RELEASE NOTES

Monarch Server 2024.1

Report Warehouse (Formerly Content Server), Automator, Report Mining Server

Table of Contents

1. Welcome

Welcome to Altair Monarch Server release 2024.1.

This release is generally available from Dec 2024, following on from the previous 2024.0 release in July 2023.

This document provides an overview of the new features and enhancements provided by Monarch Server 2024.1 release.

For information on installation and upgrade procedures, as well as details on supported platforms and software requirements, see the separate installation guides that are provided with this release.

If you are upgrading from a version 2022.x or lower, please ensure that the changes relating to Data Connectors in in version 2023.0 are reviewed prior to the implementation or upgrade to 2024.1.

NOTES:

- This is a major release. You must uninstall the currently deployed version before installing 2024.1.
  - o The Monarch Server database can then be upgraded, and relevant settings re-applied to corresponding web.config / config.xml files relating to the instance.
  - o Please ensure the application database and if required, the web.config and config.xml files are backed up prior to the uninstall for reference or for regression.
  - o Post install, it is advised that end users of the MSAdmin, MSClient or RMSClient based interfaces perform a clear browser cache activity to ensure outdated styles/scripts/resources are removed and ensuring the best performance & functionality of Monarch Server.

- It is strongly recommended that at minimum, Altair Support / Professional Services is involved with reviewing any upgrade activity prior to the same being conducted. A full backup of the existing deployment must be made and verified before commencing the same to enable regression should it be required. Without a backup, data loss is unavoidable. Altair recommends utilizing our Professional Services to assist you with planning or completing an upgrade activity to minimize downtime, disruption, and risk.

- **Per the previous 2023.1 release of Monarch Complete & Monarch Server (Automator Feature), the following changes have been made to Data Connectors.**
  - o *the following Connectors have been deprecated:*
    JIRA, Zendesk, Box, SugarCRM, Google Sheets, Google Ads & Google Drive
  - o *functional changes to the following Connectors:*
    MySQL, NetSuite, Cassandra, Spark SQL Big Query, HubSpot, ServiceNow, SharePoint, OData, Active Directory

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Altair highly recommends upgrading to the most recent available release to make use of the latest functionality and feature enhancements, improvements in performance and stability, and to be best prepared for the next release.

Monarch Server 2024.1 is compatible with Monarch Complete/DPS 2024.1 and earlier. Please note,
- Monarch Server Assembly Version is 24.1.0.18
- The full version of Datawatch.SDK, which is used in the build, is 24.1.0.37261.
- The full version of Datawatch.DataPrep Engine, which is used in the build, 24.1.0.37261.

2. Monarch Server Upgrade

This section covers general principles for backup of the Monarch Server instance as part of any upgrade / migration activity. Note for Automator, please refer to the section '3. Monarch Server Automator - Upgrading or New Installation?'

An upgrade operation involves the backup, upgrade procedures per product documentation and potential for other bespoke operations relevant to the instance environment including reconfiguration activities. In the event of a problem the restore/recovery of the SQL Server based Application database is critical to the recovery.

As part of validating & completing the install/upgrade, there may be a need to perform activities on the SQL Server database instance via Management Studio. For this reason, familiarity with/experience of administrating a SQL Server instance and its connectivity/availability/maintenance is required by the person(s) conducting the upgrade operation. Potentially, there may be the use of a fuller version of SQL Server as part of the Monarch Classic cache database configuration. This may need to be included as part of the upgrade considerations.

Before commencing an upgrade, the application database should be backed up to allow for regression if problems occur and cannot be resolved within the desired upgrade window. Monarch Server services should be stopped to endure the state of the database is static.

Monarch Server can be deployed such that all components reside on one server, including its SQL Server Application database. However, you should ensure that for your upgrade, you identify if more than one server requires backup actions. Ensure also if there is a need to perform a separate SQL Server backup if you are using an external SQL Server instance. By referring to the Monarch Server Configurator, servers used to host the Monarch Server application, and its application databases can be identified.

A full backup should be taken when the Altair Monarch Server services are stopped (Monarch Server Config Service and Monarch Server Agent Service). Where there is more than one server, then the Agent Service on all other servers hosting Modules must also be stopped (refer to your Configurator to determine your server(s) and their hostname(s)).

For Monarch Server Report Warehouse & Automator in particular, there may be a need to validate and monitor the inputs to ensure post restart, all required inputs are present and will commence processing to allow for a complete and accurate catchup of pending inputs as well as subsequent newly delivered inputs. The mechanisms for this will vary depending on the input types as well as the storage/delivery methods used to make the inputs available to Monarch Server. Altair Support or Professional Services can assist with any questions or queries in this aspect.

