GUIDE TO DELIVER YOUR LEGACY APPLICATION IN THE CLOUD

Are You at a Digital Transformation Crossroads?

ABOUT THIS E-BOOK

This guide will provide an overview of the benefits, considerations, and options available to deliver your legacy application in the cloud. It will highlight key topics you need to think through as you develop your strategy.

What does "SaaS" mean?

A Software-as-a-Service (SaaS) model is the enablement of a software license and delivery model that is charged on a subscription basis. Ultimately, it is a transformation of your business with modernization of app delivery, IT infrastructure, and business model.

3 NECESSARY CHARACTERISTICS OF A SAAS MODEL:

1. **Centralized Management**
   Centrally hosted in the cloud to enable infinite scale, on-demand

2. **Multi-Tenancy**
   Ability to serve multiple customers on the same infrastructure, allowing consistency

3. **Subscription-based Business Model**
   Grant user access rights periodically, rather than perpetually

3 KEY BENEFITS OF A SAAS MODEL:

1. Provide anywhere, any device access to any app, from a browser

2. Expand customer opportunity and geographic reach

3. Grow profitability with a monthly recurring revenue model

In this Guide You Will Learn:

+ Why you should deliver your legacy application in a SaaS model

+ Options to deliver your legacy application

+ Why a SaaS model can be as simple as delivering your legacy application in the cloud

+ Options and considerations to deliver your legacy application in the cloud

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DIGITAL TRANSFORMATION IN THE CLOUD

Are you at a digital transformation crossroads?

Legacy applications and businesses were built for a static, slow-moving, client-server world – that is not the world we live in today. Adoption of the cloud is accelerating, as are the mobility demands of our global workforce. A digital, on-the-go world requires anywhere, any device access – is your application built for the modern, mobile, and global workforce? **It should be.**

INDUSTRY TRENDS

+ **Customer need for mobility and ease of access to important data**

+ **Customer expansion beyond geographic borders**

+ **Increasing intellectual property in offering**

+ **Using niche 3rd party providers to focus on core competencies**

+ **Using more reseller partners to**

CLOUD BENEFITS

+ **Faster time to market**

+ **Low to no capital expenditure needed**

+ **Improved availability for customers**

+ **Grow reach and customer base**

+ **Subscription-based business model**

+ **Better user experience**

+ **Customers not limited by device**

OPTIONS TO MOVE TO THE CLOUD

+ **Re-write your legacy app as a web-based app**

+ **Deliver your legacy app from the cloud**

WHY YOU SHOULD DELIVER
YOUR LEGACY APP IN THE CLOUD

4 BENEFITS OF DELIVERING
YOUR LEGACY APP IN THE CLOUD

Below are four key benefits realized by most application providers once they deliver their app in a software-as-a-service model.

1

Increase Your Revenue with Global Access to Your Application
By delivering your application in the cloud, you can expand your geographic scope and acquire customers across the globe. An application delivered from the web can be consumed globally, by customers across device and operating system. Support and customer issues are minimized as well, when delivery is simplified to logging into a portal rather than installing and launching a legacy application. As a result, you can support more global users with less resources and grow your business without needing to hire additional employees.

2

Grow Your Business with a Subscription-Based Business Model
Moving to a subscription-based business model called Monthly Recurring Revenue (MRR) can help increase the value of your business. You are able to become more profitable, more predictable, and more sticky. Using an MRR business model means you'll create a predictable monthly revenue stream and be able to generate more revenue per user over their lifetime. An additional benefit in a SaaS subscription model is the ability to push out updates as needed and ensure all customers have the most up to date version of your software. This not only makes it easier for you to update your application, but it makes it stickier for users. Knowing they don't have to pay for upgrades because they are included gives them comfort in knowing they always have the most updated version. This also gives you the opportunity to respond faster to business needs and help provide more value for users.

