



System Diagnostics Guide

PV800 SV100

Copyright © 2024 OneStream Software LLC. All rights reserved.

Any warranty with respect to the software or its functionality will be expressly given in the Subscription License Agreement or Software License and Services Agreement between OneStream and the warrantee. This document does not itself constitute a representation or warranty with respect to the software or any related matter.

OneStream Software, OneStream, Extensible Dimensionality and the OneStream logo are trademarks of OneStream Software LLC in the United States and other countries. Microsoft, Microsoft Azure, Microsoft Office, Windows, Windows Server, Excel, Internet Information Services, Windows Communication Foundation and SQL Server are registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. DevExpress is a registered trademark of Developer Express, Inc. Cisco is a registered trademark of Cisco Systems, Inc. Intel is a trademark of Intel Corporation. AMD64 is a trademark of Advanced Micro Devices, Inc. Other names may be trademarks of their respective owners.

Table of Contents

Overview	1
Setup and Installation	2
Dependencies	3
Select the System Diagnostics Development Location	4
Create the OneStream Development Application	5
Application Server Settings	6
Configure the OneStream Application Server	6
Install System Diagnostics	8
Set Up System Diagnostics	10
Create Tables	10
Package Contents	12
Business Rules	12
Data Management	13
Settings	15
Global Options	15
Uninstall	17
System Diagnostics Overview Page	19
Environment Analysis	21
Create an Environment Snapshot	21

Table of Contents

Application Servers	22
Database Servers	23
Analyze Environment Snapshot Data	24
Environment Statistics Groups and Items	24
Environment Statistics Status	28
Environment Analysis Reports	29
Application Analysis	30
Create an Application Snapshot	30
Application Metrics	31
Application Metrics Status	33
Data Volume Statistics	34
Application Analysis Reports	34
Compare Application Snapshots	35
Auto-created Task in Task Scheduler	37
Modify the Task	37
Report Package	39
Task Analysis	41
Chart Parameters	42
Task Concurrency	44
View Daily Concurrency Details	44

Table of Contents

Task Statistics	48
Task Counts	50
Live Monitoring	51
Environment Health	52
Analysis	53
Environment Health Monitoring Status	53
Environment and Task Health Monitoring Status	54
Environment and Task Health Monitoring Groups / Items	54
Pivot	58
Reports	58
Task Health	59
Reports	60
Unhealthy Tasks	60
Help and Miscellaneous Information	61
Display Settings	62
Package Contents and Naming Conventions	63
Solution Database Migration Advice	64
MarketPlace Solution Modification Considerations	65

Overview

System Diagnostics enables System Administrators to:

- Monitor and diagnose overall environment performance and task health.
- Examine application metrics and application data volumes.

System Diagnostics helps to assure that the OneStream environment and applications are properly sized and efficiently configured.

System Diagnostics provides:

- Detailed environment snapshot analysis across application and database servers.
- Detailed application snapshot analysis of key metrics and data volumes.
- Live monitoring across application and database servers.
- Detailed task analysis including task concurrency, statistics, and counts.

IMPORTANT: Access to System Diagnostics is limited to users with the System Administrator security role. This should be strictly enforced because of the accessibility to application information and controls.

Setup and Installation

System Diagnostics now comes preinstalled in your OneStream environment. System Diagnostics can be installed within an existing OneStream application, yet it enables you to analyze performance of all applications in a given environment. See [Install System Diagnostics](#) for details.

This section contains important details related to the planning, configuring, and installation of your solution. Before you install the solution, familiarize yourself with these details.

Dependencies

Component	Description
OneStream 8.0.0 or later	Minimum OneStream Platform version required to install this version of System Diagnostics.

Select the System Diagnostics Development Location

Before installation, decide whether to build the solution directly in the Production OneStream application or in a separate Development OneStream application. This section provides some key considerations for each option.

Production OneStream Application: The primary advantage of building the solution in a Production application is that you will not have to migrate the resulting work from a Development application. However, there are intrinsic risks when making design changes to an application used in a Production capacity and it is not advised.

NOTE: OneStream strongly recommends that you implement the solution in the Development environment with a fresh copy of the Production application before starting work.

Development OneStream Application: As a best practice, use the Development OneStream application to build the solution.

Create the OneStream Development Application

1. Ensure all the OneStream artifacts relating to System Diagnostics such as workflow profiles and entities are in the Production application.
2. Copy your Production application to your Development environment and rename it. Use the development version for your System Diagnostics solution.

Application Server Settings

You may need to edit the OneStream Application Server Configuration so users can create and change data in the additional database tables. If other MarketPlace solutions (such as Specialty Planning) are already in the application, these adjustments may already exist.

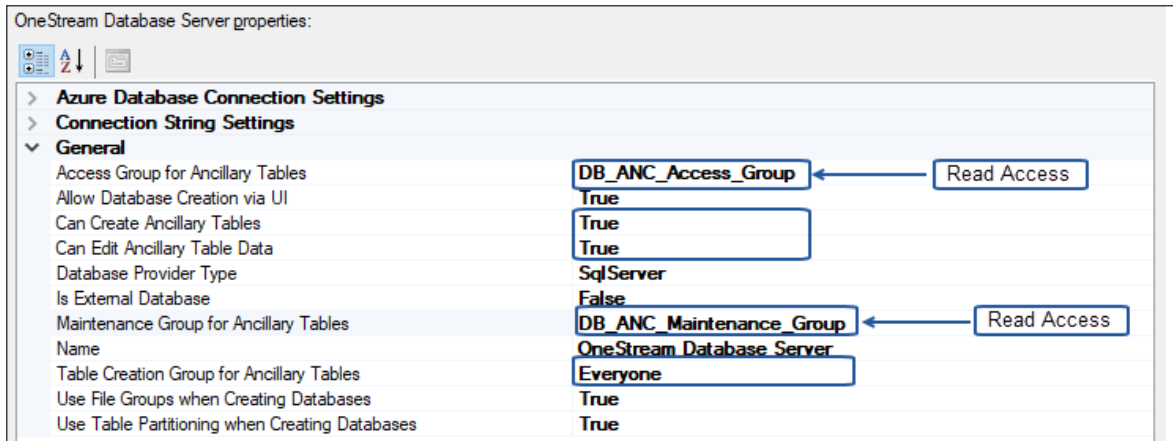
Configure the OneStream Application Server

Be sure that the security group settings include the users who work on and set up the solution before proceeding.

NOTE: Group settings are applicable to all MarketPlace solutions; it is important to keep the group names generic.

1. Start the OneStream Server Configuration Utility as an Administrator.
2. Click **Open Application Server Configuration File > Database**.
3. Edit the following **OneStream Database Server properties**:
 - **Access Group for Ancillary Tables:** Select a group that includes those who will access records.
 - **Can Create Ancillary Tables:** True
 - **Can Edit Ancillary Table Data:** True
 - **Maintenance Group for Ancillary Tables:** Select a group to edit and maintain tables.

- **Table Creation Group for Ancillary Tables:** Select a group who can create tables.



4. Restart Internet Information Server.

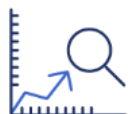
NOTE: The SQL Server account used for the OneStream application must have the View Server State Permission granted for System Diagnostics to access the SQL Server details.

Install System Diagnostics

Check the Release Notes to determine if uninstalling only the user interface or a full uninstall of the solution is necessary and then read that section for instructions. If the Release Notes indicate that an overinstall is allowed, then continue with these instructions.

NOTE: In OneStream platform version 10.0, System Diagnostics comes preinstalled on the platform.

1. Download the System Diagnostics solution from the MarketPlace. The package is a zip file named OSD_PVx.x.x_SVzzz_PackageContents.zip where x.x.x and zzz represent version numbers for OneStream and the solution. The PVx.x.x number (for example, 620) represents the minimum Platform Version (6.2.0) required to implement this solution version.
2. On the OneStream MarketPlace Dashboard, click **MarketPlace > System Diagnostics**.



PRODUCTIVITY
System Diagnostics

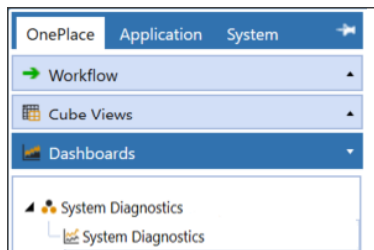
3. On the System Diagnostics Solution page, select the appropriate OneStream platform version from the **Minimum Platform Version** drop-down list.
4. Select the most recent version from the **Solution Version** drop-down list and then click **Download**.

-
5. Log in to OneStream.
 6. On the **Application** tab, click **Tools > Load/Extract**.
 7. On the **Load** tab, locate the solution package using the **Select File** icons and click **Open**.
 8. When the solution's file name appears, click **Load**.
 9. Click **Close** to complete the installation.

Set Up System Diagnostics

The first time you run System Diagnostics, you are guided through the table setup process.

In OneStream, click **OnePlace > Dashboards > System Diagnostics > System Diagnostics**.






























Create Tables

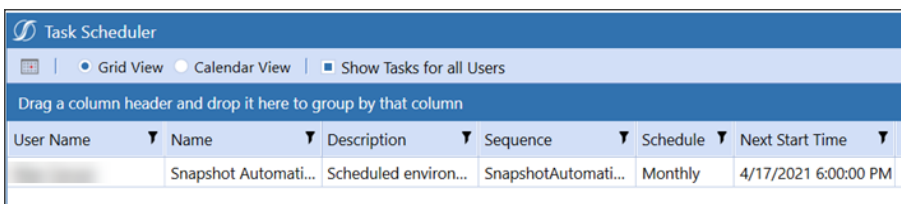
1. Click **Step 1: Setup Tables**.

This step may be necessary when upgrading even if tables are already present. System Diagnostics does not drop any tables that already exist, but modifies table structures and add any new ones if necessary.

