

# xDB Data Migration Tool 2.0.0 Installation Guide

Sitecore Experience Platform 9.0.0

*How upgrade xDB data to Sitecore 9.0 from Sitecore 8.0 or later using xDB Data Migration Tool*



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## Chapter 1

### Migrating Sitecore Experience Database

Sitecore xConnect introduces a new, omni-channel data model for Sitecore Experience Database. Data collected in xDB must be converted into the new data model. Sitecore xDB Data Migration Tool is used to do this.

## 1.1 Overview

xDB Data Migration Tool is built on Sitecore Data Exchange Framework (DEF):

- DEF provides the ability to read from a MongoDB database (the source system) and write to an xConnect server (the target system), as well as the ability to configure mapping data from a source system to a target system.
- xDB Data Migration Tool provides the pre-configured mapping of data from a MongoDB database to an xConnect server.

DEF is a Sitecore-based ETL tool. ETL stands for:

- Extract - reading data from a source system
- Transform - converting data from the source system into a format that is compatible with a target system
- Load - writing the converted data to the target system

Being "Sitecore-based" means that Sitecore items are used to configure ETL processes. For example, the mapping rules that determine how data is transformed is controlled by Sitecore items. If a new mapping is needed, a new Sitecore item is created. If an existing mapping needs to be changed, the Sitecore item that represents the mapping is edited.

### 1.1.1 Supported Data Migration Processes

xDB Data Migration Tool includes two data migration processes.

- MongoDB Contacts to xConnect Contacts - Reads contact data - and related device and interaction data for each contact - from a MongoDB database and writes it to xConnect.
- MongoDB Reference Data to xDB - Reads geo IP and location data from a MongoDB atabase and writes it to xConnect.

#### Note

Details on precisely what data is mapped is available in the xDB Data Migration Tool developer documentation, available at <http://integrationsdn.sitecore.net/xDBDataMigrationTool/v2.0>.

### 1.1.2 When to Use xDB Data Migration Tool

You can use xDB Data Migration Tool at any time:

- Immediately after you upgrade your Sitecore server
- After you have been running your upgraded Sitecore server for a period of time

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## 1.2 Prerequisites

The following are required in order to use xDB Data Migration Tool 2.0.0:

- Sitecore 9.0.0 or higher
- MongoDB database that contains the xDB data

### Note

It is recommended that xDB Data Migration Tool be installed on a content management (CM) server.

### 1.2.1 Determine Whether to Enable Verification

xDB Data Migration Tool has a verification feature. When this feature is enabled, information about each entity submitted to xConnect is stored in a dedicated database called the verification database. This database includes information such as:

- Id for the MongoDB document
- Id for the entity in xDB
- Hash of the data submitted to xConnect
- Description of whether the entity was successfully submitted to xConnect
- Description of whether the entity was created or updated

The following is an example of the data that is captured in the verification database.

id	BatchId	ThreadId	Date Time	SourceIdentifier	TargetIdentifier	Target Type	Hash	Status	Operation Type	De
1	33	3	0	2017-09-14 18:08:19.7347	e5ec2e06-d5ca-4310b714-3365567b387	e5ec2e06-d5ca-4310b714-3365567b387	Contact	W/EBLmxAml3uY="	Succeeded	Create
2	34	3	0	2017-09-14 18:08:19.8129	e5ec2e06-d5ca-4310b714-3365567b387	e5ec2e06-d5ca-4310b714-3365567b387	Device Profile	W/wNg0qYoy7Kg="	Succeeded	Create
3	35	3	0	2017-09-14 18:08:19.8360	04cf9e44#60-49f-85ca-a2ad956067c3	e5ec2e06-d5ca-4310b714-3365567b387	Interaction	W/PcWdcDh84Lk="	Succeeded	Create
4	36	3	0	2017-09-14 18:08:19.8671	7d06402e-47ec-4bab-9ed6423ae36b6fa	e5ec2e06-d5ca-4310b714-3365567b387	Contact	W/JD4d4fX+/Uli="	Succeeded	Create
5	37	3	0	2017-09-14 18:08:19.8791	7d06402e-47ec-4bab-9ed6423ae36b6fa	7d06402e-47ec-4bab-9ed6423ae36b6fa	Device Profile	W/47mrx+GZTw="	Succeeded	Create
6	38	3	0	2017-09-14 18:08:19.8850	7118cbb8-9112-409b-94dd-3c12882ed7db	e5ec2e06-d5ca-4310b714-3365567b387	Interaction	W/916y44QP80="	Succeeded	Create
7	39	3	0	2017-09-14 18:08:19.8890	aef12b32-149f-41b6b33d-1a699f86ab3f	e5ec2e06-d5ca-4310b714-3365567b387	Contact	W/rmJGPGFGQW0="	Succeeded	Create
8	40	3	0	2017-09-14 18:08:19.9100	aef12b32-149f-41b6b33d-1a699f86ab3f	aef12b32-149f-41b6b33d-1a699f86ab3f	Device Profile	W/ej5zmKA1uGc="	Succeeded	Create
9	41	3	0	2017-09-14 18:08:19.9166	defa723c-b075-4eec-9b0f-acc52e9e45a7	e5ec2e06-d5ca-4310b714-3365567b387	Interaction	W/M0rqN3eL7g="	Succeeded	Create
10	42	3	0	2017-09-14 18:08:19.9201	2f8ca9a6-d9cb-4652-abe8-337b9f0c0276	e5ec2e06-d5ca-4310b714-3365567b387	Contact	W/Fq5LAA2k8MM="	Succeeded	Create
11	43	3	0	2017-09-14 18:08:19.9348	2f8ca9a6-d9cb-4652-abe8-337b9f0c0276	2f8ca9a6-d9cb-4652-abe8-337b9f0c0276	Device Profile	W/VbxqqkKHvl="	Succeeded	Create
12	44	3	0	2017-09-14 18:08:19.9400	c77e5ef5-5bb8-4eff-a1e2-dc3511b651a0	e5ec2e06-d5ca-4310b714-3365567b387	Interaction	W/mk5LcKGYFE8="	Succeeded	Create
13	45	3	0	2017-09-14 18:08:19.9440	a04a95e2-48c4-4eca-a67d-7b26df5d5ac6	e5ec2e06-d5ca-4310b714-3365567b387	Contact	W/1KIBPZRpI="	Succeeded	Create
14	46	3	0	2017-09-14 18:08:19.9551	a04a95e2-48c4-4eca-a67d-7b26df5d5ac6	a04a95e2-48c4-4eca-a67d-7b26df5d5ac6	Device Profile	W/2HUKXQeZl="	Succeeded	Create

The advantage of verification is that a record of the data migration process is captured.

The disadvantage is that data migration process performance may be degraded.

### Note

Sitecore provides the verification database via a dacpac file. The dacpac file can be downloaded from the Sitecore Developer Portal, on the same page where xDB Data Migration Tool is available.

### 1.2.2 Installing in Multi-Server Environments

xDB Data Migration Tool only needs to be installed on one Sitecore server. There is no value in installing it on multiple Sitecore servers because the data migration process can only run on one server at a time.

## 1.2.3 Add Indexes to MongoDB Collections

xDB Data Migration Tool reads virtually all of the data in the MongoDB data for analytics from Sitecore 8.x. In order to do this efficiently, a couple of indexes must be added.

### Note

Adding these indexes is optional. However, if you choose not to add these indexes, you should expect the data migration process to take longer to complete.

1. Open a mongo shell.
2. Select the database with the xDB data you plan to migrate to Sitecore 9.
3. Enter the following commands:

```
db.getCollection('Devices').createIndex({LastKnownContactId:1})  
db.getCollection('Interactions').createIndex({ContactId:1})
```

## 1.2.4 Prevent IIS Application Pool Shutdown/Recycle

Depending on the amount of data you have in MongoDB, it may take hours - or even days - to migrate all of your data. The migration process runs asynchronously on the Sitecore server, so you can continue to use your Sitecore server during the migration process.

However, since the migration process runs asynchronously, it will not prevent the application pool from recycling. If the application pool recycles during the migration process, the migration process will stop and it will be necessary to restart the migration process manually.

Therefore, during the migration process it is recommended you re-configure the IIS application pool before you start the migration process:

Setting	Value	Description
Idle Time-out	0	<p>The default value is 20 minutes. This means that if the website does not receive any requests for 20 minutes, the app pool will shutdown or suspended.</p> <p>If the Sitecore client window is left open, this will periodically send a request to the Sitecore server, resetting the idle time-out timer. If you do not have a Sitecore client window open, eventually the app pool will time out.</p>
Regular Time Interval	0	<p>The default value is 1740 minutes. This means that every 29 hours the application pool will recycle.</p> <p>In cases where MongoDB has millions of contacts, it is possible the data migration process will take more than 29 hours to complete.</p>

### Note

Remember to reset these settings to their original values after the data migration process is finished.

## 1.2.5 Set Change Tracking Retention Policy on SQL Server

xConnect uses SQL Server's change tracking features to know when new data is available to index. SQL Server uses a hidden database to store this data for a specific amount of time. The amount of time that the data is stored in this hidden database is determined by the retention policy on the xConnect collection database.

In cases where a large amount of data is submitted to xConnect for an extended period of time (such as during a data migration process), the hidden database can become very large, which leads to a gradual but steady degradation of performance.

