insightsoftware

Server Manager Guide

Longview

Version 26

Document Information

Notices

Copyright

The information contained in this document represents the current view of insightsoftware.com on the issues discussed as of the date of publication. This document is for informational purposes only. insightsoftware.com makes no representation, guarantee or warranty, expressed or implied, that the content of this document is accurate, complete or up to date.

Disclaimer

This guide is designed to help you to use the Longview applications effectively and efficiently. All data shown in graphics are provided as examples only. The example companies and calculations herein are fictitious. No association with any real company or organization is intended or should be inferred.

Contents

Introduction to Longview

Longview provides corporate performance management (CPM) software that leading companies use to drive performance with speed, visibility, and financial integrity. Since 1994, many of the world's most respected companies have been using our technology platform to create a single repository of financial truth from which statutory consolidation, management reporting, financial planning, modeling, analysis, budgeting, forecasting, and strategic tax can be performed quickly and accurately, enterprise wide.

Longview enables enterprise clients to collect, store, analyze, and report on data in real-time by automating, centralizing, and standardizing any one or combination of the following key financial processes: Planning, Budgeting, Forecasting, Consolidation, Financial Close Management, Profitability Analytics, Statutory, XBRL Financial Reporting and Tax Provisioning. With Longview customers can reduce overreliance on spreadsheets, improve transparency, and regain control of these key finance functions.

Longview Tax calculates your company's global tax charge, effective tax rate, and deferred taxes for tax provisioning purposes. Since Longview Tax uses the same technological platform as your corporate performance management solution, the tax reporting process is directly integrated into the corporate close process. As one solution, consolidated pre-tax income can be reported by legal entity to accurately calculate consolidated income tax charges and deferred taxes.

For more information on purchasing Longview Tax, contact your Longview Account Manager. Web services are a standardized way of integrating applications over the Internet or Internet protocol-based networks. Web services rely on certain software standards including Extensible Markup Language (XML), Simple Object Access Protocol (SOAP), Web Service Definition Language (WSDL) and Universal Description, Discovery & Integration (UDDI).

About this guide

This guide includes basic information on how to install your Longview system. The following sections indicate conventions that are used in this guide.

Warnings and notes

This guide uses the following conventions for warnings and notes:

Caution: Warnings provide cautionary information on the possible effect of certain actions, including the unintentional deletion of data. Be sure to read and understand all warnings before performing a related procedure.

Note: Notes provide additional information to help you understand your Longview system better. They also provide important information on exceptions to general guidelines.

Procedures

There may be several ways to perform a procedure in your Longview system.

- You may be able to choose a menu command. For example, to open a file, you can choose **Open** from the File menu. In this documentation, we use: Choose **File** > **Open**.

- You may be able to use a keyboard equivalent. For example, to exit you can press the **Alt** key and then the letter **F** to open the File menu, and then press **X** for Exit.
- You may be able to click a button or icon. If a menu command has an equivalent button or icon, an illustration of the button or icon may appear in the margin.

In this documentation, we may not describe all methods to carry out a task. Use whichever method you prefer. Depending on the task you are performing, certain methods may not be available.

Contacting Longview

Questions? We are ready to help. For contact information for Longview, visit our web site at insightsoftware.com/Longview/.

Who Should Read This Document?

This documentation assumes you have a working knowledge of Microsoft Windows and the Internet, and that you understand basic terminology such as buttons, drop-down lists, defaults, and so on.

It also assumes that you are familiar with basic accounting terminology and concepts.

Longview Server Manager Overview

Longview Server Manager is one of the major components of Longview. Longview Server Manager is used to administer the Data Server, and the servers that make up the Data Server.

Longview Server Manager allows you to create and modify the logical systems that serve Longview. Longview Server Manager is used by IT professionals to manage the Longview infrastructure, its various servers, and the implementation life cycle. Longview Server Manager should not be confused with Longview Application Administrator, which is used by Business System Administrators to manage hierarchies, business rules, attributes, etc. For a list of which operations are managed by which component, see Performing Server Tasks.

Longview Application Administrator and Longview Server Manager

Longview Application Administrator is one of the administrative components of Longview. It is used to work with users and the group hierarchies to which they belong, and process data approvals. For more information, see the Longview Application Administrator Guide.

Longview Server Manager is another administrative component of Longview. It is used to administer the servers that make up the application, as well as the server Directory and server Events that control and monitor activity in the system.

In general, business administrators use Longview Application Administrator, and IT professionals use Longview Server Manager.

Administrative Server Tasks

Server tasks fall into two broad categories that are handled by different kinds of users. Tasks that involve managing the content of the database are handled by users with the appropriate permissions. Tasks that involve creating the database and configuring its servers are handled by the users with permissions to manage the database.

User maintenance tasks, including user access and permissions, cannot be performed using Longview Server Manager. These require the use of Longview Application Administrator. For information on user and group maintenance, see the Longview Application Administrator Guide.

Performing server tasks

Longview Application Administrator and Longview Server Manager administer different aspects of the system. Which of the components you should use depends on the nature of the task you want to accomplish. Below is a list of common administrative tasks and the corresponding component to use.

Common Administrative Tasks	Corresponding Component to Use
Longview Application Administrator	■ Checking for duplicate data ■ Collecting statistics ■ Creating, modifying, and deleting users, groups, and symbols ■ Exporting the Data Audit Trail ■ Resetting the Data Audit Trail ■ Importing Data Server objects from text files ■ Running restatements or recalculations ■ Specifying Journal Entries settings ■ Specifying NDD settings ■ Working with attributes ■ Working with batches ■ Working with events ■ Working with foreign exchange ■ Working with locks ■ Working with schedules ■ Working with server rules (model, rollup, query, event, and validation rules) ■ Working with symbol access roles ■ Working with the hierarchy

Common Administrative Tasks	Corresponding Component to Use
Longview Server Manager	■ Reviewing users ■ Exporting data to files ■ Importing data from files ■ Starting and stopping servers ■ Working with Log files ■ Working with server status ■ Working with servers ■ Working with the Data Server Configuration

Understanding Longview Servers

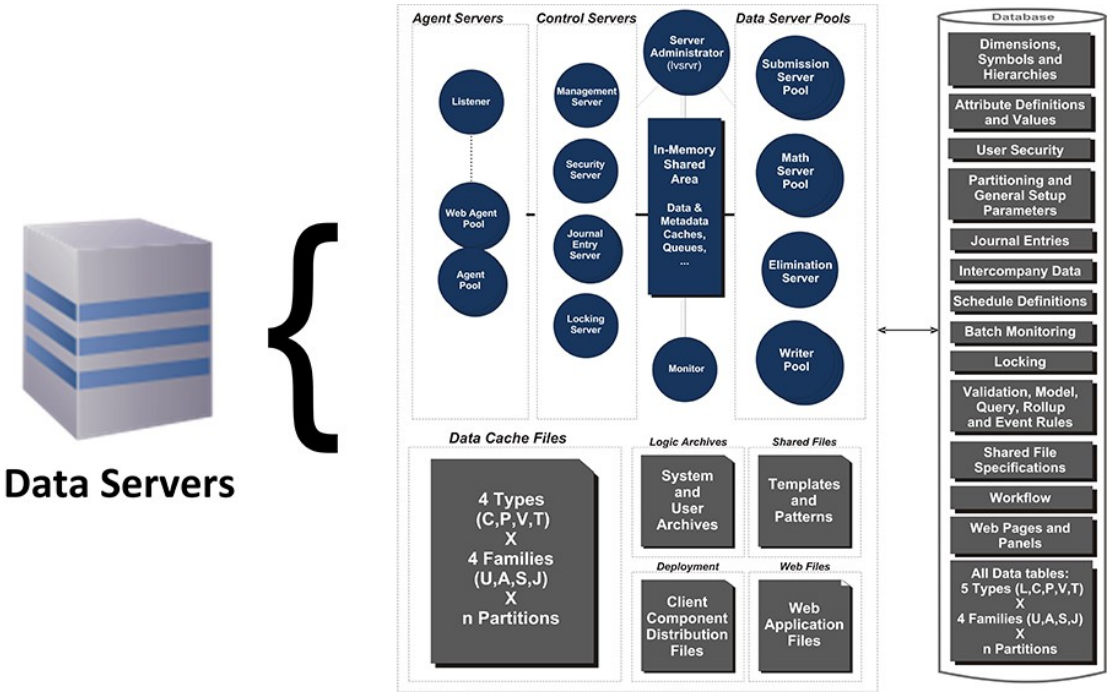
The following servers are an integral part of Longview. In addition to these servers, your system may also have process-specific servers or server pools, such as Elimination Servers, Math Servers, Journal Entry Servers, and so on.

Understanding the Data Server

The Data Server performs as a single, integrated data source for the Longview system. It is responsible for maintaining access to the system, overseeing authentication and authorization, and maintaining symbols, dimensions, classes, and attributes.

The Data Server features the following characteristics:

- up to 16 base dimensions
- up to 8 schedule dimensions
- a maximum of 262,144 symbols per dimension
- string data and data approval comments up to 4,000 characters in length
- names up to 31 characters in length



The Data Server is not actually one server, but a set of executable files.

The Data Server consists of the following:

- Agents
- Elimination Server

- Grid Server
- Listener
- Locking Server
- Management Server
- Monitor Server
- Security Server

Agents

An agent (lvagent) is a process that serves as a channel from client components to the servers. There are two modes in which agents can operate — dedicated and pooled.

There are also web agents (lvwag), which behave similarly to regular agents.

- Dedicated
  When your Longview system uses dedicated agents, a new agent is spawned by the Listener each time it receives a connect request from a client component. The agent process ends when the user disconnects from the servers.

- Pooled
  When your Longview system uses agent pooling, the Listener pre-spawns the specified number of agents when the servers first start up. In this mode, each time the Listener receives a connect request from a client component, it assigns the connection to the least busy agent in the pool. Agents handle multiple, concurrent connections in this mode, to a maximum of 250 connections. When a user disconnects, the assigned agent remains on the server, waiting to handle other connections. Longview recommends that you start with one agent handling ten users.

Elimination Server

If your company contains several divisions that share the same corporate parent, it is possible that they do business with each other. To ensure that intercompany transactions are handled correctly, the users of your Longview system need to identify each entity that does business with its siblings, and then perform an intercompany elimination on each of those transactions.

The Elimination Server (lvelim.exe) manages the data related to eliminations. Specifically, the Elimination Server does the following:

- creates eliminations for all hierarchies.
- stores and manages the transactions in new intercompany data tables.
- communicates with the Journal Entry Server to create and post each elimination journal entry (JE) automatically.

Grid Server

The Grid Server manages the running of the math portion of the restatement over a network of Windows-based computers. In manual mode, the Grid Server itself manages the distribution of all jobs in the network. The Grid Server also works with third-party grid software (DataSynapse) by sending jobs to the third-party Grid Server, which then manages the distribution of the math jobs. In either case, distributing the jobs across multiple desktops/servers reduces the time taken to complete the restatement process.

The Grid Server:

- works with third-party grid software (DataSynapse).
- is launched when the Longview Administrator Console is started.
- distributes the math jobs to multiple machines when using manual mode or sends all jobs to a third-party Grid Server when the restatement is launched.
- transfers the math output files to the tmp folder on the server and adds the jobs to the writer queue.
- sends information on its activity to the Longview Data Server Log.

Listener

The Listener (lvlsnr.exe) identifies connection requests from client components. It listens for users attempting to access the application.

The Listener:

- receives the user's request for connection to the application.
- assigns an agent to communicate the user's request to the application and to transmit the responses to the user. If agent pools are being used, the Listener assigns user connection requests to a particular pre-existing agent.
- goes back to listening for the next request from a user.
- sends information on its activities to the Longview Data Server Log.

Locking Server

The Locking Server (lvlock.exe) handles all requests for locking, unlocking, and verification of submitted data against a user's locks. It also stores information on locking activity.

The Locking Server:

- receives notification from the agent that the user has requested access to symbols in the Data Server database. The combination of symbols is called an intersection of data (specified hierarchically in all dimensions).
- verifies whether the intersection of data is valid.

- verifies whether any of the symbols in the intersection are locked — that is, in use by another user. If the requested intersection overlaps a locked intersection, the data is considered locked.
- If none of the data is locked, it allows write access.
- If any of the data is locked, it allows read-only access.
- sends the locking information back to the agent.
- sends information on its activities to the Longview Data Server Log.

Management Server

The Management Server (lvmgm.exe) maintains hierarchy information for other servers, providing quick and coordinated access to hierarchical information.

The Management Server:

- creates hierarchical information when the server is first initialized.
- recreates hierarchical information when the hierarchy is changed.
- handles most database maintenance requests (for example, adding or deleting symbols).
- detects errors in the hierarchy, alerting users when the hierarchy structure fails to meet the Longview standard.
- sends data back to the requesting server.
- sends information on its activities to the Longview Data Server Log.

Monitor Server

The Monitor Server (lvmon.exe) monitors all system activity. All processes on the Server, including agents, send periodic status updates to the Longview Data Server Log.

The Monitor Server:

- receives information from the Listener and Agents, and from all servers.
- relays all status updates to the Longview Data Server Log, which you can review later for general and troubleshooting information.
- takes appropriate action, such as shutting down all servers, if a system error occurs.

Security Server

The Security Server (lvsec.exe) filters every connection to the application. It handles user IDs, passwords, and symbol access restrictions.

The Security Server:

- receives notification from the agent that the user has requested access to the application.
- checks if the user is authorized to access the database by verifying the user ID and password.
- If the user ID and password are correct, it identifies the areas of the data for which the user has read access and write access.
- If the user ID and password are incorrect, the component sends an error message to the user.
- If the user does not have the proper authorization for a particular request, the component sends an error message to the user.
- sends the security information back to the agent.
- sends information on its activities to the Longview Data Server Log.

Understanding Server Pools

In the past, Longview servers were designed to process very specific types of data. Many of those processes were quite similar and repetitive, resulting in unnecessary fragmentation.

The servers now understand all families of data (unadjusted, adjusting, and schedule), and all types of data (leaf, parent, calculated, validation, and CTA). The resulting benefit is optimal use of resources.

Server pools include the following:

- Journal Entry Server Pool
- Math Server Pool
- Submission Server Pool
- Writer Server Pool

Journal Entry Server Pool

A Journal Entry (JE) is a record of the accounting information for a business transaction. The Journal Entry Server (lvjent.exe) handles all operations relating to an application's journal entries, for example:

- creating JEs
- updating JEs
- translating and validating JE details
- posting JEs
- deleting JEs (when allowed) The Journal Entry Server Pool:
- receives requests from the component (via the associated agent), or from the Elimination Server, to perform a JE operation. When a system is configured to use JE workers, these requests are routed automatically to the least busy worker for better concurrency.

- queues data to the Submission Server queue.
- sends information on its activities to the Longview Data Server Log.

Math Server Pool

The Math Server (lvmath.exe) performs accounting related logic, server modeling and validation logic, and calculations, depending on the configuration of your system.

The Math Server:

- receives data from the Submission Server Pool.
- performs specialized accounting calculations:
  - N-Dimensional Distribution
  - Period Activity Calculation
  - Retained Earnings Calculation
  - Translation
  - Year-to-date
- performs modeling and validation calculations as specified in the server rules.
- creates parent data by rolling up per your system's hierarchies.
- sends calculated data to the Writer queue.
- sends information on its activities to the Longview Data Server Log.

N-Dimensional Distribution

N-Dimensional Distribution distributes data to the nth dimension, in a one-to-one mapping. For example, for a particular account and entity, it distributes 100% of the data to the nth dimension, which can be a function, an activity, or a product.

N-dimensional modeling automatically iterates through fixed dimensions, to run three-dimensional models. No complex looping is necessary.

N-dimensional modeling:

- executes the query once (rather than once for each iteration)
- compiles the datalink and model once
- submits changes once (after all iterations)

Period Activity Calculation

The Period Activity Calculation (PAC) translates year-to-date (YTD) data to current period data. Whenever a data value corresponding to a YTD time period changes, the corresponding current period time period data automatically changes.

Retained Earnings Calculation

Retained Earnings Calculation (REC) moves the net income value to the Retained Earnings section of the Balance Sheet. Whenever the value of a leaf cell changes, this change causes a change in the Net Income value and is recorded automatically in the associated REC leaf account.

Translation

The translation logic calculates data related to data translation (also known as foreign exchange). Whenever the value of a source currency changes, the corresponding target currency is automatically calculated using appropriate exchange rates.

In addition, the appropriate effect on the Net CTA account, as well as the related Cumulative Translation Adjustment (CTA) details are calculated.

Year-to-date

The year-to-date (YTD) calculation logic is like the Period Activity Calculation (PAC) logic. It converts a period amount to a YTD amount.

Submission Server Pool

The Submission Server Pool (lvsub.exe) enters data into leaf tables in the Data Server database and sends data files to the appropriate servers for further calculations.

The number of submission servers you can start depends on the logic enabled in your system. For example, if you use schedules in your system, the submission pool can be set to 2, because you can submit to different leaf tables (klx_uln_pnnn_cells and klx_sln_pnnn_cells). If you use leaf partitioning in the database, your submission pool can be greater than 1, because there is more than one leaf table to which you can submit data. It is not necessary to have one Submission Server per leaf table.

The Submission Server Pool:

- receives input from the agent.
- sends the data file to the Math Server if calculations are required.
- sends information on its activities to the Longview Data Server Log.
- inserts and updates values in the following tables:
  - klx_aln_pnnn_cells
  - klx_sln_pnnn_audit
  - klx_sln_pnnn_cells
  - klx_sls_pnnn_cells
  - klx_uln_pnnn_audit
  - klx_uln_pnnn_cells
  - klx_uls_pnnn_cells
  - * nnn = 0 – 999

Writer Server Pool

The Writer Server Pool (lvwrite.exe) updates all data tables not updated by the Submission Server Pool — parent, calculated, validation, and translation tables.

The Writer Servers:

- accept rolled up calculated delta data from the Math Server.
- take the jobs that were placed in the Writer queue by the Math Server.
- create data cache files (highly compressed files, much smaller than storing in a database) when Store Calculated Data in Cache Files is selected.
  For more information, see Recalculation.
- update the appropriate data tables — for example, parent, calculated, Cumulative Translation Adjustment (CTA), or validation.
- send information on activities to the Longview Data Server Log.

To calculate the maximum number of Writer Servers, you can use the following formula:

```
Max Writers = NumPartitions * 4 * Logic
```

where:

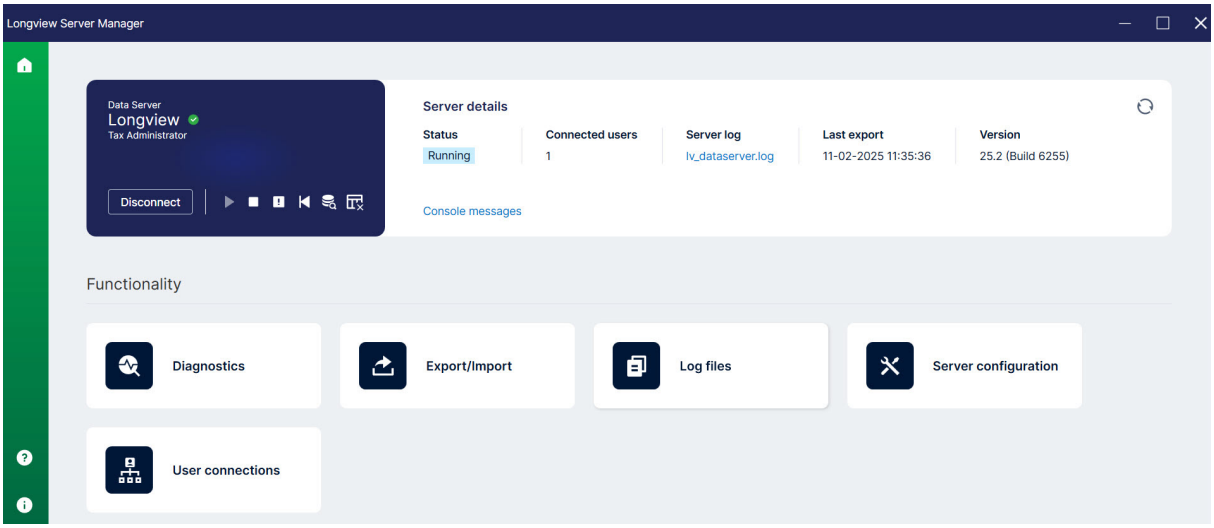
- NumPartitions is the number of partitions in the database
- 4 represents the four types of tables (Calculated, Parent, Validation, and CTA)
- Logic represents the combination of Journal Entry and Management Servers currently enabled. The possible values are:

Value	Description
1	Neither Journal Entry nor Management Servers.
2	Only Journal Entry Server, or only Management Server.
4	Both Journal Entry and Management Servers.

Longview Server Manager Home Page

The home page of the Longview Server Manager is composed of the following elements:

- Left navigation
- Data Server and Server details
- Functionality section
- Toast notifications



Left Navigation

The navigation bar on the left contains the following icons:

Home

Click to display the home page of the Longview Server Manager.

AI Doc Assist

This feature is available for Longview systems on the ISW platform. The AI Doc Assist is a chatbot that can answer your questions about using Longview and Longview Server Manager. The AI Doc Assist bases its answers on Longview user documentation and provides direct links to the source articles.

Help

Click to display the Longview Server Manager help.

About

Click to review version and copyright information of the Longview Server Manager.

Data Server And Server Details

When you launch Longview Server Manager via the Longview Dashboard, you are automatically connected to the Data Server.

The dark blue Data Server panel displays the name of the **Data Server** you are connected to, and the user who is connecting to the server. You can also use the icons in the Data Server panel to determine the status of the server and its processes.

In the **Server details** panel, you can review server and user information.

For more information on the panels and their functionalities, see the Data Server and Server Details article.

Functionality Section

The Functionality section provides entries to the following Longview Server Manager functionality pages:

Diagnostics

Opens the Diagnostics page to establish and manage logging and tracking activities related to diagnostics and support.

Log files

Opens the Log files page to view log files that contain information about various activities in your system.

Server configuration

Opens the Server configuration page to configure your Data Server.

Export/Import

Opens the Export/Import page to export and import data into database tables.

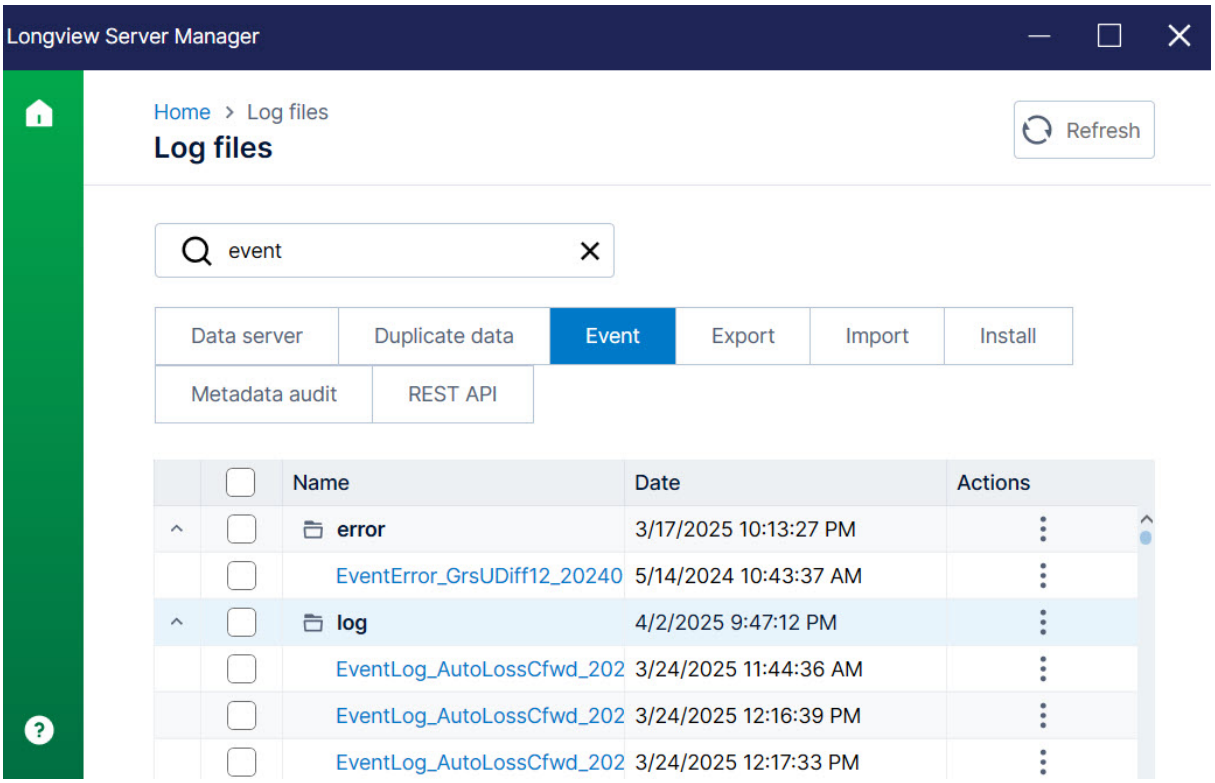
User connections

Opens the User connections page to view information about users and to monitor their usage of the system.

Search in the Functionality Pages

In each functionality page, you can use the Search field to easily find the items you need. The search functionality allows to filter a list based on the text you type in the Search box. The Search functionality is available for all the tabs in each page. If you switch between the tabs in a functionality page, and apply the Search filter, each tab will display only the matched items.

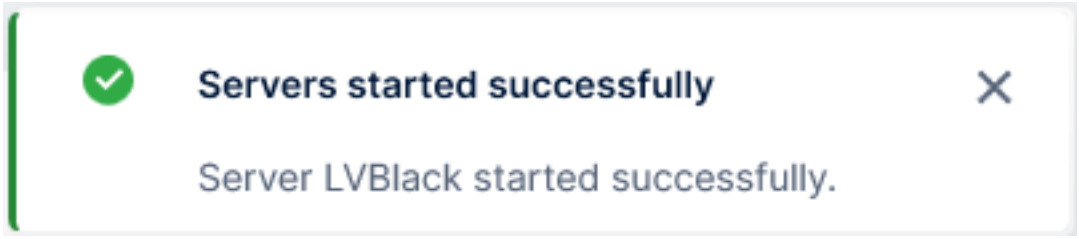
Additionally, the Search functionality allows you to search folders and files under the sub-folders. For example, if you want to search a log file with the name starting from "event", then in the Search box, start typing event. The Search box will display all the files under folders and sub folders with the name event. For more information, see the following image:



To clear the search, delete the text in the Search box or click the Close button × in the Search box.

