MarketPlace Solution Tools (MST)

Contents

This guide describes the necessary steps to setup and use the *MarketPlace Solution Tools (MST)* solution.

MarketPlace Solution Tools Overview

MarketPlace Solution Tools (MST) provides OneStream XF Administrators a suite of features that can be used across different XF MarketPlace solutions.

Solution Analysis

The *Solution Analysis* tool provides diagnostic capabilities in the examination of solutions meeting with coding standards on the XF MarketPlace as well as in general practice. These results provide direction in prioritizing any discovered issues, including a mechanism for pinpointing the location of those issues. Different output formats provide for dissemination of issues needing investigation, including an overall report for presentation purposes. Each analysis is preserved for audit purposes or solution review.

Solution Copy

The *Solution Copy* tool provides an efficient way to copy an existing XF MarketPlace solution enabling multiple solution instances to coexist in a single OneStream XF Application. This will allow flexibility to support how groupings of users manage these solutions and data that need to be segregated to support different business processes. For example, if a OneStream customer wanted to have two completely unique instances of Account Reconciliations (RCM) to be independently managed by two separate business units, the Solution Copy tool can assist.

The *Solution Copy* process will analyze the XF MarketPlace solution and replace all solution-related artifacts with a number appended to each artifact. This includes any XF MarketPlace based XML files for Business Rules, Cube Views, Dashboards, Data Management, Data Sources, Form Templates, Metadata, and Transformation Rules.

MarketPlace Solution Tools Setup

Prerequisite: Considerations for Location of Development Work

There are two options when building out your *MarketPlace Solution Tools* solution:

1. Build in Production OneStream XF application.
2. Build in a separate Development OneStream XF application.

Below are considerations for each approach:

When Building in a Production OneStream XF Application

An advantage of building your solution in your Production application is that you will not have to migrate the resulting work from a Development application. However, there are intrinsic risks of making design changes to a OneStream XF application that is being used in a Production capacity.

When Building in a Development OneStream XF Application

A Development OneStream XF application is the safest method for building out your solution. Prior to the solution configuration and to ensure the identifiers match within the Development and Production Applications and potentially separate Framework database, the Development Application should be a recent copy of the Production Application. Note that the tables for this solution are added to the Framework database and the Dashboards and related Business Rules are stored in the XF Application of your choice. Once the Development Application is created, install the solution and begin design.

We recommend following this procedure in the creation of your OneStream XF Development application:

- Copy your Production OneStream XF application and related Framework database to your Development environment. The tables for this solution are created in the Framework database, so a separate Framework database must be created if it is planned to not do this work in a Production environment. This Development version will be used for your project.

See the chapter on *Migration Advice* for more details.

Database Server Connections Settings

Changes need to be made to the *OneStream XF Application Server Configuration* for users to create and change data in the additional database tables used by this solution.

To edit these settings:

1. Start *OneStream XF Server Configuration Utility* as an Administrator.
2. Select *Open Application Server Configuration File*.
3. Select Database

Note: If other MarketPlace Solutions such as Specialty Planning are already in the application, these settings might already be in place.

If a change is necessary, Internet Information Server must be restarted.

Make the following changes:

