



BI Office Content Conversion Guide

Best practices for converting content from BI Office to Pyramid 2018

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Overview

Pyramid 2018 is the next generation Business Intelligence and Analytics Platform. Built on the design foundations and success of BI Office Pyramid 2018 enables our customers to design and build business solutions from a variety of data sources (more than just SQL Server Analysis Services cubes), deeper analytics, more advanced visualizations and a modern HTML5 compliant user interface.

To support our customers migrate from BI Office to Pyramid 2018 the BI Office Conversion Utility has been created enable you to migrate user profiles and content. The [BI Office Help Guide](#) provides functional details and how to guide for the conversion utility.

This document provides a best practice guide for planning and running the content migration program, including migration considerations and recommendations.

Planning

The migration of content from BI Office to Pyramid 2018 will require planning, an allocation of resources to migrate content, testing and a level of content re-development. A BI Office deployment will contain a number of different object types;

- Data Discovery books, including
 - Reports
 - Calculations
 - Sets
 - Parameters
 - Variables
- Storyboard books
- Publication books

The BI Office objects are organized into a series of folders (Personal, Group and Public) and access control is defined by Users and Roles.

The BI Office Conversion Utility is a standalone utility designed to support customers migrate content and security objects from BI Office to Pyramid 2018.

Migration Considerations

When planning the BI Office migration there are a number of areas to consider;

- What is the best schedule and timeline to migrate content?
 - Do you migrate all content at the same time?
 - Do you migrate content based on business solution, department or user?
- What content do you migrate?
- Do you have additional infrastructure available to run Pyramid 2018 while running the migration program?
- When do you switch over from BI Office to Pyramid 2018?
 - How long do you plan to parallel run BI Office and Pyramid 2018?
 - What are the plans to decommission the BI Office environment?
- What resources do you have available to manage, execute and test the content migration?
- What are the plans to re-develop content that cannot be migrated?

Migration Pre Requisites

The following pre-requisites are required prior to starting the migration process:

- BI Office
 - BI Office 6.50 is installed
 - Software is installed in a separate environment to Pyramid 2018
 - Access to the appropriate SQL Server Analysis Services data models (OLAP and/or Tabular)
- Pyramid 2018
 - Pyramid 2018.04 is installed
 - Software is installed in a separate environment to BI Office
 - Access to the appropriate SQL Server Analysis Services data models (OLAP and/or Tabular)
- BI Office Conversion Utility
 - Installed on Windows desktop or server. This machine will need to be on the same network as the BI Office repository and can connect to the Pyramid 2018 instance.
 - BI Office
 - Connection settings for the BI Office repository: Database server address (and instance), Database name, SQL Server user name and SQL Server user password.
 - We recommend the utility is installed on a machine which can be left idle - in the event the conversion payload is really large, and it requires time to process the selections.
- Pyramid 2018
 - Connection settings for the Pyramid 2018 server instance (not the repository): Pyramid 2018 URL, Active Directory domain (if appropriate), Pyramid 2018 Admin user name and Admin user password.
 - If you are planning to use the multi-tenancy options you should create the required tenants prior to starting the conversion process. During the conversion process, you can direct which users (and associated content) will be attached to each available tenant.
- A successful connection to both BI Office and Pyramid 2018 frameworks is required for the conversion utility to run.
 - Ensure that the Active Directory settings on both systems are identical and synchronized.
- Prior to starting the conversion process backup the BI Office repository.
 - During testing phases, we also recommend backing up the Pyramid 2018 repository. This will allow operators to restore and reset the Pyramid 2018 environment for more testing (beta or otherwise), without having to recreate the entire environment over and over again.
- The content conversion requires that all data sources are matched between the 2 systems. You should undertake a review of all data sources in BI Office and ensure the relevant ones have been pre-loaded in Pyramid 2018.