The following tables are created in the OneStream framework database:

-  XFW_OSD_AnalyticBlendDataVol
-  XFW_OSD_AppServers
-  XFW_OSD_AppSnapshot
-  XFW_OSD_AppStatistics
-  XFW_OSD_AppTableSizes
-  XFW_OSD_AttributeMemberDetail
-  XFW_OSD_ClosedWfProfiles
-  XFW_OSD_ControlLists
-  XFW_OSD_CubeAlgorithmDetail
-  XFW_OSD_CubeDataVol
-  XFW_OSD_DatabaseSizes
-  XFW_OSD_DBServers
-  XFW_OSD_DimDetail
-  XFW_OSD_ElasticPool
-  XFW_OSD_EntityAutoTranslateDetail
-  XFW_OSD_EntityRelationshipDetail
-  XFW_OSD_EnvironmentSnapshot
-  XFW_OSD_EnvironmentStatistics
-  XFW_OSD_EnvTableSizes
-  XFW_OSD_LiveMonitorDefinition
-  XFW_OSD_LiveMonitorInfo
-  XFW_OSD_MarketplaceSolutionDeploy
-  XFW_OSD_PotentialDataCells
-  XFW_OSD_RuleDetail
-  XFW_OSD_SpePlanningDataVol
-  XFW_OSD_StageDataVol
-  XFW_OSD_StoredFormulaDetail

The Snapshot Automation scheduled task is created and can be edited in the Task Scheduler.



User Name	Name	Description	Sequence	Schedule	Next Start Time
	Snapshot Automati...	Scheduled environ...	SnapshotAutomati...	Monthly	4/17/2021 6:00:00 PM

NOTE: You should receive the message **Solution Table Created** if this is a new implementation of System Diagnostics. If updating a previous release which includes changes to these tables, the message reads **Solution Tables Upgraded**.

See Also:

- [Task Scheduler](#)
- The *Task Scheduler* section in the *Application Tools* chapter of the *Design and Reference Guide*.

2. Click **Step 2: Launch Solution** to open System Diagnostics.

After setting up the solution's tables, a task is created in Task Scheduler that takes Application snapshots on the third Saturday of each month. You can change the task frequency and timing using the Task Scheduler.

NOTE: The Task Scheduler is currently only available when using the OneStream desktop application.

Package Contents

The Dashboard Maintenance Unit provides the user interface for System Diagnostics and includes the required dashboard groups, components, data adapters, parameters and files.

Business Rules

The following business rules are included:

OSD_HelperQueries

Dashboard Data Set Business Rule. This rule provides query functions for collecting the activity and environment analysis information using a combination of SQL and programmatic data.

OSD_SolutionHelper

Dashboard Extender Business Rule. This rule provides various functions for the System Diagnostics solution and the Dashboard user interface.

OSD_ParamHelper

Dashboard XFBR String Business Rule. This rule provides conditional parameter processing functions that allow a parameter value to be interpreted and substituted with a different string.

OSD_ApplicationSnapshot

Extensibility Business Rule. This rule facilitates Application and Environment manual and Task Scheduled snapshots.

Data Management

The following Data Management Sequences and steps are used with their related Business Rules (as described above). The benefit of running these processes through a Data Management sequence is that they can run in the background while the user continues their work.

Data Management sequences are:

- AppSnapshot_OSD
- MonitorHealthTask_OSD
- ReportPackage_OSD
- SnapAutomation_OSD


Data Management steps are:

-
- AppSnapshot_OSD
 - CreateReports_OSD
 - MonitorHealthTask_OSD
 - SnapAutomation_OSD
 - TakeAppSnapshot_OSD

Data Management sequences used for application and environment snapshots, found in Task Scheduler for the System Diagnostic Automation task:

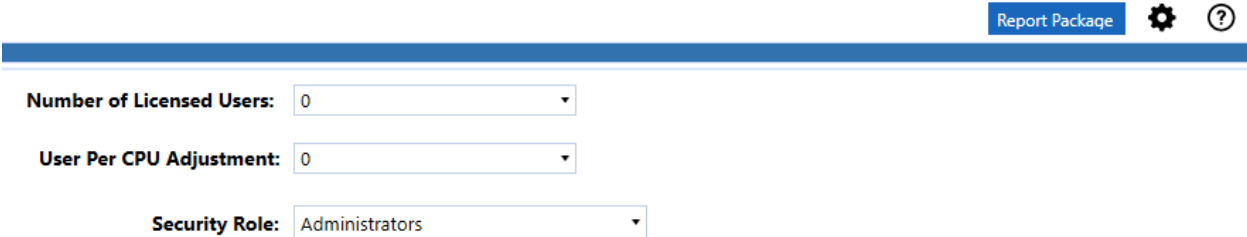
- SnapAutomation_OSD



Settings

 The **Settings** page contains the **Global Options** tab in which key properties that guide administration are set as well as **Uninstall** tab, which provides solution uninstall options.

Global Options

The **Global Options** tab is used during the initial setup and configuration of System Diagnostics.



Report Package  

Number of Licensed Users: 0

User Per CPU Adjustment: 0

Security Role: Administrators

Number of Licensed Users: This setting is used for the estimation calculations in the Resource Validation Report. It is an estimation of how many users are expected to utilize OneStream. This setting is only visible if the user is on Azure and holds an unlimited number of user licenses.

NOTE: The maximum number of licensed users is 10,000.

User Per CPU Adjustment: This setting allows the ability to manually adjust the derived value of users per CPU. Users per CPU is used in the Environment Statistics calculations.

Settings

Security Role: This setting allows you to select a security role. Users within the designated security role will have access to the solution.

Uninstall

The **Uninstall** tab allows administrators to uninstall the System Diagnostics user interface or the entire solution.

NOTE: If performed as part of an upgrade, any modifications made to the standard System Diagnostics objects are removed.

There are two uninstall options:

- **Uninstall UI** removes System Diagnostics, including related dashboards and business rules, but leaves the database and related tables in place. Some Global Options will also be cleared because their values are stored in Parameters under Dashboards.

Check the *Release Notes* to determine if this step is necessary. For some releases, this step should be performed before accepting a new version of System Diagnostics because some of the dashboards or other objects may have been modified.

- Choose this option to accept a System Diagnostics update without removing the data tables.
 - The *Release Notes* indicate if an overinstall is supported.
- **Uninstall Full** removes all the related data tables, all data, System Diagnostics dashboards, and related business rules.
 - Choose this option to completely remove System Diagnostics or to perform an upgrade that is so significant in its changes to the data tables that this method is required.

NOTE: The System Diagnostics tables are stored on the Framework database. Removing these tables also removes all related System Diagnostics data for all applications using the same Framework.

System Diagnostics Overview Page

Access the System Diagnostics Overview page by navigating to **OnePlace > Dashboards > System Diagnostics > System Diagnostics**.

Upon start up, you are directed to the overview page. Use this page to get an overview of your application and environment health. The overview page contains four condensed reports:

- **Database Usage:** The pie chart displays how much storage is available and in use in an environment. Databases are sorted into used, unused, or allocated types.

NOTE: You will receive an error message if database usage data cannot be retrieved.

- **User Licenses:** This shows licensed user data in two tiles, Active Licenses and Total Licenses.
- **Application Metrics:** This displays the most recent changes (business rules, formulas, records, and more) in a snapshot of the current application. You can drill down into each metric for a detailed view of the change.
- Daily logon activity

Click the title of a condensed report to navigate to the appropriate page in System Diagnostics.

System Diagnostics Overview Page

The screenshot displays the 'SYSTEM DIAGNOSTICS' interface. At the top, there's a 'HOME' button and a 'Report Package' button. The main content is divided into several sections:

- Server Status:** A summary section with an 'Overview' icon.
- Application Servers:** A table with columns: Status, Recycle, ServerRole, AppServerName, MachineName, WcfAddress, IsGen, IsStage, IsCon, IsDM, CPUs, CPUmpScore, RamGB, DeriveMaxNumDataRecordsInRAM, ReservedMemoryGB, NumE. One row is visible for server '(*G*S*C*D)' on machine 'FORTL-D3315'.
- Database Servers:** A table with columns: Status, DBType, MachineName, InstanceName, LogicalCPUs, PhysicalCPUs, HyperthreadRatio, RamGB, VirtualRamGB, MaxWorkerThreads. Two rows are visible for 'Application' and 'Framework' on machine 'FORTL-D3315'.
- Resources Validation:** A list of items with status indicators (red, orange, green). The first item, 'AppServer Minimum-RAM (FORTL-D3315)', is highlighted in yellow.
- Daily Logon Activity:** A line chart showing logon activity over time from 2023-04-18 to 2023-04-03.
- Application Metrics:** A list of metrics with status indicators (orange, green). Items include 'Members with Auto-Translate Currencies', 'One to One Entity Relationships', etc.

At the bottom, there are 'Snapshot: New Snapshot' labels and 'Administrator' names with timestamps (e.g., '46 minutes ago').

Click the **Overview** tab to return to the home page.

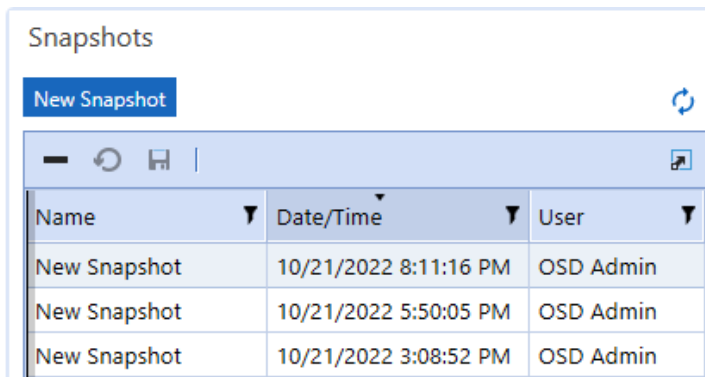


Environment Analysis

Use **Environment Analysis** to create environment snapshots by gathering information maintained by OneStream Environment Monitoring features. The environment snapshots provide details on application and database server status, available resources, and associated reports.

Create an Environment Snapshot

- To create an environment snapshot for a given point in time click **New Snapshot**. The new snapshot displays in a list on the left side of the dashboard panel with any other snapshots that have been created.



The screenshot shows a dashboard panel titled "Snapshots". At the top left is a blue button labeled "New Snapshot". To the right of the button is a refresh icon. Below the button is a toolbar with a minus icon, a refresh icon, a home icon, and a save icon. Below the toolbar is a table with three columns: "Name", "Date/Time", and "User". The table contains three rows of data:

Name	Date/Time	User
New Snapshot	10/21/2022 8:11:16 PM	OSD Admin
New Snapshot	10/21/2022 5:50:05 PM	OSD Admin
New Snapshot	10/21/2022 3:08:52 PM	OSD Admin

- To change a snapshot name, click the name value and relabel the snapshot. Click the save icon to maintain changes.
- To delete a snapshot, select the snapshot name and then click on the minus icon.