- *Access Group for Ancillary Tables* should be *Everyone* or a group that includes those that will edit records.
- *Maintenance Group for Ancillary Tables* should include a group who will create the tables. This is typically set to Administrators or a group that contains a limited number of users.
- Other settings highlighted need to be set to *True* in order to execute table creation via the MarketPlace Solution Tools Dashboards.
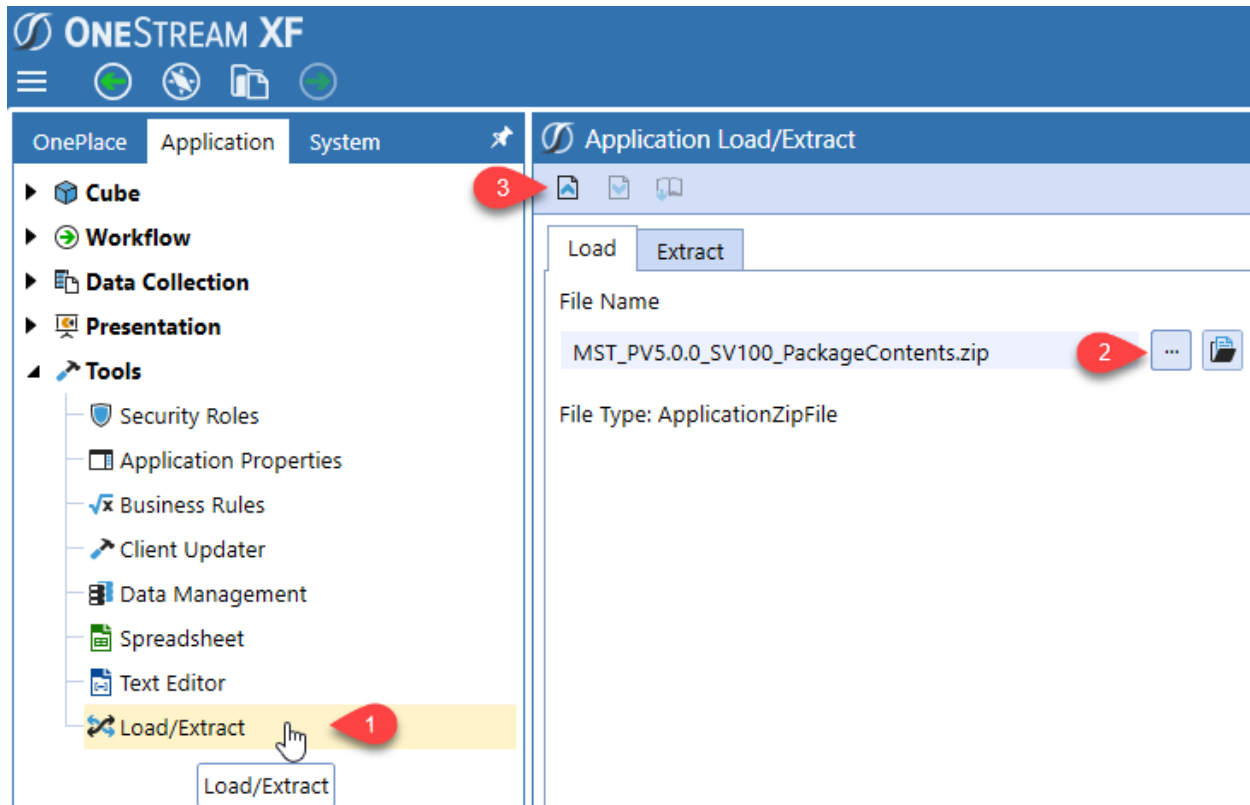

Ensure these user group settings include the people who will be working on and setting up MarketPlace Solution Tools tables.

How to Install MST

First, check the related *Release Notes* to determine if an Uninstall of the User Interface or a Full Uninstall is necessary and then see that chapter for instructions. If the *Release Notes* say that an over-install is allowed, then proceed with these instructions from here:
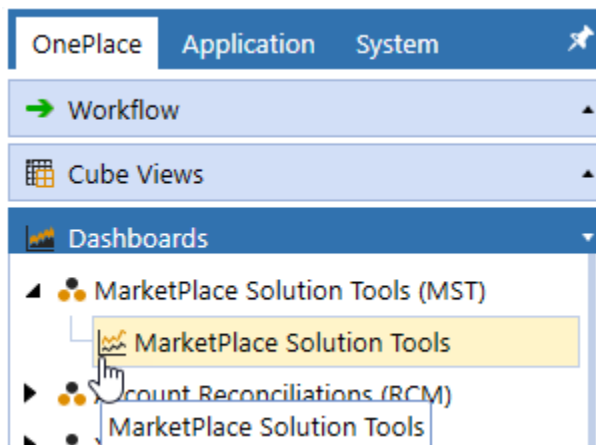
Download the Solution from the XF MarketPlace. The package is a zip file named *MST_PV5.0.0_SV101_PackageContents.zip*. The *PV500* number (e.g. 500) represents the minimum XF Platform Version (e.g. 5.0.0) required in order to implement this Solution Version (i.e. *SV101*).

Log into OneStream XF, navigate to Application Tab | Tools | Load/Extract. Click *Select File,* navigate to the zip file, and click *Load* .

Create MarketPlace Solution Tools Tables

Go to OnePlace | Dashboards and select the *MarketPlace Solution Tools (MST)* Dashboard.

After selecting *Marketplace Solutions Tools* from the Dashboard, you will be presented with the *Solution Setup* screen.
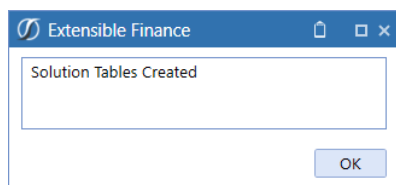
MARKETPLACE SOLUTION TOOLS   **Solution Setup**

Step 1:

Setup Tables

Step 2:

Launch Solution

Step 1 will create four new solution tables to the Application database.

Ø Extensible Finance

Solution Tables Created

OK

Once Step 2 is selected and the dashboard launched, this setup screen will no longer appear after selecting *Marketplace Solutions Tools.*

Note: A message that "Solution Tables Created" will confirm completion.

