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Top 10 Best Practices
for Migrating Data from
On-Premise to the Cloud

Introduction

Cloud computing has become an all-but completely compelling choice for most businesses. The clear advantages of moving many IT workloads to the Cloud have become undeniable, including: significant cost reduction, system resilience, sustainability, redundancy, elasticity, user self-service, continuity of business, automated data backup, and more. With a well-planned transition from on-premise to cloud computing, you'll deliver a greatly enhanced user experience without any disruption!

But before you can enjoy any of that, you need to finish the transition. This means all of your existing data will need to be migrated from your existing systems to the new cloud-based environment.

While you're formulating a plan that will take advantage of best practices, you will frequently find yourself lacking all the resources to assure that all of your existing data will be available to users on Day Zero when they start using the new cloud solution.

This is a major concern that must be addressed to ensure a completely smooth transition.

This is also a great opportunity that you'll seldom see again. This is an excellent time to make decisions about archiving older data and keeping them "near" the live system instead of on it. This will accelerate so many processes. You will have more control over versions, backups, eDiscovery, and more. You'll also reduce costs coming from your new cloud services, and you'll enable your users to improve performance by generating many queries and reports without impacting the online data, especially historical reports, and also without additional licensing costs or contention for cloud computing resources.

Scribe Software

Data migration and integration is the sole focus for Scribe Software. We've been helping companies like yours to successfully migrate data from old systems to new for more than twenty years across many generations of applications. You've probably used or are using some of our utilities to help in your migration right now, or will be soon. In this white paper, we translate many of the lessons learned from our deep experience in data migration and integration into a high-value set of best practices you can put to use immediately.

As you begin to develop your migration strategy and develop your plan, consider these **Top 10 Best Practices for migrating your data from your previous on-premise system to your new cloud environment.**

FIRST SET UP THE ACTIVE USERS

While this sounds like common sense, sometimes common sense isn't so common. Many seem to assume the user accounts will simply create themselves. This is a critical step that must be accomplished before any data is migrated so all records can be related to users.

When migrating your data from your on-premise CRM system, make certain that all active users have been created in the CRM Online Organization, and make certain that the "fullname" value in the on-premise system matches the same value in the online system, so all of your lookups will be successful. Note that we said all "active" users. You will not want to create accounts for departed users. You will be able, instead, to create user identities to collect all data from departed users and make it available to management for distribution or deletion, as they see fit.

You will also want to create a temporary role that is a copy of the System Administrator Role and apply it to all users. This will help you avoid delays due to security issues, record creation rules, or other user-specific rights. Don't worry about future system control issues; this Admin role will be deleted after the migration is completed.

Microsoft Office 365

If the cloud solution you're migrating to includes Microsoft Office 365, now is the time you'll want to execute the standard organization spin-up processes for that service, including the creation of all users and the assignment of a CRM license to each user. Again, make certain that the full user name matches between all involved systems.

Sandbox!

Note that Microsoft provides a free "sandbox" environment to any customer purchasing more than 25 user licenses. As the word suggests, this is an "instance" of the platform that can be used to "play" and experiment in before committing to actual production. This can be used as a quality control step in the middle of your migration to assure that everything is correct, in the sandbox, before you migrate to your actual production instance!

Pay close attention to consistency of user names always, especially if you're considering setting up Active Directory Federation Services (ADFS) so you can use your Active Directory (AD) domain to provide single sign-on. You also have the option of using an account identity provided and managed by Microsoft. It is critical to be able to match users correctly between systems, no matter what type of credentials you use for login.

UPLOAD CUSTOMIZATIONS

It is absolutely a best practice to upload any existing customizations or plug-ins from your existing on-premise system as early as possible and make sure they are working properly in the cloud version before migrating data.

Be thorough in your documentation of the changes you've made. Some may require special attention when migrating the actual data. You may need to create a formula or create a field mapping to transfer the data to the correct fields.

Once you have all customizations and plug-ins transferred, and before you migrate any data, be sure to disable your workflows including email notifications. This will avoid any unnecessary jobs being triggered while the live data is being added.

One thing to note: If you are moving from an on-premise system to online, you will not be able to use SQL Reports written with SQL Server tools. You'll need to recreate these using FetchXML.

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CAREFULLY CONSIDER SIZING

Nothing holds greater potential to disrupt your migration project than exceeding your data storage limits during the process, potentially creating unnecessary time and cost overruns.

Be sure to purchase enough space on your CRM Online subscription to store all of your migrated data. Carefully predict and calculate enough additional space to accommodate anticipated growth. By default, you'll have 5GB of data space when you first set up your organization in Microsoft Dynamics CRM® Online.

The easiest way to gauge your space requirements is to **review the database on your existing on-premise CRM implementation.**

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KNOW YOUR DATA

Your migration project will go more smoothly and your results will be more satisfying if you take the time to carefully analyze your data in preparation for making decisions as to what data will be migrated where.

Ask Yourself

- Do you need Inactive records?
- Is there an identifiable cutoff date that defines "old data" that will not be migrated?
- Can you eliminate old abandoned records?
- Are there any space-consuming attachments you no longer require?
- Are there old activities that no longer need to be tracked?

When you migrate data like this, you have a unique opportunity to purge data you'll never use again and to consolidate data from departed users into a distribution account from which management can reassign the records. Remember that you can always keep a complete backup of the original data prior to migration and use filters to only transition truly useful data. This way you still have and can retrieve any data you may incorrectly identify and tag as no longer useful.