If using Virtual Servers, then snapshots are also viable. However, these should also be taken when the services are stopped to ensure the snapshot is in a clean, restorable state. These will be used to perform a 'point-in-time' recovery should they be used. This means for Monarch Server Report Warehouse and Automator, there may also be a need to ensure any inputs delivered post this 'point-in-time' may need be captured and restored to enable 'catchup' of processing deferred during the upgrade downtime.

3. Monarch Server Automator - Upgrading or New Installation?

In the previous 2023.0 version of the Monarch Product family, changes were made affecting the Data Connectors. These changes are reflected in 2024.1.

A summary of changes made to Connectors are,
- The following Connectors have been deprecated.
  JIRA, Zendesk, Sugar CRM, Google Sheets, Box, Google Ads, Google Drive
- The following Connectors have had their functionalities modified.
  MySQL, NetSuite, Cassandra, Spark SQL Big Query, HubSpot, ServiceNow, SharePoint, OData, Active Directory

The Monarch Server 2024.1 installers (Single Server or Advanced) can be used to perform the following.
- a new install of Monarch Server, with an empty database, or
- to perform a clean install of Monarch Server and then point to and upgrade an existing database to the latest version.

Please review the following information relating to a clean install or upgrade before proceeding.

Clean Installation

If you are performing a new / clean install and creating a new, empty database, and thereafter using Workspaces created / edited in Monarch Complete 2023.0 or above, you can proceed with no further checks required. Workspaces created in Monarch DPS 2024.1 reflect the most recent features & functionalities by default and will therefore by compatible with Monarch Server 2024.1 accordingly.

Upgrading Monarch Server

This installer may be used as part of upgrading from a previous version of Monarch Server. If the previous version is 2022.0.2 or lower, then there is the possibility of Processes, Workspaces, Change Lists or Exports using the affected Connectors listed above.

If you are performing an upgrade and will be using a database from Version 2022.0.2 or lower of Monarch Server, then you must complete one of the following before proceeding:
- have reviewed the release notes and confirm that you are **not** affected by the connector changes implemented in Monarch Server 2023.0 and above (i.e., you do not use any of the affected Connectors)
- and / or have used the Monarch Server Inspector Tool to verify the existing database is **not** affected by the connector changes and no issues were identified.
- and / or have used the Monarch Server Inspector Tool to verify the existing database was affected by the connector changes and any issues have been **identified and have been or will be addressed** accordingly.

NOTE: If the Inspector Tool is not used / identified issues not addressed, then Visual Processes affected by the connector changes may fail to run or report errors.

If you require assistance, please refer to the Installation Guide or Release Notes for this version. The Release Notes contain a full list of new features, changes, bug fixes & known issues.

Alternatively, you can contact Altair DA Support here; https://community.altair.com/community

4. Software Support

Altair will support the current major version of a product release, and one major version behind the latest product version (N -1).

This means supported versions at the time of this release will be Altair Monarch Server 2024.x and 2023.x.

Support includes:

- Response to questions about using product features.
- Operational questions
- Guidance on installing latest updates, service updates, and patch fixes (Altair strongly suggests that Altair Knowledge Works Professional Services be involved with your upgrades and patches)
- Investigation into operational failures and/or issues

The Altair Customer Support Page can be found here; Customer Support | Altair (https://altair.com/customer-support).

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5. Access to Software Updates

Customers with an active Maintenance Plan are automatically provided access to the latest product releases via the Customer Support Portal (https://community.altair.com/community). This includes major software releases and service releases for updates and fixes.

5.1. Release Overview

Altair Monarch Server is a deployment platform for the Monarch based Server products within the Knowledge Works product set. The server-based platform is scalable from a single-server implementation to a multi-server web distributed system, providing failover, scaling and pooling capabilities accordingly.

Altair Monarch Server consists of three products:

- Report Warehouse
    - o Traditional Enterprise Server / Content Server functionality
    - o Filing, storage, retrieval of TXT & PDF based reports
- Automator
    - o Traditional Data Pump Engine
    - o Project Editor
    - o Visual Process Editor
- Report Mining Server (RMS)
    - o 'Overlaying' Report Warehouse (Formally Content Server) functionality on top of an existing Content Management System

Altair Monarch Server 2024.1 continues the following:

- To simplify providing a centralized, browser-based report warehouse with rich data extraction/manipulation/export capabilities
- To enable the automation of data preparation based on Altair Monarch Workspaces and Models
- To enhance the user experience of existing Content Management Systems by enabling richer interactions with compatible report content, enabling rich data extraction/manipulation/export capabilities

Enhancements in the general user experience are added to process definitions/logic, and improvements are made for data connectivity and exports.