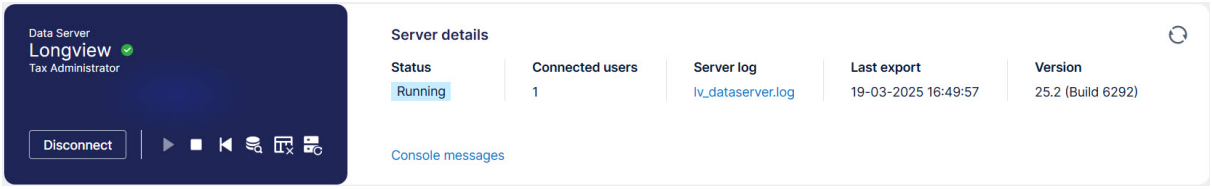
Toast Notifications

Toast notifications are short pop-up messages that appear in the top right corner of the Server Manager. They provide timely information on updates, alerts, and actions performed with the Server Manager. Some toast notifications close automatically after a brief period, while others require you to close them by clicking the **close (x)** button on the notification.



Data Server and Server Details

When you launch Longview Server Manager via the Longview Dashboard, you are automatically connected to the Data Server.



Data Server Panel

The dark blue **Data Server** panel displays the name of the Data Server you are connected to, and the user who is connecting to the server. You can also use the icons in the Data Server panel to determine the status of the server and its processes.

Below are descriptions of the information and functionalities included in the Data Server panel.

Status icon

Next to the data server's name is an icon indicating the status of the server. The icon can appear as one of the following:

- **Green checkbox icon:** the server is connected and running
- **Red stop bar icon:** the server is connected and stopped
- **Gray x icon:** the server is disconnected

The status of the server is also displayed under **Status** on the **Server details** panel.

Action Icons

You can use the icons at the bottom of the Data Server panel to determine the status of the server and its processes:

Disconnect/Connect

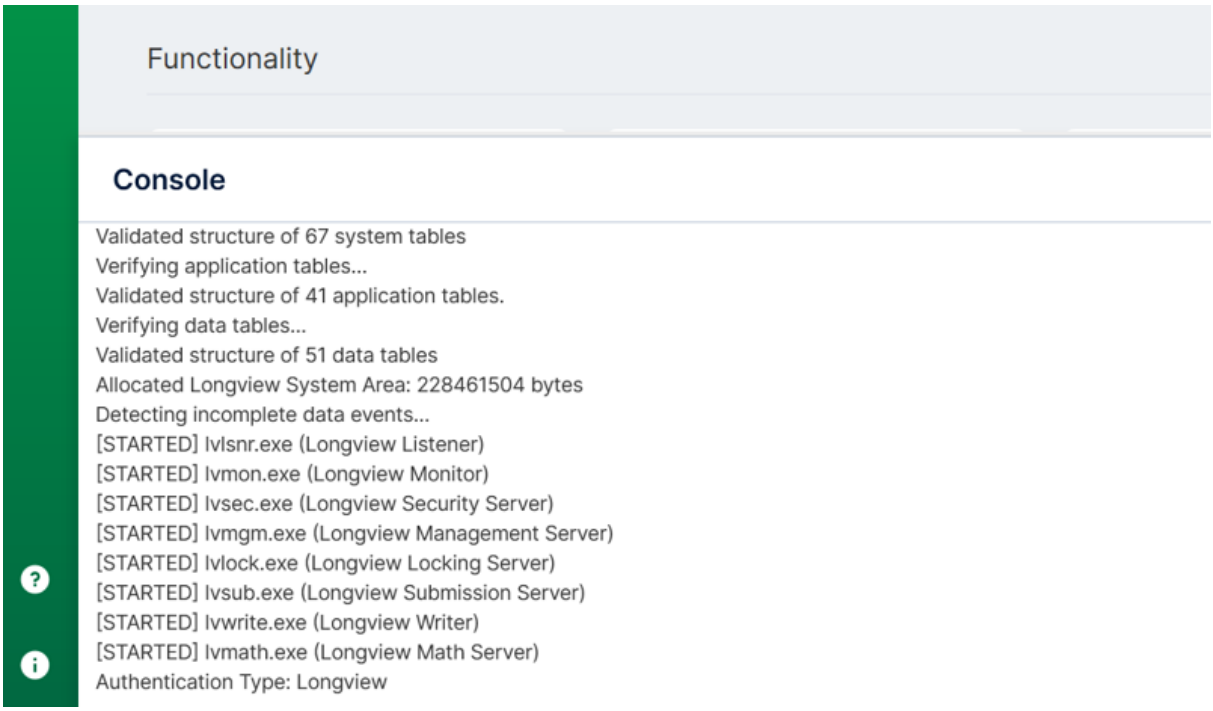
Click to disconnect from the server or connect to the server after being disconnected. If you access Server Manager through the Longview dashboard, you are connected to the servers automatically.

When you click **Connect**, a login window opens. Select your preferred authentication method, insert your username and password, and click **Log in** to connect to the server.

You receive a toast notification on the top right corner for a successful action or an occurring error.

Start

Click to restart a stopped server. When you click **Start**, the current status information displays in the **Console** pane, as shown below:



Note:
At server startup, the system displays and records the active authentication method in both the console and the server log.

- If Platform authentication is enabled, it shows “Authentication Type: Platform.”
- If only SSO is enabled, it shows “Authentication Type: Longview SSO.”
- If neither option is enabled, the default “Authentication Type: Longview” is recorded.

You can close the Console pane by clicking the **close (x)** button on the top right corner of the pane.

Stop

Click to stop the server that is currently running, subject to warnings. Clicking the icon opens a menu for selecting between the two options: **Stop** and **Stop immediate**.
If you click **Stop**, you can view the current status information including situations where the server cannot be stopped in the Console pane. If the server cannot be stopped, you will also receive a toast notification on the top right corner of Server Manager.

Click **Stop immediate** to stop the server immediately, even when the users are connected. You should only use stop immediate when you need to stop the Data Server and users are connected, or there are jobs being processed. If you use stop immediate, you should have a business administrator check the data submission batches to ensure all the data was submitted.

Reset server warnings

Click to either reset server or restatement error code on the selected server. Clicking the icon opens a menu for selecting between the two options: **Reset server warning** and **Reset restatement warning**. This allows users to connect to the server without seeing an error message while you are fixing the error. However, in some cases, you must fix the error before users can continue.

Status

Click to view the current status of the server and its dependent processes in the Console pane.

Clear data area monitoring

This is only available when your system is using data area monitoring. When the data and event monitoring becomes too large, users could experience performance issues while opening reports, clearing the data and event monitoring may help with the performance. Click to clear the data and event area monitoring. Clicking the icon opens the **Confirmation** dialog. Click **Yes** to clear all data and event area monitoring data.

Note: Clearing the data and event area monitoring will clear the related symbols in existing user and event batches and delete the event log files. This action cannot be undone.

The status will be displayed in the Console pane, you will also receive a toast notification on the top right corner of Server Manager.

Reset data audit trail

Reset data audit trail

If your system has **Data audit trail** selected in the Server Configuration settings, you can **Reset data audit detail**. If you reset data audit trail, the audit trail is deleted, and the initial audit values are reset to the current leaf table values. Batch and event information is also deleted, along with related log, error and history files.

If your system is not using **Data Audit Trail**, you can still use the **Reset data audit trail** to delete all batch and event information, along with related log, error and history files.

Reset data audit trail by dimension

If your system has **Data Audit Trail** selected in the Server Configuration settings, you can use **Reset data audit trail by dimension** to delete obsolete data audit trail from the database for all intersections of leaf and schedule data containing the specified symbol(s) for the selected dimension.

Clicking the **Reset data audit trail** icon opens a menu for selecting between two options: **Reset data audit trail** and **Reset data audit trail by dimension**.

If you click **Reset data audit trail**, the **Confirmation** dialog will open. Click **Yes** to reset the data audit trail.

Caution: Clicking **Yes** in the **Confirmation** dialog will remove all audit trail values and the batch, and event information, as well as log, error and history files.

If you click **Reset data audit trail by dimension**, the **Reset data audit trail by dimension** dialog opens, where you can select a dimension and then choose a symbol(s) for that dimension. Clicking the **Reset** button will open the **Confirmation** dialog. Click **Yes** to delete all intersections of leaf and schedule data containing the selected symbol(s).

Note: You must select at least one symbol in the **Reset data audit trail by dimension** dialog.

Server Details Panel

In the **Server details** panel, you can review server and user information:

Status

The server status is displayed under Status. The status can be one of the following:

- **Running**: the server is connected and running
- **Stopped**: the server is connected and stopped
- **Disconnected**: the server is disconnected

The status of the server is also displayed as an icon next to the server name in the Data Server panel.

Connected users

Displays the number of users connected to the server.

Server log

Click to open the server log in a text file format.

Last export

Displays the date and time of the latest export.

Version

Displays the Longview data server version.

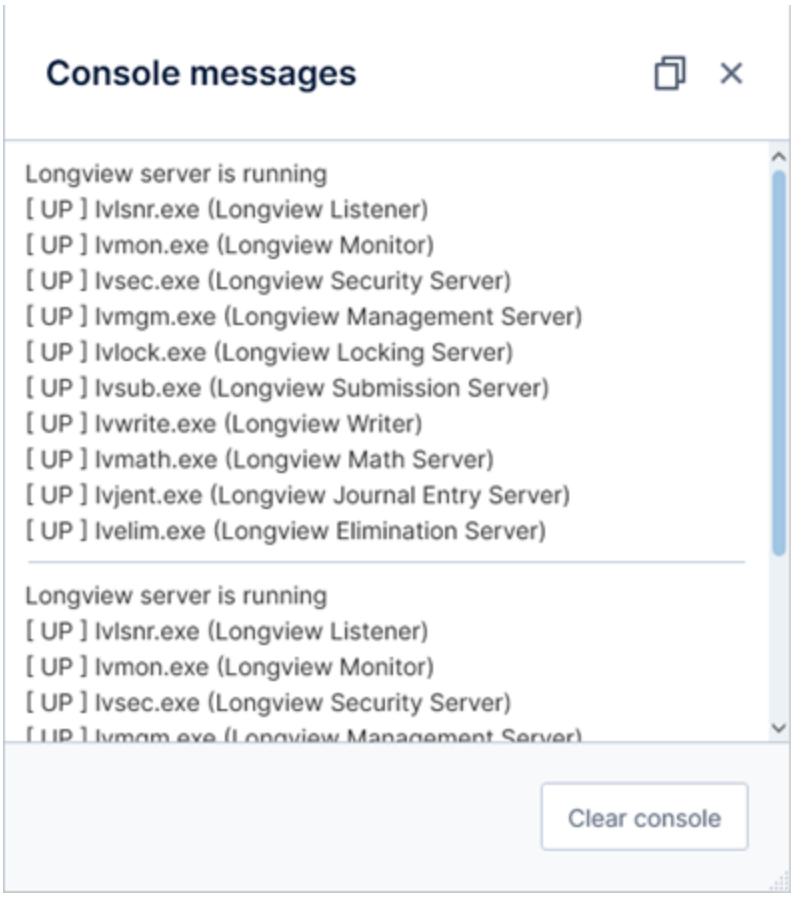
Refresh icon

Click the **refresh icon** on the top right corner of the Server details panel to refresh all the Data Server and Server details panel components that may have changed. Changes may occur for example, when the server is stopped or started outside the Server Manager, the last export date has been modified, or the number of users connected to the server changes.

The home page also refreshes if the server's session has changed from the existing session. For example, if the servers have been stopped but your session still considers them to be running, the refresh functionality removes the user connection tile.

Console messages

Click on Console messages to view the status information of your current session. The console messages open in a pane on the right side of the Server Manager. You can copy the messages using the **Copy** icon on the top bar of the pane and clear the messages by clicking **Clear console** at the bottom of the pane.


Console messages
Longview server is running
[UP] lvlsnr.exe (Longview Listener)
[UP] lvmon.exe (Longview Monitor)
[UP] lvsec.exe (Longview Security Server)
[UP] lvmgm.exe (Longview Management Server)
[UP] lvlock.exe (Longview Locking Server)
[UP] lvsub.exe (Longview Submission Server)
[UP] lvwrite.exe (Longview Writer)
[UP] lvmath.exe (Longview Math Server)
[UP] lvjent.exe (Longview Journal Entry Server)
[UP] lvelim.exe (Longview Elimination Server)
Longview server is running
[UP] lvlsnr.exe (Longview Listener)
[UP] lvmon.exe (Longview Monitor)
[UP] lvsec.exe (Longview Security Server)
Clear console

Diagnostics

You can use Longview Server Manager to open the **Diagnostic** page. The **Diagnostics** page allows you to establish and manage logging and tracking activities related to diagnostics and support. The **Diagnostics** page displays the **Diagnostic settings** and **Diagnostic files** tabs. Additionally, there is a link to open the **lv_dataserver.log** file directly from the Diagnostics page, allowing you to open the file without having to navigate elsewhere when debugging.

To access the **Diagnostics** page, click the **Diagnostics** tile under the **Functionality** section on the **Server Manager** home page.

Refresh button

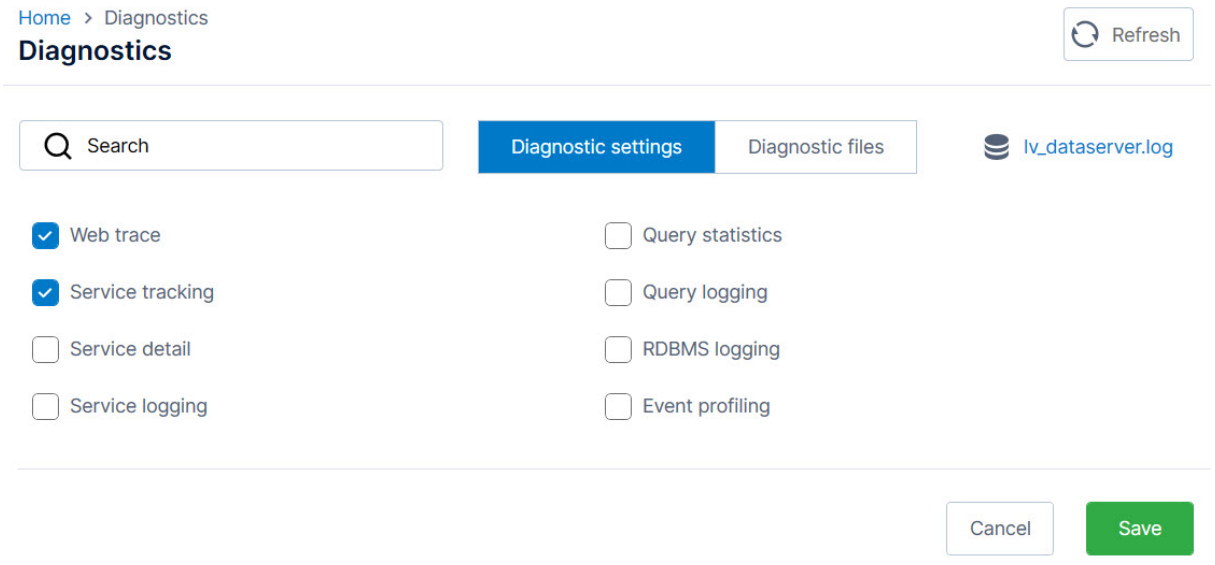
At any time, you can click the Refresh button to refresh the **Diagnostics** page and view an updated value on the **Diagnostics Settings** tab, especially when someone has changed a value. Refresh will also update the list of diagnostic files on the **Diagnostic files** tab that have been added or deleted outside the Server Manager.

Search

In each functionality page, you can use the Search field to easily find the items you need. The search filters as you type and applies to all tabs in each page, meaning, when you switch between the tabs in a functionality page, each tab displays only the matched items. To clear the search, remove what you have typed from the Search box.

Diagnostic settings Tab

The **Diagnostic settings** tab opens by default when you access the **Diagnostics** page. The page displays various diagnostic settings options. You can select or deselect the check boxes of the parameter to turn specific logging on or off. The diagnostics do not require the servers to be restarted for the parameter changes to take effect.



The following table lists the parameters that you can configure in the **Diagnostics** page:

Setting	Default	Description
Enable web trace	Cleared	Enables web trace to assist in debugging web connection problems.
Service tracking	Cleared	Specifies whether to include diagnostic service tracking information in the Longview Data Server Log (lv_dataserver.log). ■ Selected — Includes diagnostic service tracking information. These statistics are included for agents, web agents, and locking, management, and security servers. ■ Cleared — Disables logging of service tracking information.

Setting	Default	Description
Service detail	Cleared	Specifies whether to include diagnostic service detail information in the Longview Data Server Log (lv_dataserver.log). ■ Selected – Includes process timing and memory usage information in the Longview Data Server Log. Process timing information includes the elapsed time of a service, the count and sum of elapsed time per unique service, and summarized timing statistics. This information is included for agents, web agents, and locking, management, and security servers. v25.3 The execution time of an event (from fired to completed) is logged, as well as the wait time between an

Setting	Default	Description
		event being triggered and fired. ■ Cleared – Disables tracking and logging of process timing and memory usage information.
Service logging	Cleared	Specifies whether to track and log service activity information. When this setting is selected, the system generates a separate .csv log file, per agent process, that contains diagnostic service tracking information.
Query statistics	Cleared	Specifies whether to include query statistic information in the Longview Data Server Log (lv_dataserver.log).
Query logging	Cleared	Specifies whether to log query information. When this setting is selected, the system generates a separate .csv log file, per agent process, containing detailed information about all queries.

Setting	Default	Description
RDBMS logging	Cleared	Specifies whether to track and log RDBMS information. When this setting is selected, the system generates a separate .csv log file, per agent process, that contains RDBMS activity information.

Setting	Default	Description
Event profiling	Cleared	Specifies whether to output event profiling for diagnostic purposes. When this setting is selected, profiling for each event is enabled and output to two files: ■ the profile for each event is output to the profile_ EventProc_ RuleID.csv file and overwritten each time a rule ID is triggered. ■ the profile for the bottleneck event for each iteration is appended to the profile_ criticalpath.csv file. ■ v25.3 The number of concurrent events (triggered and/or fired) are logged in the lv_ dataserver.log file.

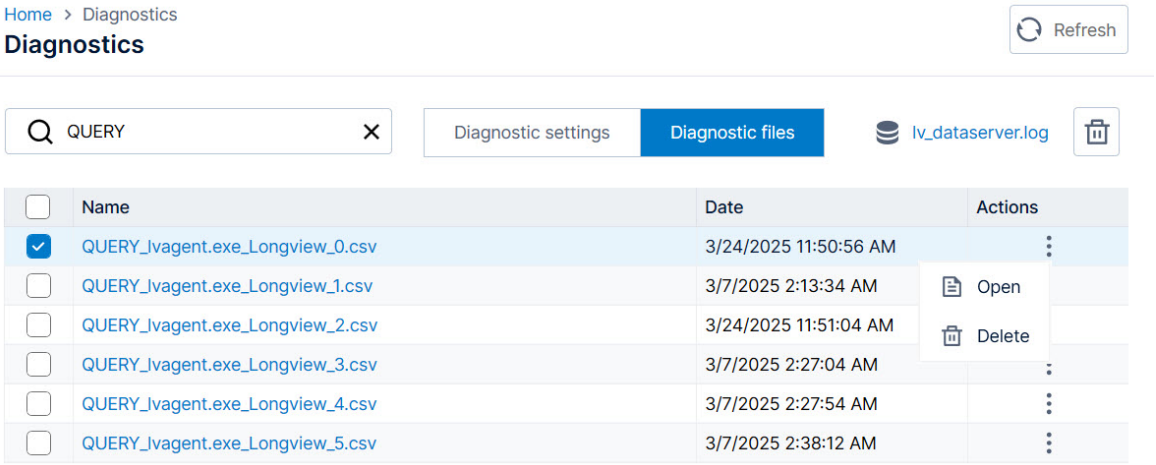
Diagnostic files Tab

Click the **Diagnostic files** tab in the **Diagnostics** page to view files, open a required file, or delete a file. You may open or delete a diagnostics log file from the **Diagnostic files** tab.

Opening diagnostic files

To open diagnostic files in the Server Manger, follow these steps:

1. Open the **Diagnostics** page. The **Diagnostic settings** tab opens by default.
2. Click the **Diagnostic files** tab. When selected the diagnostic log files are listed on the page.

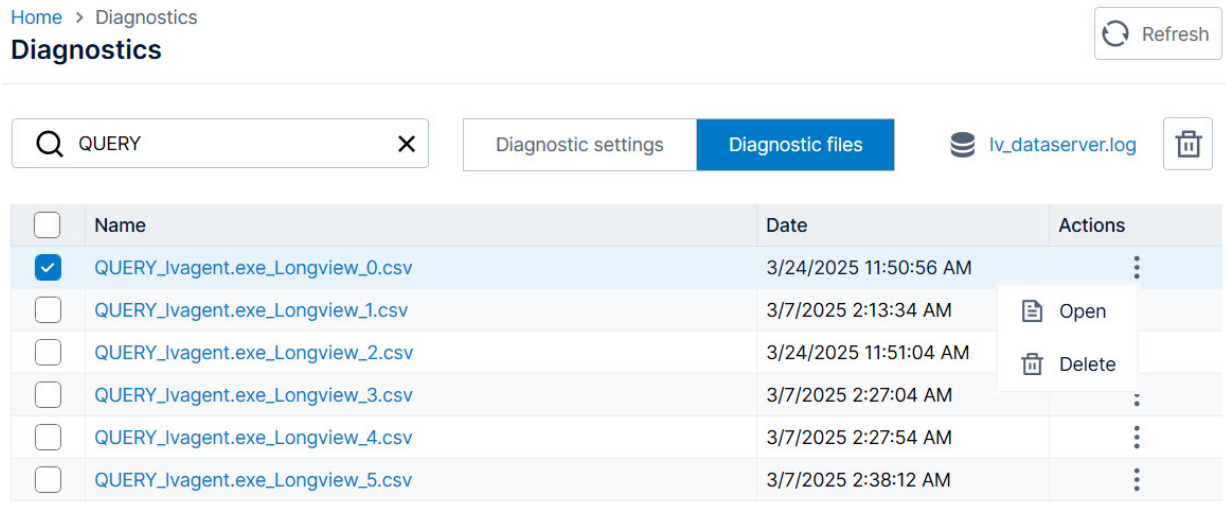


3. Click the appropriate **diagnostic file name**, or the **More options menu (ellipsis)** in the **Actions** column of that row and select **Open**.
4. The log file opens in a text editor such as Microsoft WordPad. From here, you can read or save the file to your local or network drives.

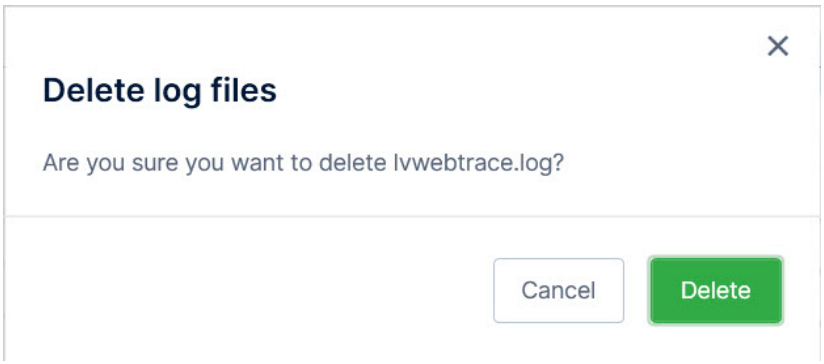
Deleting diagnostic files

To remove a diagnostic log file, follow these steps:

1. Open the **Diagnostics** page. The **Diagnostic settings** tab opens by default.
2. Click the **Diagnostic files** tab. When selected the diagnostic log files are listed on the page.
3. To delete one or more log files, click the check box on the diagnostic file(s) you want to delete. To delete all log files under the tab, click the check box on the header row of the table and all log files are selected.



4. Click the **Delete** icon which appears on the right side of the tabs. A confirmation dialog opens.
5. Click **Delete** to delete the diagnostic file(s).



6. The selected diagnostic file(s) are deleted, and you receive a toast notification on the success of the deletion process

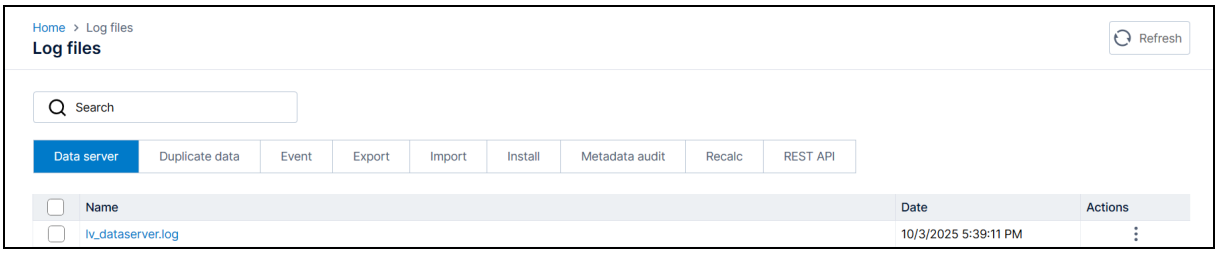
Note: In some cases, a .csv file cannot be deleted while the servers are running. If the .csv file cannot be deleted, try stopping the servers, and then attempt to delete the file again.

Log Files

You can use the Longview Server Manager to manage and view various types of log files generated by the Longview Data Server. You can view detailed server activity, troubleshoot issues, review user activities, and more through the log files.

> **Note:** During server startup, the Longview Data Server logs all lvsrvr.cfg configuration parameters and their values to the lv_dataserver.log file for auditing purposes.

To access the **Log files** page, click the **Log files** tile under the **Functionality** section on the Server Manager home page.



