

cloudticity

Optimizing your cloud migration with Cloudticity

Capitalize on transformative cloud benefits while reducing costs, complexity, and risks

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Many healthcare organizations today recognize the potentially transformative benefits of cloud migration. Moving key applications to the cloud can enable organizations to tap into cutting-edge technologies that drive innovation. Meanwhile, organizations can also use cloud environments to scale their IT resources, enhance security, and avoid massive capital expenditures.

Still, cloud migration can be fraught with challenges, especially for healthcare organizations. Whether moving applications used by employees, patients, payers, or providers, these organizations must make those shifts without interruptions in service. At the same time, they must maintain the utmost security and sustain compliance with strict regulations. Just as important, they must control the costs and complexity of the migration and subsequent operations.

Identifying potential obstacles, formulating a detailed plan, and streamlining execution are critical for a successful migration. Cloudticity Cloud Migration Services for Healthcare can help your organization plan and execute a migration that meets your specific needs. By drawing on deep experience and expertise with cloud migration for healthcare organizations, Cloudticity enables you to accelerate your journey while minimizing risks. A seamless transition to using the Cloudticity Oxygen™ fully automated managed services platform helps ensure that you continue to maximize the benefits of the cloud going forward.

Why move to the cloud?

There are several compelling reasons to move forward with a cloud migration—and to move forward now.

Innovation: Like businesses in other industries, healthcare organizations are under continuous pressure to stay relevant and deliver innovative solutions. Your organization might want to provide patients with new ways to access healthcare information; offer providers the ability to connect genomic data with clinical insights; or enable payers to better assess health risks and optimize reimbursement models. By running apps in the cloud, you can take advantage of advanced cloud-based technologies—such as artificial intelligence (AI)/machine learning (ML), analytics, and data visualization tools—to augment your software and deliver new experiences. Because cloud service providers (CSPs) offer new technologies as they are introduced, you can stay up to date with the latest capabilities without large capital expenditures.

OpEx cost model: Cloud migration can help you flip your IT cost model. With the traditional CapEx model, you buy, operate, and maintain physical hardware in your own data center. To accommodate occasional peaks, you have to buy more hardware than you need, which means you might use only a fraction of your resources on a daily basis. The cloud allows you to shift to an OpEx model in which you pay for only what you consume. You can free up budget for other types of investments that the business might need more.

Scalability: Using a public cloud gives you the flexibility to scale up—or down — as needs change. You can accommodate demand surges or seasonal spikes quickly. And you can avoid overbuying and over-provisioning resources, eliminating the expense of idle servers and storage.

Security: In many cases, cloud providers can offer more robust, advanced security capabilities than you could cost-effectively deploy in your own data center. By implementing managed cloud services designed specifically for healthcare organizations, you can also simplify HIPAA compliance and achieve HITRUST certification for your cloud-based services.

Resiliency: Adopting cloud services can help you improve application resiliency and availability without the capital costs of buying redundant systems or building additional data centers. In the cloud, you can easily, cost-effectively replicate apps and data across multiple regional locations. If there is an outage in one location, your workloads can automatically fail over to another with minimal downtime. Meanwhile, load balancing can help ensure availability and maintain required performance even if usage spikes.

Maintaining the status quo is not a viable option. Traditional on-premises infrastructure, which requires upfront capacity planning and ongoing maintenance, cannot offer the agility for responding to changing business requirements. Meanwhile, legacy security solutions, optimized for old security issues, cannot effectively detect or address emerging threats.

Cloud migration enables you to keep up with evolving business needs and user expectations. By moving apps to the cloud, you can deliver faster more innovative, engaging software and services while reducing the costs and risks of traditional approaches.

Identifying the key challenges of cloud migration

While the potential benefits of cloud migration are clear, organizations face several challenges.

Downtime: Without proper planning and execution, moving vital applications to the cloud can incur downtime. Depending on the application, that downtime could impact your employees' productivity or your customers' ability to provide quality patient care. Extended service interruptions could put your organization's reputation and revenues at risk.

Regulatory compliance: Adhering to HIPAA requirements is non-negotiable. You must ensure the privacy and security of protected health information (PHI), and you must be able to prove HIPAA compliance to regulators as well as patients and other healthcare partners. HIPAA violations can be costly, and data breaches can be even costlier.

Complying with HIPAA regulations and achieving HITRUST certification (to prove compliance) can be challenging for many organizations. Despite HIPAA and HITRUST services offered by CSPs, many organizations moving apps to the cloud still face time-consuming and costly processes to meet all requirements successfully.

Ongoing management: Cloud migration does not end when you start running new apps in a cloud. You need to plan ahead for managing those potentially complex cloud environments while maintaining compliance and meeting service-level agreements. A full understanding of needed skills and anticipated costs will be essential for successful and efficient management.