Package Contents

It is not recommended to rename any included Dashboard, Business Rules, etc. unless specified.

Dashboard Maintenance Unit

XFW MarketPlace Solution Tools (MST)

This is a Dashboard Maintenance Unit that provides the user interface for the MarketPlace Solution Tools solution. It includes the Dashboard Groups, Components, Data Adapters, Parameters and Files used to build the solution.

Business Rules

MST_HelperQueries

This is a Dashboard Data Set Business Rule. This rule provides a helper query to return the solution instance data set.

MST_SolutionHelper

This is a Dashboard Extender Business Rule that provides various helper functions for the MST solution. These helper functions include management of the solution setup, and configuration settings.

MST_ParamHelper

This is a Conditional Parameter helper function XFBR String Business Rule. This rule is used to provide conditional parameter processing functions that allow a parameter value to be interpreted and substituted with a different string.

Solution Database Tables

The following solution Database Tables are added to the application database to manage the MarketPlace Solution Tools solution.
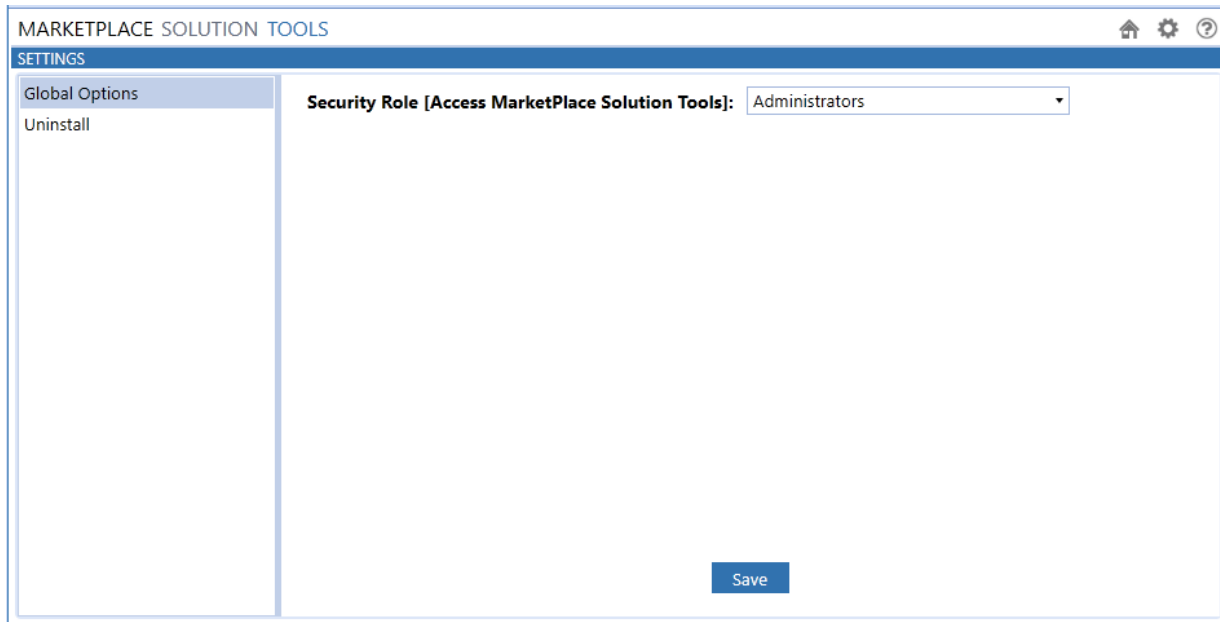
▦ XFW_MST_Analysis

▦ XFW_MST_AnalysisFindings

▦ XFW_MST_AnalysisRules

▦ XFW_MST_ControlLists

MarketPlace Solution Tools Settings ⚙

The Settings page contains a page for the *Global Options* to be applied across this XF Application.

MARKETPLACE SOLUTION TOOLS	🏠 ⚙ ⑦
SETTINGS	
Global Options	Security Role [Access MarketPlace Solution Tools]: Administrators ▾
Uninstall	
	Save

Security Role [Access MarketPlace Solution Tools]

This tool kit is designed with administrators in mind. The default setting for all solutions is the standard Administrators User Group, but this can be changed. It is important to note that anyone in the Administrators User Group is a OneStream XF System Administrator and, by default, can perform any of

the same duties as any of the individual solution admins. Therefore, OneStream XF System Administrators will always be able to access and use all solutions within this tool kit.

