Microsoft

An ISV's guide to cloud migrations

How software vendors are making the move to SaaS

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An industry transformed

In the span of just five years, cloud-based technology has completely revolutionized the software industry.

Even for today's fast-moving digital market, the rate of change for vendors has been intense. The number of competitive and competent start-ups has proliferated, while many of the industry's largest brands have either started or completed the shift to modern cloud-based software-as-a-service (SaaS) offerings.

The result: enterprise-level SaaS solutions are now earning a combined $20 billion in quarterly revenues for their vendors[1], a mark nearly double that of 2016. That rate of growth is the industry's present and future — Gartner projects the SaaS space will grow by almost 53% between 2019 and 2022[2].

Those revenue levels, combined with a customer base that increasingly relies on streamlined SaaS solutions, paint a clear picture for vendors: staying competitive requires a scalable and cost-controlled SaaS product offering that can fit market expectations, open up new revenue streams, and monetize new customer segments.

For vendors still operating with legacy on-premise infrastructures, however, the cloud transformation process represents a number of logistical challenges. Solving for such issues and fully incorporating the benefits the cloud offers — takes both the right **plan** and the right **partner**.

[1] Gartner: Forecast Analysis: Public Cloud Services, Worldwide, 4Q18.

[2] Quarterly SaaS Spending Reaches $20 billion as Microsoft Extends Its Market Leadership, Synergy Research Group, August 21, 2018.

"The enterprise SaaS market is now generating $20B in quarterly revenues for software vendors, a number that is growing by 32% per year." [3]

[3] Quarterly SaaS Spending Reaches $20 billion as Microsoft Extends Its Market Leadership, Synergy Research Group, August 21, 2018

Building your business case

In many ways, the success of a software vendor's migration to the cloud and a SaaS-based business model starts with its primary objective. Whether the company is trying to reach new markets, reduce its overhead, integrate advanced analytics capabilities, or achieve a combination of things, identifying key needs will help determine exactly which migration methodology is best suited for the job.

The business values that have driven SaaS models to the industry's forefront fall into four broad but distinct camps:

Reductions in complexity and TCO
On-prem infrastructures have been industry staples for decades. But the cloud provides software vendors with clear advancement opportunities in two key operational areas: overall infrastructure costs, and the time and expertise it takes to maintain that infrastructure.

A cloud-based infrastructure rolls time-intensive maintenance to the provider, helping vendors better manage laborious recurring needs like security and functionality updates. Such tasks — and the personnel needed to execute them — can be cost-prohibitive, especially as legacy on-premise solutions reach their end-of-support periods. The cloud eliminates an organization's need for both, allowing vendors to pass those savings along to customers.

Scale and growth opportunities
One of the cloud's most fundamental appeals for software vendors is scalability. A SaaS offering drastically simplifies a company's ability to expand to global markets and new audience segments, all managed by the elasticity of a cloud setup's scalable resources.

But a reliable cloud provider offers more than a key to new markets: it provides a compliance framework that aligns vendors to country-specific data management regulations. Whether its through a global network of data centers that can house information wherever is needed, or granular expertise on managing complex and changing regulations, enterprise cloud providers have the resources needed to support a global software offering.

"ISVs (who switch to SaaS) reported a range of efficiency gains depending on the complexity of the application and the ongoing maintenance responsibilities, with an average of a 26% improvement in engineering efficiency." [4]

[4] The Shift to SaaS: A high-value opportunity for ISVs, Keystone, June '17

**Extensions of offerings
and new cloud services**
Part of the reason SaaS offerings have
been so revolutionary is because of
their accessibility for the customer. The
consumer's ability to rapidly purchase
and utilize such solutions has completely
transformed the enterprise-level software
market: ISVs on a SaaS model are reporting
reductions of customer installation times of
up to 75%[5].

This kind of seamless onboarding is a boon
for both customer and vendor: customers
can more quickly recognize product value,
and vendors can move away from traditional
licensing models and into more efficient
revenue strategies. Focused companies can
also roll over non-core disciplines to the
cloud provider, using the provided platform
to process payments and manage product
updates — allowing them to get back to the
development skills they rely on the most.

AI and advanced analytic capabilities
A SaaS model opens up a vast array of
opportunities for data intelligence. With so
much collected customer data housed within
a unified pool, companies can leverage
advanced AI solutions to help parse out key
consumer insights and behavioral trends.

This has obvious potential for how vendors
market their products. But depending on
an application's purpose, those data insights
can also be passed along to customers as
an added service, enabling them to better
understand their own organizations. These
are the kind of capabilities that are far more
cost- and time-efficient when managed
through a cloud infrastructure, as opposed
to on-prem.

