onestream

Xperiflow Administration Tools Guide

PV9.3.0 SV240

Table of Contents

Overview

This document details the Xperiflow Admin Tools user interface, including functionality and requirements of each page. Information includes:

- How to interact with a page.
- What happens in the AI Services engine based on user interactions.
- What a complete access control is within AI Services.

Access Control & Identity Management

One major section of XAT focuses on permissions and access management. Administrators can control access for individual users or groups across various Scopes. The access control portion of XAT is divided into three main sections: Identity (who is being given access), Role (what permissions they have), and Scope (where the access is being applied, such as within a specific SensibleAI Forecast project or globally).

These three factors combine to form an RSI (Role/Scope/Identity) Assignment. Access is determined by how these elements are configured together. An RSI Assignment, which must include one Identity, one Role, and one Scope, is required to establish access control.

For initial setup, it is recommended to configure each section (Identity, Role, Scope) individually before creating RSI assignments, as a complete control requires all three elements. The sections can be set up in any order, either sequentially or in parallel, potentially by different teams. For more detailed guidance, refer to the specific sections on Identity, Role, and Scope.

Definitions

- **Identity**: Identifies the user or group to whom access is being controlled for.
- **Role**: Defines the specific permissions that a user or group can have, for example read, write, and limits.
- **Scope**: Specifies the context or location where a role applies, for example application or project.
- **RSI Assignment**: A configuration that links an Identity, Role, and Scope together to create a complete access control within the system. Without this assignment, no access can be granted.

Version Management

In addition to access controls, XAT includes a Version Management section. This section provides a display of each AI Services solution currently installed and shows its compatibility with the dependencies installed in the environment. This allows administrators to monitor the current state of system solutions and ensure that all dependencies are compatible, helping to streamline the upgrade process.

Setup and Installation

This section contains details for planning, configuring, and installing the Xperiflow Administration Tools solution. Before you install the solution, familiarize yourself with these details.

See OneStream Solution Modification Considerations

Dependencies

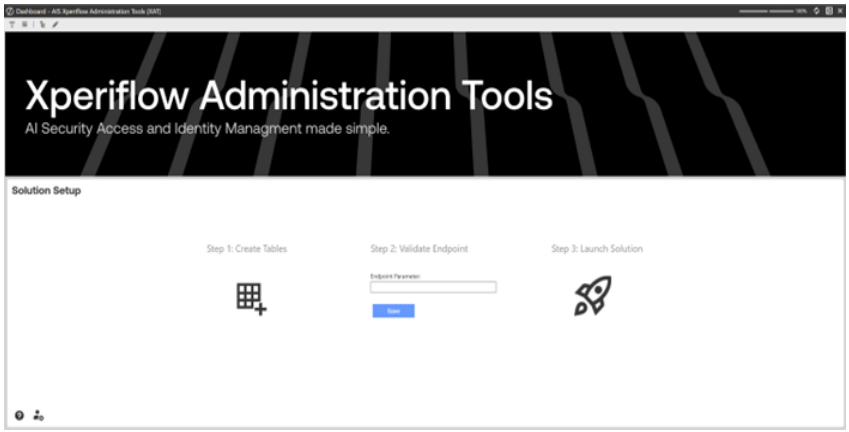
Component	Description
OneStream 9.3.0 or later	Minimum OneStream Platform version required to install this version of Xperiflow Administration Tools.
Xperiflow 4.2.0 or later	Minimum version required to install this version of Administration Tools.
Xperiflow Business Rules V220 (XBR)	External API client library to allow Xperiflow Administration Tools to interface with the Xperiflow Engine. The required version of XBR is packaged with all Xperiflow Administration Tools versions.

Set Up Xperiflow Administration Tools

Follow these steps to set up Xperiflow Administration Tools:

> **NOTE:** Only Administrators or users in the XAT Administration user groups can access the Xperiflow Administration Tools solution.

1. Download the Xperiflow Administration Tools Solution from the OneStream Solution Exchange.
2. After the OneStream support team ensures that the proper contract is in place, a link is sent to download the Xperiflow Administration Tools solution and a meeting request to complete the setup, which includes setting the endpoint parameter.
3. Follow the outlined Solution Setup steps:



   a. Create Tables
   b. Validate Endpoint
   c. Launch Solution

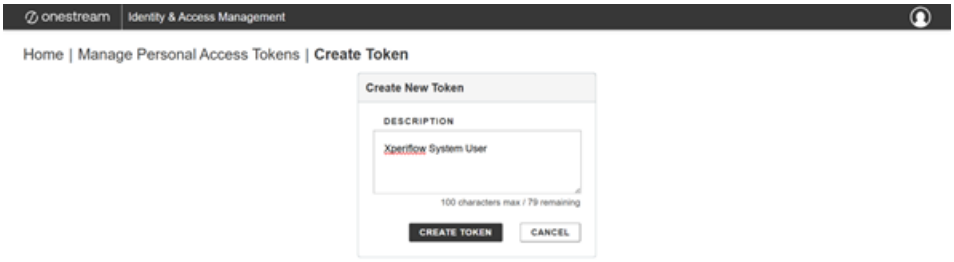
4. When you reach the **Home** page displayed in Xperiflow Administration Tools Home Page, Xperiflow Administration Tools is set up correctly and functioning properly.

Xperiflow Set Up (Required)

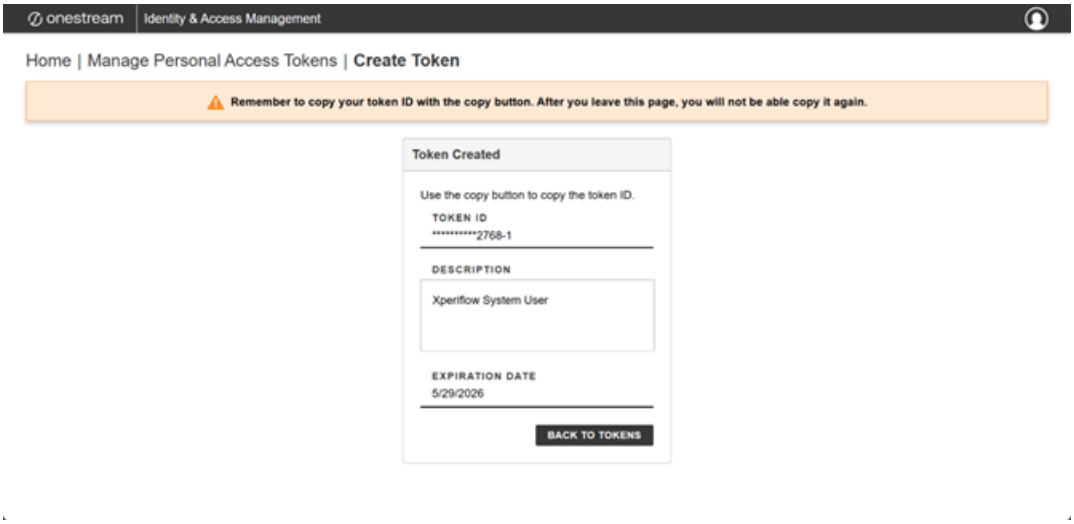
For the AI Services Solutions to function properly, a Personal Access Token (PAT) must be configured for the System User upon initial set up of XAT. This must be done by a OneStream user that is part of the Administrators group. Follow these steps to properly configure the token:

- Open the Identity & Access Management Home page by clicking the following icon at the top of the OneStream application. 
- Navigate to the **Manage Personal Access Tokens** page.
- Click the Create Token button. 

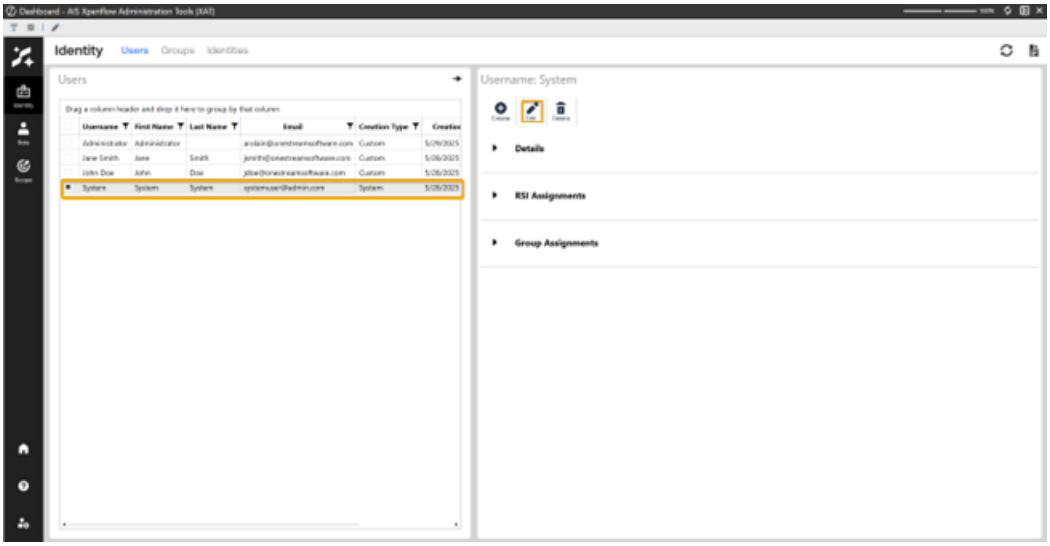
- Create a token for the Xperiflow System User:



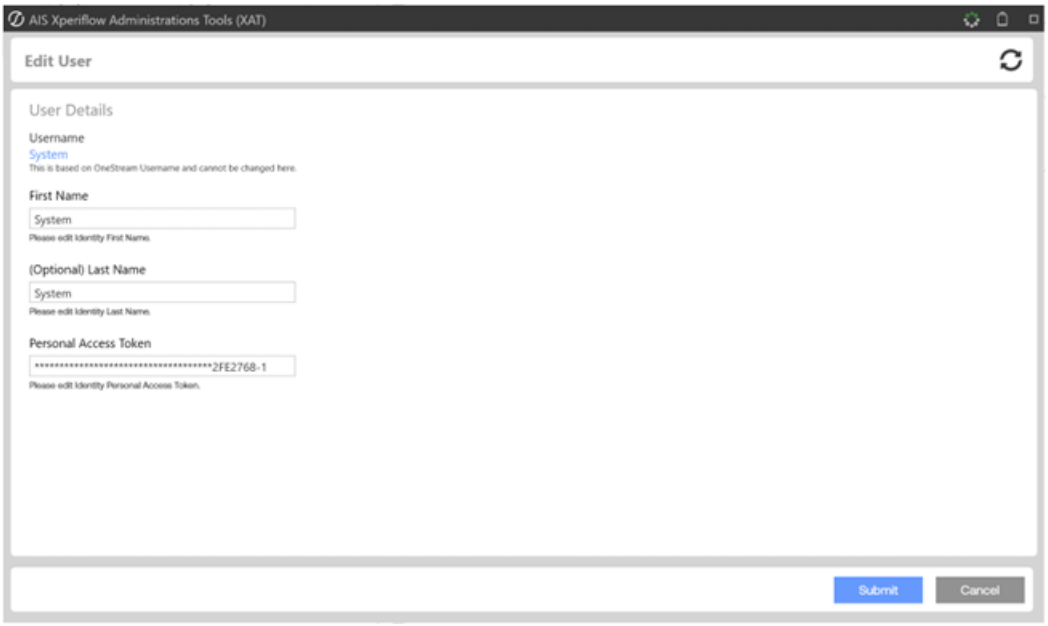
- After creating the token, copy the token and navigate to the Users page of XAT.



- Select the **System User** from the Users grid on the left and click the edit icon.



- Paste the PAT token into the **Personal Access Token** field and click Submit.



Solution Access

Upon initial installation of XAT onto an OneStream environment, only users within an OneStream Administrators group will have access to the solution. There is the ability to assign a Power User Group that will grant access to the solution for other users. Any additional users that attempt to access XAT will be blocked upon entry.

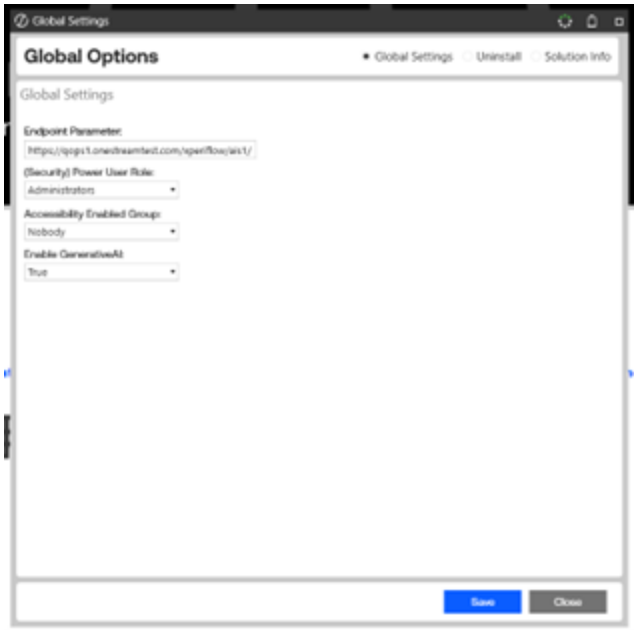
Settings

To access the Global Options page, click **Settings** in the bottom left corner of the **Home** page or the **Version** page.

Global options include:

- Global Settings
- Uninstall
- Solution Info

Global Settings



Endpoint Parameter

Predefined endpoint to access the application.

> **IMPORTANT:** Do not make changes to this value unless instructed to do so.

(Security) Power User Role

Select who can access the solution and access the Global Settings content. The default is Administrators.

Accessibility Group

Choose individuals who will receive comparable information from accessible grid formats as opposed to BI Viewer charts.

Uninstall

There are two uninstall options:

> **CAUTION:** Uninstall procedures are irreversible.

Uninstall UI removes Xperiflow Administration Tools, including related dashboards and business rules, but leaves the database and related tables in place. Choose this option if you want to accept a Xperiflow Administration Tools update without removing data tables.

Uninstall Full removes all related data tables, data, Xperiflow Administration Tools dashboards, and business rules. Choose this option to completely remove Xperiflow Administration Tools or to perform an upgrade that is so significant in its changes to the data tables that this method is required.

Solution Info

Under Solution Version, there is a Solution Code. This code is comprised of the Solution Code, Solution Version, and OneStream platform version (Solution Code-Solution Version-OneStream platform version).

Navigate in Xperiflow Administration Tools

The following sections describe the ways to navigate in Xperiflow Administration Tools.

Xperiflow Administration Tools Home Page

The Home page displays the different administration tools available to the user.

Use the Home page to:

- Navigate to a section:
  - Identity (Access Controls)
  - Versions (Version Management)
- Access the following toolbar icons:

Icon	Description
	Opens the AI Services Activity Log
	Open theXperiflow Administration ToolsGuide
	Opens theXperiflow Administration Toolssettings. Configure Global Settings options and uninstall the solution. See Settings.

Xperiflow Administration Tools Sections

The left side navigation includes different sections and the top left navigation shows the pages available in the selected section. Below are the different sections with their respective pages:

Access Controls & Identity Management

- Identity
  - Users
  - Groups
  - Identities
- Role
  - Roles
  - Permissions
- RSI Assignments

    - Create RSI Assignments
- Scope
    - Scopes
    - RSI Assignments

Version Management

- Version Management

Toolbar Icons

Icon	Description
	**HOME** - Navigates to the Home page.
	**HELP**- Opens theXperiflow Administration ToolsGuide
	**SETTINGS**- Opens theXperiflow Administration Toolssettings. Configure Global Settings options and uninstall the solution. See Settings.

Each section page includes a **Home** button at the top right of the page and a set of buttons at the bottom left of the page that provide additional navigation, settings, or help. Additionally, there are action or CRUD-type (create, update/edit, delete- no read) buttons in the top middle of each section.

Identity

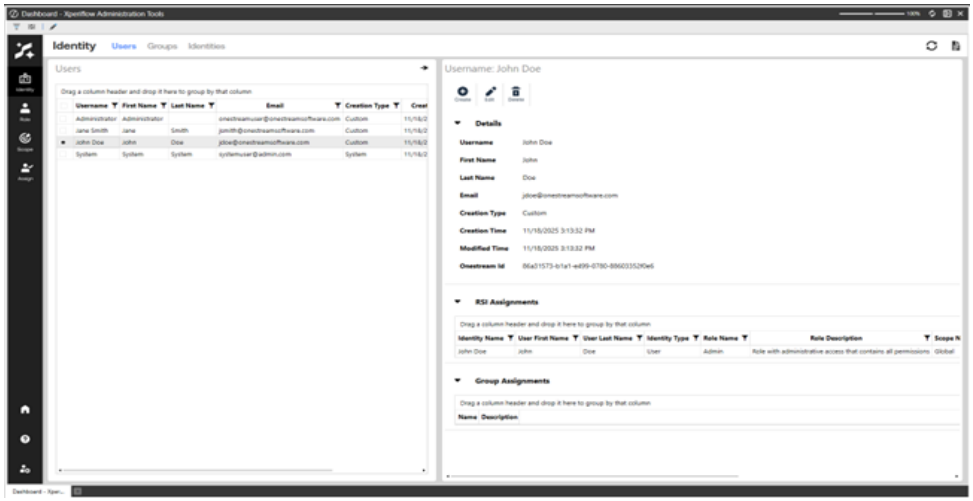
An Identity refers to a single user or a group. Users can belong to one or more groups, and groups can include other sub-groups, creating a parent-child relationship. This structure allows for hierarchical organization of users and groups within the system.

The Identity section is comprised of:

- Users
    - How to Create a User
- Groups
    - How to Setup a Group
    - Identity Assignment (for existing Groups)
- Identities

Users

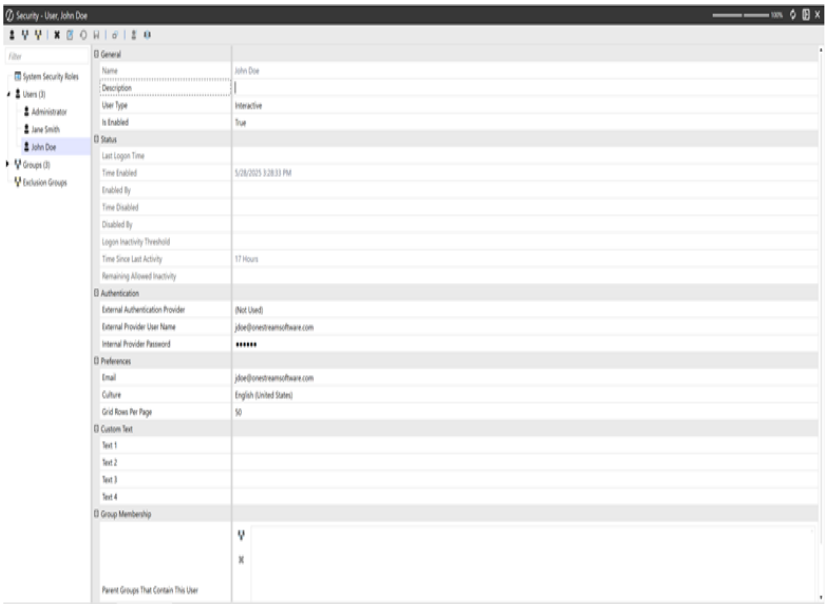
Create, edit, delete, and view existing Xperiflow Administration Tools users. Additionally, you can access user-specific details, such as existing RSI Assignments that have already been made for a particular user. These assignments only appear after they have been created.