Content Migration Options

The BI Office Conversion Utility has been designed to run as a standalone utility, independent of the BI Office installation, by a centralized administration resource rather than each individual user. The utility is focus on 2 keys areas;

- Security (Users and Roles)
- Content, including a Purge options for existing BI Office content

The security converter will migrate users, roles and licenses types to Pyramid 2018.

The content converter option is focused converting books, report and associated objects such as calculations. Since the content framework includes security, any related security items (users and roles) attached to the selected content will be converted as well. The conversion utility includes a BI Office content purge option to allow you to delete and purge any BI Office content prior to running the utility. This is a useful option to remove any unused content prior to the conversion process and reduce the amount of content you choose to convert to Pyramid 2018.

BI Office storyboards / dashboards and publications are not currently supported by the conversion utility. The storyboard and publication components have been re-designed in Pyramid 2018, incorporating many feature requests from customers, and therefore currently it is not possible to migrate the corresponding books to Pyramid 2018. The foundation for any Storyboard or Publication is the Data Discovery books and therefore in the majority of BI Office deployments over 80% of all BI Office objects will consist of Data Discovery books. Whilst this will mean the re-development of dashboards and publications is required typically customers will take the opportunity to re-design and update the solutions incorporating the new Pyramid 2018 features. In addition, the Pyramid user interface design and advanced features in the Present (Storyboards) and Publish (Publications) components will mean the development time will be reduced compared to BI Office.

The conversion utility supports the ability to selectively choose which content to migrate. This means you can phase the content migration process rather than running a single migration exercise for all content.

There are differences (see [BI Office Help Guide](#)) between the BI Office Data Discovery features and the equivalent Pyramid 2018 objects both in terms of supported features and visualizations. The conversion utility will attempt to migrate all selected data discovery content, and related objects, and convert to Pyramid 2018 equivalent content. The utility will report any content that is only partially migrated which will enable you to review and update accordingly.

Data Migration

There are 2 primary data sources supported by BI Office; SQL Server Analysis Services (SSAS) OLAP and SSAS Tabular. Pyramid 2018 supports both data sources plus a range of other data sources and query options. This means there is no requirement to migrate data between the 2 environments, simply configure Pyramid 2018 to use the same SSAS data models.

Prior to using the BI Office Conversion Utility the Pyramid 2018 Data Sources must be configured and tested.

Migration Approach

As part of the migration planning we recommend you review the current BI Office content and perform a rationalization exercise to determine which Public, Group and Personal content you want to migrate.

Appendix A contains a sample SQL script which can be run against the BI Office repository (SQL Server database) to provide a complete listing of all content and contains the following details;

- Book Name
- Report Name
- Description
- Book ID
- Folder Path
- User
- Book Type
- Last Modified Date

Use this information to determine the scale of the migration task and identify what content you want to migrate. Based on the number of users you may choose to assess what personal content to migrate, this is also an opportunity to delete / purge unused or redundant content in BI Office prior to the migration.

- *List of users*
- *List of roles*
- *List of public calculations / sets*

Here are the recommended steps

1. Planning and preparation
 - a. Create a list of BI Office users and roles
 - i. The converter allows you to upload a list of users to convert over – either as a means to convert user accounts and/or as a means to select private folders from BI Office. This is the preferred mechanism for selecting a large pool of users and content more migration.
 - ii. The user import tool also facilitates a staged conversion process. By using a sub-set of the users in each conversion session, you can convert parts of the repository in steps. This is also critical in a multi-tenant conversion – since each session is directed at the chosen tenant only.
 - iii. If you want to bring your users online before or while content is being migrated, use the security converter tool. This will enable all your users in the new system, before BI Office content is made available to them – allowing them to continue with their migration path (and training) irrespective of the older content conversion.
 - b. Create a list of current BI Office content
 - i. Group by Public, Group and User folders
 - c. Work with BI Office users to identify which content should be migrated
 - i. Users can move their preferred content into easily identifiable folders, so the “good” content items are easily identifiable in the tool. Having users perform a localized or personal clean up on their own content (delete or purge) will also help to reduce the amount of content converted over.
 - d. Identify the Storyboards and Publication that will not be migrated
 - i. Assess the impact of not migrating these components and identify the Data Discovery reports required to migrate and support the re-development exercise

