**Migration Dynamics Handbook**

Prerequisites:

Prior to migrating data from your source organization to your destination organization you will need to create the appropriate users and teams and ensure the security roles are configured in your destination system as well as migrate your custom solutions to the destination organization.

If you need assistance please contact Cobalt Support at support@cobaltsupport.zendesk.com. Note: You will be able to manually map users from the source to the destination during the migration setup. Teams are mapped based on the name of the team with the exception of the default team which will be mapped to one another.

Install Migration Dynamics on your source and destination Dynamics organization.

To install Migration Dynamics (Note: you will have to repeat the following steps for both your source and destination Dynamics Organization):

1. Double click the self-extracting executable
2. Once the files are extracted you will see the following screen
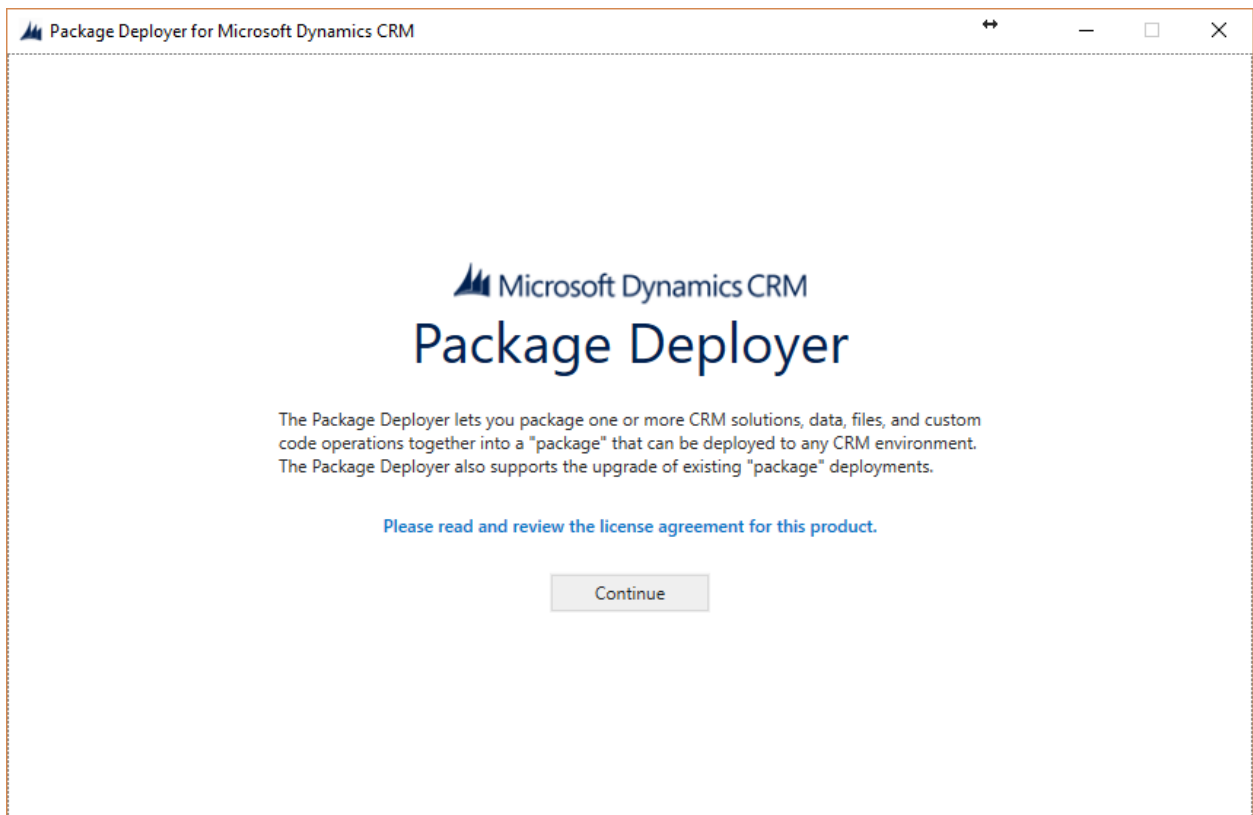
3. Click Continue
4. Select the Deployment Type of your source or destination organization and enter the required information to connect to your org and Click Login.

5. If Deployment Type = Office 365 Sourthen select the organization from the list and click Login otherwise continue to step 6
6. Select the appropriate version of Migration Dynamics to install. (Note: For Dynamics Online choose the latest version) and click Next (
   a. For CRM 2011 your organization should have at least **Update Rollup 18** installed.
   b. For CRM 2013 **without** Update 1 (I.e. version 6.0 vs 6.1) select Migration Dynamics 2011 in this step.
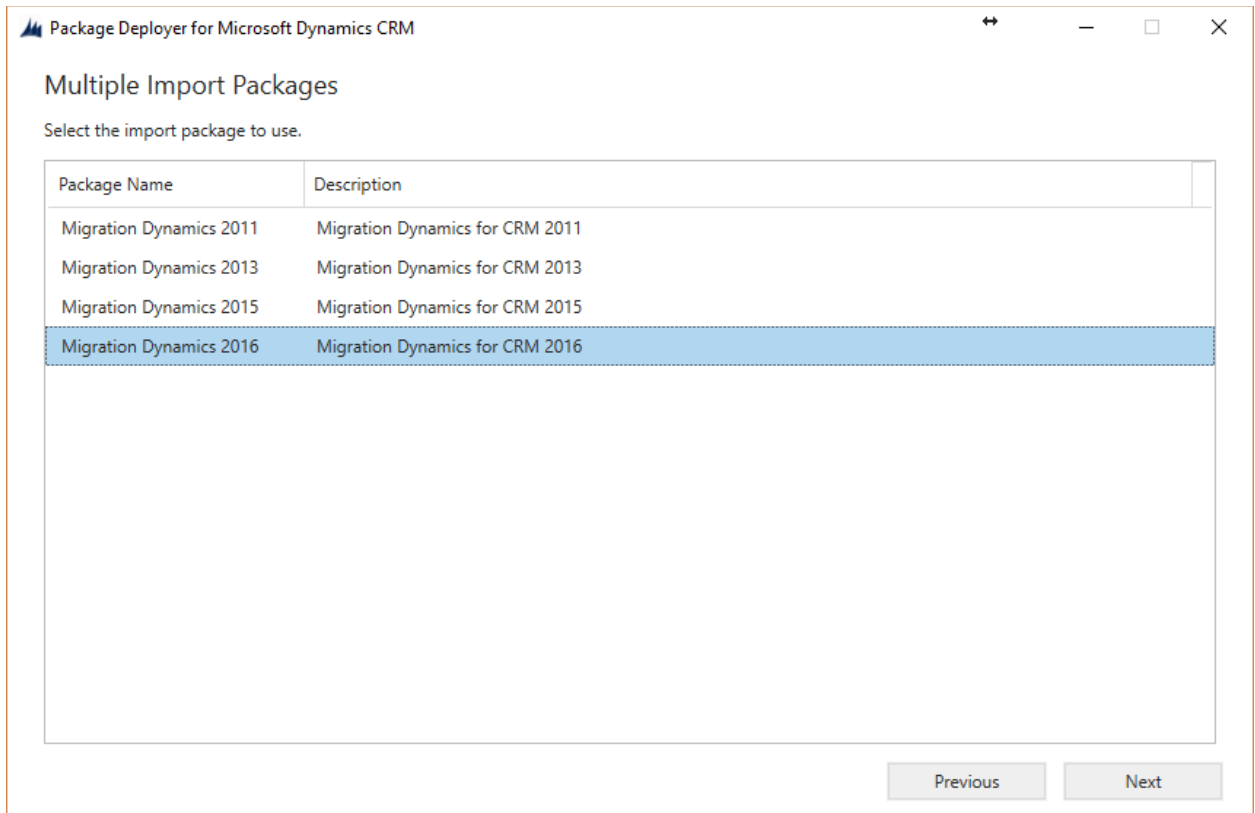