Create a User

To manage OneStream users, the OneStream Administration Security settings for creation of users for Xperiflow Administration Tools can be utilized. This can be found within the OneStream Administration tab below.

To verify users are configured properly, check user settings within the OneStream application before attempting to create an Xperiflow user.



To create a user within Xperiflow Administration Tools:

1. Select the **Create** button.
2. Select the OneStream user.
3. Follow the remaining confirmation steps until the user is created.

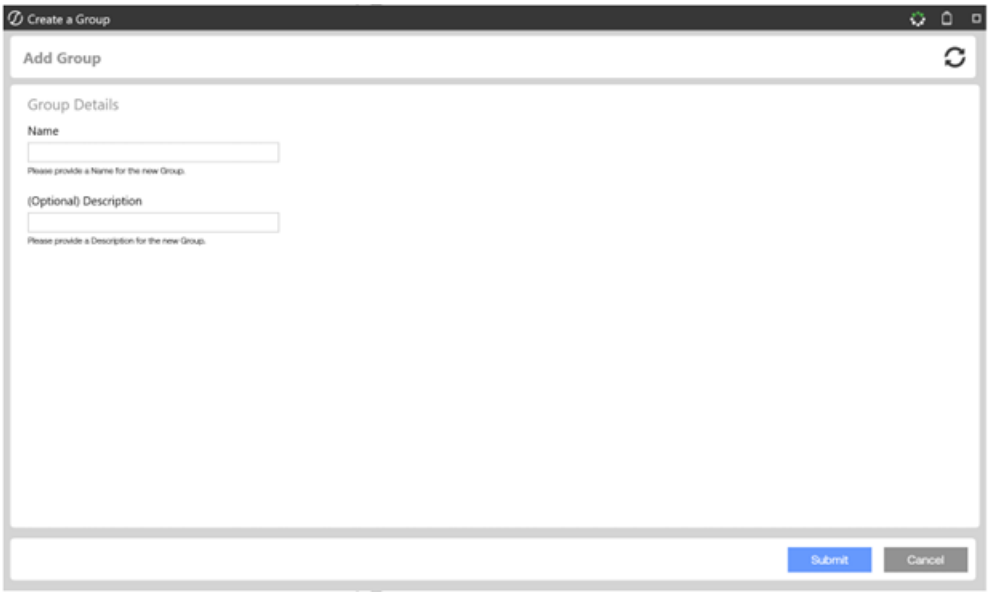
> **NOTE:** If you receive an email error, ensure email is setup correctly within OneStream System Administration as either a preference or External Provider User Name.

Once complete, a User Identity is available for assignment to Group Identities or RSI Assignments.

Groups

Groups are used to contain User Identities for RSI Assignments.

Create a Group



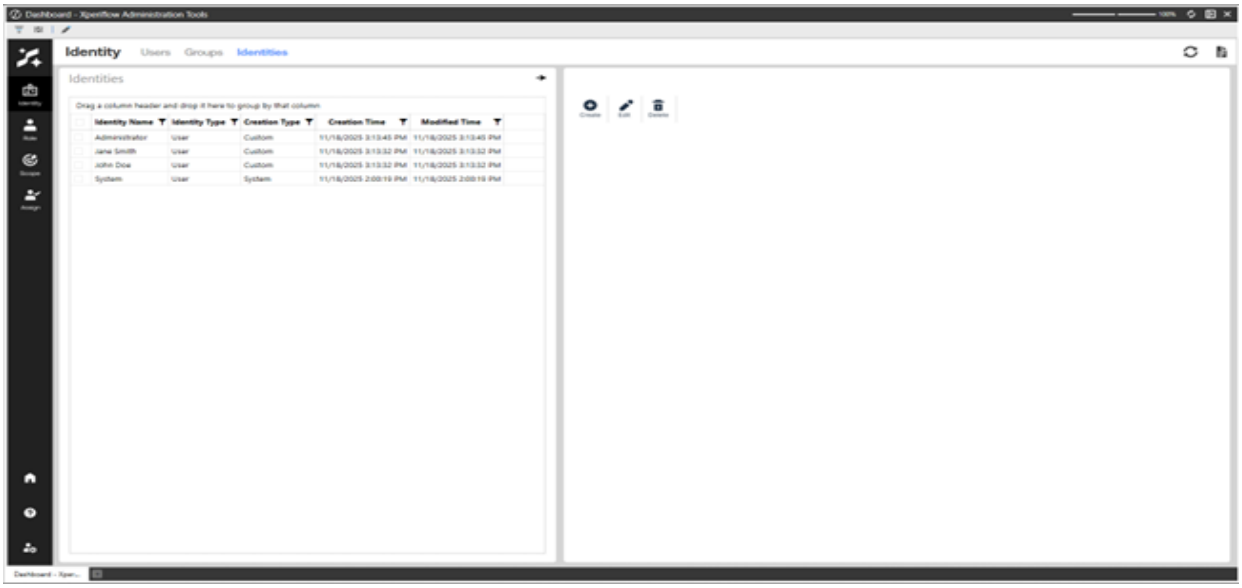
From the Groups Create dialogue box:

1. Enter a **Name** for the group.
2. Enter a **Description** (Optional).
3. Click **Submit**.

Creating an empty group does not result in an effective RSI Assignment. While the RSI Assignment can be made, it does not establish access control for any users unless User Identities or a group containing User Identities are assigned as children. Once the Group Identity container is created, assign User Identities or other groups to it.

Identities

The Identities page brings together the functionality from the Users and Groups pages since they are both Identity types. All functionality present within the Users and Groups pages are available within the Identities page in a combined format.

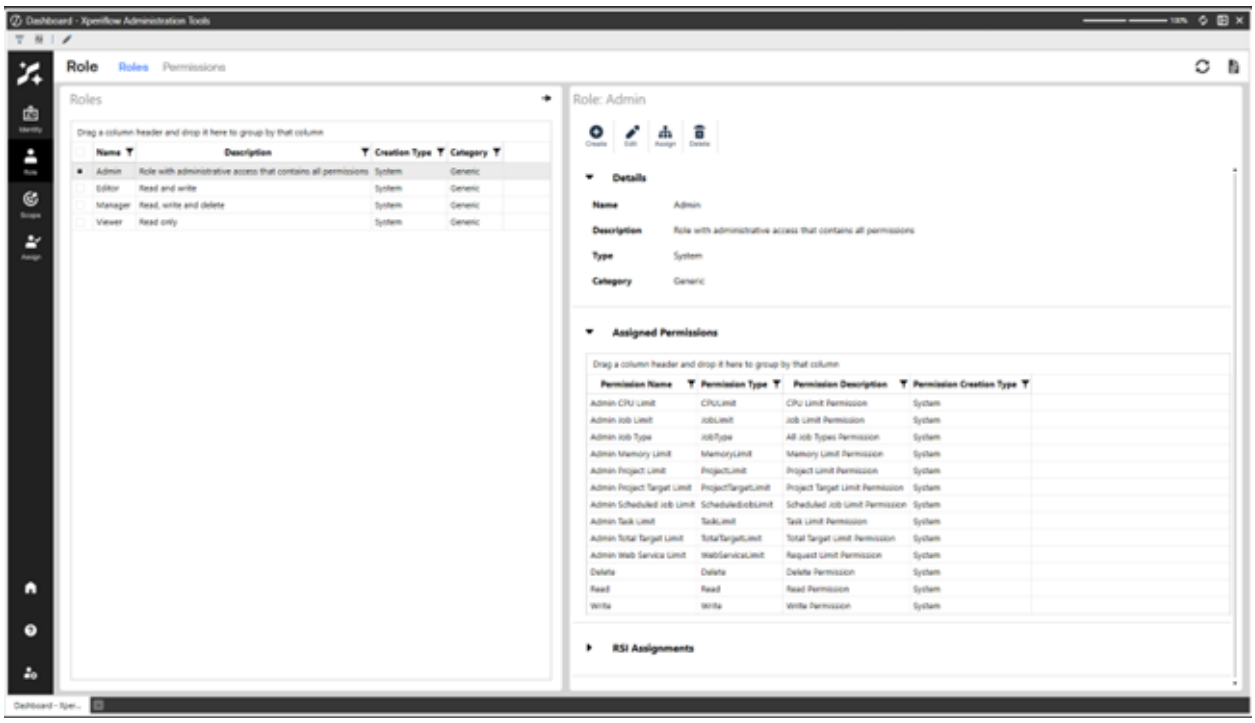


Creating an Identity is similar to the Users and Groups workflow, except you are asked which Identity type to create.

You can use the pages in any combination as they all reconcile with each other. To see all Identities together, use the Identities page. To view them by Identity type, use the individual Identity pages or filter the Identities grid view by Identity Type.

