OneStream XF Version 5.0.0 Release Notes

OneStream XF 5.0 represents a major release of our platform. This release includes the first in a series of performance and scalability improvements that we call "X-Scale." It also includes several Reporting and Analysis improvements, Report Alias capabilities, as well as Administrator and End User productivity improvements. These Release Notes list the changes in OneStream XF, other changes in XF MarketPlace solutions during this timeframe and includes an Upgrade Guide.

Release Date: March 05, 2019

Important Notes

Prerequisites

See section of this document entitled *OneStream XF 5.0.0 Upgrade Guide* for important notices and details regarding planning your upgrade. Also refer to *OneStream XF version 4.5.0 Release Notes* if upgrading from a previous release.

Compatibility

See the *OneStream XF 5.0.0 Upgrade Guide* later in this document for information on compatibility of the OneStream Studio and OneStream Excel Add-in versions.

- OneStream XF Server is no longer supported on **Windows Server 2008.** (8443)
- OneStream XF users are encouraged to adopt the OneStream Windows App. The OneStream XF web interface has been developed utilizing Microsoft's **Silverlight** web browser plug-in. Microsoft officially announced in 2012 that development of Silverlight will be discontinued with support scheduled to end in October 2021. The OneStream Windows Application is the replacement for the Silverlight-based browser interface. Customers should note that certain new features may only be available in the OneStream Windows App due to its technology advantages. In addition, users can access OneStream XF through the HTML5-based OneStream Mobile and OneStream Excel Add-in. OneStream will not support the Silverlight-based web browser interface beyond 2021.

Schema Update

OneStream XF 5.0 will require a Database Schema Upgrade to be performed on the Framework and application databases, using the Database Configuration Utility, when upgrading from prior releases. All the OneStream databases must have a complete backup performed prior to initiating the OneStream XF

5.0 upgrade. Customers should anticipate the Schema Update process to take longer than the typical OneStream XF upgrade.

OneStream customers, depending on application size, may want to increase the computing power of the OneStream database instance temporarily to ensure this process completes in a timely manner.

The additional time to process the database scheme update is due to various updates to existing database tables and the creation of new database tables supporting features in this release. As part of this release, Task Activity table historical records, which are within the retention configuration thresholds, are migrated to a new table to support a new table design. A new standard report is available to report Task Activity on either historical or future records. Updates to the Standard Application Reports (RPTA) and Standard System Reports (RPTS) are available on the XF MarketPlace Store.

OneStream XF

X-Scale

OneStream is delivering the first in a series of X-Scale releases to eliminate wasted server capacity and costs while accommodating peak loads when needed. The X-Scale environment is one having a self-regulating, but transparent, mechanism to adjust capacity, detect anomalies, and optimize infrastructure usage and costs. The results are server resources and their capacity, which are capable of being expanded and contracted, manually or automatically.

Enabling the optimization of performance, and understanding the demands on the system, is done through the OneStream XF Smart CPM Sensors. These sensors monitor and manage activity such as queueing tasks, logons, application and database server activity, and the overall health of the environment. Extensive metrics information is now being tracked on web, mobile and application servers as well as database statistics.

A key aspect is to understand and control the OneStream XF Environment. In this release, the new **Environment page** gives graphical insight into how your server sets and database are configured and performing, all directly from a single OneStream XF user interface.

The OneStream XF 5.0 **Queue-Based Smart Load Balancing** X-Scale feature is tailored to monitor the Smart CPM sensors to assign high-resource tasks such as Consolidations, Data Management and Stage Tasks to the servers best suited for the task.

The X-Scale feature set will continue to expand as the demand for efficient, performance driven systems continues to expand.

