



# Best Practices for Migrating from Lotus Notes to Microsoft Exchange and SharePoint

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## Abstract

Many organizations are migrating from IBM Lotus Notes to Microsoft Exchange and SharePoint because of the rich feature set of the Microsoft solutions, the strategic value of partnering with Microsoft and the high availability of IT staff trained on Microsoft technology. However, migrations are long, complex, and expensive projects that must be carefully planned and executed. Reliable automated tools from Quest Software can play a key role in keeping a migration on-schedule and error-free. And after migration is complete, Quest's maintenance solutions complement the native Microsoft tools to ensure high performance and reliability.

## Introduction

IBM Lotus Notes is one of the most popular enterprise software applications. It was one of the first workgroup applications—applications that made groups more productive by enabling members to easily share documents and other information online. In the early 1990s, Notes was also a popular workgroup e-mail client and server, further enhancing communication among workgroup members. Millions of end user licenses of Notes were deployed in enterprises, and for more than a decade, Notes was the engine that drove communication and collaboration in these organizations.

One factor contributing to the success of Lotus Notes was the lack of a viable alternative from Microsoft. Microsoft's growth during the past two decades is legendary, and today Microsoft servers and network infrastructure are commonplace in many organizations. But until recently, Microsoft did not offer a complete solution that could compete with Lotus Notes. Although many organizations migrated their Notes mail to Microsoft Exchange, Microsoft did not provide a mature alternative for Notes business applications until SharePoint 2007 emerged as a fully capable content and application portal for organizations of any size. Now organizations that migrated their Notes mail to Exchange years ago are migrating their Notes applications, and others that waited for a complete Microsoft solution are migrating both their Notes mail and applications.

As various types of communications and media converge, Microsoft is emerging as the vendor with the applications and tools to bring communication together into an integrated whole. There is less distinction between e-mail, content, and productivity applications, and an increasing trend toward bringing these disparate forms of content into a single location. Microsoft's focus on workgroups and productivity has led it to develop a collection of applications that make it possible to work across multiple media with relative ease. Now that a full migration from Notes to the Microsoft platform is possible, many executives today are rethinking

their strategic investment in Notes. Some executives have a preference for the Microsoft platform because they have used it successfully in previous jobs and mandate migration to that platform, with or without a cost justification. Many executives recognize the strategic value in partnering with the emerging market leader in communications technology. Other companies already have a significant investment in Microsoft software, servers, and infrastructure and want to standardize to the Microsoft platform. In any case, Notes is often the one part of the IT infrastructure that doesn't use Microsoft software, making migration from Notes a significant part of IT-related strategy.

The availability of qualified IT staff also plays a role in the decision to shift from Notes to Microsoft solutions. Because of the ubiquity of Microsoft technologies in the enterprise, engineers, administrators and support professionals experienced in building and maintaining Microsoft-based applications are readily available. Experts in implementing and maintaining Notes are less available, and fewer technical professionals want to make the investment to develop those skills.

Finally, migration often provides new capabilities beyond the existing infrastructure and architecture. For many organizations, those capabilities can add to the productivity of the end users, yielding an additional return on the investment in the new platform.

Any one of these reasons rarely provides sufficient justification for an organization to abandon its considerable investment in Notes. But considered together, these reasons often provide a justification for migration. Migrating from Notes to Microsoft solutions is not a project for the faint of heart: for an organization with thousands of users and applications, migrating could cost into the six figures for licenses, systems, and personnel.

Organizations can make back the bulk of their investment from a technology migration by laying a foundation for future growth and opportunity. In the case of a migration from Notes to corresponding Microsoft technologies, organizations increase their return on investment by leveraging existing Microsoft solutions as well as more fully utilizing Microsoft products with complementary features.

## Best Practices for Migrating from Notes to Microsoft Solutions

Despite the plug-and-play nature of many Microsoft technologies, migrating from Notes to equivalent Microsoft technologies requires careful planning and execution. The necessary steps include the following:

1. Gathering requirements
2. Project planning
3. Implementing a pilot project
4. Project execution
5. Testing
6. Going live
7. Post-migration administration of the target Microsoft environment

Let's examine some of these steps in further detail.

## Gathering Requirements for Migration

The first step in migrating from Notes to Microsoft is to determine the user requirements for the new environment. Understanding these requirements enables an organization to determine if the current messaging and collaboration infrastructure is truly serving its needs. If not, additional functionality can be built into the requirements for the new platform.

These requirements direct the efforts of the migration team by specifying the work to be done and the priorities of individual work items. Organizations should prioritize which Notes features are mission-critical; these should be migrated first. Other features can follow later in the process. E-mail is always a migration priority, but many businesses also rely on critical applications built in Notes, such as human resources systems, financial applications, and document repositories, that may also need to be migrated early in the process. End user involvement is critical in making those determinations.

The requirements also provide important checkpoints to determine if the migration is proceeding according to plan. This is critical in a project that can last well over a year. And requirements enable testers to determine whether the completed project was successful—that is, whether it fulfills user needs.