3

Create a Better User Experience for Your End-User
While increasing speed to market benefits you, it also benefits the end user since they can be up and running in less time. New users can be added in minutes with little hassle and there is no setup required. This allows your customers to easily add more new users quickly and not have to worry about a long-term commitment of a set number of licenses. In addition to global access, you can also provide users with access to your application on any device, anywhere, and at any time. They not only can access your application from any device, but they are able to access a Windows application on a Mac. As the workforce becomes more mobile, flexibility is key.
Save Costs on IT Infrastructure

4

Save Costs on IT Infrastructure
Delivering your legacy application in a client-server model is very likely costing you more than it should in capital and operational expenses. Whether you host your application on-premises or through a hosting partner you are certainly not taking advantage of the cost benefits of the cloud. The cloud offers the ability to pay-as-you-go, only for what your use saving you upfront cash outlays on equipment and ensuring you don't overpay for outsized growth projections. Additionally, the ability to turn on and off machines on demand can save significant sums over any given month and year.

4 CUSTOMER BENEFITS OF DELIVERING OUR LEGACY APP IN THE CLOUD

As discussed, a SaaS model delivers practical, tangible benefits to your business, but it also benefits your customers. Here are 4 benefits your customers will gain from you delivering your app in the cloud.

4 Benefits of Delivering Your Legacy App in the Cloud

Better Performance
Delivery from the cloud can provide better performance and monitoring with less effort or cost required. Performance is not tied to end user hardware, but can be controlled on demand in the cloud. Real-time performance monitoring is streamlined by most cloud providers and many third-party vendors to ensure transparency and opportunity to avoid performance issues. Lastly, any software fixes or updates can be pushed to all users seamlessly.

Anywhere Access
You can provide global access, which is a huge benefit for users because they can now access your application from anywhere, at anytime, and on any device. In addition, being able to access your application from any device also means whether they have a Windows or Mac OS, they can access your application regardless of the operating system. Users have become accustomed to this because their smart phones have allowed them to access just about anything on one device.

Infinite Scalability
Cloud infrastructure can be scaled on demand and automated – no hardware changes or installation required. And no more worries about precise forecasting for infrastructure needs. Additionally, new users can be added simply with a click of a button. Companies don't have to worry about a long onboarding or off-boarding process, rather they can get users up and running or removed on demand.

No Software Installation
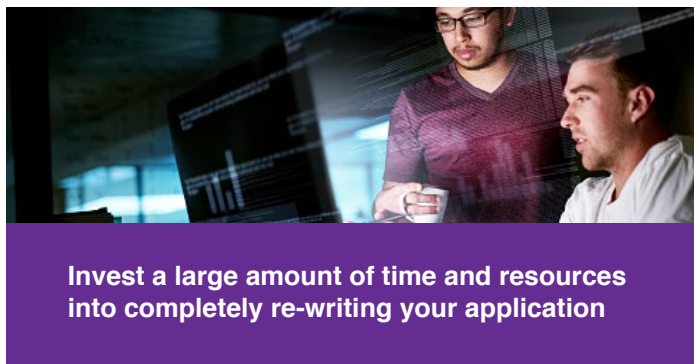Customers only have to download a file and launch the application, or more simply – just sign in. This frees up time and energy spent on support from your end, and your customer benefits from easily accessing the application. This makes troubleshooting installations a thing of the past. Your customer also saves money on hardware costs since they are no longer restricted on what hardware they need.

OPTIONS TO DELIVER YOUR LEGACY APP IN THE CLOUD

SHOULD YOU RE-WRITE YOUR LEGACY APP OR DELIVER IT FROM THE CLOUD?

If you have an application that is more than 3 years old, it is likely your software was built to run on hardware or virtual machines hosted on-premises. And you are likely missing out on most of the previously discussed benefits of delivering your app in a SaaS model.

There are two main options to deliver your legacy application:

Invest a large amount of time and resources into completely re-writing your application

Deliver your native application in the cloud by leveraging Infrastructure-as-a-Service

Option 1 - Re-Write Your Legacy Application

Approach this option in phases – Research, Planning, Design, and Execution. During the research and planning phases, be sure to undertake a risk assessment and cost analysis. Consider re-architecting specific parts of the application to phase out or partially replace specific pieces of the application. To execute, hire additional developers or re-purpose existing developers to re-write application code accordingly. For some applications, this process may take many months, and for some it may take many years to have a full solution ready to deliver as a web service.