Roles

A Role is a container of permissions that can be assigned to an identity under a scope. Each role can have a number of permissions that will dictate what an identity can do. Without assigning permissions to a Role, the Role has no effect. To see which permissions are assigned to a role, click on it and view the Assigned Permissions drop-down menu.



The default roles that come with Xperiflow Administration Tools are Admin; Viewer; Editor; and Manager. These are System roles that cannot be modified or deleted, but can be assigned to identities.

Admin

This role contains permissions that allow for maximum access across the AI Services environment.

> **Example:** To create an administrators' group, create a group called "Administrators", add Users who require administrator rights. Then, go to the RSI Assignments page and assign the Admin role to the Administrators group under the Global scope. The group can be modified at any time by adding or removing Users from this group.

Viewer

This role contains the Read permission. This allows you to read anything within the scope that the role is applied.

> **Example:** Give a User the Viewer permission inside of a SensibleAI Forecast Project Scope by setting those three items as an RSI assignment. This User would only have read permissions inside of the Project, but not write or delete permissions.

Editor

This role contains both the Read and Write permissions.

> **Example:** Give a User the Editor permission inside of a SensibleAI Forecast Project Scope by setting those three items as an RSI assignment. This User would have read and write permissions inside of the Project, run jobs (write to the project), but not delete permissions.

Manager

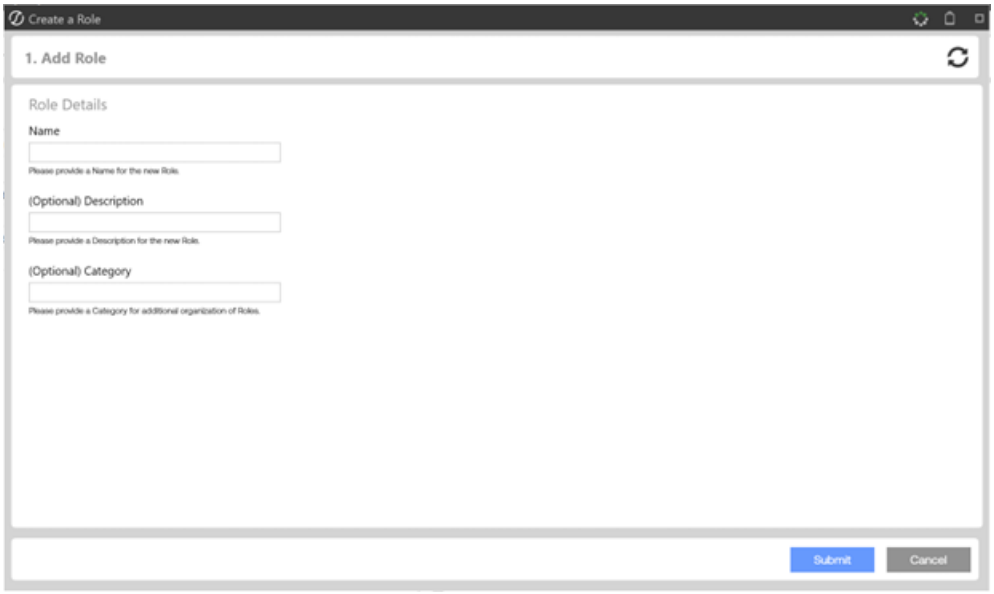
This role contains the Read, Write, and Delete permissions. This role allows for any of these actions to be used under the scope it is applied.

> **NOTE:** When creating a SensibleAI Forecast Project, this Role is automatically applied to the User that creates the project and cannot be deleted. This ensures that the creator always has the ability to manage the project.

Grant Users access by creating an RSI Assignment of any of these three roles to an Identity and that project's scope. The role can also be applied globally by assigning it to the Global scope. This would apply to all project scopes, as the project scopes are all children of the global scope.

> **NOTE:** When creating a SensibleAI Forecast Project, you are given the option to assign which Identities will have Viewer, Editor, and Manager roles inside of this project.

Create a Role



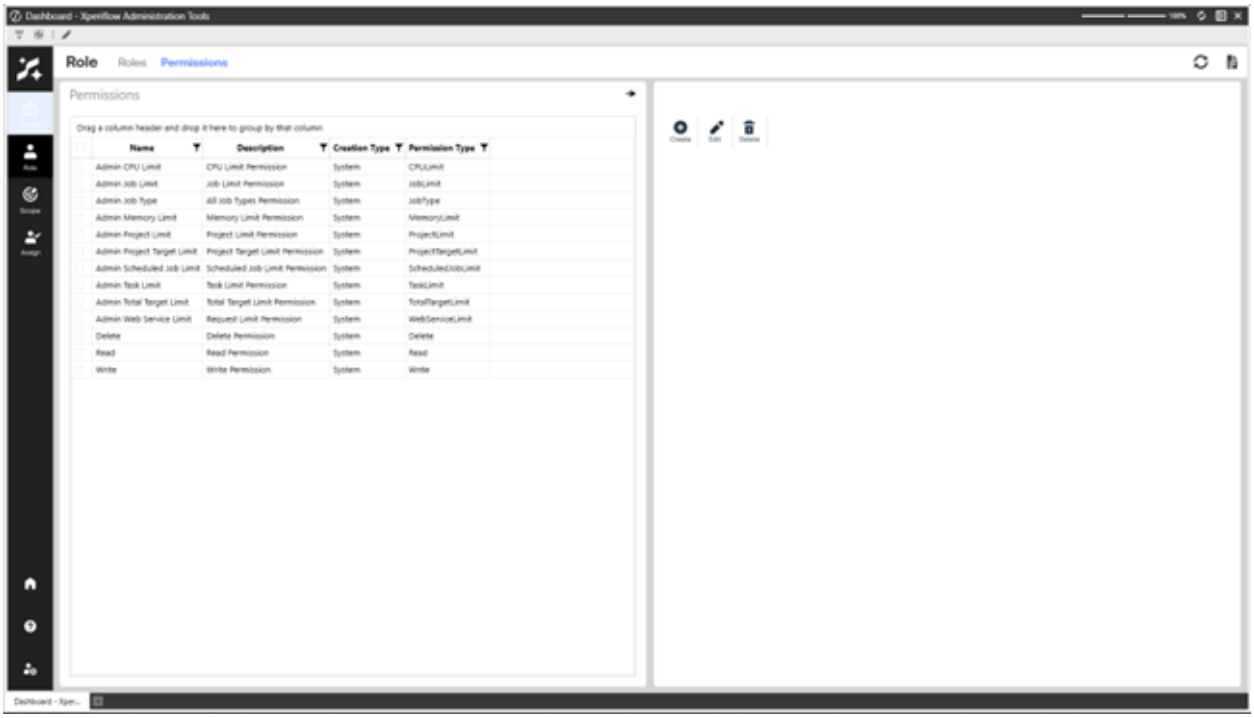
From the Roles page:

1. Select the Create button.
2. Enter a **Name**, **Description** (Optional), and **Category** (Optional)
3. Click **Submit**
4. Follow the remaining confirmation steps until the Role is created.

> **IMPORTANT:** For a role to function, assign permissions and use in an RSI Assignment.

Permissions

For a Role to function, it must have a Permissions assigned to it.



There are two categories of Permissions:

Limit Permissions

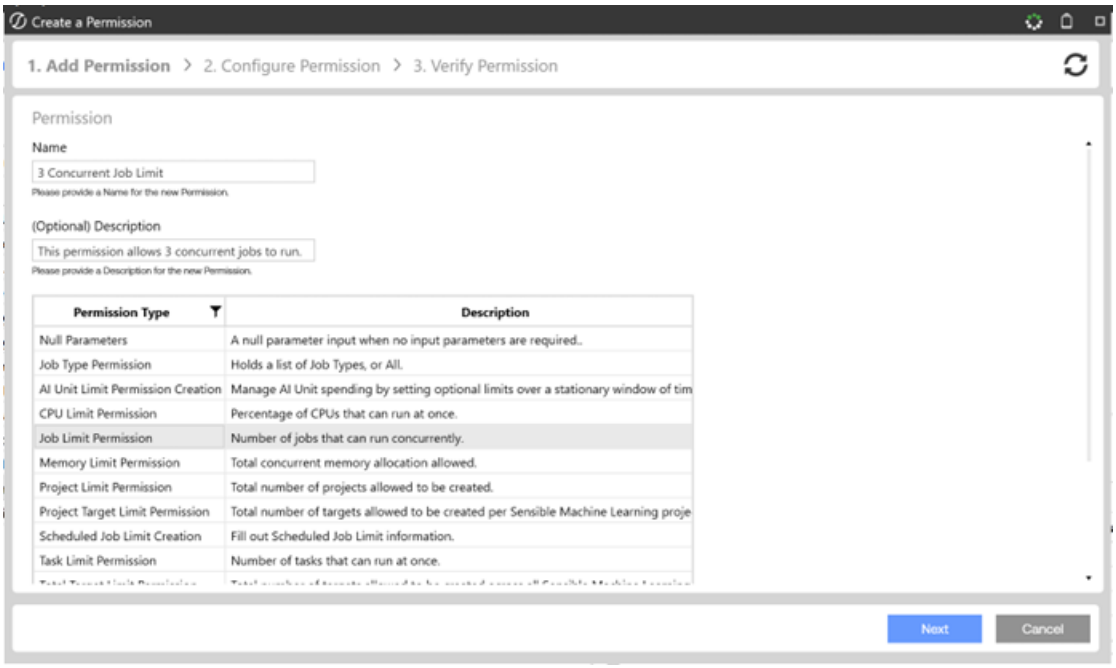
These limit a user from doing an action too many times. There are Project Limits, Job Limits, and Memory Limits. These types of limits are validated against all identities across groups.