By default the retention policy on the xConnect collection database is 5 days. It is recommended that this value be decreased while the migration process is running.

### Note

Do not forget to reset this value after the migration process is finished running.

## 1.2.6 Set Maximum Request Size on xConnect Server

By default, IIS limits the amount of data that can be accepted by the web server. This default setting reduces the effects of certain types of denial-of-service attacks.

This setting is configured in the HTTP runtime settings section in web.config. The property is `maxRequestLength`:

```
<system.web>
  <compilation debug="true" targetFramework="4.6.2" />
  <httpRuntime targetFramework="4.6.2"
    maxRequestLength="1048576"
    maxUrlLength="8192"
    maxQueryStringLength="8192"
    requestPathInvalidCharacters="" />
  <customErrors mode="RemoteOnly" />
</system.web>
```

It is recommended that this value be increased to the maximum value `2147483647` while the migration process is running.

### Note

Do not forget to reset this value after the migration process is finished running.

## 1.2.7 Data Exchange Framework 1.x

If you are installing xDB Data Migration Tool on a Sitecore server that has Data Exchange Framework 1.x already installed on it, you must must must uninstall DEF and all providers before you can install xDB Data Migration Tool.

### Note

There is no upgrade path for tenants created for DEF 1.x to 2.x. You will need to recreate these tenants after you upgrade DEF.

An uninstaller for Data Exchange Framework 1.x is available on the [Sitecore Developer Portal](#).

## 1.3 Install xDB Data Migration Tool

This section describes how to install Xdb Data Migration Tool.

### Note

If you already have xDB Data Migration Tool 2.0 installed on your Sitecore server, follow the instructions in section **Error! Reference source not found.**

### 1.3.1 Install Sitecore Installation Packages

Installing xDB Data Migration involves installing several Sitecore installation packages. These packages can be downloaded from [dev.sitecore.net](http://dev.sitecore.net):

1. Data Exchange Framework 2.0.0
2. MongoDB Provider for Data Exchange Framework 2.0.0
3. xConnect Provider for Data Exchange Framework 2.0.0
4. xDB Data Migration Tool for Data Exchange Framework 2.0.0

### Note

The order these packages are installed is significant. Certain installation packages include references to components that are installed by the other installation packages.

### Note

If you used Web Forms for Marketers on Sitecore Experience Platform 8.x to collect form data, you will also need hotfix 201456. For more information, see <https://kb.sitecore.net/articles/346587>.

### 1.3.2 Install Verification Database

The verification database is provided as a dacpac that must be deployed to SQL Server.



## 1.4 Installing Hotfixes

Hotfixes for xDB Data Migration Tool are delivered as Sitecore installation packages. In general these hotfixes will do the following:

- Make changes to the module to ensure that tenants created *after* the hotfix is installed take advantage of the hotfix. This happens automatically.
- Install instructions that can be used to apply changes to a tenant to ensure that tenants created *before* the hotfix was installed take advantage of the hotfix. These instructions must be applied to each tenant individually.

### Note

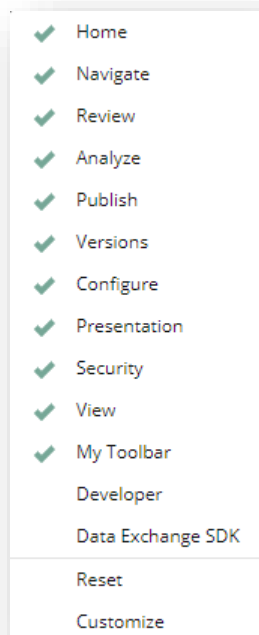
Not all hotfixes require existing tenants be updated. The hotfix will indicate whether this step is needed.

### Note

The steps in this section are only necessary if you have tenants that were created before the hotfix was installed that will benefit from the hotfix.

### 1.4.1 Install Sitecore Data Exchange Framework SDK

1. Download the Sitecore Data Exchange Framework SDK 2.0 from the [Sitecore developer portal](#).
2. On your Sitecore server, install the Sitecore Data Exchange Framework SDK 2.0.
3. After the SDK is installed, open Content Editor.
4. In the top toolbar, right-click above any of the menu items (HOME, NAVIGATE, etc.).
5. Click Data Exchange SDK.

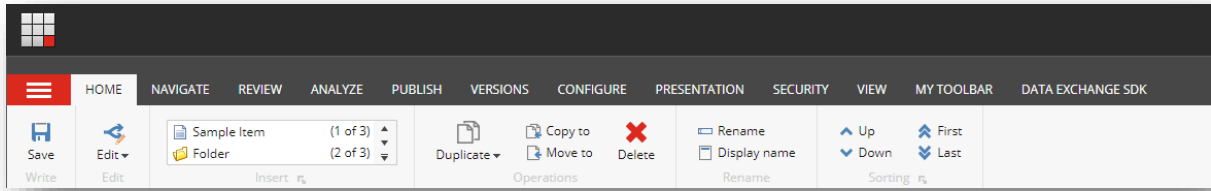


### 1.4.2 Install Sitecore Hotfix

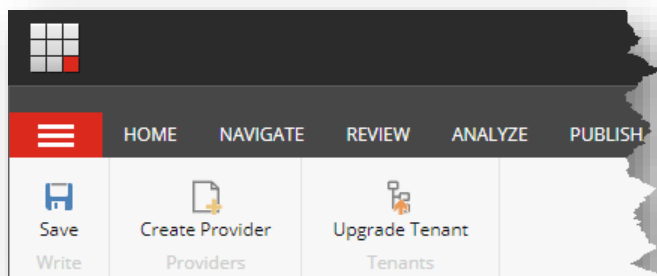
1. On your Sitecore server, install the hotfix.

## 1.4.3 Update the Tenant

1. In Content Editor, select the tenant you want to update.
2. In the top toolbar, click DATA EXCHANGE SDK.



3. Click Upgrade Tenant.



### Note

If you get an error about "The layout for the requested document was not found", see section 1.7.7.

## 1.5 Configure xDB Data Migration Tool

This section describes how to configure xDB Data Migration Tool.

### 1.5.1 Add Connection Strings

The data migration process involves reading data from a MongoDB database and writing the data to an xConnect server. The location of these servers must be specified:

1. MongoDB database

xDB Data Migration Tool uses the MongoDB .NET Driver version 2.4.4. Details on how to build a connection string for this driver, see the driver documentation:

<http://mongodb.github.io/mongo-csharp-driver/2.4/reference/driver/connecting/#connection-string>

2. xConnect collection service

The Sitecore server comes with the connection strings needed to connect to the xConnect collection service. You can use these values unless you want to specify a different xConnect collection service:

```
xconnect.collection  
xconnect.collection.certificate
```

3. xConnect reference data service

The Sitecore server comes with the connection strings needed to connect to the xConnect reference data service. You can use these values unless you want to specify a different xConnect reference data service:

```
xdb.referencedata.client  
xdb.referencedata.client.certificate
```

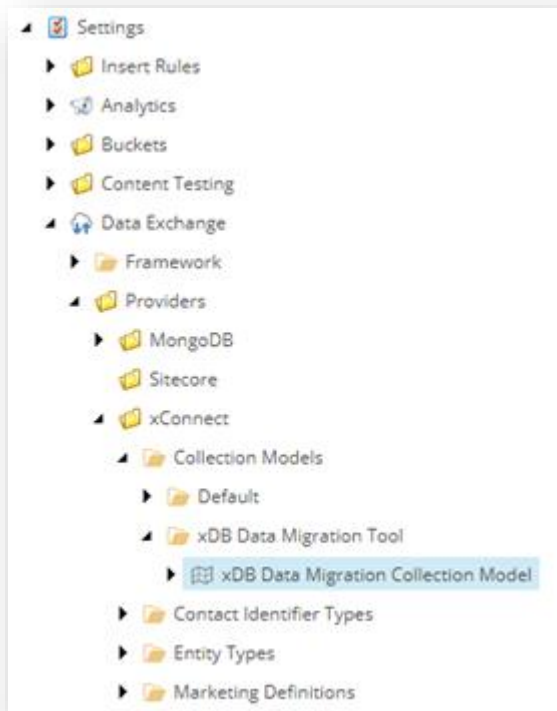
4. Verification database (optional)

If you plan to use the verification features (see section 1.3.2) you must add a connection string for xDB Data Migration Tool to use to connect to the verification database. The name of the connection string must be *def.verification*.

## 1.5.2 Deploy the Collection Model

xDB Data Migration Tool uses a custom collection model that identifies the data that can be written to xConnect. This custom collection model must be deployed to both the xConnect service and the xConnect indexer service.

1. In Content Editor, navigate to *sitecore > system > Settings > Data Exchange > Providers > xConnect > Collection Models > xDB Data Migration Tool > xDB Data Migration Collection Model*



2. In the ribbon, click *Convert Model to JSON*



3. Your browser will prompt you to download a JSON file. Save the file.
4. In versions of Sitecore Experience Platform 9.0, a bug results in an error in the JSON file. To fix this bug:
  - a. Open the JSON file in a text editor.
  - b. Find the line `"Name": "ContentTesting"`,
  - c. Change this line to `"Name": "Sitecore.XConnect.ContentTesting.Model"`,
  - d. Save the JSON file.