Additionally, a few general enhancements are included in this release relating to upgrades, performance & security.

Finally, Veracode Static Application Security Testing (SAST), Veracode Software Composition Analysis (SCA), OWASP Dependency Track & WebInspect Dynamic (PCI Data Security 3.2.1) scans for vulnerability issues were used to ensure that no significant risks for security breaches were apparent and appropriate remedial work undertaken to address issues found accordingly.

6. Release Benefits

This document is divided into the major areas where improvements and additions of new features provide significant benefits to the users of Altair Monarch Server 2024.1.

A summary of changes / new features is as follows:

- Installation & Upgrade
- Deprecated functionality
- Altair Monarch Complete SDK / Engine alignment
- Reduced risk for security breaches
- New features / Improvements

6.1. Installation and Upgrade

Support of newer technologies that are reflected in this release of Altair Monarch Server 2024.1:

- Support for Tableau .hyper file format in Standard & Visual process exports
- Support for SAS Transport V8 file format in Standard & Visual process exports

6.2. Deprecated Functionality

Deprecation of older technologies are reflected in this release of Altair Monarch Server 2024.1:

- Tableau TDE Export Format has been deprecated and replaced with the newer .hyper format. This applies to both Standard and Visual Processes.

The following Connectors have been deprecated per previous 2023.0 release:

- *JIRA, Zendesk, Box, SugarCRM, Google Sheets, Google Ads & Google Drive*
- *Any visual processes utilizing these connectors will fail with error advising of the same in the job log. Likewise, the Inspector Tool will advise of the same as part of its scan summary.*

6.3. Altair Monarch Complete SDK/Engine alignment

Altair Monarch Complete 2024.1 was released in Dec 2024.

To align with the desktop tools, Altair Monarch Server 2024.1 makes use of the Altair Monarch Complete 2024.1 SDK engines accordingly (also referred to as the Monarch Classic and Data Prep Studio SDKs).

It is important to ensure desktop and server components are of a common version to avoid issues with models/projects/workspaces generated in the desktop product and subsequently used in server product(s). The version of the Engine/SDK is provided as part of the Altair Monarch Server major/minor releases and patch release notes. These should be checked to ensure commonality between the products accordingly. Altair Knowledge Works Support can provide further assistance if required (https://community.altair.com/community).

In the prior 2023.0 release of the Monarch Product family, changes were made to the data Connectors.

A summary of changes made to Connectors are,

- The following Connectors have been deprecated:
  JIRA, Zendesk, Sugar CRM, Google Sheets, Box, Google Ads, Google Drive
- The following Connectors have had their functionalities modified:
  MySQL, NetSuite, Cassandra, Spark SQL Big Query, HubSpot, ServiceNow, SharePoint, OData, Active Directory

Monarch Server 2024.1 is compatible with Monarch Complete/DPS 2024.1 and earlier. Specifically,

- If using workspaces created in Monarch DPS 2024.1, these will be compatible with Monarch Server 2024.1
- If using workspaces created in an earlier version of Monarch DPS (2022.1 or lower) and **upgraded** in Monarch DPS 2023.0 and above, these will be compatible with Monarch Server 2024.1
- If using workspaces created in an earlier version of Monarch DPS (2022.1 or lower), that use one or more of the connectors listed above and **not upgraded** in Monarch DPS 2023.0 or above, these will **NOT** be compatible with Monarch Server 2024.1. Visual Processes that use these workspaces will fail accordingly.

For Monarch Server 2024.1:

- Monarch Server Assembly Version is 24.1.0.18
- The full version of Datawatch.SDK, which is used in the build, is 24.1.0.37261.
- The full version of Datawatch.DataPrep Engine, which is used in the build, 24.1.0.37261.

6.4. Reduced Risk for Security Breaches

Regular review of the software eliminates the risk to have vulnerabilities exposed. The code scans performed on Altair Monarch Server permit deployments to comply with major regulatory requirements and industry standards more easily.