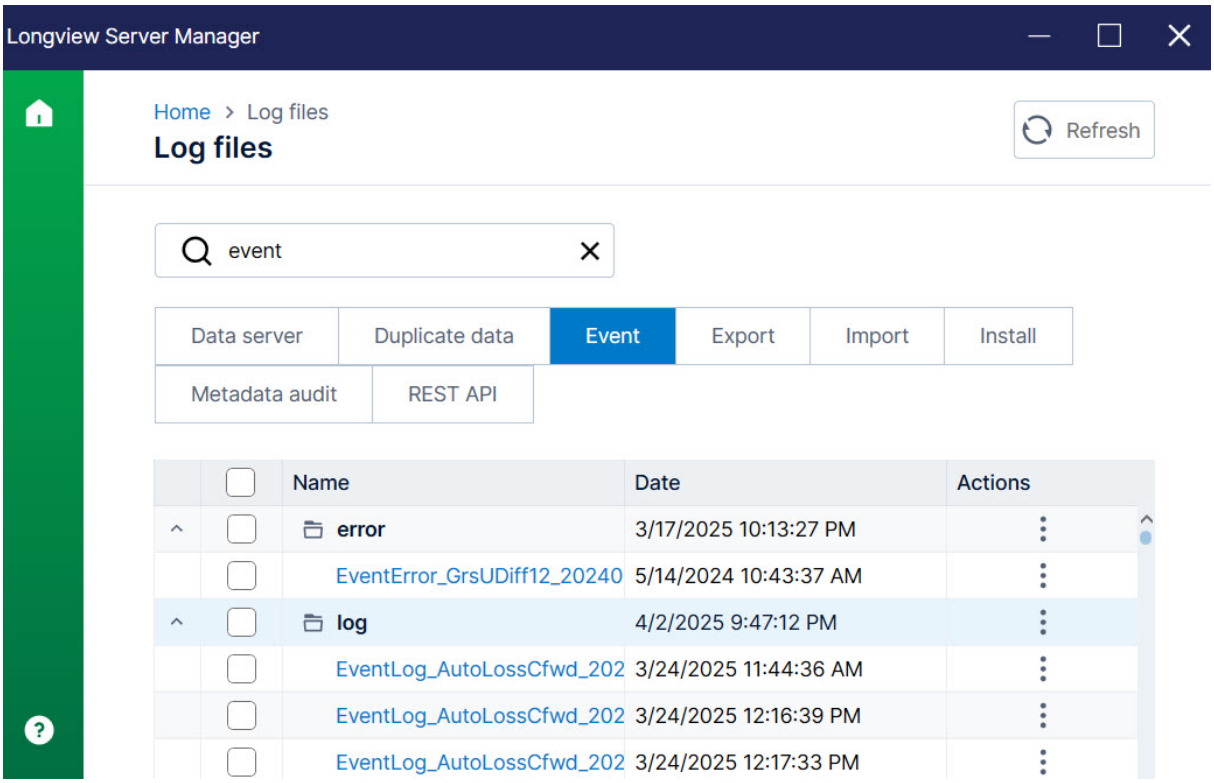
Refresh button

Click the **Refresh** button to refresh the log file lists when new log files have been added or deleted outside the Server Manager.

Search in Log files

In each functionality page, you can use the Search field to easily find the items you need. The search functionality allows to filter a list based on the text you type in the Search box. The Search functionality is available for all the tabs in each page. If you switch between the tabs in a functionality page, and apply the Search filter, each tab will display only the matched items.

Additionally, the Search functionality allows you to search folders and files under the sub-folders. For example, if you want to search a log file with the name starting from "event", then in the Search box, start typing event. The Search box will display all the files under folders and sub folders with the name event. For more information, see the following image:



To clear the search, delete the text in the Search box or click the Close button ✕ in the Search box.

Log File Tabs

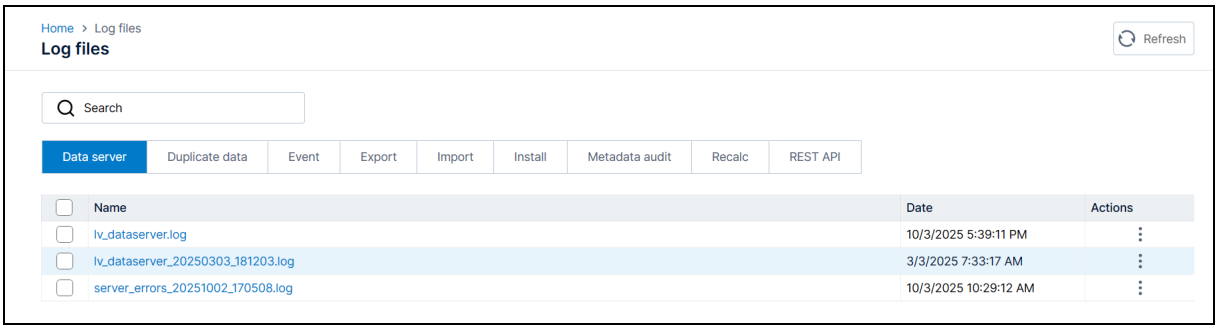
The log files are organized into the following tabs according to their type:

Data server

Data Server logs (lv_dataserver.log) record all activities that occur on the Longview Data Server. This includes, but is not limited to, logging the values of the parameters in the data server configuration file at startup, authentication mode, symbol, user, and server model maintenance, specific activities performed by individuals, errors, starting and stopping of servers, and restatement.

> **Note:** If an error occurs during the restatement, the error is logged in the lv_dataserver.log, and a restatement error log is also created. The restatement error log is named restate_recalc_Errors_<timestamp>.log file. This allows you to more easily identify when a restatement has failed or encountered errors, as such issues could affect your data. Restatement errors can now also be found in the Recalc tab. For more information, please refer to the Recalc tab.

A server error log file (server_errors_<timestamp>.log) will now be generated whenever an error triggers the "servers have encountered errors" database status flag. This log captures detailed information about the error to aid in troubleshooting.



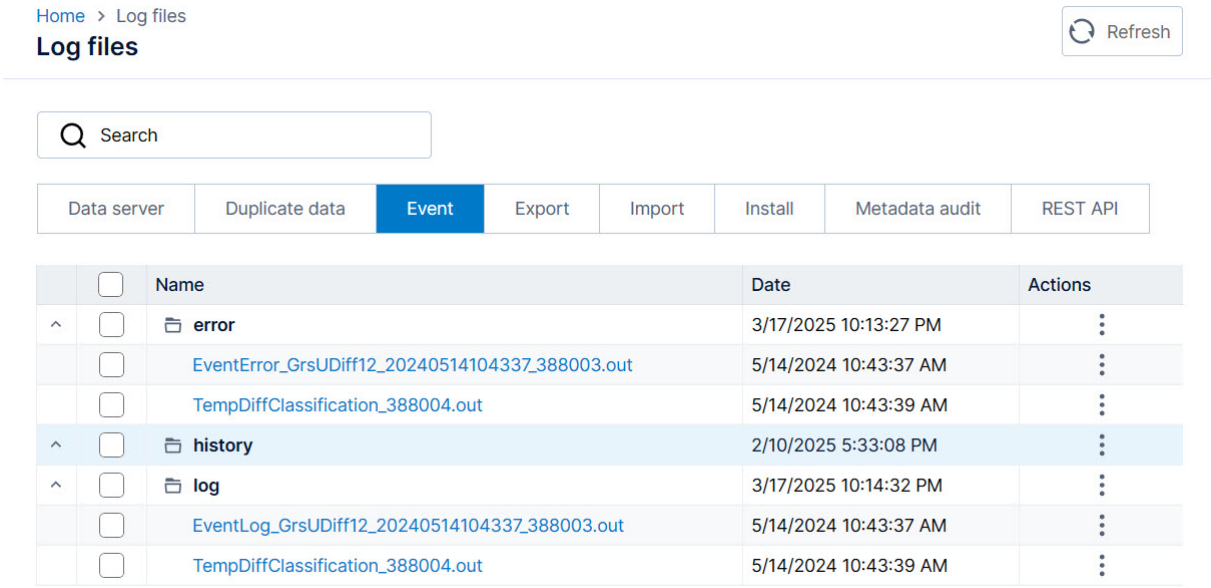
You can also **archive** Data Server logs, but the server_error log file cannot be archived. The archived logs are displayed on the Data Server tab. Please refer to Archiving Data Server log file below for more information.

Duplicate data

Duplicate data files (duplicates.txt) record duplicate data in your system. Please refer to Checking for duplicate data section in Application Administrator Guide for more information on the duplicate data.

Event

Event logs allow users to view error, history, and log files for event rules. These files are read-only and cannot be deleted from this location.
To delete these files, refer to the Deleting Event Information section in the Monitoring Events documentation.



Export

Export logs (<ExportName>_export.log) record the status and details of the export operation. The log file includes comprehensive information such as the number of rows exported from each table, the version the export was taken from, the success status, and any errors encountered during the export process. This detailed logging helps you to monitor and troubleshoot exports effectively.

The export log files are named <ExportName>_export.log, where <ExportName> is the name specified for the export at the time it was created.

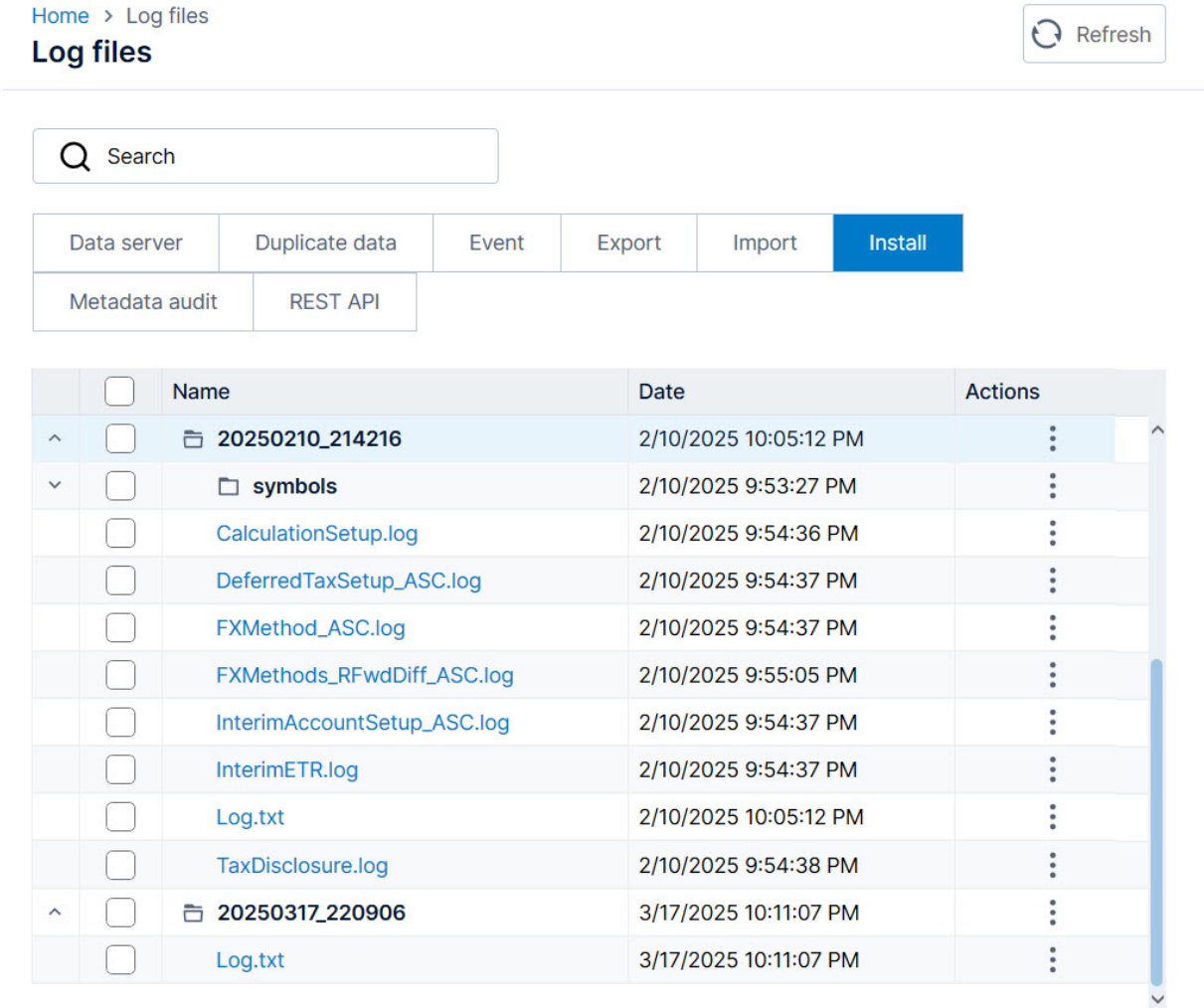
Import

Import logs (<ImportName>_import.log) record the status and details of the import operation. The log file includes comprehensive information such as the number of rows imported into each table, any rows not imported, the success status, and any errors encountered during the export process. This detailed logging helps you monitor and troubleshoot exports effectively.

The import log files are named <ImportName>_import.log, where <ImportName> is the name specified for the export that was selected for the import.

Install

Install logs are created during the installation and upgrade of Longview. They contain information about changes made during the installation or upgrade of Longview Tax or Longview Close. These logs are organized into folders named based on the date and time of the installation.

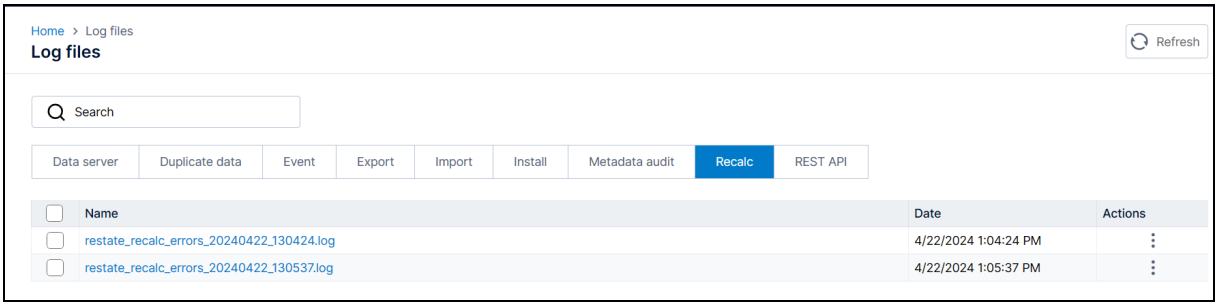


Metadata Audit

Metadata audit logs are created when a metadata audit is reset. The log file includes the cleared metadata audit data, reset date, date range, categories, and comment if provided, the user who performed the reset, and the number of records reset. The file name contains the date and timestamp of the reset.
For more information on resetting metadata audits, refer to the Resetting the Metadata Audit Trail section in the Performing General Server Tasks of the Application Administrator Documentation.

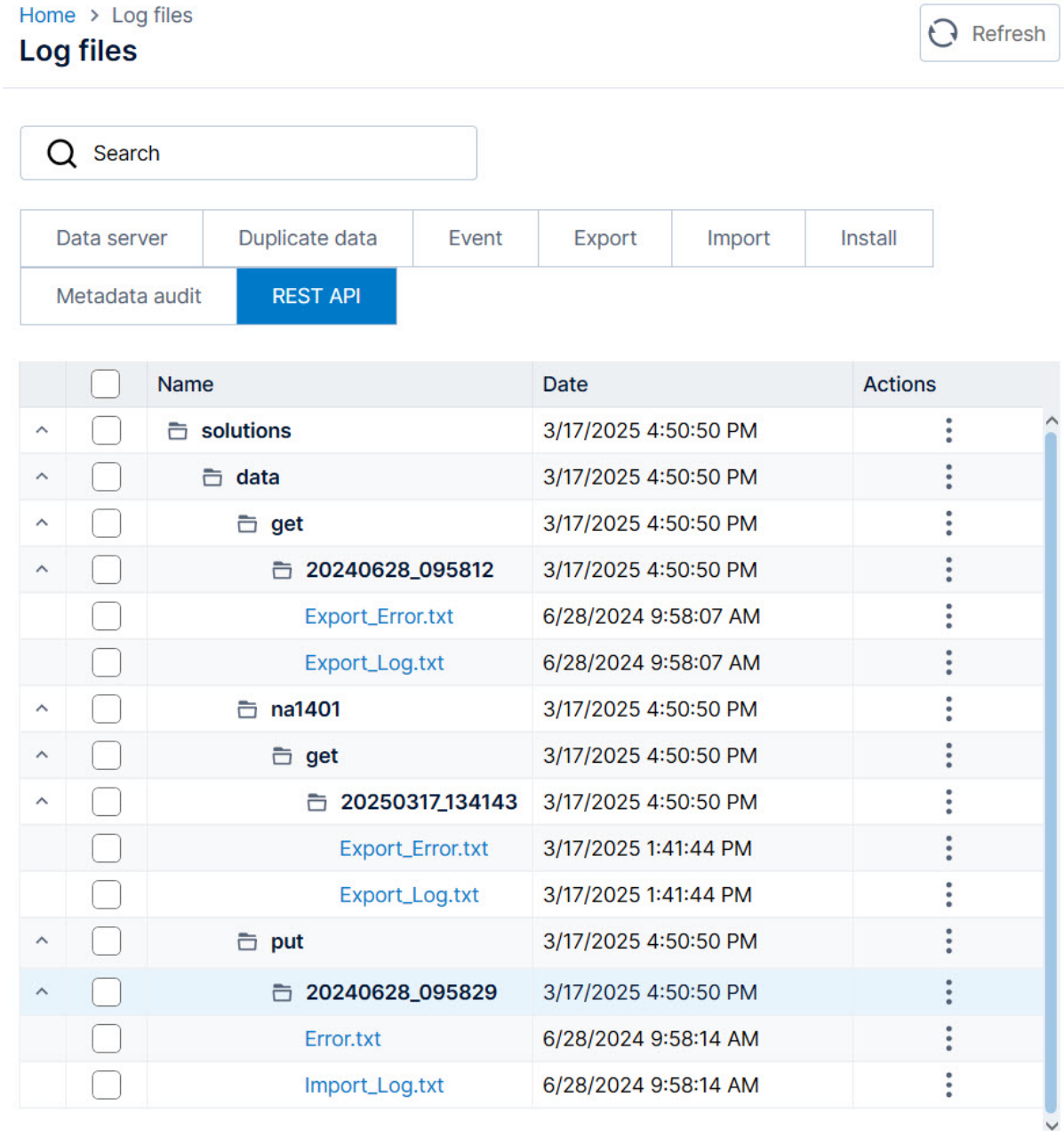
Recalc

Restatement logs are generated in the Recalc tab whenever an error occurs during the restatement process. These logs provide detailed information to help identify the cause of any failures and track the progress of restatement activities. By reviewing the logs, you can quickly detect issues and take corrective actions to resolve them.



REST API

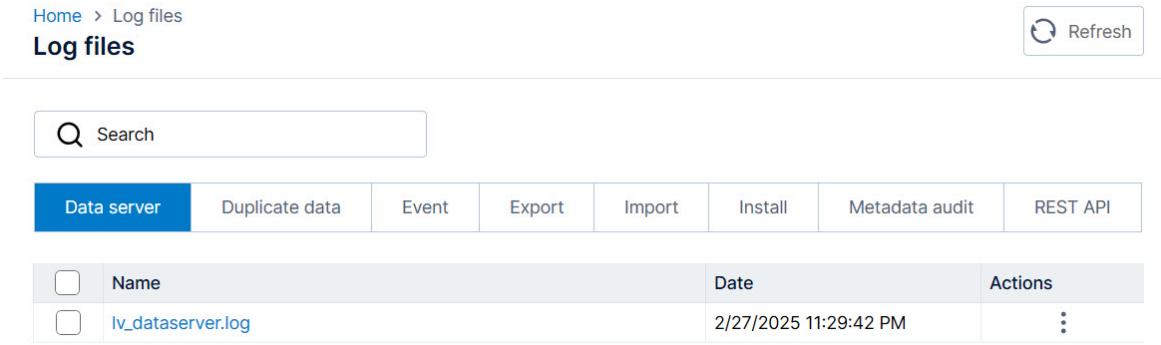
REST API logs include errors, import and export logs, generated when invoking Longview REST APIs. These logs are organized into folders named by the endpoint, method, and date and timestamp. For example: \restapi\solutions\data\na1401\get\20250317_134143.



Opening log files

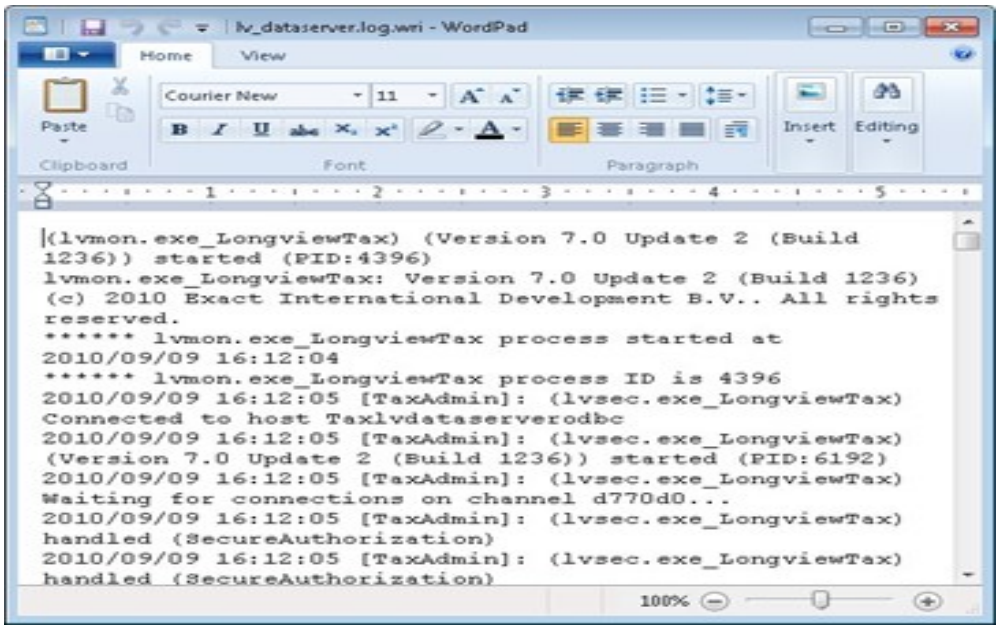
To open log files in the Server Manager, follow these steps.

1. Click a required tab on the **Log files** page based on the type of log file you want to open. The tab button turns blue when selected and the log files associated with that tab are listed on the page.



2. Click the appropriate **log file name**, or the **More options menu (ellipsis)** in the **Actions** column of that row, and select **Open**.The log file opens in a text editor such as Microsoft WordPad. From here, you can read or save the file to local or network drives.

3. The log file opens in a text editor such as Microsoft WordPad. From here, you can read or save the file to your local or network drives.



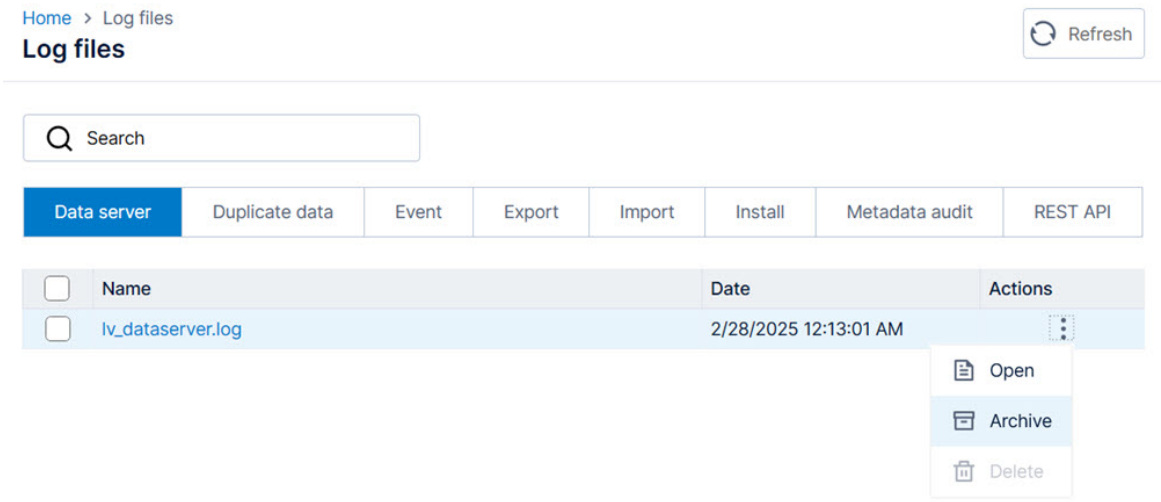
Archiving Data Server log file

To archive a Data Server log file, follow these steps.

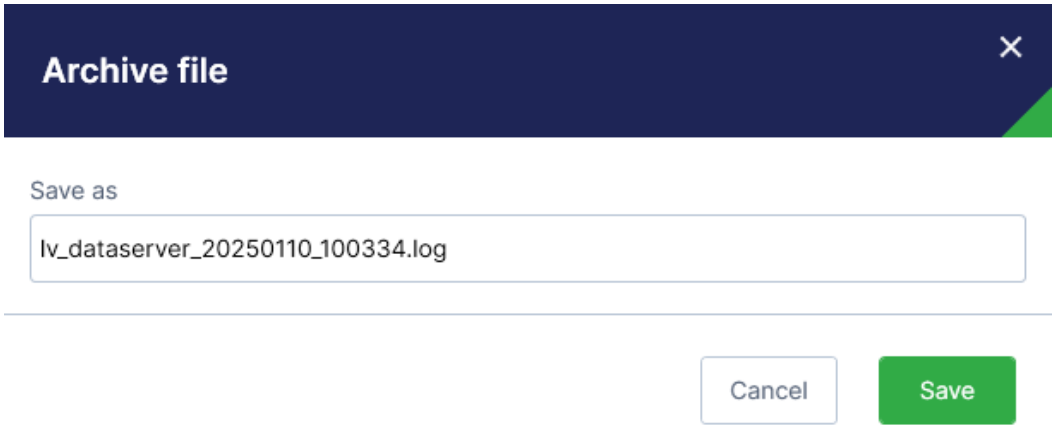
1. Click the **Data server** tab.

2. Select the lv_dataserver.log, click the **More options menu (ellipsis)** in the **Actions** column.

3. On the drop-down menu, select **Archive**.



4. In the **Archive file** pop-up that opens, rename the file for archiving if needed, and click **Save**.



5. The archived file appears on the log file list, and you receive a toast notification on the success of the archiving process.

Deleting log files

To remove a log file, follow these steps.