> **Example:** If an Identity has a project limit of 10, but is in a group with a project limit of 5, that Identity can only create 5 projects. The associated group is taken into the equation when granting access to create a new project. In order for the user to be able to create 10 projects, they would have to be taken out of any other groups or RSI Assignments with a more restricted role than 10 projects.

Existential Permissions

These are permissions that are granted differently than limits. Read, Write, Delete, and JobType permissions are all considered existential permissions. They are not validated against all identities across groups.

Create a Permission



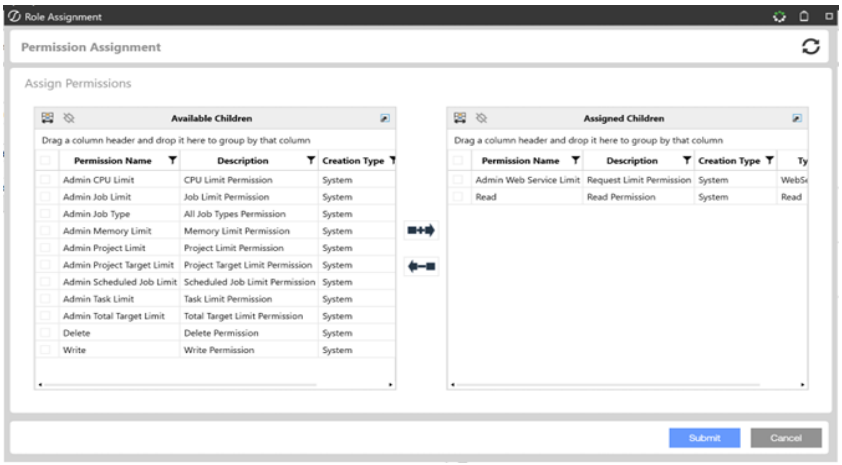
From the Permissions page:

1. Select the **Create** button.
2. Enter a **Name** and **Description** (Optional),
3. Click **Next**.
4. Follow the remaining confirmation steps until the Permission is created.

It is recommended to name the permission to detail its function.

> **Example:** Create a ProjectLimit permission that limits the number of project to 5 named "5 Project Limit".

Assign a Permission



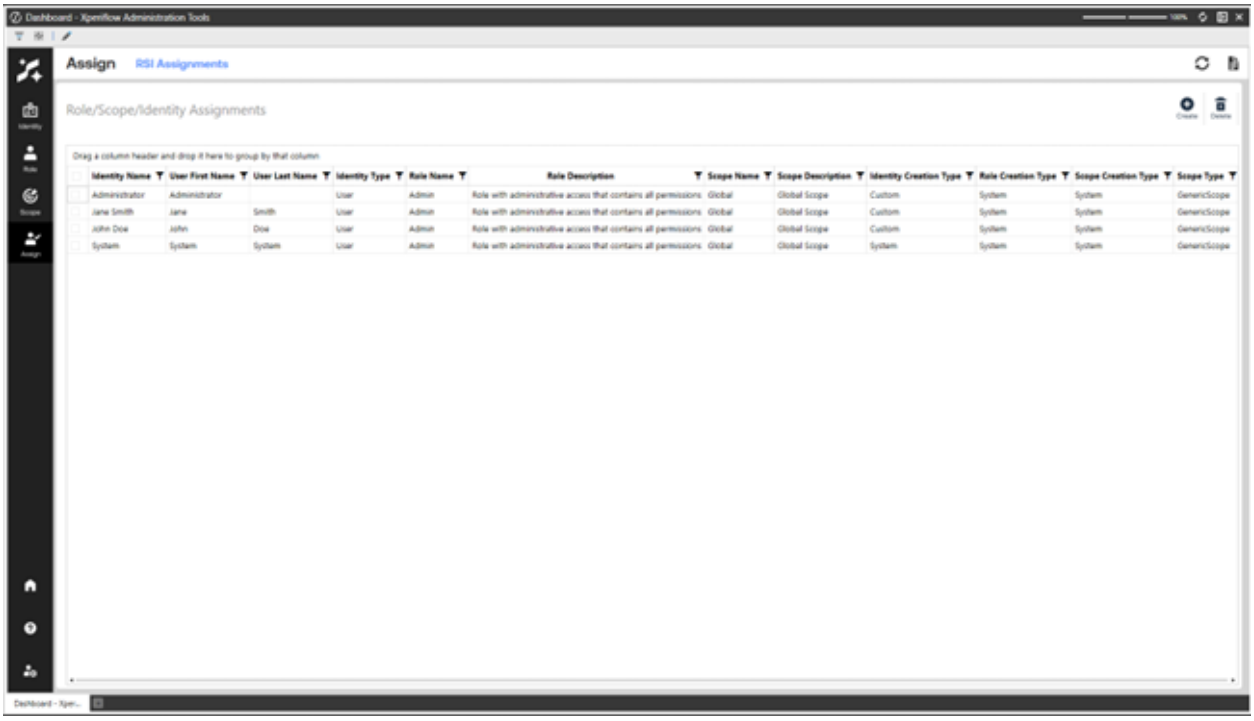
From the Roles page:

1. Select a Role.
2. Click **Permission Assignment**.
3. Move permissions to the right side.
4. Click **Submit**.

> **NOTE:** Only one Permission of each permission type can be assigned to a Role.

RSI Assignments

An RSI Assignment is a Role, Scope, and Identity assignment. From the RSI Assignments page, user create, edit, delete, and view existing Xperiflow Administration Tools RSI Assignments. This is what adds function to these items. To grant access, user must create RSI assignments. This assigns a specific Role to an Identity under a given scope.

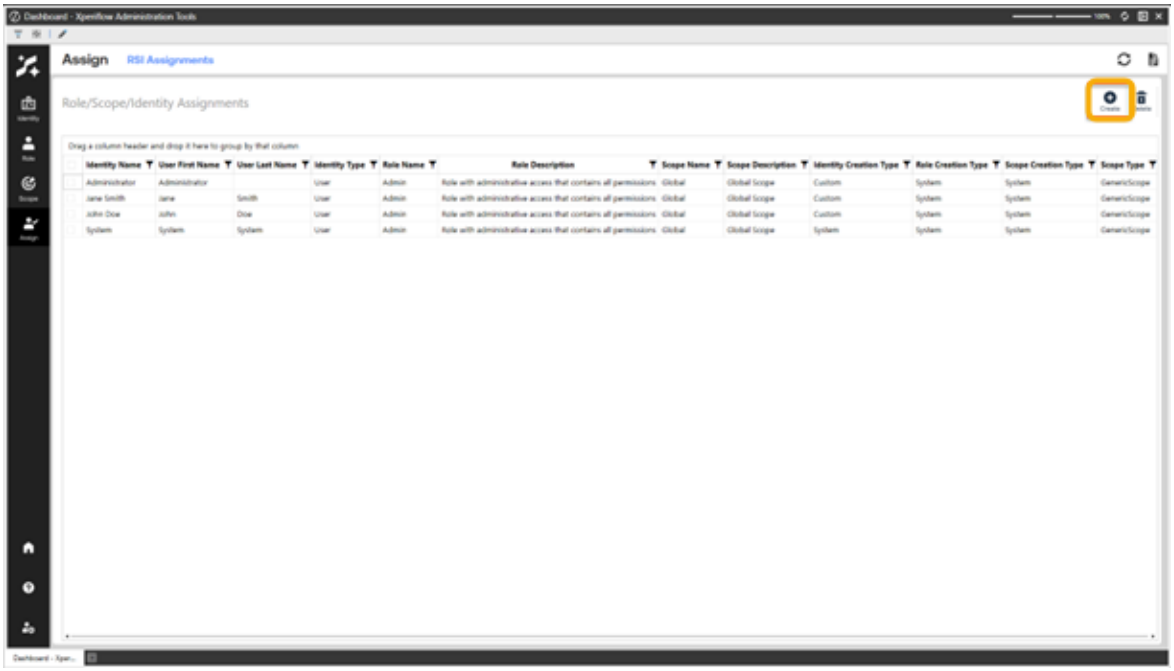


> **Example:** To give the Viewer Role to a User within a Project scope, create an RSI Assignment with the Viewer Role, the chosen User, and a Project scope. To give a User the Viewer Role across all scopes, create an RSI Assignment with the Viewer Role, the chosen User, and the Global scope. This gives Viewer access to all Projects because all projects live within the Global scope.

