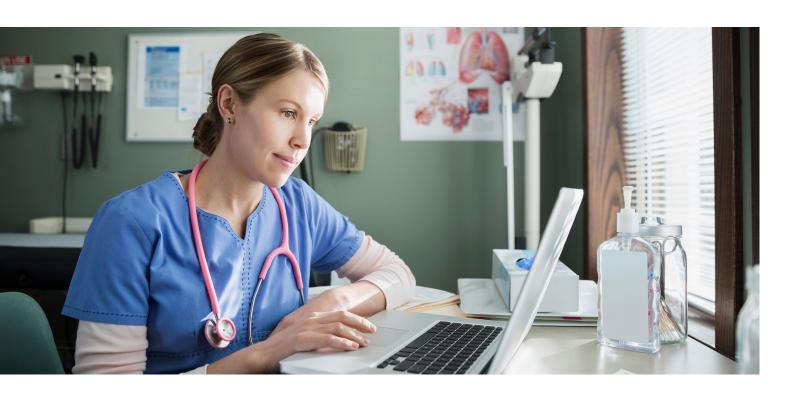


IT Integration Best Practices for HealthCare Mergers and Acquisitions

How to restructure and modernize hybrid Active Directory, Exchange, SharePoint and Office 365



INTRODUCTION

Healthcare merger and acquisition (M&A) activity reached record volume in 2018, and it shows no sign of slowing. After all, mergers can help healthcare organizations improve patient care and outcomes, reduce costs, and better align with modern regulatory requirements and reimbursement models.

Despite these benefits, IT teams face special challenges in achieving the technology integration required by a merger or acquisition in the healthcare industry. On top of the usual tight deadlines and equally tight budgets, they face more stringent uptime requirements, multiple compliance mandates, a more dynamic user base and the complexity of migrating a wide variety of proprietary systems.

These challenges can feel overwhelming. But with the right planning and the right tools, they don't have to be. Indeed, properly understood and managed, the migration necessitated by a merger or acquisition is a prime opportunity to consolidate, clean up and modernize your hybrid Active Directory (AD), Exchange, SharePoint and Office 365 environments to support and even drive the ongoing success of your healthcare organization. And

with the right planning, strategy and tools, the process can be far easier than you ever imagined. This white paper explains how.

FACTORS DRIVING HEALTHCARE M&A ACTIVITY

Healthcare M&A activity — spread across insurance, providers and vendors in the pharmaceutical, biotechnology and life science sectors — has reached record volumes, and the value of global healthcare deals is expected to increase in 2019 to \$331 billion according to Oxford Economics.

A number of forces are driving this historic period of business consolidation in the healthcare industry. Increased competition, a shift to outcomes-based reimbursement models, and an overall need to widen the scope of care while reducing costs are driving more and bigger deals. In addition, the Affordable Care Act of 2010 has spurred health care providers to merge into large regional health systems that dominate local markets, and insurers in turn are merging to equalize the balance of power from the larger healthcare providers. Various laws that protect dominant hospital systems and limit patient choices are also driving small practices into mergers and acquisitions.

A merger or acquisition is an opportunity to create an IT infrastructure that will support your healthcare organization's mission today and into the future.

A final major driver of M&A activity is the rising cost of healthcare — costs have outpaced inflation every year since 2008. Rising costs not only make it more expensive to run a healthcare facility, but they also cause patients, especially those who can't afford out-of-pocket expenses, to become more selective about the care they receive or to skip follow-up appointments to avoid additional fees, which can further reduce revenues for providers. Healthcare mergers and acquisitions can help bring down the cost of care by enabling providers to eliminate overlapping positions and streamline expenses across facilities, resulting in greater efficiencies and scale. For instance, different healthcare centers might be using a number of different procedures or tools to treat the same condition. But when they consolidate under one umbrella, they can choose one method and apply it across their operations to drive efficiency.

THE SPECIAL IT CHALLENGES IN HEALTHCARE M&A SCENARIOS

Technology integration is one of the most important components of a merger or acquisition. Combining the IT systems of the merging companies is a critical step toward making them one entity, realizing the synergies between them, and enabling strategic and cultural integration. Without technology integration, you just have two separate entities that report their revenue as one.

Integrating the IT systems of two or more distinct organizations is difficult in any industry. Most M&A projects have a hard deadline, so there's a ton of pressure on IT to finish as quickly as possible. Plus, integrations are complex projects that require considerable expertise and resources. IT managers may not have the budget to hire additional staff, so existing IT teams are often tasked with managing the post-merger integration, in addition to their full plate of daily duties. Very few IT professionals have much, if any, migration experience, but they must become experts quickly. And, of course, smaller organizations may not even have an IT employee on staff.