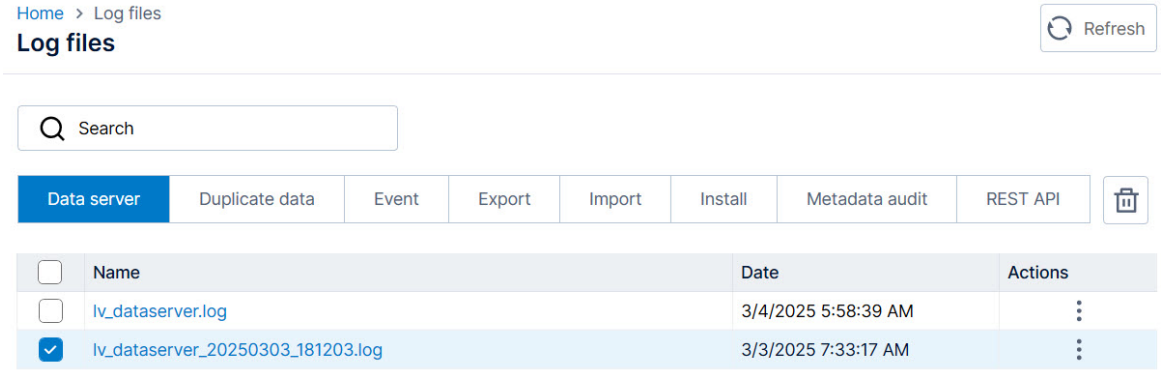
1. Click a tab on the **Log files** page based on the type of log file you want to delete. The tab button turns blue when selected and the log files associated with that tab are listed on the page.

2. To delete one or more log files, click the checkbox on the log file(s) you want to delete. To delete all log files under the tab, click the checkbox on the header row of the table and all log files are selected.

3. Click the **Delete icon** which appears on the right side of the tabs. A confirmation dialog opens.

> **Note:** You cannot delete the Longview Data Server Log (lv_dataserver.log) or all log files on the Data Server tab at once. However, you can delete multiple archived versions of the lv_dataserver.log file at once.
> Additionally, event log files cannot be deleted from Longview Server Manager.

4. Click **Delete** to delete the log file(s).



The selected log file(s) are deleted, and you receive a toast notification on the success of the deletion process.

Server Configuration

To configure your Data Server, you must be signed on to the system as an administrator with the requisite permissions to modify the database.

To access the server configuration settings, click **Server configuration** in the Functionality section on the Longview Server Manager home page. The Server configuration page opens with the Application tab in view.

The following tabs are accessible through the Server configuration page:

- Application
- Diagnostics
- Events & data monitoring
- Memory & pooling
- Performance
- Recalculation
- System
- System limits
- Timeouts
- User security
- Web

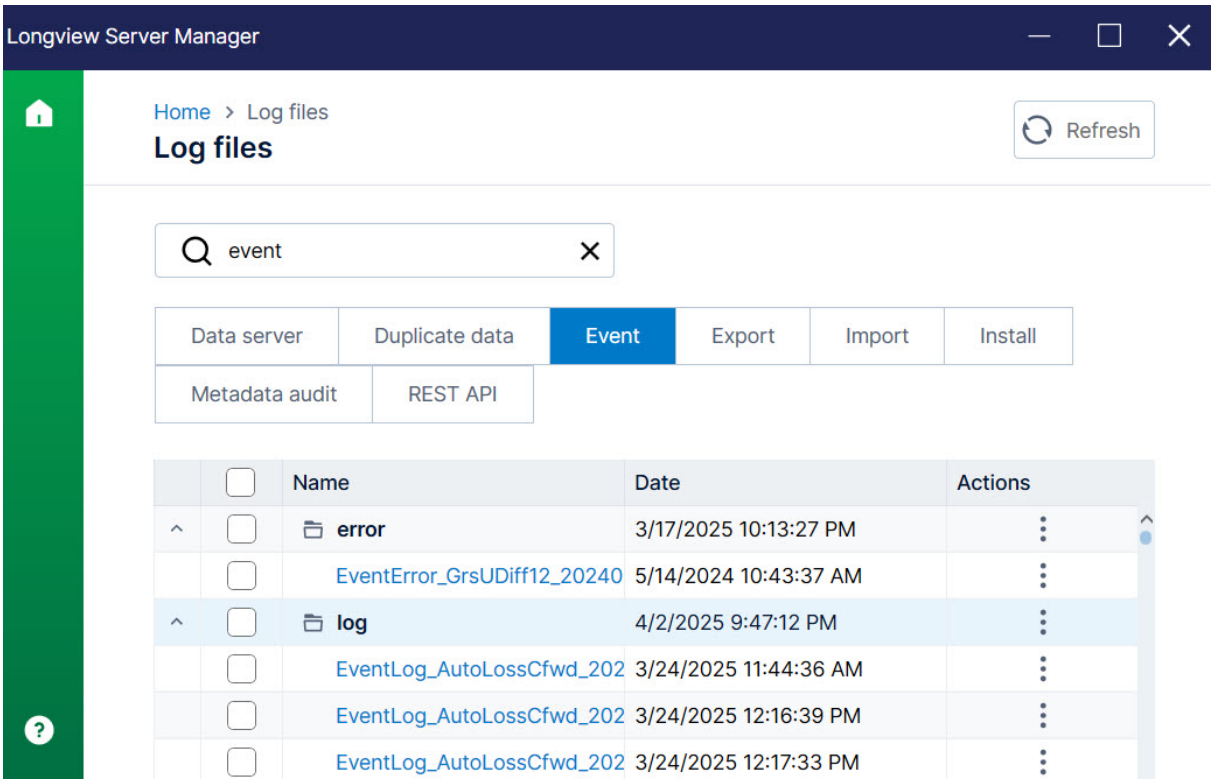
Refresh button

At any time, you can click the **Refresh** button to refresh the Server configuration page with the current values in the lvsrvr.cfg file located on the Longview Data Server.

Search in Server Configuration

In each functionality page, you can use the Search field to easily find the items you need. The search functionality allows to filter a list based on the text you type in the Search box. The Search functionality is available for all the tabs in each page. If you switch between the tabs in a functionality page, and apply the Search filter, each tab will display only the matched items.

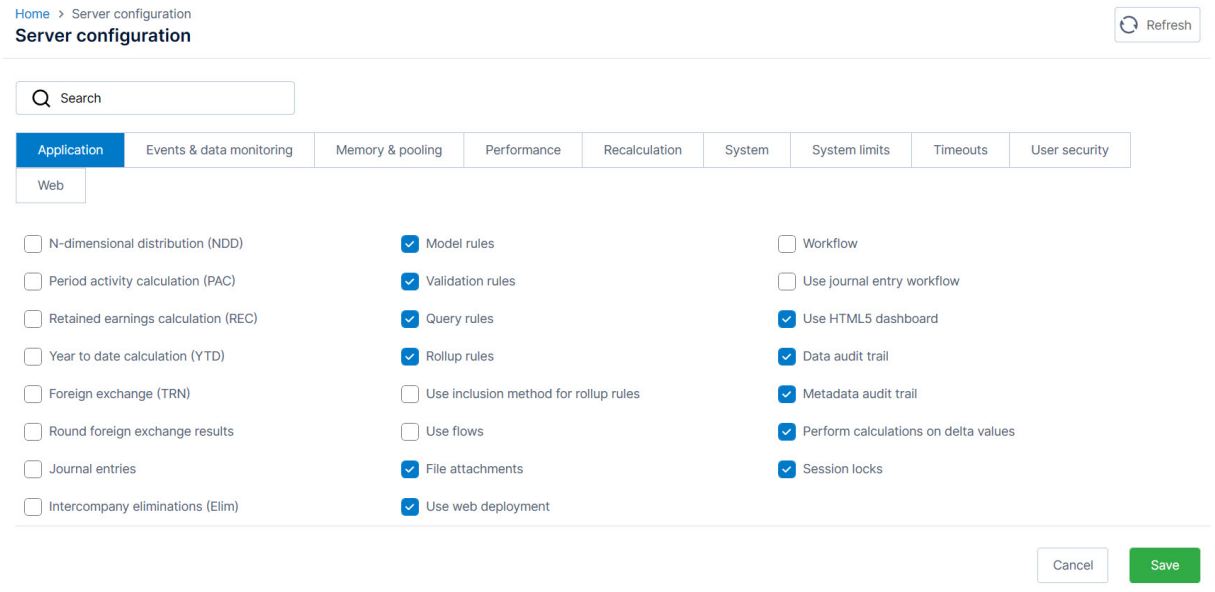
Additionally, the Search functionality allows you to search folders and files under the sub-folders. For example, if you want to search a log file with the name starting from "event", then in the Search box, start typing event. The Search box will display all the files under folders and sub folders with the name event. For more information, see the following image:



To clear the search, delete the text in the Search box or click the Close button ✕ in the Search box.

Application

The Application tab presents you with a list of functionalities available in the application. In general, if a parameter is selected, it is on and available to users. If a parameter is cleared, it is off and unavailable.



The following table lists the parameters that you can configure on the **Application** tab:

Setting	Default	Description
N-dimensional distribution (NDD)	Cleared	Specifies whether to use N-Dimensional Distribution in this system. For more information, see N-Dimensional Distribution.
Period activity calculation (PAC)	Cleared	Specifies whether to use Period Activity Calculation logic in this system. For more information, see Period Activity Calculation.
Retained earnings calculation (REC)	Cleared	Specifies whether to use Retained Earnings Calculation logic in this system. For more information, see Retained Earnings Calculation.
Year to date calculation (YTD)	Cleared	Specifies whether to use accounting year-to-date (YTD) logic in this system. For more information, see Year-to-date.
Foreign exchange (TRN)	Cleared	Specifies whether to use data translation in this system. For more information, see Translation.
Round foreign exchange results	Cleared	Specifies whether to use translation rounding in the system. If this parameter is selected, **Foreign exchange (TRN)** must also be selected.
Journal entries	Cleared	Specifies whether to use the Journal Entry Server in this system.

Setting	Default	Description
Intercompany eliminations (Elim)	Cleared	Specifies whether to use the Elimination Server in this system. If this parameter is selected, **Journal entries** must also be selected.
Model rules	Selected	Specifies whether to use server model rules in this system.
Validation rules	Selected	Specifies whether to use validation rules in this system.
Query rules	Selected	Specifies whether to use query rules in this system.
Rollup rules	Selected	Specifies whether to use rollup rules in this system. ■ Selected — Rollup rules are used. The calculation of data areas is subject to inclusion or exclusion as set in the **Use inclusion method for rollup rules** parameter. ■ Cleared — Rollup rules are not used (all data areas are calculated).

Setting	Default	Description
Use inclusion method for rollup rules	Cleared	Specifies the rollup rule method, in conjunction with the **Rollup rules** parameter. ■ Selected (INCLUSION) — Only the DataArea specified by a rollup rule rolls up. All other areas of the database do not roll up to their parents. ■ Cleared (EXCLUSION) — All areas of the database roll up, except for those specified by a rule. Areas specified by a rule do not roll up to their parents.
Use flows	Cleared	Specifies whether to use FLOWS dimension in this system.

Setting	Default	Description
Use web deployment	Selected	Specifies whether to deploy the Longview components using Web Deployment or Enterprise Deployment. ■ Selected - Deploys the Longview components using ClickOnce. ■ Cleared - Uses Enterprise Deployment to install and upgrade the Longview components. **Note:** Enterprise Deployment is not supported with legacy dashboard.
Workflow	Cleared	Specifies whether to enable Longview Workflow.

Setting	Default	Description
Use journal entry workflow	Cleared	Specifies whether users receive emails notifying them of journal entry activity. ■ Selected — Sends users notification emails. If this parameter is selected, **Journal entries** must also be selected. ■ Cleared — Disables email notifications.
Data audit trail	Cleared	Specifies whether Data Audit Trail is enabled in this system. Data audit trail is used to query the database for records of what values in the database have been changed and by which users and to export those records to a text file. For more information, see the Longview Application Administrator Guide.

Setting	Default	Description
Metadata audit trail	Cleared	Specifies whether metadata audit trail is enabled in this system. Metadata audit trail captures metadata changes in the system, such as user and group maintenance, symbol maintenance and attribute maintenance. The changes are stored in the LV_AUDIT_METADATA table. This table can grow, and it is recommended that this table is archived occasionally.
Perform calculations on delta values	Selected	Specifies whether the system uses deltas when processing math logic to eliminate rounding errors caused by using the delta values for math processing. ■ Selected — The system uses the difference in the deltas for math processing. ■ Cleared — The system zeroes out the area to which users are submitting data, and then submits the new value.

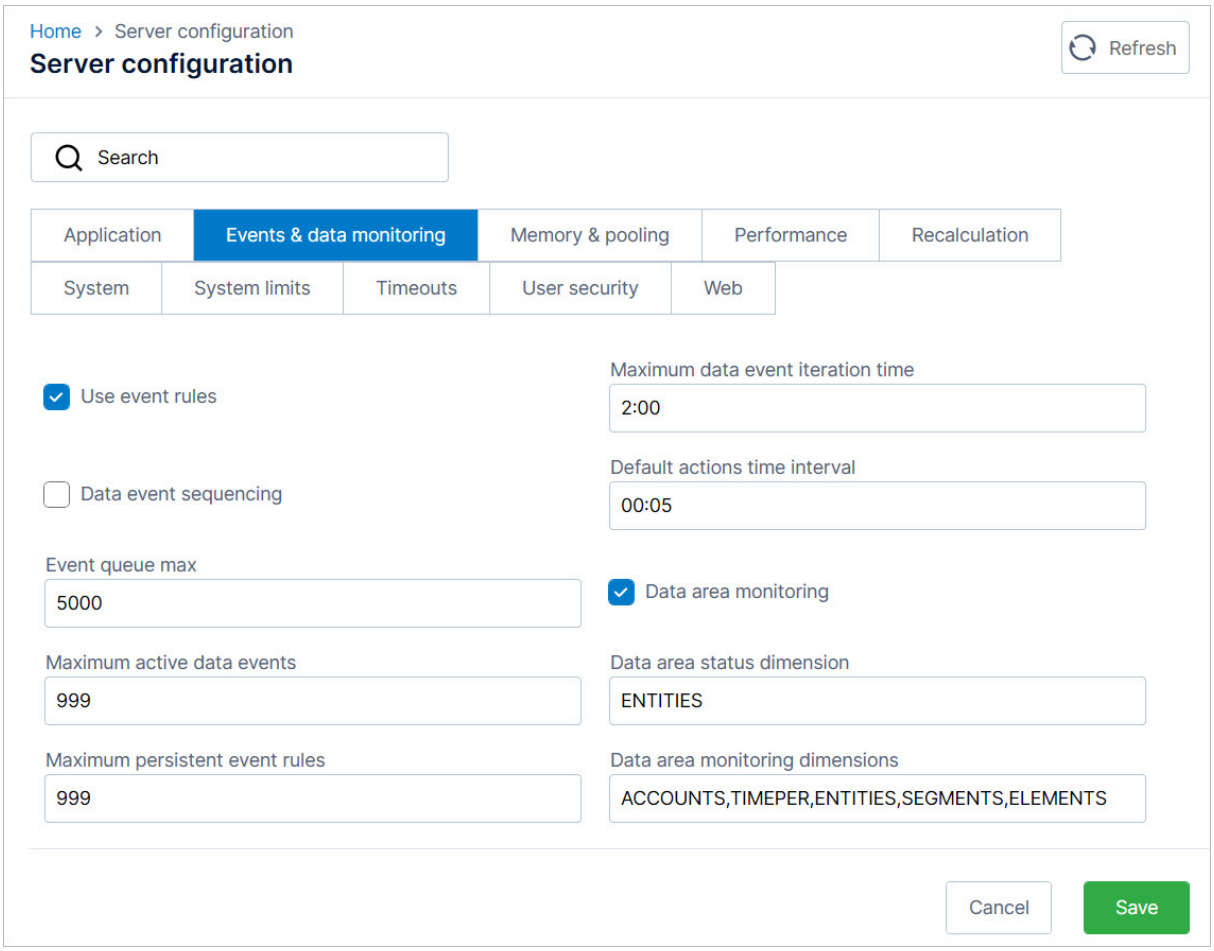
Setting	Default	Description
Session locks	Selected	Specifies whether to use session-based locking for Application Framework. ■ Selected — When an Application Framework session ends, when the timeout is reached or the connection is lost, all session locks are released. ■ Cleared — Locks are maintained when an Application Framework session ends and must be deleted manually.

Diagnostics

Note: From the version 25.2, please refer to the Diagnostics page in the Longview Server Manager guide since the Diagnostics section no longer applies in 25.2 to the lvsrvr.cfg file.

Events & data monitoring

The Events & data monitoring tab allows you to set policies related to Event rules and the Data Server.



The following table lists the parameters that you can configure on the Events & data monitoring tab:

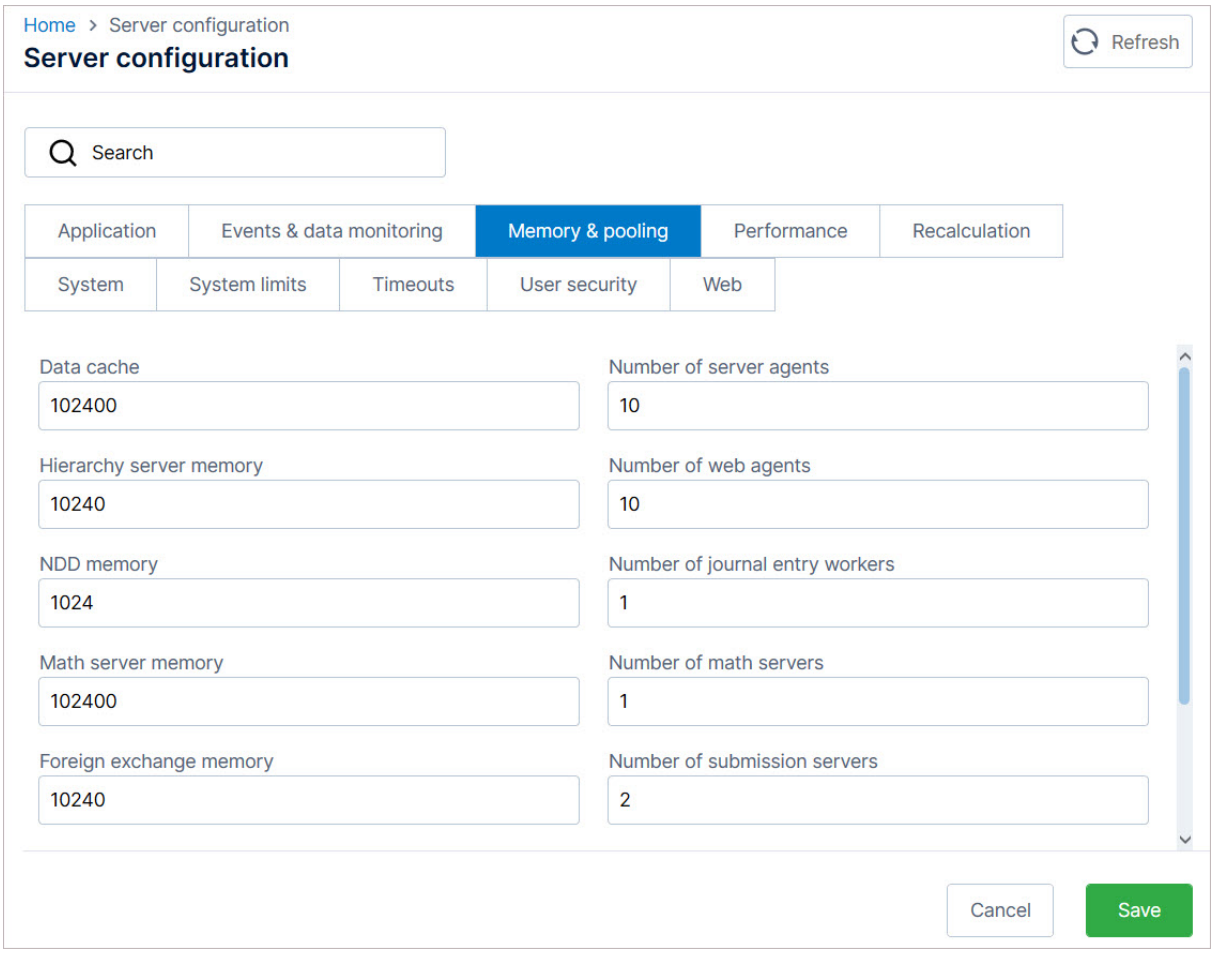
Setting	Value	Description
Use event rules	Selected or Cleared Default: Selected	Specifies whether to enable Event-based rules in this system.
Data event sequencing	Selected or Cleared Default: Cleared	Specifies whether to use sequencing for events. If you use data event sequencing, the **Default actions time interval** setting is ignored. For more information on data event sequencing, see the Longview Application Administrator Guide.
Event queue max	Numeric value Valid range: 32 to 100000000 Default: 5000	Specifies the size of the queue to be used by the Model Server in processing event messages.

Setting	Value	Description
Maximum active data events	Numeric value Valid range: 0 – 999 Default: 999	Specifies the maximum number of active data events to allow in an event sequence iteration.
Maximum persistent event rules	Numeric value Valid range: 0 – 999 Default: 999	Specifies the maximum number of event rules that can be set as persistent. If you do not want to use persistent event rules, set this parameter to 0. For more information on persistent event rules, see the Longview Application Administrator Guide. **Note:** Setting event rules as persistent increases memory consumption on the data server. If you do not allocate enough memory, specifying event rules as persistent may cause your system performance to degrade instead of improving.
Maximum data event iteration time	Numeric value Valid range: 0 - 1440 Default: 2:00	Specifies the maximum time, in the format mm:ss, that the Management Server will wait for the current iteration to complete before starting the next iteration. The minimum value allowed for this parameter is 00:01 and the maximum is 1440 minutes (one day).
Default actions time interval	Numeric value Valid range: 0 - 1440 Default: 00:05	This parameter applies only if **Data event sequencing** is not used. Specify the minimum amount of time that must pass before the same event action may be triggered again. The format for this value is mm:ss, where mm is the number of minutes, and ss is the number of seconds. The seconds value is optional. The minimum value for this parameter is 0 minutes, and the maximum is a combined value of 1440 minutes (one day).
Data area monitoring	Selected or Cleared Default: Cleared	Specifies whether to track and store batch and event activity for a given data area. If you select this parameter, you must specify at least one dimension for **Data area monitoring dimensions**. Optionally, you can also specify a dimension for report status tracking (**Data area status dimension**).
Data area status dimension	The name of a dimension in your system	This parameter applies only if **Data area monitoring** is selected. Specifies the dimension for which to enable data area status tracking. The dimension must be included in those specified for **Data area monitoring dimensions**. For example, Entities. If you do not specify a dimension for this parameter, data area status is not tracked.

Setting	Value	Description
Data area monitoring dimensions	Comma-delimited list of dimensions	This parameter applies only if **Data area monitoring** is selected. Specifies the dimensions for which to enable data area monitoring. Separate multiple dimensions with a comma. Spaces are not supported. For example, Accounts,Entities,TimePer.

Memory & pooling

The Memory & pooling tab allows you to configure memory and pooling of your system.



The following table lists the parameters that you can configure on the Memory & pooling tab:

Setting	Value	Description
Data cache	Numeric value Valid range: 1024 - 2048000 Default: 102400	Specifies the amount of RAM (in KB) reserved in the KSA for data cache files. Increase this value to allocate more memory to this cache (memory is allocated only if the **Store calculated data in cache files** parameter is selected). The size of this cache affects performance of queries when using data cache files.

Setting	Value	Description
Hierarchy server memory	Numeric value Valid range: 1024 -1245184 Default: 10240	Specifies the amount of RAM (in KB) reserved in the KSA for the Management Server. This parameter depends on the number of symbols and parent/child relationships. To identify the minimum amount, see the Longview Data Server Log (lv_dataserver.log) after the Management Server has started. It must be higher than the minimum amount required, or the server will not start. It should also be high enough to allow for expected growth in the size of the hierarchy. However, setting this value excessively high wastes memory. This value does not affect performance.
NDD memory	Numeric value Valid range: 1024 - 2048000 Default: 1024	Specifies the amount of RAM (in KB) reserved in the KSA for N-Dimensional Distribution (NDD). This parameter depends on the number of symbols configured for NDD.

Setting	Value	Description
Math server memory	Numeric value Valid range: 1024 – 2097151 (approximately 2 GB) Default: 102400 Optimal: 262144	Specifies the maximum amount of RAM (in KB) to be used by each Math Server in the Math Server Pool. Once the Math Server pool reaches that memory for a job, it transfers the data to the writer pool. Leave enough for operating system overhead and the RDBMS (if it resides on the same machine). To calculate the total possible memory consumption during a restatement or recalculation, multiply this number by the **Number of math servers** value. To speed up math operations (rollup, accounting, and model), you can increase this parameter to increase the overlap percentage, resulting in fewer redundant writes to the database tables. It will also help reduce the temporary disk space usage. However, make sure your system

Setting	Value	Description
		has enough memory to support the setting.
Foreign exchange memory	Numeric value Valid range: 1024 - 1024000 Default: 10240	Specifies the amount of RAM (in KB) reserved in the KSA for translation logic. This parameter depends on the number of different translation rates used, and is used only if **Foreign exchange (TRN)** is selected on the Application tab.
Rules	Numeric value Valid range: 10 - 102400 Default: 10240	Specifies the amount of RAM (in KB) reserved in the KSA for the Management Server. This parameter depends on the number and complexity of server rules, and is used only if **Model rules** is selected on the Application tab.
Writer memory	Numeric value Valid range: 10240-2097151 Default: 102400	Specifies the amount of RAM (in KB) reserved for the writers. This parameter is only used on Windows platforms, and only if **Writer async IO** is selected on the Recalucation tab.

Setting	Value	Description
Number of server agents	Numeric value Valid range: 0 - 250 Default: 40	Specifies the number of agents required to handle connections from Longview. If you use a value of 0 (in other words, a dedicated server) Longview will use one agent for each connection, rather than using a pool of agents.
Number of web agents	Numeric value Valid range: 0 - 250 Default: 40	Specifies the number of web agent workers to spawn.
Number of journey entry workers	Numeric value Valid range: 1 - 100 Default: 1	Specifies the number of workers in the Journal Entry (JE) Pool.If the journal entry portion of a recalculation or restatement runs too slowly, you can increase this value to attempt to improve performance.