- Environment Awareness
  - Collect Metrics
  - Insight between functional metrics with system metrics over chosen timeframes
- Environment Control and Health
  - Manage performance
  - Manage servers and database
  - Configuration transparency, reducing reliance on OneStream Support
- Smart Autonomous Servers
  - Automatic Diagnostics
  - Collaborative Task Load Balancing
- Simplify OneStream XF Cloud Upgrades

New Features

Presentation

- Cube Views
    - A new application metadata feature now supports alternate **Reporting Alias** on all editable dimensions. This feature allows application designers to localize applications for users. The Reporting Alias descriptions are defined through a "Culture Codes" property in the OneStream Application Configuration Utility. The property is then enabled as a metadata dimension description property, which can be used in reporting. The application administrator has full control on the display of the property in reporting as a manual setting or dynamically by being defined through each user's Security Preference setting of "Culture". (5098)
    - A new **Conditional Formatting** solution has been added to Cube Views to quickly and easily apply formats to Headers and/or Data Cells. Conditional Formatting applied to a Cube View is presented in all outputs such as Data Explorer, Excel and Reporting. As part of this enhancement, formatting for Header and Cell is done through a new Edit window where the user can directly enter the formatting definition. Alternatively, a graphical interface is available using the Condition and/or Format buttons. These buttons present all the syntax options available for conditional definitions and formatting options. The Conditional Formatting definition can also be saved as a Literal Parameter and applied later to a Cube View by name. (5580),(5581), (5576),(5584),(5585),(8258),(8447)
- Dashboards
    - **XF Project** is for OneStream XF Application Project Designers who are building solutions that span many OneStream XF artifacts, such as Dashboard Maintenance Units, Business Rules, Cubes, Dimensions, Cube Views, etc. A good example is a person designing a solution to be hosted on XF MarketPlace. This application Extract and Load option allows all the defined objects, such as Dashboards and Business Rules, to be collected as a single file export package and to be later reloaded as a package. XF Project is used as a convenient way to organize MarketPlace or similar solutions into a folder structure which can be integrated with a version control system such as "Git." Doing so could enable more than one team member to work on a solution simultaneously. The OneStream XF developer must create an XML file which is the definition for the contents of the XF Project export. (5587)
- Excel and Spreadsheet
    - Multidimensional analysis in **Quick Views** is now faster and more intuitive by allowing users the ability to **directly type** the row and column definitions to worksheet cells to initialize a Quick View. Once initialized, direct typing definitions to cells can also be done to expand or modify a Quick View such as adding new members or expanding a hierarchy. Direct typing also allows the users to pivot and swap dimensions between rows, columns and the point of view. (8271),(8271),(8273),(8274),(8277),(8421),(8693),(8856), (8421)
    - The **Quick View Select Member** toolbar button is now integrated with the selected worksheet member. The default selected member returned in the dialog box will be the member selected as the active cell in the Quick View worksheet. The Quick View Select Member toolbar button is now unique in that selections using this tool bar button will also apply the dimension keyword, such as "A#" as a prefix. This feature is used to assist applying members to worksheets using the "direct typing to cells" method to initialize Quick Views. (8831),(9759)

- o The **Quick View Point of View** panel has been enhanced to display the current Cube POV selection, beyond only displaying the dimension type. (8275), (8272)
- o The Excel Add-In refresh performance has been enhanced with the updated Preference called *Use Minimal Excel Calculation on Refresh*. This now applies to both the *Refresh Worksheet* and *Refresh Workbook* processes. This is for Excel Add-In only, not the Spreadsheet feature in OneStream Windows App. The default is True this will only calculate XF formulas and Excel functions in the active worksheet or workbook. Set to False to revert to a full calculation of all workbooks and all sheets. Performance is best when Excel is set to use Manual Calculation Mode. (9134)