Charting the course from rationalization to realization

Not all cloud migration journeys are the same. The apps you decide to move, your timeline for completion, your compliance and certification goals, and the cloud model you decide to employ—such as infrastructure as a service (IaaS) or platform as a service (PaaS)—all can affect your planning and execution. But following the right multi-phase process, from rationalization to realization, enables you to make the best decisions for your organization and can help ensure a successful migration.

Cloud Rationalization to Realization* Roadmap

Rationalized selected group of apps

- Current state opex
- Complexity. Business Criticality
- Business drivers to re-platform
- Rehost vs Modernize

Assessed impact of rehosting

- Opex to support workloads in cloud
- Cost savings/optimization opportunities

Prioritized criteria for pilot app migration

- Managed by sponsor's team
- Cloud compatible
- Low business criticality/ complexity
- Non-prod and prod environment

Prioritized future app migrations

- Operationalized newly migrated app
- Operationalized lessons learned
- Prioritized remaining pilot app migrations

Planned, migrated to production

- Gained insight into managing app in the cloud
- Assessed cost and operational efficiency deltas
- Validated results of rationalization

Planned, migrated to non-prod

- Strengthened cloud skills
- Highlighted skill gaps
- Training, hiring new talent
- Generated lessons learned

Cloud migration is a multi-stage process.

* Continuous change management throughout rationalization to realization.

Rationalize apps

Before starting a large-scale migration project, you need to take inventory of your existing software and identify the apps that are the best candidates for migration.

For each app, ask:

- What are the business drivers for migrating this app?
- Would moving this app to the cloud increase momentum for migrating other apps?
- Can this app be moved to the cloud with minimal or no additional coding? Does it need more substantial development work?

Your goal is to focus on the apps that would benefit the business most from running on the cloud.

Assess the economic impact of migration

What will it cost to move each app and run it in the cloud? Consider the cost of simply rehosting versus re-platforming or refactoring. Understanding how moving each app will affect your operating budget can help you establish your migration priorities.

Prioritize apps for migration

Which apps should be migrated first? Though you might have tens or hundreds of apps you want to move to the cloud, starting with one app or a small subset of apps can help you hone your process and bolster your team's skills before undertaking a larger-scale app migration.

Prioritize apps by considering:

- Is this app already cloud-compatible or will it require refactoring to run in a public cloud?
- How complex is the app? Will migrating the app require work on dependent apps or systems?
- How critical is this app to your business? Note that a highly critical app is not necessarily the best choice for your first migration.

Plan and migrate to a non-production environment

Moving an app to a non-production environment first enables your team to strengthen cloud skills and identify any skills gaps. You can then conduct any necessary training or hire the new personnel you might need. And importantly, your team can define a process, identify potential issues, and apply new knowledge to the next migrations.

Plan and migrate to a production environment

You can draw on the insight you've gained from the non-production migration as you plan and then execute app migration into a production environment. Once migration is complete, re-assess costs and operational efficiency deltas: Is this migration truly helping to reduce the time and cost of management? Validate your rationalization decisions: Has the migration of an app into production confirmed that this was one of the best apps to move to the cloud?

Prioritize future app migrations

With deeper insights into the migration process and data about the impact of migration on your team's time and budget, you can prioritize (or re-prioritize) the additional apps targeted for migration. You might decide to move apps with lower complexity or apps that require less refactoring before tackling larger, more complicated migrations. Or conversely, you might place a particularly complex app at the top of the list because you recognize the potential to rapidly reduce costs by running it in the cloud.

Planning and executing a successful cloud migration with Cloudticity

Cloud Rationalization to Realization* Roadmap

High Level Overview

Program Initiation*

Estimated Duration: 4–8 weeks (Dependent on scope and complexity)

Kickoff / Initial Workshops

- Identify people and program requirements
- Validate core subscription
- Determine high level expectations

Migration Planning and Data Collection

- Collect technical information
- Phase is largest consumption of time
- Verify assumptions
- Pre-migration surveys
- Playbook development

Pilot Migration Processes

- Validate defined processes work
- Perform test of migration, rollback, and re-migration
- Pre-provision Cloud Environment resources

Migration**

Estimated Duration: Dependent on number of applications, scope and complexity

Playbook Finalization

- Review provisioned information with application owner/SME
- Determine migration date
- All activities required to get to migration

Migration Activity

- The activity of performing the migration of a business system

Hypercare Support

- Post migration support period
- Scale Up/down as requested

Migration Completed

- Decommissioning activities
- Correcting access
- Incorporate lessons learned / Retrospective into next migration
- Migration signoff

Program Closeout

Program Closeout

- Final signoff
- Artifact turnover
- Program post-mortem and next steps
- Oxygen-MSP

Cloudticity Cloud Migration Services includes in-depth planning and testing plus a continuous cycle of application migration.

* Pre-requisite technology environment assessment

** Cyclical and program closeout

Cloudticity Cloud Migration Services for Healthcare provide an efficient and effective path for migrating existing applications from on-premises environments to the cloud while minimizing risks.