But healthcare organizations have challenges that go above and beyond these concerns. The regulatory burdens alone

set healthcare apart. But on top of that are the widespread use of proprietary systems in the healthcare industry, the unique composition and needs of healthcare staff, and the critical need to avoid disrupting patient care or diminishing its quality.

For example, in a merger in another industry, most users will likely have their own laptops, computers and other devices, which IT can schedule for migration at a convenient time, such as in the middle of the night, and some loss of productivity and system unavailability will probably be acceptable. But healthcare organizations often employ a dynamic group of clinical staff, including shortterm volunteers, nurses and doctors who travel between locations, and technicians who rotate around the clock. Since any of these people might use a shared computer next to a patient's bed to check medical records and other information, there is no single "user" for IT to work with to schedule the device migration. Indeed, since emergency situations can strike at any time, it can be difficult for IT to ever find a time to migrate some computers without compromising patient health and safety.

More broadly, any system or application downtime could disrupt administrative or medical processes critical for patient care. For example, a disruption in intake processing systems could result in having to redirect inbound ambulances to a different emergency room, delaying care for patients in urgent need. Similarly, network outages could impede the work of healthcare professionals who rely on networked workstations to enter procedures, make pharmacy requests and perform other critical tasks.

IT INTEGRATION AS AN OPPORTUNITY TO ALIGN WITH THE HEALTHCARE MISSION

These challenges are daunting. But they actually tie in with a set of challenges that IT teams at healthcare organizations are facing anyway. Therefore, the IT integration required by a merger or acquisition can actually be an opportunity to address a wide range of IT concerns and create an infrastructure that will support the healthcare mission into the future.



The mission of any healthcare organization, whether private, public, for-profit or not-for-profit, is to improve health outcomes for patients. But how that mission is carried out changes over time, as patient needs, care delivery, technology and regulations change. For example, healthcare is in the midst of a radical shift that will move resources away from inpatient care and toward coordinated outpatient and telehealth care. The resulting increased use of mobile access, virtual visits, remote monitoring devices and wearables will create new and unique challenges. At the same time, the Health Information Technology for Economic and Clinical Health (HITECH) Act will stimulate the adoption of electronic health record (EHR) technology such as Epic.

Because of factors like these, healthcare organizations — independent of any M&A activity — need systems that are efficient and flexible enough to enable them to quickly embrace change. However, over time, many IT architectures have grown complex and convoluted. They often have developed silos and rigidity that discourage the adoption of new technology and limit the organization's ability to change. A merger or acquisition deal is an opportunity to change all that and refocus IT systems on the strategic goals of the organization.

THE CONSOLIDATION AND RESTRUCTURING PROJECT

So, how can an IT team achieve the integration required by a merger and acquisition process while also modernizing the IT infrastructure to support the healthcare organization's mission and needs into the future? A key part of the effort is to consolidate, restructure and modernize underlying infrastructures, especially Microsoft Active Directory, Azure Active Directory, Exchange, Share-Point, and Office 365.

No migration is as complex or as critical as an AD, Exchange, SharePoint or Office 365 consolidation and restructuring. That's because these two systems offer core services that the organization cannot do without at any time. AD is at the center of the IT infrastructure, securing and controlling access to mission-critical applications, including Epic or other EHR software, while

Exchange, SharePoint or Office 365 provides vital communication and collaboration services.

Many healthcare organizations struggle with managing multiple AD forests, email services, rapidly expanding SharePoint content, and a merger or acquisition often brings the problem to a head. Consolidation in these areas is critical to IT efficiency, application availability, security and compliance. For example, many customers find that Epic works best in a single Active Directory environment, so ensuring reliable access to electronic medical records requires AD consolidation. And individual physicians and other medical professionals often move among multiple facilities; if these physical facilities are in separate AD domains, it is difficult and time-consuming for IT to properly create, manage and retire access rights, which can lead to both giant gaps in security and Health Insurance Portability and Accountability Act (HIPAA) violations.

For example, one not-for-profit network of leading healthcare providers comprises 12 member hospitals and four affiliates. In order to more tightly integrate the hospitals and offer better patient care, the organization decided to roll out Epic EHR across all its hospitals. But each hospital had its own Active Directory and hence a separate list users to manage — in fact, due to M&A activity, the health system had grown to 21 AD domains with over 25,000 AD users and more than 18,000 mailboxes. For the new EHR system to centrally manage access to patient record for all clinicians, the organization had to consolidate to a single AD domain.