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With a desired business case in-hand, software
vendors can now hone in on exactly what kind
of migration or modernization methodology is
needed. While the technicals of each approach
option will vary, the overarching framework is
largely universal: Assess, Migrate, Optimize, and
Secure and Manage.

[5] The Shift to SaaS: A high-value opportunity for ISVs,
Keystone, June 17

"SaaS changes the way ISVs produce value for their customers and it presents opportunities to evolve their monetization potential. Over half (57%) of the ISVs interviewed introduced significant pricing changes as they moved to SaaS. ... Of the ISVs who reported changing pricing models, everyone also reported an improved ability to capture net new revenue from heavy users that previously represented value left on the table in a traditional licensing model." [5]

"All of the ISVs interviewed explained that the combination of continuous product development methodologies and greater visibility into customer usage through app data collection have led to improved product development cycles, saving up to one-third of the time required for a typical product release." [6]

[5],[6] The Shift to SaaS: A high-value opportunity for ISVs, Keystone, June 17

4-step migration process

The cloud migration process usually includes four key phases. No two migrations are exactly alike, but organizations that prepare along these basic guidelines will be better equipped to build a flexible infrastructure that solves for its precise business objectives.

1

Assess

Build a migration plan that's backed by stakeholder alignment, informed by a comprehensive inventory audit, and in-line with your TCO objectives.

2

Migrate

Choose the right methodology for you, from no-code lift-and-shift migrations to highly scalable application modernizations.

3

Optimize

Implement additional cloud services to help you govern and monitor your infrastructure, simultaneously controlling costs and managing usage.

4

Secure & Manage

Leverage advanced adaptive threat protection tools to keep your cloud infrastructure's data secure and stable.

Assess & migrate

1. Assess: Build your migration plan

No matter how necessary a cloud migration or modernization may be, such a significant organizational shift should always be approached with the appropriate level of structure. In other words, the better your plan is, the smoother your migration should be.

Start your migration plan by aligning the company's key stakeholders on the exact business objectives you're trying to solve for. Reaching that consensus can help your cloud provider narrow in on whether a **migration** or **modernization** is required — like, for example, a no-code shift versus a more comprehensive application restructuring.

This is also the time to calculate your anticipated total cost of ownership and compare it with your current solution. To do so, you'll need both a **calculator tool** and a full audit of your current server inventory. Various applications may need to be migrated in specific ways at specific times to ensure a seamless transition to the new infrastructure.

2. Migrate: Choose the
right methodology

There is a fundamental difference between how Microsoft views the concept of migration versus modernization. Knowing which path your company needs to follow is critical to a successful transformation.

"Migration" is primarily used to describe either a no-code lift-and-shift (also known as "rehosting") or an app transference that also involves focused changes to the application design without reworking its code (also known as "refactoring"). This is a quick and unobtrusive way to evolve to a cloud infrastructure without significant risks to the application code itself.

A **"modernization"**, on the other hand, involves modifications to or extensions of an application's code that are meant to scale and optimize it for a cloud environment. Also known as "rearchitecting", this approach is necessary for companies that are looking to maximize an application's scalability or integrate additional cloud services. This can also include a hybrid infrastructure, where certain application elements are moved to the cloud and others are kept on-premise based on a vendor's needs. When combined with the **Azure Hybrid Benefit,** such an approach can help vendors trim their TCO while still modernizing their offering.

While these two strategies take different routes to solve for different business needs, they can both have powerful effects on how a software vendor operates. Here's two examples of how very different companies have been able to transform the way they do business through the cloud.
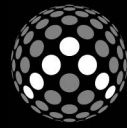
Allscripts®

"As we progress into the international market space, we simply don't have existing data centers in those regions."

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powerdetails

"We hope to empower customers in the future to manipulate their data in creative ways that nobody has yet thought of."

Allscripts: Prescription for agility

Global scalability and a lower TCO
Allscripts, a leading healthcare software manufacturer, serves physician practices, hospitals, health plans, and pharmaceutical companies. Needing to frequently transform its applications and reach a global audience, it migrated its infrastructure to Microsoft Azure.

 "As we progress into the international market space, we simply don't have existing data centers in those regions," said Jeff Brady, senior program manager. "Being able to provide access to data centers worldwide, as well as the various technology sets to allow us to grow as a technology company, was a primary driver for us to head to Azure."

The wide and broad set of capabilities within Azure provided the ability to match technology to the problems Allscripts was trying to solve. In one acquisition, Allscripts' careful planning — like a test/fail of critical systems — allowed it to lift-and-shift dozens of applications across 1,000 virtual machines in just three weeks.

