

# Performance Testing: Migrating Large Lotus Notes Databases to Office 365

Using Notes Migrator for SharePoint

Randy Rempel  
Senior Product Manager  
Published December, 2014

## Table of Contents

Introduction .....	3
The Lotus Notes Test Databases .....	4
Office 365 Site .....	4
First Test: Migrating 5000 Documents.....	5
Second Test: Migrating 97,280 Documents.....	6
Third Test: Migrating 5187 Documents with File Attachments.....	7
Performance Testing Results Summary .....	8
Conclusion.....	9
Appendix A: Internet Speed Tests.....	10

## Introduction

I am continuing the review of how we do some performance testing of our **Migrator for Notes to SharePoint** (MNSP) tool.

In this round of performance testing, I am migrating Notes documents from a custom Lotus Notes discussion database to Office 365. I hope that readers can use these results as a relative comparison for their own purpose. However, I caution everyone that their own performance test results can vary from these based on their own test environment and test databases.

Also, many of the list limitations that exist for SharePoint 2013 also exist for Office 365. You can read the published documentation on the software boundaries and limits for SharePoint 2013 at <http://technet.microsoft.com/en-us/library/cc262787.aspx>. Migrations run with our MNSP tool is constrained by these limitations.

The version of MNSP that I am testing with is not able to avoid getting throttled or blocked in SharePoint Online. Documentation on this is provided by **Microsoft** in the document titled **How to avoid getting throttled or blocked in SharePoint Online** at <http://technet.microsoft.com/en-us/library/dn878981.aspx>.

There are no server hardware requirements to review. In addition, we cannot use our MNSP Import service on Office 365. Instead, I will enable the Redirector Page with Link Tracking. However, I do not have any document links in the documents that I am migrating in these tests.

## The Lotus Notes Test Databases

I am using two different test databases. The first is a large custom Lotus Notes discussion database that I have on my Domino server. It has 389,616 documents and is almost 5 GB in file size. I can ignore some of the documents in the database by focusing on three document types.

There are three primary types of documents in the database. The forms are all heavily customized from a standard discussion database design template.

Form	Documents
Main Topic	119,985
Response	126,706
ResponseToResponse	141,550
<b>Total</b>	<b>388,241</b>

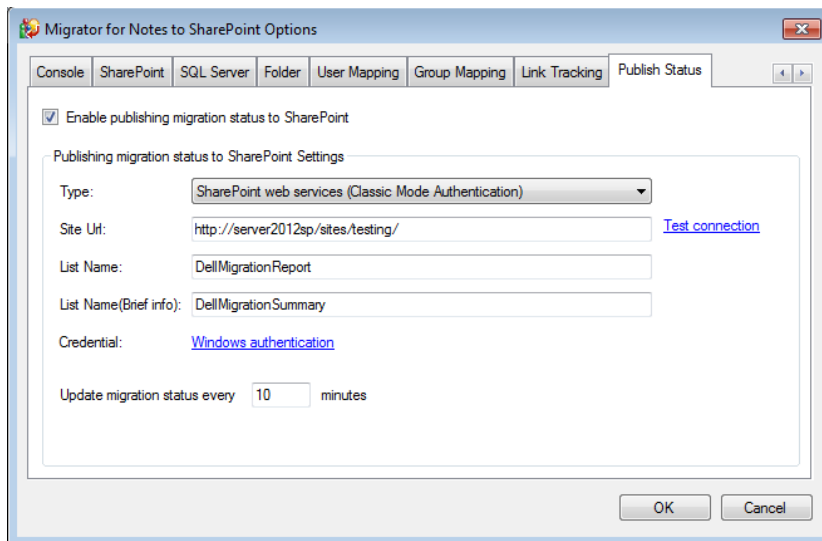
The second test database is a custom document library containing approximately 3500 documents with file attachments.

## Office 365 Site

I have a three-server environment for testing SharePoint 2013. You can read the complete details on my server environment on my blog at <http://rhempel.wordpress.com/>

I am using my SQL Server for Link Tracking.