Uninstall

Allows administrators to uninstall MarketPlace Solution Tools' User Interface or the entire solution. Note that if this is performed as part of an upgrade, any modifications that were performed on the standard MarketPlace Solution Tools objects will be removed.
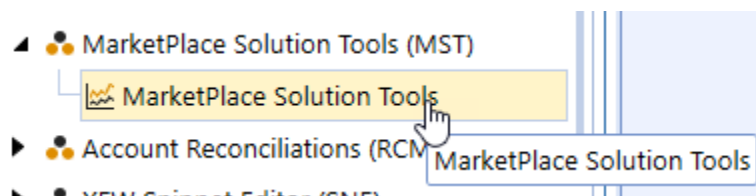
Uninstall UI

Check the related *Release Notes* to determine if this step is necessary. For some releases, this step should be performed before accepting any new version of MarketPlace Solution Tools since some of the Dashboards or other objects may have been renamed. This will remove all the related MarketPlace Solution Tools Dashboards. It will leave the data tables intact. If you wish to accept an update to MarketPlace Solution Tools without removing the data tables, this is the option to use. The *Release Notes* for MarketPlace Solution Tools will indicate if an over-install is supported.
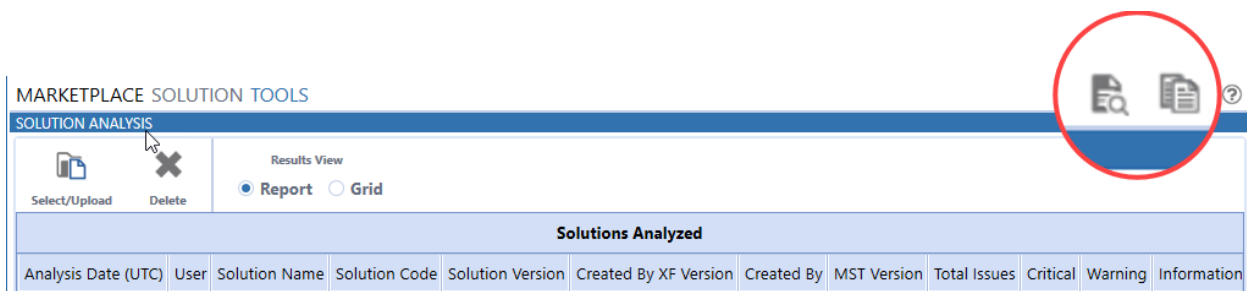
Uninstall Full

The Uninstall Full button opens a dialog to confirm removal of the MarketPlace Solution Tools solution UI and deletion of all MarketPlace Solution Tools custom tables. Use caution, as this action is not reversible.

Launch Solution

After the initial setup has completed, clicking *MarketPlace Solution Tools* will launch the *Solution Analysis* tool.

The default view will be *Solution Analysis Page* in "Report View". To the far right are two buttons.
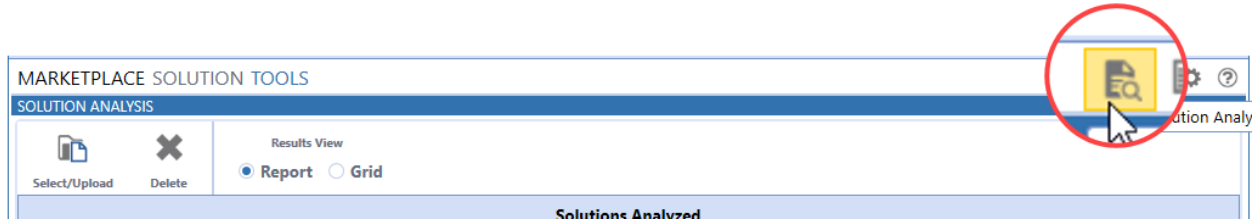
The first button is for *Solution Analysis* the second for *Solution Copy*. You can proceed directly to *Solution Copy* if desired.
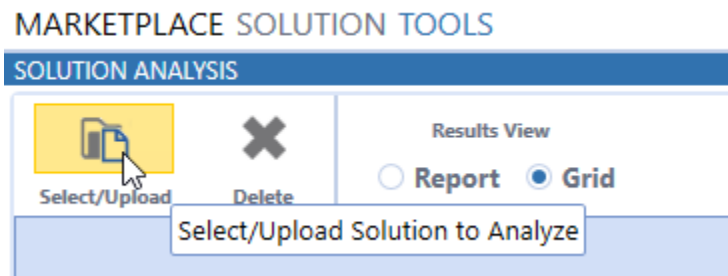
Using Solution Analysis

There are two steps to the MarketPlace Solution Tools Solution Analysis tool:

1. Selecting the XF MarketPlace solution to be analyzed
2. Reviewing the results of the Analysis Report, addressing issues identified
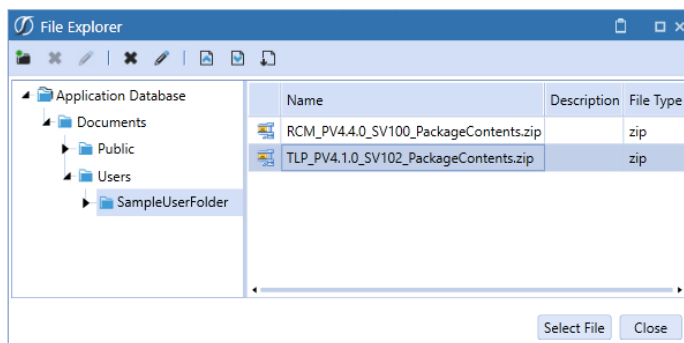

Select/Upload XF MarketPlace Solution

The first step in the solution analysis process is to select a file to load. Once selected, the file will be scanned to confirm that it meets acceptance criteria.

Selecting this button will open the OneStream XF File Explorer window where an XF MarketPlace Solution file can be selected. The Upload File button can be selected to upload an XF MarketPlace solution to the OneStream XF File Explorer folder.

Analysis Levels

The analyze process reviews the whole solution, looking for individual issues to be assigned into one of three *Levels*; Critical, Warning or Success.

Critical level issues are of a type that should be addressed in keeping with standard coding practices for solutions. The following issues are considered a C*ritical Level*:

Level	Rule	Description	Examples
Critical	Require Using on DataBase Connection	Proper reference will release system resources after use.	Dim dbConnAppA As DBConnInfo = BRApi.Database.CreateApplicationDbConnInfo(si)
Critical	Unsafe SQL Query	Method query should be used in place of straight SQL query. Command type = Method, Method Type=Business Rule; Parameters should be resolved within Business Rule.	FROM [dbo].[XFW_ABC_Fields] WHERE [State] XFBR(ABC_ParamHelper, GetItemsByState, State=[| !ParamItemState_ABC! |], Compare=Equal)
Critical	Item requires solution code in name	Component contains improperly formatted solution code suffix within the file name.	NonStandard1_HMM does not contain '_HOM'
Critical	Solution Initialization Failure	Cannot performed Solution Analysis on encrypted Business Rules.	Encrypted Business Rules are not supported
Critical	Unsupported Solution File Type	Only XML file type are valid files.	Invalid XML file
Critical	Security Violation	Roles, Groups and Users are not supported in Security import file.	Users are not supported in Security import file.

Warning level issues are of a type which should be reviewed for good coding practices but may be acceptable under the particular requirements for that solution. These issues are considered best practice, but their existence may be justified.

The following issues are considered a *Warning Level*:

Level	Rule	Description	Examples
Warning	Referenced Assemblies	Unexpected extrenal reference assembly found.	C:\Windows\Microsoft.NET\Framework64\ v4.0.30319\System.Data.OracleClient.dll
Warning	Development Review	Direct connection to database establlished rather than using Connection Manager.	BRApi.Database.GetDatabaseServerConnection
Warning	External Connection	External connection establihsed.	Dim connectionWebClient As New System.Net.WebClient()
Warning	External Process	External process established, possible performance or security implication.	Dim aProcess As New Process()
Warning	External Reference	Unexpected extrenal reference found.	Dim test As New System.IO.FileStream ("c:\temp\test.fil", FileMode.Create)
Warning	Function with no Return Type	Return type should be defined for efficiency.	Public Function TestFunctionNoReturnType()
Warning	Variables should be initialized	Variable should be initialzied for efficiency.	Dim stringB As String
Warning	Variable Types should be declared	Variable types should be declared for efficiency.	Dim thing1 = "test1"
Warning	Unused SQL Query	Remove unused SQL Query from parameter.	Non SQL Parameter Command Type that has a previous SQL statement.
Warning	Unsupported File Type	Solution Analysis can only be performed on well formed XML files.	Unsupported File Type Detected such as a PDF or Zip in the solution package
Warning	Security Warning	Modification to security detected	BRApi.Security.Admin.DeleteUser(si, "UserName")

Analyze Presentation

Once the analysis has completed, the results will be initially presented in a *Report* format. The report format provides a convenient summary of the results in the top, right-hand corner with color coding indicating severity; Red for Critical and Yellow for Warning. These colors correspond to the *Levels* in the report. The Navigation pane to the left of the report provides quick filtering upon of specific results.

This report format can be printed (PDF, hard copy, etc.) for supporting documentation needs.