Ideally, this opening phase of the migration process engages all of the stakeholders: the IT migration and administration team, application developers where required, business unit representatives, and end users. Business analysts are in the best position to work with all these groups to identify and flesh out user requirements. Organizations that do not have business analysts on staff may need to turn to outside consultants for the appropriate level of skill and objectivity.

## Project Planning

Once requirements have been defined and approved, IT must assemble a project plan that defines the tasks required to fulfill the requirements. It should include detailed lists of tasks

and the estimated time required for their completion. It should highlight any dependencies between tasks or on external events, the resources required, and a timeline.

IT must also select the Microsoft products that provide the features specified in the requirements. Exchange Server and Outlook are almost always necessary to provide e-mail functionality, and in most cases, end users already have Outlook as a part of a Microsoft Office installation.

The Exchange and Outlook combination also provides basic collaboration features. Many enterprises use shared folders in Outlook to make documents available for workgroups and projects. However, the usefulness of these shared folders is limited. Although they are organized in a tree structure, they can be difficult to navigate, making bulk document storage impractical.

The natural alternative is Microsoft Office SharePoint Server. SharePoint provides a mature portal environment that can integrate content and applications in a single view. SharePoint also provides features for content management, enterprise search, collaboration, and workflow.

Most enterprises find that they need many of the features of both Exchange and SharePoint Server. Once this determination is made, IT must size the servers, select backup systems and software, and analyze maintenance requirements for the level of users and installations.

Finally, the IT staff charged with the migration must ensure that their skill sets are up to the challenge of the migration and to administering the Microsoft environment after the migration. The importance of this step cannot be underestimated. The IT staff likely has significant experience in Notes administration and application development, and must ensure that it possesses the corresponding skills in the target Microsoft technologies.

The next step is to conduct a pilot project. Take a small sample of mailboxes, calendars, content, and applications from Notes, and test your knowledge and processes by migrating them to Microsoft Exchange and SharePoint. This enables the IT staff to iron out any issues or inconsistencies in the process. In addition, a pilot project can give the migration team and management confidence that the migration can be performed successfully.

## Project Execution

Execution of the migration project involves two parts: mail services and portal/collaboration services. Each part requires its own planning and migration process. Mail services include e-mail and attachments, personal address books and contact

lists, personal and group calendars and to-do lists. Portal/collaboration services include content, applications, and presentation. The specific items to be migrated should be spelled out in the requirements.

Historically, organizations chose to migrate one type of service (such as e-mail) and then migrate the other (portal/collaboration services)—and that is still a common strategy. However, it is possible to migrate both simultaneously with a commercial tool set that integrates Notes mail and applications as they are migrated to Exchange and SharePoint. In this case, organizations often conduct a proof of concept to confirm that their applications can be migrated to SharePoint before they commit to a complete Notes to Microsoft transition.

If you opt to migrate mail first and applications second, a good approach would be structured something like this:

- Establish coexistence between both environments.
- Migrate Notes mailboxes and calendars to Exchange.
- Migrate Notes application content to SharePoint.
- Recompose Notes applications in SharePoint.

### Migrating Mailbox and Calendar Data

Project managers can choose one of two approaches to execute the mail and calendar migration. The first is batch migration: all components are migrated in bulk, in a single transaction. The second is per desktop: each individual mailbox and application is migrated separately, in serial. Batch migration can generally be accomplished more quickly, but per desktop gives you greater control over the migration process.

With either approach, automation is a key to a fast and successful migration. Manually copying individual mailbox contents and settings from Notes to Exchange is time-consuming and error-prone. It is possible to script the steps of the migration, but the result could be complex and inaccurate, causing poor performance.

The best choice is a commercial tool that migrates all required files and information quickly and accurately, such as Quest Notes Migrator for Exchange. The tool you choose should convert e-mail, calendars, tasks, and personal address books and store them in new e-mail boxes on the Exchange server. It should also assist in preparation for the migration by classifying the components to be migrated, prioritizing them, and filtering out unneeded data. The tool should provide realistic time estimates for the migration and progress reports.

The safest way to begin is with a pilot project, as described earlier. Once the migration team has worked out any errors in the pilot, the actual migration can begin. Any automated

migration is likely to have a small number of inconsistencies or special cases; ideally, the migration tool will report which components and data have been successfully migrated, any errors and the overall status and health of the project. This reporting enables IT to quickly identify problems and exceptions and deal with them early, rather than wait until they are discovered in testing or production.

### Migrating Application Content and Design

In most cases, migrating Notes content to Microsoft SharePoint lists, document libraries, and InfoPath form libraries is relatively straightforward. One important goal is to retain the structure of the content and the relationships between content items on the target SharePoint platform. It is also important to be able to identify and move all content components, including all Notes data, rich text, images, file attachments, OLE objects, document links, and access control lists.

Migrating Notes applications, on the other hand, is often a challenge, especially if some applications were developed specifically for the Notes platform. It can also be difficult to identify all application components and data in use in the organization.