NOTE: You must click the save icon after making any changes, including deleting a snapshot, for your environment to update.

Application Servers

This section shows data specific to the application servers.

Application Servers												
Status	Recycle	ServerRole ▼	AppServerName ▼	MachineName ▼	WcfAddress ▼	IsGen ▼	IsStage ▼	IsCon ▼	IsDM ▼	CPUs ▼	CPUmipScore ▼	RamGB ▼
●	●	(*G*S*C*D)	VMMPLTESTWEB9	VMMPLTESTWEB9	Standard (Standard)	✓	✓	✓	✓	4	83.71	32

Database Servers

This section shows data specific to the database servers.

Database Servers					
Status	DBType ▼	InstanceName ▼	LogicalCPUs ▼	AzureDatabaseName ▼	AzureServiceObjective ▼
●	Application	sqlmpitest	2	MarketPlace_QA_6.2	ElasticPool
●	Framework	sqlmpitest	2	OneStream_mpltest_Framework_Web9	ElasticPool

Both application and database server reports display in a pivot grid, allowing you to sort and group records using the grid capabilities.

Analyze Environment Snapshot Data

Select an environment snapshot and click **Resources** to view a breakdown of the data collected in the snapshot.

Server Status					
Resources					
Reports					
Status	Group	Item	Actual Value	Estimated V:	Information
	A) User Concurrency	Number of Licensed Users	0	0	Company Name: XFMarketPlaceTest
	A) User Concurrency	Estimated Licensed Concurrent-Users	0	0	Licensed Users [0] * Estimated Concurrency [0.35] = 0
	A) User Concurrency	Actual Concurrent Logins	10	0	Peak Actual User Concurrency for the past 30 days
	A) User Concurrency	Actual Concurrent Users	7	0	Peak Actual Distinct User Concurrency for the past 30 days
	A) User Concurrency	Number of Enabled User Licenses	125	0	Number of Enabled licensed OneStream users
	A) User Concurrency	Number of Disabled User Licenses	5	0	Number of Disabled licensed OneStream users
	B) Gen-Stage Concurrency	GenServer Users-Per-CPU	4	4	Base Users Per CPU [4.5] - Shared Server Deflator [0.5] - Larg Note: Gen Servers are: [Shared]
	B) Gen-Stage Concurrency	GenServer Supported-Users	16	16	GenServer Users-Per-CPU [4] * (Gen CPUs) [4] = 16
●	B) Gen-Stage Concurrency	GenServer Users Capacity-Variance	6	16	Gen Server Supported-Users [16] - User Concurrency [10/0] =
	B) Gen-Stage Concurrency	GenServer Required-Servers	1	1	User Concurrency [10/0] / GenServer Users-Per-CPU [4] / Std
	B) Gen-Stage Concurrency	GenServer Available-Servers	1	1	Available General Servers Note: Gen Servers are: [Shared]
●	B) Gen-Stage Concurrency	GenServer Server Capacity-Variance	0	0	Gen Servers Required [1/1] - Gen Servers Available [1] = [0/0]
●	B) Gen-Stage Concurrency	GenServers Balanced	1	1	Gen Servers are Balanced (CPU and RAM Consistent)
	C) Con-DataMgmt Concurrency	ConServer Required-Servers	1	1	User Concurrency [10/0] / ConServer Users-Per-CPU [4] / Std
	C) Con-DataMgmt Concurrency	ConServer Available-Servers	1	1	Available Consolidation Servers Note: Con Servers are: [Shared]
●	C) Con-DataMgmt Concurrency	ConServer Server Capacity-Variance	0	0	Con Servers Required [1/1] - Con Servers Available [1] = [0/0]
●	C) Con-DataMgmt Concurrency	ConServers Balanced	1	1	Con Servers are Balanced (CPU and RAM Consistent)
●	C) Con-DataMgmt Concurrency	DMServers Dedicated	0	0	Dedicated DM Server NOT required
●	E) DB-Server Resources	AzureSQL Edition-Check (Application)	0	0	AzureSQL is NOT BUSINESS CRITICAL Service Level and may
●	E) DB-Server Resources	AzureSQL ServiceObjective-Check (Application)	1	0	AzureSQL database is running in an ELASTIC POOL.
●	E) DB-Server Resources	AzureSQL Edition-Check (Framework)	0	0	AzureSQL is NOT BUSINESS CRITICAL Service Level and may
●	E) DB-Server Resources	AzureSQL ServiceObjective-Check (Framework)	1	0	AzureSQL database is running in an ELASTIC POOL.

Environment Statistics Groups and Items

Environment statistics are grouped as follows:

- **User Concurrency:** Shows concurrency statistics for user-related data including the number of licensed users, the concurrent logins, and the number of enabled and disabled user licenses.

-
- **Gen-Stage Concurrency:** Shows concurrency statistics for General-type or Stage-type application servers.
 - **Con-DataMgmt Concurrency:** Shows concurrency statistics for Data Management-type or Consolidation-type application servers.
 - **DB-Server Resources:** Shows statistics for the database server in a stand-alone database server environment or the AzureSQL Elastic Pool for Azure Cloud environments.

A) User Concurrency

Use items in this group to gain insight into user activity and concurrency throughout your application.

Number of Licensed Users: Total number of licensed users permitted. This value can be changed in System Diagnostics settings.

Estimated Licensed Concurrent-Users: An estimated concurrency value based on the number of licensed users multiplied by the estimated concurrency.

Actual Concurrent Logins: Actual peak user concurrency for the past 30 days.

Actual Concurrent Users: Actual peak distinct user concurrency for the past 30 days.

Number of Enabled User Licenses: Total users that have the **IsEnabled** general setting in the system security settings set to **True**.

Number of Disabled User Licenses: Total users that have the **IsEnabled** general setting in the system security settings set to **False**.

B) Gen-Stage Concurrency

Use items in this group to gain insight into the user load on your general-type application servers.

GenServer Users-Per-CPU: Maximum number of base users per central processing unit (CPU) minus the shared server deflator and large data unit deflator, plus any CPU adjustment per user.

The shared server deflator is used to account for CPU utilization between servers.

GenServer Supported-Users: Number of general-type application server CPUs multiplied by estimated users per CPU.

GenServer Users Capacity-Variance: General-type application user concurrency minus estimated concurrency.

GenServer Required-Servers: Estimated user concurrency divided by the general-type server users per CPU.

GenServer Available-Servers: Number of available general servers.

GenServer Server Capacity-Variance: General-type application server concurrency minus estimated concurrency.

GenServers Balanced: Indicates whether the CPU and RAM are consistent across general-type application servers.

See also: [System Security Users and Groups](#) in the OneStream Software **Design and Reference Guide**.

C) Con-DataMgmt Concurrency

Use items in this group to gain insight into the user load on your data management-type or consolidation-type application servers.

ConServer Required-Servers: Estimated concurrency divided by estimated users per CPU divided by standard application server CPUs, multiplied by General-type application server to Consolidation-type application server ratio.

ConServer Available-Servers: Current consolidation servers being used.

ConServer Capacity-Variance: consolidation servers required minus the available consolidation servers. A value of 0.0 means consolidation servers are available. A value of 1.0 indicates that consolidation servers are required.

ConServers Balanced: Indicates whether the CPU and RAM are consistent across Consolidation-type application servers. A value of 0.0 means the consolidation servers' CPU and RAM are consistent across the application servers. A value of 1.0 indicates CPU and RAM are not consistent.

DMServers Dedicated: Indicates whether a dedicated Data Management-type application server is required.

D) DB-Server Resources

The group reflects the settings for the database server in the AzureSQL Elastic Pool for Azure Cloud environments.

DB-Server Resources




AzureSQL Edition-Check (Application): Indicates whether the Azure SQL application database runs at a business-critical service level. A value of 1 equals yes. A value of zero equals no.

AzureSQL ServiceObjective-Check (Application): Indicates whether the Azure SQL application database runs in an Elastic pool. A value of 1 equals yes. A value of zero equals no.

AzureSQL Edition-Check (Framework): Indicates whether the Azure SQL application framework runs at a business-critical service level. A value of 1 equals yes. A value of zero equals no.

AzureSQL ServiceObjective-Check (Framework): Indicates whether the Azure SQL application framework runs in an Elastic pool. A value of 1 equals yes. A value of zero equals no.

Environment Statistics Status

Status	Description
Informational	Data point used in environment statistics calculations.
Ok 	Indicates that the metric does not affect application performance.
Warning 	Indicates that the metric may negatively affect application performance.
Critical 	Indicates that the metric is negatively affecting application performance.

Environment Analysis Reports

Click **Reports** at the top of the page and select the name of the report you want to run.

Database Sizes: Provides insight into the elastic pool usage for Azure customers.

Databases are sorted into used, unused, or allocated types.

NOTE: For Cloud customers, an elastic pie chart is displayed at the beginning of the Database Sizes report.

Memory Manager: Provides the server memory details over the previous 15-day period.

Any events over 10 days reflect a critical status.

Resource Validation: Provides a detailed breakdown of the General Stage Concurrency, Consolidated-Data Management Concurrency, and Database Server Resources.

Server Detail: Provides details for the application servers.

Server Startup: Provides the server startup details over the previous 15-day period. Any day with zero start ups reflects a critical status.

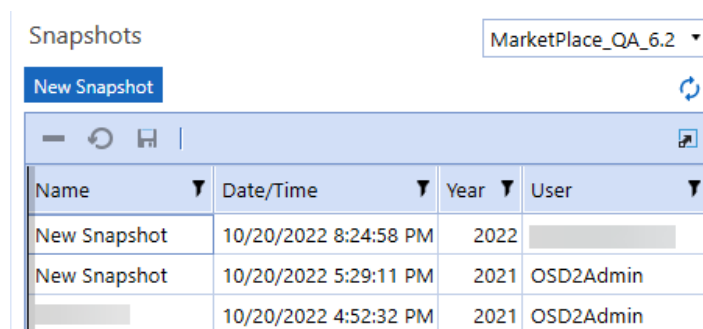
Application Analysis

Application Analysis lets you create application snapshots by gathering information maintained by the selected application and its database tables. The application analysis page displays application metrics, data volume statistics, and reports. It also allows administrators to compare snapshots from across system applications.

Create an Application Snapshot



1. Click **New Snapshot** to populate an application snapshot.
2. A pop-up dialog prompts you to enter the **Data Volume Year** (the year to which the data volume statistics apply), **Data Volume Detail** (the number of top records recorded for the data volume statistics), and **Snapshot Name**. The snapshot name defaults to New Snapshot if you leave the snapshot name blank.