Pros:

+ **Ease of Use** - No installation required for users

+ **Cross Platform** - Your application will run on any browser regardless of the platform

+ **Accessible Anywhere** – If developed for all common browsers, users can access from any device

Cons:

+ **Cost and Time** – Higher cost and time are required for development and maintenance of a web-based application

+ **Security** – Browsers typically are easier to exploit versus secure protocols (i.e. Microsoft RDP)

+ **Less Control** – Developing in web standards will require more code and offer you less control

Option 2 - Deliver Your Legacy Application in the Cloud

Unlike rewriting your application, this approach requires less effort since it does not involve any code changes. Depending on which technology (Microsoft RDS, Citrix, or VMware) you choose, you can experience the best of both delivery models.

One example of this approach is Microsoft Remote Desktop Services (RDS) technology. All that is required is the RDS infrastructure running in the cloud. In a session-based remote desktop services environment, you will need to build traditional RDS roles such as Gateway and Web Access, Domain Controller, RD Connection Broker and Licensing Server, and Session Hosts. Once architected and deployed for proper scalability, you can simply install the applications on both the client side (Session Host) and the Server side (Application / Database VM), configure user authentication, and you are ready to start delivering applications in the cloud.

Pros:

+ **Security** – Leveraging a secure protocol for a connection mitigates security risks

+ **Performance** – Scale your infrastructure up and down on demand and globally for better performance

+ **Speed to Market** – Have your application running in the cloud in days, not months or years

Cons:

+ **Infrastructure Management** – You will need to find a hosting partner/platform or dedicate engineering resources to manage your cloud infrastructure

+ **Not All Apps are 100% Compatible** – Up front testing is needed to ensure seamless user functionality

+ **Need Cloud Expertise** – Whether internal or external, cloud experts help get the highest performance at the lowest possible cost

Insider Tip: Re-writing your application means you'll completely rebuild your app from the ground up. While this is an option for some companies who have vast resources and the manpower to do so, most will opt to deliver their legacy app in the cloud. This super quick, inexpensive way to deliver an app will make it possible for more companies to be able to move to the cloud.

6 QUESTIONS TO CONSIDER WHEN DECIDING TO DELIVER YOUR APP

Infrastructure

1

What kind of infrastructure does your application have now?
Examine your existing infrastructure set-up, including your business pros and cons for that set-up. Then outline your needs and what an ideal infrastructure set-up would be for your business.

2

What do you want to manage? What do you want to control?
What are the cost implications?
How much of the infrastructure, delivery and ongoing maintenance do you want to manage? How much of the infrastructure do you want to control? How much control do you need? The answers will help you define the appropriate infrastructure set-up and the ongoing management solution.

Scalability

3

How does your application scale now?
What are the user demands on your application and infrastructure? Do users and access needs fluctuate with time of the day, day of the week, or month of the year? Understanding user demand is helpful to understand scaling needs

4

How do you increase profitability?
How do you earn revenue today? How can you scale your existing business? Does your existing application limit your customer or geographic reach? For many ISVs changes in delivery model and business model can unlock customer growth and business value immediately.

Management

5

How often do you have to upgrade your on-prem infrastructure?
Is your hardware upgrade cycle too slow to keep pace with technological advancements and associated benefits? How often you upgrade infrastructure correlates to how often you bring cost and performance innovation.

6

What maintenance are you responsible for? How do you manage your maintenance?
Are you responsible for hardware maintenance? Infrastructure maintenance? Application maintenance? Storage maintenance? Do you want to be in the business of maintenance? There are many solutions for ISVs that want to lower their own maintenance burden to focus on app development and customer acquisition.

HOW TO DELIVER YOUR LEGACY APP IN THE CLOUD

3 METHODS TO DELIVER YOUR LEGACY APP IN THE CLOUD

You are ready to deliver your application from the cloud, and you've decided to deliver your legacy app with native functionality in the cloud rather than re-writing your entire application. This section will discuss three common methods for delivering your legacy application in the cloud. You should be able to find a method that is right for you and makes sense for your business.