Financial Model

- Application performance will be increased for large server tasks, such as Consolidations, Data Management Tasks and Stage Loads through Smart Load Balancing. This feature more efficiently assigns tasks to servers based on their current usage. While each tasks' processing time may not be shortened, less queuing and more efficient use of server resources results in faster overall processing of tasks.
- The eight User Defined Dimensions can now have customized descriptions to provide the user with better insight into the design and context of each dimension. This feature adds a new property on the **Application Properties / Dimensions** tab for **User Defined Dimension Descriptions**. The descriptions are exposed in all point of view selections, dimension selectors and drill-downs as a display or hover tool-tip, making navigation through the selections easier. (7707), (7708),(7710),(8259),(9469)
- Member Expansions can now be modified for the orientation of the parent member, allowing designers more flexibility in reporting. Parent members can be positioned at the top or the bottom of the expansion by added the letter "R" at the end of the expansion definition. This property is available on the Children, TreeDescendents expansions. Example: E#ParentMember.ChildrenInclusive or E#ParentMember.ChildrenInclusiveR.(8859)
- Two new business rule functions have been added for performance purposes, **RemoveZeros** and **RemoveNoData.**   These functions can be added to calculations to more efficiently process formulas. Use the RemoveNoData function in calculations where there is a substantial amount of No Data cells in Data Units. Use the RemoveZeros function in calculations where there is a substantial amount of No Data or 0.00 cells in Data Units. These two new functions replace the functionality found in certain **Eval** helper functions. (7626)
- Business Rules can now be secured using password protected encryption. This new feature can be enabled for application designers and XF MarketPlace developers to protect content from view or edit. Supporting this feature is a new security role, **EncryptBusinessRules**, which enables the *Encrypt Business Rules* toolbar button. (8094), (8104), (8107), (8112), (8232), (8233), (8252), (8323), (8646), (8873), (10280)

Data Integration

Load Cube performance and data cell update processing has been greatly enhanced in OneStream XF 5.0. Under our test circumstances, we experienced a significant performance improvement in Stage Load Cube processing. Data Cell processes, such as saving data through Excel Set Cell Formulas, Cube View / Forms data entry, Quick View data entry and Data Management Clear Data, are also enhanced.

Load Cube optimization most heavily impacts the write process for "Clear" and "SaveCell" processes. Improved management of the DataCache TimeStamp updates provides performance and scalability benefits for data cell updates. (9249), (9293)

Together, these enhancements were realized in our tests in these ways:

- Better performance on Load Cube times.
- Better performance on Stage Validate Intersections when cell level security is used for a cube.
- Better performance on Data Management Clear Data processes.
- Better performance on data cell updates from Excel/Spreadsheet Set Cell Formulas, Cube Views/Forms and Quick Views

Load Stage performance has been enhanced to support more efficient processing of multi-period data files. The new Import has two new Load Methods: (8638)
- **Replace (All Time):** This method forces a replace of all time values in a multi-period Workflow View. This prevents the need to use an event Business Rule when the source file may not contain all time values each time the file is loaded.
- **Replace Background (All Time, All Source IDs):** This method replaces all Workflow Units in the selected Workflow View, and all Source ID's in a background thread, while the new file parse or connector execution is running. This method should not be used in situations when a partial replace data file is used and there are multiple Source ID's. This is because all the Source ID's will be deleted when the process is executed.

Foundation

- The new page, **Environment**, has been added to the **System** tab **Tools.** The Environment page is designed to give both IT and business users a way to manage and optimize their applications and the environment that is running under. Using the Environment page, the user can monitor the XF environment, isolate bottlenecks, look at properties and configuration changes, and scale in/out application servers and database resources if needed. For more details on the Environment page, see the *Design and Reference Guide* as well as the *Installation and Configuration Guide.*
- **Queue-Based Smart Load Balance** for intensive server tasks will provide better server utilization. Once a task is queued, the server will and assign the task to the server that is best suited to run the process. Each task is evaluated for optimal utilization on the current CPU usage and the number of tasks running.
- Application performance is maximized by adhering to best practices when designing Business Rules. Using Microsoft's latest .NET Roslyn compiler, OneStream XF 5.0 is exposing **Warning Messages** during the compile process. The warning messages will write to the **Error Log** whenever the application compiles Business Rules. These Warning Messages are designed to guide the customer to inefficient or incorrect rules which may impact application performance. Warning messages should be corrected to achieve maximum system performance.
- The OneStream Application Server Configuration Utility now contains four new settings in the *Monitoring* section to provide the ability to define the automatic recycling of the IIS application pools. These settings are AutoRecycleNumRunningHours, AutoRecycleStartHourUtc, AutoRecycleEndHourUtc and AutoRecycleMaxPauseTimeMins. (6412)

Fixed

- (6200) Dashboard Map Component Throws displays with active links and formatting using business rules.
- (8677) The "&" Character is no longer a restricted character for use in Metadata for Extensible Documents.
- (9240) Setting a logon agreement through the Configuration file in SSO enabled Silverlight Web Applications, the logon agreement will display independently from the authentication type.
- (9302) User ID's can be deleted from the OneStream XF Security configuration without impacting the audit history.
- (9310) Selecting a top-level Workflow will automatically de-select any child Workflow.