The new snapshot displays on the left side of the dashboard panel.



The screenshot shows a dashboard panel titled "Snapshots" with a dropdown menu set to "MarketPlace_QA_6.2". A "New Snapshot" button is visible. Below it is a table with the following data:

Name	Date/Time	Year	User
New Snapshot	10/20/2022 8:24:58 PM	2022	
New Snapshot	10/20/2022 5:29:11 PM	2021	OSD2Admin
	10/20/2022 4:52:32 PM	2021	OSD2Admin

To change the snapshot name, select the name field, change the name, and click . To delete a snapshot, select the snapshot name and then click .

NOTE: You must click the save icon after making any changes, including deleting a snapshot, for your environment to update.

Application Metrics

This section shows the application metrics that are considered key stakeholder drivers for the general performance of an application. You can click on any row in the Application Metrics grid to view additional details of the records in that metric.

Stored Formulas: Applications that have many stored formulas may notice a consolidation performance impact. Green Status: Less than 1000, Orange Status: 1000-2000, Red Status: Higher than 2000.

Dimensions with over 1000 Members: Multiple dimensions greater than 1,000 members can result in a large and sparse data model which can impact consolidation and reporting performance. Green Status: Less than 2, Orange Status: 2-3, Red Status: Higher than 3.

Members with Auto-Translate Currencies: Applications that use the Entity Auto Translate property will have reduced consolidation performance. Green Status: 0, Orange Status: 1-20, Red Status: higher than 20.

Cubes with Non-Standard Consolidation or Translation Algorithms: Applications that use non-standard consolidation or translation algorithm types may have reduced consolidation performance. Green Status: 0, Orange Status higher than 0. No Red status.

Attribute Members: Applications that have greater than 500 attribute members will have a negative impact on consolidation performance. Green Status: 0, Orange Status: 0-500, Red Status: higher than 500.

Application Analysis

Number of Stored Records for Largest Data Unit: Data Units larger than 500,000 records may cause consolidation and reporting performance degradation. Green Status: less than 1,000,000. Orange Status: 1,000,000-2,000,000. Red Status: Higher than 2,000,000.

Number of Stage Records for Largest Workflow: Workflows with more than 1,000,000 finance load result records may result in reduced stage performance. Green Status: 1,000,000. Orange Status: 1,000,000-1,500,000. Red Status: higher than 1,500,000.

One to One Entity Relationships: Entity hierarchies with numerous one to one parent child relationships can result in poor consolidation performance. Green Status: 0, Orange Status: 1-5, Red Status: higher than 5.

Number of Closed Cube Root Workflow Profiles: Closed workflow profiles may cause reporting and navigation performance degradation. Green Status: 0, Red Status: greater than or equal to 1.

Number of Active Finance Rules and Member Formulas Using BRApis: Finance Rules and Member Formulas that use BRApi functions can result in a degradation of consolidation performance because these functions need to open a database connection. Consider using API function equivalents whenever possible. Green Status: 0, Orange Status: 1-10, Red Status: Higher than 10.

Number of Active Finance Rules and Member Formulas without Consolidation Conditions: Finance Rules and Member Formulas without consolidation if conditions can result in a degradation of consolidation performance because the rule may needlessly run at multiple levels of the consolidation dimension. Green Status: 0, Orange Status: 1-10, Red Status: Higher than 10.

Number of Active Finance Rules and Member Formulas without Entity Conditions: Finance Rules and Member Formulas without entity if conditions can result in a

Application Analysis

degradation of consolidation performance because the rule may needlessly run for both base and parent entities. Green Status: 0, Orange Status: 1-10, Red Status: Higher than 10.

Number of Active Finance Rules and Member Formulas Using Error Logging:




Finance Rules and Member Formulas that have active error logging still commented in can result in a degradation of consolidation performance because these rules write to the error log during a consolidation. Green Status: 0, Red Status: Higher than 0.

Number of Active Finance Rules and Member Formulas that Execute

Api.Data.Calculate within a For Each Loop: Finance Rules and Member Formulas that execute an Api.Data.Calculate within a For Each Loop can result in a degradation of consolidation performance due to the inefficiencies of looping through a list of the opening of a data unit potentially many times in memory.

Potential Number of Stored Data Cells for Largest Data Unit: Represents the maximum number of data cells for this data model.

Application Metrics Status

Status	Description
Ok 	Indicates that the metric does not affect application performance.
Warning 	Indicates that the metric may negatively affect application performance.
Critical 	Indicates that the metric is negatively affecting application performance.

Data Volume Statistics

This section reflects on the data volume detail of the application based on the year selected for the snapshot.

Application Metrics		Data Volume Stats	Compare Snapshots		Reports	
Cube Data Volumes		Stage Data Volumes	Register Data Volumes		BiBlend Data Volumes	
Cube ▼	Scenario ▼	Consolidation ▼	Entity ▼	Year ▼	DataRowCount ▼	DataCellCount ▼
CFModel	Upside	USD	Houston Heights	2021	18	72
CFModel	Downside	USD	Houston Heights	2021	18	72
CFModel	Baseline	USD	Houston Heights	2021	18	72
CFDrivers	Upside	USD	Houston Heights	2021	8	32

Cube Data Volumes: Reports on the cube, scenario, entity, and year combinations with the most data volume rows in the *DataRecord* database tables.

Stage Data Volumes: Reports on the workflows with the most data rows in the *stagetofinanceloadresult* database table.

Register Data Volumes: Reports on workflows with the most records that are found in the installed Register Plan database tables.

BiBlend Data Volumes: Reports on BiBlend data volumes in the *StageBiBlendInformation* database table.

Application Analysis Reports

Application Analysis reports are based on the selected snapshot time period.

Database Table Sizes: Summarizes application table sizes by row count, used space, unused space, and allocated space.

Application Analysis

Long Running Formulas: Reports on any long-running formulas logged in the error log during the previous 30 days from when the selected snapshot was taken.

MarketPlace Solution Deployment: Reports on all the deployed MarketPlace solutions in the current application when the selected snapshot was taken.

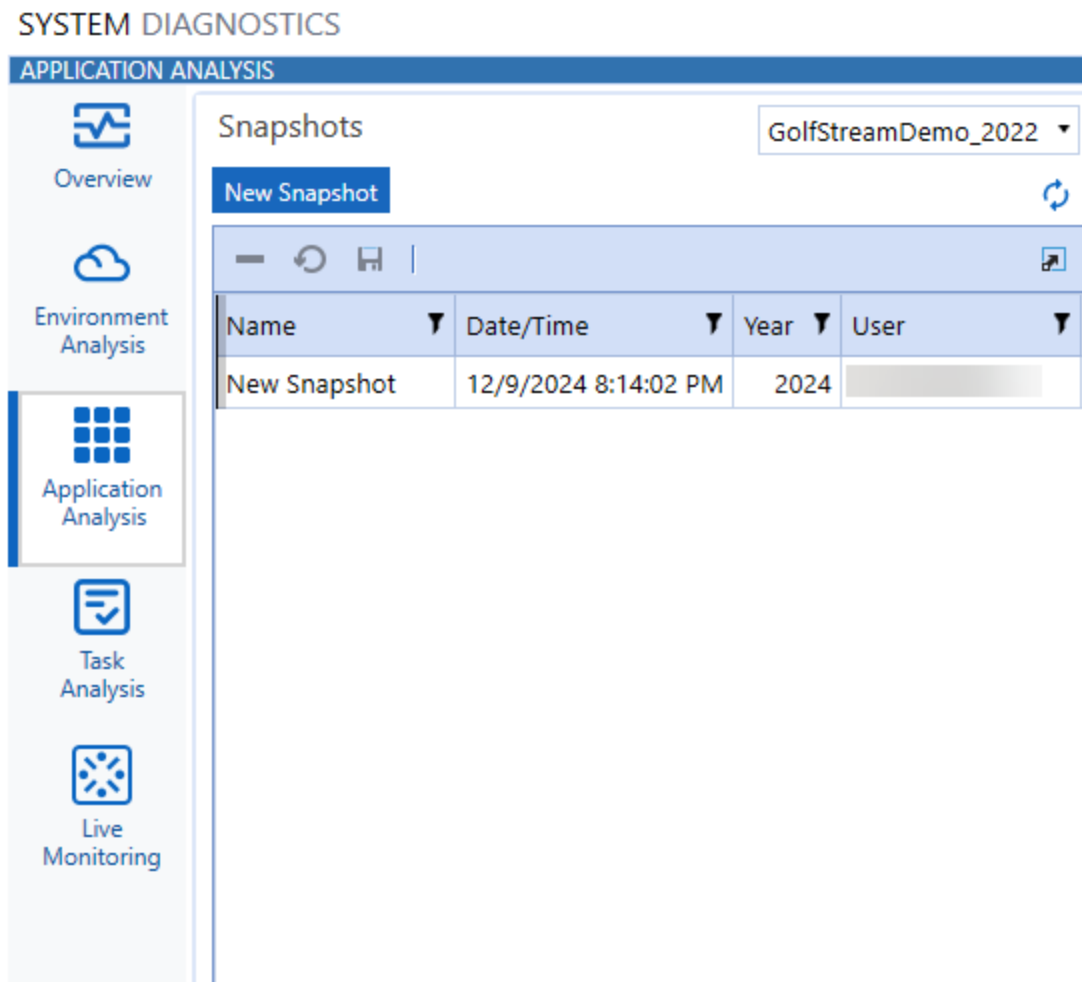
Snapshot Summary: Summarizes all the snapshot data found in the application metrics and data volume statistics tabs into one PDF report.

Compare Application Snapshots

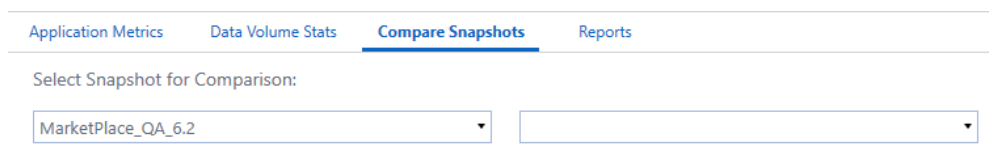
Click **Compare Snapshots** to compare any two application snapshot metrics. You can compare snapshots in the same application or different applications.