Switching from the default report format into the *Grid* view is accomplished by choosing the radio button at the top left.
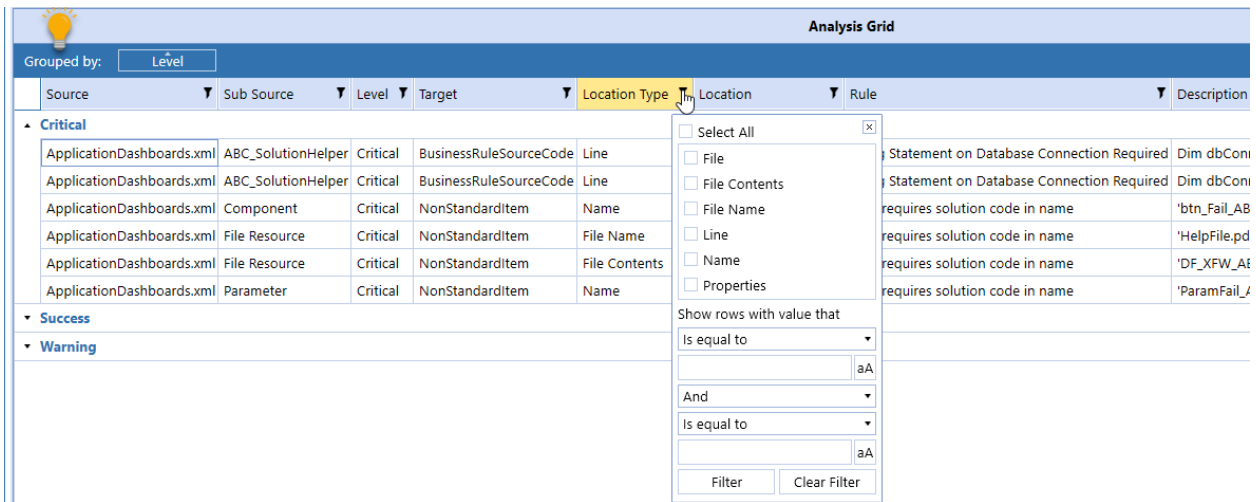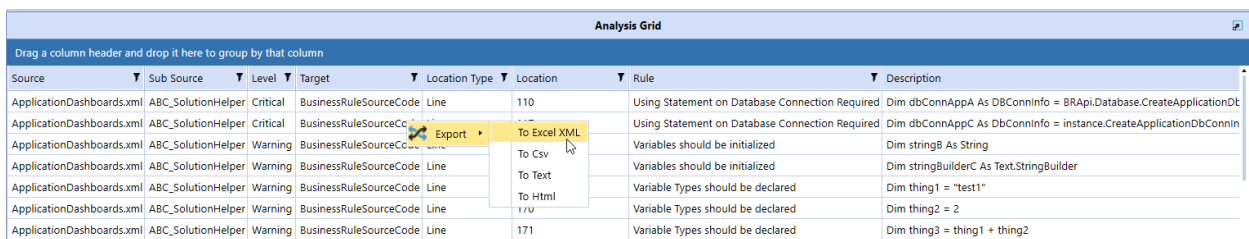
The grid view allows for dynamic grouping, sorting and filtering.

This format allows for *Exporting* into a desired format for external review.

Results for each analyzed file will be retained until it's decided the results are no longer needed. To remove any results, select the row in the *Solutions Analyzed* grid and click the Delete button at the top left.

Note: The results presented during *Solution Analysis* will not preclude someone from performing a *Solution Copy*.

Using Solution Copy

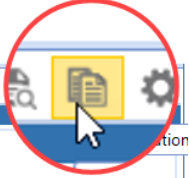There are three steps to the MarketPlace Solution Tools Solution Copy tool:

1. Selecting the XF MarketPlace solution to be copied
2. Selecting the destination and instance number of the copied solution
3. Executing the copy of the solution

Select/Upload XF MarketPlace Solution

The first step in the solution copying process is to select a MarketPlace Solution file to load. Once selected, the file will be scanned to confirm that it meets the Solution Copy acceptance criteria.

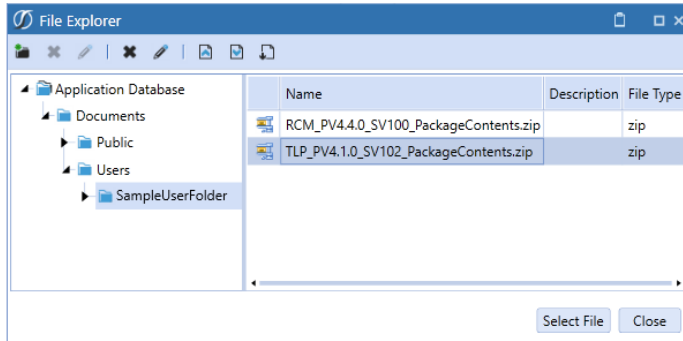Selecting the Select/Upload will open the OneStream XF File Explorer window where an XF MarketPlace Solution file can be selected and scanned. The Upload File ⬆ button can be selected to upload an XF MarketPlace solution to the OneStream XF File Explorer folder.