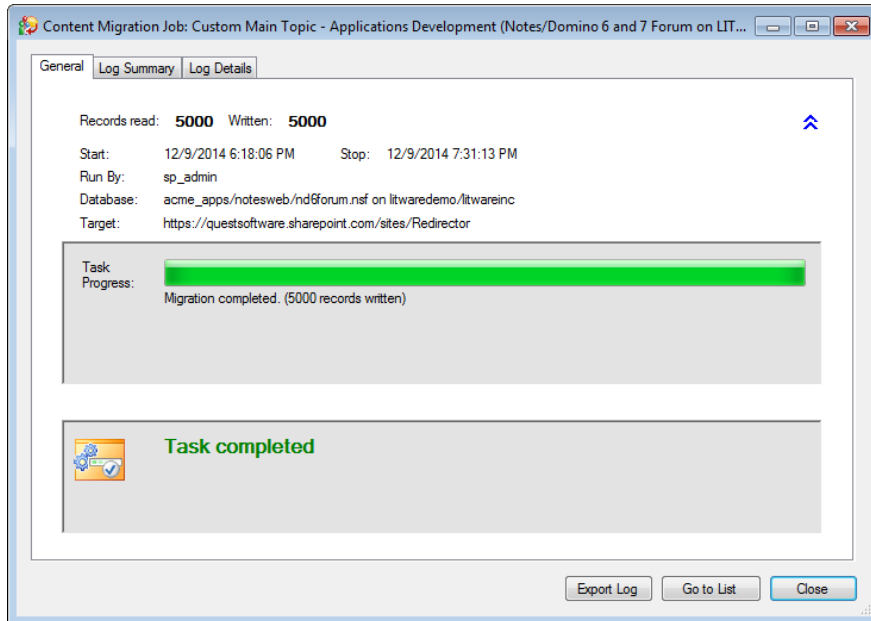
I am using the new **Publish Status** feature to write the migration status updates to my SharePoint 2013 server.



I am using MNSP to migrate Lotus Notes content to Office 365 in this round of performance testing. I created a site in Office 365 where my R&D team does testing. Thus, this site may not experience the same performance load as a production site.

## First Test: Migrating 5000 Documents

This first test migrated 5000 documents from Lotus Notes to SharePoint. This is a relatively simple test that gives you a basic idea of how long it will take to move a simple database. The migration took 1 hour and 10 minutes to complete.

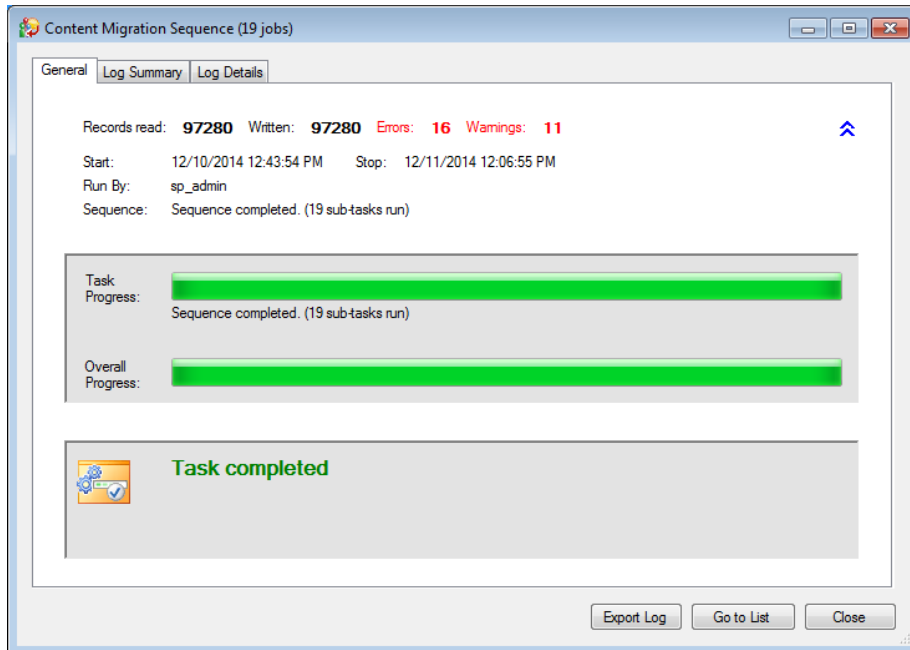


A similar test that I ran within my SharePoint environment took 48 minutes to complete. This test also migrated 5000 documents.

The Office 365 migration test took approximately 50% longer to complete than the SharePoint migration test.