Application Analysis

1. Select a snapshot from the table on the left to be the original snapshot.



2. Select the application you would like to choose your comparison snapshot from the snapshots list grid on the left.



3. Select the snapshot you would like to compare to the original.

Application Metrics Data Volume Stats **Compare Snapshots** Reports

Select Snapshot for Comparison:

MarketPlace_QA_6.2	New Snapshot - Oct 20 2022 8:24PM
--------------------	-----------------------------------

Auto-created Task in Task Scheduler

When the solution's tables are first set up, a task called **System Diagnostics Snapshot Automation** is created in Task Scheduler. Task Scheduler is only viewable on OneStream Desktop. This task runs monthly on the third Saturday of the month at 11:30 PM UTC. The task takes an environment snapshot and also takes an application snapshot for the application where System Diagnostics was deployed.

If other applications in the same environment already have a System Diagnostics solution installed, a new System Diagnostics install in another application results in the task being scheduled to run 30 minutes before the existing System Diagnostics tasks in the environment to ensure environment resources are not exhausted by having several application snapshots run at the same time.

See also: [Create Tables](#)

Modify the Task

Administrators can modify the Snapshot Automation OSD task to change the frequency or scheduled time of the automated snapshot:

1. Navigate to the **Task Scheduler** page in OneStream (**Application > Tools > Task Scheduler**).
2. Select the task called **Snapshot Automation OSD** and click **Edit**.

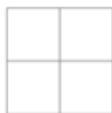
Application Analysis

3. Click the **Schedule** tab and change the frequency and scheduled time. See the *Task Scheduler* section in the *Design and Reference Guide* for more information on using the **Schedule** tab.

Re-create the Task (After Deleting)

If the task gets deleted for any reason, and the administrator wants to re-create the task, there are two options.

- Find the dashboard **0_Frame_OSDS** under the dashboard group **Solution Setup (OSDS)** and run it. Then click **Setup Tables** to create the task.



Setup Tables

- Manually create a task with the frequency needed and select the **SnapshotAutomation_OSD** sequence. Then set the Data Volume parameter to 10, as shown below:

The screenshot shows a configuration window with two main sections: 'Sequences' and 'Parameters'.

Sequences: A list of sequences is displayed, with 'SnapshotAutomation_OSD' selected at the bottom. The list includes: RecycleForceGen_OSD, RecycleForceStage_OSD, RecycleSmartAllTypes_OSD, RecycleSmartCons_OSD, RecycleSmartDataMgmt_OSD, RecycleSmartGen_OSD, RecycleSmartStage_OSD, and SnapshotAutomation_OSD.

Parameters: A table with two columns: 'Name' and 'Value'. The 'DataVolume' parameter is set to '10'. There is a button labeled 'Click here to add new item' below the table.

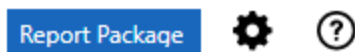
Name	Value
Year	
DataVolume	10
Click here to add new item	

Report Package

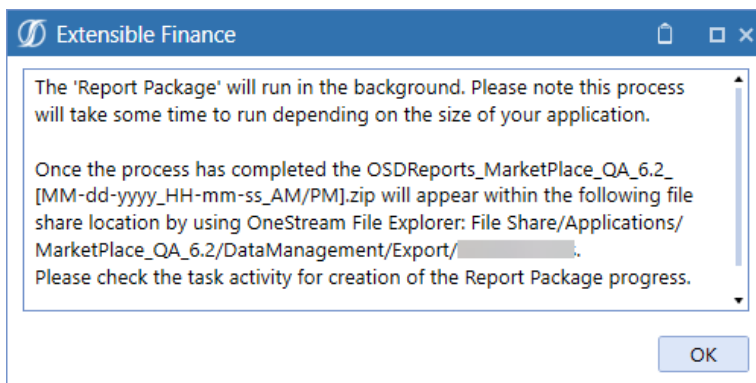
The report package function allows you to generate environment and application snapshots in the background of the application. These snapshots are created and stored in a .zip file that can be emailed to OneStream Software Support for further assistance resolving any system issues.

To create a report package:

1. Click the **Report Package** button in the upper right corner of the System Diagnostics page.



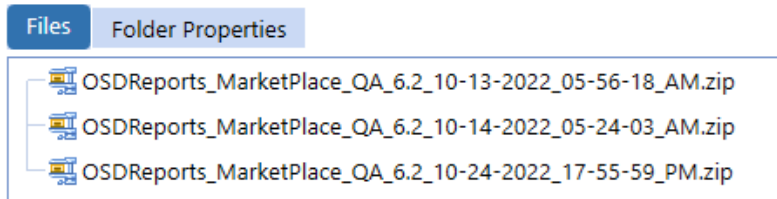
2. A pop-up message is displayed on the screen to verify that report package will run in the background of the application. Click **OK** and the report will begin to run.













NOTE: If report package is already running and you attempt to click the report package button again, a pop-up message is displayed stating that there is already a report being generated.

Report Package

3. After completion, the reports are available in the OneStream File Share. The .zip file can be located by going to **System > File Explorer > File Share > Applications > ApplicationName > DataManagement > Export > UserName Folder**.



4. Click on the appropriate .zip file and download the file content using the file download button  .
5. The .zip file can then be attached to an email and sent to OneStream Software Support.

Name	Type	Compressed size	Password ...	Size	Ratio	Date modified
 Application Analysis: Database Tabl...	Adobe Acrobat Document	118 KB	No	132 KB	11%	10/24/2022 5:56 PM
 Application Analysis: Long Runnin...	Adobe Acrobat Document	49 KB	No	52 KB	6%	10/24/2022 5:56 PM
 Application Analysis: Marketplace ...	Adobe Acrobat Document	60 KB	No	64 KB	6%	10/24/2022 5:56 PM
 Application Analysis: Snapshot Su...	Adobe Acrobat Document	133 KB	No	139 KB	5%	10/24/2022 5:56 PM
 Environment Analysis: Elastic Pool ...	Adobe Acrobat Document	91 KB	No	103 KB	12%	10/24/2022 5:56 PM
 Environment Analysis: Memory Ma...	Adobe Acrobat Document	52 KB	No	59 KB	13%	10/24/2022 5:56 PM
 Environment Analysis: Resource Va...	Adobe Acrobat Document	62 KB	No	69 KB	11%	10/24/2022 5:56 PM
 Environment Analysis: Server Detail	Adobe Acrobat Document	59 KB	No	62 KB	7%	10/24/2022 5:56 PM
 Environment Analysis: Server Startup	Adobe Acrobat Document	54 KB	No	63 KB	14%	10/24/2022 5:56 PM

NOTE: Any errors incurred during the report package creation are listed in a .txt file which is available with the snapshot PDFs.

Task Analysis

The **Task Analysis** page lets you query the number of tasks running in parallel over a given time frame by application, application server, task type, and environment snapshot. Use the Task Analysis page to run a daily log-on chart compared to environment resources.

The data is represented as a line chart in the Task Analysis page, with each line representing a daily logon type. Check boxes at the top of the chart let you exclude log-on types.

You can also hover over data points of the lines in the chart to see a count of daily log-ons for the highlighted log-on type in a pop-up. Data points occur on each date on the chart as defined by the evaluation criteria.

This page also provides access to the [Task Concurrency](#), [Task Statistics](#), and [Task Counts](#) pages. You can also print these charts by clicking on the printer icon in the top right corner of the task analysis page.

Upon clicking the Task Analysis tab, you will see the Daily Logon displayed in a line chart.

Task Analysis

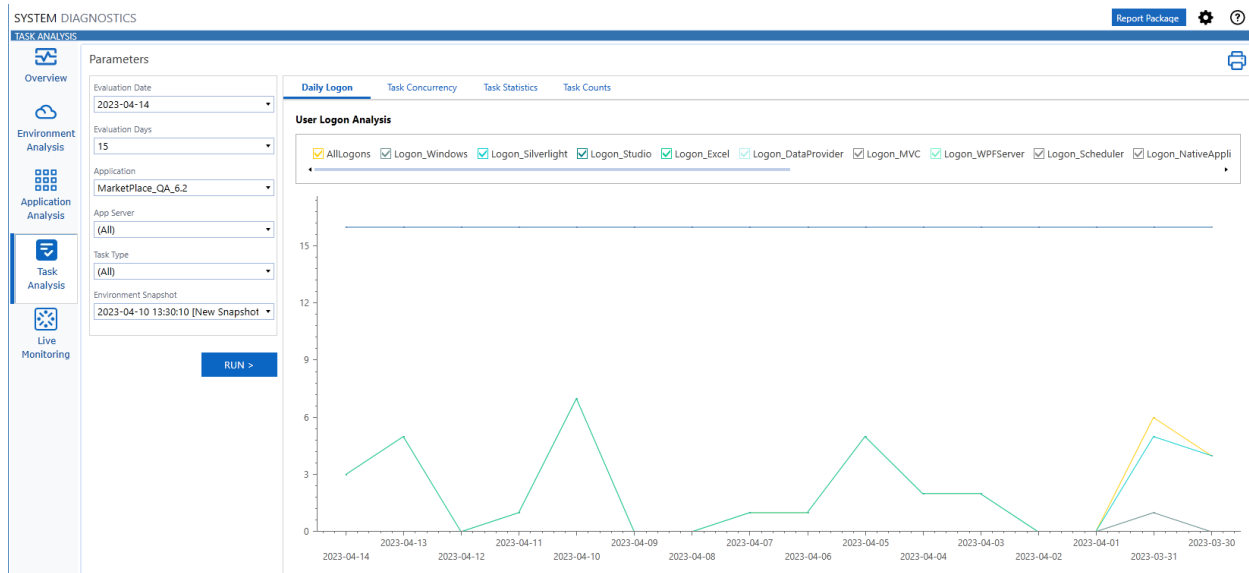


Chart Parameters

All pages available in Task Analysis work the same way. Select criteria in the parameters box to the left of the page to determine the data that displays on the chart. Criteria includes:

Evaluation Date: Date for which you want evaluation data to start.

Evaluation Days: Number of days before the Evaluation Date to evaluate and include on the chart. For example, if you select 2021-07-22 as the Evaluation Date and 15 for the number of evaluation days, the chart reflects data from 2021-07-22 to 2021-07-07.

Application: Select the name of the application you want to analyze data from the list. Applications in the list are based on your security role.

Task Type: Select a specific task type to evaluate or select the default (All) to include all task types.