- (9512) OneStream Excel Add-In Functions, such as XFGetMemberProperty, can reference a worksheet cell to define a formula property and will not be affected by display the cell display settings.
- (8984) The OneStream Application Server Configuration Utility is updated to display an error if the Server Sets property for Scaling Type is set to reference a business rule, and no rule is assigned to the **System Business Rule Name** property.
- (8824) After Scrolling tabs on a multi-tab Spreadsheet Form Templates, using the scroll buttons, the selected worksheet will correctly display as the active worksheet.
- (7609) Journal export and import of *.csv files, and *.xfj templates have been enhanced to support Scenarios designed as Yearly, Half, Quarterly Workflow Tracking Frequency. A new property has been added to the Journal Header definition, **CubeTimeName** to define the period a journal is posted within the Workflow.
- (10344) The Workflow Certification step processing has been improved to better support Workflow designs with very large numbers of base input Workflows.

Changed

Foundation

- The **Task Activity** log now includes an additional database column **Assigned Time** to reflect the time the task is assigned to a server for processing as part of **Queue-Based Smart Load Balancing**. (9496)
- The administrator can define the function of each server on the Web Server Configuration Settings under **Application Servers.** Each server can be designated as for "Used for Consolidation," "Used for Stage," "Used for Data Management," "Used for General Access" or "Used for Stage Load" by assigning each as **True** or **False**. The "Used for Consolidation" setting enables the server to be used in Smart Load Balancing. (6080),(5901)
- ConfigurationFolder key has been added to the MVC Web Configuration file. The configuration folder is used to point to the XF config files. This key has been added to the MVC Web Configuration file with the default value as blank and is automatically populated when the ASP.Net Configuration file is directed to the MVC directory in the OneStream XF Server Configuration Utility. (6854)
- Session ID columns has been removed from displaying in the Logon Activity Page. (9466)

Known Issues

- Report Preview Error in Cube View Sharing Rows/Columns with same Name in Shared Cube Views. (2651)
- When opening a Workbook that contains OneStream Formulas/Cube Views/Quick Views directly from the file system before opening a blank Excel workbook and logging into the OneStream Excel Add-In, the user may receive a "Cannot run the macro 'XFInternalSetConnectionInfo' error. As a workaround, the user can open Excel, log in and then open the XLSX file, or they can launch the file from within OneStream if it is in the File Repository. (5024)
- To have SSL security configured between the OneStream Application and Web Servers, Application Pools must use a local administrator account rather than a domain account. (4603)
- Business Rule which contains a ~ with passed parameters will only run when the user running it has a Culture Code set to English. Workaround is to use a different parameter separator other than ~ in rules for time being. Planned for next major release. (5958)
- Please note that the Windows 2008 Server will no longer be supported for App Server and Web Server in our next major planned release. On January 14, 2020, support for Windows Server 2008 and 2008 R2 will end (8443)

- SAML 2.0 does not initiate an authentication flow with a username and password from the service provider therefore Client API authentication with SAML 2.0 is not supported. This may limit the automation capabilities available. (9158).
- Excel Extensible Documents may not retain the margin and print area formatting when assigned to a OneStream Book of reports. (9052)
- Viewing Dashboards in the Silverlight Web Browser which are designed to contain more than six levels of nested Dashboards may not render as expected. Users encountering this issue should use the OneStream Windows Application interface as a solution. (10136), (10102)
- When viewing a Spreadsheet Form in the OneStream XF Windows Application, the Ribbon toolbar control to Show Gridlines or Headings does not display a "check mark" when the control is activated. (9895)
- Users editing dimension hierarchies through the Silverlight-based web interface may experience an intermittent issue where the Dimension Library page become unavailable. Use of the OneStream Windows Application is the recommended solution for application management to avoid this situation. (10274)

Managing a OneStream Environment

Management of all changes to the OneStream XF system are recommended to follow best practice procedures. Whether the changes derive from a OneStream software upgrade, or through regular application maintenance, all changes are recommended to be first deployed and tested in a development environment. There are additional benefits of making a recent copy of the production OneStream XF Application database, renaming it and using this as a base for these changes. Search for "Rename Application" in the OneStream XF Installation and Configuration Guide for instructions on doing so.