Vulnerability code scans were performed on Altair Monarch Server 2024.1 using a combination of:

- Veracode Static Application Security Testing (SAST) - Auto-update PCI Policy
- Veracode Software Composition Analysis (SCA)
- OWASP Dependency Track
- WebInspect Dynamic (using PCI Data Security 3.2.1 - AllCheck policy (Includes all the PCI vulnerabilities))

Scans for vulnerability issues are used to ensure that no significant risks for security breaches were apparent and appropriate remedial work undertaken to address issues found accordingly.

7. New Features / Changes

An overview of major new features / improvements follows.

As part of the Monarch SDK consumption and to maintain feature parity in Automator Processes primarily, Monarch Server has inherited the following functional changes.

- Deprecation of the Tableau .tde file export format (see here for more information) . Replacing this, is provision for file export to the newer ".hyper" format.
- Connector updates (Salesforce, Google Sheets, OData)
- Support for SAS Transport V8 Export format (see here for more information)

These and other Monarch Server specific highlights are as follows.

7.1. DST-2722 - Export to Snowflake

Prior to Monarch Server 2024.1, export to Snowflake was typically conducted as an external activity referenced by the Process. As an example, the dataset was exported to a CSV file and then a script used to perform the upload of the CSV to the target Snowflake instance.

Customers desired a more integrated capability that enabled the selection of a Snowflake target as part of a Visual Process export definition, making it more accessible and less technical.

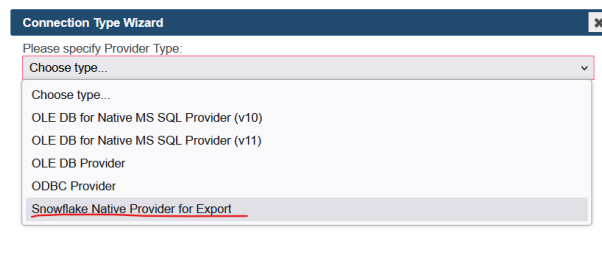In Monarch Server 2024.1, it is now possible to create a Snowflake Connection Definition.

Figure 1 - Connection Type Wizard with new Snowflake option.

In turn, this allows for the connection settings to be centrally maintained and made available for subsequent export usage.
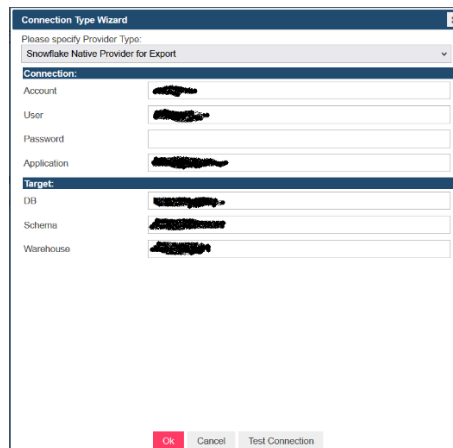

Figure 2 – Snowflake connection settings dialog.

NOTE: Customers currently exporting to Snowflake using other methods will need to rework their Visual Processes to use this capability. Doing so will provide advantages, regarding maintaining processes in a centralised fashion.

7.2. DST-2280 - Improve scheduling settings with CRON capabilities.

Monarch Server has background modules that runs continuously and executes scheduled tasks.

Once configured, the modules check for associated task schedules to run as frequently as every minute (assuming correct instance configuration) based on internally stored CRON expressions, which specify the exact times or intervals when tasks should run.

In the Monarch Server scheduling interface (Version 2024.1+), there is a new option to allow for the provision of a user defined CRON string as opposed to using the scheduling interface to define the same via the options presented by (and limited to) the interface options.
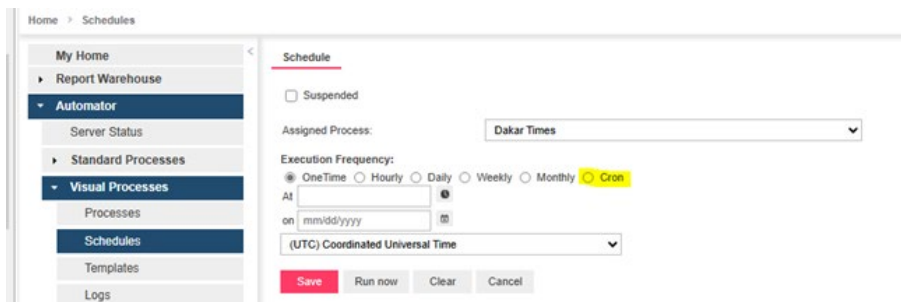

Figure 3 - New CRON Execution Frequency option.