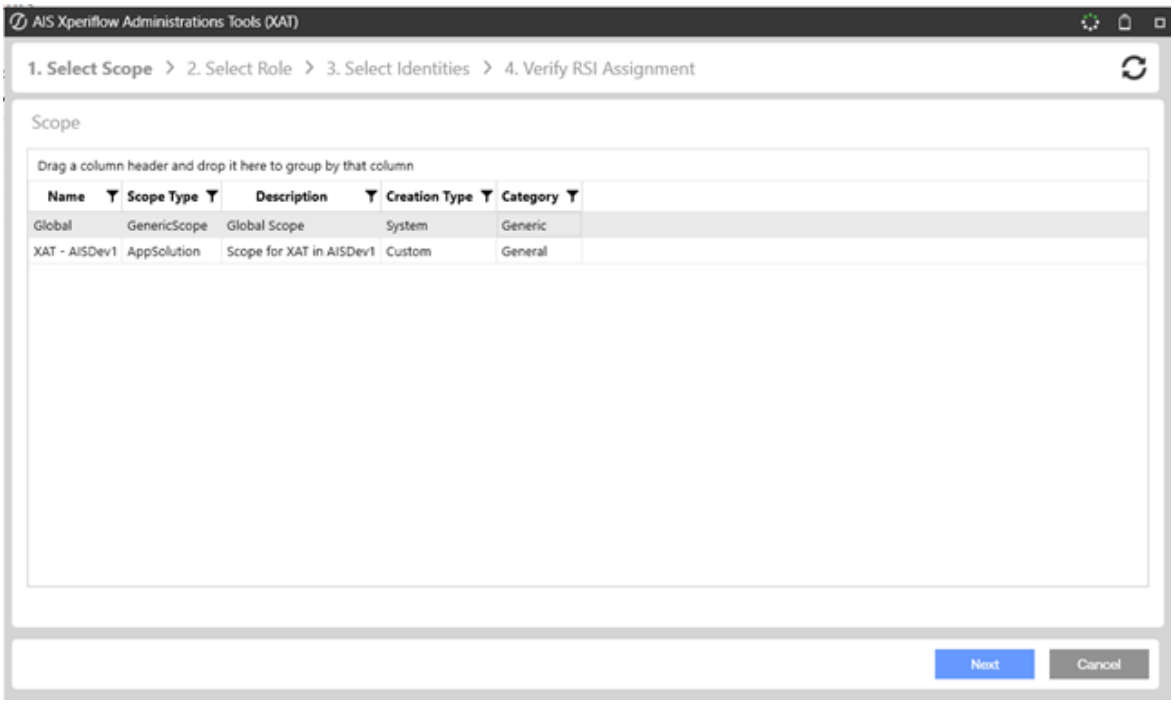
Create an RSI Assignment

From the RSI Assignments page:

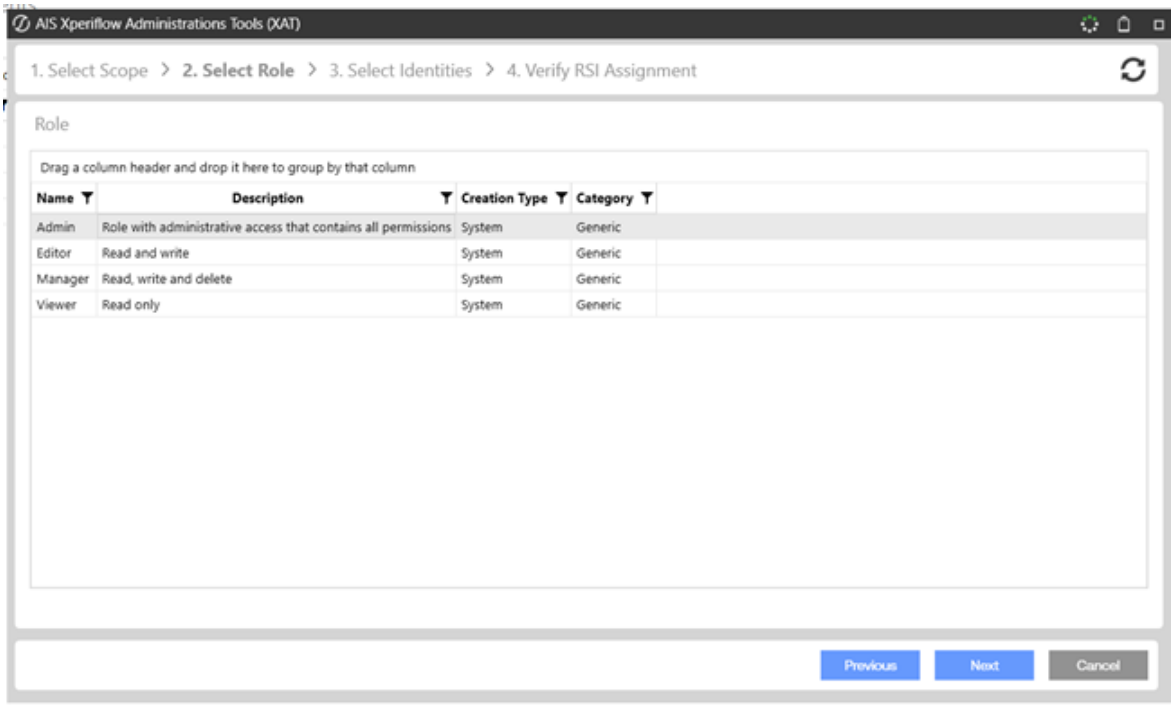
1. Select the **Create** button.



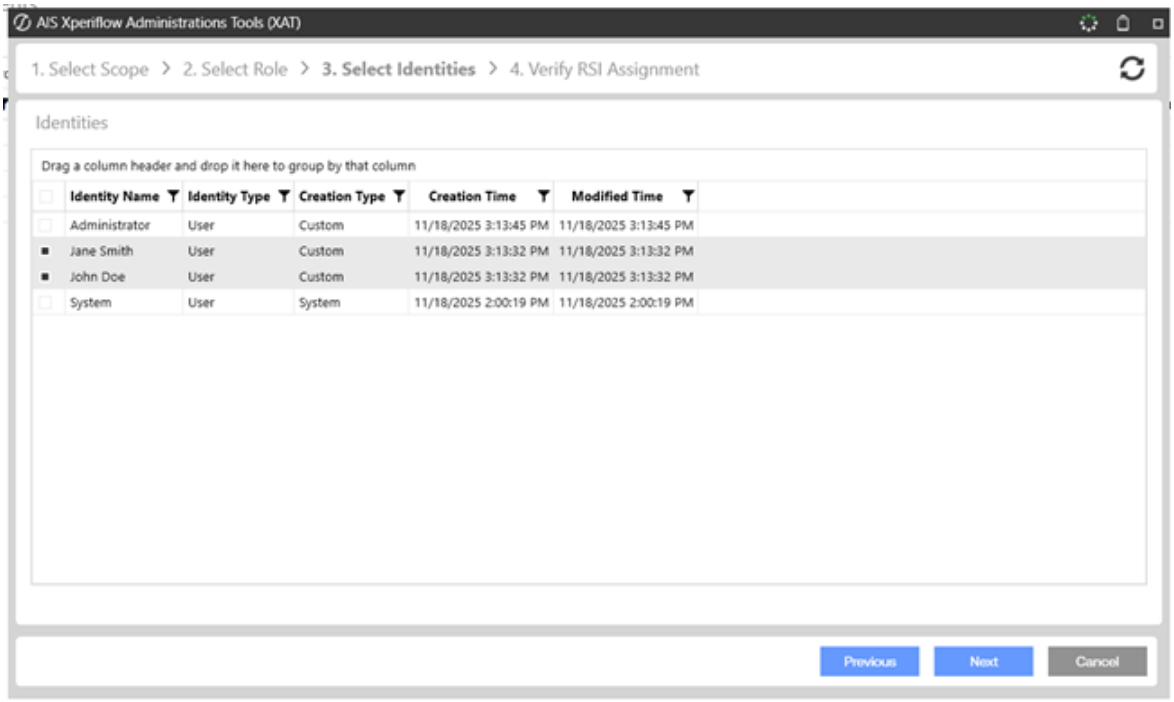
2. Select a scope.



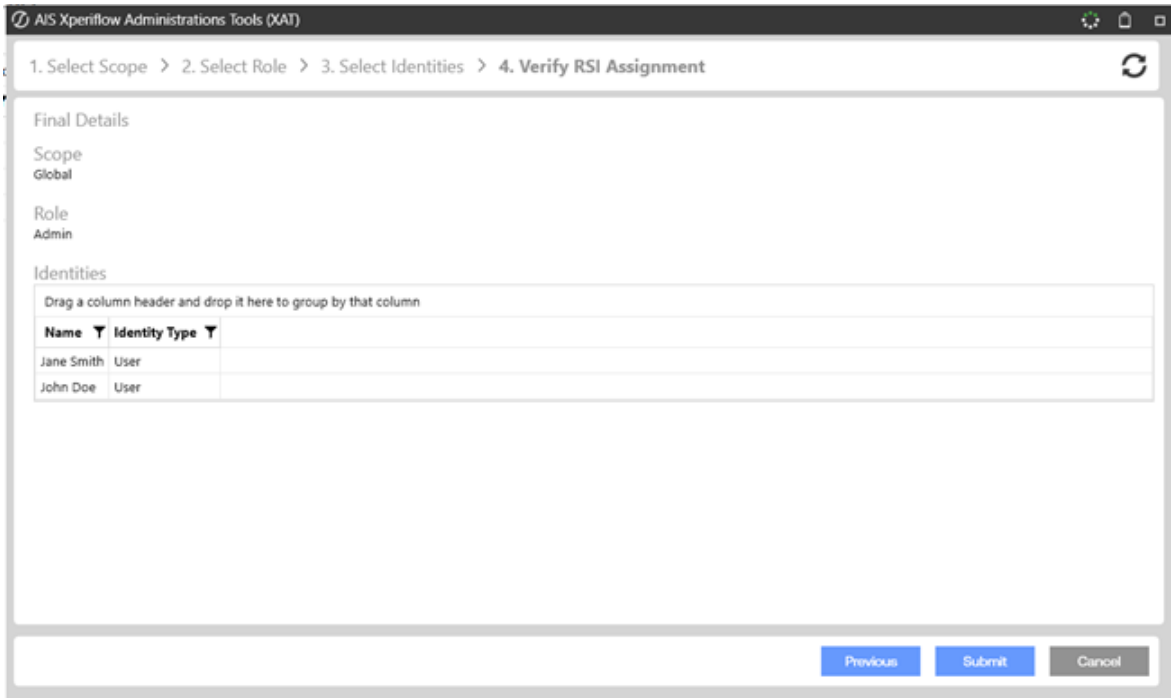
3. Select a role.