7. Click Next on the following 2 screens
8. Once the installer configuration has been read click Next to begin the installation
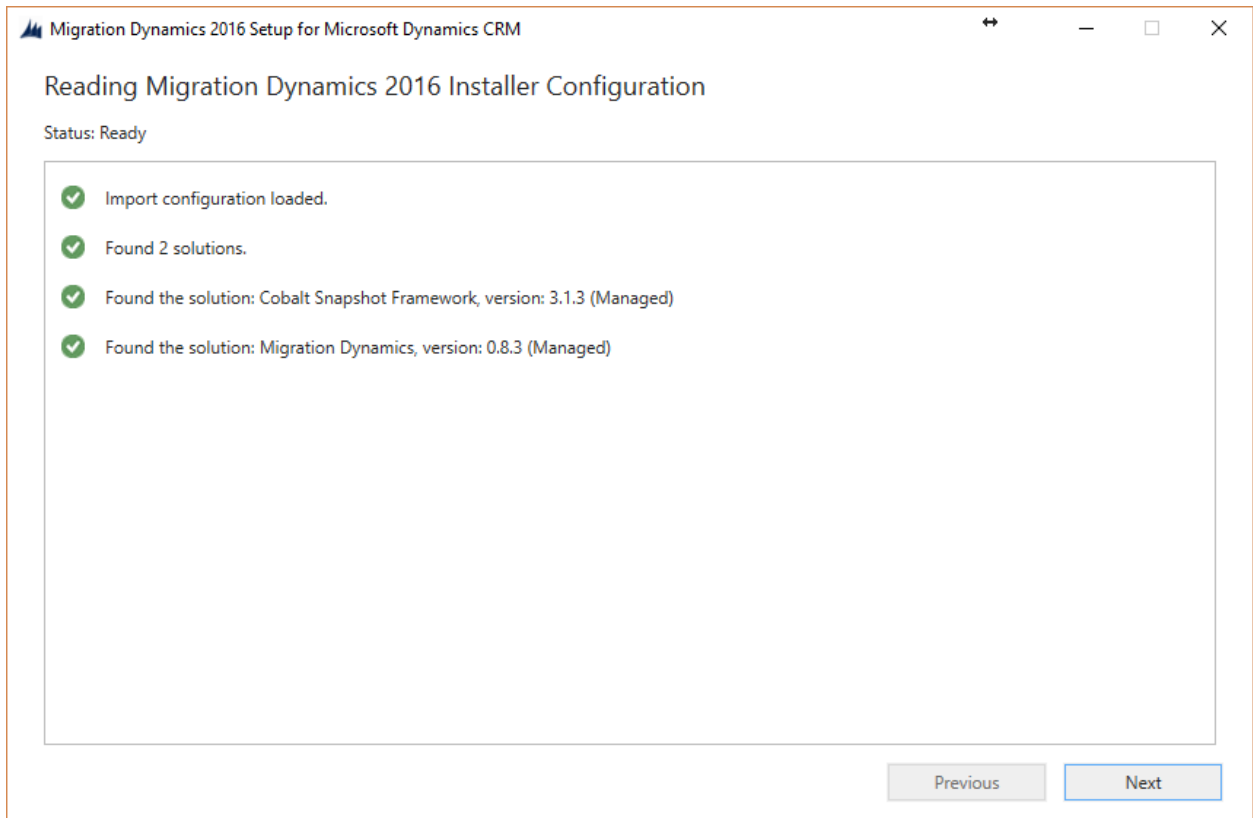
9. When the installation is complete (Note: this will take several minutes to complete) click through the following screens

10. Repeat 1 – 9 above for both the source and destination Dynamics Organization

Once you've completed the setup, you are ready to start migrating your data.