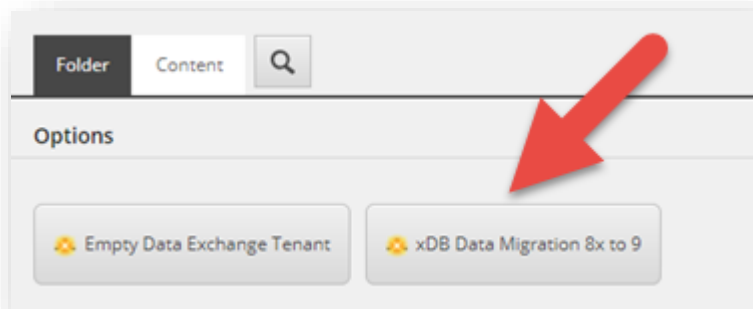
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5. Copy the JSON file to the following locations:
  - a. [xConnect collection service root]\Website\App\_data\Models
  - b. [xConnect indexer service root]\Website\App\_data\Models

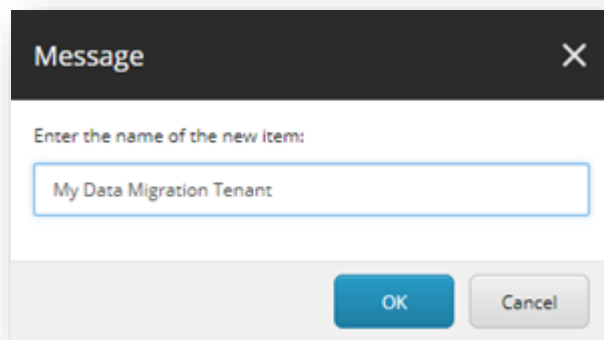
## 1.5.3 Create Tenant

A tenant is an item that organizes all of the settings related to the data migration process.

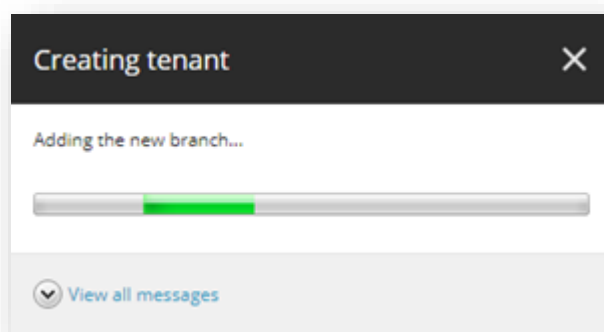
1. In Content Editor, navigate to *sitecore > System > Data Exchange*
2. Add a new item using the option *xDB Data Migration 8x to 9*



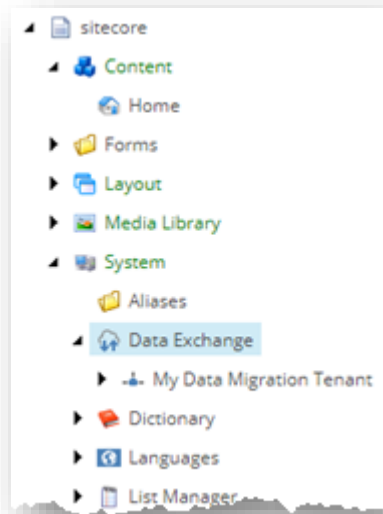
3. Enter a name for the tenant and click *OK*. The name of the tenant should be something descriptive.



4. It may take a several minutes for the tenant to be created.



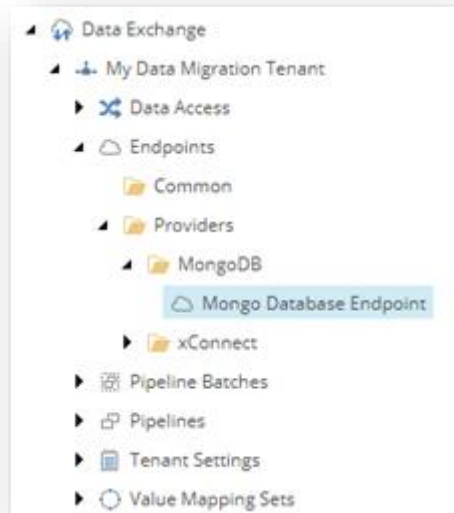
5. When the tenant is created you will see it listed under *sitecore/System/Data Exchange*



## 1.5.4 Configure Endpoints

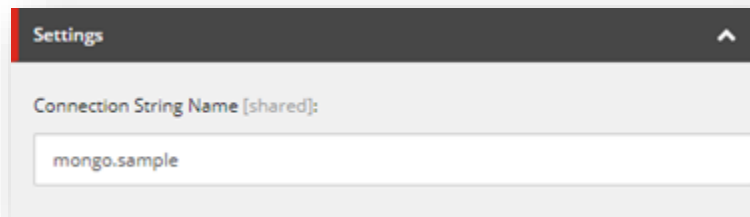
An endpoint represents a system that data can be read from or written to.

1. In Content Editor, select your tenant.
2. Navigate to *Endpoints > Providers > MongoDB > Mongo Database Endpoint*

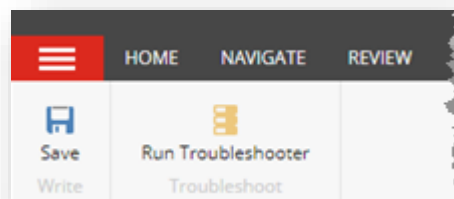


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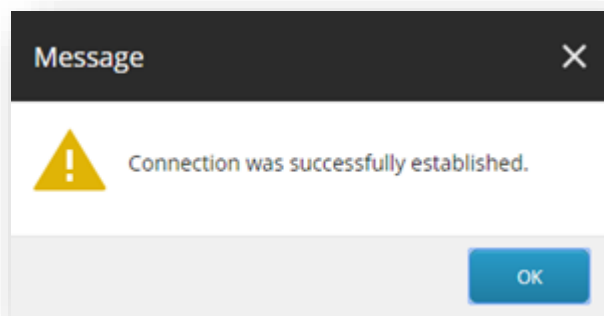
3. In the field *Connection String Name*, set the name of the connection string for the MongoDB database.



4. Save the item.
5. In the ribbon, click *Run Troubleshooter*.

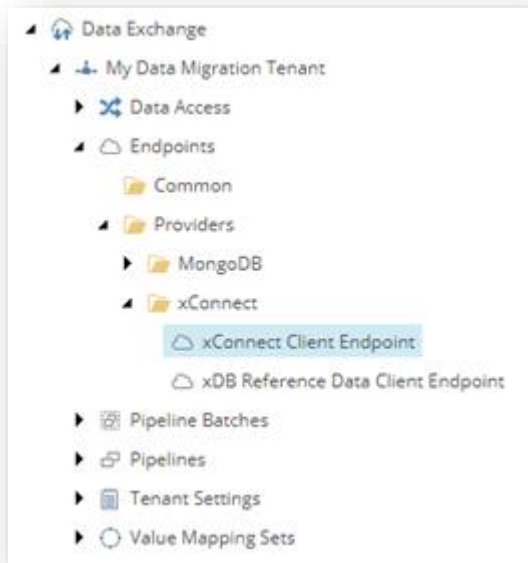


6. A message appears to indicate a connection could be made to the MongoDB database.

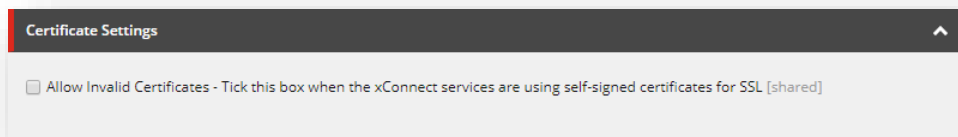


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7. Under the tenant, navigate to *Endpoints > Providers > xConnect > xConnect Client Endpoint*



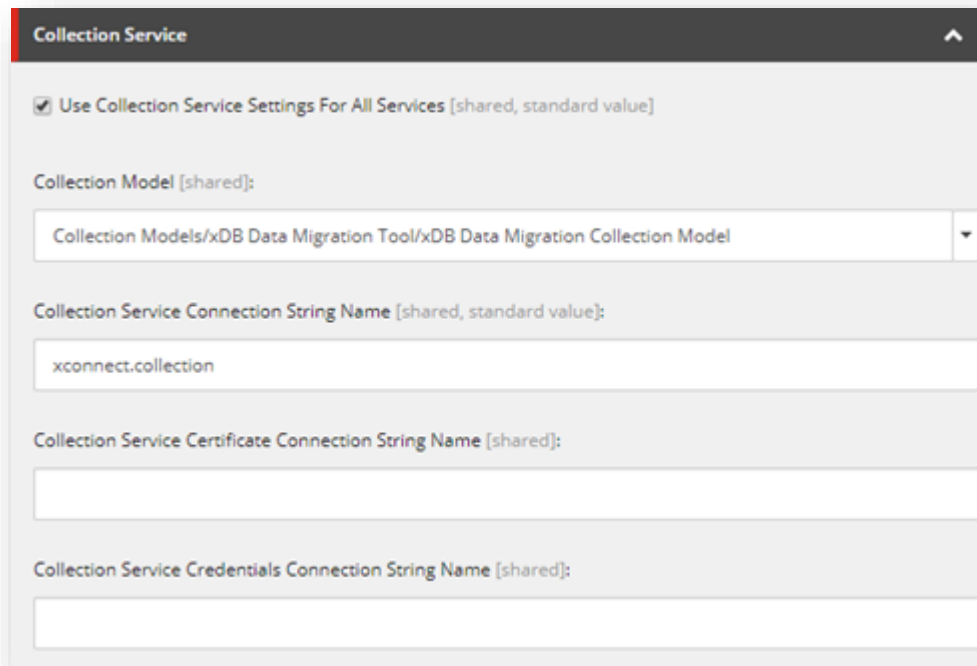
8. If your xConnect server is using a self-signed certificate for SSL, enable the field *Allow Invalid Certificates*.