When selected, the user can either type or paste in the CRON string desired. Pressing TAB will perform a validation of the string.
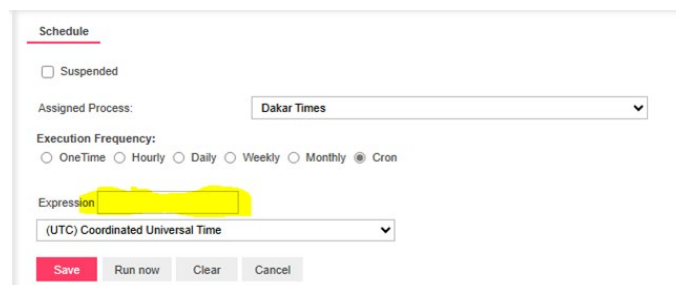

Figure 4 - CRON expression input box.

Monarch Server has historically stored user defined schedules using CRON. However, post Monarch Server 2024.1, Administrators can define schedules using CRON syntax explicitly, allowing for more efficient and complicated/customised scheduling definitions.

Product documentation also includes a rich list of example CRON statements and other resources to help a user create/test CRON strings that meet their needs.

7.3. DST-3526 - Configuration Reports Updated UI Control

The Monarch Server Configuration Reports consist of the following that supplement the administration of the Report Warehouse and Automator features.
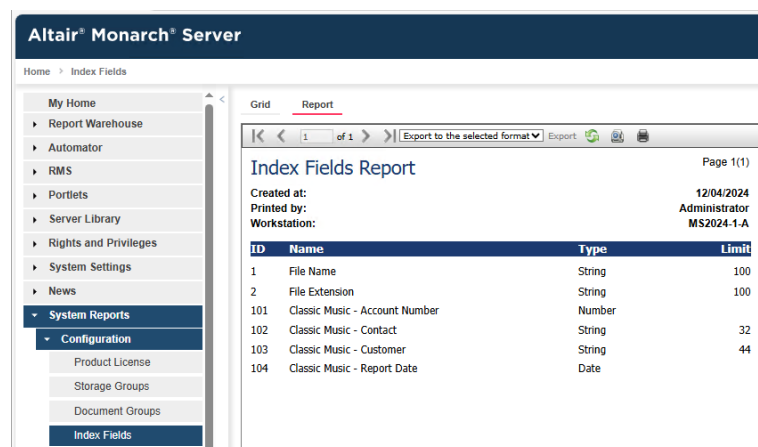
- Product License report
- Storage Groups report
- Document Groups report
- Index Fields report
- Roles report
- User Groups report
- Users report
- Maintenance Tasks report
- Filing Tasks report
- Security report
- Model Indexes report
- Document Type Security report
- Automator Process Dependencies report

These reports previously rendered in a text/console style that limited their accessibility. A new UI Control has been introduced which renders these in a more usable grid format that in turn supports modern expectations in terms of sorts, filters and exporting to make the data more interactive and accessible.

Users of the prior text/console style reports will still have access to the same, however, reports will default to the new style.

In future releases, this grid approach will be used further in the application, in conjunction with other UI improvements to better enable feature functionalities and empower the user in their usage of the same.

To illustrate this further, lets compare the *System Reports, Configuration, Index Fields* report views.

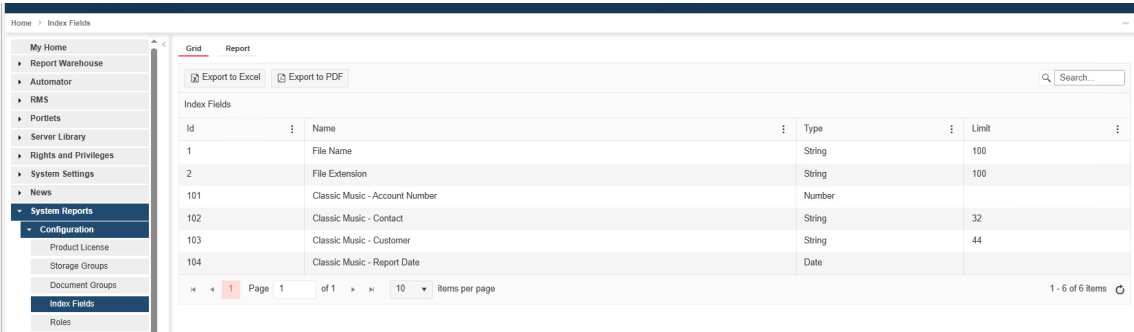*Figure 5 - Index Report - Legacy Style*
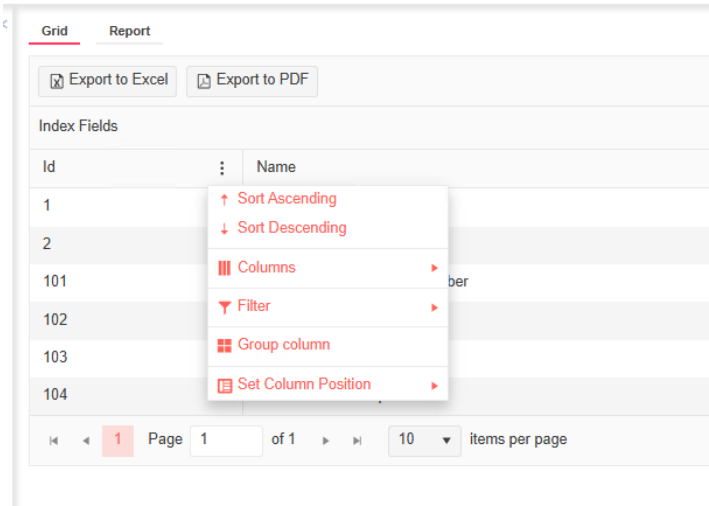
Figure 6 - Index Report, New Grid Style