Setting	Value	Description
Number of math servers	Numeric value Valid range: 1-100000 Default: 1	Specifies the number of Math Servers required to handle math logic. Longview suggests that you set this value to the total number of CPUs on the server machine for optimal performance. The recalculation or restatement attempts to take full advantage of all available Math Servers in the pool. You can specify this parameter as the number of CPUs in the server machine. If the math portion of a recalculation or restatement runs too slowly, increase this value. **Note:** Increasing this number beyond the numbers of CPUs in your system will have less impact and may slow it down.

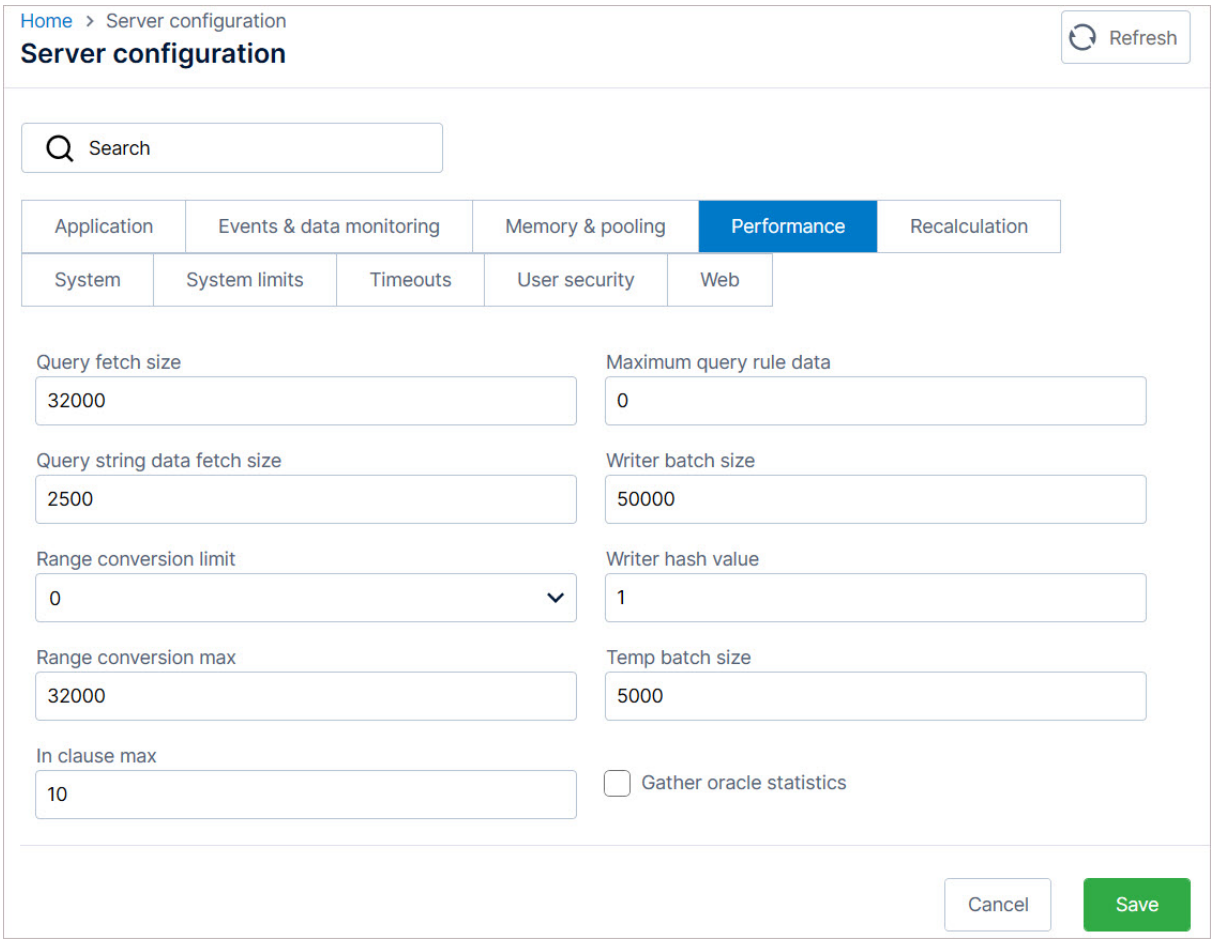
Setting	Value	Description
Number of submission servers	Numeric value Valid range: 1-100000 Default: 2	Specifies the number of Submission Servers required to handle data submissions.

Setting	Value	Description
Number of writer servers	Numeric value Valid range: 1-100000 Default: 2	Specifies the number of Writer Servers required to handle data written to the database. You can increase this value if your system is partitioned at the leaf level. The recalculation takes full advantage of all available writers in the pool. The writers are responsible for merging and sorting temporary files created by the Math Server, then loading the result into a Longview data table. You can set this parameter to a value as large as possible without causing disk bottlenecks on the server machine. In practice, many data tables may actually be small, with only a few large ones. In this case, the recalculation will likely not benefit from a **Number of writer servers** value larger than the number of large data tables (since these are the loads likely to take the longest, any additional writers

Setting	Value	Description
		will be idle). Increasing this parameter causes more concurrent table loads to happen during a recalculation or restatement. Increase this value to keep as many disks and controllers busy as possible during the load portion of the recalculation or restatement.

Performance

The Performance tab allows you to set system limits in areas that can affect the timely execution of operations.



The following table lists the parameters that you can configure on the Performance tab:

Setting	Value	Description
Query fetch size	Numeric value Valid range: 1000 - 1024000 Default: 96000	Specifies the fetch size for data queries. A larger fetch size results in a better compression rate, and therefore better data query performance, especially over slow networks. However, more memory is consumed by agents during large data queries.

Setting	Value	Description
Query string data fetch size	Numeric value Valid range: 1000 – 16000 Default: 2500	Specifies the maximum size of string data to be returned in a query.

Setting	Value	Description
Range conversion limit	Numeric value, or AUTO Valid range: 0 – 16 Default: 0	Specifies the number of dimensions to which range conversion logic applies. ■ Numeric value — Specifies the number of dimensions (from 0 to 16). ■ AUTO — Specifies the number of dimensions minus 2. For example, if your system has 16 dimensions, this value will set the range conversion limit to 14. Range conversion logic is used to optimize the SQL statements generated when querying data from the database. The logic considers converting one dimension's query constraint to a parameter and repeatedly re-executing the statement with different parameter values, as this can be more efficient than a BETWEEN clause,

Setting	Value	Description
		which can sometimes return extra data that needs to be discarded. This parameter determines the maximum number of dimensions to consider (in index order) for the use of range conversion logic.

Setting	Value	Description
Range conversion max	Numeric value Valid range: 1-32000 Default: 32000	Specifies the maximum number of symbols to allow when considering the use of range conversion logic for a dimension. Range conversion logic is used to optimize the SQL statements generated when querying data from the database. The logic considers converting one dimension's query constraint to a parameter and repeatedly re-executing the statement with different parameter values, as this can be more efficient than a BETWEEN clause, which can sometimes return extra data that needs to be discarded. This parameter determines the maximum number of symbols to allow in a dimension being considered for range conversion (and therefore the maximum number of re-executions of the statement).

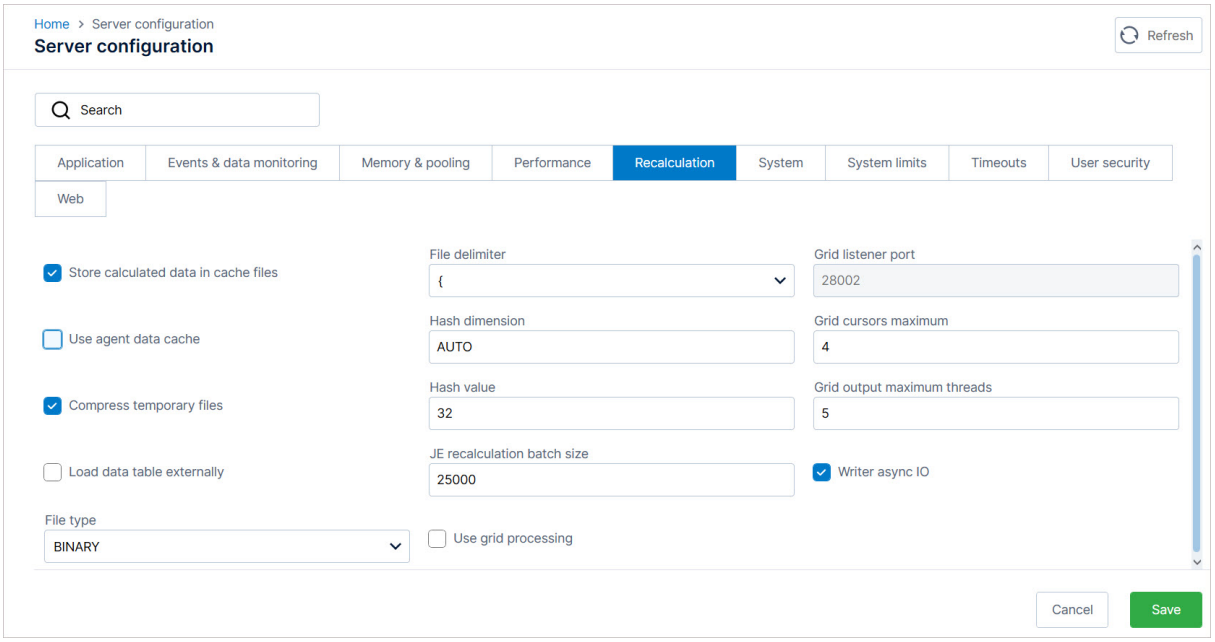
Setting	Value	Description
In clause max	Numeric value Valid range: 10-32000 Default: 10	Specifies the maximum number of symbols to allow when considering the use of an IN clause for a dimension. Range conversion logic is used to optimize the SQL statements generated when querying data from the database. The logic considers converting one dimension's query constraint to an IN clause explicitly listing the individual symbols requested, as this can be more efficient than a BETWEEN clause, which can sometimes return extra data that needs to be discarded. This parameter determines the maximum number of symbols to allow in an IN clause.
Maximum query rule data	Numeric value Value range: 0-1000000000 Default: 0	Specifies the maximum number of query rule records allowed in a single query. The default value (0) specifies that an unlimited number of query rule records are allowed.

Setting	Value	Description
Writer batch size	Numeric value Valid range: 500- 1000000000 Default: 50000	Specifies the batch size. When the value of writer batch size is reached, the writer transfers data from the temp table to the destination table. The higher this value, the better the throughput of the writer. However, there may be a penalty in size of database temporary space, rollback, and so on.
Writer hash value	Numeric value Valid range: 1 – 256 Default: 1	Specifies how to divide a Writer job destined for one table into multiple jobs, so that multiple writers can work on them concurrently. It is faster to have many processes updating one table in parallel than to have one process update the table with all records sequentially.
Temp batch size	Numeric value Valid range: 200 –1000000000 Default: 5000	Specifies the batch size when inserting records into temporary tables during submissions. The higher this value, the better the throughput of the writer. However, there may be a penalty in terms of the amount of memory required.

Setting	Value	Description
Gather Oracle statistics	Selected or Cleared Default: Cleared	This parameter applies only to Oracle systems. If selected, Oracle database statistics are gathered automatically on the temporary tables after they are created, which helps the Oracle optimizer make appropriate assumptions when choosing an access plan. Before you select this parameter, make sure the DBO can gather statistics on its own schema.

Recalculation

The Recalculation tab allows you to configure recalculations and establish policies for their execution.



The following table lists the parameters that you can configure on the Recalculation tab:

Setting	Value	Description
Store calculated data in cache files	Selected or Cleared Default: Cleared	Specifies whether to store calculated data in cache files. ■ Selected — Stores calculated data in cache files. ■ Cleared — Loads all data to the database.
Use agent data cache	Selected or Cleared Default: Cleared	Specifies whether to store the data cache for agents and web agents in RAM. ■ Selected — Stores the data cache for agents and web agents in RAM. ■ Cleared — Stores the data cache for agents and web agents in the KSA along with other server data caches.
Compress temporary files	Selected or Cleared Default: Selected	Specifies whether to compress temporary files. ■ Selected — Compresses temporary files, reducing disk space usage but slightly impacting CPU performance. ■ Cleared — Disables compression of temporary files.

Setting	Value	Description
Load data table externally	Selected or Cleared Default: Cleared	Specifies whether a partition recalculation, restatement, or import should expect an external load to occur (for example, piped loading during a recalculation). ■ Selected — The recalculation, restatement, or import truncates the tables, but does not load the resulting ASCII file (ftd_Pnnn.out). In this case, it is the responsibility of the Administrator to prepare the external load scripts. ■ Cleared — The recalculation truncates the table and loads it (via SQL*Loader for Oracle, or via bulk insert for SQL server).

Setting	Value	Description
File type	BINARY or DELIMITEDASCII Default: BINARY	Specifies the type of output file a partition recalculation creates. ■ BINARY — This file type produces the smallest and fastest loading file. ■ DELIMITEDASCII — This file type produces a delimited ASCII file. It is preferable when you are troubleshooting and need to read the file's contents.
File delimiter	Default: {	This parameter applies only if **File type** is set to DELIMITEDASCII. Specifies the character used as a delimiter in the ASCII file created during a partition recalculation. ■ { — Uses the left brace as the delimiter. ■ } — Uses the right brace as the delimiter. ■ , — Uses the comma as the delimiter. ■ ; — Uses the semicolon as the delimiter.

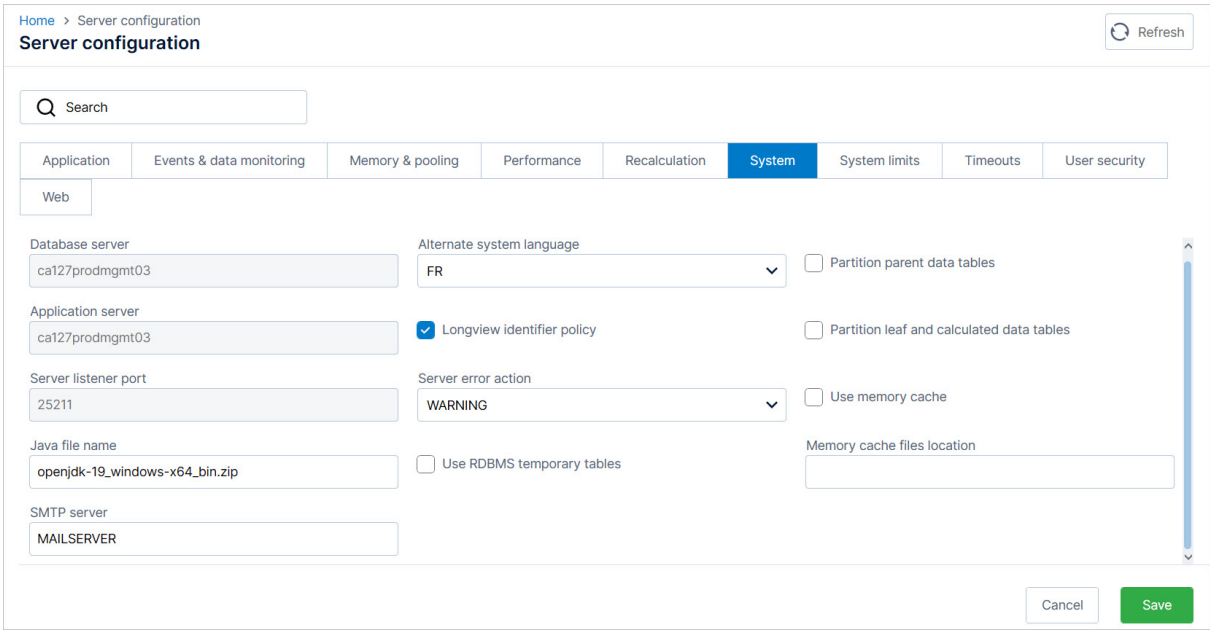
Setting	Value	Description
Hash dimension	Valid dimension name Default: AUTO	Specifies the dimension to be used to split up the leaf records into smaller jobs (hashing). Avoid specifying dimensions with single symbols that contain large percentages of data. The default value AUTO means splitting up the leaf records of the dimension with the largest number of symbols into smaller jobs. Sometimes this choice results in unbalanced performance, which can be detected by noting the last message from each Math Server during a recalculation or restatement. If some Math Servers complete long before others, the jobs are not balanced. If so, select a dimension in which the data is evenly distributed.

Setting	Value	Description
Hash value	Value range: 1 - 256 Default: 32	Specifies the number of jobs in a group, using hashing logic. If this value is greater than 1, the system subdivides Math Server jobs during a partition recalculation. This number can range from 1 to 256. For example, if this value is specified as 5, the recalculation divides the number of rows in the leaf tables into 5 sections to do the rollup, contributing to performance gains. Increase this value to create more jobs with each containing fewer records and to help balance the Math Servers, as described in **Hash dimension**. You may have to test this value when running your restatement to find the optimal value.
JE recalculation batch size	Numeric value Value range: 1000 - 128000 Default: 25000	Specifies the fetch size used by the Journal Entry Server during journal entry recalculations. A larger fetch size results in faster recalculations but consumes more memory.
Use grid processing	Selected or Cleared Default: Cleared	Specifies whether grid processing should be used when running restatements.
Grid listener port	Valid port number	Identifies the Grid Listener Port number.
Grid cursors maximum	Numeric value Valid range: 1 – 12 Default: 4	Specifies the maximum number of grid cursors.

Setting	Value	Description
Grid output maximum threads	Numeric value Valid range: 1 - 80 Default: 5	Specifies the maximum number of grid output threads.
Writer async IO	Selected or Cleared Default: Selected	Enables asynchronous IO for your grid environment when the parameter is selected, and the value of **Writer memory** on the Memory & pooling tab is a positive integer.

System

The System tab allows you to configure your system.



The following table lists the parameters that you can configure on the System tab:

Setting	Value	Description
Database server	Maximum length 253 characters Default: localhost	Identifies the name of the server on which the database is hosted.

Setting	Value	Description
Application server	Valid string Maximum length 253 characters	Identifies the host name or address of the Data Server that the Longview Smart Client should connect to. The GetSessionInfo web action returns this parameter to the Longview Smart Client or to Longview Tax.
Server listener port	Numeric value Valid range: 1000 - 65535 Default: 28000	This parameter is populated by the server installer and specifies the port number used by the Listener (client port). the port number used by the Listener (client port). Usually, the value of this port is the value of port used by the Longview_LID service + 1.
Java file name	Valid file	Specifies the name of the zip file containing the Java JDK. Example: "openjdk-12_windows-x64_bin.zip" **Note:** The file must exist in the software folder of the Longview Data Server's working directory in zip file format.
SMTP server	Valid server name	Specifies the name of the SMTP server, if you are using email notification.
Alternate system language	EN or FR Default: FR	Specifies the alternate language to use in your system, using a two letter ISO language code.

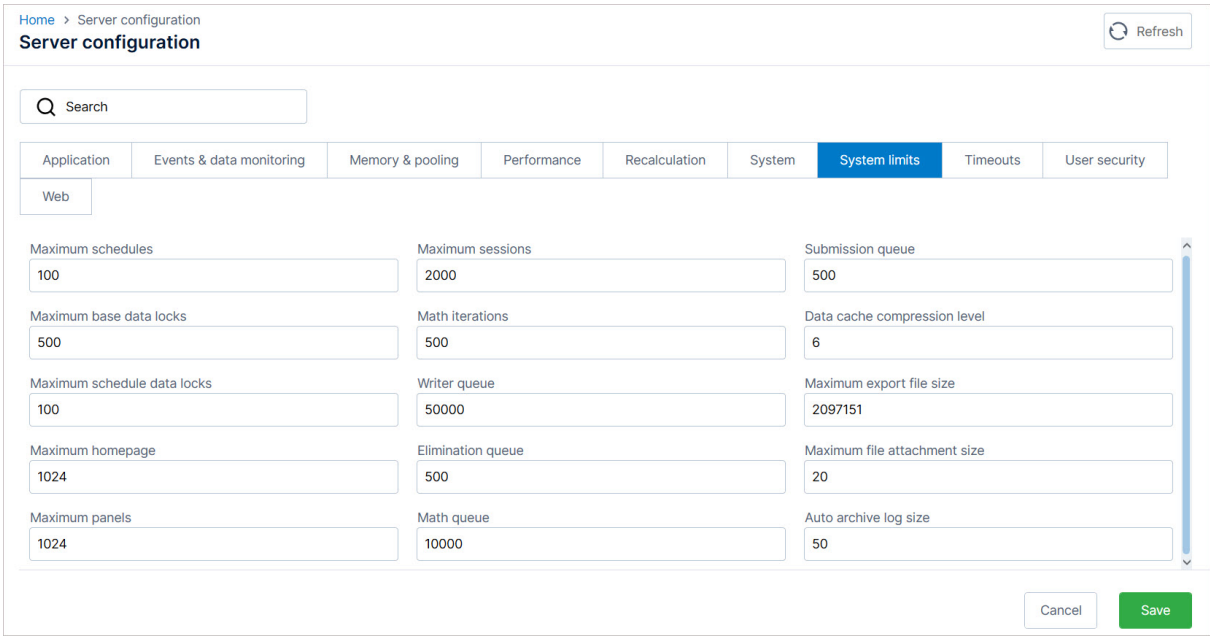
Setting	Value	Description
Longview identifier policy	Selected or Cleared Default: Selected	Determines whether the system should use the Longview Identifier policy. ■ Selected - The Client Longview Identifier (LID) must match the Server LID set as part of the installation process. For more information, see the Longview Installation Guide. ■ Cleared - The Client LID can be different than the Server LID.
Server error action	IGNORE or WARNING Default: WARNING	Specifies how system responds to a data submission error. ■ IGNORE - The user does not see an error message. Errors are reported to the Longview Data Server Log (lv_dataserver.log) only. ■ WARNING - The user sees a server error message when connecting.
Use RDBMS temporary tables	Selected or Cleared Default: Cleared	Specifies whether the system uses Oracle Global Temporary temp tables instead of regular temp tables (for Oracle databases only).
Partition parent data tables	Selected or Cleared Default: Selected	Specifies whether the parent data table is partitioned.
Partition leaf and calculated data tables	Selected or Cleared Default: Selected	Specifies whether a data table is partitioned for leaf and calculated data.

Setting	Value	Description
Use memory cache	Selected or Cleared Default: Cleared	Specifies whether to enable caching data in memory if the MemoryCacheSizes.cfg file is present in the location specified by the **Memory cache files location** parameter. **Note:** Longview recommends caching data in memory only as part of a full-system performance strategy. Review Caching Data in Memory before implementing this feature.

Setting	Value	Description
Memory cache files location	Valid folder	This parameter applies only when **Use memory cache** is selected. Specifies the location of the memory cache folder containing the memory block files for caching data in memory. The default value for this parameter is the Data Server working directory, such as "C:\Longview\DataServers\LID" where LID is the Longview Identifier for the system. **Note:** ■ The location must be a path local to the server machine. Do not specify a network drive. ■ This functionality is only available for Longview Data Servers running on Windows O/S. For more information, see Caching Data in Memory.

System limits

The System limits tab allows you to set limits in your system.



The following table lists the parameters that you can configure on the System limits tab:

Setting	Value	Description
Maximum schedules	Numeric value Valid range: 1 - 5000 Default: 100	Specifies the maximum number of schedules allowed.
Maximum base data locks	Numeric value Valid range: 100-100000000 Default: 500	Specifies the maximum number of data locks allowed in the database.
Maximum schedule data locks	Numeric value Valid range: 100- 100000000 Default: 100	Specifies the maximum number of schedule locks.
Maximum homepage	Numeric value Valid range: 1 - 1024 Default: 1024	Specifies the maximum number of home page locks.
Maximum panels	Numeric value Valid range: 1 - 4096 Default: 1024	Specifies the maximum number of web panel locks.
Maximum sessions	Numeric value Valid range: 8 - 100000000 Default: 2000	Specifies the maximum number of sessions allowed at one time.

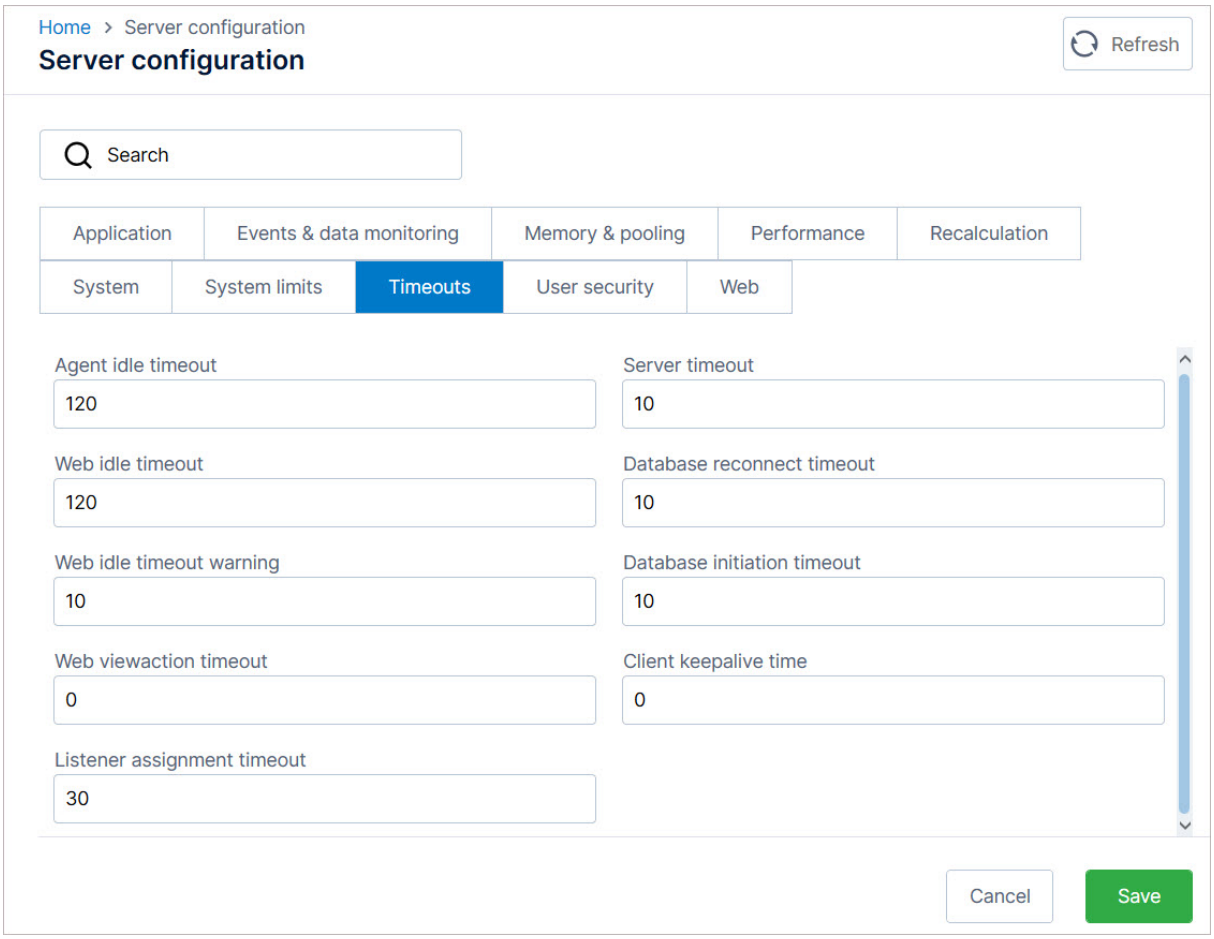
Setting	Value	Description
Math iterations	Numeric value Valid range: 100 -100000000 Default: 500	Specifies the maximum number of math iterations allowed.
Writer queue	Numeric value Valid range: 32 -100000000 Default: 50000	Specifies the maximum number of entries in Writer queue. If you have a high volume of submissions, make this value large enough to handle the backlog, but remember each leaf table can be handled by only one Submission Server at a time.
Elimination queue	Numeric value Valid range: 32-100000000 Default: 500	Specifies the maximum number of entries in the Elimination queue. If you have a high volume of submissions, make this value large enough to handle the backlog, but remember that each leaf table can be handled by only one Submission Server at a time.