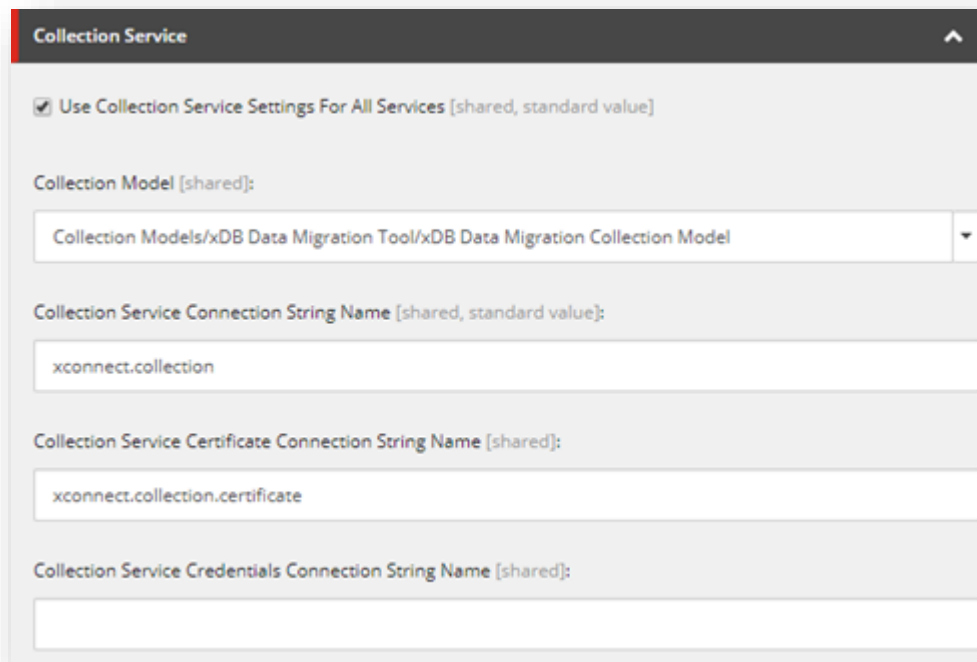
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- In the field *Collection Service Connection String Name*, set the name of the connection string for the xConnect client service.



The screenshot shows the 'Collection Service' configuration window. It features a header with the title 'Collection Service' and an upward arrow. Below the header, there is a checked checkbox labeled 'Use Collection Service Settings For All Services [shared, standard value]'. The 'Collection Model [shared]:' is set to 'Collection Models/xDB Data Migration Tool/xDB Data Migration Collection Model'. The 'Collection Service Connection String Name [shared, standard value]:' field contains the text 'xconnect.collection'. The 'Collection Service Certificate Connection String Name [shared]:' and 'Collection Service Credentials Connection String Name [shared]:' fields are currently empty.

- In the field *Collection Service Certificate Connection String Name*, set the name of the connection string that describes the certificate used to connect to the xConnect client service.

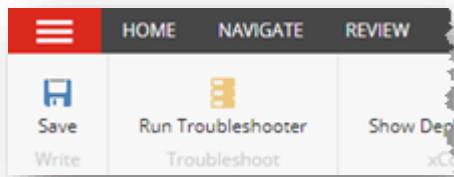


This screenshot shows the same 'Collection Service' configuration window as above, but with the 'Collection Service Certificate Connection String Name [shared]:' field now containing the text 'xconnect.collection.certificate'. All other settings remain the same.

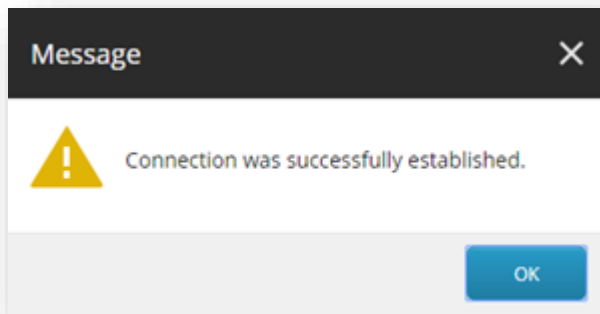
- Save the item.

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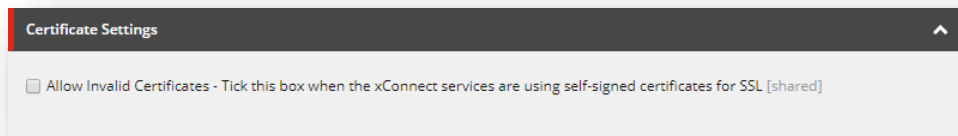
12. In the ribbon, click *Run Troubleshooter*.



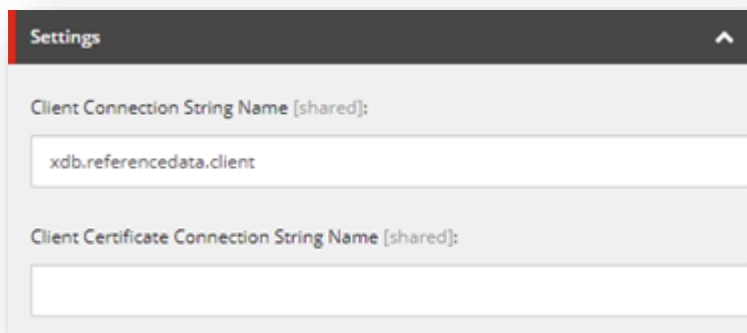
13. A message appears to indicate a connection could be made to the xConnect collection service.



14. Under the tenant, navigate to *Endpoints > Providers > xConnect > xDB Reference Data Client Endpoint*
15. If your xConnect server is using a self-signed certificate for SSL, enable the field *Allow Invalid Certificates*.

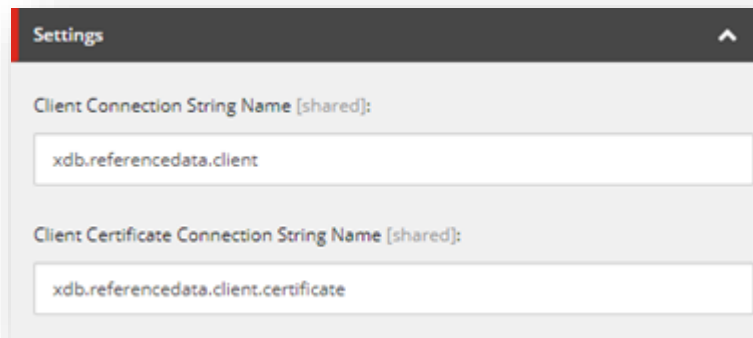


16. In the field *Client Connection String Name*, set the name of the connection string for the xConnect reference data service.

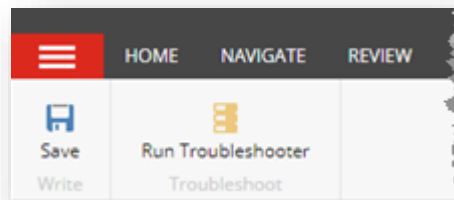


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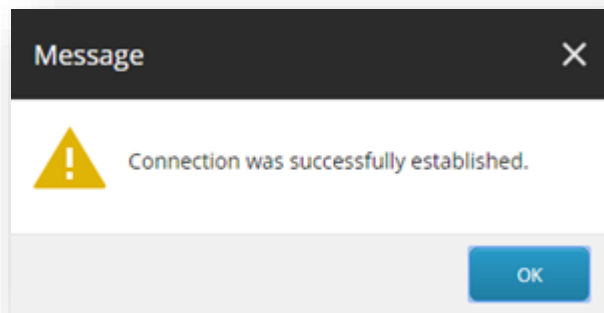
17. In the field *Client Certificate Connection String Name*, set the name of the connection string for the xConnect reference data service.