Prior to being deployed to a production environment, it is recommended to extract changes from the development environment and assess this deployment of changes in a separate test environment. See relevant chapters such as *Extracting and Loading Dimensions*.

Deploying changes to a production environment should avoid times during high load and high application activity. Changes to these types of application artifacts especially should not be performed against a production environment experiencing heavy activity:

- Business Rules, whether they contain Global functions or not
- Confirmation Rules
- Metadata, especially when using member formulas

Applying changes like this while the production system is under a high level of activity may have a negative impact on servers and have the potential to cause running processes to produce an error.

Standard environments are recommended to schedule production changes during slow periods or non-work hours. Large environments should consider using the *Pause* functionality within the *Environment* tab to allow activity to wind down. These large environment managers should also consider the XF Marketplace solution, *Process Blocker*, which allows a pause of critical processes to perform maintenance on the system, without having to shut down the entire application. Process Blocker allows current tasks to be completed, while any new requests are queued, allowing the changes to be applied safely and effectively. Once these changes are in place, it is recommended to significantly limit the ability for users to make such changes during high volume.

It is key that servers get a chance to recycle for good system memory health. OneStream Servers have a setting to do just that after a few hours. This is set to every 2 hours by default and can be configured in IIS in the *OneStreamAppAppPool* settings in the *Idle Time-out* property. In a standard environment, this

tends to happen naturally by the servers winding down after this period of inactivity. For active, global environments with Data Management Sequences regularly being executed, a recycle of IIS is recommended every 24 hours for these OneStream App Servers. Please discuss this situation with OneStream Support to find what is recommended, as each situation may vary.

Contacting Support

OneStream Support can be contacted at any time by first registering at our support site at http://support.onestreamsoftware.com and then emailing support@onestreamsoftware.com. To gain access to the XF MarketPlace, email OneStream Support.

OneStream XF MarketPlace Updates

The following updates were made to XF MarketPlace solutions since the OneStream XF 4.5.0 Release in October 2018. Refer to the specific solution's release notes in XF MarketPlace for more details on these improvements.

New
Tax Provision Starter Kit (TXP)

The Tax Provision Starter Kit (TXP) solution provides OneStream customers with an integrated easy to manage application to automate and streamline the tax provision process within the OneStream XF CPM platform. The Tax Provision Starter Kit is installed with Customer's OneStream XF Financial Model Applications but will utilize its own distinct Cube within OneStream XF. This provides the ability to leverage Financial Model data that may already be in OneStream XF, while still retaining the ability for Tax organizations to manage separate and distinct data and Workflow in OneStream XF.

MarketPlace Solution Tools (MST)

MarketPlace Solution Tools provides OneStream XF administrators a suite of features that can be used across different XF MarketPlace solutions. The initial version includes the Solution Copy feature as the first solution tool. The *Solution Copy* feature provides administrators with 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.

Changed
Diagnostics 123

The theme for this release is OneStream XF 5.0.0 compatibility. The XF 5.0.0 Environment Monitoring functionality is now used to provide source environment information for analysis and reporting in Diagnostics 123. Redundant functionality has been removed from the Diagnostics 123 solution.

Snippet Editor

The theme of this release is new Snippets related to OneStream XF 5.0.0 functionality, such as Remove Zero Data and Remove NoData. Also included are best practices Snippets such as Workflow status, common financial logic including getting the days in a period, rename dim, metadata helpers and a Stage-to-Stage Connector example.

Provision Request Manager (PRM)

The theme of this release is minor updates and defect resolution and OneStream XF 5.0.0 compatibility.

Task Manager

The latest release includes OneStream XF 5.0.0 compatibility. The theme of this release is incremental improvements including a revamped Scorecard and a new Grid View to view and work on Tasks, Task Instructions, and additional Task actions.

User Management Console

The theme of this User Management Console (UMC) release is compatibility with OneStream XF 5.0.0 and minor user interface enhancements.