Method 1 Build Your Own Infrastructure in the Cloud (DIY)	**Method 2** Hire a Hosting Partner	**Method 3** Pay a 3rd Party to Build the Infrastructure for You

Method #1 - Build Your Own Infrastructure in the Cloud (DIY)

As with any Do-It-Yourself (DIY) project, if you have the time and expertise to take on the project, this will most likely be the method you will lean towards because it will end up being the least expensive route. Typically, most will lack the expertise and require assistance at some level.

Pros:

+ **Control over Infrastructure** – You control the infrastructure, so you can customize the architecture to fit any specific need

+ **Control over Cost** – You control the project and don't have to pay anyone, which should make the cost less expensive and ultimately up to you on how much you spend

+ **Expertise** – You have the expertise needed so you can build and support it without relying on anyone

Cons:

+ **Opportunity Cost** – Understand what projects your labor could be going towards instead of infrastructure. Additionally, the cost is multiplied if you make a mistake and end up needing to hire outside resources is multiplied

+ **Time** – Not paying someone does save you money, but it also means you will lose out on time that could be spent on other projects

+ **Expertise** – If you don't have the expertise, then this option would be unrealistic because you won't be able to customize the infrastructure

Method #2 - Hire a Hosting Partner

Hiring a Hosting Partner is one option for those who don't have the expertise, but this can end up being expensive. It involves hiring a Hosting Services Provider to offer the infrastructure and expertise to host your app in the cloud, which usually means more expense and less control.

Pros:

+ **Get What You Pay For** – The Hosting Partner will provide the architecture expertise and support, so you won't have to worry about it

+ **Pass on Expectations** – You can pass on the security and regulation expectations to them and not have to worry about it

Cons:

+ **Performance** – You have no control over the performance

+ **Control & Flexibility** – Hosting Partners generally have a cookie cutter approach which means you will lose control, flexibility, customization capabilities

+ **Cost – Expertise** and full management can come at a steep cost

+ **Due Diligence** – Not all Hosting Partners are the same. Do your due diligence prior to selecting a company to ensure they meet your expectations or they can cause you more issues down the line

Method #3 - Pay 3rd Party to Build the Infrastructure for You

Hiring a third-party to build the infrastructure for you is a great option for a company who doesn't have the expertise to build it, but can support it and wants some level of control over the infrastructure.

Pros:

+ **Customization** – You can customize it to whatever you want without having to worry about the needed expertise

+ **Cost** – This option will be less expensive than hiring a hosting partner to do everything so you'll be able to pay less and have more control

+ **Performance** – You should be able to optimize the performance of your infrastructure and provide an ROI since it will be customized to fit your company

Cons:

+ **Cost** – This option will be more expensive than building it yourself, assuming you have the expertise needed

+ **Management & Support** – You will lose some control and flexibility compared to building it on your own

+ **Due Diligence** –You will need to do your due diligence prior to selecting a company to ensure they meet your expectations

Insider Tip on Methods:
When looking to deliver your legacy application in the cloud, there is a method for every business. For those who have a more technical background and want to build their own infrastructure, Method #1 is perfect. On the other hand, for those who don't want to handle any of it, they are able to hire a hosting partner who will handle all aspects. Method #2 is great for anyone who has the capital resources but lacks the technical background to build, manage, or want any control over the infrastructure. The last method is for those who want more control, but don't want the hassle of building an infrastructure. This is a great hybrid method. Given the number of partners who can help deliver an infrastructure solution, you can be up and running quickly.

As the digital transformation accelerates, more and more third-party vendors are available to take on non-core functionalities like infrastructure. With a growing number of solutions, Method #3 continues to be the option of choice for many companies.

8 QUESTIONS TO THINK THROUGH AS YOU DEVELOP YOUR STRATEGY

Whichever method you choose, you need to be aware or at least think about some of these issues as you develop your strategy. Let's take a look at some questions you can ask yourself as you begin.

1 What type of resource demand does the application have?
This question is to help you think through how your application works and what is required.

+ What is the expected compute horsepower?
+ What are the hardware requirements of your platform? Are they specific?
+ What are the hardware requirements per user?
+ Can it operate in a shared environment where multiple users can be logged into the same VM running multiple instances of the same application?
+ Are there internal databases?
+ Are you going to put them in the cloud?