18. Save the item.
19. In the ribbon, click *Run Troubleshooter*.



20. A message appears to indicate a connection could be made to the xConnect reference data service.

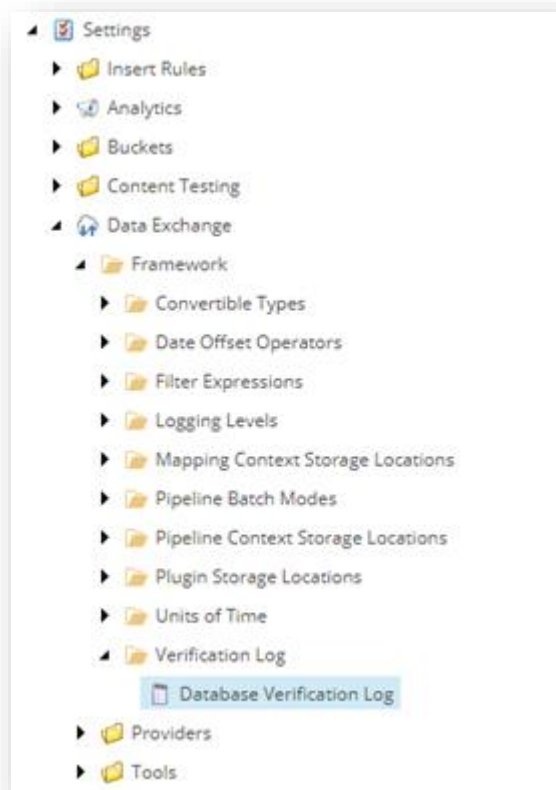


## 1.5.5 Configure Verification Database

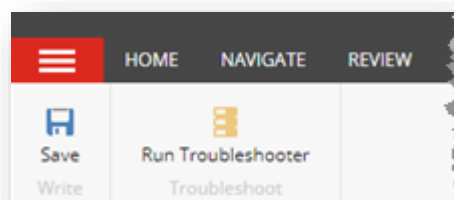
If you are using the verification feature, you must configure the tenant to use the database you created (see section 1.3.2).

By default, the name of the connection string for the verification database is *def.verification*. If you used a different connection string name, you must set the correct connection string name.

1. In Content Editor, navigate to *sitecore > system > Settings > Data Exchange > Framework > Verification Log > Database Verification Log*

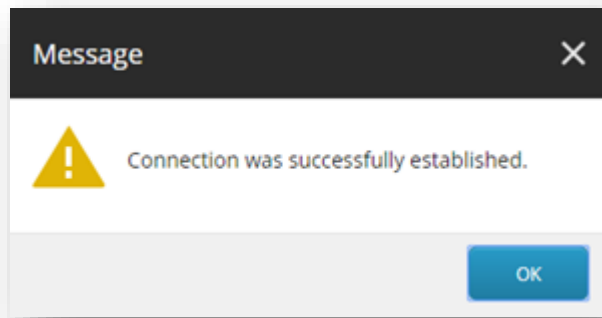


2. In the field *Connection String Name*, set the correct connection string name.
3. Save the item.
4. In the ribbon, click *Run Troubleshooter*.



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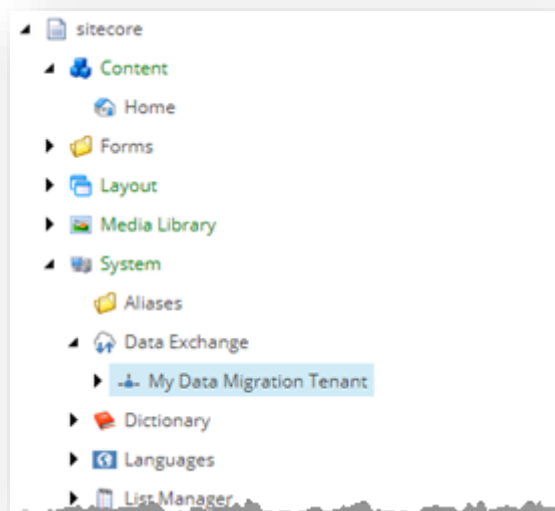
5. A message appears to indicate a connection could be made to the verification database.



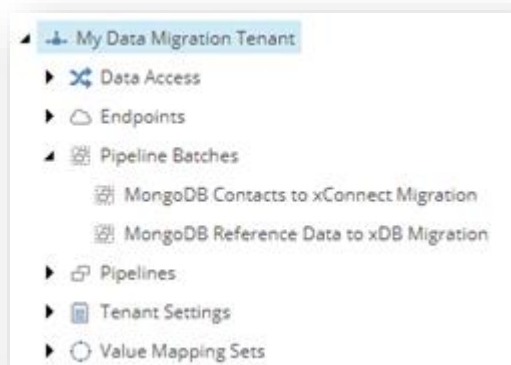
## 1.5.6 Enable Verification

By default, verification is disabled on each pipeline batch. The following steps will enable verification on a pipeline batch.

1. In Content Editor, select your tenant.

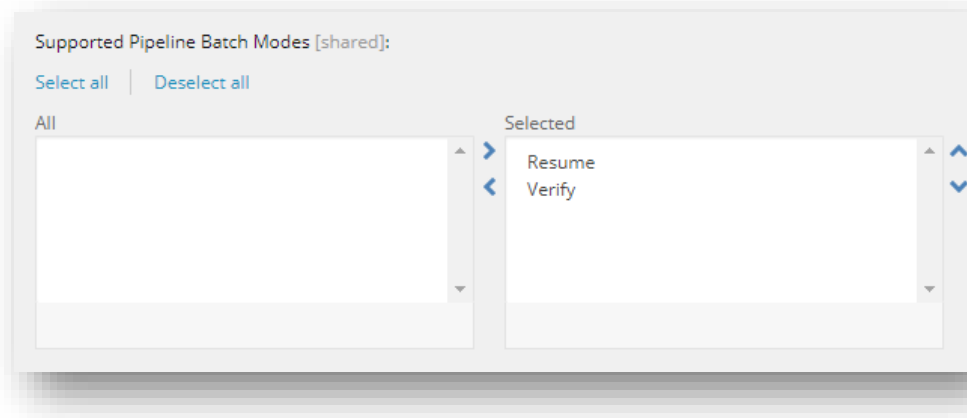


2. Expand *Pipeline Batches*.

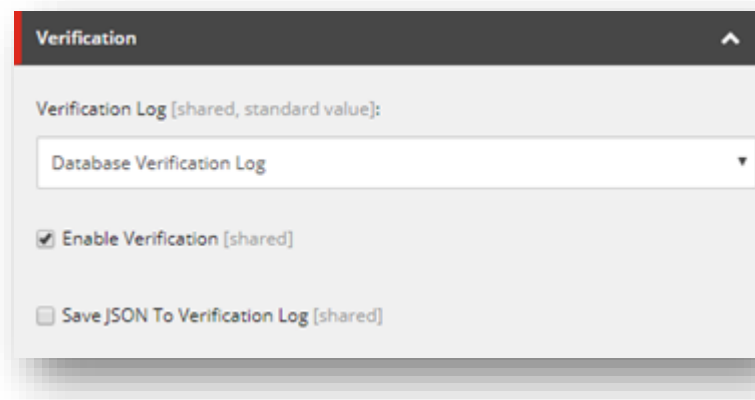


# xDB Data Migration Tool 2.0.0 Installation Guide

3. Select the pipeline batch you want to enable verification on.
4. In the field *Supported Pipeline Batch Modes*, add *Verify*.



5. In the field *Enable Verification*, tick the box.

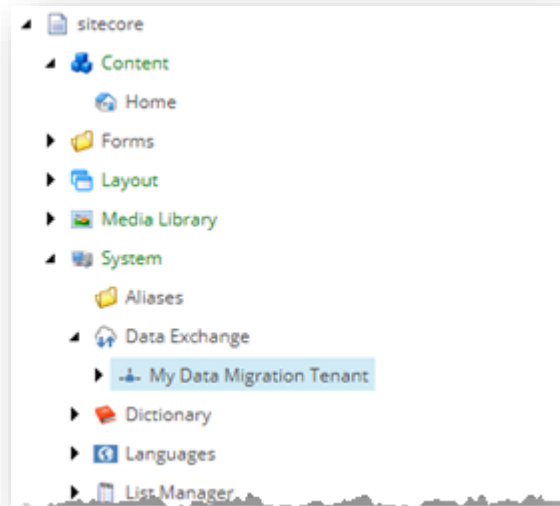


6. Save the item.

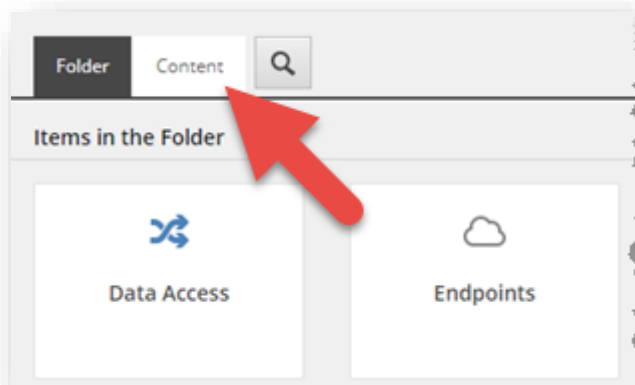
## 1.5.7 Enable the Tenant

By default, the tenant is disabled. This is to ensure that the data migration process is not run accidentally before it has been properly configured.