1. Open you source CRM Organization and navigate to Settings -> Migration Wizard (under the Cobalt section)
2. On the 1st page of the wizard you will be presented with an option to select the type of migration you will be performing.
    a. **NOTE: If you receive a message that your organization is not licensed. Please email** support@cobaltsupport.zendesk.com **to obtain a license for your source organization.**
    b. It's recommended that for test runs of a migration or for ad-hoc migration of data between organizations that you leave the checkbox unchecked.
    c. If you are performing a full / final migration and plan to continue to enter data into the source system and want to ensure that data is synced to the destination while the migration is taking place, select the 'Keep my data in sync' checkbox.
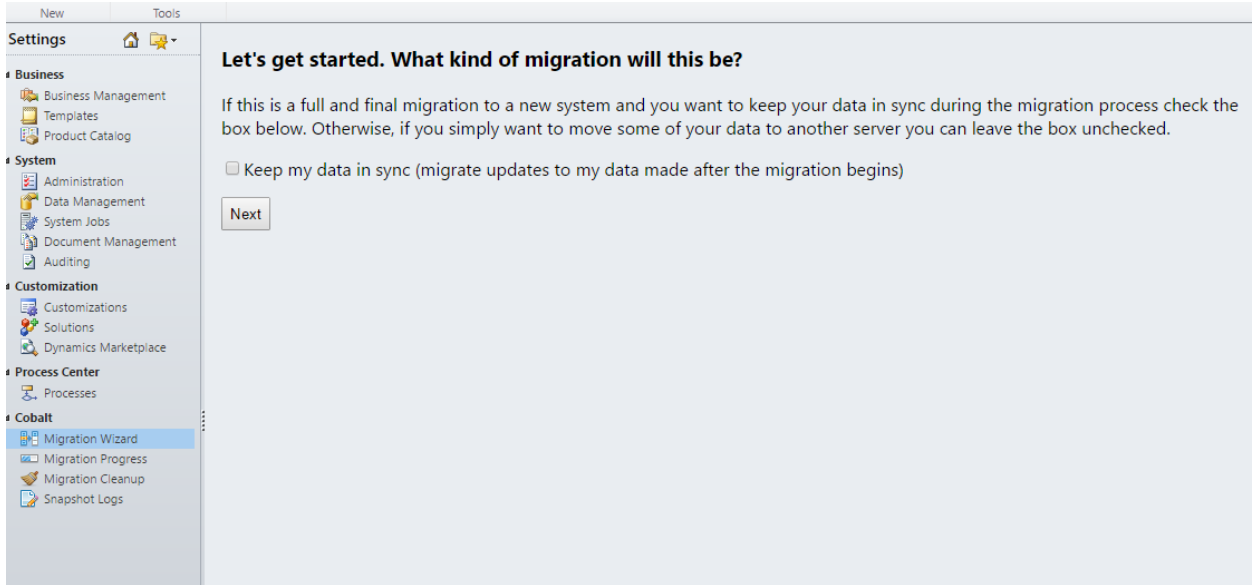
3. Click Next
4. On the 2nd screen you will be asked to enter the connection information for your destination Dynamics organization (Note: this is the destination organization on which you previously installed Migration Dynamics). Enter the required information and click Next.
   a. Once you've entered your destination organization's connection information it will be saved for later and you can select it from the dropdown instead of typing it in.
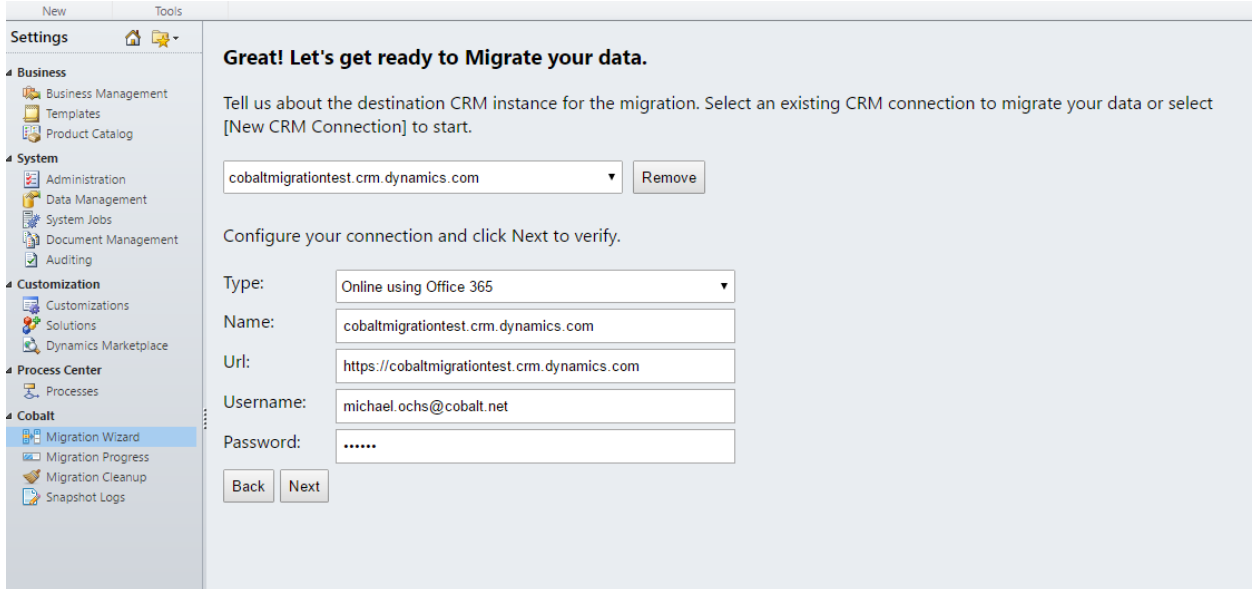

5. At this point Migration Dynamics will verify it can connect to the destination organization using the credentials you entered and pull down the data for all of the existing users on the destination organization.
6. If Step 5 is successful, you will be taken to a screen that will allow you to map your users.

7. **NOTE: If Migration Dynamics is not able to connect to your destination organization and you've verified the information entered on this screen is correct there are a few things to check**
   a. Most important is that your destination organization is accessible from outside the network it is installed in. If your organization is using Windows authentication and not configured for Internet Facing Deployment this is the most likely issue. Migration Dynamics uses Azure Web Services to connect to your organization and therefore must be able to get to your org from the web.
   b. The user should have the system administrator role in order to be able to read / write data in Dynamics. The most likely scenario if the connection fails at this step and you've verified 7a is that the user you entered does not have the appropriate permissions to access Dynamics.
8. On the User Mapping screen, you have the option to specify what users in the destination should be mapped to the users in the source organization. Migration Dynamics will attempt to map your users for you using the following logic.
   a. Match source users to destination users based on id.
   b. Match source users to destination users based on primary email address.
   c. Match source users to destination users based on secondary email address.
   d. Match source users to destination users based on Name.
   e. Match source users to destination users based on User Name.
   f. Otherwise, all destination users will be mapped to the user specified on the previous screen by default.
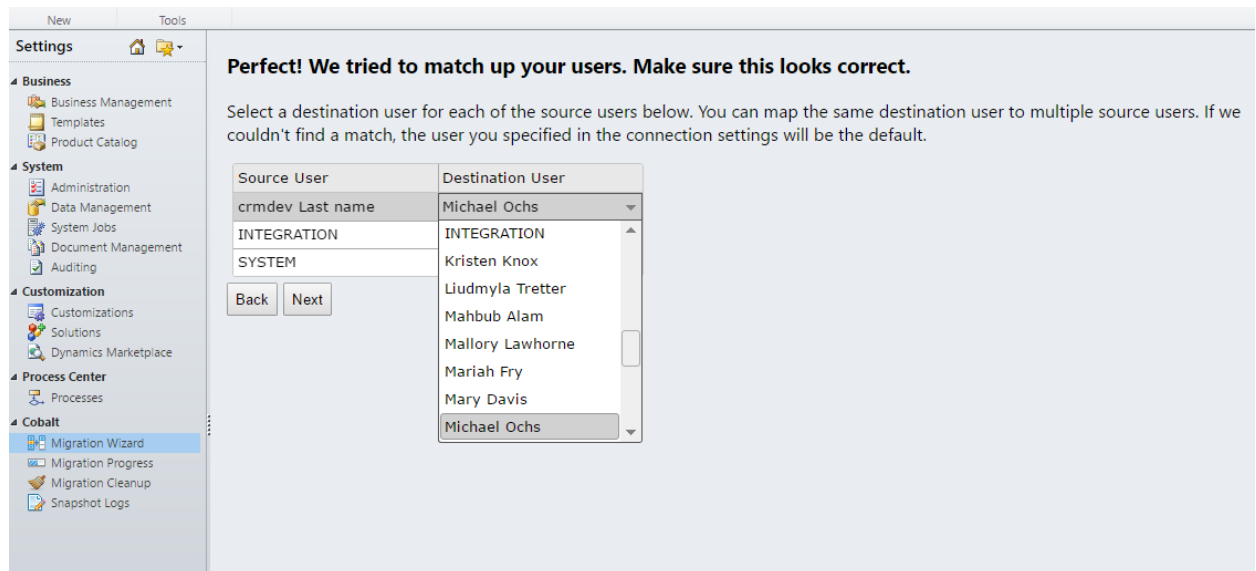
9. To update the default mappings select the drop down under the Destination User column and select the destination user you want to map to.
   a. One of the most powerful features of Migration Dynamics is the ability to map multiple source users to the same destination users. If you have disabled or legacy users in your source system you can map all of the records owned / created by or assigned to those users to a new user in the destination system.

