

The background image shows a hand pointing at a digital chart or data visualization. The chart features various colored lines (blue, pink, yellow) and a grid. The hand is in the foreground, pointing towards the right side of the chart. The overall scene is set against a dark background with some blurred lights.

## Lotus Notes

### To SharePoint Data Migration Scenarios

This paper helps business owners understand scenarios encountered while migrating Lotus Notes data to SharePoint.

*“When IT starts discussing the migration of Lotus Notes applications to SharePoint, the first question posed by the Business to IT is ‘Will we lose our data?’. The emphatic answer is ‘No’.”*

-With Birlasoft’s migration expertise, partner support with several tools and proprietary migration Framework, migrating Lotus Notes data and applications to SharePoint without loss of data, has never been easier.

With the rising adoption of the SharePoint platform across many enterprises, moving Lotus Notes applications to the SharePoint platform becomes a logical decision. The SharePoint platform can not only serve the functionality provided by Lotus Notes applications but can also provide numerous additional capabilities for a tangible value-add proposition. The real challenge in migration (which also existed in Notes databases) is continuing data usage in SharePoint wherein application business logic/processes are redeveloped. Furthermore, if enhancements continue, it poses a dual challenge for information architects to map data between Lotus Notes and SharePoint. Below are situations related to various data elements in Lotus Notes<sup>1</sup> and how these can be addressed for a successful migration to the SharePoint platform using Tools/ Frameworks.

## Overview

- Enterprises using Lotus Notes for many years for their business operations are planning to move to a new generation Microsoft Collaboration Platform. This initiative will give them competitive advantage while improving operational efficiency and lowering maintenance costs.
- However, successful migrations need clearly carved out strategy considering the business impact and work volume involved in this migration / modernization mission.
- Successful migration is majorly attributed to cost incurred and time invested. Both attributes can be greatly influenced by partnering with experienced professionals equipped with processes and tools to expedite the entire exercise.
- With its vast experience in the application migration area, Birlasoft has devised a Migration methodology which will not only help control cost and time attributes but also ensure that the new platform is successfully adopted by users which will future proof the business.

## Notes Documents

### Situation

Notes documents must be migrated to SharePoint that may or may not have attachments. Also, the documents might have data in multiple languages or Dates in different time zones.

### Solution

Notes documents can be migrated to SharePoint easily. This is possible by creating a similar structure having proper field mapping. Attachments and multilingual data can also be migrated. For dates and time zones, in some cases tools may not be used, to avoid conversions to local settings. In such cases, custom logic is applied to perform time zone migration.

## Rich Text

### Situation

Notes documents have rich text data where data is formatted with attachments and images in it.

### Solution

Rich text data can be migrated to SharePoint without loss of formatting. Attachments can be stored in SharePoint Document Library or may reside embedded with List data. Rich formatted text having multilingual data can be seamlessly migrated to target platform destinations – SharePoint or SQL Database. Language packs installed on the Server can help render multilingual data properly. Optionally, Word or PDF documents can be generated out of Rich text data and these documents can be further stored in SharePoint document libraries

### “Before starting the migration process ...

- Complete all workflow processes in Lotus Notes.
- Check the content you want and leave the content you don't.
- Data cleansing is required in some cases
- Delete orphan/invalid/incomplete documents.
- Beware, since during data migration mass email notifications may be sent which could be annoying to business users.
- Beware, since during data migration mass email notifications may be sent which could be annoying to business users.
- Ensure correct Notes directory server is defined for name scanning.
- Ensure that SharePoint Workflows or SharePoint Event Receivers are disabled/removed before you begin a migration.
- Turn 'On' or 'Off' strict data migration settings. This will decide whether to stop at first occurred error or continue to next record by ignoring/ recording errors.
- During migration, end users should not be using the system as data may be in an inconsistent state.

“ *Off-the-shelf Migration tools available in the market can be used in most cases. However, in complex scenarios these tools pose limitations and custom logic specific to the situation is required. Birlasoft's proprietary Migration framework addresses such situations effectively* ”

## Users and Groups

### Situation

Optionally, Word or PDF documents can be generated out of Rich text data and these documents can be further stored in SharePoint document libraries

### Solution

Users and User Groups can be easily migrated to SharePoint. Optionally, groups can be SharePoint groups or Windows AD2 group. In some cases, the Notes user names may be different than Windows Active Directory user names. In such cases, proper translation or mapping of user names can be done using tools.

## Attachments

### Situation

Notes database has lot of attachments of different types and/or varying sizes.

### Solution

Attachments can be migrated to SharePoint document libraries or Lists. If attachments are to be stored in a database for some reason, tools can help achieve this. Once attachments are migrated to new location, their reference locations will be updated by tools so that it can be located correctly. If the attachment size is high, tools can compress the file during migration. Certain types of attachments are not allowed in SharePoint for security reasons, Tools can restrict migrating such exception file types.

## Workflow History

### Situation

Notes databases have several workflows and workflow history is maintained for reference purpose. This history needs to be made available after migration to SharePoint.