Figure 7 - Grid Report View - interaction options.

With this new Grid approach, we can enable the user with options such as sort, filter, choose columns, export to XLSX /PDF and will improve on this further and more comprehensively in the overall UI in coming releases.

7.4. DST-3517 - Add total Altair Units consumption in Configurator.

To aid Units maintenance, the total units consumed by the current instance configuration is now displayed explicitly.
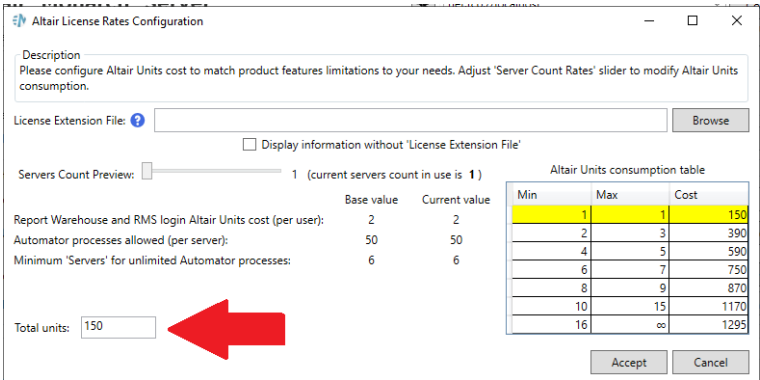

Figure 8 - Altair Units License Dialog in Monarch Server Configurator with new Total Units displayed.

7.5. DST-3569 - Improve Altair Units consumption table.

In Monarch Server 2024.1, the Units consumption cost renders using the more practical numbering format that forms the basis of current Altair Units consumption conversations as opposed to a raw, legacy, internal notation that can be confusing.
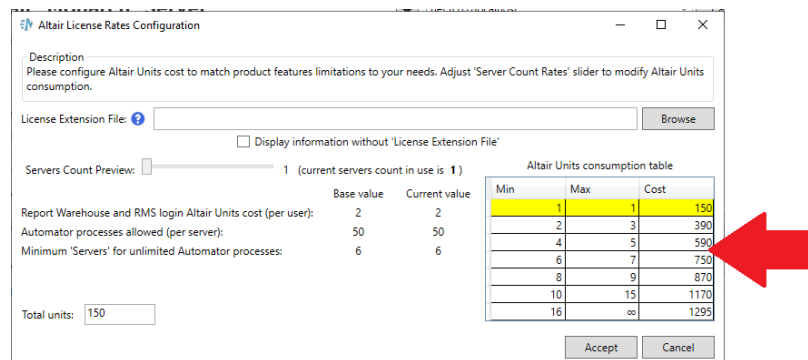

Figure 9 - Units consumption cost is no longer in ,000 format.

7.6. DST-3652 - Export - Replace Tableau TDE and Server with .hyper - Classic Export

To maintain functional parity with Monarch Complete 2024.1 and per Tableau support, exports for Tableau / Tableau Server will now be performed using the .hyper format (see here for more information) for Standard Process / Model (.XMOD/.DMOD) derived exports.