Instead of asking your internal team to move through a multi-phase process unassisted, you work with a dedicated Cloudticity team that has deep experience and expertise in moving apps for healthcare organizations.

Program initiation

Cloud migration begins with initial workshops to define roles and document high-level expectations. Next, the Cloudticity team starts collecting data and planning.

In addition to inventorying your app environment and gathering technical information, the team verifies assumptions, surveys internal teams (such as DevOps, infrastructure, networking, and security teams), and starts to develop a playbook for the next steps. During this phase, the Cloudticity team also helps you rationalize and prioritize apps for migration, assessing the potential impact and costs of moving each app. The Cloudticity team pinpoints any skills gaps and helps your team get any necessary training.

Compliance and security are key topics from the early stages of the engagement. The Cloudticity team discusses HIPAA considerations for the cloud environment, determines whether HITRUST certification is a priority for you, and identifies any additional compliance frameworks that should be employed.

Beyond planning a successful migration, these compliance and security discussions are critical for ensuring your teams understand the shared responsibilities for maintaining compliance once the migration is completed. Your teams can also learn how the Cloudticity Oxygen™ managed services platform reduces the burden of those responsibilities, helping to streamline compliance and certification in the cloud.

Migration

The Cloudticity team then commences the pilot migration of an app to a non-production environment. The team first provisions the cloud environment and then performs a test of migration, rollback, and re-migration. This testing is essential for validating the current plan and enabling the team to fine-tune the process. Having a tested, validated process in place helps avoid any surprises during the migration that could cause downtime.

Once the pilot testing is completed, migration to a production environment begins. With Cloudticity, migration is a continuous cycle of planning, execution, and post-migration activities. The first step is to finalize the playbook, reviewing plans with the application owner and setting the migration date. Then, the Cloudticity team helps execute the actual migration process, whatever that entails for the particular app. Once an app has been successfully migrated, the Cloudticity team provides post-migration support.

The Cloudticity team then moves on to the next app to be migrated, according to the established list of priorities. The team draws on lessons learned from each migration cycle and applies those lessons to the next cycle. This cyclical process helps eliminate issues and continuously streamlines migration.

Program closeout

When all desired apps have been migrated, the Cloudticity team closes out the migration program. The team conducts a post-mortem, turns over any artifacts to your internal team, and defines the next steps—including plans for managing the environment going forward.

Organizations that did not start using Cloudticity Oxygen during the migration process will have a seamless transition from migration to fully automated managed services. By automating time-consuming processes such as configuration, monitoring, and remediation, Cloudticity Oxygen can help you continue to make the most of the cloud while simplifying compliance and reducing management burdens.

Simplifying Cloud Migration, Maximizing Cloud Value

Michigan Health Information Network Shared Services (MiHIN) is a nonprofit, public/private collaboration dedicated to improving the quality, efficiency, and safety of healthcare for Michigan residents.

Challenges

The organization needed to enhance agility for delivering new services and scale up its technology resources to better support the fast-growing volumes of patient information messages that pass through its network. The organization's leadership team also wanted to reduce costs, moving away from the fixed costs of a co-located data center to the variable-cost model of the cloud.

Solution

The MiHIN team decided to migrate its health information network to Amazon Web Services (AWS). By using Cloudticity Cloud Migration Services along with Cloudticity Oxygen, MiHIN could tap into Cloudticity's deep experience with coding, migrating, and managing some of the largest HIPAA-compliance solutions on AWS. Cloudticity continues to manage the organization's AWS services and assist with compliance issues.

Benefits

- **Fast migration:** MiHIN fully migrated to AWS within 90 days.
- **Flexible cost model:** MiHIN eliminated the fixed CapEx costs of the previous data center and shifted to a more flexible OpEx model.
- **Compliance:** With help from Cloudticity, MiHIN achieved HITRUST certification.
- **Innovation:** Cloudticity helped MiHIN deepen its AWS expertise. MiHIN created an Advanced Cloud Services division to develop innovative services on AWS that will benefit millions of people.

To discover how other healthcare organizations are streamlining their cloud migration with Cloudticity, visit: https://www.cloudticity.com/case-studies

Moving forward with your cloud migration

The potential benefits of moving apps to the cloud are undeniable: You can tap into cutting-edge technology, shift your cost model, gain unlimited scalability, and enhance security. Still, for most organizations, moving apps to the cloud can be a complex, costly, and time-consuming undertaking. You need ways to migrate applications quickly—so you can start realizing the benefits of the cloud—while minimizing downtime and avoiding compliance issues.

Cloudticity Cloud Migration Services for Healthcare can help your organization methodically plan and execute a successful cloud migration. With Cloudticity, you can address the challenges of cloud migration and begin maximizing the value of the cloud for your business.

Ready to move forward with your cloud migration?

Connect with a Cloudticity expert: schedule a free consultation.



Connect with a Cloudticity expert


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Start Your Journey to
Business Value Today
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