Setting	Value	Description
Math queue	Numeric value Valid range: 32 -100000000 Default: 10000	Specifies the maximum number of entries in the Math queue. The value for **Math queue** does not change with changes in the **Number of math servers** value on the Memory & pooling tab. For example, if you specify 500 for Math queue, then regardless of number of Math Servers running (Number of math servers), there will be one queue with a maximum of 500 entries. If the queue becomes full, the 501st job returns an error. Use the following factors to calculate the optimum size of the math queue: ■ volume of anticipated submissions during a peak period ■ number of partitions (because submission jobs may be broken into many smaller partitioned jobs) ■ **Hash value** used during a recalculation or restatement If you have a high volume of submissions, make this value large enough to handle the backlog, but remember that each leaf table can be handled by only one Submission Server at a time.

Setting	Value	Description
Submission queue	Numeric value Valid range: 32-100000000 Default: 500	Specifies the maximum number of entries in Submission queue. If you have a high volume of submissions, make this value large enough to handle the backlog, but remember each leaf table can be handled by only one Submission Server at a time.
Data cache compression level	Numeric value Valid range: 1 - 9 Default: 6	Specifies the compression level to use when generating data cache files. The range varies from 1 to 9; where 1 corresponds to the best speed and 9 corresponds to the best compression.
Maximum export file size	Numeric value Valid range: 1024 -2097151 Default: 2097151	Specifies the maximum size of any export file in KB.
Maximum file attachment size	Numeric value Validrange: 5 - 25 Default: 20	Specifies the maximum file size in MB for file attachments in web input templates. If this setting is greater than the maxAllowedContentLength attribute in your IIS web.config file, the IIS setting is used.
Auto archive log size	Numeric value Valid range: 0 – 400 Default: 50	Specifies the size in MB the lv_dataserver.log file can reach before it gets auto archived. When this value is set to 0, the lv_ dataserver.log will not auto archive.

Timeouts

The Timeouts tab allows you to configure timeout periods in your system.



The following table lists the parameters that you can configure on the Timeouts tab:

Setting	Value	Description
Agent idle timeout	Numeric value Valid range: 1 - 1440 Default: 120	Specifies the timeout period (the number of minutes to wait if the agent is inactive). This parameter is not designed to be used as a method of disconnecting a user connection. It releases the agent after a specified period of inactivity but does not disconnect the actual user connection. This parameter applies to Longview Application Framework as well as Longview Tax and Longview Smart Client.
Web idle timeout	Numeric value Valid range: 5 - 1440 Default: 120	Specifies the number of minutes to wait if the web agent is inactive, before releasing the web agent. This parameter applies to Longview Dashboard sessions. This parameter is not designed to be used as a method of disconnecting a user connection. It releases the web agent after a specified period of inactivity but does not disconnect the actual user connection.

Setting	Value	Description
Web idle timeout warning	Numeric value Valid range: 0 - 1440 Default: 10	Specifies the number of minutes before timeout to send a warning to the user. This value must be less than the value set for **Web idle timeout**. **Note:** This parameter only applies to the legacy dashboard. It does not apply to HTML5 dashboard.
Web viewaction timeout	Numeric value Valid range: 0 - 1440 Default: 0	Specifies the number of minutes that a web request can run before it is terminated. If this parameter is set to 0, web requests can run for an unlimited amount of time.
Listener assignment timeout	Numeric value Valid range: 0 - 120 Default: 30	Specifies the number of seconds that listener server will wait for an agent/web agent to accept a RCP connect request. If timeout occurs, listener will try the next agent/web agent to accept the request. If this parameter is set to 0, it will wait for agent/web agent's reply infinitely.

Setting	Value	Description
Server timeout	Numeric value, in minutes Valid range: 1 - 120 Default: 10	Specifies the number of minutes to wait for a response before timing out on server startup or shutdown. The value set for this parameter has a specific impact on persistent event rules. If you attempt to stop the servers while a persistent event is running, the system waits until the event completes or the value set for Server Timeout is reached. The system behavior is dependent on what occurs first: ■ If the persistent event completes before the value set for Server timeout is reached, the Management Server stops, and the server stop request continues. ■ If the value set for Server timeout is reached before the persistent event completes, the server stop request is terminated

Setting	Value	Description
		and the servers continue to run. ■ If additional events are triggered while the system is waiting, they are not started until the stop request is terminated. If the initial persistent event completes before the value set for Server timeout is reached, the additional events are not started, and the triggers are ignored. The Management Server stops, and the server stop request continues.

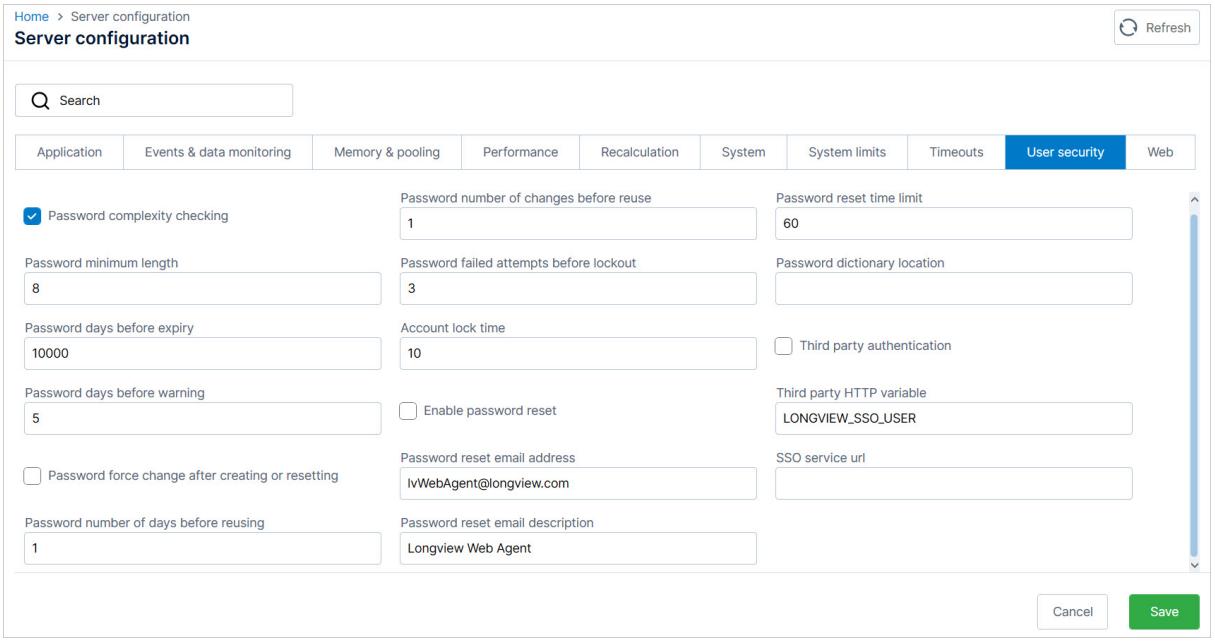
Setting	Value	Description
		Note: If you attempt to stop the servers while a non-persistent event is running, you receive a message that users are still connected, and the server stop request is terminated. For more information on persistent event rules, see the Longview Application Administrator Guide.

Setting	Value	Description
Database reconnect timeout	Numeric value Valid range: 0 – 60 Default: 10	This parameter applies to SQL servers only. This parameter, set in minutes, causes the server to check the connection each time it attempts to communicate with the database, and to reconnect if necessary. If the connection fails during a SQL operation, a regular error message is returned and the submission will not complete. The server will try to reconnect in the next operation. Reconnection will be attempted every five seconds for the duration of the time period (in minutes) defined by this parameter.
Database initiation timeout	Numeric value Valid range: 0 – 60 Default: 10	Specifies, in minutes, the amount of time that the server will retry connecting to the database, if the first attempt to connect failed. The server will attempt to reconnect every five seconds until the value set is exceeded.

Setting	Value	Description
Client keepalive timeout	Numeric value Valid range: 0 - 1440 Default: 0	Specifies the number of minutes a client socket waits after data is last sent before sending a TCP keepalive packet to the data server to verify that the connection is still available. If this parameter is set to 0, client sockets do not send TCP keepalive packets. Currently, this parameter applies to the following client components with or without using Longview HTTP Proxy: ■ Longview Add-In for Office ■ Longview Application Framework ■ Longview Apps ■ Longview Designer ■ Longview Performance Manager ■ Longview Tax ■ Longview tools and editors

User security

The User security tab allows you to establish and manage protocols to protect the data in your system from unauthorized users.



The following table lists the parameters that you can configure on the User security tab:

Setting	Value	Description
Password complexity checking	Selected or Cleared Default: Selected	Specifies whether the system enforces password complexity. ■ Selected — Passwords must meet the password complexity restrictions. ■ Cleared — Password complexity restrictions are not enforced. Passwords are still restricted by the value set for **Password minimum length**. **Note:** Passwords cannot contain any of the following characters: double quotation marks ("), pipes (|), dollar sign ($), square brackets ([ ),( ]) or spaces ( ), and cannot start with the at sign (@). When this parameter is selected, a password must meet all the following restrictions: ■ The password must contain at least one character from each of the following categories — uppercase letters (A-Z), lowercase letters (a-z), base 10 digits (0-9), and special characters (~ ! @ # $ % ^ & * _ - + = ` \ ( ) { } [ ] : ; ' < > , . ? /). ■ The password must meet the length as specified for Password minimum length. ■ The password cannot contain the whole Username, First Name, or Last Name of the user that the password is assigned to, in either uppercase or lowercase, if they are more than two characters in length. If any of the following characters (. - _ # ! ` ~ @ '), or any spaces appear in the Username, First Name, or Last Name, these characters are treated as delimiters instead of consecutive characters. For example, the password for user 'Jean-Paul' cannot contain the strings 'jean' or 'paul' but can contain 'pau'. ■ The password cannot contain any of the password dictionary strings, in either uppercase or lowercase. For more information, see Password dictionary location.

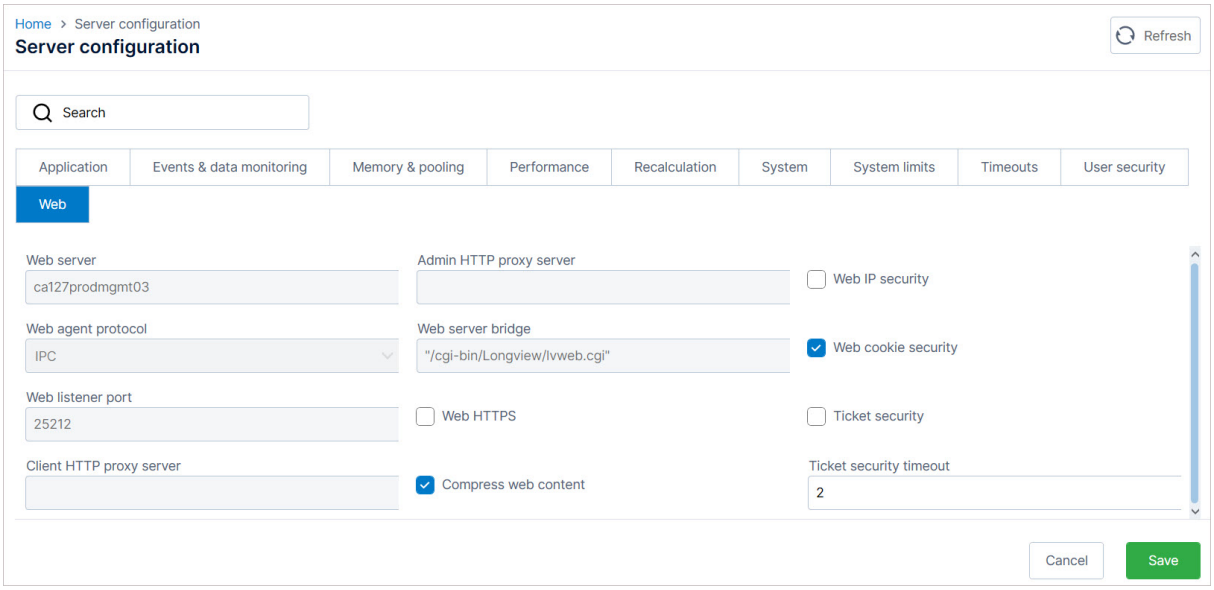
Setting	Value	Description
Password minimum length	Numeric value Valid range: 1 - 63 Default: 8	Specifies the minimum length for passwords, in number of characters. **Note:** If **Password complexity checking** is selected, avoid setting this parameter to a value of 3 or less. Since password complexity restrictions require that passwords must contain at least one character from four different categories, passwords that are three or less characters in length will not be permitted.
Password days before expiry	Numeric value Valid range: 1 - 10000 Default: 30	Specifies the number of days until a password expires.
Password days before warning	Numeric value Valid range: 1 - 10000 Default: 5	Specifies when a password expiry warning is given. The value set in **Password days before warning** is the number of days before the value set in **Password days before expiry**. For example, if you set 30 to Password days before expiry, and 5 to Password days before warning, a password expiry warning is given on the twenty-fifth day (5 days before the value set in Password days before expiry).
Password force change after creating or resetting	Selected or Cleared Default: Selected	Specifies whether or not a password change is enforced. ■ Selected — If a user logs on for the first time, or after a password is reset, the password must be changed. ■ Cleared — Passwords do not have to be changed.
Password number of days before reusing	Numeric value Valid range: 0 - 3650 Default: 1	Specifies the number of days after a password is set or reset, until it can be reused.
Password number of changes before reuse	Numeric value Valid range: 0 - 1000 Default: 1	Specifies the number of password changes that must occur before a password can be reused. A password cannot be reused until both the number of days set in **Password number of days before reusing** and the number of changes set in **Password number of changes before reuse** have been exceeded.
Password failed attempts before lockout	Numeric value Valid range: 1-100 Default: 3	Specifies the number of times a user can enter an incorrect password before they are locked out of the system.

Setting	Value	Description
Account lock time	Numeric value Valid range: 0 – 1440 Default: 10	Specifies the time interval, in minutes, between when an account is locked (due to repeated failed password attempts, exceeding the number set in **Password failed attempts before lockout**), and when the account is unlocked. If account lock time is set to 0, the account is locked until the administrator resets the password.
Enable password reset	Selected or Cleared Default: Cleared	Specifies whether users can reset their passwords from the Longview Dashboard web Sign On dialog. ■ Selected — Users can reset their passwords from the web Sign On dialog. ■ Cleared — Users cannot reset their passwords from the web Sign On dialog. **Note:** For users to reset their passwords from the web Sign On dialog, they must have a unique email address as specified in their user settings. For more information, see the Longview Application Administrator Guide or the Longview Tax Implementer's Guide.
Password reset email address	Valid string Default: "lvWebAgent@longview.com	This parameter applies only if **Enable password reset** is selected. Specifies the email address that the password reset link is sent from when users reset their passwords from the web Sign On dialog. This parameter must be enclosed in double quotation marks.
Password reset email description	Valid string Default: "Longview Web Agent"	This parameter applies only if **Enable password reset** is selected. Specifies a description for the email address that the password reset link is sent from when users reset their passwords from the web Sign On dialog. This parameter must be enclosed in double quotation marks.
Password reset time limit	Numeric value Valid range: 0 – 1440 Default: 60	This parameter applies only if **Enable password reset** is selected. Specifies the time, in minutes, before the password reset link expires. The password reset link is provided when users reset their password from the web Sign On dialog.

Setting	Value	Description
Password dictionary location	Valid string	This parameter applies only if **Password complexity checking** is selected. Specifies the location where the dictionary files are stored. Dictionary files are text files that contain strings of characters that cannot be used in passwords if Password complexity checking is selected. Examples of strings commonly not allowed in passwords include abc, password, or your company name. If you do not specify a value for this parameter, passwords are not restricted by the strings in the dictionary files. This parameter must be enclosed in double quotation marks. For example, `"C:\Longview\CPM\DataServers\LVCPM\PasswordFiles"` The following rules apply to dictionary files: ■ Strings must be at least three characters in length. ■ Strings must be listed one per row in the text file. ■ Password matches to dictionary files are not case-sensitive. For example, if the dictionary file contains Abc, the password 1aBCD is not permitted. Dictionary files adhere to the following naming convention: password_dictionary_FileName.txt **Note:** File extensions other than .txt can be used. For example, password_dictionary_LVWords.dct is a valid dictionary file name.
SSO service url	Valid URL	Specifies the URL to the Longview SSO Web Service. The URL will either be setup for SAML or OpenID. For example: ■ For SAML: "https://srvr1201sql01.domain.com/sso/saml" ■ For OpenID: "https://srvr1201sql01.domain.com/sso/openid" Setting this parameter enables Longview to work with Federated SSO, ensuring secure and streamlined user authentication. For more information on setting up Longview SSO Service, see the Longview SSO Service Installation.

Web

The Web tab allows you to manage policies related to web access to the system.



The following table lists the parameters that you can configure on the Web tab:

Setting	Value	Description
Web server	Valid string Maximum length 253 characters	Identifies the host name or address of the Web Server that the Longview Smart Client or Longview Tax should connect to.
Web agent protocol	IPC or TCP Default: IPC	Identifies the protocol used between the web server and the web agent: ■ IPC — Shared memory ■ TCP — TCP/IP
Web listener port	Numeric value Valid range: 1000 - 65535 Default: 28001	Identifies the port to use when the value of **Web agent protocol** is TCP. Usually, the value of this port is the value of the port used by the Longview_LID service - 1.
Client HTTP proxy server	Valid string	Identifies the secure listener port URL (HttpProxyServerListenerPortURL) for your HTTP Proxy Server. For example, "https://srvr1201sql01:8080/listenerportproxy/". For information on installing the HTTP Proxy Server, see Installing Longview HTTP Proxy Server.

Setting	Value	Description
Admin HTTP proxy server	Valid string	Identifies the secure admin port URL (HttpProxyServerAdminPortURL) for your HTTP Proxy Server. For example, "https://srvr1201sql01:8080/ adminportproxy/".
Web server bridge	Valid path Default: "/cgi-bin/LID/lvweb.cgi" where LID is the Longview Identifier for the system.	Identifies the path for the cgi or dll file serving as the communication bridge between the web server and Longview Data Server. This path must be relative to the document root configured for the web server and must be enclosed in double quotation marks. This value is used when resolving the WEBBRIDGE token in web content delivered to a user. Therefore, if it is not specified correctly, your web application will not work correctly.

Setting	Value	Description
Web HTTPS	Selected or Cleared Default: Cleared	Specifies whether Secure and HttpOnly attributes are added to the cookie header. When this parameter is selected, the Web Server uses Secure Sockets Layer (SSL). ■ Selected — Secure and HttpOnly attributes are added to the cookie header. ■ Cleared — Secure and HttpOnly attributes are not added to the cookie header. The **Web cookie security** and **Web HTTPS** parameters behave together in the following ways: ■ If Web cookie security and Web HTTPS are both selected, the Web Server uses https (SSL), and cookies are used and have Secure and HttpOnly attributes set. ■ If Web cookie security is selected and Web HTTPS is cleared, the Web Server uses http and cookies are used but do not have Secure and HttpOnly attributes set. ■ If Web cookie security is cleared and Web HTTPS is selected, the Web Server uses https (SSL), and cookies are not used. ■ If Web cookie security and Web HTTPS are both cleared, the Web Server uses http and cookies are not used.
Compress web content	Selected or Cleared Default: Selected	Specifies whether to use gzip standard compression whenever applicable.
Web IP security	Selected or Cleared Default: Cleared	Specifies whether to validate a web session ID against the user's IP address for each web action. If you are using Longview HTTP Proxy Server, or any other proxy server, you must not select this parameter.

Setting	Value	Description
Web cookie security	Selected or Cleared Default: Selected	Specifies whether cookies are used to pass the web session ID and its key information. When this parameter is selected, the user's browser must allow cookies.
Ticket security	Selected or Cleared Default: Cleared	Specifies whether ticket security is enabled. Ticket security refers to using a single-use ticket when launching Longview components via URL links. This parameter is not selected by default. Longview strongly recommends that it is enabled. If this parameter is selected, Web HTTPS must not be enabled. **Note:** ■ Customers have experienced issues with cookie-based security and smart client components, due to changes made by Microsoft – while most of these issues appear to have been resolved, we are providing this alternative mechanism as an additional security layer and to protect against future cookie complications when launching Longview components via URL links. ■ If this parameter is selected, if you are using out-of-box functionality, no other changes are required. However, if you have custom links on the Longview Homepage or legacy Dashboard which launch Longview components, then these links must be updated to work with the new feature. For more information, contact Longview Support Services.

Setting	Value	Description
Ticket security timeout	Numeric value Value range: 2 to 10 Default: 2	Specifies the number of minutes that a ticket is valid when launching Longview components via URL links.

Export and Import

You can use Longview Server Manager to export and import the data in the database tables.

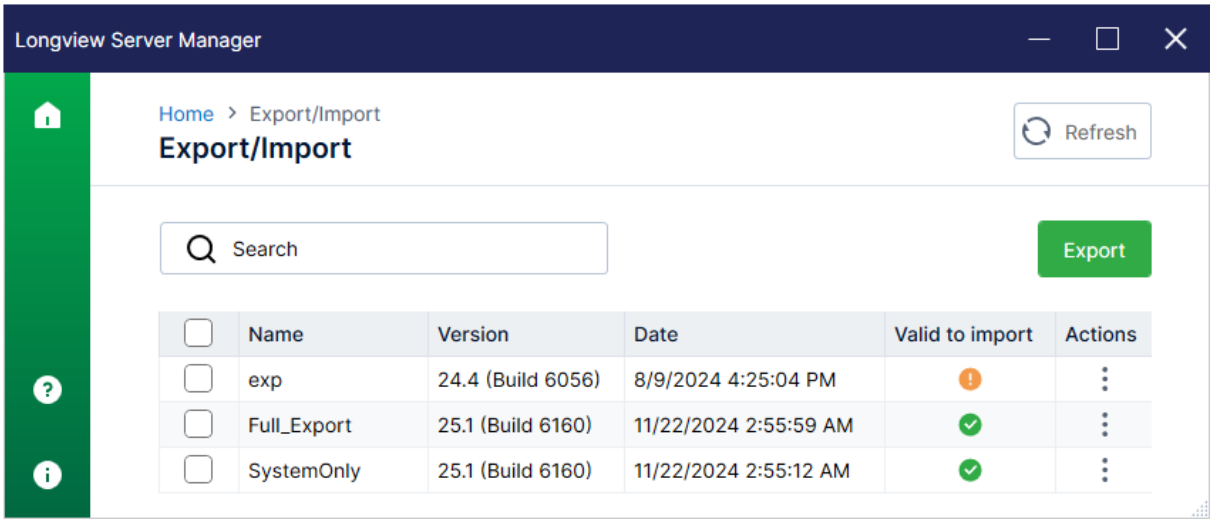
Note: The database table structure is not exported or imported.

You can use the export and import utilities to perform several tasks, listed below:

Task	Description
Clean up leaf data	You can use the export and import utilities to clean up: ■ data corresponding to deleted symbols ■ data corresponding to symbol indexes out of the valid range ■ non-static parent data ■ data with a value of 0.0 ■ data with empty character strings
Reorganize symbol indexes	You can collapse deleted symbol gaps, and then reorganize existing symbol lists, collapse out deleted symbols, and reindex all existing data to use the new index coordinates.
Perform data transfers across platforms	The import and export utilities provide flexible data transfers by creating Longview-related binary files independent of the Longview database and server platform.

Note: When you export server data, the export files are created in the export folder of the Custom Files Location (specified in the FILES_CUSTOM_ROOT_PATH server configuration parameter) on the Longview data server and the corresponding log files are created in the logs/export folder. When you import server data the import log is created in the logs/import folder.

To access the Export/Import page, click the **Export/Import** tile under the **Functionality** section on the Longview Server Manager home page.



Server Manager allows you to see all your exports, as well as the version they were exported from and the date they were created.

From the list of exports, you can open the export log file associated with the export, delete the export, or import.