2 How will you manage your security model?
From a user authorization perspective, this question will help you understand where security

+ Will your application manage user access and data security, or do you expect Active Directory to authenticate users?

3 What is the user on-boarding process?
Use this question to think through what your infrastructure will look like and what you will

+ What is the base infrastructure (data base server, file server, application server)?
+ As you bring new users onboard, what portions of your infrastructure will need capacity increases to help you grow on demand?

4 What is the typical user profile?
This question will help you gauge what you'll need for your standard user profile.

+ How much compute capacity will each user need?
+ Do you want users to store any data locally or is it stored only in the cloud?
+ Do you want to prevent users from copying data locally?
+ How will data security be managed?

5 How can I eliminate or minimize requests/help desk calls?
Use this question to work backwards from issues to develop solutions and minimize extra work.

+ What documentation can you provide to help users?
+ What is the process for contacting the help desk?
+ Are you able to provide any self-help options?

6 **What are the different security options?**
Consider your different security options to determine how you want to handle security and what expectations you have for your application.

+ Is a user name and password adequate? Or do you need multi-factor authentication?
+ Does your application handle all the security?
+ Is the application doing user authentication or do you expect the infrastructure to do user authentication?
+ How do you ensure valid users have access to the infrastructure and how will you protect their data?

**7** **Does your app interact with other apps? (i.e. Office Apps)**
Use this question to understand how your apps work together and what is needed.

+ What other dependencies does your application need (like Office)?

8 **Can it be a multi-tenant environment, or do you need a separate Active Directory for each customer?**
This question helps you determine if you can use a shared infrastructure. If your application is able to manage user and data access, then multiple customers could share the same infrastructure, thus reducing runtime costs. If each customer needs to be isolated, then each customer would need their own infrastructure, thus raising runtime costs.

+ Where is the application security - user authentication level or database level?
+ Where is the data isolated?
+ How do you isolate data from unauthorized access?
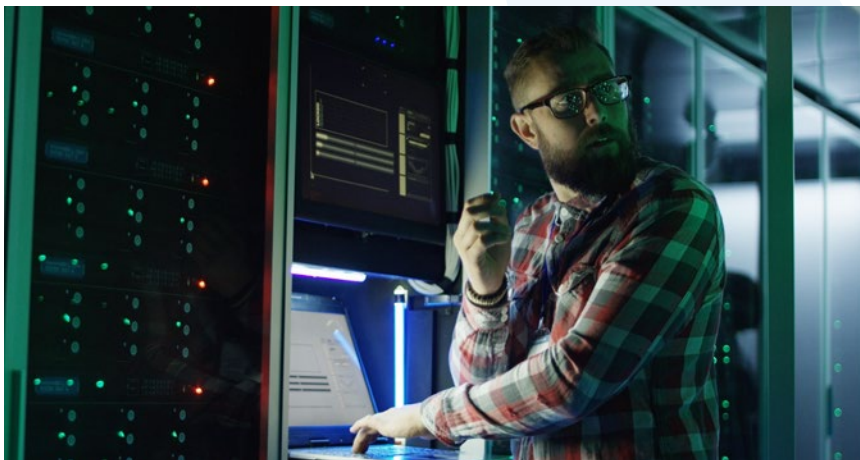
MYCLOUDIT + THE RDS SOLUTION
TO DELIVERING YOUR APP IN AZURE

At MyCloudIT, we work with ISVs all over the globe looking for a solution to deliver their application from the cloud. We work with ISVs to quickly bring their native application to their customers in a SaaS-based model without the time or expense of doing it themselves or hiring a hosting partner.