Standard Application Reports (RPTA) and related retirement of Standard Metadata Audit (RPTMA) Solution

The latest release includes OneStream XF 5.0.0 compatibility. This release includes the latest Standard Application Reports. This release is also a merger of selected Metadata Audit (RPTMA) Reports. The RPTMA solution will no longer be updated now that all reports are merged into this solution.

Standard System Reports (RPTS)

The latest release includes OneStream XF 5.0.0 compatibility. This release includes the new *Archived Task Activity* report and the latest Standard System Reports that are now saved in a new format.

Account Reconciliations (RCM)

The theme of this release is defect resolution with minor user interface improvements. Updated various interface styles and formatting.

Reporting Compliance (TCR)

The theme of this release is to improve Reporting Compliance to better support adjustments such as leasing contracts with new audit features. Added new Solution Audit feature for logging modifications to Register data, Allocations, Calculation Plans and a defined set of other changes. Audit Dashboard reporting is provided to review Solution Audit changes. There were also other minor improvements and defect resolution.

Parcel Service (OPS)

The theme of this release is defect resolution with minor improvements (folder management).

OneStream XF 5.0.0 Upgrade Guide

This document provides an overview of OneStream XF's upgrade process when moving from an earlier OneStream XF release to 5.0.0. The anticipated audience for the upgrade process is Information Technology professionals responsible for installing, maintaining and supporting OneStream XF.

Review the following **OneStream XF 5.0.0 requirements prior to scheduling an upgrade** and any related notes in the **_OneStream XF Installation and Configuration Guide_**, available on XF MarketPlace.

1.) If upgrading from OneStream XF version 4.1.x or earlier, OneStream updated to **.NET 4.7** to stay current on the latest version of the .NET Framework, which is required for Microsoft's security standards and for advanced features. Please note, Microsoft provides the .NET Framework 4.7 optional update through standard Microsoft Windows Updates.
2.) The most recent **database schema update** was 4.2.0. There **is** a need for a database schema update if upgrading from 4.2.x or 4.3.x to version 5.0.0. If upgrading from a version 4.2.0 or earlier, Database Schema updates must be implemented as part of the upgrade on every Application and Framework database. Full Database Backups are required.
3.) The 5.0.0 version of the **OneStream Studio** and **OneStream Excel Add-in** are not backward compatible with prior versions and must be updated. These either need to be uninstalled and reinstalled or use the Client Updater. See _OneStream XF Installation and Configuration Guide_ for details under the section "Upgrade or Downgrade via OneStream."
4.) If upgrading from a version 4.2.0 or earlier, it is required that all OneStream Applications complete the **_Compile All Business Rules_** _and Formulas to Check for Syntax_ process as part of the upgrade process.

Scheduling the Upgrade

It is recommended that this upgrade be performed by the OneStream Software Technical Support Team. Contact OneStream Technical Support to schedule this upgrade: support@onestreamsoftware.com.

Pre-Installation Upgrade Checklist

The checklist below details the items that should be completed prior to beginning the upgrade operation:

Step 1: Perform a **full backup of all OneStream databases.**

Step 2: App Pool Service Account must use an Administrator ID or be added to the Performance Monitors User Group and Performance Log Users Group.

Step 3: Download OneStream XF Installation Software from the OneStream XF MarketPlace

1.) Login to the OneStream XF MarketPlace and select **Software Download** in order to access the latest version of OneStream XF.
2.) Download the **Full Package** or **Server Software** to acquire the appropriate setup files for the server installation.

Step 4: Verify the Location of the OneStream XF Configuration Files

1.) On each OneStream server, navigate to the OneStream Server Configuration Utility
   (Start > Programs > OneStream Software > Server Configuration Utility)
2.) Right-click on the utility and select **Run as Administrator**

3.) Choose *File > Open ASP.NET Configuration File* and browse to *C:\Program Files\OneStream Software\OneStreamAppRoot\OneStreamApp* on application servers, or *C:\Program Files\OneStream Software\OneStreamWebRoot\OneStreamWeb,* on web servers, and choose the **web.config** file
4.) The web.config will open and display the path to the corresponding configuration files: **XFAppServerConfig.xml and XFWebServerConfig.xml**
5.) Take a copy of the config file
6.) Copy and paste the configuration file path in a place that is easily accessible as this will need to be re-entered following the upgrade process
7.) Close the file, and select **No** when prompted to save
8.) Close the OneStream Server Configuration Utility