Refresh Button

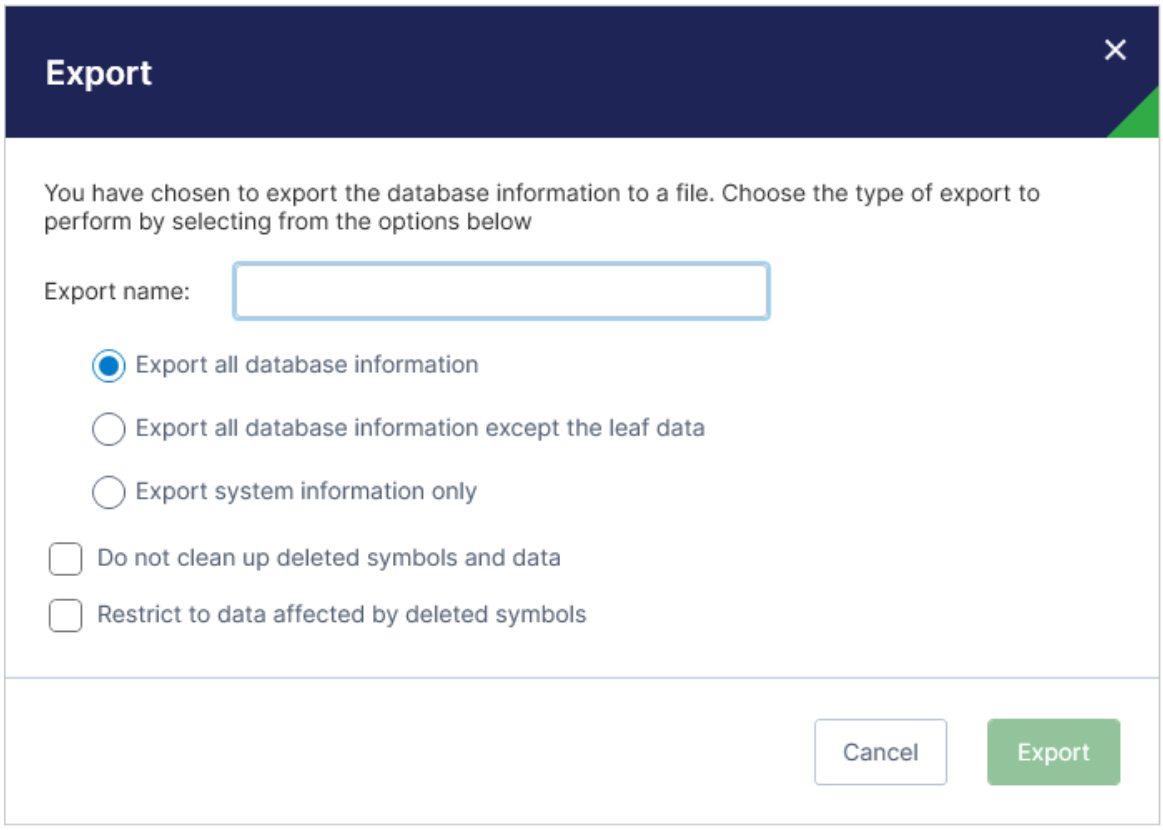
Click the **Refresh** button to refresh the export list with the exports on the Longview data server.

Exporting data from database tables

You can use Server Manager to export the data in database tables, though it does not export table structures. The export utility extracts data from the appropriate database tables, creating multiple binary files that can be stored or subsequently imported. (It does not export data from any tables whose name starts with klx_ic.)

To export data from database tables, follow these steps:

1. Select **Export** at the top right. The Export dialog displays, as shown below:



2. Select from the following options:

   a. **Export name**: Enter the name that the export will be saved as. The export cannot be more than 64 characters long or contain characters (\ / * ? “ < > | % $) or spaces.

   b. **Export all database information**: Select this option to export all system, system data, and leaf data tables. This includes metadata, journal entry, batch, locking, symbol statistics, shared files, models, and intercompany tables data. Use this option to reorganize the Longview database structure and optimize performance, export system tables and leaf data for the purpose of leaf-level repartitioning, copy the database to another Longview instance, and create an exact backup of your database.

   c. **Export all database information except the leaf data**: Select this option to export data from main system tables in the Longview database, including metadata tables such as the dimension and symbol tables. In addition, journal entry, batch, locking, symbol statistics, shared files, models, and intercompany tables data is exported. Data from the leaf data tables is not exported. Use this option to copy the symbols and hierarchy of a database to another database, along with the additional tables.

   d. **Export system information only**: Select this option to export data from only the main system tables in the Longview database, including metadata tables such as the dimension and symbol tables. Data from journal entry, batch, locking, symbol statistics, shared files, models, intercompany, and leaf data tables is not exported. Use this option to copy the symbols and

hierarchy of a database to another database and reorganize the Longview database structure and optimize performance when no data exists.

e. **Do not clean up deleted symbols and data**: Select this option to export data from the database in its raw state without removing, re-sequencing, or reorganizing deleted symbols. Use this option to create an exact snapshot of a database at a particular moment in time.

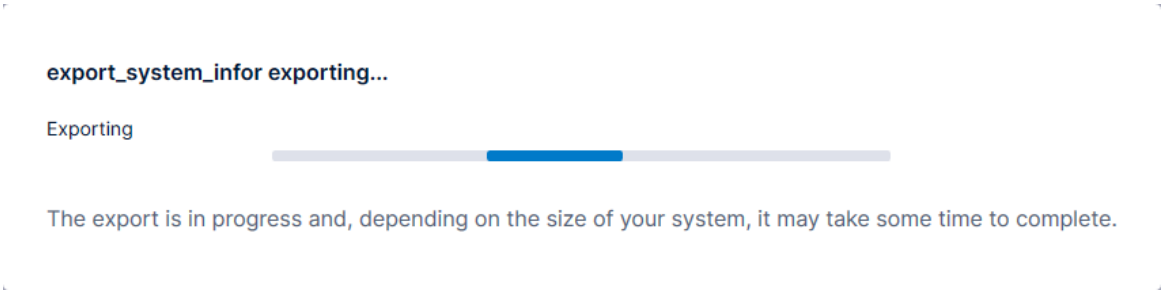
f. **Restrict to data affected by deleted symbols**: Select this option to export data from tables that would be affected by symbol re-indexing only. Use this option to reduce the number of tables to export and import. However, it is not suitable if you are using the Export utility to create a backup.

> **Note:** You can only select one of **Do not clean up deleted symbols and data** or **Restrict to data affected by deleted symbols**. If you do not select either option, data is exported from the database and its indexes are reordered.

3. Click **Export**.

4. A status dialog appears, showing the export is in progress.

> **Note:** The exporting process may take a while.



5. A toast notification displays at the top right, indicating that the export was successful. To view the export log file, click **View log**. The log file opens. For more information, see Log Files.

Data from the tables you selected is exported to Longview-related binary files that you can either store or import back into the Longview database.

Importing data into database tables

You can use Server Manager to import data into Longview database tables. To perform this task you must have authorization to Start/Stop servers. The Import utility reads binary files created by the Export

utility, and restores the appropriate database tables. Importing data can save time when duplicating a database structure from one server to another, particularly when setting up a new server.

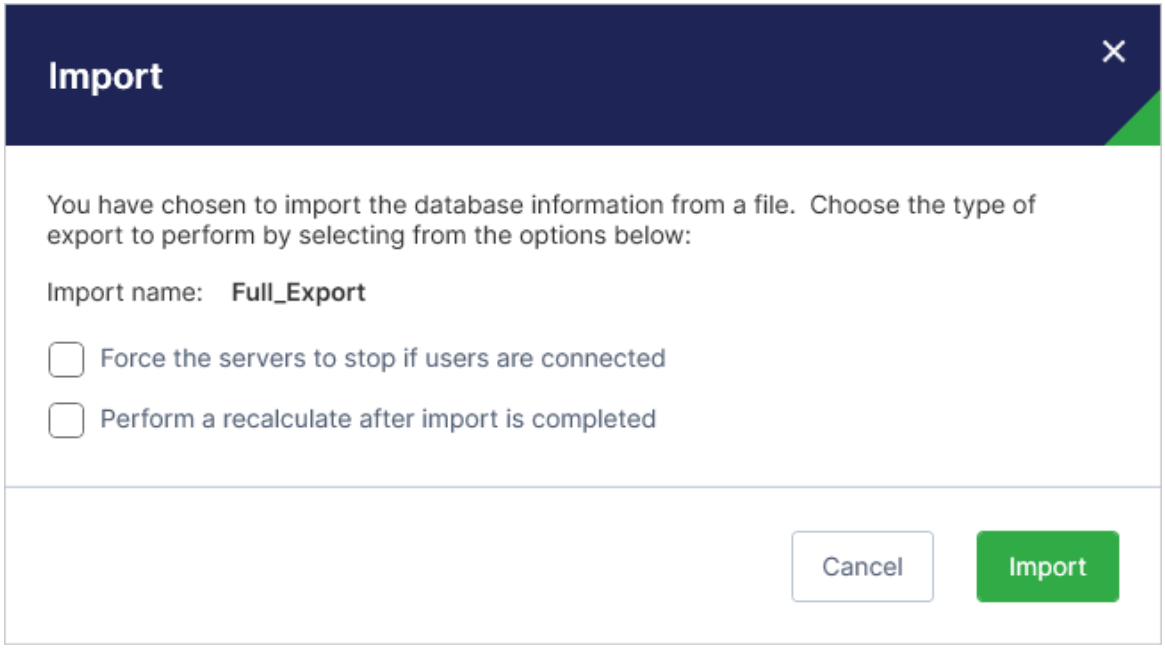
You can use Server Manager to import a specific export from the export list. The **Valid to import** column shows whether an export can be imported. A green checkmark means that the export can be imported.

To import an export, complete the following steps:

1. Navigate to the export you want to import.
2. In the **Actions** column, select the ellipsis in the same row as the export and click **Import**.

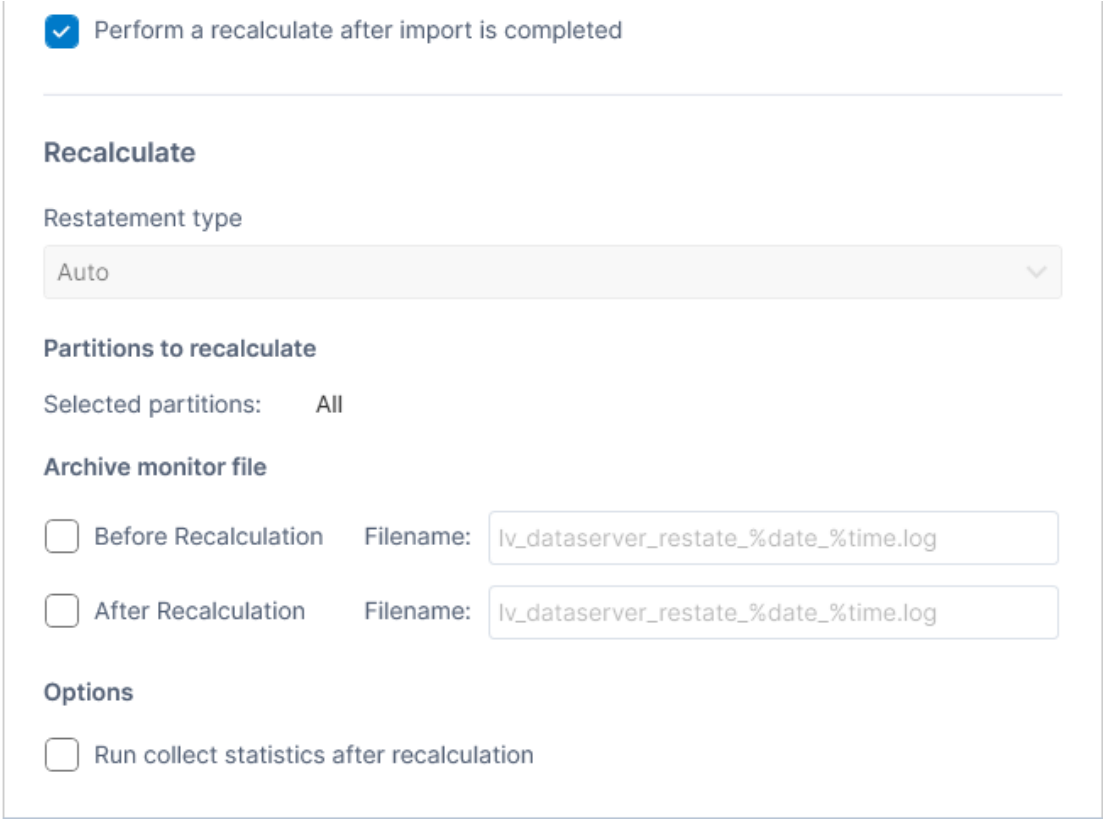
   Note: The export selected must match the version of the Longview data servers to be able to be imported.

3. The Import dialog displays. The Import name uses the name of the export file to import.



4. Specify the following options:

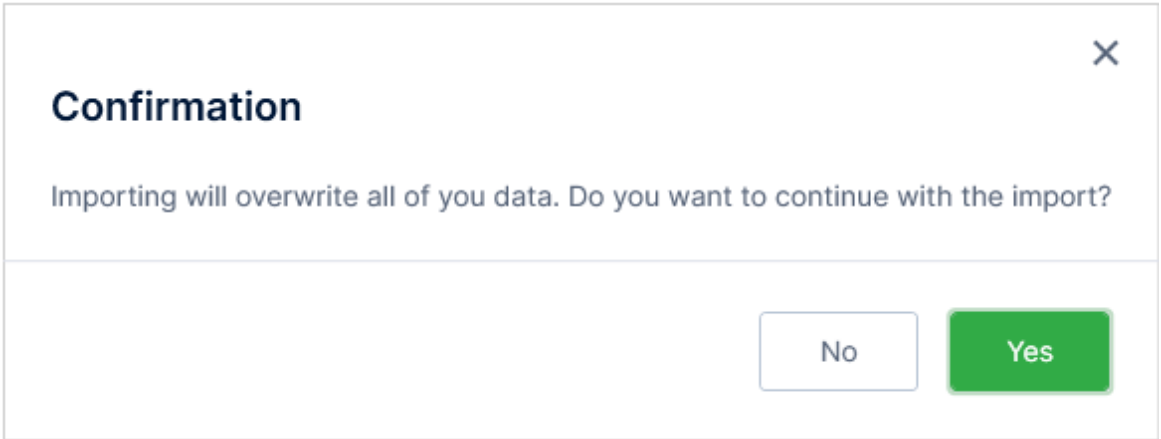
   - **Force the servers to stop if users are connected**: Select this option to stop the servers and disconnect any users.
   - **Perform a restatement after import is completed**: Select this option to force the system to run an immediate restatement (once the binary files are imported). After you select this option, you can further specify the following settings:



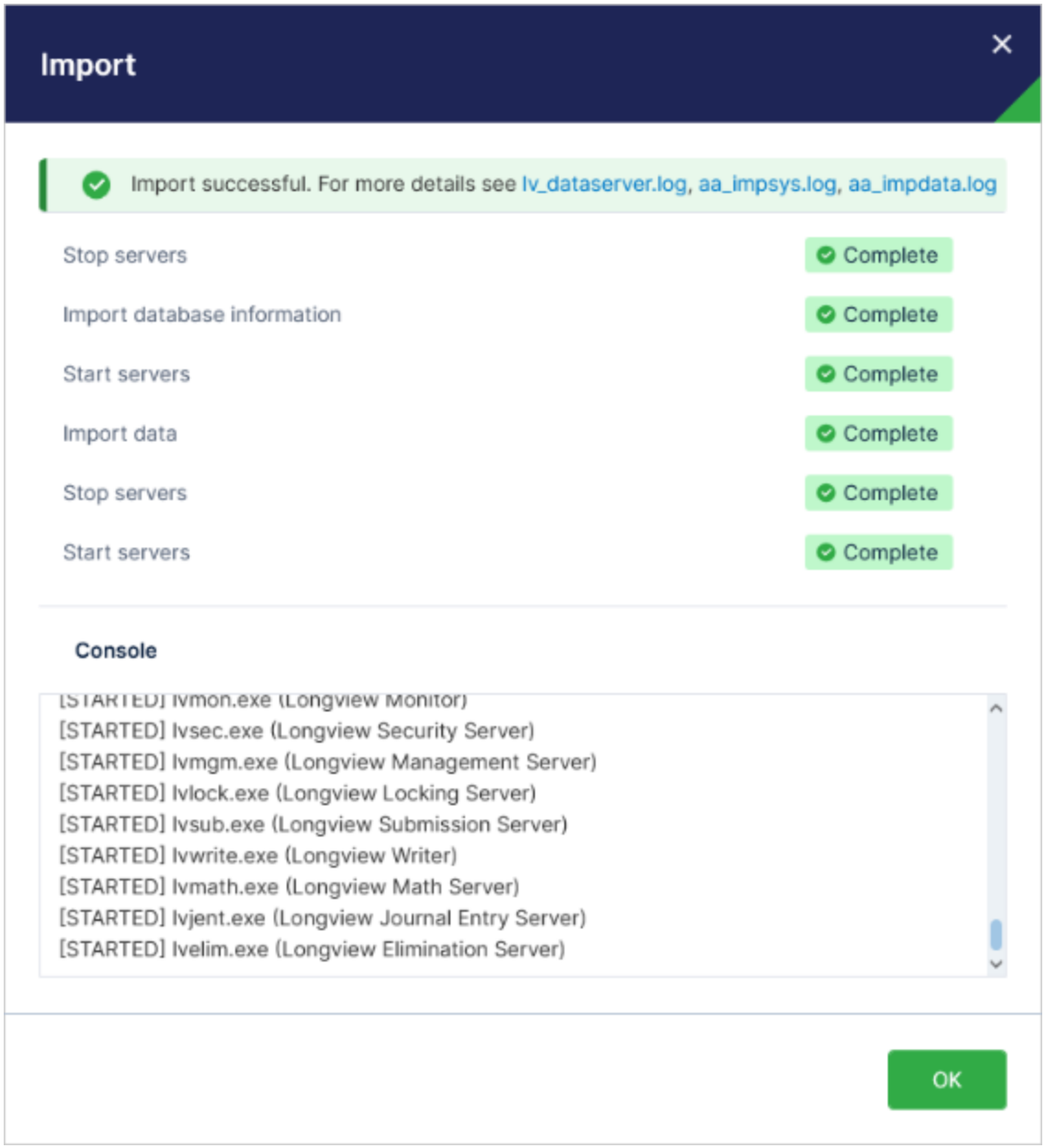
a. **Archive monitor file Before/After Recalculation**: Specify whether to archive monitor file before or/and after the recalculation and the corresponding file names.

b. **Run collect statistics after recalculation**: Select this option to run the collected statistics after the recalculation.

5. Click **Import**.
6. A Confirmation dialog opens. Click **Yes** to continue, which will overwrite all your existing data.



7. Longview starts importing and displays the importing process and status information.

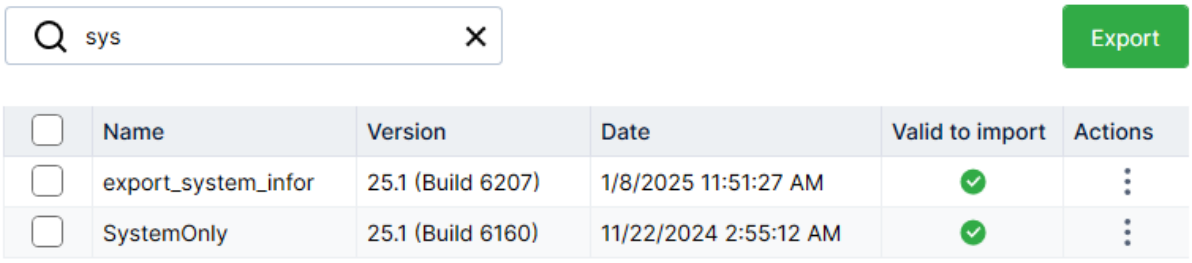


8. When the import is completed, you can click the log file names at the top to view the detailed logs.

9. Click **OK** to close the Import dialog.

Searching Export files

You can use the Search field to find the exports you want easily. The search filters as you type and displays only the matched exports whose names contain the input text. To clear the search, remove what you have typed from the Search box.



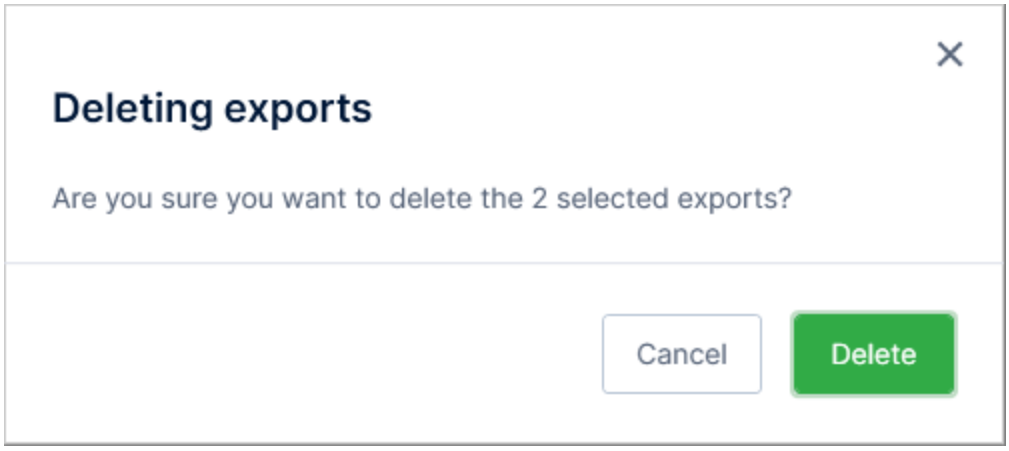
Deleting export files

You can use Server Manager to delete exports from your system.

To delete one or more exports, follow these steps.

1. Click the checkbox on the export(s) you want to delete. To delete all exports, click the checkbox on the header row of the list and all exports are selected.
2. Click the **Delete icon** which appears beside **Export** at the top right. A confirmation dialog opens.

> **Note:** The delete only deletes the export files. The export log file will remain.



3. Click **Delete** to delete the export(s).

You can also delete an export using the following method:

1. Navigate to the **export** you want to delete.
2. In the **Actions** column, select the ellipsis in the same row as the export and click **Delete**. A confirmation dialog opens.
3. Click **Delete** to delete the export.

Viewing an export log file

You can use Server Manager to view the export log associated with an export.

To view the export log file, complete the following steps:

1. Navigate to the **export** you want to view the export log file for.
2. In the **Actions** column, select the ellipsis in the same row as the export and click **View log**.

The log file opens in a text editor. From here, you can save the file to local or network drives.

User Connections

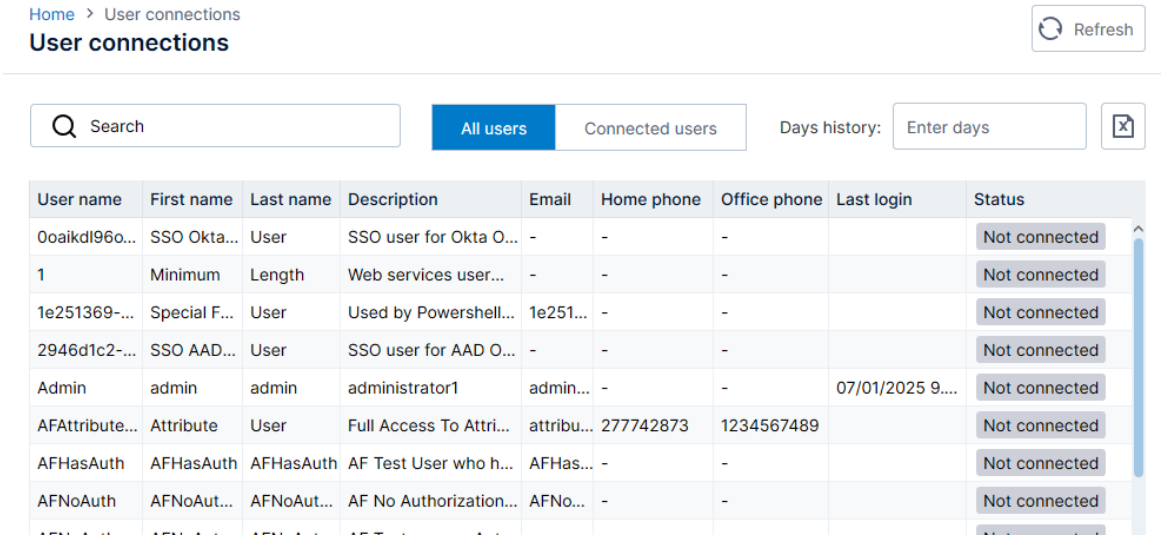
Reviewing user in Longview Server Manager

You can use Longview Server Manager to perform the following tasks related to user data analysis:

- View a list of all users
- View a list of currently connected users
- View a list of user connection history

To review user data in Longview Server Manager, complete the following steps:

1. In the Longview Server Manager home page, click **User connections** in the **Functionality** section. The User connections page comes into view, showing data of all users in the **All users** tab by default.



2. Click the **Refresh** button while on the All users tab to refresh user information.
3. You can click the desired column heading to sort the list of users by that heading. The Status column indicates the current connection status of each user.
4. To view the history of user connections for a certain number of days, type the desired number of days into the **Days history** field. The list of connected users for the desired number of days appears.

> **Note:** The Days history field is based on calendar days and always includes results from the current day. For example, typing 1 in the Days history field retrieves all users connected from one day before the current day up to the current time.