## Second Test: Migrating 97,280 Documents

This second test migrated 97,280 documents from Lotus Notes to SharePoint. The migration took 23 hour and 23 minutes to complete. However, three of the migration sub-tasks reported errors and did not finish due. I can still run these migration jobs again without impacting what has already been migrated. This test represents a larger migration of a custom form. However, this is a single form without any file attachments in the content.

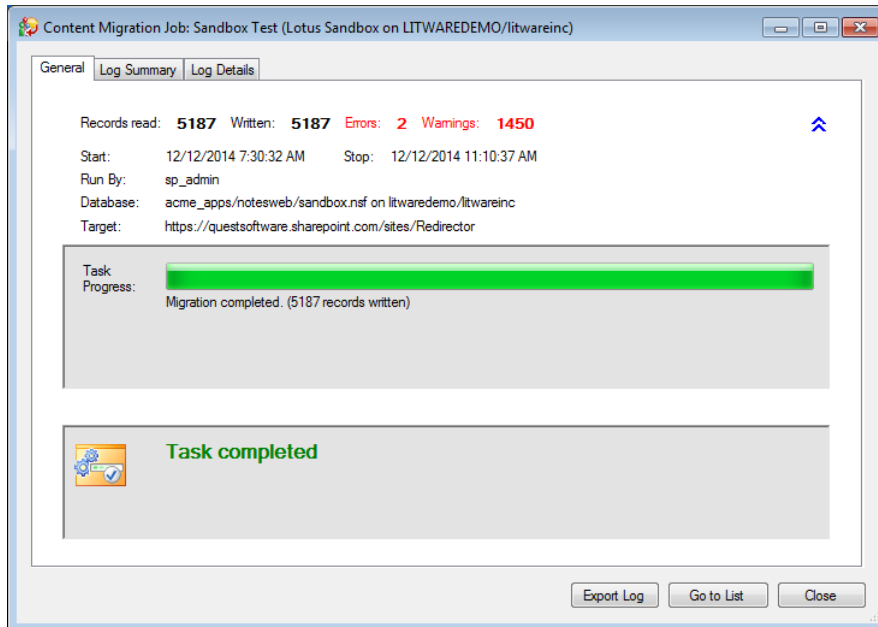


A similar test that I ran within my SharePoint environment took 5 hours 49 minutes to complete. All of the migration sub-tasks finished and it migrated 110,000 documents. The test also used the Quest Import Service.

The Office 365 migration test took approximately four times longer to complete than the SharePoint migration test.

## Third Test: Migrating 5187 Documents with File Attachments

This third test will migrate 5187 documents with file attachments from Lotus Notes to SharePoint. The migration took 3 hours and 40 minutes to complete.



A similar test that I ran within my SharePoint environment took 55 minutes to complete. That test migrated 3580 documents. The test used the SharePoint web services.

The Office 365 migration test took approximately four times longer to complete than the SharePoint migration test.

## Performance Testing Results Summary

The table below displays the results from migrating content to SharePoint 2013 server. These are the results from my previous performance tests.

Test	Documents	Start	Finish	Query Notes Data (minutes)	Processing Documents (minutes)	Total Time (minutes)	Network Bandwidth	Comments	Import
1	5000	12:45:01	1:23:52	9	35	44	1 GB	Custom Main Topic form	SharePoint web service
2	110000	12:18:33	6:57:34	1	5h 48	5h 49m	1 GB	Custom Main Topic form to custom list with folders using @function to filter records	Quest Import service
3	3580	1:50:20	2:45:40	1	54	55	1GB	Attachments to a Custom Document Library	SharePoint web service

The table below displays the results from migrating content to Office 365. I used the same data and migration jobs as in my previous performance tests. The count of documents is not always identical.

Test	Documents	Start	Finish	Query Notes Data (minutes)	Processing Documents (minutes)	Total Time (minutes)	Internet Bandwidth	Comments	Import
1	5000	6:16:19	7:27:00	1	1h 9m	1h 10m	5.5 Mbps	Custom Main Topic form	O365 web service
2	97280	12/10/2014 12:43:54PM	12/11/2014 12:06:55PM	1	23h 22m	23h 23m	5.5 Mbps	Custom Main Topic form to custom list with folders using @function to filter records	O365 web service
3	5187	7:30:32AM	11:10:37AM	1	3h 39m	3h 40m	5.5 Mbps	Attachments to a Custom Document Library	O365 web service



## Conclusion

The Office 365 migration test results show a similar pattern to those that appeared in the SharePoint migration tests:

- A Notes database with more documents takes longer to migrate.
- A Notes database with file attachments takes longer to migrate than a database without file attachments.