4. Select identities. One or more identities can be selected to create the same RSI assignment.



5. Verify the created RSI assignments. Click the **Submit** button.



Scope

Think of a Scope as the “where” within the who (Identity), what (Role), and where of a complete RSI Assignment access control. It defines the boundaries for which access is granted or where the specific policies (granted to Roles) are applied. A Scope can be an application, file, project, and more. For more information, see Scope Types.

By default, Xperiflow Administration Tools includes a global scope, under which all RSI assignments can be made. This is the most popular way to create access controls. Scopes can also have a parent/child relationship. Creating custom scopes and assigning these relations can give finer control within an environment.

> **NOTE:** When creating a custom scope, it is best to assign it as a child to the global scope.

Scope Types

The OneStream Scope Types have varying attributes each that can be combined with parent-child hierarchical assignment.

Generic Scope
A broad, or flexible, Scope that is not tied to any specific resource type. It is used to define boundaries for a variety of contexts, such as group configurations or operations that apply to multiple types of objects or resources.

Project Scope
This Scope controls access to a specific SensibleAI Forecast project and contains a project ID which is unique to each individual project. When a SensibleAI Forecast project is created, a Project Scope is automatically created. Additionally, a Manager role (read, write and delete) is given to the identity who created the project. This can be found in the RSI Assignments page. The Project Scope name will contain the project name. This scope will be deleted when the project is deleted.

> **NOTE:** To grant viewer access to a specific project, find the project scope and create an RSI assignment with the Viewer role, the identity in question, and the project scope in question.

> **IMPORTANT:** The following scopes are created by the AI Services applications themselves. Do not modify them in Xperiflow Administration Tools under any circumstances

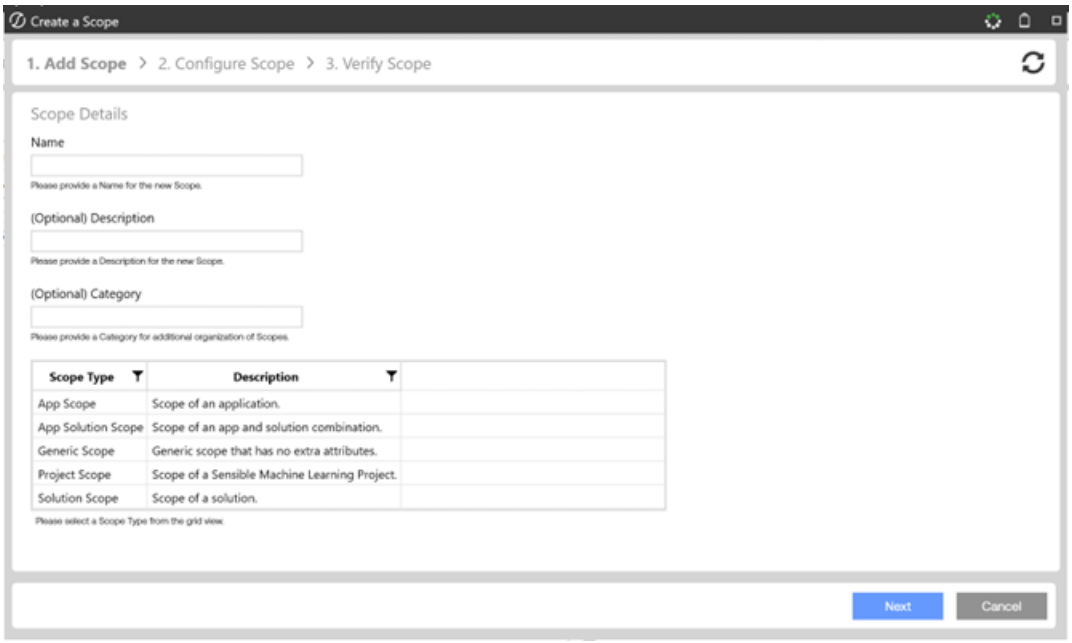
Application (App Scope) Scope
This Scope controls access to specific Applications.

App Solution Scope

This Scope contains attributes for controlling access to both an Application and Scope within a single Scope.

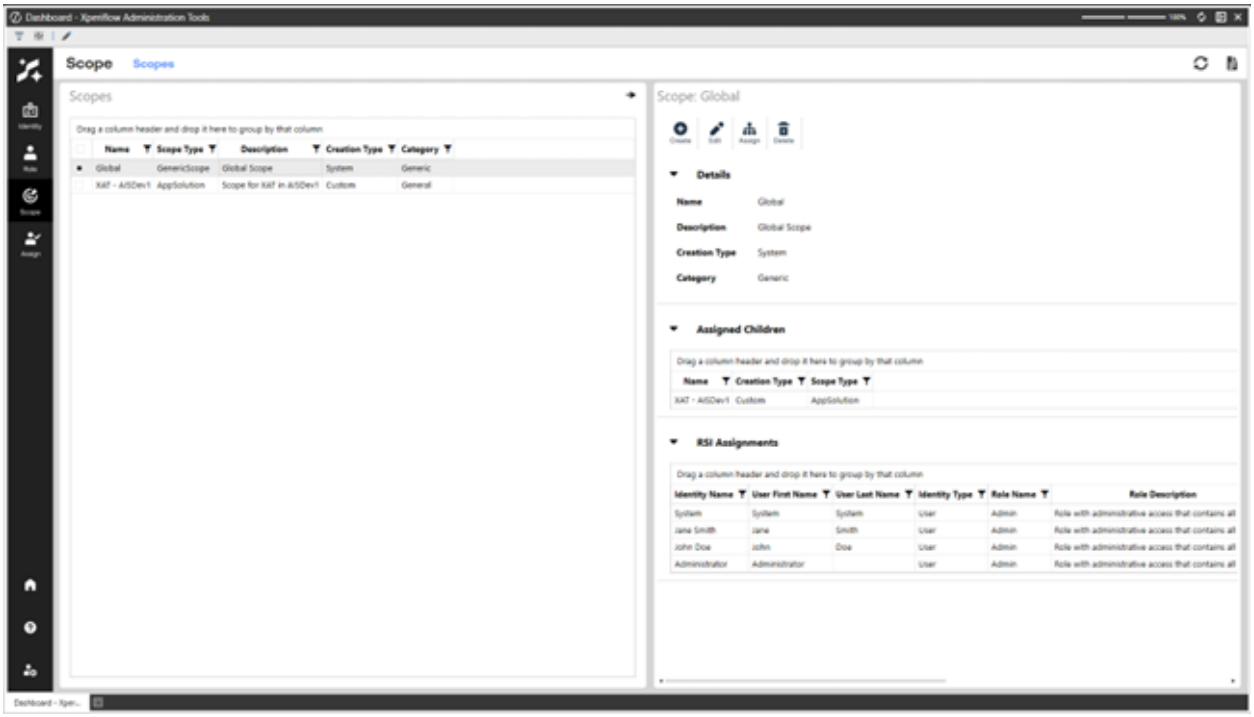
Solution Scope

This Scope contains access for a single solution.



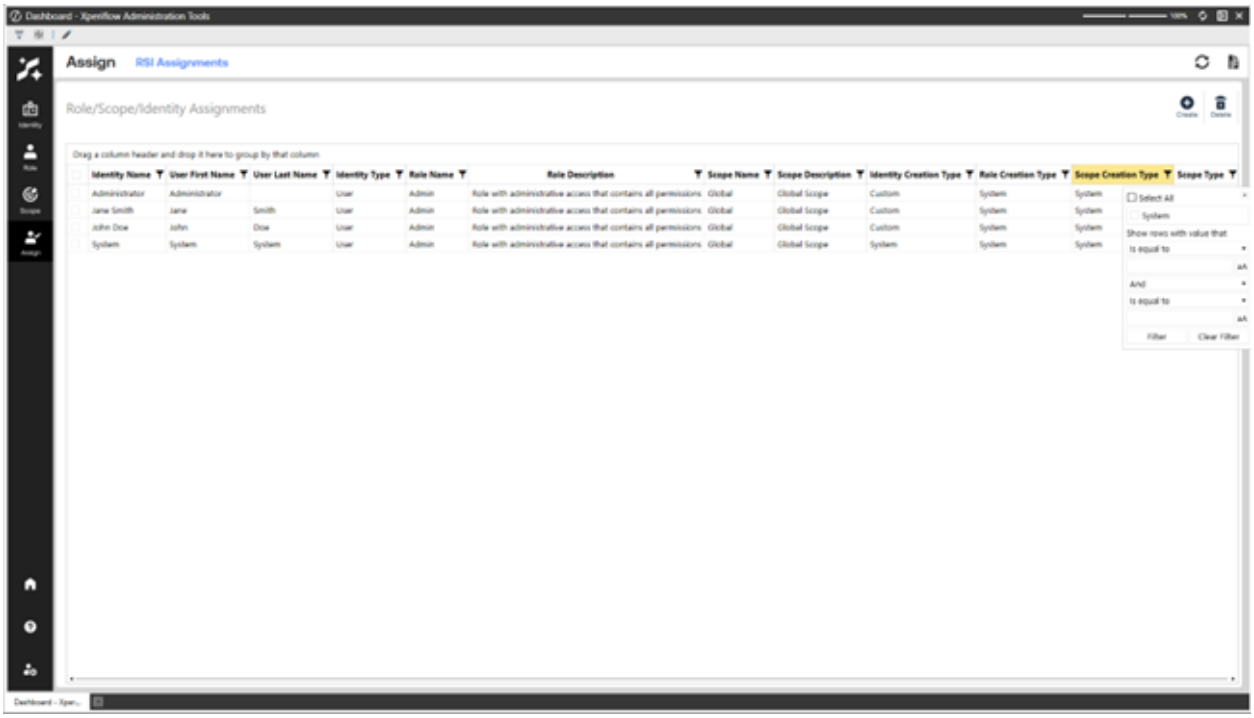
Scopes

On the Scopes page, users can view, create, edit, delete, and assign Scopes. OneStream provided Scopes are System Creation Types and User/Administator created are custom. For single selections, users can expand views below to see Details, Assigned Scopes, and RSI Assignments.