One of the "battle cries" we keep coming back to is **"Know Your Data!"**

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PREPARE FOR LIMITATIONS

Any change may bring limitations along with it, such as things that cannot be readily migrated from an existing system to a new one. In the case of Microsoft Dynamics® CRM, for example, you will find that you cannot set "Modified On" date/time values or "Modified By" user values when moving to the online version.

Many values that are unique to a specific organization also cannot be migrated, such as user options, including:

• Saved Personal Views
• Team Membership
• Security Role Assignment
• Workflow in a Waiting State
• System Jobs
• System Logs

Prior to migration, be certain to document these thoroughly for manual reconstruction post-migration.

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CONSIDER INACTIVE USERS

A user that cannot be found in the CRM Online System during migration will be set either to the user account of the person actually running the migration, or a specified user that is preset to catch all unidentifiable records in advance.

It is advisable to always retain all historical info even if it is associated with users who are no longer in the organization.

During migration, create a user in Office 365 named "Old User" or something similar that will indicate it as an identity created solely for the purpose of containing all records from departed users. This way you will have no need to transition the non-existent users. Assign records to this account using Team functionality. Once again be sure to assign a temporary system admin role just in case you need to make adjustments during the migration process.

In the case of core records, hopefully you're re-assigning each to a new existing user. Carefully examine the activities associated with those users to decide which are valid and which are not, and which should be retained. Obviously this can become very cumbersome when working with large numbers of records. You can use Advanced search or add-ons to make this process easier.

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PLAN TO KEEP THE RECORD GUIDS AND USE
OVERWRITECREATEDONDATE

You will want to keep the original globally unique identifier (GUID) for each record from your source system to enable future matching of related records. To assure these are kept, use the <entityname> ID field to keep the original value for the GUID.

This is a tremendous aid in assuring that certain records have been brought across. You also have the optional ability to use overwritecreatedon so you can keep the original Created On from the on-premise system stored within the Cloud; the new Modified On would be the migration date. This will be helpful in the future, as you're reviewing data to determine its origin.

One of the advantages inherent in Scribe is this ability to bring over the original GUID.

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MIGRATE LOOKUP ENTITIES FIRST, AND THEN DO TOP DOWN

While it might not seem intuitive for Lookup Entities to be the first thing moved, it actually is. Many organizations like to have standardized lookup for many items that might be entered in various forms from user to user. For example, some might enter the abbreviation for New York City as "NYC", while city natives and others might just use "NY."

Knowing and understanding your own data and its architecture will help to establish useful lookups, which will ultimately help you avoid record duplications or difficult searches that can result from these field entry differences.

By migrating your lookups first you'll be able to use lookup effectively during the migration process. Also be certain to confirm the consistency of your CRM data hierarchy with opportunities, cases and other activities relating back to contacts which in turn relate upward to accounts.

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MINIMIZE DOWNTIME AND REDUCE RISK

If you want to save a considerable amount of time, especially user downtime during your data migration, be prepared to perform two migrations.

First, migrate the bulk of your data from the on-premise system to the new online system while your users are still using the on-premise system. They can continue working while you migrate most of the data.

Then you can perform all of your testing, including User Acceptance Testing (UAT), while your users continue to work in the old environment. Once you are satisfied that all testing has been accomplished successfully, you can then move on to the final stage.

This is the only time you will have to have all users logged out of the system. Now all you need to do is move any data that has changed since you did the initial migration. By moving only the delta data, you minimize the amount of time this stage will take. This also minimizes the time users experience any lack of availability of the system.

Experience gained over many migrations across many organizations over time has proven that **this two-stage migration saves a tremendous amount of time and assures minimum operational disruption.**

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VERIFY YOUR MIGRATION

Whatever you do, verify your migration before you conduct final user acceptance testing.

Many technologists observe that the most difficult part of any system to manage is that segment which occurs between the keyboard and the back of the chair, namely the user. In the case of data migration projects, the key concern is user adoption. The easiest way to fail to obtain enthusiastic user adoption is to have them find data records missing in the new system that were in the old system yesterday. Nothing will have them crying for a rollback faster or louder.

Begin with row counts. If there were 5,197 accounts in the account table in the on-premise system, be sure there are 5,197 in the online system. If there were any exceptions, this is the time that you will regret it if you didn't document them carefully. You can use FetchXML to generate row count reports for comparison.

Next, verify that all expected functionality is operational. Workflows are firing off properly, changing the correct fields in all tables that should be affected by them.

The time you invest in confirming the successful completion of your migration project will pay off endlessly in improved user satisfaction.

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EVERY MIGRATION PROJECT IS DIFFERENT, BUT...

As you perform more migration projects you'll realize that you almost always run into something new, different, and possibly challenging. Remember that you always have the fallback of reaching out to an experienced partner or other specialist for assistance,

but following these 10 Best Practices as a guideline and using the right tools for the job will always improve your likelihood of success.

About Scribe

Scribe is an established global provider of solutions that easily bring customer data anywhere it is needed – regardless of IT infrastructure. Scribe's award-winning products help 12,000 customers and 1,200 partners use customer data – cloud-based, on-premise or a mix – to increase revenue, provide superior service, and create business value faster. Its easy-to-use, enterprise-ready solutions are backed by extensive support options and training, and service customers across a wide array of industries including financial services, life sciences, manufacturing, and media and entertainment companies. © 2015 Scribe Software Corporation. All rights reserved.

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