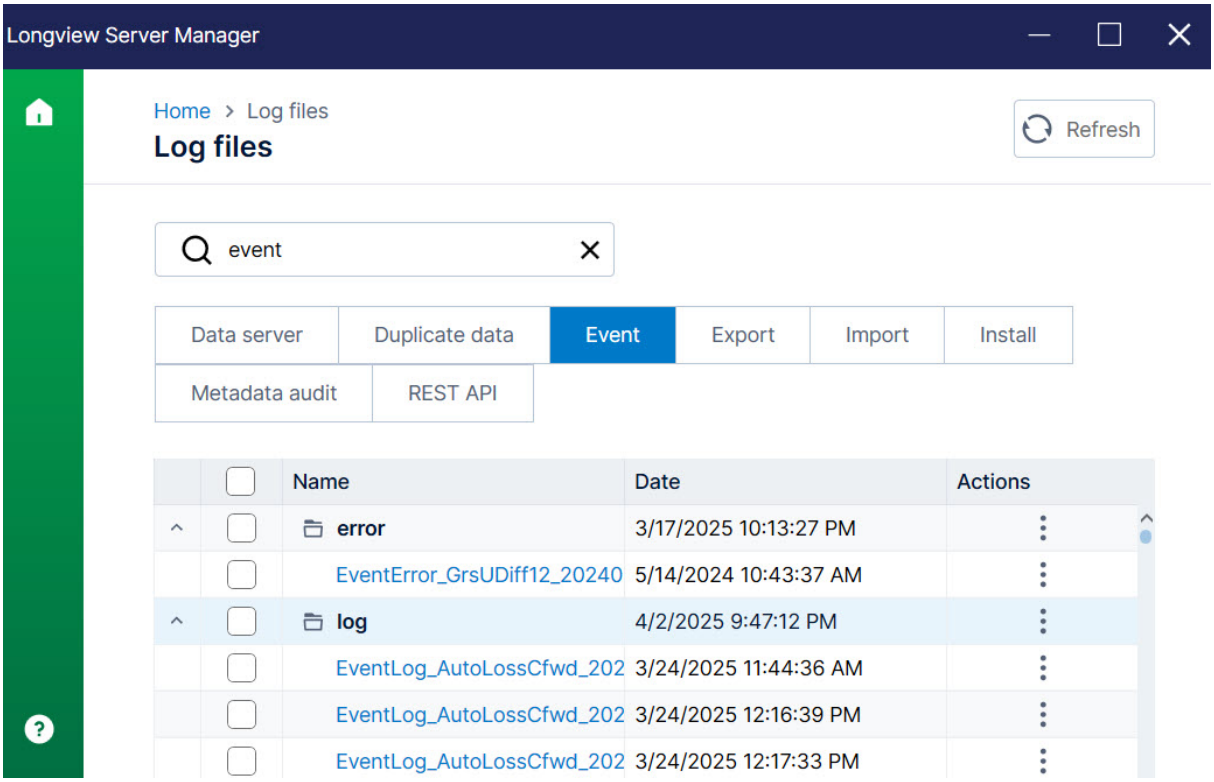
5. To retrieve all users again, clear the number from the Days history field.
6. To view the currently connected users, click the **Connected users** tab. The list of currently connected users appears. Click the **Refresh** button to refresh the list of connected users.

7. To generate a report from the User Connections, click the **export to Excel icon**. On the **Save As** dialog, select a file location and give the file a name. Click **Save** to save the report to an Excel file. The report includes user data according to the settings on the User Connections page.
8. When you are finished viewing user data, click the **Home** icon on the left navigation to go back to the Longview Server Manager home page.

Search in User connections

In each functionality page, you can use the Search field to easily find the items you need. The search functionality allows to filter a list based on the text you type in the Search box. The Search functionality is available for all the tabs in each page. If you switch between the tabs in a functionality page, and apply the Search filter, each tab will display only the matched items.

Additionally, the Search functionality allows you to search folders and files under the sub-folders. For example, if you want to search a log file with the name starting from "event", then in the Search box, start typing event. The Search box will display all the files under folders and sub folders with the name event. For more information, see the following image:



To clear the search, delete the text in the Search box or click the Close button × in the Search box.

Performing Server Tasks Using Longview Administrator Console

You can interact with the Longview Data Server in two ways:

- Longview Server Manager — A Graphical User Interface (GUI)-based component, which is available from Longview Component Manager.
- Longview Administrator Console — A line mode-based tool, which you can use to enter commands and parameters manually.

Users must have authorization for Longview Server Manager to work with Longview Administrator Console.

For information on creating and configuring users, see the Longview Application Administrator's Guide.

For information on configuring Longview Administrator Console for a Windows authenticated user, see Accessing the Longview Administrator Console.

System Administrators can perform the following tasks in Longview Administrator Console:

- Accessing the Longview Administrator Console
- Working with General Commands
- Working with Server Status
- Updating Server Configuration
- Analyzing System Data
- Checking for Duplicate Data
- Exporting and Importing Data in Database Tables
- Working with Restatements and Recalculations

Accessing the Longview Administrator Console

To simplify the process of accessing Longview Administrator Console, you should create a customized batch file for your system.

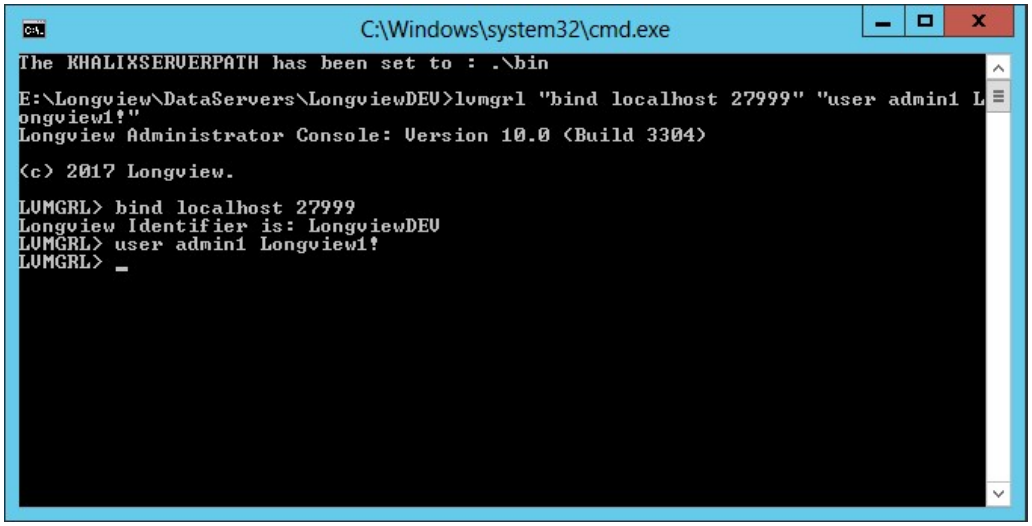
To create a batch file for Longview Administrator Console:

1. Open your preferred text editor.
2. Add the following lines to your file:

```
@ECHO OFF
SET KHALIXSERVERPATH=.\bin
```

```
SET PATH=%PATH%;%KHALIXSERVERPATH%
CLS
ECHO The KHALIXSERVERPATH has been set to: %KHALIXSERVERPATH%
@ECHO ON
lvmgrl "bind serverhost adminport" "user userID pwd"
```

3. Replace the following parameters:
    a. serverhost: The host name of address of the Data Server that Longview Administrator Console should connect to. For example, localhost or SQL0934.
    b. adminport: The Data Server Administrator port. For example, 27999.
    c. userID: The user ID. For example, jgordon. If you are using Windows Authentication, type "system".
    d. pwd: The user's password. If you are using Windows Authentication, delete this parameter.
4. Save the file as LongviewAdministratorConsole.bat.
5. Double-click the **file** you created to open Longview Administrator Console.



Working with general commands

You can use Longview Administrator Console to perform several tasks related to connections and help.

For commands related to server status, see the table below:

Command	Parameter	Description
bind	host port	To bind to the server host and port.

Command	Parameter	Description
user	userID password	User authorization to start and stop the server.
user	<clientID> <secret> SSO [scope]	Single sign-on authorization using OAuth2 with the Longview SSO Service, where scope is optional depending on your IDP application setup.
help	help ALL or help [Command Name]	To view online help for line mode commands. ALL – To view a list of all line mode commands. Command Name – To view help for the specified command.
exit		To exit.

Working with server status

You can use Longview Administrator Console to perform several tasks related to server status.

For commands related to server status, see the table below:

Command	Parameter	Description
getid		To view the Longview Identifier (LID) of the Longview server, as specified in the SERVER_NAME parameter in the lv_ dataserver.log file.
getport		To view the server listener port, as specified in the LISTENER_ PORT parameter in the lv_dataserver.log file.
getrecalcdir		To view the current restatement folder for the set of data servers being managed by this lvmgr, as specified in the RECALC_FILE parameter in the lv_dataserver.log file.
getworkdir		To view the current working folder for the set of data servers being managed by this lvmgr, as specified in the WORK_DIRECTORY parameter in the server configuration file (lvsrvr.cfg).

Command	Parameter	Description
reset	[restate]	To reset the restatement error code or to reset error codes. When you reset the restatement error code or the servers error codes, users may be able to continue to work even while those errors still exist (depending on the type of error). For example, if a command fails because there is not enough database space for its database to expand, the Longview data server sends an error message to every user who connects to the server. You may be able to use this command to clear the error message so that subsequent users do not see an error message while you are fixing the error. However, in some cases, you need to correct the error before users can continue. The optional parameter restate will reset the restatement error code, reset without a parameter will reset the server error codes. **Note:** When resetting the restatement error code, exclusive mode will remain on. The restatement error code is set when a restatement fails.
start		To start the servers.
status		To view the status of the servers. Once you know the status of the servers, you can turn them on or off as necessary. In addition, the status will indicate the state of the servers and whether they have encountered any errors.
stop	[immediate]	To stop the server, subject to warnings. Any submissions complete before the server stops. The optional parameter immediate stops the server at once, regardless of connected users or jobs being processed. If you use stop immediate, you should have a business administrator check the data submission batches to ensure all the data was submitted.

Note: For more information on the server configuration file, see the Longview Installation Guide.

updating server configuration

You can use the Longview Administration console to update the server configuration parameters stored in the database and retrieve their current values:

Parameter	Valid Values
DIAGNOSTIC_SERVICE_TRACKING	ON|OFF
DIAGNOSTIC_SERVICE_DETAIL	ON|OFF
DIAGNOSTIC_QUERY_STATISTICS	ON|OFF
DIAGNOSTIC_QUERY_LOGGING	ON|OFF
DIAGNOSTIC_RDBMS_LOGGING	ON|OFF
DIAGNOSTIC_EVENT_PROFILING	ON|OFF
ENABLE_WEB_TRACE	ON|OFF
USE_DATA_AUDIT_TRAIL	ON|OFF

For commands related to server configuration, see the table below:

Command	Parameter	Description
get-all-parameters		To retrieve all the server configuration parameters and their current values from the database.
get-parameter	<parameter>	To retrieve the value of a specific parameter in the database, such as the USE_DATA_AUDIT_TRAIL. For example, if you want to retrieve the value of the parameter USE_DATA_AUDIT_TRAIL, enter the following command: get-parameter use_data_audit_trail.

Command	Parameter	Description
set-parameter	<parameter> <value>	To set the value of a specific parameter in the database, such as USE_DATA_AUDITTRAIL. For example, if you want to turn USE_DATA_AUDIT_TRAIL ON, enter the following command: set-parameter use_data_audit_trail on.

Analyzing system data

You can use Longview Administrator Console to analyze various types of data and activity in your Longview system. The Longview data server tracking can help identify specific activities performed by users. For example, symbol maintenance and server model maintenance activities are listed in the Longview Data Server Log file.

For line mode commands related to system data, see the table below.

Command	Parameter	Description
archive	monitor | [filename]	To rename the Longview Data Server Log (lv_dataserver.log) with a date/time stamp extension while servers are running. A new lv_dataserver.log file will automatically be created. To use a name other than the default date/time stamp extension, provide the filename parameter. Archived log files are stored in the logs folder.
get	user all | connected | active n	To retrieve the following information about users: user all – user IDs of all users connected – all connected users active n – all users currently connected to the data server
get	node connected	To retrieve information on all grid nodes connected to the data server. For more information, see Polling the Grid Environment (Get Node Connected).
get	server id	To retrieve the server ID.
collect	statistics	To collect statistics.

Checking for duplicate data

Due to user error or other reasons, you may sometimes have duplicate data in your system. You can use Longview Administrator Console to check for duplicate data before you perform a data export or a restatement.

To check for duplicate data, type the following command in Longview Administrator Console:

```
CHECKDUPLICATE [FAMILY] [DATAOPTION]  [PARTITION_LIST]
```

where:

- FAMILY can be one of the following:

Value	Description
BASE	regular data
SCHEDULE	schedule data
ALL	both schedule and base data

> **Note:** If you omit FAMILY, all data is checked.

- DATAOPTION can be one of the following:

Value	Description
CALCULATED	leaf and calculated data
PARENT	leaf and parent data
ALL	leaf, calculated, and parent data

> **Note:** If you omit DATAOPTION, all types of data are checked.

- PARTITION_LIST is an optional parameter to specify the list of partitions you want to check. If you omit PARTITION_LIST, all partitions are checked.

  For example, to check for duplicate data in base calculated data in partitions P01 and P02, the syntax is:

  ```
  CHECKDUPLICATE BASE CALCULATED P01,P02
  ```

  To check for duplicate data in both data types and all partitions, the syntax is:

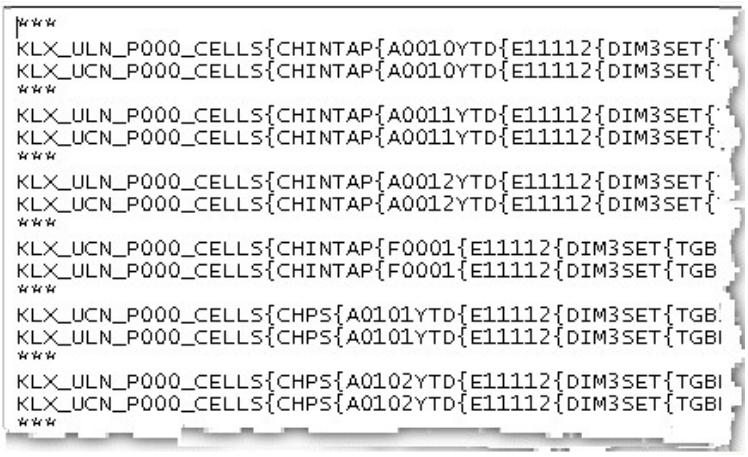
  ```
  CHECKDUPLICATE ALL
  ```

  ALL or simply:

  ```
  CHECKDUPLICATE
  ```

  When you run this command, a message identifying the number of duplicates appears on screen. The output of the duplicate values is saved to a file called duplicates.out in the server's

working directory. The output appears as follows:



Exporting and importing data in database tables

You can use Longview Administrator Console to export and import the data in database tables. (However, you cannot export or import the structure of the tables.) You can use these export and import utilities to perform several tasks.

Task	Description
clean up leaf data	You can use the export and import utilities to clean up: ■ data corresponding to deleted symbols ■ data corresponding to symbol indexes out of the valid range ■ non-static parent data in the leaf tables ■ data with a value of 0.0 ■ data with empty character strings
repartition leaf data	You can redistribute leaf data properly.
reorganize symbol indexes	You can collapse deleted symbol gaps, and then reorganize existing symbol lists, collapse out deleted symbols, and re-index all existing data to use the new index coordinates.
perform data transfers across platforms	The import and export utilities provide flexible data transfers by creating Longview-related binary files independent of the Longview data server platform.

For line mode commands related to importing and exporting, see the table below.

Command	Description
export [system [affectedonly | raw] | systemdata [affectedonly | raw] | affectedonly | raw] [TO Name]	To export your Longview data server data to a binary file.
import system | systemdata | data [FROM Name]	To import your Longview data server data from binary files to a table.

Exporting database tables

The Export utility extracts the appropriate Longview data server tables, creating multiple binary files that can be stored or subsequently imported. (It does not export any tables whose name starts with klx_ic or calculated and parent data.)

The Export utility does not alter any data on the actual tables. The server must be running before you can use the Export utility.

The Export utility performs the following tasks.

1. Based on the Master Symbol table (lv_master_symbol), it creates new temporary index mappings to eliminate deleted symbols and out of range symbols.

   Using the new mapping and specified options, it converts data from the existing tables to an output file. The name of the export file is exp_data.nnnn, where nnnn is 0001 to 9999. The file is saved in the folder specified by the RECALC_FILES parameter in the server configuration file (lvsrvr.cfg).

2. The size of each output file cannot exceed the size specified in the MAX_EXPORT_FILE_SIZE parameter in the server configuration file (lvsrvr.cfg). If the amount of data exceeds the specified size, the data is saved in multiple output files.

   Note: Note For more information on the server configuration file, see the Longview Installation Guide.

3. It eliminates data as follows:

a. If data in the output files is from data tables, it eliminates data with empty strings or a numeric value of 0.

b. If data in the output files is from leaf tables, it eliminates non-static parent data.

4. It creates an import control file for referencing the output files to the original tables. The name of the import control file is exp_cntl.lv. The import control file is created in the RECALC_FILES folder as specified in the server configuration file (lvsrvr.cfg).

5. It creates a log file which contains details of the specific tables and number of rows exported. The name of the log file is export.log. The export log file is created in the RECALC_FILES folder as specified in the server configuration file (lvsrvr.cfg).

To run the Export utility, use the following command:

```
export [system [affectedonly | raw] | systemdata [affectedonly | raw] | affectedonly | raw] [TO name]
```

where:

Field	Description
No parameter	Export all system, system data, and leaf data tables with the default export name exp. ■ Do not specify a parameter for ExportType to: ■ reorganize the Longview data server database structure and optimize performance ■ export system tables and leaf data for the purpose of leaf-level repartitioning ■ copy the database to another Longview instance ■ create an exact backup of your database. However, Longview recommends that for disaster recovery procedures, you use the RDBMS software.
system	To export main system tables in the Longview data server database, including metadata tables such as the dimension and symbol tables. Use this option to: ■ copy the symbols and hierarchy of a database to another database ■ reorganize the Longview data server database structure and optimize performance when no data exists
systemdata	To export as system, but with the addition of journal entry, batch, locking, symbol statistics, shared files, and models. Use this option to copy the symbols and hierarchy of a database to another database, along with the additional tables.
affectedonly	To export only tables that would be affected by symbol reindexing. Use this option to reduce the number of tables to export and import. However, it is not suitable if you are using the Export utility to create a backup.
raw	To export the database in its raw state without removing and resequencing deleted symbols. Use this option when you want to have an exact snapshot of a database.
name	Use this parameter to provide a name for the export. This parameter allows you to create multiple exports. The default name of the export if not provided is exp. If an export of the same name already exists it will overwrite the export with the same name. The export name cannot: ■ be more than 64 characters long. ■ cannot contain characters \ / * ? “ < > | % $ or spaces.

Command example:

```
export TO Full_Export_Backup
```

Importing database tables

The Import utility reads binary files created by the Export utility and restores the appropriate data server tables. If you want to change the number of partitions, prior to using the import data command, use the DBScript utility to add the additional data tables or delete data tables.

Caution: After you export data, you must import the system/system data as your first step, before you import data. Otherwise, your data may refer to invalid symbol references. If you choose to make subsequent imports with the same export file, you don't need to import the system again (until a new export is made).

To run the Import utility, type the following line mode command:

```
Import system | systemdata | data [FROM name]
```

where:

Value	Description
system	To import the main system tables into the Longview database. All non-data tables are truncated according to the information provided in the export control file. The data is then loaded into the appropriate system tables. You must stop the Longview server before you select this option.
systemdata	To import as system, but with the addition of journal entry, batch, locking, symbol statistics, shared files, models, and intercompany tables. You must stop the Longview server before you select this option.
data	Use this option to: ■ import data tables into the Longview database. ■ import leaf data into the Longview database for the purpose of repartitioning and switching parent symbols. All leaf data tables are truncated according to the information provided in the export control file. The data is then loaded into the appropriate leaf data tables. You must start the Longview server before you select this option.
name	Use this option to provide the name of the export file to import.

Caution: After you import data, stop, and start the servers and run an enterprise restatement. If you don't stop and start the servers first, data may not calculate correctly.

Command example:

```
import systemdata FROM Full_Export_Backup
```

```
import data FROM Full_Export_Backup
```

Using importing and exporting to change partitioning

One of the main uses for the import and export utilities is to allow for easier repartitioning of an existing data server database.

To repartition a data server database, complete the following steps:

1. Export the data server database.
2. Shut down the server.
3. Using the system or the systemdata option, import the output files created in step 1.
4. Change partition strategy by changing information in the Partitions table (lv_partitions) and the sym_partition column in the Master Symbol table (lv_master_symbol).
5. Start the server.
6. Import the contents of the output files using the data option.
7. After the import data leaf has completed successfully, stop, and start the servers, and perform an enterprise restatement. For more information, see Working with Restatements and Recalculations.

Working with restatements and recalculations

An enterprise restatement is a mode of calculation in which a rollup of the entire data server database is performed to make all values current. An enterprise restatement is required to calculate the effect of major changes throughout the database.

A partition recalculation is a mode of calculation in which a recalculation of one partition is performed to make all values current. A partition recalculation is required to calculate the effect of changes confined to a single partition.

You can use Longview Administrator Console to create, edit, run, and delete enterprise restatements and partition recalculations.

For line mode commands related to restatements and recalculations, see the table below.

Command	Parameter	Description
begin	restate | recalc	To begin a restatement or recalculation.
end	restate | recalc	To end a restatement or recalculation. This command must be used if the begin command was used.
recalc	[loadonly] unadjusted | adjusting | partition(s)	To perform a partition recalculation. All is not a valid parameter for partitions. To recalculate all partitions, use the restate command.
recalc	eliminations all | Partition [,Partition[,...]] [[ignore unchanged]]	To perform a recalculation for eliminations. To perform a partition recalculation for eliminations, specify the Partition option.
recalc	journals	To perform a recalculation for journal entries.

Command	Parameter	Description
recalc	audit recover	This command is used to recover data from audit tables, and it can only be performed when there is no one connected to the Longview system. This feature also behaves directly according to the value in USE_DATA_AUDIT_TRAIL. **Note:** For more information on USE_DATA_AUDIT_TRAIL, see the Longview Installation Guide.
recalc	audit reset	The command is used to reset the information in audit tables, and it behaves differently according to the value in USE_DATA_AUDIT_TRAIL. **Note:** For more information on USE_DATA_AUDIT_TRAIL, see the Longview Installation Guide.
recalc	audit reset [Dimension|Symbol1,Symbol2…]	This command without optional parameters is used to clear all information in the audit tables. When USE_DATA_AUDIT_TRAIL is ON, it also initializes data for the data audit trail. **Example**: recalc audit reset The optional parameters allow the removal of obsolete data audit trail from the database for all intersections of data containing the specified symbol(s). This includes both schedule and leaf data. If a parent symbol is specified, it will clear data for all leaf symbols under the parent. **Example**: recalc audit reset timeper A101020, YR2022 **Note:** The optional parameters can only be used when the data servers are running.

Command	Parameter	Description
recalc	dataarea monitoring reset	This command is used to clear the data and event area monitoring. When the data and event monitoring becomes too large, users could experience performance issues while opening reports when data area monitoring is enabled. This command will delete the event log files and clear the following tables: ■ LV_EVENT ■ LV_EVENT_FROM_BATCH ■ LV_EVENT_AREA_DETAIL ■ LV_EVENT_ACTION ■ KLX_BATCH_FROM_EVENT ■ KLX_BATCH_AREA_DETAIL In addition to clearing the above tables, an entry will be made in the metadata audit.
restate	[loadonly] unadjusted | adjusting	To perform an enterprise restatement.

Partition recalculation does not guarantee data integrity under the following scenarios:

- If the specified partition or partitions do not cover all input leaf data needed to generate data for the specified partition or partitions.
- If there is output data generated not within the specified partition or partitions. A warning message appears in the Data Server Log file:

The output data generated to the following partitions were filtered out during partition recalc on specified_partition_name: list_of_partitions.

Note: When a restatement or recalculation fails, the system will remain in exclusive mode and the restate error code will be set. In addition, a restate_recalc_errors log file is created containing the errors that occurred during the restatement or recalculation. To clear the exclusive mode a successful restatement or recalculation needs to be ran or stopping and re-starting of the servers.

Creating a manual grid environment for restatements

Longview applications on Windows platforms can run the math portion of restatements across a grid environment, consisting of a grid server and several grid node machines. This feature introduces an enhanced degree of scalability to restatement functionality, allowing several computers to participate in the calculation process, greatly increasing performance.

To create a manual grid environment, follow these steps:

1. Set the following server configuration file (lvsrvr.cfg) parameters in the Data Server:
   - USE_GRID_PROCESSING must be set to TRUE.Optionally, you can set the name of the grid server using the GRID_SERVICE_NAME parameter (by default, the grid server name is ks_math).
   - GRID_PROCESSING_TYPE must be set to LVGRID.
   - GRID_LISTENER_PORT must be configured with a port number. The GRID_LISTENER_PORT set in each of the grid node machines must match this value.
   - GRID_CURSORS_MAX must be set to an integer between 1 and 12 (the default value is 4)

   Note: If you change any of the LVGRID parameters in the lvsrvr.cfg file, you must stop and restart the servers and the Longview_LID service.
2. Install the grid node software on the machines to participate in the grid. For more information on installing grid software and working with the server configuration file (lvsrvr.cfg) file, see the Longview Installation Guide.
3. Use the line mode command GET NODE CONNECTED to get all connected grid node machines involved in the restatement.
   For more information, see Polling the Grid Environment (Get Node Connected).

When a restatement runs in a grid environment, a lv_dataserver.log is created on each grid node machine. As jobs are sent to the grid node machines, messages in the master lv_dataserver.log file (on the grid server) are sent to indicate that a calculation job was sent and when the job was completed. Once all of the math jobs have completed, the writers merge all records together and load as usual. If an error occurs on any of the grid node machines, the restatement process is terminated and must be run again.

Note: The grid restatement functionality supports Oracle and SQL on the Windows operating system.

For more information on this feature, contact Longview Support Services.

Polling the grid environment (Get Node Connected)

It is possible to get an overall view of what is going on in the grid environment and how it is composed by issuing the Get Node Connected command. This command will return a table with the following information for each grid node machine:

Field	Description
Node ID	The ID number of a computer participating in the grid environment.
Node Host	The network address of the grid node machine.
Num Math	The number of math servers running on the grid node machine.
Num Jobs	The number of jobs that the grid node machine has queued up on it, running or pending.

Improving performance with asynchronous IO

It is possible to significantly improve the performance of the writers by making use of asynchronous IO during read operations. The asynchronous IO process makes use of RAM to create buffers that enable the writers to continue with merge-sort operations during input-output processes, rather than having to wait for them to complete.

Requirements to use this feature:

- You must have a grid environment set up for your restatements and recalculations.
  To implement asynchronous IO for your environment, set the following parameters in the server configuration (lvsrvr.cfg) file:
  - In the GENERAL SYSTEM PARAMETERS section, set the value of the parameter WRITER_ASYNC_IO to TRUE.
  - In the MEMORY CONFIGURATION section, set the value of the parameter WRITER_SERVER_RAM to a positive integer. This is the amount of memory, in kilobytes, that will be allotted to the process (only when asynchronous IO is in use).

Note: If you change any of the parameters in the lvsrvr.cfg file, you must stop and restart the servers and the Longview_LID service.

For more information on the server configuration file (lvsrvr.cfg) parameters, see the Longview Installation Guide.