1. In Content Editor, select your tenant.



2. Select the tab *Content*.



3. In the field *Enabled*, tick the box.
4. Save the item.

## 1.5.8 Testing the Configuration

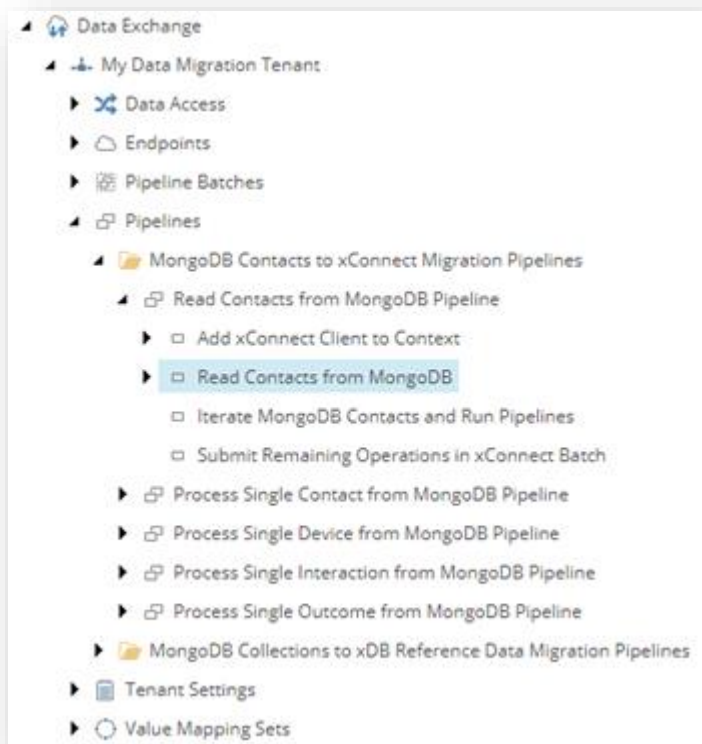
It is recommended that you try running the data migration process in a test environment before running it in a production environment.

When running a test, it is often acceptable to read a limited amount of data from MongoDB. At this point, the goal is to determine whether or not the data migration process is working as you expect it to.

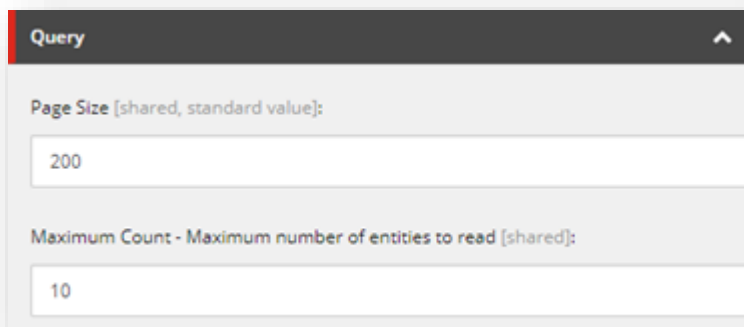
To limit the amount of data that is read from MongoDB to 10 contacts:

Use the following steps to limit the amount of data that is read from MongoDB. These instructions will result in a, at most, 10 contacts being read from MongoDB.

1. In Content Editor, select your tenant.
2. Navigate to *Pipelines > MongoDB Contacts to xConnect Migration Pipelines > Read Contacts from MongoDB Pipeline > Read Contacts from MongoDB*



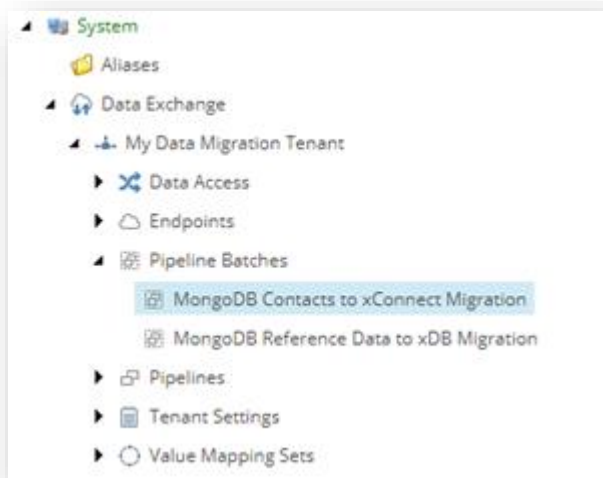
3. In the field *Maximum Count*, enter 10.



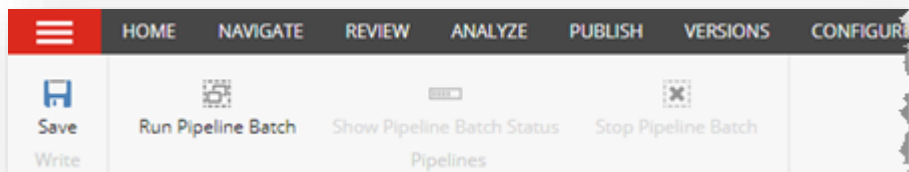


# xDB Data Migration Tool 2.0.0 Installation Guide

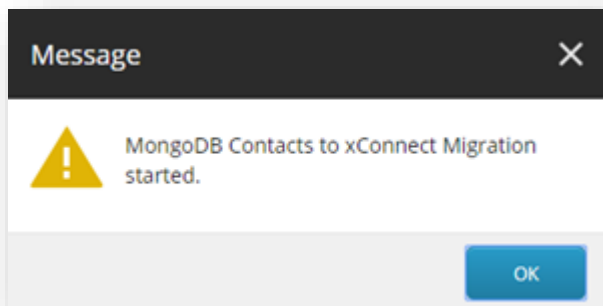
4. Save the item.
5. Select your tenant.
6. Navigate to *Pipeline Batches* > *MongoDB Contacts to xConnect Migration*



7. In the ribbon, click *Run Pipeline Batch*



8. A message will appear to indicate the pipeline batch was started. Click *OK* to continue.



# xDB Data Migration Tool 2.0.0 Installation Guide

9. While the pipeline batch is running, in the ribbon, commands to show the pipeline batch status and to stop the pipeline batch are available.

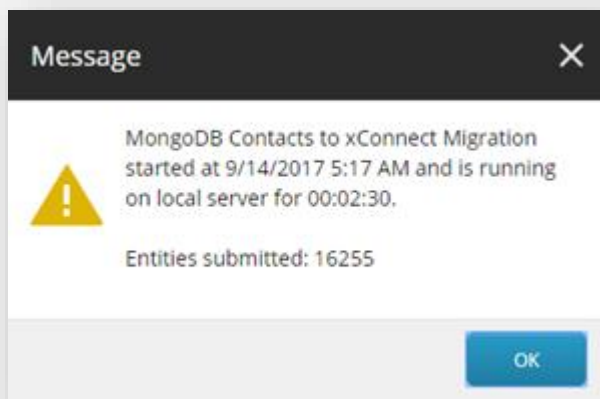


## Note

The length of time it takes to complete the data migration process depends on how much data you have in MongoDB and the maximum count you specified.

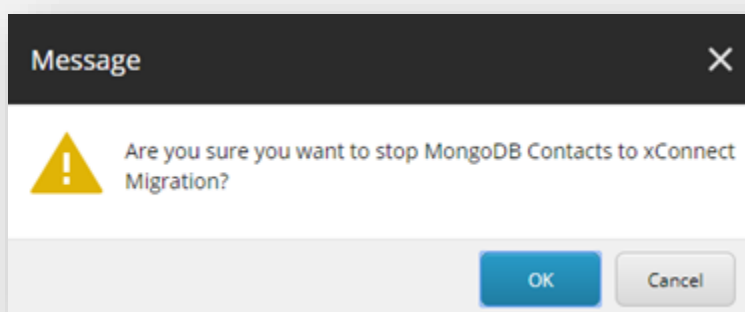
## Important

The *Show Pipeline Batch Status* command displays a value *Entities submitted*. This is the number of xConnect operations that were submitted, not the number of contacts that were submitted.



## Important

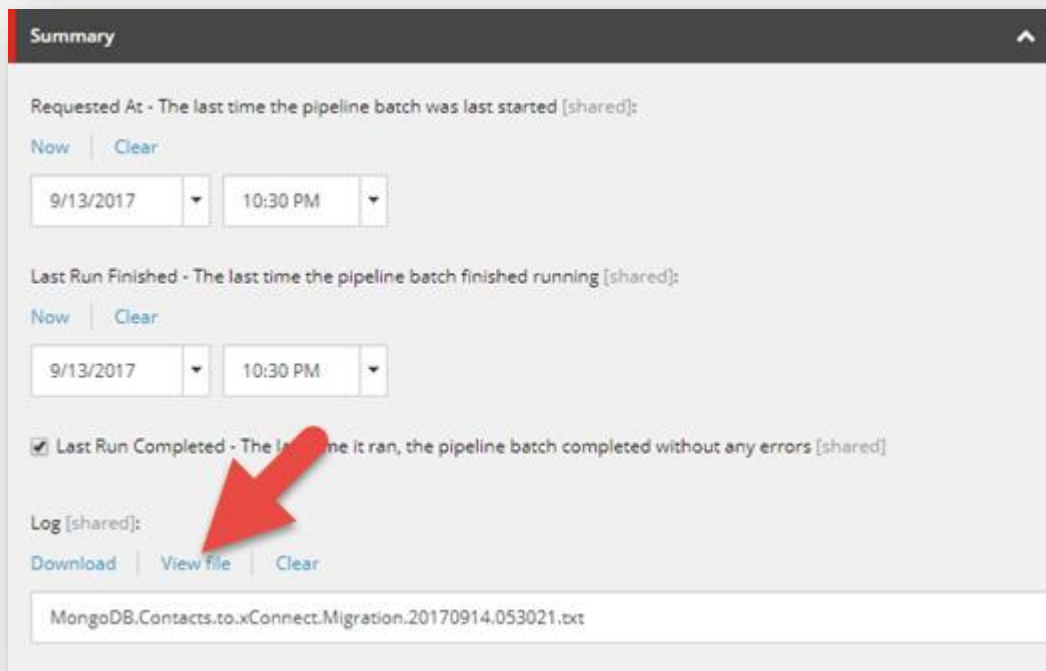
The *Stop Pipeline Batch* command lets you stop a pipeline batch that is currently running. The pipeline batch runs asynchronously on the Sitecore server. This means that the command sends an instruction to Sitecore to request the pipeline batch be stopped. The pipeline batch will not stop immediately.