- e. Identify resources to manage the migration program, test the migrated content and re-develop dashboards and publications in Pyramid 2018
 - i. Migration team should include Business and IT users responsible for managing the BI Office and Pyramid 2018 environment, and end users.
 - ii. Train resources in Pyramid 2018
- f. Agree the migration plan and approach
2. Migration proof of concept
 - a. Identify a sample set of users, roles and content to include in a test migration. The sample set should include a range of content objects to test simple to complex content objects.
 - b. Perform a test migration
 - c. Document test migration feedback and adjust migration plan accordingly
3. Execute the migration program
 - a. Migrate users and roles
 - i. If a user has been setup in Pyramid 2018 prior to running the conversion tool may create an additional user name for the same user based on the fully qualified domain\name.
 - ii. If this does happen a Pyramid 2018 Enterprise Admin can move content to the appropriate user profile and then remove the duplicated user profile
 - b. Migrate required content
 - c. Document full and partial content migration objects
4. Test and review migrated content
 - a. Review migrated content in Pyramid 2018
 - b. Update partially migrated content
 - c. Re-organize migrated content as appropriate, for example, BI Office Group folder content to the appropriate role-based Workgroup content folders in Pyramid 2018.
5. Re-develop required dashboards and publications in Pyramid 2018 using migrated and new content.
6. Execute Pyramid 2018 training program for all BI Office users
 - a. Admin training for the appropriate business and IT users responsible for managing the Pyramid 2018 environment
 - b. Foundation training for all users developing content
 - c. Custom migration training for all users to understand the differences between BI Office and Pyramid 2018.
7. Decommission BI Office
 - a. Remove user access to BI Office to ensure all new content is developed in Pyramid 2018
 - b. Uninstall BI Office software

Resources

The BI Office Conversion Utility is a standalone utility designed for single user to migrate all content to Pyramid 2018. The utility is not designed for each individual BI Office user to migrate their personal content, instead a central administration user will migrate all required personal, group and public content.

We recommend the following resources are allocated to the migration program:

1. Program Lead
 - Responsible for managing the migration plan and activities
2. BI Office Migration Lead
 - Responsible for managing a central team of resources running the conversion utility
 - Requires full knowledge of the current BI Office deployment and environment, and Pyramid 2018
3. Content Migration Team
 - A pool of resources responsible for running the conversion utility and executing content migration plan
 - Requires full knowledge of the current BI Office deployment and environment, and Pyramid 2018
4. Content Migration Test Team
 - A pool of resources consisting of business end users responsible for testing and validating the BI Office content has migrated and updating the new Pyramid 2018 content as appropriate
 - Requires Pyramid 2018 knowledge and training
5. Content Re-development Team
 - A pool of resources consisting of business end users responsible for re-developing the required dashboards and publications in Pyramid 2018
 - Requires Pyramid 2018 knowledge and training

Content Selection

We recommend when planning and executing the conversion program you start with BI Office content in the PUBLIC domain / folders, followed by the GROUP domain and then finally User / personal content. Both the PUBLIC and GROUP domains are typically well managed/curated with less unused and shelved content.

Content selections are best done using parent folders, rather than individual books or sub folders. It simplifies the selection process and administration. If you plan to use Pyramid 2018 tenant please note that each conversion cycle is directed at a specific tenant.

The conversion utility contains a series of converter switches / options;

1. Converting deleted items in BI Office can often make little sense. We do not recommend turning this switch on.
2. If you already have Pyramid 2018 deployed to users, we recommend using the “Create BI Office Root Folders” switch to ensure that all BI Office content is stored in a single folder, rather than directly in the domains. This will help users differentiate between the old and new content.
3. Content in Pyramid 2018 is presented in alphabetical order. If you have a random order of reports in BI Office books you wish to preserve we recommend using the “preserver report order” switch.