Allscripts has also began refactoring its applications' code to become more native to Azure and take full advantage of its capabilities. Through the use of the Azure Hybrid Benefit, Allscripts was able to reduce its overall costs by up to 82 percent.

PowerDETAILS: built for growth

Expanding to new customers with new services

PowerDETAILS offers a management platform that connects police officers to part-time security opportunities that they can pursue while off duty. To scale up the platform, PowerDETAILS recently migrated from a Microsoft SQL Server database on virtual machines to Microsoft Azure SQL Database Managed Instance.

PowerDETAILS lifted and shifted its regional databases to Managed Instance in batches. Within a week, 10 regional databases and 24,000 users had been migrated with minimal downtime.

"With Azure, we can achieve 99.99 percent uptime and elastically scale to meet new transaction demands," said Andy Rivera, general manager.

"We already have an analytics tool built into the system to help police departments identify patterns. But with the flexibility of Azure machine learning, we hope to empower customers in the future to manipulate their data in creative ways that nobody has yet thought of."

Optimize & secure

3. Optimize: Integrate additional services

A proper application migration extends well beyond just the rehosting or refactoring. A software vendor's initial migration plan should also include structure on how to best utilize the cloud's various components to create the most modern and competitive customer offering possible.

A monitoring tool like **Azure Cost Management** can help you assess and control resource usage across both the entire organization and individual teams. For vendors who are trying to reduce their infrastructure TCO, these tools can help keep actual costs in-line with the ones projected in the Assess phase.

The overarching goal in this stage is to actively monitor and adjust your infrastructure to help engineer the most seamless and scalable day-to-day management process. Doing so lays a stable foundation for the expansion of application capabilities like machine learning and AI.

4. Secure and manage: Protect your data
Lastly, it's time for an open-ended phase: the ongoing protection of your infrastructure.

One of the primary appeals of the cloud is the expertise of the provider itself: enterprise cloud platforms carry a vast supply of built-in protections and management services to keep core processes updated and secure. But vendors can also enable adaptive threat protection systems to further reduce their potential exposure.

Data security is of paramount importance in the cloud. Your provider should offer guidance and protections for things like compliance regulations, ransomware, human error, and downtime — all of which are accounted for in the **Azure Security Center management system**.

By optimizing and securing their cloud infrastructure, vendors give themselves the capabilities and man hours needed to evolve their overall offering. This is the most valuable end-state companies can reach: the ability to truly innovate their product. Here's how Stackify and Rockwell Automation did exactly that.

Stackify

"By providing a PaaS framework that developers can build on, Azure empowers Stackify developers to start using a new Azure service in minutes."

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Rockwell Automation

"What we're talking about delivering is a degree of collaboration and visibility unheard of in the oil and gas industry. To do that, we need a rich flow of data."

Stackify: Constantly innovating

Evaluating and implementing new services

Kansas-based Stackify was founded to develop the tools developers need for easy, self-managed daily-operations oversight and server access. Operating as a SaaS platform made it easy to onboard new customers, scale to accommodate growth, and gather deep insights into customer behavior.

"Building our application on Azure has made it really easy to leverage the latest technologies, like microservices, to innovate faster," said Matt Watson, Stackify's founder and CEO. "We're also able to scale out to meet our customers where they are, manage thousands of customer databases as one, and protect our customer's data. With Azure, we can ensure our margins are healthy and grow our business without a hitch."

By providing a PaaS framework that developers can build on, Azure empowers Stackify developers to start using a new Azure service in minutes. The Stackify team can continually evaluate Azure services and quickly and easily adopt new features as they become relevant to Stackify's needs. If they later decide they no longer need a service or that another service might be a better fit, Stackify developers can turn the service off without spending money or time on provisioning infrastructure.

Rockwell Automation: Advanced analytics

Solving the big data challenge

Rockwell Automation calls itself the world's largest company, by revenues, dedicated to industrial automation. But that's a challenge when it means more control systems to monitor, analyze, and support.

A single customer for the company's customer support monitoring and analysis operations can have thousands of the company's sensors and programmable logic controllers, each delivering up to tens of thousands data points per second.

To monetize that rich flow of data, Rockwell Automation has devised and continues to refine a comprehensive data strategy based on a range of cloud-based Microsoft technologies.

"We can take analytics to an entirely new level — the level of predictive, actionable analysis — with Azure Machine Learning," says Weber. "But we can do even more with it. The time to develop a solution using Azure Machine Learning is so much reduced, compared to writing a fully custom-coded application. That makes it easier for us to roll out this solution to more customers, and to build more solutions around more uses than we could otherwise."

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"(Azure) does just about anything you want to do. It's all there. It provides all the building blocks you need to build an app. You just have to figure out what you need and make it work."

—Matt Watson, founder and CEO, Stackify

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