7.7. DST-3617 - Export - Replace Tableau TDE and Server with .hyper - DPS Export

To maintain functional parity with Monarch Complete 2024.1 and per Tableau support, exports for Tableau / Tableau Server will now be performed using the .hyper format (see here for more information) for Visual Process / Workspace derived exports.

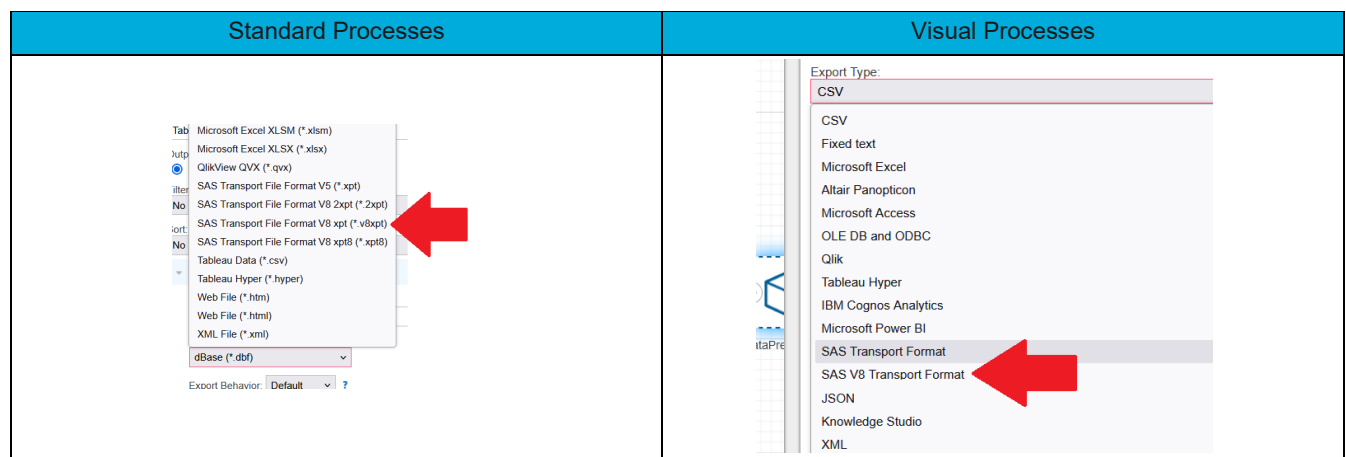## 7.8. DST-3651 - Export support for SAS Transport V8 files

See here for more information on this file format.

Processes support the ability to export to both the previous SAS Transport V5 format and now include options for the various V8 options.

7.9. DST-1791 - VPD: add the ability to open and view Process Log XML in user-friendly style.

For improved portability/usability, Visual Process logs can be exported to a more readable, formatted HTML output.
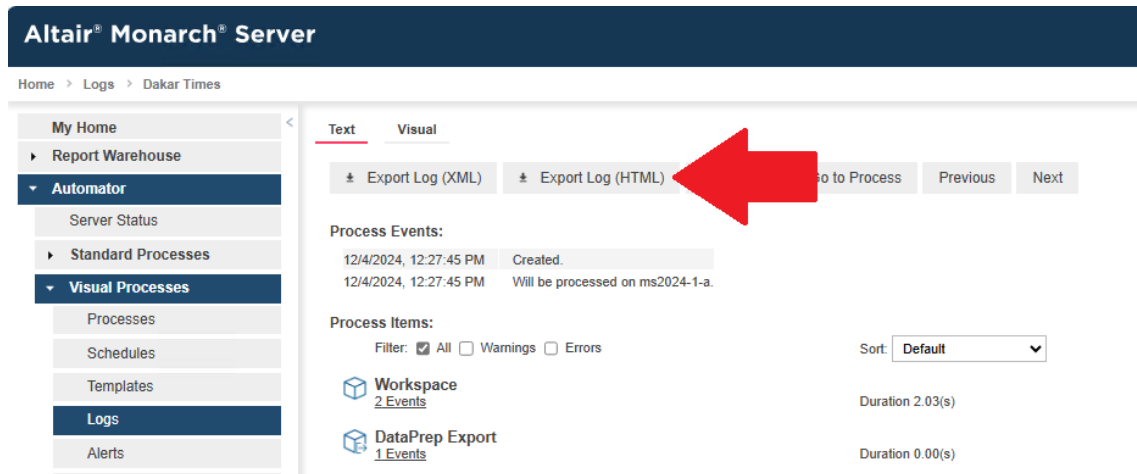

Figure 10 - New Export Log (HTML) option.