b. **NOTE: Migration Dynamics will map all references to the source user to the destination user chosen on this screen.**

c. **IMPORTANT: The destination users mapped in this step should be Enabled users that have their Access Mode set to Read-Write (i.e. not administrative or non-interactive)**

10. Once you've selected a destination user to assign to all of the source users in the system click Next.

11. In the next step Migration Dynamics will validate your setup. On this screen you will be presented with a checklist of Errors, Warnings and Informational messages.

   a. If there are any errors you will need to address them before you will be allowed to continue. Once the errors are addressed Click Retry to refresh the list.

   b. After all errors are cleared you can continue. However, pay close attention to the warning and informational messages because they may require you to perform additional steps.
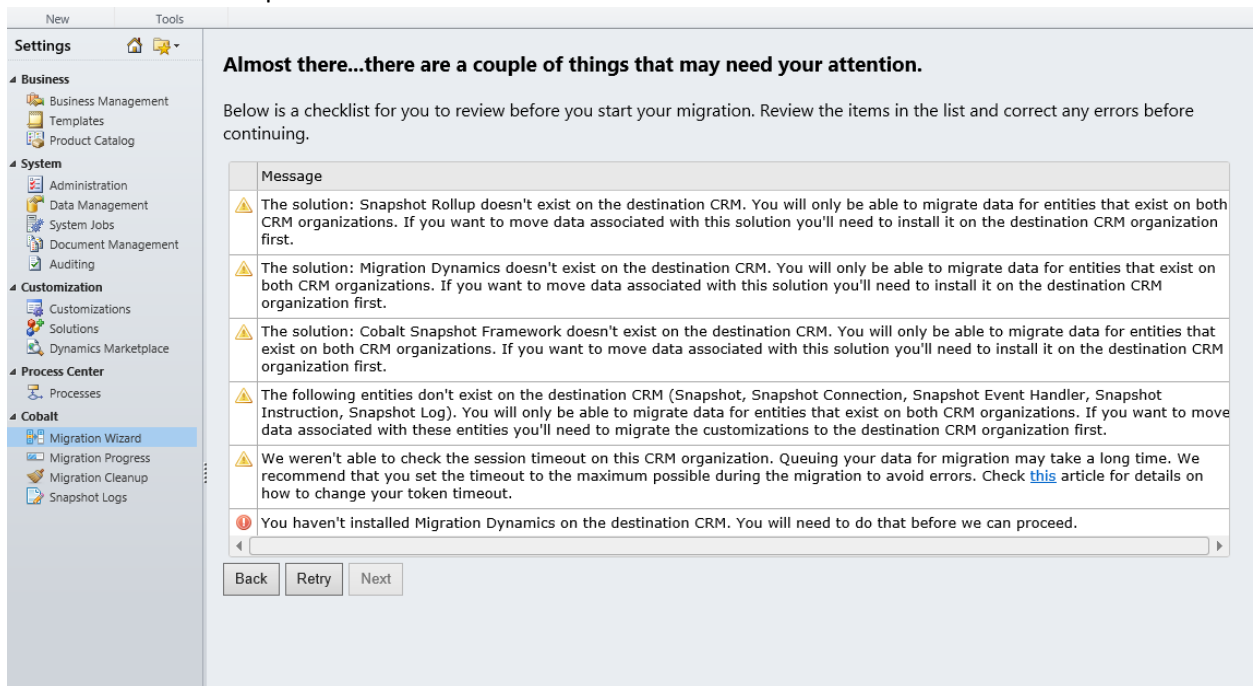
12. The final step before migrating your data is to choose the entities you want to move.

   a. Select the entities you want to migrate by clicking the checkbox.

   b. To specify which records you want to migrate click the Search Icon to open Advanced Find and update the Migration Dynamics filter. Don't forget to Save! (show me how).

   c. To remove an existing filter click the Trash Icon. If no filter is specified all applicable records will be migrated.

   d. When you're ready, click Migrate and sit back and relax.

   e. NOTE: Only entities that are Advanced Find eligible are available for filtering. Click Migrate to Begin the Migration

Settings

- **Business**
  - Business Management
  - Templates
  - Product Catalog
- **System**
  - Administration
  - Data Management
  - System Jobs
  - Document Management
  - Auditing
- **Customization**
  - Customizations
  - Solutions
  - Dynamics Marketplace
- **Process Center**
  - Processes
- **Cobalt**
  - Migration Wizard
  - Migration Progress
  - Migration Cleanup
  - Snapshot Logs

Workplace

Here we go!

1. Select the entities you want to migrate by clicking the checkbox.
2. To specify which records you want to migrate click the 🔍 to open Advanced Find and update the Migration Dynamics filter. Don't forget to Save! (show me how).
3. To remove an existing filter click the 🗑. If no filter is specified all applicable records will be migrated.
4. When you're ready, click Migrate and sit back and relax.