THE QUEST HEALTHCARE M&A INTEGRATION FRAMEWORK

To achieve an efficient, manageable and flexible end result, IT must carefully manage the integration before, during and after the merger or acquisition process. To help, Quest has developed a M&A IT integration checklist for healthcare organizations. It involves the following:

- Day 0: Due Diligence
- Day 1: Integration Execution
- Day 2: Ongoing Management

AD, Exchange, SharePoint and Office 365 consolidation is critical to IT efficiency, application availability, security and compliance.



Before the merger is complete, it's important to build a map of what the combined IT environment will look like.

DAY 0: DUE DILIGENCE

The planning for consolidating IT environments in an acquisition starts before the deal is inked. Before the contracts are signed, the leadership teams should understand the cost of the integration and have a high-level understanding of the timeline to accomplish the task. For this to be achieved, key individuals from the IT team must be brought under NDA to assess the target's legacy systems and size the application effort and infrastructure cost. In some cases, infrastructure costs can be equal to or even greater than the application migration efforts.

A key focus of the integration should be on reducing risk and avoiding disruption. That means maintaining security and compliance measures throughout, reporting on status regularly, and establishing clear permissions, privileges and access rights. It also means having a clear backup plan in place in case things go wrong.

Factors to consider

Here are some key factors to consider when planning your IT integration project:

- Audits A full inventory of the source IT environments is necessary in order to plan for what the combined environment will look like. This is something that any organization should do, not just one contemplating a merger or acquisition. But many do not. Many organizations don't even know what they have, how many users are active and what the state of their support contracts are.
- Security The new organization needs to understand what kinds of liabilities they may be inheriting. If possible, vulnerabilities should be eliminated before combining systems. Critical questions include:
 - Who has access to what sensitive data and how did they get that access?
 - Who has elevated privileged permissions in AD, servers and databases?
 - What systems are vulnerable to security threats?
 - What does normal and abnormal user behavior look like and how are we monitoring for that before, during and after the merger?

It's not unusual for the acquirer to insist on a full security assessment and remediation from the acquisition target as a condition of the deal.

Why? Quite frankly, because healthcare organizations are very susceptible for hackers and insider threats. Ransomware, spearfishing and viruses are common attacks that can result in data theft and subsequent compliance failures, litigation, fines and more. Because of the fluid nature of people coming and going and the many endpoint devices in the hospital — cellphones, workstations on wheels, kiosk logins, dumb terminals, laptops and PCs, electronic medical devices, iPads, and so on — physical theft is an attractive option for insiders and outsiders alike. But more often, hackers use social engineering to trick hospital staff into divulging information or downloading malware.

A few months before an M&A deal goes through is the wrong time to discover a security breach.

- Access management Because of the regulatory obligations they are under, healthcare organizations need to be particularly diligent when it comes to access policies. There are a lot of different classes of users in healthcare that you don't often see in commercial organizations.
 Compliance is a key driver for getting identity and access management right, but so is plain old security.
- Infrastructure and applications Before the merger is complete, it's important to build a map of what the combined IT environment will look like. Using the audit information and security assessment, the teams can begin to make some of the major decisions about which systems to sunset and which to migrate over. Pay special attention to storage reports for content migrations to make critical capacity and performance decisions. The more decisions that are made in advance and the more detail that is included, the less opportunity there is for issues to arise during the migration.
- User training and support Planning should also include comprehensive end-user training, especially if EHR applications are changing, as well as a plan for go-live support as new systems are brought up. At-the-elbow support is critical to success with new clinical applications, and resources should be budgeted for gold-standard services.



Options for AD, Exchange, Share-Point and Office 365 integration

When it comes to the AD and Exchange integration, IT decision makers have three options:

- You can choose to keep both existing infrastructures in place as is, and synchronize directory and email contents.
- You can choose to move all data from one or more structures into another existing structure from one of the merging parties.
- You can move to a completely new structure, one that is developed to meet the needs of the new organization being developed

Option 1: Keep both infrastructures and synchronize them

Some organizations will choose to maintain their current infrastructures as they are, and use synchronization tools to provide integrated services to users of the new structure. This approach is complex and expensive because the interface must be maintained and updated as the two synchronized systems evolve over time. Therefore, this option is not recommended, and it will not be considered for the remainder of this paper.