# xDB Data Migration Tool 2.0.0 Installation Guide

## Important

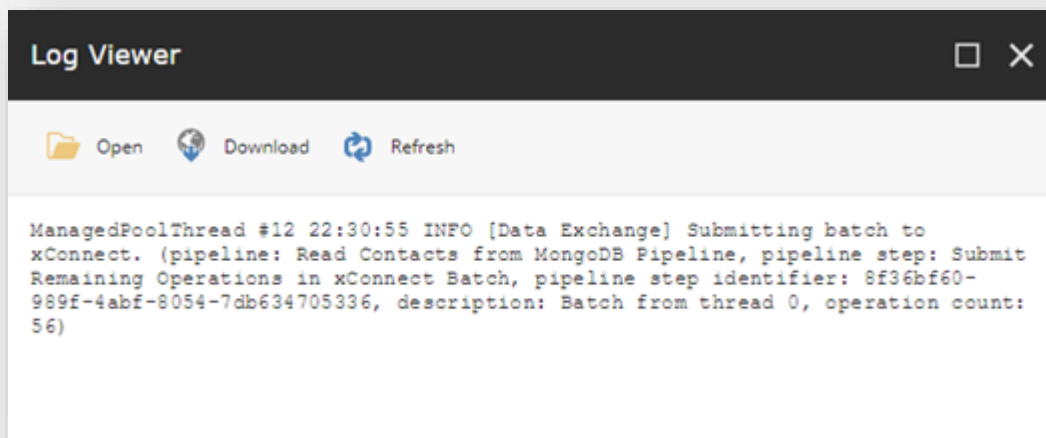
After the pipeline batch finishes, you can view a log of the activity from the last time the pipeline batch was run.



The screenshot shows the 'Summary' panel of the xDB Data Migration Tool. It contains the following information:

- Requested At** - The last time the pipeline batch was last started [shared]:  
Now | Clear  
9/13/2017 | 10:30 PM
- Last Run Finished** - The last time the pipeline batch finished running [shared]:  
Now | Clear  
9/13/2017 | 10:30 PM
- Last Run Completed** - The last time it ran, the pipeline batch completed without any errors [shared]
- Log** [shared]:  
Download | View file | Clear  
MongoDB.Contacts.to.xConnect.Migration.20170914.053021.txt

A red arrow points to the 'View file' link in the Log section.



The screenshot shows the 'Log Viewer' window with the following content:

ManagedPoolThread #12 22:30:55 INFO [Data Exchange] Submitting batch to xConnect. (pipeline: Read Contacts from MongoDB Pipeline, pipeline step: Submit Remaining Operations in xConnect Batch, pipeline step identifier: 8f36bf60-989f-4abf-8054-7db634705336, description: Batch from thread 0, operation count: 56)

## 1.6 Advanced Configuration

This section describes some common settings you may want to use in your tenant.

### 1.6.1 Enabling Multiple Threads

By the contact migration process is configured to run in a single thread. By increasing the number of threads used during the migration process you can increase performance, especially when a large number of contacts need to be migrated.

#### Note

Multiple threads are used to handle the contact documents that are read from MongoDB. Reading from MongoDB is done in a single thread in order to avoid reading the same documents multiple times.

1. In Content Editor, select your tenant.
2. Navigate to *Pipelines > MongoDB Contacts to xConnect Migration Pipelines > Read Contacts from MongoDB Pipeline > Iterate MongoDB Contacts and Run Pipelines*
3. In the field *Max Thread Count*, set the number of threads you want to use.
4. Save the item.

#### Important

Do not change the Max Thread Count value on any other pipeline step in the contact migration process. Doing so may prevent interaction data from being migrated properly.

### 1.6.2 Changing Batch Size

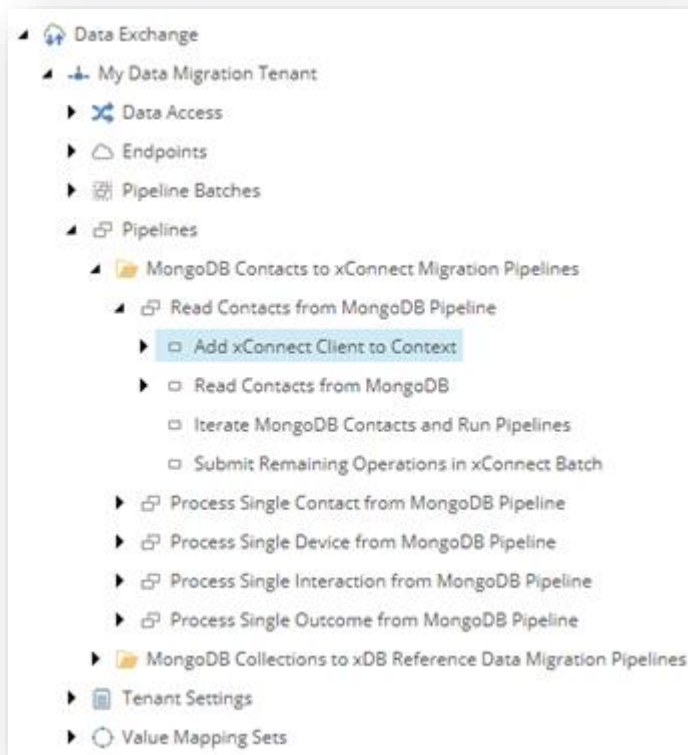
In order to interact with the xConnect collection service as efficiently as possible, the contact migration process only submits data to the xConnect collection service after a certain amount of data is collection.

This threshold can be configured on the contact migration process.

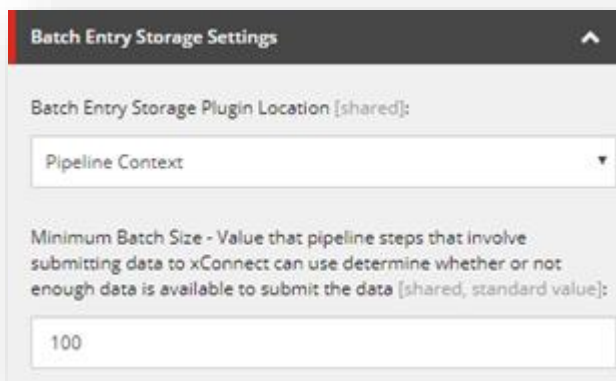
#### Note

The unit this threshold is measure in an *operation*. An operation represents a single instruction for the xConnect collection service. Controlling the batch size means specifying the minimum number of operations that must be available before those operations are submitted to the xConnect collection service.

1. In Content Editor, select your tenant.
2. Navigate to *Pipelines > MongoDB Contacts to xConnect Migration Pipelines > Read Contacts from MongoDB Pipeline > Add xConnect Client to Context*



3. In the field Minimum Batch Size, set the minimum number of operations that must be added to the xConnect client before the batch is submitted.



4. Save the item.

## 1.7 Troubleshooting

This section describes common problems and their solutions.

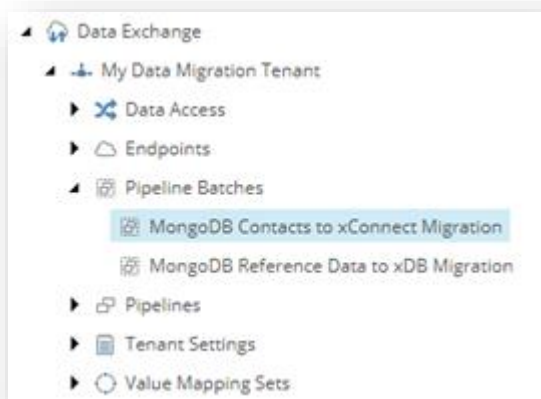
### 1.7.1 Logging

Each data migration process in xDB Data Migration Tool maintains its own log. This log is accessible from Content Editor through the pipeline batch item that represents the data migration process.

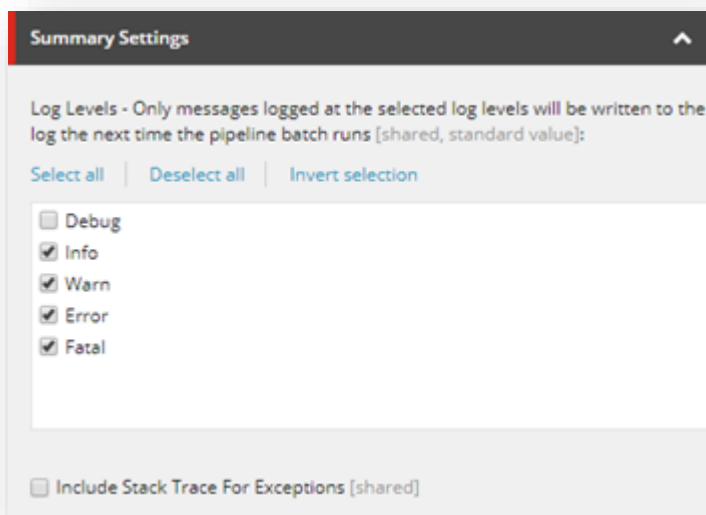
#### Note

Changing the log level for xDB Data Migration Tool does not affect the log level for any other part of the Sitecore server.