Task Analysis

Environment Snapshot (Daily Logon and Task Concurrency only): Select the snapshot that contains the data you want to use as the source for daily activity charting.

To create a new chart:

1. Use the fields located in the parameters box to update your chart.
2. Click **RUN >** to create the chart based on the defined criteria.

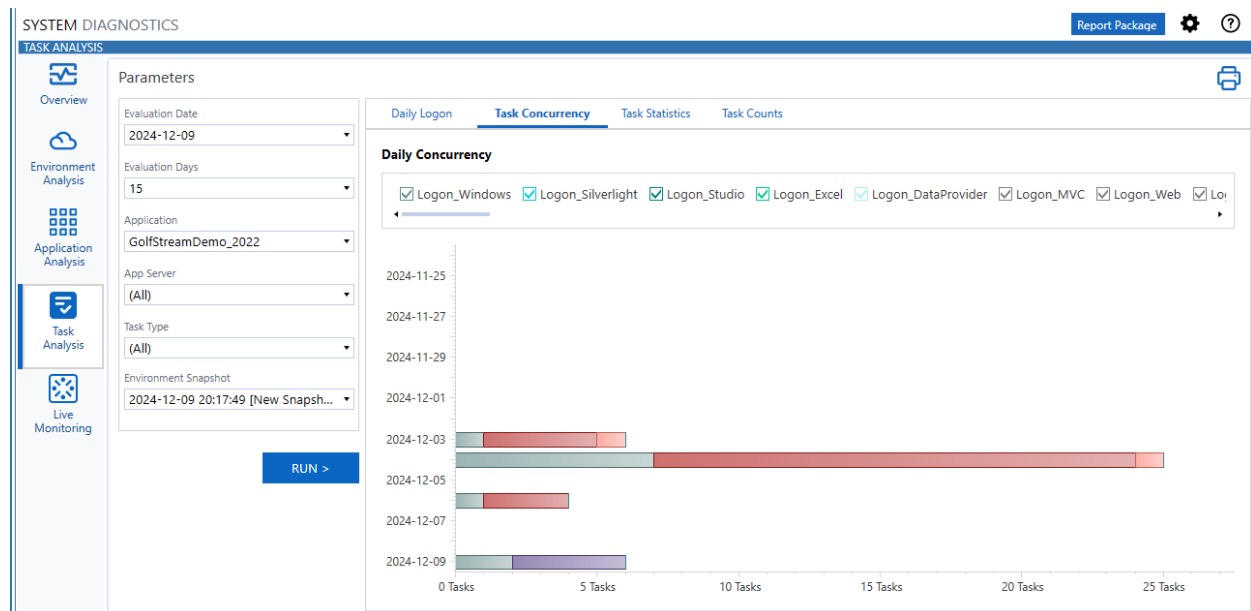
NOTE: After changing parameters, a message is displayed on the screen reminding you to click **RUN >** to refresh the chart.

Task Concurrency

This page lets you query the number of tasks running in parallel over a given time frame by application, application server, task type, and environment snapshot.

Task Concurrency bar chart data is based on the currently selected criteria. Each bar represents a day during the evaluation period. Each color in a bar represents either a task type defined using the evaluation criteria or a selected log-on type.

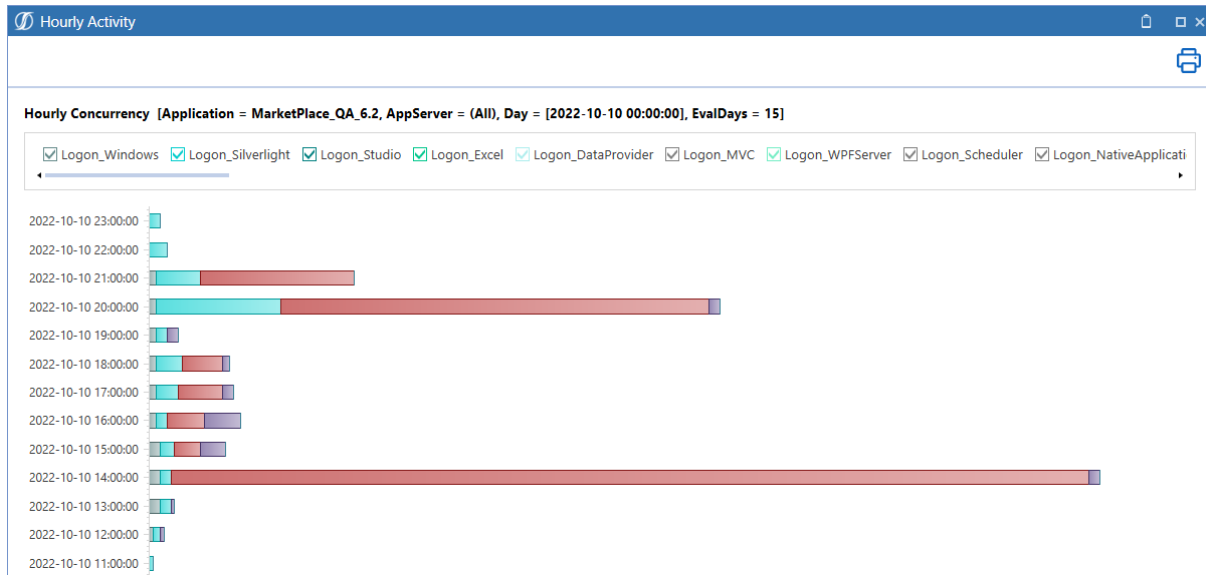
Like Daily Logon charting, checkboxes at the top of the chart represent the different daily concurrencies being tracked based on the evaluation criteria. Select or clear checkboxes to show or hide log-on types in each bar on the chart.



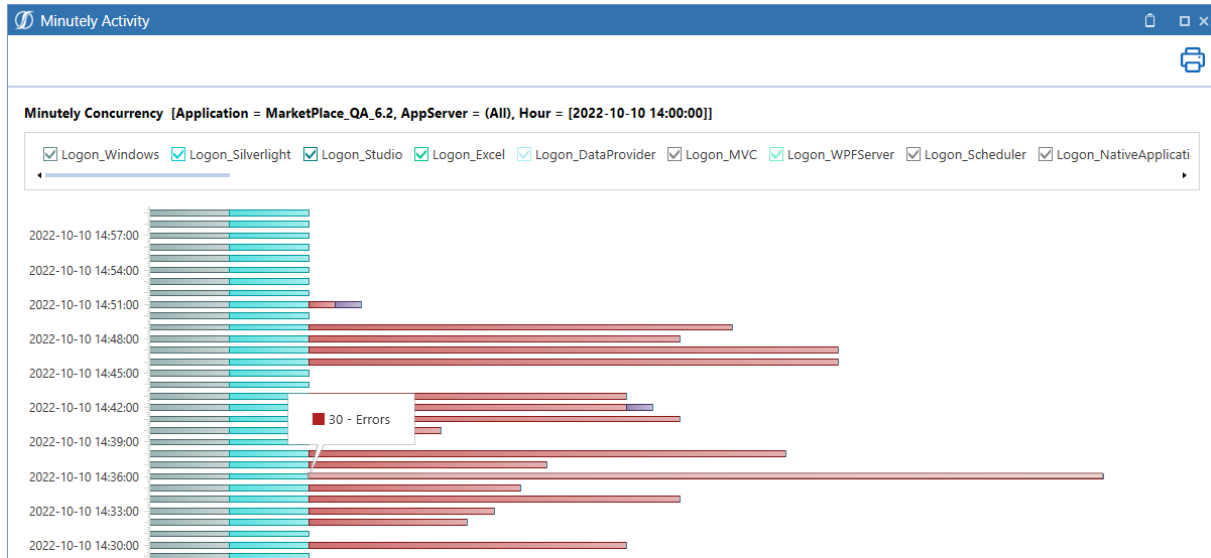
View Daily Concurrency Details

Click on any bar in the Daily Concurrency chart to view the detail for that day in a separate bar chart. The Hourly Activity chart uses a bar to represent each hour increment of the

day selected in the Daily Concurrency chart. The left axis labels of the chart are for each two-hour increment in the day.



Click on any bar on the Hourly Concurrency chart to view the detail for that hour in a separate bar chart. The Minutely Activity chart uses a bar to represent each minute increment of the hour selected in the Hourly Concurrency chart. The left axis labels of the chart are for each four-minute increment in the hour.



Click on any bar on the Minutely Concurrency chart to view specific log-on detail along with any task or error detail for that minute in a separate detail application window.

Detail Application = Marketplace_OA_6.2, AppServer = (All), Minute = [2022-10-10 14:43:00]

Logon Detail

Drag a column header and drop it here to group by that column

UserName	AppName	ClientModuleType	ClientXFVersion	ClientIPAddress	PrimaryAppServer	LogonTime	LogoffTime	LogonStatus
OSD Admin	MarketPlace_QA_6.2	Windows	6.2.1.11728			10/10/2022 1:47:11 PM	10/10/2022 3:50:21 PM	LoggedOffBySystem
	MarketPlace_QA_6.2	Silverlight	6.2.1.11728			10/10/2022 1:45:57 PM	10/10/2022 3:50:21 PM	LoggedOffBySystem
	MarketPlace_QA_6.2	Silverlight	6.2.1.11728			10/10/2022 11:05:13 AM	10/10/2022 10:55:41 PM	LoggedOffBySystem
	MarketPlace_QA_6.2	Silverlight	6.2.1.11728			10/10/2022 12:47:26 PM	10/10/2022 4:25:22 PM	LoggedOffBySystem
	MarketPlace_QA_6.2	Windows	6.2.1.11728			10/10/2022 12:55:40 PM	10/10/2022 3:00:19 PM	LoggedOffBySystem
	MarketPlace_QA_6.2	Windows	6.2.1.11728			10/10/2022 1:16:14 PM	10/10/2022 4:55:23 PM	LoggedOffBySystem