Option 2: Merge one existing infrastructure into the other

This approach is usually chosen in either an acquisition scenario or a merger scenario in which one organization is larger or more dominant than the other.

Moving objects from one AD forest or SharePoint farm to another isn't a simple task. You need to begin with a pre-migration assessment in which you analyze the existing directories and email structures in order to determine how best to perform the migration. You can choose to:

- Clean up objects in their originating source before moving them. This is often hard to do properly because you must have a thorough inventory of the objects before beginning the cleanup, and obtaining valid, up-to-date information on the objects in each source and target can be difficult.
- Move the objects into a special container in the merging target environment, clean them up there and then move them to the appropriate location within the

- platform. This consolidation strategy also requires a thorough inventory.
- Group objects according to the new departmental structure and move them as groups into the merging target.

Option 3: Merge everything into a new infrastructure

A third strategy is to move into a brand new infrastructure by creating a new directory service, Exchange, SharePoint or Office 365 environment and moving existing data and objects into this infrastructure. This works particularly well if the acquiring organization is already contemplating a move to Office 365 for their on-premise Exchange and SharePoint. They make the move part of their IT integration. This way you can ensure that any new standards and operational strategies that need to be enforced in the new organization will be enforced from day one. You don't need to adapt existing directory structures or make legacy systems work in new ways. Instead, you can create new systems from the ground up — and create an environment that is properly scaled and has room for growth in case of additional M&A activity in the future.

Ensure that you have comprehensive inventories of the legacy systems, and then work with your business counterparts to identify unused mailboxes, accounts and services that do not need to be migrated, as well as content that should be archived. This process will help both you simplify the migration and deliver a clean new infrastructure without any obsolete objects.

DAY 1: INTEGRATION EXECUTION

Key considerations

Once you have chosen either option 2 or option 3 for your Microsoft platform integration, it's time to perform the migration. Keep the following considerations in mind:

- Take backups Before you begin any migration, make thorough backups of the originating forests, mailboxes repositories, and collaboration sites in case in case something is missed during the move.
- Have a reporting structure in place You'll need to report to the authorities and executives at regular intervals how the migration is proceeding and

Create an environment that is properly scaled and has room for growth in case of additional M&A activity in the future.



The migration process will take time, so make sure your strategy includes a tool that will support coexistence.

- where you are in the process to meet transition services agreement (TSA).
- Plan for directory and email system
 coexistence The migration process
 will take time. The duration will depend
 on the total number of users to migrate,
 as well as the amount of data to transfer.
 Make sure your strategy includes a tool
 that will support this coexistence.
- Migrate user credentials Ensure that all users who are being moved to a new system will not be given new credentials by using a tool that moves their existing passwords with their accounts. Of course, some users may be forced to update their passwords later to meet the standards in the new infrastructure.
- Synchronize key data Critical data, such as public folder content and calendars, must be synchronized between the two systems throughout the migration process. For example, users who are on the new system need to be able to share information with users who have not yet been migrated.
- Synchronize availability data Free/busy information must also be synchronized if users are to have a productive experience during the migration. Otherwise, they will be frustrated when they try to organize meetings, since they will be unable to tell whether participants or resources are available at a given time.
- Synchronize mailbox data It's essential to ensure that users have uninterrupted access to all their email during the migration.
- Control legacy access During the migration, users will need to access data in both the legacy and new infrastructure. To do so, you need to enable the Security ID (SID) history.
- Perform SID translations Once data migration is complete for a user, you can switch that user to the new environment and remove legacy SIDs. To do so, you will need to perform SID translations on legacy data.
- Update user profiles Once each user is completely migrated, you will need to update their AD and Outlook profiles to ensure all of their systems work properly.

Perform a final cleanup — When
the migration is complete, you will
also need to remove any agents you
deployed and perform a final cleanup
of your legacy systems. At this point,
you will be able to decommission
the older systems to free up valuable
footprint, heating, cooling and power.

DAY 2: ONGOING MANAGEMENT

As its name implies, ongoing management includes activities that must be planned and executed throughout the merger or acquisition integration. The goal is to establish workflows between the two organizations so that productivity and communications can be maintained. There are four key aspects to keep in mind:

- is the most basic requirement in making a merger or acquisition work. Creating a common culture and shared mission in the new healthcare organization is essential to ensuring seamless care for patients. For instance, you must establish how the combined entity will exchange information by setting up a unified address list, shared calendars and access to other shared resources.
- Roles and responsibilities Equally important is assigning specific aspects of the consolidation to appropriate resources. Accountability and a clear understanding of responsibilities are critical for success. Anything less allows critical tasks to fall between the cracks, potentially upending the entire effort.
- Governance Governance must include clinical and business leaders in addition to IT leaders. This will help ensure that clinical needs are understood by the technical leaders, and that technical capabilities are clearly transmitted to clinical and business staff. A collaborative approach also often results in better use of available technology and better mission support by IT.
- Training In all of the urgent and complex tasks involved in IT integration, it's easy to forget about the end users. Ongoing training on new systems is critical for maximizing productivity and maintaining security.