RSI Assignments

View RSI Assignments and filter by Scope Creation Type in the RSI assignment section.


Assign
RSI Assignments
Role/Scope/Identity Assignments
Drag a column header and drop it here to group by that column
Identity Name
User First Name
User Last Name
Identity Type
Role Name
Role Description
Scope Name
Scope Description
Identity Creation Type
Role Creation Type
Scope Creation Type
Scope Type
Administrator
Jane Smith
John Doe
System
Select All
Show rows with value that
Is equal to
And
Filter
Clear Filter

Security Best Practices

Here are some Xperiflow Administration Tools best practices for granting yourself access to other solutions without over-privileging.

Core Rule

Access to each AI Solution is not automatic. Access is only established through an **RSI Assignment** that links one **Identity**, one **Role**, and one **Scope**. Without an **RSI Assignment**, access is not granted.

Security Posture

Avoid distributing the built-in **Administrator** role broadly. Use least privilege by creating custom roles that contain only the permissions required for the work being delegated. System roles exist, but custom roles are the secure default for most teams.

What Granting Access Means in Xperiflow Administration Tools

To allow yourself and others to access other **AI Services** solutions (or manage work across scopes), you must:

1. Ensure your **Identity** exists (**User Identity**).
2. If sufficient Roles/Permissions are not already created or do not meet security needs:
    a. Create the **Permissions** you need (preferably constrained). Double check the existing permissions to see if they satisfy your needs. Sometimes you will find that the built-in roles and permissions can give you the access necessary.
    b. Assign those permissions to a **Role** (custom).
3. Create an **RSI Assignment** that applies that **Role** to your **Identity** under the **Scope** that represents where you need access.

Step-by-Step: Least-Privilege Self-Access Pattern

If you need to create new **Permissions** or **Roles** to meet your specific needs, follow the least-privilege access pattern.

1) Create your Permissions (Bounded by Default)

Xperiflow Administration Tools permissions fall into two functional categories:

- **Limit permissions** restrict counts or capacity (for example, job,project, or memory-related limits). They can be constrained by setting a value, or left unlimited if not set. Limit permissions are validated across identities and groups, so the most restrictive applicable limit effectively wins.
- **Existential permissions** grant capabilities (Read/Write/Delete/JobType) and are not validated the same way across groups.

Implementation rule: Create one permission for each permission type you intend to grant, choosing a limit value where appropriate. Name permissions so the intent is clear.

2) Create a Custom Role and Assign Permissions

A **Role** is only a container until permissions are assigned; without permissions, it has no effect.

From **Roles**:

- Create a custom **Role** (name plus optional description or category).
- Assign permissions to the role using **Permission Assignment**.

Constraint: Only one permission of each permission type can be assigned to a role.

3) Grant Yourself Access With an RSI Assignment (Identity + Role + Scope)

RSI Assignments are the mechanism that turns on access. Create an **RSI Assignment** that applies your Role to your Identity under the correct Scope.

Workflow:

1. Select a **Scope**.
2. Select a **Role**.
3. Select **Identity**.
4. Verify and submit.

Scoping Guidance: Stay as Narrow as Possible

Scopes define where the role applies.

Use these defaults:

- **Global Scope**: Grants access across all project scopes in **SensibleAI Forecast** because project scopes exist under the global scope (use sparingly).
- **Application/App Solution/Solution** scopes: Grant access to that specific **App**, **Solution**, or **App-Solution** combination.
- **Project Scope**: Grants access to a single **SensibleAI Forecast** project. Project scopes are created automatically when projects are created.

Group vs. User Assignment

Prefer assigning roles directly to **Users** instead of **Groups** to reduce ambiguity and unintended privilege inheritance. Groups can be used, but limit permissions may become more restrictive when combined across group memberships.

Project Creation (SensibleAI Forecast)

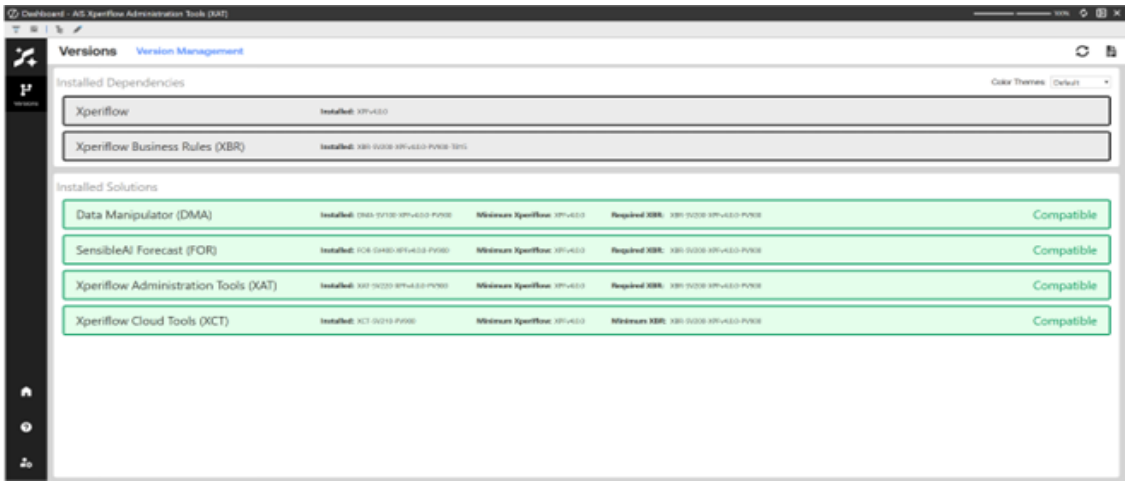
When creating a **SensibleAI Forecast** project, assign **Viewer**, **Editor**, or **Manager** access at creation time to whoever may need access. This will create **RSI Assignments** in Xperiflow Administration Tools automatically. The project creator automatically receives **Manager** access for that project, and it cannot be deleted.

Operational Control: Who Can Access Xperiflow Administration Tools at All

After installation, only **OneStream Administrators** can access Xperiflow Administration Tools by default. Access can be expanded via a designated **Power User** group or role selection in Settings.

Version Management

The Version Management section of Xperiflow Administration Tools allows for an administrator to easily view a snapshot of what the current versions of AI Services solutions are installed, as well as, their compatibility with each dependency installed on the environment. Below are further details on how to effectively use this page.



Installed Dependencies

The “Installed Dependencies” section, displays the current versions of each dependency installed on the AI Services environment. Upon set up an AIS environment, there are the following dependencies installed:

- **Xperiflow**: The machine learning engine used throughout all of the AI Services solutions.
- **Xperiflow Business Rules (XBR)**: Shared library of functions used to interface with the Xperiflow Engine.

Installed Solutions

The “Installed Solutions” section, displays the current versions of each AI Services solution. Each installed solution displays the following:

- **Installed**: The installed version of the solution.
- **Minimum Xperiflow**: The minimum version of Xperiflow that is required for the currently installed version of the solution to be able to run.
- **Required/Minimum XBR**: The minimum or required version of XBR for the currently installed version of the solution to be able to run.
- **Compatibility Label**: An indicator of whether or not the currently installed version of the solution is compatible with the dependencies listed in the “Installed Dependencies” section. Below are the options that will display for this label:
    - **Compatible**: All of the required or minimum dependencies are installed for this solution.
    - **Not Compatible**: One or multiple of the required or minimum dependencies are not installed for this solution.

> **NOTE:** Each solution card will be color coded base on if it is “Compatible” (Green) or “Not Compatible” (Red). There is also the ability to update the Color Theme of the page for users that may need different colors than green and red.

Help and Miscellaneous Information

Display Settings

OneStream 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.

Additionally, OneStream recommends that you adjust the Windows System Display text setting to 100% and do not apply any Custom Scaling options.

Package Contents and Naming Conventions

The package file name contains multiple identifiers that correspond with the platform. Renaming any of the elements contained in a package is discouraged in order to preserve the integrity of the naming conventions.

Example Package Name: XAT_PV9.3.0_SV240_PackageContents.zip

Identifier	Description
XAT	Solution ID
PV9.3.0	Minimum Platform version required to run solution

Identifier	Description
SV240	Solution version
PackageContents	File name

OneStream Solution Modification Considerations

A considerations regarding the modification of OneStream Solutions:

- Major changes to business rules or custom tables within a OneStream 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. If an upgrade is applied to the OneStream Solution, this could overlay and wipe out the changes. This also applies when updating any of the standard reports and dashboards.
- If modifications are made to a OneStream Solution, upgrading to later versions could be more complex. 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, could increase upgrade complexity.