Task Detail

Drag a column header and drop it here to group by that column

Error Detail

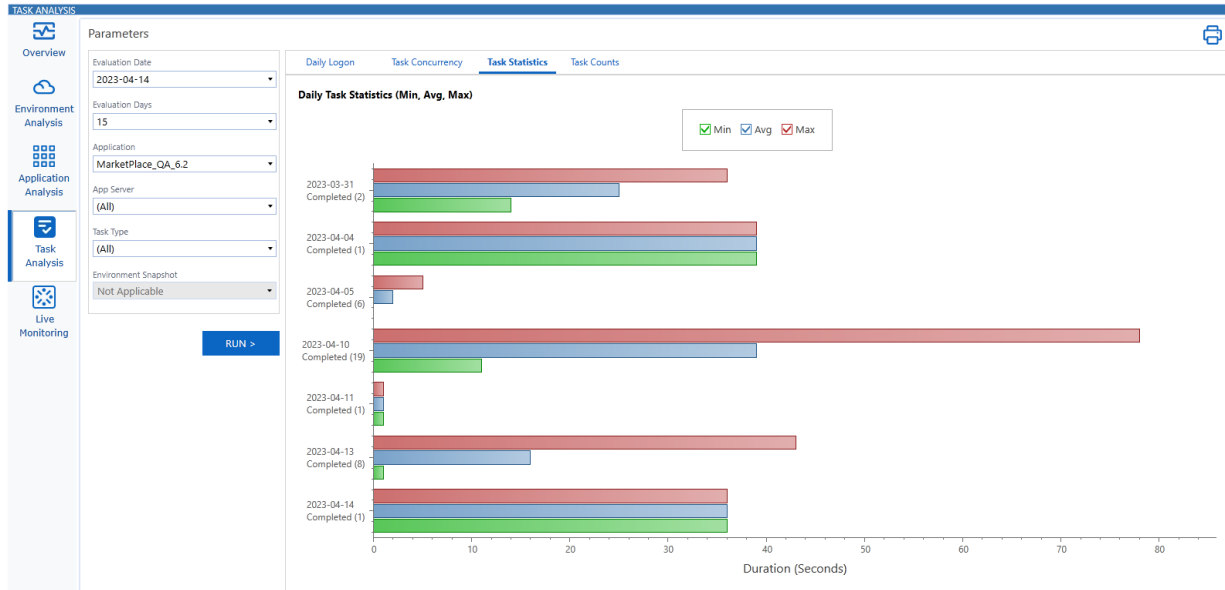
Drag a column header and drop it here to group by that column

ErrorLevel	Description	ErrorTime	AuthSessionID	UserName	AppName	OriginatingTier	WebServerName	We
Information	SelectedModelContent_PAMME	10/10/2022 2:43:01 PM	fe5a34d8-f4fe-4e40-addb-f2065189ade9		MarketPlace_QA_6.2	AppServer		
Information	SelectedRunID_PAMME	10/10/2022 2:43:01 PM	fe5a34d8-f4fe-4e40-addb-f2065189ade9		MarketPlace_QA_6.2	AppServer		
Information	SelectedModelContent_PAMME	10/10/2022 2:43:05 PM	fe5a34d8-f4fe-4e40-addb-f2065189ade9		MarketPlace_QA_6.2	AppServer		
Information	SelectedModelContent_PAMME	10/10/2022 2:43:05 PM	fe5a34d8-f4fe-4e40-addb-f2065189ade9		MarketPlace_QA_6.2	AppServer		
Information	SelectedRunID_PAMME	10/10/2022 2:43:05 PM	fe5a34d8-f4fe-4e40-addb-f2065189ade9		MarketPlace_QA_6.2	AppServer		
Information	SelectedRunID_PAMME	10/10/2022 2:43:05 PM	fe5a34d8-f4fe-4e40-addb-f2065189ade9		MarketPlace_QA_6.2	AppServer		
Information	SelectedRunID_PAMME	10/10/2022 2:43:10 PM	fe5a34d8-f4fe-4e40-addb-f2065189ade9		MarketPlace_QA_6.2	AppServer		

Close

Task Statistics

This page provides the ability to query the minimum, maximum, and average durations in seconds by date, application, application server, and task type.



Selecting or clearing Min, Avg, or Max in the statistic key updates the daily task statistics chart. Any changes to chart variables or parameters will prompt you to click **RUN >** to refresh the chart.

TASK ANALYSIS

- Overview
- Environment Analysis
- Application Analysis
- Task Analysis**
- Live Monitoring

Parameters

Evaluation Date
2023-04-14

Evaluation Days
16

Application
MarketPlace_QA_6.2

App Server
(All)

Task Type
(All)

Environment Snapshot
Not Applicable

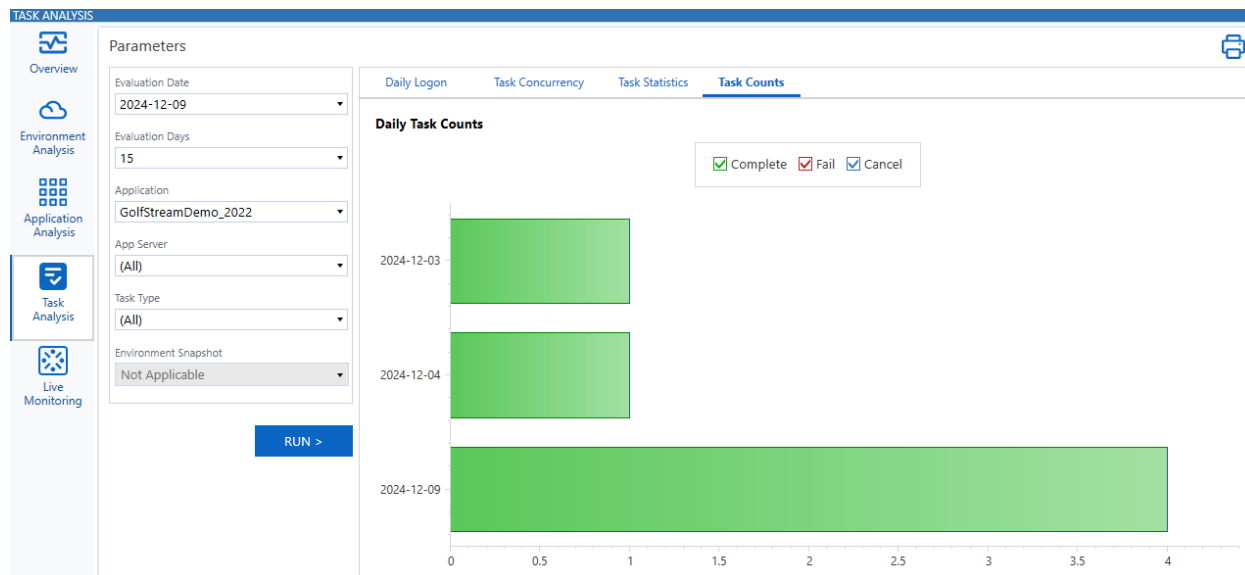
- Daily Logon
- Task Concurrency
- Task Statistics**
- Task Counts

CLICK RUN > TO REFRESH THE CHART

RUN >

Task Counts

This page provides the ability to query the number of tasks completed over a given time frame by application, application server, and task type.



Selecting or clearing **Complete**, **Fail**, or **Cancel** in the task key will prompt you to click **RUN >** to refresh the chart. Additionally, any changes made to chart parameters will prompt you to refresh the chart.

Live Monitoring

Live Monitoring provides environment and task health data for a given time period which can be changed by system administrators.


NOTE: This function is not available for users using Cloud environments.

Environment Health

This section provides a way to check the application environment health by different time frame durations and intervals.

The screenshot displays the SYSTEM DIAGNOSTICS LIVE MONITORING interface. The top navigation bar includes 'SYSTEM DIAGNOSTICS' and 'Report Package' with settings and help icons. The main interface is divided into several sections:

- Overview:** Contains navigation icons for Environment Analysis, Application Analysis, Task Analysis, and Live Monitoring.
- Environment Health:** The active section, showing configuration options for 'Duration' (set to 1 Minute) and 'Interval (Seconds)' (set to 60). A 'RUN >' button is present.
- Snapshots:** A table displaying monitoring results with columns for Description, Duration (min), Interval (ms), Date/Time, and User. Two rows are shown, both for 'Monitor Environment Health'.
- Analysis:** A table showing monitoring items with columns for Status, Group, Item, Invalid If, Target, and Minimum. One item is visible: 'A) Application Concurrency' with 'Total Logged On Users' as the item and 'Greater Than' as the invalid condition.
- Reports:** A section for generating reports, currently showing 'Monitor Environment Health | 10/21/2022 4:15:43 PM'.

To help differentiate between environment health live monitoring sessions, the description value can be changed by selecting the description field, changing the description, and clicking **Save**. Sessions can also be deleted by selecting them from the list and clicking **Delete Row** .

Duration: Set the duration to monitor from a range of 1 minute to 12 hours.

Interval (Seconds): Set the interval to monitor from a range of 10 to 600 seconds. The first monitoring point will be at the interval time selected with additional point being recorded at each interval.

NOTE: Running short intervals over long durations may impact system performance. An interval of 60 seconds or greater should be used for longer duration monitoring.

Click **RUN >** to run the environment health monitoring job.

Select the job by highlighting a row and select from one of the three output methods: **Analysis, Pivot, or Report.**

Analysis

Select **Analysis** to view the environment health monitoring data in a table with target, minimum, average, and maximum indicators. Selecting a metric will display item details to the right of the analysis table.

Analysis
Pivot
Reports

Monitor Environment Health | 10/21/2022 4:15:43 PM

Status	Group	Item	Invalid If	Target	Minimum
●	A) Application Concurrency	Total Logged On Users	Greater Than	16.00	6.00
	A) Application Concurrency	Running Task Total		0.00	1.00
	A) Application Concurrency	Running Tasks Type: (DataManagement)		0.00	1.00
	A) Application Concurrency	Running Tasks Server: (VMMPLTESTWEB9)		0.00	1.00
	B) App Server Health (*G*S*C*D)	XF Memory In Use (GB): (VMMPLTESTWEB9)		0.00	3.12
	B) App Server Health (*G*S*C*D)	Server Memory In Use (GB): (VMMPLTESTWEB9)		0.00	32.00
	B) App Server Health (*G*S*C*D)	Total Memory (GB): (VMMPLTESTWEB9)		0.00	32.00
●	B) App Server Health (*G*S*C*D)	Memory Utilization: (VMMPLTESTWEB9)	Greater Than	90.00	1.00
	B) App Server Health (*G*S*C*D)	CPU Count: (VMMPLTESTWEB9)		0.00	4.00
●	B) App Server Health (*G*S*C*D)	CPU Utilization: (VMMPLTESTWEB9)	Greater Than	90.00	2.41
	B) App Server Health (*G*S*C*D)	Process Handles: (VMMPLTESTWEB9)		0.00	4,355.0
●	B) App Server Health (*G*S*C*D)	Server Logged On Users: (VMMPLTESTWEB9)	Greater Than	16.00	6.00
	C.3) DB Server Health - Mem/IO (App)	Blocking Transaction Count		0.00	0.00
●	C.3) DB Server Health - Mem/IO (App)	Page Life Expectancy	Less Than	3,000.00	53.00
●	C.3) DB Server Health - Mem/IO (App)	Buffer Cache Hit Ratio	Less Than	95.00	99.76

Item Details

Information: OK: All evaluations were within Target Value limit.