Step 5: Verify the OneStream Service Account in Internet Information Services Manager *(IIS)*

1.) Service Account must be an Admin ID or in the Performance Log User and Performance Monitor Users groups.
This ID is necessary to use Queuing and CPU Monitoring.
2.) On each OneStream server, launch Internet Information Services Manager
(Start > Control Panel > Administrative Tools > Internet Information Services (IIS) Manager)
3.) Expand the server in the left pane and select **Application Pools**
This will display a list of application pools in the right pane. The OneStreamAppAppPool and OneStreamWebAppPool are displayed in the Identity column. Note this windows account and its password as this will need to be re-entered in IIS following the upgrade process.

Step 6: Verify OneStream Application Server with OneStream Database Configuration Utility Installed

On each OneStream application server, navigate to *Start > Programs > OneStream Software* and verify which application server has the OneStream Database Configuration Utility installed.

Step 7: Verify OneStream Application Server with OneStream Studio Installed *(if applicable)*

On each OneStream application server, navigate to *Start > Programs > OneStream Software* and verify which application server(s) has OneStream Studio installed. This will need to be re-installed on the application server during the upgrade operation.

Upgrading System Components
The following section describes the process used to upgrade the complete OneStream XF system.

Step 1: Stop OneStream Application Pools Prior to Uninstall

1.) On each OneStream server, launch Internet Information Services Manager
(Start > Control Panel > Administrative Tools > Internet Information Services (IIS) Manager)
2.) Expand the server in the left pane and select **Application Pools**
This will display a list of application pools in the right pane.
3.) Stop the **OneStreamAppAppPool** and/or **OneStreamWebAppPool** by right-clicking on each and selecting **Stop** (Note: Close any open OneStream Configuration Utilities)
4.) Repeat these steps for each server in the environment

Step 2: Uninstall the OneStream XF Servers Package
In order to upgrade to a new release, the previous software release must be uninstalled from all servers before the new release can be installed on each server in the environment.

1.) Navigate to *Control Panel > Programs and Features > Uninstall a Program* and locate the OneStream Servers component in the list
2.) Right-click on the **OneStream Servers component** and select **Uninstall**
3.) If OneStream Studio is also installed, locate the **OneStream Studio component** in the list, right-click and select **Uninstall**

Step 3: Re-Install the OneStream XF Servers Package on an Application Server

This is the primary OneStream XF installation package. This wizard based package is used to install a complete server setup which includes web server, application server, and all utilities. This can also be used to do a custom install which allows the user to pick and choose the appropriate components for the server type being built.

1.) Browse to the OneStream Servers package, right-click on **Setup.exe** and select **Run as Administrator** to execute the server installation package
2.) Click **Next** at the landing page and accept the License Agreement
3.) Select the **Custom** option and click **Next**
4.) Choose the installation directory where the software was previously installed and click **Next**
5.) Choose the **Application Server** and **Server Configuration Utility** on the **Select Features** page and click **Next**
   Note: The Database Configuration Utility may also be chosen if the application server is the server where the software was installed in the previous version of OneStream XF.
6.) Click **Install** to install the software and click **Finish** when it is complete

Step 4: Re-Install the OneStream XF Servers Package on a Web Server

1.) Browse to the OneStream Servers package, right-click on **Setup.exe** and select **Run as Administrator** to execute the server installation package
2.) Click **Next** at the landing page and accept the License Agreement
3.) Select the **Custom** option and click **Next**
4.) Choose the installation directory where the software was previously installed and click **Next**
5.) Choose the **Web Server** and **Server Configuration Utility** on the **Select Features** page and click **Next**
6.) Click **Install** to install the software and click **Finish** when its complete

Step 5: Re-Install the OneStream XF Studio Package

1.) Browse to the OneStream Studio package, right-click on **Setup.exe** and select **Run as Administrator** to execute the server installation package
2.) Click **Next** at the landing page and accept the License Agreement
3.) Select the **Custom** option and click **Next**
4.) Select the installation directory where the software was previously installed *(C:\ProgramFiles(x86)\OneStreamSoftware),* and click **Next**
5.) Choose all options on the **Select Features** page and click **Next**
6.) Click **Install** to install the software and click **Finish** when its complete

Step 6: Upgrade OneStream XF Framework and Application Databases

Note: Make sure to have the DBA backup all OneStream Databases *(Framework/Application Databases)* prior to running the schema update operation.