8. Full List of Fixes / Improvements (42)

8.1. General Fixes / Improvements (8)

Type	ID	Summary
New Feature	DST-2280 DST-3698 DST-3713	Improve scheduling with CRON capabilities
New Feature	DST-3526 DST-3663	New Configuration Reports / UI Controls
Improvement	DST-3517	Add total Altair Units consumption in Configurator
Improvement	DST-3569	Improve Altair Units consumption table
Documentation	DST-3635	Doc: Update Embedded Third-Party Components Documentation

8.2. Automator Fixes / Improvements (34)

Type	ID	Summary
New Feature	DST-1791 DST-3644	Add the ability to open and view Process Log XML in user-friendly style
New Feature	DST-2722 DST-3658	Export to Snowflake directly in Visual Process
Improvement	DST-1672	VPD: enhance set up Table name for Workspaces
Improvement	DST-2376	Improve logs when process export failed: Cannot open input file if Excel input has Engine: Legacy
Improvement	DST-3173	DataPrep Export 'Column Mapping' and 'Bulk Behaviour' redesign
Improvement	DST-3617 DST-3675	Export - Replace Tableau TDE and Server with .hyper format - DPS Export
Improvement	DST-3651 DST-3670	Export support for SAS Transport V8 files
Improvement	DST-3652	Export - Replace Tableau TDE and Server with .hyper format - Classic Export
Bug	DST-2238	Cancelled process state was changed to Completed for all processes after update of DB

Type	ID	Summary
Bug	DST-2251	Access (.accdb and .mdb) export created file is empty if Update and append option was selected
Bug	DST-2296	In certain process configuration some data prep exports in sequence produce no action and no error, just start and finish
Bug	DST-2559	Job is completed with "System.NullReferenceException" error during distribution of some excel table
Bug	DST-2567	Selected 'Location' in 'Set Destination Path' dialog is not being saved
Bug	DST-2581	System cannot retrieve table's name of database input while using "Process name" macro in path name
Bug	DST-2704	Process with workspace completes with an error when starting by manifest
Bug	DST-3052	Data captured via Excel Worksheet Design (Excel Trapping) and then use it as input in an Automator process will display an error "The given key was not present in the dictionary."
Bug	DST-3112	Multiway export options validation does not work properly for SAS Transport Format export type
Bug	DST-3415 DST-3669	Issue opening some projects in Project Editor after Monarch Server upgrade (from 2021.1.1 to 2023.0.2)
Bug	DST-3452	Data is truncated in Automator when using Fixed Text as export file type.
Bug	DST-3507	Oracle connection property bag does not set columns
Bug	DST-3522	Fix bug which is causing that first part of the Share String ends with underscore character
Bug	DST-3584	'Browse for file' dialog does not retrieve old value when invoked (Database Input)
Bug	DST-3595	Automator Verify node not showing rows when rows are Expected
Bug	DST-3599	Input file locking when running the processes sequentially
Bug	DST-3634	A manifest file that contains Change History failed to export the second load plan but exported the first load plan.
Bug	DST-3643	Export Log (HTML)'s click action is not applied to whole button in Visual tab (Firefox & Edge only)

Type	ID	Summary
Bug	DST-3685	Existing Tables list not populating under table combo box for Database Input in Project Editor
Bug	DST-3707	Validation message not coming when Table name has more than 8 characters for SAS Transport File Format Export
Bug	DST-3708	Unable to replace XML input file from DPS 2024.0 SDK based workspace

8.3. Report Warehouse (Formally Content Server) Fixes / Improvements (0)

Type	ID	Summary
		No Report Warehouse specific items in this release.

8.4. Report Mining Server (RMS) Fixes / Improvements (0)

Type	ID	Summary
		No Report Mining Server specific items in this release.

9. Known Issues

The following known issues are intended to be fixed in a subsequent release of Altair Monarch Server. The next planned release (2025.0) is expected for calendar Q2 2025.

9.1. Monarch Server General

Category	ID	Summary
Bug	DST-2857	Unexpected Service termination / Server shutdown prevents modules restarting due to corrupt [module].exe.config files
Improvement	DST-3623 DST-3624	3rd Party Component 'linq2db' awaiting release of version 6.0.0 from vendor to address several issues preventing update to 5.4.1

9.2. Automator

Category	ID	Summary
N/A		

9.3. Report Warehouse

Category	ID	Summary
Bug	DST-2608	CS: Offline Tasks - mail client is NOT opened by clicking on "mail" icon

9.4. RMS

Category	ID	Summary
N/A		

EOF