	Display Name	Intersect Entity	Name	Schema Name
	Account	false	account	Account
	AccountLeads	true	accountleads	AccountLeads
	Address	false	customeraddress	CustomerAddress
	Appointment	false	appointment	Appointment
	Article	false	kbarticle	KbArticle
	Article Comment	false	kbarticlecomment	KbArticleComment
	Article Template	false	kbarticletemplate	KbArticleTemplate
	Business Unit	false	businessunit	BusinessUnit
	Campaign	false	campaign	Campaign
	Campaign Activity	false	campaignactivity	CampaignActivity
	Campaign Activity Item	true	campaignactivityitem	CampaignActivityItem
	Campaign Item	true	campaignitem	CampaignItem
	Campaign Response	false	campaignresponse	CampaignResponse
	Case	false	incident	Incident
	Case Resolution	false	incidentresolution	IncidentResolution
	Competitor	false	competitor	Competitor
	Competitor Product	true	competitorproduct	CompetitorProduct
	CompetitorSalesLiterature	true	competitorsalesliterature	CompetitorSalesLiterature

Back   Migrate

13. While the data is being queued to be written to your destination organization do not leave the migration wizard page. Moving away from this page will stop the queuing of the data. Once the queuing is complete you can monitor the progress of the migration from Migration Progress page under Settings->Migration Progress

14. Once the migration is complete you can view any errors in the destination organization by going to Settings->Snapshot Logs.

15. When you are satisfied with the data migrated. Run the Migration Cleanup Wizard on the source and destination organization to reset your organization back to its original state and remove any plugins, left over logs and re-enable plugins and business logic that was disabled during the migration.

FAQs:

Q: Why do I receive a timeout error during the migration process when the message reads "Creating a Migration Checkpoint" if Auditing is enabled in my target organization.

A: This issue was discovered in 1.1.9 and was **resolved in the 1.2.0 release** ~~is currently in our backlog to be resolved~~. The current workaround for this issue is to manually disable Auditing on your target organization. On your target Dynamics organization Go to Settings -> Auditing -> Global Audit Settings -> Uncheck Start Auditing and Click OK

Q: How long does it take to migrate 1 million records using Migration Dynamics.

A: While there are a lot of factors to consider related to the speed of a migration including bandwidth and the source and destination server resources, as of the 1.1.7 release the benchmark for Migration Dynamics has been averaging ~8 records / second to write data to Dynamics 365 online. Some other considerations are how long queuing will take. Migration Dynamics migrates

data by first pushing all of the data out of your source organization and into Azure queues. Depending on the size of the records and distribution in the number of records this process averages ~20 records / second. Additionally, circular relationships will tend to create more orphans to restore during the migration which can add overhead as can errors that occur based on resource issues or the cleanliness of the data. Ultimately, while the data is being queued it also being written to the destination org, but the writing of the data will be the limiting factor for the time it takes to migrate 1 million records. Based on the 8 records / sec. It will take 34 hours on average to complete the migration. Of course using the Live Migration option allows for your source organization to remain in a usable state while the migration is occurring.

Q: Should I select the checkbox to keep my data in sync on the first page of the wizard?

A: It is recommended that you only select this checkbox when performing a full and final migration to your target production environment. The first time you run Migration Dynamics, it is recommended that you migrate your source organization to a staging environment and leave this box unchecked to minimize the overhead on the source organization associated with the live migration option.

Q: What data do I need to configure manually prior to migrating with Migration Dynamics?

A: You will need to create your users and security role assignments manually in the target organization prior to migrating. This means you will create the destination users and assign them the appropriate security roles manually. Migration Dynamics does have the ability to migrate teams for you, so you could select to migrate teams only using Migration Dynamics initially. However, Migration Dynamics will not migrate security role assignments for these teams so you will still need to assign the Team security roles manually once they are migrated in order to migrate any data associated with those teams.

Q: Do business units migrate aside from the default business unit?

A: You can migrate your business units if you have a lot of them and don't want to create them manually. To do this you'd just select Business Units from the entity list and migrate the business units by themselves. Unfortunately, the security roles will not migrate so you'll still need to setup the security roles for the business units manually. Alternatively, you can manually recreate the business units manually in the destination and assign the roles. As long as the names of the business units are the same in the source and destination Migration Dynamics will match based on the name.

Q: Does the live sync only affect queuing performance or the actual migration? Both?

A: The live sync only affects the queuing. The overhead is in registering the plugins on the source organization while queuing the data. However, in the current version, once it has been turned on in the source system there's no mechanism for turning it off except for disabling the SDK Message Processing Steps directly. So, it's recommended that it is left disabled until the final migration is performed.

Q: Queuing records for entities that only had some of the records from the source brought over in the initial migrate - is it queuing all of them, or just the ones that didn't come over? Also, will the subsequent queuing/migration be faster?

A: You can select which entities to migrate but there is currently no method of limiting the records to be queued. It's all or nothing.

Q: Migrating from a dev environment vs. existing production environment, assuming all data is the same. Are there any issues that you can think of? They are doing their trial migrations from a dev environment on 2013 and will do the final migrate from production.

A: As long as the ID's of the records in the dev environment are the same as those in destination with the exception of some of the system entities. The list below are the system entities that are matched based on name and / or the defaults or manual mapping and not the ID.

1. organization

2. uom

3. uomschedule

4. transactioncurrency

5. metric

6. pricelevel

7. businessunit

8. team

9. role

10. systemuser – system user mapping is handled prior to migration in the Migration Wizard

Q: Custom solutions - are they required if the entities in a solution already exist in the target environment outside of the solution?

A: No; If the entities exist with the same schema names in the source and destination then you will be able to migrate those entities even if they don't exist in the same solution.

Q: Re-migrating entities - will fields that were missing be updated in a migrate if the record already was migrated? I.e., migrated contacts initially, forgot custom field, re-migrated with field added in target.

A: Yes, Migration Dynamics will ignore fields in the source that don't exist in the destination and will bring those over if they are added prior to a subsequent run.

Q: How does your tool manage the table import ordering?

A: Migration Dynamics attempts to determine the best order for migrating entities based on the relationships in the system and the counts of the records for the associated relationships. For example, entities with no N:1 relationships are migrated first since there would never be a situation where those records would be orphaned from their parents. There is additional proprietary logic

built into the algorithm that determines the ordering and of course there's no way to resolve all potential relationships since some relationships are circular.

Q: How does your tool manage the table dependencies resolution?

A: As mentioned above MD will attempt to migrate records in the most efficient order possible but since there will always be orphans those orphans are tracked in the target organization when the orphaned record is migrated so that when the parent record is migrated the relationship is automatically restored. MD maintains the IDs of all records migrated from the source system so resolving dependencies is simple. This also ensures that duplicate records are never created even if you migrate the same entity multiple times.

Q: What is data transfer speed? (# Records per minute/hour or how many hours expected for a 10GB or 20GB database?)

A: The size of the database on disk is less of a factor on transfer speed than the number of records being migrated. A 10GB database with 100,000 records will transfer much quicker than a 10GB database with a million plus records. This is because the choke point is the Dynamics endpoints that the data is written through. Migration of large records like attachments are only affected by bandwidth which is less of an issue than trying to write a lot of smaller records.