Definition: Environment Concurrency Limit: Number of users logged on to the environment compared to the number of users that the environment can support.

Analysis: Environment Concurrency Limit: If the number of users logged on to the environment is greater than the supported limit for the environment, UI and reporting performance may degrade to the point of requiring an IIS Recycle.

Environment Health Monitoring Status

Status	Description
Informational	Data point that is used in environment health monitoring calculations.
Ok ●	Indicates that the metric does not affect application performance.

Status	Description
Warning 🟡	Indicates that the metric may negatively affect application performance.
Critical 🔴	Indicates that the metric is negatively affecting application performance.

Environment and Task Health Monitoring Status

Status	Description
Informational	Data point that is used in environment health monitoring calculations.

Environment and Task Health Monitoring Groups / Items

A) Application Concurrency

Total Logged on Users: Number of users logged on to the environment compared to the number of users that the environment can support.

If the number of users logged on to the environment is greater than the supported limit for the environment, UI and reporting performance may degrade to the point of requiring an IIS Recycle.

Running Task Total: Total concurrent tasks in progress at the time of the monitoring.

Running Tasks Type: Total tasks in progress by the type at the time of the monitoring.

Running Tasks Server: Total tasks in progress per server at the time of the monitoring.

B) App Server Health Items

Memory in Use: Total memory being used by OneStream processing.

Server Memory in Use: Total memory being used by the application server.

Total Memory: Total memory available on the application server.

Memory Utilization: Amount of memory used for the analytic cache and all other caches.

The reserve memory must be large enough to hold all non-analytic cached items, such as metadata, workflow, stage processing. If this value is consistently high and gets above 90%, reserve memory should be increased because non-analytic memory consumption is larger than the reserve and virtual memory pressure grow.

CPU Count: Number of CPUs on the application server.

CPU Utilization: CPU activity for the specified application server as a percentage of 100.

High CPU usage is common for Consolidation, Data Management and Stage servers.

However, CPU utilization should fluctuate for General Servers (Consistent high CPU utilization on General-type application servers indicates that more General server CPUs are required).

Server Logged on Users: Number of users logged onto the application server.

If the number of users logged onto the environment is greater than the supported limit for the environment, UI and reporting performance may degrade to the point of requiring an IIS Recycle.

C) DB Health Items

The following items display for Application and Framework Databases.

Blocking Transaction Count: Number of transactions that are delayed or stopped from processing in the database.

Page Life Expectancy: Average expectancy for how long each data page is staying in a buffer cache before being removed to make room for other pages.

A value below 3000 indicates memory pressure (Below 1000 represents extreme memory pressure).

Example: A server with 230 GB RAM allocated to the SQL Server buffer pool and a Page Life Expectancy of 300 would equate roughly to 785MB/sec of I/O activity to maintain the page churn inside of the buffer pool. While it might be possible for the I/O subsystem to keep up with this demand, this represents a significant number of page churn in the buffer pool.

Buffer Cache Hit Ratio: Indicates the percentage of pages that were found in the buffer pool without having to incur a read from the disk.

The recommended value should be between 95 and 100. A lesser value indicates memory pressure.

Memory Grants Pending: Indicates the number of processes waiting on a workspace memory grant.

A higher value indicates the server needs more memory.

Total Server Memory (GB): Amount of memory that a server has committed using the memory manager.

Target Server Memory (GB): Amount of memory that a server is willing to allocate to the buffer pool under its current load. The Target Server Memory value shows how much memory the SQL Server needs for the best performance.

Total-Target Memory Ratio: Total Server Memory / Target Server Memory

When the Total Server Memory and Target Server Memory values are close, there's no memory pressure on the server. The recommended ratio value should be 1.

Total Connection Count: The number of client connections accessing the database.

A high connection count near the target means that the MaxPoolSize of the SQL Connection should be increased or connection time-outs may occur.

Total Select Count: Number of select statements executed during the monitor period.

Total Insert Count: Number of insert statements executed during the monitor period.

Total Update Count: Number of update statements executed during the monitor period.

Total Delete Count: Number of delete statements executed during the monitor period.

Lazy writes/sec: Indicates the number of times per second the server relocates dirty pages from buffer pool to disk.

The recommended value for Lazy Writes/Sec is below 20. Higher paging and disk I/O activity indicate insufficient memory. Check Page Life Expectancy and if its value is low (below 1000 seconds), then this is a clear indication of memory pressure.

Page reads/sec: Indicates the number of physical database page reads that are issued per second. This statistic displays the total number of physical page reads across all databases.

The recommended Page Reads/Sec value should be under 90. Higher values indicate insufficient memory and indexing issues.

Page writes/sec: Indicates the number of physical database page writes that are issued per second.

The recommended value for Page Writes/Sec is below 90. Higher paging and disk I/O activity indicate insufficient memory.

Pivot

Select **Pivot** to view the environment health monitoring data in a table by the number of interval evaluations that were selected.

Analysis		Pivot		Reports			
Group	Item	Eval1	Eval2	Eval3	Eval4	Eval5	Eval6
A) Application Concurrency	Total Logged On Users	6	6	6	6	6	6
A) Application Concurrency	Running Task Total	1	1	1	1	1	1
A) Application Concurrency	Running Tasks Type: (DataManagement)	1	1	1	1	1	1
A) Application Concurrency	Running Tasks Server: (VMMPLTESTWEB9)	1	1	1	1	1	1
B) App Server Health (*G*S*C*D)	XF Memory In Use (GB): (VMMPLTESTWEB9)	3.12	3.12	3.12	3.12	3.12	3.12
B) App Server Health (*G*S*C*D)	Server Memory In Use (GB): (VMMPLTESTWEB9)	32	32	32	32	32	32
B) App Server Health (*G*S*C*D)	Total Memory (GB): (VMMPLTESTWEB9)	32	32	32	32	32	32
B) App Server Health (*G*S*C*D)	Memory Utilization: (VMMPLTESTWEB9)	1	1	1	1	1	1
B) App Server Health (*G*S*C*D)	CPU Count: (VMMPLTESTWEB9)	4	4	4	4	4	4
B) App Server Health (*G*S*C*D)	CPU Utilization: (VMMPLTESTWEB9)	4.67	3.02	3.02	3.02	2.41	2.41
B) App Server Health (*G*S*C*D)	Process Handles: (VMMPLTESTWEB9)	4366	4355	4358	4360	4360	4355
B) App Server Health (*G*S*C*D)	Server Logged On Users: (VMMPLTESTWEB9)	6	6	6	6	6	6
C.3) DB Server Health - Mem/IO (App)	Blocking Transaction Count	0	0	0	0	0	0
C.3) DB Server Health - Mem/IO (App)	Page Life Expectancy	53	63	73	82	92	101
C.3) DB Server Health - Mem/IO (App)	Buffer Cache Hit Ratio	99.76	99.87	99.87	99.89	100	99.93
C.3) DB Server Health - Mem/IO (App)	Memory Grants Pending	0	0	0	0	0	0

Reports

Select **Reports** to view the environment health monitoring analysis and detail.

Environment Health Analysis: Provides the Environment Analysis for the application and database servers.

Environment Health Analysis (With Explanations): Provides the Environment Analysis for the application and database servers with explanations.

Environment Health Detail: Provides the Environment Detail for the application and database servers.

Task Health

This section provides a way to check the task health by different task types, durations, intervals, and evaluations. If there are no unhealthy tasks for a selected snapshot, no data will populate on the Analysis, Pivot, and Reports tabs.

Environment Health **Task Health**

Parameters

Task Type
ProcessCube

Duration
1 Min

Interval (Seconds)
60

Seconds Before Flag
180

Evaluation Before Log
3

RUN >

Unhealthy Tasks

There are no unhealthy tasks for the selected snapshot.

Snapshots

Description	Duration (min)	Interval (ms)	Eval Bef Log	Secs Bef Flag	Date/Time
Monitor Task Health (ProcessCube)	1	60000	3	180	10/24/2022 9:22:36 AM

1 Rows Page 1 of 1

Analysis Pivot Reports

Monitor Task Health (ProcessCube) | 10/24/2022 9:22:36 AM | Kendell Davis

Task Type: Set the type of task to monitor.

Duration: Set the duration to monitor tasks from a range of 1 minute to 12 hours.

Interval (Seconds): Set the interval to monitor tasks from a range of 10 to 600 seconds.

Seconds Before Flag: Set the Seconds Before Flag to capture tasks that have been processing for more than a 10 to 6000 second runtime.

Evaluation Before Log: Set from a range of 1 to 10 to determine the number of times to skip logging the task if the task has exceeded the seconds before flag.

Click **RUN >** to begin the task health monitoring job.

Select the job by highlighting a row and select from one of the three output methods: **Analysis, Pivot, or Report.**

Reports

Select **Reports** to view the task health monitoring analysis and detail.

Task Health Analysis: Provides the Environment Analysis for the application and database servers.


Task Health Analysis (With Explanations): Provides the Environment Detail for the application and database servers.

Task Health Detail: Provides the Environment Detail for the application and database servers.

Unhealthy Tasks

This section will reflect any tasks that are not processing successfully for a given monitoring time frame.

Help and Miscellaneous Information

 This page contains solution documentation.

Display Settings

OneStream and 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.

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: OSD_PV8.0.0_SV100_PackageContents.zip

Identifier	Description
OSD	Solution ID
PV8.0.0	Minimum Platform version required to run solution
SV100	Solution version
PackageContents	File name

Solution Database Migration Advice

A development OneStream application is the safest method for building out a solution with custom tables such as this one. The relationship between OneStream objects such as workflow profiles and custom solution tables is that they point to the underlying identifier numbers and not the object names as seen in the user interface. 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 following process below will help migrate the solution tables properly.

See also: *Managing a OneStream Environment* in the *Design and Reference Guide*.

MarketPlace Solution Modification

Considerations

A few cautions and considerations regarding the modification of MarketPlace solutions:

- 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.