If the file is not an XF MarketPlace solution file or an unsupported file type no results will be returned. If the selected file is an unsupported XF MarketPlace solution file then the following error message will be displayed in the Results section.

There is a set of acceptance criteria that must be met for a solution file such as one downloaded from XF MarketPlace to be allowed to be copied. The criteria are as follows:

1) The file is an XF MarketPlace solution zip file available on OneStream's XF MarketPlace or has similar characteristics. For instance, it must contain a Dashboard Maintenance Unit which must contain at least these two Parameters of the type of Literal:
   a. HelpAboutSolutionCode_XXX where XXX is the solution code in the name as well as in the Default Value.
   b. HelpAboutCreateBy_XXX where XXX is the solution code in the name and in the Default Value is the name of the company who has created this solution.

2) The XF MarketPlace solution is not on the XF MarketPlace Unsupported Solutions List.

XF MarketPlace Unsupported Solutions List

Solution Name	Solution Code
Actor Workspace	AWS
App Template - Fiscal Year End	ATFYE
Budget Forms	BFRM
Budget Manager	BMR
Default Map Templates	DMT
Dim Template - Simple Currency Flow	DTSCF
Dim Template - Simple Single Currency Flow	DTSSCF
Dim Template - US States	DTUSS
Dimension Comparison Utility	DCU
End User Training-Cube Views	EUTCV
End User Training-Excel Analysis	EUTEA
End User Training-Extensible Docs	EUTXFD
End User Training-Report Books	EUTRB
End User Training-Workflow	EUTW
Excel Metadata Builder	MDB
Forecast Forms	FFRM
Forecast Manager	FMR
Guided Reporting	GRT
Load Test Suite	LTS
MarketPlace Solution Tools	MST
PowerShell Scripting	POW
Sample Import Templates	IMT
Snippet Editor	SNE
Standard Application Reports	RPTA
Standard Cube View Styles	RPTC
Standard System Reports	RPTS
Tax Provision Starter Kit	TXP
XML Security Remover	XSR

If the solution scan was successful and the solution files met the acceptance criteria, Solution Successfully Initialized will be displayed in the Results section and the user can proceed to Step 2.

1 Select/Upload XF MarketPlace Solution

Select/Upload

Title:	Thing Planning
Version:	PV410-SV102
File name:	TLP_PV4.1.0_SV102_PackageContents.zip
Created By:	OneStream Software

Results

✔ Solution Successfully Initialized.

Title
The title of the XF MarketPlace solution.

Version
The XF MarketPlace solution platform version (PV) and solution version (SV) numbers.

File Name
The XF MarketPlace solution package contents file name.

Created By
The XF MarketPlace solution creator company name.

Supported XF MarketPlace Solution Files with Non-Standard items

There are some supported XF MarketPlace solution files that contain non-standard items. For example, improperly named components, DB tables names, indexes and constraints that do not contain the solution code. If the XF MarketPlace solution file contains non-standard items, then the following message will be returned in the results field and the details of the non-standard items will be written to a OneStream Analysis Report text file specific to the solution file selected. The user can proceed to Step 2 if the solution was created by OneStream. Non-standard items for solutions not created by OneStream will need to be corrected before proceeding to Step 2.

Results

Solution Analysis discovered Items for review. For additional information, please see the OneStream Analysis Report.

Selecting the button will open the Package Contents Analysis Report text file.

Note: The time is written in (UTC).

```
--------------------------------------------------------------------------
                         OneStream Analysis Report
--------------------------------------------------------------------------

Date (UTC): 2019-09-09 02:27:48 PM
File: ABC_PV5.0.0_SV100_Package.zip
Title: ABC Solution Name
Version: PV500-SV100
Created By: ABC Company
Description: ABC


                 ***** Non-Standard Item Analysis *****

The following 4 Non-Standard Items were detected.

File: ApplicationDashboards.xml contained 4 Non-Standard Items.
    'HelpFile.pdf'
    'DF_XFW_ABV_Fields_Choice'
    'ParamFail_AB'
    'btn_Fail_AB'


Report Generated by MarketPlace Solution Tools (MST) Version PV500-SV100 RC16
```

Destination and Instance Number

Step 2 of *Solution Copy* allows the ability to select the OneStream XF File Explorer destination folder that the selected solution will be copied to as well as define the instance number. The File Explorer destination folder will default to the file location of the selected file in Step 1.