We recently scaled out our Azure services (i.e., the number of services available to handle the write requests) to accommodate the higher traffic we are getting through the services for the Migration Dynamics Product – this has allowed us to double the average amount of records migrated / second from 4 to 8 when migrating to Dynamics 365.

Additionally, another limiting factor in terms of write speeds includes the hosting infrastructure surrounding the destination organization, which would affect the throughput through the Dynamics web services. If you are migrating to Dynamics365 in the cloud then neither we nor you have any control over this. If you are migrating to another on-prem org, then you could put some load balancing infrastructure in place around the destination organization to improve the throughput. It may also be possible to open a support ticket with Microsoft to ask for more resources for your Dynamics 365 online organization during the migration, but that's solely up to them to provide those resources.

Q: What is the effect on overall performance on the source system if used by user while data is transferring? (i.e. when data is importing? when ongoing changes are done and while source system is still used)

A: Migration Dynamics migrates data in 2 steps. 1. It will queue all the data in the source system to an Azure queue. This process is reasonably intensive on the source system. However, it is fast since it's only pushing data up to Azure temporary storage and not actually writing the data to the target and we've never had a client that this took longer than over a night. We generally recommend kicking off the queuing after business hours. 2. Once all the data is queued to Azure there is no additional load on the source system. All data is written from the Azure queues.

In the case where the live sync option (on-going changes) is enabled there is a minimal amount of impact when creating, updating, deleting records. The on-going sync is handled by plugin steps

registered on the Create, Update, delete messages which pushes updates up to the Azure queues to be processed after all the other data that's already been sent. It depends a lot on the amount and type of usage in the source system. To an end user of Dynamics that is simply creating, updating, retrieving data from the Dynamics interface there will be very little noticeable effect. However, if you have a public facing portal or integrations that write a lot of data to Dynamics all the time there could be a noticeable performance impact.

Q: Does your tool have its own error management or it only uses regular Dynamics error management?

A: Migration Dynamics has its own logging. There is a variety of information that is stored in the logs including the orphan tracking information mentioned above as well as actual errors that occur during the migration process. Every error is logged in duplicate during the migration. It is first logged with the source system and will be displayed in the migration progress window and secondly logged to the

Snapshot Log entity in the target system. This allows you to export the logs from Dynamics and share them with our support staff to troubleshoot problems.

Q: What are the major problems that you have faced with your tool doing the migration?

A: We've worked through a lot of missing features in the first few months of public availability. There are a lot of "gotchas" related to migrating Dynamics data. The most troublesome issue is maintaining the modified date as well as the created / modified by and owner on the records when migrating through the web services while allowing those users to be mapped to disabled users in the destination. The latter wasn't something we even considered in the initial release but became apparent that it would be a requirement since we couldn't force users migrating to Dynamics 365 to lose this historic information and additionally couldn't require users to pay for licenses for users that were disabled by re-enabling them during import. We've since handled these cases in the tool.

Q: would you be open to provide us your product so that we could try it on our own environment to see it in real life before we would use or recommend it to our clients?

A: You can sign up for a demo version of the product which would allow for migrating contacts, accounts, leads and opportunities only. The trial signup takes place in the Migration Wizard. The latest version of Migration Dynamics is available here
https://cobaltsolutions.file.core.windows.net/migrationdynamicspackage/Migration%20Dynamics.exe?restype=object&sv=2015-04-05&ss=f&srt=sco&sp=rl&se=2020-12-31T00:42:58Z&st=2016-07-26T16:42:58Z&spr=https&sig=VI%2BNZWIIxW4pKsMMqJG4%2Bja0UGYWmvnLb6hmXAl4i8s%3D

Additionally, we have a video on our website which walks through the migration process and shows the tool in action. (http://www.cobalt.net/migrationdynamics)

We are not, however, open to providing free licenses to customers.

Release Notes v 1.2.1:

Release 1.2.1 fixes an issue experienced by some users when queuing a large number of records from the source organization. If MD is unable to retrieve the number of records for larger data sets it will show "Queuing entity...N of Unknown in 1.2.0 this was causing MD to default to queuing 10 records at a time which meant it was hitting the azure web service with a lot of unnecessary calls. The update defaults the batch size to 500 instead when this happens.

Release Notes v 1.2.0:

The 1.2.0 release was technically a revision (bug fix) release and not a minor version release, but due to a limitation in the package deployer we had to bump the minor version for this release.

"No active transaction" error restoring activities. This issue was introduced in the 1.1.9 release and has been resolved in 1.1.10

We've added better error handling for records that fail to migrate by adding an additional retry and a back off time to allow the target organization services to rest between retries. This should alleviate the frequent Generic SQL Errors being thrown by Dynamics 365 online organizations.

Timeout when "Creating Migration Checkpoint" if Auditing Enabled on the target organization. This was discovered in 1.1.9 and has been resolved in 1.1.10

Release Notes v 1.1.9:

The 1.1.9 Release was a minor bug fix release to resolve a specific issue regarding migrating the actual close date of the opportunity entity.

This release also included an Azure service resilience update and additional service capacity.

A link to email the url of the Migration Wizard and Migration Progress pages was also added to these pages to allow users to access these pages directly from their devices to monitor progress or run migrations without the need for accessing the full browser version of Dynamics.

Release Notes v 1.1.8:

Update replication settings – When you check the box on the first page of the migration wizard there are plugins registered on the source organization that push updates to the source data to the destination organization. In 1.1.8 we added the ability to remove these plugins by running the Migration Cleanup wizard from the source org.

Opportunity createdby and modifiedby not set correctly. This was originally reported before the 1.1.7 release and resolved but it came back after the release. It should be resolved now.

Azure service updates – Several updates were made to the Azure services to make them more resilient against errors that occur in Dynamics. Specifically, a retry was added for unexpected errors coming from Dynamics to ensure random failures (I.e. CRM endpoint timeouts, SQL errors etc.) are handled. Additionally, we've added the ability to target specific Azure service instances in Migration Dynamics using the Snapshot Connection entity in CRM.

Release Notes v 1.1.7:

Infrastructure updates – Scale out has been enabled in the production Azure web app to handle more concurrent migrations and has shown dramatic improvements in overall performance of the Migration services. Where we were previously averaging 3-4 records / second we are now getting closer to 7-8 records / second in 1.1.7. Effectively increasing throughput to Dynamics 365 online by > 100%.

Delete Live Migration Plugins from the Source Migration Cleanup Wizard - We've added the ability to delete the Live Migration Plugins that are registered when the live migration option is selected in the Migration Wizard. In order to delete the plugins you can run the Migration Cleanup wizard on the source organization.