1. In Content Editor, select your tenant.
2. Navigate to *Pipeline Batches > MongoDB Contacts to xConnect Migration*



3. Select the log levels you want to capture.



4. Save the item.

## 1.7.2 Collection Model Not Deployed to xConnect Collection Service

### Error Message

```
'Sitecore.DataExchange.Tools.XdbDataMigration.Models.DataMigrationCollectionModel, 1.0' does not have a remote version...
```

### Cause

The collection model for xDB Data Migration Tool has not been deployed to the xConnect services.

### Solution

Follow the instructions in section o.

## 1.7.3 Unable to Establish Connection to MongoDB

### Error Message

```
A timeout occurred after 30000ms selecting a server using CompositeServerSelector...
```

### Cause

Sitecore cannot make a connection to the MongoDB server.

### Solution

Ensure that the following are true:

- There no network connectivity issues affecting either the Sitecore or the MongoDB server.
- The MongoDB server is running.
- The connection string for the MongoDB server is configured properly.

## 1.7.4 Unable to Establish Connection to xConnect Collection Service

### Error Message

```
The HTTP response was not successful: NotFound
```

### Cause

A network connection to the xConnect collection service could not be established.

### Solution

Ensure that the following are true:

- There no network connectivity issues affecting either the Sitecore or the xConnect collection service.
- The xConnect collection service is running.
- The connection string for the xConnect collection service is configured properly.

## 1.7.5 Request Handling Size Too Low

### Error Message

```
The maximum number of bytes allowed to be read from the stream has been exceeded. After the last read operation, a total of #### bytes has been read from the stream; however a maximum of #### bytes is allowed.
```

### Cause

The data sync process is sending too much data in a single batch to the xConnect collection service.

## Solution

The amount of data the xConnect collection service can accept is configured in the collection service's web.config file. Increase the following value:

```
configuration > system.web > httpRuntime > @maxRequestLength
```

### 1.7.6 Contacts are Missing in Experience Profile

There are several possible causes for this issue:

#### The contact has no interactions

Experience Profile only displays a contact with at least one interaction associated with it.

#### The contact's interactions are too old

Experience Profile uses a cache to determine which contacts to display. By default, only interactions that occurred within the past 30 days are added to the cache.

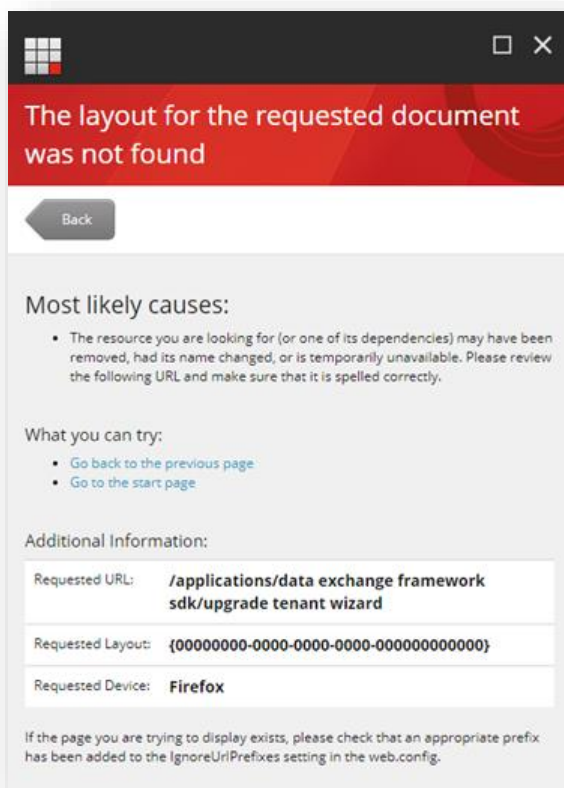
This setting can be changed on the xConnect server:

- File: *sc.XConnect.Collection.Model.Plugins.xml*
- Setting: *MaximumInteractionPeriod*

See the xConnect product documentation for more details.

### 1.7.7 The layout for the requested document was not found

The following error may appear when you click the Upgrade Tenant button.





The following steps will fix this error.

1. In Content Editor, open the core database.
2. Navigate to sitecore > content > Applications > Data Exchange Framework SDK > Upgrade Tenant Wizard
3. Open the presentation details.
4. Edit the settings for Internet Explorer.
5. For the layout select Layouts > Data Exchange Framework SDK > Upgrade Tenant Wizard
6. Save the item.

## 1.8 Uninstall xDB Data Migration Tool

After you have migrated your data from Sitecore Experience Platform 8.x to 9.0, you can uninstall xDB Data Migration Tool.

### Note

There is no harm in leaving the migration tool installed. If you choose to leave the tool installed, be sure to disable any tenants you created in order to prevent the migration process from being run accidentally.

### 1.8.1 Delete Tenants

1. In the Sitecore database *master*, delete the child items under the following items:
  - a. `/sitecore/system/Data Exchange`

### 1.8.2 Uninstall xDB Data Migration Tool for Data Exchange Framework 2.0.0

1. In the Sitecore database *master*, delete the following items:
  - a. `/sitecore/system/Settings/Rules/Insert Options/Rules/Data Exchange - xDB Data Migration Tool`
  - b. `/sitecore/templates/Branches/Data Exchange/Tools/xDB Data Migration Tool`
  - c. `/sitecore/templates/Data Exchange/Tools/xDB Data Migration Tool`
2. On the Sitecore server, delete the following folders:
  - a. `App_Config\Sitecore\XdbDataMigration`
3. On the Sitecore server, delete the following files:
  - a. `bin\Sitecore.DataExchange.Tools.XdbDataMigration.dll`
  - b. `bin\Sitecore.DataExchange.Tools.XdbDataMigration.Local.dll`

### 1.8.3 Uninstall MongoDB Provider for Data Exchange Framework 2.0.0

1. In the Sitecore database *master*, delete the following items:
  - a. `/sitecore/system/Settings/Rules/Insert Options/Rules/Data Exchange - MongoDB Provider`
  - b. `/sitecore/templates/Branches/Data Exchange/Providers/MongoDB`
  - c. `/sitecore/templates/Data Exchange/Providers/MongoDB`
2. On the Sitecore server, delete the following files:
  - a. `bin\Sitecore.DataExchange.Providers.MongoDB.dll`
  - b. `bin\Sitecore.DataExchange.Providers.MongoDB.Local.dll`

### 1.8.4 Uninstall xConnect Provider for Data Exchange Framework 2.0.0

1. In the Sitecore database *master*, delete the following items:
  - a. `/sitecore/system/Settings/Rules/Insert Options/Rules/Data Exchange - xConnect Provider`
  - b. `/sitecore/templates/Branches/Data Exchange/Providers/xConnect`
  - c. `/sitecore/templates/Data Exchange/Providers/xConnect`

2. In the Sitecore database *core*, delete the following items:
  - a. /sitecore/content/Applications/Content Editor/Ribbons/Contextual Ribbons/Data Exchange/Data Exchange/xConnect
3. On the Sitecore server, delete the following folders:
  - a. App\_Config\Sitecore\DataExchange\XConnect
4. On the Sitecore server, delete the following files:
  - a. bin\Sitecore.DataExchange.Providers.XConnect.dll
  - b. bin\Sitecore.DataExchange.Providers.XConnect.Local.dll

## 1.8.5 Uninstall Data Exchange Framework 2.0.0

1. In the Sitecore database *master*, delete the following items:
  - a. /sitecore/system/Data Exchange
  - b. /sitecore/system/Settings/Validation Rules/Field Rules/Data Exchange Framework
  - c. /sitecore/system/Settings/Data Exchange
  - d. /sitecore/system/Settings/Rules/Insert Options/Rules/Data Exchange - Common
  - e. /sitecore/system/Settings/Rules/Definitions/Macros/Data Exchange Framework
  - f. /sitecore/system/Settings/Rules/Definitions/Elements/Insert Options/Data Exchange - Add Children as Insert Options
  - g. /sitecore/system/Tasks/Commands/Data Exchange
  - h. /sitecore/templates/Branches/Data Exchange
  - i. /sitecore/templates/Data Exchange
2. In the Sitecore database *core*, delete the following items:
  - a. /sitecore/content/Applications/Data Exchange
  - b. /sitecore/content/Applications/Content Editor/Menues/Data Exchange
  - c. /sitecore/content/Applications/Content Editor/Ribbons/Contextual Ribbons
  - d. /sitecore/system/Field types/Data Exchange
3. On the Sitecore server, delete the following folders:
  - a. App\_Config\Sitecore\DataExchange\XConnect
4. On the Sitecore server, delete the following files:
  - a. bin\Sitecore.DataExchange.Providers.XConnect.dll
  - b. bin\Sitecore.DataExchange.Providers.XConnect.Local.dll

## 1.8.6 Remove Connection Strings

On the Sitecore server, remove any connection strings that were created for the data migration process, including those for:

1. MongoDB
2. Verification database

### **Important**

Only remove the connection strings you *added* during the configuration process. Some of the connection strings you *use* during the (such as the connection string for the xConnect server) must not be removed.

## 1.8.7 Remove Verification Database

Drop the verification database.