The first step in application migration is to identify Notes databases across all servers in all locations, and to classify applications according to technical and business characteristics. IT should then analyze application usage, data complexity, design complexity, and deviations from standard design templates. The goal is to identify active application content in order to determine what needs to be migrated and the level of effort needed to migrate each application. It is particularly important to recognize cases where many applications share the same design so they can be consolidated or at least migrated with a common set of routines.

All application data can then be migrated directly into corresponding SharePoint locations. A quality automation tool, such as Quest Notes Migrator for SharePoint, is invaluable here. The tool should enable IT to manage the entire project throughout the process. Frequently it will be necessary to generate new SharePoint sites and subsites to mirror the structure that previously existed in Notes. Any access control rules in place in the Notes applications must be mapped to permissions in the corresponding SharePoint sites, lists, libraries, and even individual data documents. Some Notes applications will map to standard SharePoint templates such as Discussions, Calendars, and Document Libraries. Others will require customized schema to accommodate additional data columns or content types that are not standard in SharePoint. The migration tool should support the development of custom schema based on

patterns detected in the source applications and provisioning them in SharePoint. In cases where IT has developed or purchased customized SharePoint application templates, the tool should support mapping data from Notes to the custom SharePoint schemas and transform the data as needed.

Often, the complex Notes applications in an organization are the most visible and “mission-critical” applications to be migrated. In addition, many organizations want to improve or consolidate applications as they move them from Notes to SharePoint. This creates a substantial application development requirement that can stall the move. Many organizations will not start their migration until they have a solution for recomposing these high value/high visibility applications.

These recomposed/improved applications can be developed with Visual Studio, SharePoint Designer, and InfoPath. However, the worldwide shortage of qualified SharePoint developers makes investing in a rapid application development tool such as Quest Development Studio for SharePoint a good strategy, helping to significantly reduce the cost and timetable of development. This toolkit of WebParts enables IT to rebuild Notes applications in SharePoint without custom coding. This can minimize the time needed to get the applications running and productive on the new platform and allows an IT staff to reserve valuable coding resources for other important projects. Additionally, it simplifies the retraining of Notes developers. Transitioning from Notes to .Net development requires a steep learning curve. Training a Notes developer to configure WebParts will enable that developer to become a productive SharePoint developer in a much shorter time.

The automation process and tools should also allow the Notes and Microsoft environments to coexist for an extended period to keep them working together smoothly during extended migration processes. For example, Notes mail messages or other application documents often link to other Notes application documents. These links need to continue to function throughout the migration, whether you migrate mail or applications first. Users who have been moved to SharePoint must continue to have access to Notes applications. Users still using the Notes client must be able to copy Notes documents from their Inbox to a SharePoint document library. Every organization has different needs; it is important that broad set of tools is available to handle these types of challenges. Visibility and management are key aspects of the migration and testing. Without data, it isn't possible to determine how much work remains to be done and whether the target environment is operating as it should. An automation platform should enable the IT team to collect, analyze, and report on data that reflects the state of the project. It should enable management to determine project status, adjust milestones, and identify and correct problems early, before they are faced with an unpleasant surprise.

## Administering the Target Microsoft Environment

Work doesn't stop after a successful migration. Once enterprise e-mail, calendars, collaboration, content and applications reside entirely on Microsoft applications, those applications and the underlying infrastructure have to be administered for long-term high performance and reliability.

IT staff who have been working with IBM Lotus Notes for years may find administrative tasks such as archiving, repair, user management, and growth more difficult and time-consuming in Microsoft Exchange and SharePoint. But even an IT staff experienced with Microsoft solutions should plan on employing tools to support an automated management and control strategy with these products.

Many organizations already have automated solutions in place to manage their existing Microsoft infrastructure, such as Active Directory and SQL Server. These solutions can be easily supplemented with complementary products that work specifically with Exchange and SharePoint. In particular, Quest Software's Archive Manager, MessageStats, Recovery Manager for Exchange, Recovery Manager for SharePoint, Site Administrator for SharePoint, and Spotlight on Messaging can assist IT administrators in maintaining a reliable and high-performance environment.

## Conclusion

Moving an organization's e-mail, portal content, and applications from IBM Lotus Notes to Microsoft Exchange and SharePoint can make business and economic sense because it provides the organization with more functionality, cohesiveness, and room to expand. But migration requires careful planning, execution, testing and oversight. Running a migration manually or with homegrown scripts can result in an inconsistent application of the process, lengthy delays and rework, and less than optimal use of the target platform.

A better alternative is to employ proven migration solutions like Quest Notes Migrator for Exchange and Notes Migrator for SharePoint. These tools assess the effort needed to complete the project, enable effective project management, and automate critical but repetitive tasks to ensure a successful migration. Quest also offers a full suite of tools to help you manage your new Exchange and SharePoint environments. The end result is a reliable and scalable Microsoft solution that enables your organization to take full advantage of its investment.

## About Quest

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