Testing Migrated Content

A BI Office Data Discovery book may contain 1 or more reports. Each BI Office report is converted into at least one Discover object in Pyramid 2018, for example;

- In BI Office
 - Folder: \Public\Examples
 - Book: Sample Book
 - Report 1; contains a Grid
 - Report 2; contains a Grid and Chart
- In Pyramid 2018 the conversion will create
 - Folder: \Public\BI Office Content\Examples\Sample Book
 - Discover object: 01.Report 1 [Grid]
 - Discover object: 02.Report 2 [Grid]
 - Discover object: 02.Report 2 [ColumnChart]

It is recommended that you test each converted object and validate it is working as per BI Office, based on the conversion utility supported features. You may choose to update or modify the Discover object based on the result of the conversion process. Once you have completed testing each Discover object we recommend you rename the object and move to the appropriate content folder and assign the relevant roles and access permissions.

You may choose an iterative approach to the conversion and testing process;

1. Select single BI Office folder to convert
2. Run conversion utility
3. Test converted content in Pyramid 2018
 - a. Resolve any conversion issues highlighted
 - b. Move converted content to new Pyramid 2018 folder
 - c. Test associated Formulate objects and move to new Pyramid 2018 folder, the same location as the Discover objects or a shared business logic folder.
4. Repeat steps 1 to 3 until conversion completed.

See BI Office Help – Conversion Utility Capabilities for more details regarding supported features

The following tables shows the mapping between BI Office objects and Pyramid 2018 objects, and which object can be converted;

BI Office object type	Pyramid 2018 object type	Conversion Available
Discovery	Discover	Partial
• Grid	• Grid	Yes
• Chart (various)	• Chart (various)	Partial (chart type dependent)
• Map	• Map	No
• KPI Gauge	• Gauge	Partial
• Calculated Members	Formulate	Yes
• Sets	Formulate	Yes
• Variables	Formulate	Yes
• Parameters	Formulate	Yes
• Cell Overlays	N/A	No

BI Office object type	Pyramid 2018 object type	Conversion Available
<ul style="list-style-type: none"> Visualizations 	Discover	Partial (visualization type dependent)
Storyboard	Present	No
Publication	Publish	No
Admin	Admin	N/A
<ul style="list-style-type: none"> Users 	<ul style="list-style-type: none"> Users 	Yes
<ul style="list-style-type: none"> Roles 	<ul style="list-style-type: none"> Roles 	Yes
<ul style="list-style-type: none"> Themes 	<ul style="list-style-type: none"> Themes 	No

Appendix – BI Office Content Review

Content Listing

The following SQL Server script can be used to report the following information from the BI Office repository:

- Book Name
- Report Name
- Description
- Book ID
- Folder Path
- User
- Book Type
- Last Modified Date

SQL Script

```
select B.name as 'Book Name', p.Name as 'Report name', p.Description,
b.BookID, b.FolderPath, [user_tbl].[User].AdAccount, b.BookType, p.ModifyDate
from [content_tbl].[PanelContainers] as p
```

```
left join [content_tbl].[Books] as b
on p.bookid = b.bookid
```

```
left join role_tbl.RoleBookGroups
on role_tbl.RoleBookGroups.BookID = b.BookID
```

```
left join [user_tbl].[User]
on role_tbl.RoleBookGroups.RoleID = [user_tbl].[User].UserID
order by p.ModifyDate desc
```

where the Book Type definition is as follows:

- Null = 0
- None = 1
- Discovery= 2
- Storyboard = 4
- DiscoveryAndPointOnly = 6
- Publication = 32
- Alert = 128

The following script provides a breakdown of BI Office by Private, Group and Public folders:

SQL Script

```

select
  tl.databasename
, CASE WHEN booktype = 2 THEN 'Data Discovery Books'
  WHEN booktype = 4 THEN 'Story Boards'
  WHEN booktype = 32 THEN 'Publisher Documents'
  WHEN booktype = 128 THEN 'Alerts'
  Else 'Ad-Hoc' END AS ReportType
, CASE RootFolderType WHEN 1 THEN 'Personal Content'
  WHEN 2 THEN 'Group Content'
  WHEN 3 THEN 'Public Content'
  ELSE 'Other' END AS ContentDomain
, count(distinct b.bookid) as count_1
from user_tbl.transactionlog tl
inner join content_tbl.panelcontainers pc on pc.id = tl.ContentID
inner join content_tbl.books b on b.bookid = pc.bookid
group by tl.databasename
, CASE WHEN booktype = 2 THEN 'Data Discovery Books'
  WHEN booktype = 4 THEN 'Story Boards'
  WHEN booktype = 32 THEN 'Publisher Documents'
  WHEN booktype = 128 THEN 'Alerts'
  Else 'Ad-Hoc' END
, CASE RootFolderType WHEN 1 THEN 'Personal Content'
  WHEN 2 THEN 'Group Content'
  WHEN 3 THEN 'Public Content'
  ELSE 'Other' END
union

```

```

select
  tl.databasename
, CASE WHEN booktype = 2 THEN 'Data Discovery Reports'
  WHEN booktype = 4 THEN 'Story Board Slides'
  WHEN booktype = 32 THEN 'Publisher Documents'
  WHEN booktype = 128 THEN 'Alerts'
  Else 'Ad-Hoc' END AS ReportType
, CASE RootFolderType WHEN 1 THEN 'Personal Content'
  WHEN 2 THEN 'Group Content'
  WHEN 3 THEN 'Public Content'
  ELSE 'Other' END AS ContentDomain
, count(distinct pc.Id) as count_2
from user_tbl.transactionlog tl
inner join content_tbl.panelcontainers pc on pc.id = tl.ContentID
inner join content_tbl.books b on b.bookid = pc.bookid
group by tl.databasename
, CASE WHEN booktype = 2 THEN 'Data Discovery Reports'
  WHEN booktype = 4 THEN 'Story Board Slides'
  WHEN booktype = 32 THEN 'Publisher Documents'

```

```

        WHEN booktype = 128 THEN 'Alerts'
        Else 'Ad-Hoc' END
, CASE RootFolderType WHEN 1 THEN 'Personal Content'
    WHEN 2 THEN 'Group Content'
    WHEN 3 THEN 'Public Content'
    ELSE 'Other' END
order by 1, 2;

```

User and Role Listing

List of all users including license type

SQL Script

```

SELECT
    [FirstName]
    ,[LastName]
    ,[AdAccount] As UserName
    --,[AdminType]
    ,UPPER([AdDomain]) as [Domain]
    ,Left([Description],1) as [ClientLicenseType]
FROM [user_tbl].[User] as u
left join user_tbl.ClientLicense as cl on cl.ClientLicenseID = u.ClientLicenseID
left join user_tbl.ClientLicenseTypes as clt on clt.ClientLicenseTypeID = cl.ClientLicenseTypeID
ORDER BY [AdAccount]

```

List of all roles

SQL Script

```

SELECT
    [RoleName]
FROM [role_tbl].[Roles]
where IsPrivate =0

```

Public Object Listing

List of all public calculated measures

**list of CM which are based on a Measure and are public*

SQL Script

```
SELECT
    [Caption] As Name
    ,[Description]
    ,[Address]
    ,[CatalogName]
    ,[CubeName]

FROM [content_tbl].[CustomMembersCustomSets]
where IsDeleted =0 and Hierarchy ='[Measures]' and CustomSecurityType = 1
order by CreateDate desc
```

List of all public sets

SQL Script

```
SELECT
    [Caption] As Name
    ,[Description]
    ,[Address]
    ,[CatalogName]
    ,[CubeName]

FROM [content_tbl].[CustomMembersCustomSets]
where IsDeleted =0 and CustomSecurityType = 1 and CmcsType =2
order by CreateDate desc
```