CONCLUSION

If your healthcare organization is involved in a merger and acquisition, the impending IT integration project might seem overwhelming. But it needn't be. In fact, the project can be the perfect opportunity to clean up, consolidate and modernize your Microsoft IT infrastructure to meet the business requirements you're facing anyway, such as implementing an EHR system like Epic and ensuring enterprise-wide security and compliance. The IT integration project you're dreading can actually be the gateway to the clean, manageable, secure IT environment your healthcare organization wants and needs.

Of course, few IT professionals, even CIOs, have much experience with hybrid AD, email, and content migration projects. That's why it's critical to find the right partner and select the most appropriate tools to help facilitate the transition. With Quest® solutions, you can conquer the complexities of an M&A IT integration. We offer a comprehensive framework for the effective integration, consolidation and management of on-premises, cloud and hybrid Microsoft environments software and services you can count on, again and again. Even better, it's repeatable: You become familiar with one set of solutions, one support team and one services team, so when the next M&A falls into your lap, you'll be prepared.

With the right tools and services to help, the IT integration project you're dreading can actually be the gateway to the clean, manageable, secure IT environment your healthcare organization wants and needs.



ABOUT QUEST

Quest provides software solutions for the rapidly-changing world of enterprise IT. We help simplify the challenges caused by data explosion, cloud expansion, hybrid datacenters, security threats and regulatory requirements. We're a global provider to 130,000 companies across 100 countries, including 95% of the Fortune 500 and 90% of the Global 1000. Since 1987, we've built a portfolio of solutions which now includes database management, data protection, identity and access management, Microsoft platform management and unified endpoint management. With Quest, organizations spend less time on IT administration and more time on business innovation. For more information, visit www.quest.com.

© 2019 Quest Software Inc. ALL RIGHTS RESERVED.

This guide contains proprietary information protected by copyright. The software described in this guide is furnished under a software license or nondisclosure agreement. This software may be used or copied only in accordance with the terms of the applicable agreement. No part of this guide may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording for any purpose other than the purchaser's personal use without the written permission of Quest Software Inc.

The information in this document is provided in connection with Quest Software products. No license, express or implied, by estoppel or otherwise, to any intellectual property right is granted by this document or in connection with the sale of Quest Software products. EXCEPT AS SET FORTH IN THE TERMS AND CONDITIONS AS SPECIFIED IN THE LICENSE AGREEMENT FOR THIS PRODUCT, QUEST SOFTWARE ASSUMES NO LIABILITY WHATSOEVER AND DISCLAIMS ANY EXPRESS, IMPLIED OR STATUTORY WARRANTY RELATING TO ITS PRODUCTS INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT. IN NO EVENT SHALL QUEST SOFTWARE BE LIABLE FOR ANY DIRECT, INDIRECT, CONSEQUENTIAL, PUNITIVE, SPECIAL OR INCIDENTAL DAMAGES (INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF PROFITS, BUSINESS INTERRUPTION OR LOSS OF INFORMATION) ARISING OUT OF THE USE OR INABILITY TO USE THIS DOCUMENT, EVEN IF QUEST SOFTWARE HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Quest Software makes no representations or warranties with respect to the accuracy or completeness of the contents of this document and reserves the right to make changes to specifications and product descriptions at any time without notice. Quest Software does not make any commitment to update the information contained in this document.

Patents

Quest Software is proud of our advanced technology. Patents and pending patents may apply to this product. For the most current information about applicable patents for this product, please visit our website at www.quest.com/legal

Trademarks

Quest and the Quest logo are trademarks and registered trademarks of Quest Software Inc. For a complete list of Quest marks, visit www.quest.com/legal/trademark-information.aspx. All other trademarks are property of their respective owners.

If you have any questions regarding your potential use of this material, contact:

Quest Software Inc.

Attn: LEGAL Dept 4 Polaris Way Aliso Viejo, CA 92656

Refer to our website (www.quest.com) for regional and international office information.