1.) On the OneStream application server with the OneStream Database Configuration Utility installed, navigate to the utility
   Start > Programs > OneStream Software > OneStream Database Configuration Utility
2.) Right-click on the utility and choose **Run as Administrator**

3.) Right-click on the **OneStream Framework Database** and choose **Upgrade Database Version**
   Note: If this is grayed out, an upgrade to the database is not necessary
4.) Confirm the upgrade of the database
5.) Repeat this process for the application database(s) as necessary

Step 7: Update ASP.NET Configuration File with Configuration File Folder Location

1.) On each OneStream server, navigate to the OneStream Server Configuration Utility
   (Start > Programs > OneStream Software > Server Configuration Utility)
2.) Right-click on the utility and select **Run as Administrator**
3.) Choose *File > Open ASP.NET Configuration File* and browse to *C:\Program Files\OneStream Software\OneStreamAppRoot\OneStreamApp* on application servers, or *C:\Program Files\OneStream Software\OneStreamWebRoot\OneStreamWeb* on web servers, and select the **web.config** file
4.) When the web.config opens, paste the Configuration Files Folder path
5.) Close the file making sure to save upon closing
6.) Repeat this process on each server in the environment

Step 8: Update Application and Web Server Config Files

1.) Open Application Server Configuration file and Click **File > Save**
2.) Close and re-open the Application Server Configuration File
3.) Scroll to Database Server Connections and select the ellipsis *(…)* icon
   - Update command Time-outs for OneStream Database Server Connection:
     o Short = 90   *must do
     o Large = 900 (minimum of 900)
4.) Save and Close Application Server Configuration file
5.) Open Web Server Configuration file
6.) Click **File > Save**
7.) Close Web Server Configuration file

Step 9: Update Identity to OneStream Service Account in Internet Information Services Manager *(IIS)*

1.) On each OneStream server, launch Internet Information Services Manager
   (Start > Control Panel > Administrative Tools > Internet Information Services (IIS) Manager)
2.) Expand the server in the left pane and select **Application Pools**
   This will display a list of application pools in the right pane. The OneStreamAppAppPool on the application servers and OneStreamWebAppPool on the web servers.
3.) Right-click on the **OneStreamAppAppPool** and select **Advanced Settings**
4.) Click in the **Identity** field and select the ellipsis *(…)* icon
5.) Choose **Custom Account** and click **Set**
6.) In the **username** field, enter the **OneStream Service Account** *(Domain\Username)* and enter/confirm the corresponding password
7.) Set **Ping Enabled** to **False**
8.) Set the **Disable Recycling For Configuration Changes** setting to **True**
9.) Expand the **Generate Recycle Event Log Entries** setting, set any of the items beneath it to **True**, and click **OK**

Generate Recycle Event Log Entry	
Application Pool Configurat	False
Isapi Reported Unhealthy	False
Manual Recycle	False
Private Memory Limit Excee	True
Regular Time Interval	True
Request Limit Exceeded	False
Specific Time	False
Virtual Memory Limit Excee	True

10.) Once this is complete, restart IIS on each OneStream server in the environment

Step 10: Test OneStream Environment Login

1.) Navigate to the OneStream Web URL:
http://<webserver>:50001/OneStreamWeb/OneStreamXF.aspx
2.) Verify the ability to login to OneStream XF
3.) Select **System Administration** from the application drop down list and click **Connect**
4.) Navigate to *Tools > Application Servers*
This will display a list of all application servers and their server status
5.) Verify each server's **WCF Connection** status is **OK**
6.) Verify each server's CPU % is updating

Step 11: Application Verification

7.) Compile ALL Business Rules
- Right click grid and Export any errors to an Excel file format for analysis
- Apply updates to Business Rules as need
8.) (Optional) Import new Standard Reports after downloading from Store on XF MarketPlace