 Close Date not set properly on the Opportunity - A customer reported that the actual close date of opportunity does not migrate; it defaults to the last migration date. This has been resolved in the 1.1.7 release.

Cannot Migrate Non-Draft/Active Status Reason Quotes - This has been resolved by activating the quote prior to closing or marking the quote as won.

Duplicate Users Displayed in Destination User Mapping if They have Multiple Security Roles - This has been resolved by only returning distinct users when populating the list

Opportunities Created By is SYSTEM User - This issue was resolved by moving some of the update logic to an earlier plugin stage.

Filter queries selected in the Entity Migration screen don't update properly when they are changed. This was reported by a customer who attempted to update an existing filter in the entity migration screen but the changes never took effect when migrating the entity. The problem was that the filter criterion were being cached and not refreshed on the appropriate triggers. This has been resolved.

Improved error handling and non-sandboxed plugin execution – Several customers were having issues migrating large records. Particularly email attachments and notes with large files. The sandbox worker processes only allow for limited memory allocation and this caused the processes to fail when attempting to load large records especially when loading multiple records at a time. Migration Dynamics has been updated to handle this situation in 2 ways.

1. If a customer is migrating from an on-premises instance of Dynamics in which they are able to run non-sandboxed plugins they can now choose to update the Isolation Level of the MD plugins to allow for the plugins to run under the IIS windows process which gives greater access to memory resources and also removes the 2 minute timeout restriction for plugins to allow for greater throughput when queuing data.
2. The back-off algorithm which decreases the size of batches being queued when an error ocurrs has been improved to back off down to 1 record before the process fatally fails. Previously, the routine would only back down to 5 records and in some cases would only back down to 10 or more.

Release Notes v 1.1.6:

Opportunity Products fail to migrate when opportunity is won or lost. In 1.1.6 this issue has been resolved. Opportunity products will migrate correctly for won or lost opportunities

Migrating Marketing List members. Marketing list members were not migrated correctly in previous versions of Migration Dynamics. This issue has been resolved in the 1.1.6 release.
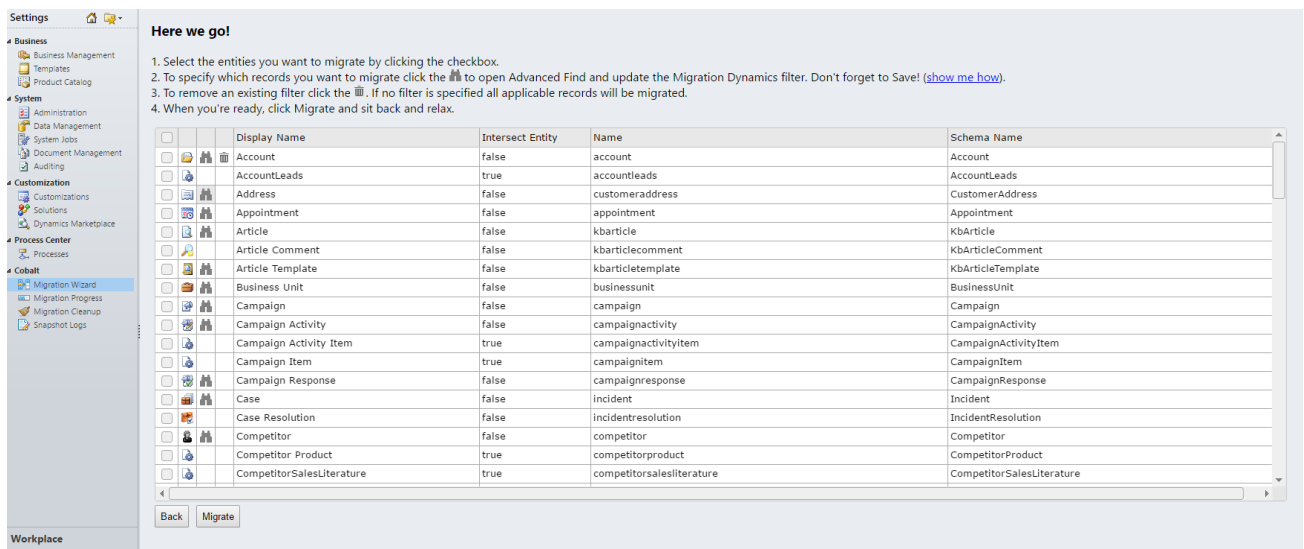
Migrating Saved/System Views. Custom / Unmanaged System views (not user views) can be migrated using Migration Dynamics in the 1.1.6 version. Note: Managed and non-custom views have to migrated as part of the solution in which they exist. This feature allows system views that have been customized by the customer to be migrated the same as user queries in previous versions.

In this version we added logic to remove attributes specified in views that no longer exist on the target system. Migration Dynamics already handles ignoring fields that don't exist in the target when migrating data, but previously if those fields were included in a saved view migrating the saved view would fail due to the field not existing in the target system. This has been updated in 1.1.6

In this version we added easier to understand error messages and email links to the for easier reporting of errors to Cobalt. The latest version also includes messages which indicate when the current version of Migration Dynamics needs to be updated so clients can receive updates faster.

Chrome Browser support – Previous versions of Migration Dynamics failed to show the entity list on the last screen of the Migration Wizard when being run in later versions of Chrome. This issue has been resolved in 1.1.6

Support for filtering - We've added the ability for users to specify a query for entities on the entity grid view. To allow filtering of the data being migrated on an entity by entity basis. If no filter is specified all applicable records will be migrated as usual. This has been the top feature request for Migration Dynamics from users and should make migrating deltas of data easier as well as migrating small subsets for testing.

Release Notes v 1.1.5:

Improvements to the entity ordering algorithm were added in 1.1.5 to ensure the least number of orphans are created during migration. A bug was fixed in this release related to the plugins which set the modifiedby/on and createdby/on. There is a known issue in this version that won't allow for migrating workflows even though they are available to migrate from the entity grid.

Release Notes v 1.1.4:

In this release we've added the ability to migrate email attachments and also updated queuing to account for large attachments

Release Notes v 1.1.3:

In this release we've added the ability to map disabled users, however, the users still have to have the same Roles as if they were enabled. If you have disabled users that do not have the appropriate roles you can temporarily re-enable them and added the correct Roles and then disable them again to ensure that you're not charged for additional licenses.

Migrating Saved Views, Charts and Dashboards are supported in this release.

Migrating Queues is supported in this release. User Queues will not be migrated since they are created by default based on the users in the destination. However, user queues will be mapped based on the User Mapping selected in the migration process.