### Solution

Workflow history can be migrated to SharePoint. However, this is unstructured data in Notes which needs to be properly formatted to be displayed in HTML pages/browsers. This additional formatting is required to make it more readable. Date time, time zone stamps may need to be displayed properly. Sometimes, workflow history needs to be searchable and sortable

## High Transactional Data

### Situation

Current Notes database has a high amount of transactional data with unique security and reporting requirements. Such system should remain scalable after migration with a large user base.

### Solution

Sometimes, due to the unique needs of applications, data may need to be migrated to SQL Server instead of storing it directly on SharePoint. This gives additional control on data, security and reporting needs. Tools can help in achieving this, Notes data can be migrated to SQL Database. However, in some scenarios, manual scripting may be required and tools may pose some limitations especially in the case of applying same security/ permissions on data. Even images and attachments can be stored in SQL Server and tools can help achieve this. As of today, tools do not support data migration to Oracle database and requires custom code to be written in such a scenario.

## User Interface

### Situation

Notes database has some user interface design that needs to be migrated and reused in SharePoint. This can be for consistency or minimizing user training.

### Solution

It is possible (to some extent) to migrate your Notes forms to InfoPath form templates. However, this feature is most suitable when forms are very simple and template based. It is also possible to export user interface elements in ASPX pages, XML, HTML, and Web Part3 Pages. In practical situations, this type of conversion is used rarely and only in specific type of applications.

## Doc Links/ Tracking Links

### Situation

In the Notes database, there are documents which are referring to or linked to other Notes documents (DocLinks). These link URLs should remain active even after migration.

### Solution

During and after data migration, tools can detect these links and convert them to use new dynamic links in the new SharePoint environment. In such cases, tools use intermediate tracking service which ensures redirection to the current location of document and also if the specific document was migrated or not. The tool maintains a record of every document that is ever migrated and guarantees that users clicking on an intra-document link will always be able to find the current location of the document.

## Security

### Situation

Notes documents have security requirements. Documents are with Reader/Author fields and Created/- modified identities that need to be preserved in SharePoint.

### Solution

Migration tools can help preserve Created/Modified identities. Also, any unique permissions on document will be transferred to SharePoint where read access will be provided to users from users and groups named in the Reader Names field and will only grant edit access to the users and groups named in the Author Names field.

## User Documentation

### Situation

Notes database has very good User documentation, can it be utilized in SharePoint?

### Solution

User documentation is simple formatted text which can be easily migrated. However, utility of documentation may be subject to contents. Documentation describing business processes may be leveraged but anything specific about the Notes database will not be applicable to the new target platform.

## Internet facing content

### Situation

Notes database has rich content that is meant for internet publishing and for a wide audience. This often includes some type of approval process, management of draft content and version control.

### Solution

This is a great example of an application that may well suit for the “publishing” site templates available in SharePoint. A rich text Notes document (with embedded images, attachments and doc links) can be migrated to the ‘Publishing Portal’ using Migration tools. With some formatting after migration, the content can be made ready for publishing.

## Multivalued data items

### Situation

The source Notes database has multivalued fields (one-to-many relationship). Also, at some places, such relationship must be created where feasible.

### Solution

Multivalued items are found in Notes documents where, for a specific column you can have many values. For example, a country record can have many state values associated with it. While migrating such documents, one can configure to create multiple rows for each such value which will cause more number of list items created in SharePoint. The reverse is also possible where there are multiple Notes documents for each value item. Tools can help you merge them into one record by creating multi value items in SharePoint. However, this is applicable to SharePoint as a target platform and not with SQL Server.

## Embedded files/ images

### Situation

The existing Notes databases have embedded documents such as POWERPOINT, EXCEL, PDFs, JPG, and BMP etc.

### Solution

Embedded objects can be extracted from the Rich text data. Where possible, objects will be converted to files that can be subsequently opened by the applications that created them. (For example, an embedded PowerPoint slide will be converted to a .PPT file.) Even images stored as native Notes bitmaps will be converted to GIF or JPEG formats.

## Data verification guidelines...

- Check Data time, time zone of migrated records
- Year/Month wise record count
- Amounts and summations
- Attachments, size and file type, location
- Images are to be in open or closed state
- Workflow and their states
- Unique number generation logic
- Treatment to users who are retired or not with the Organization
- Email notifications as workflow moves from one state to another
- If images are stored in the database, check if their paths are correctly created and mapped
- Data mismatches such as duplicate records, records missing parts of data, misplaced attachments
- Setup appropriate error log level and review log files
- Collaborate with business users to verify data quality
- Multilingual data should be verified by business users

*To conclude, overall it is clear that businesses do not have to worry about the loss of data or data quality. However it is imperative for the IT team to ascertain and ensure that the right team of professionals with necessary knowledge are working on this area to deal with challenges effectively*

1. This paper covers data migration scenarios for data and workflow driven Lotus notes applications. This paper does not cover QuickPlace / Quickr type of applications. 2. Windows Active Directory 3. Web Parts are sections of web pages rendered in a browser. A web page may have one or many web parts.



RESOURCES

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