



Moving Healthcare Applications to the Cloud

Best Practices for Successful Migration



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The Benefits: Agility, Cost Savings, Focus

Many healthcare organizations embark on cloud migrations to achieve scalability, cost-efficiency, and higher application performance. But migrating applications to the cloud can be a complex process that requires careful planning and deliberation. Maintaining HIPAA compliance and maximizing PHI security are always key considerations.

Migrating applications can be a complex process. Challenges can include unanticipated interoperability issues, application re-work, and additional security and compliance considerations, including proper business associate agreements. All of these can increase cost and cause unforeseen delay. But most of these challenges can be mitigated by having a detailed plan and an experienced, qualified healthcare cloud provider.

Have a Strategic Vision

More is being done with cloud computing every day. But there is still resistance – mostly around transition cost and security concerns. So it is critical to have the facts and communicate your strategic vision to the entire organization. Once the benefits are communicated and fears dispelled, your team can move forward.

Top Reasons for Moving to the Cloud

DATA AGGREGATION

Centralized, high-performance access



BACKUP & DISASTER RECOVERY

Securely store PHI off-site



SIMPLICITY

No hardware, no software, no new staff



REDUCE COST

Lower cost, no capex, pay as you grow



SECURITY

70% less breach, HITRUST certified



RELIABILITY / SCALABILITY

Greater uptime/redundancy, SLAs, scalability

Create a Migration Roadmap

Start with a checklist. First, take an extensive assessment of existing investments in infrastructure, from hardware to application portfolios to network architecture to determine if a move to the cloud will be beneficial.

Then, assess short-term and long-term cost. Despite cost-saving measures such as server virtualization, keep in mind that there are significant costs involved with deploying on-premise servers, including licensing and maintenance of infrastructure. Remember that no matter how good it is, any server hardware eventually becomes obsolete.

Ultimately, migrating to the cloud means forgoing the investment in an on-site data center. Eliminating the need to update and maintain on premise data center resources in the rapidly changing healthcare data environment is a huge advantage, both in terms of cost and agility. But it isn't an all or nothing proposition. A phased migration plan often makes the most sense. You can take things one step at a time.

Key Migration Considerations

Energy Consumption

Data centers require significant physical space, servers are expensive. Plus, the cost incurred to power and cool data centers often exceeds the cost of the hardware they house. Energy management and automation leader Schneider Electric recently reported that worldwide, data center power and cooling infrastructure wastes more than 60,000,000 megawatt-hours per year of electricity. Even in a well-designed data center, cooling accounts for approximately 37 percent of electricity usage.

Hardware Scalability

As mentioned previously, there are significant costs involved with deploying on-premise servers, including licensing and maintenance of infrastructure. A major advantage of cloud infrastructure is the ability to scale up...or down, quickly, as needed.

Application Portability

Application portability refers to the capability of moving an application to a different platform or infrastructure. Can your applications be run in the cloud? This not only involves technical consideration, but just as often, licensing and legal considerations as well.

Data Portability

Data portability is the process in which your data can live in any location, while remaining protected, secure, and compliant. This allows for the data to be used in a variety of manners, allowing for new ways to unlock the potential of your data and turn it into new revenue streams and improve patient outcomes. The scalability and processes necessary to properly utilize your data may or may not be easily available in an on premise environment.

Security & Compliance

Security and compliance are at the heart of any healthcare information technology. You've seen the headlines. For healthcare software providers, the risks of maintaining software on-site can be especially dire. You may have servers with protected health information (PHI) on site, or you may not have the resources for continual HIPAA compliance monitoring. Plus, data is being accessed from more devices and more locations than ever before. The new world of data availability and access requires an updated view on data security and compliance, no matter the data location.

In either case, moving to a fully compliant HIPAA infrastructure and offloading risks to healthcare data security and compliance experts may be your best choice. It helps keep your resources focused on your core competency.

Three Keys to Success:

Documentation, Communication and Coordination

Each migration presents unique challenges. But these challenges can be minimized by creating thorough documentation, communicating with all external vendors and partners and coordinating with internal teams to minimize downtime.

Although each migration has unique challenges, here is a general best practices overview you can follow:

Data & Application Migration Process Overview

Connectivity

- Determine the best migration sequence, considering server interdependency, potential downtime, etc.
 - As a test, it may be best to move dev and test environments first.
 - Establish an IP address naming convention
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Data Migration

- Determine the best method to move data. This may include:
 - Transmitting data over the network
 - Shipping data via an encrypted & GPS-tracked storage appliance.
 - Migrate as much static data as possible through a bulk load process
 - Continue to transmit incremental data via the established network connectivity to maintain data synchronization between environments
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Application Migration

- Prior to any application migration, ensure a comprehensive backup is taken in the current live environment
 - Schedule an application cutover:
 - Make one final incremental data migration
 - Enable & test the cloud based application.
 - Consider mitigating risks by running environments in parallel for
 - Disable the on premise application.
 - This process is repeated until all applications are successfully migrated.
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Documentation

- Each migration can present unique challenges. Thoroughly document each step, test results, activation procedures, etc. both as a troubleshooting aid and to help streamline future migrations.
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Security & Compliance

- For healthcare applications and data, PHI security and HIPAA compliance should always be your primary concern
 - To stay on top of security & compliance, consider a managed services approach from a HIPAA compliant, HITRUST certified healthcare cloud provider
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The Benefits: Agility, Cost Savings, Focus

The healthcare market is changing rapidly, and technology just as quickly. So agility is no longer an option – it's essential. But agility isn't just a matter of having access to the latest cloud technology tools and techniques and scaling rapidly. In healthcare, being agile also means being confident that security and compliance are maintained throughout any business or technology transition.

The cost savings may not be immediately apparent, especially if you transition from an in-house infrastructure. But they are significant over time, as you transition from capital expense to operational expense and maintenance personal are no longer required.

Just as important is the ability focus more resources on your core competency of developing software applications that help revolutionize healthcare delivery and reduce cost.



About Us

ClearDATA is the nation's fastest growing healthcare cloud computing company. More than 310,000 healthcare professionals rely on ClearDATA's HIPAA compliant cloud computing HealthDATA platform and infrastructure to store, manage, protect and share their patient data and critical applications.

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