Migrating Modified date and Modified By user are handled in this release.

Several issues related to non-english language organizations are resolved in this release.

Release Notes v 1.0.1:

Quick Campaigns will be converted to standard campaigns during migration. Due to a limitation in the Dynamics SDK it's not possible to recreate the quick campaign entity. In order to preserve this data Migration Dynamics will convert all Quick Campaigns to standard Campaigns and associate responses and activities to the campaign. The original marketing list of the quick campaign will not be associated with the new campaign since this data is not directly available on the quick campaign entity.

~~Only Enabled Users with Read/Write permissions can be mapped. We could update this to temporarily re-enable or update the user's permissions in the future but that would add overhead~~

Orphaned records will be saved without their parent unless the parent Is a system required field in which case the whole record will be orphaned until the parent is restored at which time the child will be restored.

User mappings are supported from many source users to one target user

Entities that do not exist in the target system are excluded from the list of entities available to migrate

Attributes that don't exist in the target system are ignored by MD when migrating the parent entity

Errors are logged in a temporary queue to be viewed, during the migration, on the source system in the migration progress wizard. They are also saved to the target system as Snapshot Log records with the full stack trace of the error for support and troubleshooting

Migration Dynamics will automatically retry failed records to handle situations where server load causes Dynamics to fail to write. The number of retries is 3 before a record is logged as an error.

Migration Dynamics only supports migrations to CRM orgs that are publicly accessible. There is no current support for migrations within a private network. However, migrating from a private network to a publicly accessible CRM org is supported

Migration Dynamics includes a feature called Live Sync which, when enabled, will allow updates made in the source system to be pushed to the target system while a migration is taking place. This feature assumes that the rate at which records being created in the source system is less than the rate at which records are being written to the target otherwise the migration would never complete. This can be monitored from the Migration Progress wizard to ensure that the total number of records continues to decrease over time rather than continuing to increase.

In order to use Migration Dynamics, you must install the same version of the application on both your source and target CRM instance. If you don't install MD on you target system or have a different version on the target and source you will be shown an error prior to migration.

Migration Dynamics is intended for migrating data from one CRM instance to another as an exact copy of the data. In order to minimize performance impact as well as the possibility of plugins or business rules interfering with the duplication of the data on the target any custom plugins or business rules that are registered on the target system will be disabled prior to the migration starting. The plugin steps and business rules that are disabled are tracked by Migration Dynamics and can be re-enabled using the Migration Cleanup wizard on the target system. Migration Dynamics will also disable Auditing on the target system if it is enabled to avoid extraneous data from being created during the migration and to increase throughput.

Solutions / Entities that do not exist prior to migration in the target system will cause a warning to be displayed to the user. It is not necessary to move all entities and solutions to your target system if you do not intend to migrate data associated with these customizations.

Migration Dynamics uses a Pass-Through service in MS Azure for pushing data to the destination CRM instance. The data is queued and stored in Azure Queues and Blobs only as long as required to write the data to the target system at which point the data is deleted from the Azure Queues and Blobs. Data is transferred over https secure protocol from the source system to the Azure storage account. Depending on the protocol specified by the user on the connection page the data may be written either by http or https to the target system. It is recommended that a secure connection is used (e.g. IFD and ADFS connection to on-prem).

Queueing of data to Azure happens in the context of the Migration Wizard which runs inside of CRM. As a result, large data sets could be affected by session timeouts. To avoid this when migrating

from an on-premises instance that is configured to use ADFS. The ADFS session timeout should be set as high as possible.

Migration Dynamics uses the metadata of the source system to determine the best path for migration. For example, entities with the fewest number of parental relationships are migrated ahead of entities with many relationships to avoid orphaning of records which causes some overhead when restoring the orphans to their parents later on. These calculations ensure that Migration Dynamics can migrate all of your data in a single pass while maintaining all of the relationships between records.

Note: You will notice that the Queuing process will take longer when the Live Sync option is enabled due to the overhead of registering plugins on the source system to handle the Live Sync functionality.

Note: Once the Live Sync functionality is enabled it can only be turned off by running another migration with the option turned off.

Custom Mappings are not supported

Record IDs are maintained from the source organization so multiple migrations will never create duplicate records in the destination

Default records (e.g. Default Business Unit, Organization, Currencies, Roles) are mapped to their corresponding defaults in the target system.

Teams and Team roles can be migrated. The default team in the source is mapped to the default team in the target system.

Created on dates Created By, Owners and Statuses are maintained

Modified by is not currently maintained during migration

Audit History cannot be recreated

Workflows are not currently migrated (e.g. Async Jobs in any state)

Recurring appointments will migrate however cancelled recurring appointments will not be cancelled in the target system.

Notes and attachments will migrate

Entity Image migration is not currently supported

Field length overflow will cause records to fail to migrate. Be sure to cleanse your data in the source system prior to migration.

Option Set values that do not exist in the target system are ignored and the field will default to null.

Troubleshooting/Errors

*"Error restoring the goal: System.Reflection.TargetInvocationException: Exception has been thrown by the target of an invocation. --->
System.ServiceModel.FaultException`1[Microsoft.Xrm.Sdk.OrganizationServiceFault]: The fiscal period 301 does not fall in the permitted range of fiscal periods as per organization's fiscal settings.*

If you encounter this error, double check the fiscal year settings in your target environment to ensure that they match your source. They can be found under Settings > Business Administration > Fiscal Year Settings.

"Sorry...we could not verify your access to this resource"

If you receive this message on the Migration Wizard startup screen, this implies that your CRM server may not have be able to make outside plugin requests. To test, navigate to this link on the CRM server:

https://cobaltsnapshot.azurewebsites.net/PassThrough.asmx

If you can get to it, also check your registry (regedit). Under the HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\MSCRM node, look for a key that indicates outbound calls are either disabled, or using certain logic to access a URL:

https://msdn.microsoft.com/en-us/library/gg334752.aspx

To fix:

1) Remove that registry key entirely

2) Remove it temporarily, then add it back once you've finished the migration

3) Reformat the rule indicated to allow access to the above link (https://cobaltsnapshot.azurewebsites.net/PassThrough.asmx).

Two registry keys that we have seen cause issues with this that we have seen are:

-SandboxWorkerOutboundUriPattern

-SandboxWorkerDisableOutboundCalls

If neither of those exist, please submit a support ticket containing a screenshot of your registry keys for MSCRM to have support take a look.

If you do not have access to the CRM server, please contact your hosting partner to further troubleshoot this issue.

"Only Workflow Definition or Workflow Template can be unpublished"

If you see this error, please do the following:

1) Do an advanced find for Processes (no filters)

2) Deactivate all of them

3) Rerun the migration again