring stray APIs and workloads don't create security flaws and unnecessary costs, the only way to recognize all of the benefits of the cloud is to manage the cloud itself. Furthermore, a move to the public cloud may increase the amount of code that must be refactored or even rewritten from scratch. Public cloud environments are flexible - to a point. If your code has requirements that a public cloud provider is unwilling to accommodate, you are unlikely to change their mind or their product roadmap.

Private and hybrid cloud deployments can offer solutions to this resource need. Managed cloud providers (including Liquid Web) take care of maintenance, security, and monitoring at the infrastructure level.

Furthermore, tools like VMware Private Cloud make moving applications simple and straightforward. This private cloud deployment means that Windows-based applications can run in the cloud with no refactoring. Your engineers should be working on product enhancements and new features to thrill customers, not rewriting code that already works.

How Liquid Web Helps Solve This Issue

If you choose to leverage VMware Private Cloud with Liquid Web, your Windows-based applications can run in the cloud with no refactoring. This private cloud deployment means that your internal engineering resources can continue looking forward, instead of looking back.

3. What Will the Ongoing Engineering Costs be Once the Migration is Complete?

Migration to the cloud will incur additional costs from engineering and infrastructure resources. True, the cloud is infrastructure, just as on-premises or colocated servers are infrastructure. However, the differences between these two technologies as a functional matter are significant.

In addition to supporting the infrastructure itself, you must also consider how you will support the application. New features, new customer needs, and new integrations will require new types of expertise and ability. If your existing team is not experienced with supporting a cloud-based Windows application, then it may be necessary to modify or even expand your engineering team.

How Liquid Web Helps Solve This Issue

Choosing VMware Private Cloud at Liquid Web means choosing enterprise-grade hardware for your Windows-based application hosting. You won't need to worry about infrastructure slowing down or aging as we routinely upgrade hardware in our data centers.

4. What Will the Ongoing Infrastructure Costs be as the Software Footprint Changes?

One great thing about a Windows-based application running on traditional infrastructure is that the associated costs of managing and maintaining those servers tend to be fairly predictable. Sure, there are occasional peaks and valleys in resource needs, but for the most part, costs are understood.

With your application in the cloud, that is not necessarily true. Different providers bill differently for compute, egress and ingress, and disc space (among other things). Your product roadmap likely includes new features and capabilities for your software offering. Take care to plan for the fact that each of those new features and capabilities is likely to incur additional infrastructure costs. Additional processing, storage, or bandwidth will bring additional expense. In some cases, these expenses can add up to significant sums.

How Liquid Web Helps Solve This Issue

If you choose to leverage VMware Private Cloud with Liquid Web, IT spending will be predictable. Predictable costs are good for budgets and teams looking to maximize their technology investments without going over budget. Should you need to quickly scale your infrastructure to meet demands due to new features, Liquid Web can help.

5. How Will You Secure Your Application and Infrastructure?

Security for applications in the cloud is different from traditional security. For starters, the application layer itself needs to be secured differently. Previous vulnerabilities won't go away, but new attack surfaces will come to fruition. Do you have the engineers and security infrastructure in place to protect your new, cloud-based application?

The infrastructure beneath the application layer will also need attention from a security standpoint. While many cloud providers, both public and private, offer some level of security, you need to consider what else will be needed. The stakes are high when it comes to securing user data and intellectual property. Cutting corners on security is simply not an option.

Migrating your Windows-based application to the cloud will incur additional security expenses. Unfortunately, determining return on investment for security is difficult to prove. After all, the only way to know security is working is if there are no attacks.

This level of support is increasingly expensive through a public cloud provider. Liquid Web understands the security posture necessary to keep the infrastructure of your Windows-based application secure and performant. From server hardening to vulnerability scanning, Liquid Web can help.

How Liquid Web Helps Solve This Issue

Liquid Web provides 24/7/365 managed security services around cloud deployments, taking an active role in the security and care of your infrastructure. The Liquid Web team's security expertise allows the company to offer proactive, experience-informed decision-making when it comes to securing each component of the infrastructure.

What Comes Next?

Migrating a Windows-based application to the cloud does not have to feel daunting. As with any migration, a comprehensive plan is the key to success. A comprehensive plan starts with considering the impact and ramifications of the migration itself.

The case for migrating a Windows-based application is straightforward. There are significant business, customer, and technological benefits to be gained from moving to the most advanced infrastructure in the world. Begin your journey by addressing the considerations detailed above, and you will be on the right track.

Following the path of other publishers or businesses is unlikely to lead to success without friction. This is because your needs and use case are unique and require a migration plan specific to your needs

You need an experienced partner to help plan and guide your journey to the cloud.

Take the Next Step

Our team at Liquid Web is experienced in setting up Windows-based applications for success in the cloud. From managed VMware solutions to custom cloud configurations, Liquid Web's engineers and technicians can provide the environment necessary for your Windows-based application to thrive in a cloud environment.

Cloud Solutions:

- VMware Private Clouds
- Dedicated Clouds
- High Availability Hosting
- Hybrid Clouds
- Custom Solutions

All Solutions Include:

- Full Management with 24/7/365 On-Site Expert Support
- Standard DDoS Protection & Firewall
- Server Secure™ Hardening
- Proactive Monitoring & Maintenance

vmware CLOUD VERIFIED

Cloud Service Providers who display the Cloud Verified badge of er services based on the most complete VMware-based cloud infrastructure technology available, providing compatibility, choice, and control of VMware Cloud Infrastructure at data center locations where this service is offered.

Liquid Web

Need Help Finding a Cloud Solution that Fits Your Specific Requirements?

Talk with a Liquid Web Cloud Hosting Advisor Now.

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