Destination

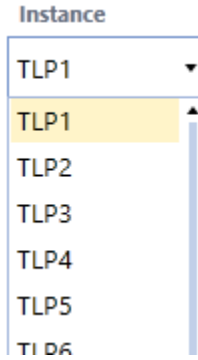Selecting Destination will allow for the ability to change what folder the selected solution will be copied to in OneStream File Explorer. The destination folder will default to the file location of the selected file in Step 1.

Instance

The *Instance* is a selection of available solution file acronyms (1 – 99) which will be used to replace the copied solution file name, including the solution artifacts.

Note: Copies of solution copies can be made. Each time a copied file is selected a different instance number series can be selected and appended to the file name and solution artifacts.

If an instance number is selected and a solution file already exists in the destination folder then the file will not be copied, and the following error message will be displayed in the Results section.

File name
The name of the solution file with the instance number appended.

Create XF MarketPlace Solution Instance

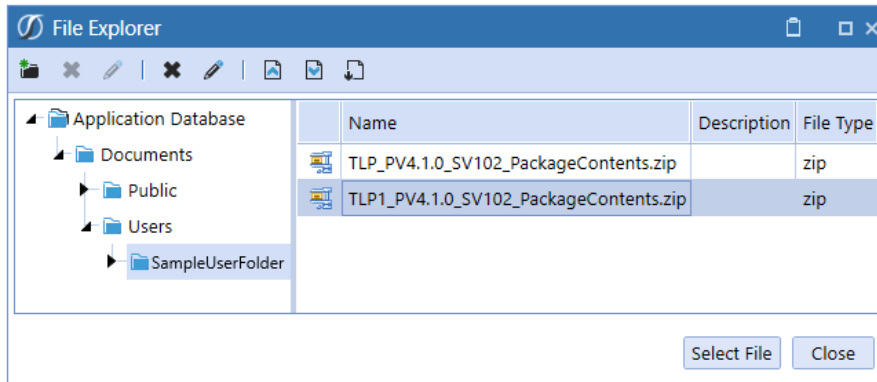Step 3 is where the copy function is executed and if successful allows the copied solution file to be downloaded.

Copy

The Copy button appears when Steps 1 and 2 have been completed without any errors. Selecting *Copy* will execute the solution copying process.

Select/Download

If the solution file was successfully copied the Download button will appear. Selecting the Download button will open the destination folder in the OneStream XF File Explorer. The *Download File* button can be selected to download the copied XF MarketPlace solution.

Help Page

This page contains instructions documentation of the solution.

Solution Database Migration Advice

Solutions copied with MarketPlace Solution Tools can have databases where this migration advice would apply.

A Development OneStream XF Application is the safest method for building out a solution with custom tables such as this one. Prior to the solution configuration and to ensure the identifiers match within the Development and Production Applications, the Development Application should be a recent copy of the Production Application. Once the Development Application is created, install the solution and begin design.

The process below will help migrate the solution tables properly:

1. In the Production OneStream XF application, install the solution and create the data tables. See the chapter on *Setup* for Database Server Connection settings and installation details.
2. Data tables were created in the OneStream XF Development Application during the solution installation. Copy the data from the tables to the Production Microsoft SQL Server Database using the Microsoft SQL Migration Utility. This utility should only be run by the Microsoft SQL Administrator.

    Note: This process has the potential to overwrite existing table data in the Production Application database if data already exists.

The Microsoft SQL Migration Utility and instructions on its use can be downloaded online from: https://sqlazuremw.codeplex.com

Note: This process has the potential to overwrite existing table data in the Production Application database if data already exists.

Optimal Display Settings

OneStream XF and XF MarketPlace solutions frequently require the display of multiple data elements for proper data entry and analysis. Therefore, the recommended screen resolution is a minimum of 1920 x 1080 for optimal rendering of forms and reports.

Modifying MarketPlace Solutions

A few cautions and disclaimers when modifying a MarketPlace Solution:

- Major changes to Business Rules or custom tables within a MarketPlace Solution will not be supported through normal channels as the resulting solution is significantly different from the core solution.
- If changes are made to any Dashboard object or Business Rule, consider renaming it or copying it to a new object first. This is important because if there is an upgrade to the MarketPlace Solution in the future and the customer applies the upgrade, this will overlay and wipe out the changes. This also applies when updating any of the standard reports and Dashboards.
- If modifications are made to a MarketPlace Solution, upgrading to later versions will be more complex depending on the degree of customization. Simple changes such as changing a logo or colors on a Dashboard do not impact upgrades significantly. Making changes to the custom database tables and Business Rules, which should be avoided, will make an upgrade even more complicated.