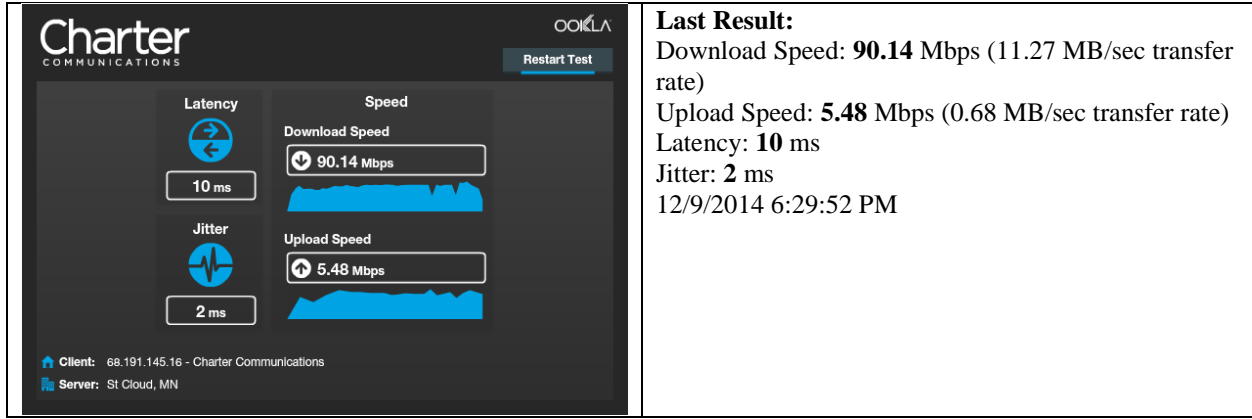
In addition, each Office 365 migration test took considerably longer to complete than a similar SharePoint migration test. The last two Office 365 migration tests took approximately four times longer.

Of course, the actual performance results that you can expect in your testing will vary from the results posted here. The main recommendation that I can make is that you should test the migration performance with a few different types of Notes databases at your company location.

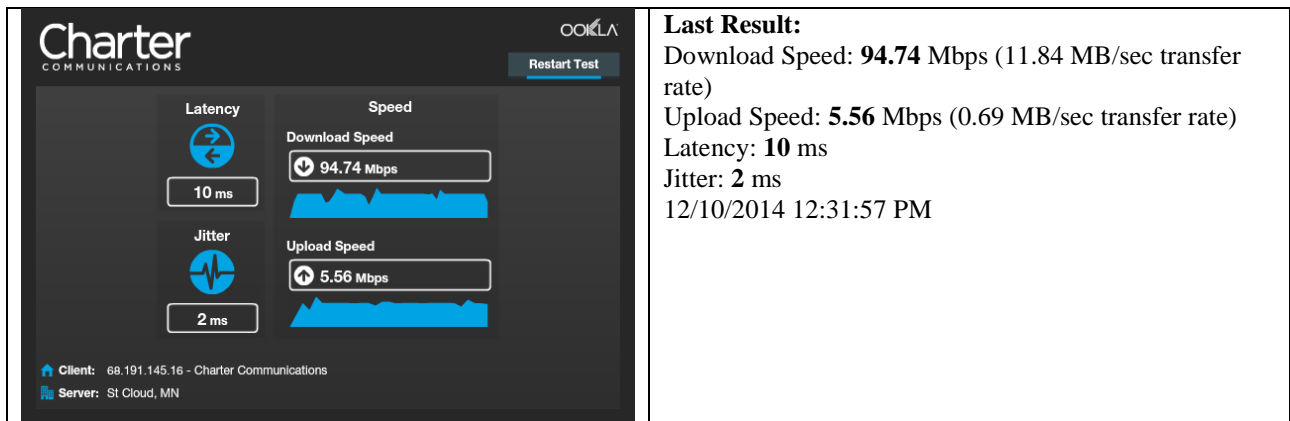
## Appendix A: Internet Speed Tests

I tested my Internet speed at the start of each migration.

First Test: below you can see that my upload speed is 5.48 Mbps.



Second Test: Below you can see that my upload speed is 5.56 Mbps.



Third Test: Below you can see that my upload speed is 5.48 Mbps.