As a third-party vendor we provide the expertise and platform to deliver your application from the cloud in hours. ISVs leverage our solution to:

+ Quickly and easily move their application to the cloud without needing to write a line of code
+ Maintain the same functionality of a web application, while significantly saving resources and costs since they do not have to build or develop a new infrastructure for their application
+ Capitalize on the IT cost and performance benefits of the public cloud
+ Shift the balance of their IT work from maintenance to innovation by automating mundane tasks and managing everything from a single pane of glass

Microsoft Azure

Our Solution:

Microsoft Remote Desktop Services (RDS) as Infrastructure-as-a-Service (IaaS) Leveraging Microsoft Remote Desktop Services (RDS) technology in the cloud allows any software vendor to deploy applications globally on cloud virtual machines in a cloud-only or hybrid approach. The result is a new delivery model that helps employees stay productive anywhere, and on a variety of devices - Windows, Mac OS X, iOS, or Android. Corporate applications run on Windows Server in the cloud, where they're easier to scale and update. Users can access their applications remotely from their Internet-connected laptop, tablet, or cellphone. While appearing to run on the users' local device, the applications are centralized on Microsoft Azure's protected, reliable infrastructure.

All that is required is a Remote Desktop Services infrastructure running in the cloud. In a session based RDS environment, you will need to build traditional RDS roles such as Gateway and Web Access, Domain Controller, RD Connection Broker and Licensing Server, and Session Hosts. Once architected and deployed for proper scalability, you can simply install the applications on both the client side (Session Host) and the Server side (Application / Database VM), configure user authentication, and you are ready to start delivering applications in the cloud.

MyCloudIT has built a management platform that automates the provisioning and delivery of this technology, so you can lift and shift your application into the cloud in hours. The accompanying management portal allows for auto-scheduling of resources and auto-scaling to ensure you are taking advantage of the cost benefits of the public cloud.

SIMPLIFY THE TRANSITION TO THE CLOUD

Unlike rewriting your application, this approach requires less effort since it does not involve any code changes. Depending on which technology (Microsoft RDS, Citrix, or VMware) you choose, you can experience the best of both delivery models, which are a web application and a native application.

All-In Strategy (With or Without Data)
While most people may think the all-in strategy is the only option, it is actually one of several options. The all-in strategy is for those who are wanting to jump in versus slowly dipping their toe in. For some companies, they have too much legacy data and really want to cut the cord and get a fresh start. They may bring over some data that is pertinent, but most will be left. Starting fresh is one of the easier ways to go, but understandably not an option for everyone. Another common example is startup companies who don't have any data. Starting from scratch is their only option. The third way is for companies to migrate the data over. This is still possible, but it will take some time and effort to make it happen. Having the understanding beforehand makes it much easier to plan for and understand the timeline needed to move to the cloud.

Obviously, you can go all in, but there are two strategies to allow you to ease your transition to the cloud.

Try Before You Buy Strategy
Just as it sounds, you are able to try before you buy. This is common with most 3rd party vendors and one of the positives of looking to move to the cloud. You have the opportunity to get a proof of concept for the cloud and decide whether it makes sense for your organization or not. Keep in mind, it will take some time and effort on your end to make it work, but it is completely worth the effort once things start moving.

Hybrid Implementation Strategy
Not everyone realizes the hybrid option is a choice when moving to the cloud. Some organizations may not want to move to the cloud completely or would prefer to move over slowly. Either option is feasible. Unlike the All-In Strategy, this is a good way to dip your toe in and test out the water versus jumping in. You are able to easily transition to the cloud as fast or as slow as you want. This makes moving to the cloud a task that is much easier to accomplish.

Final Tip:

Keep these strategies in mind as you explore what delivering your application in the cloud would look like and what it would mean for your company. The best part about these strategies is that you'll be able to go at your pace and find a solution that works for you.

ABOUT MYCLOUDIT

You are ready to deliver your application from the cloud, and you've decided to deliver your legacy app with MyCloudIT is a turnkey automation and management solution to deliver desktops and apps in Microsoft Azure.

Visit **http://mycloudit.com** today to learn more!

Centralization
Manage everything needed to deliver an application in the cloud from one streamlined portal – delivery, users, images, infrastructure, certificates, monitoring, licensing, Azure consumption, and backups all in a single pane of glass.

Simplification & Automation
Numerous complex, manual, mundane and routine tasks are simplified and automated with wizards, scripts, and intelligent agents.

Visualization
Granular visibility into management
and performance data provides unique transparency and insight, and allows for impact analysis around deployment and infrastructure configurations.

User-Centric
Easily manage and discover everything related to a single user – all objects, applications, and settings are in one place and correlated to an individual user.

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