Logic+ Introduction

LWARE Logic+ is used to view and analyse project schedule files.

Quick Start Guide

1. **Installation:** Get a license key and install Logic+
2. **Schedule Files:** Have a copy of two schedule files for the same project
3. **Project Wizard:** Use the Project Wizard to create a project and load schedule files
4. **User Documentation:** Available on the lware website.

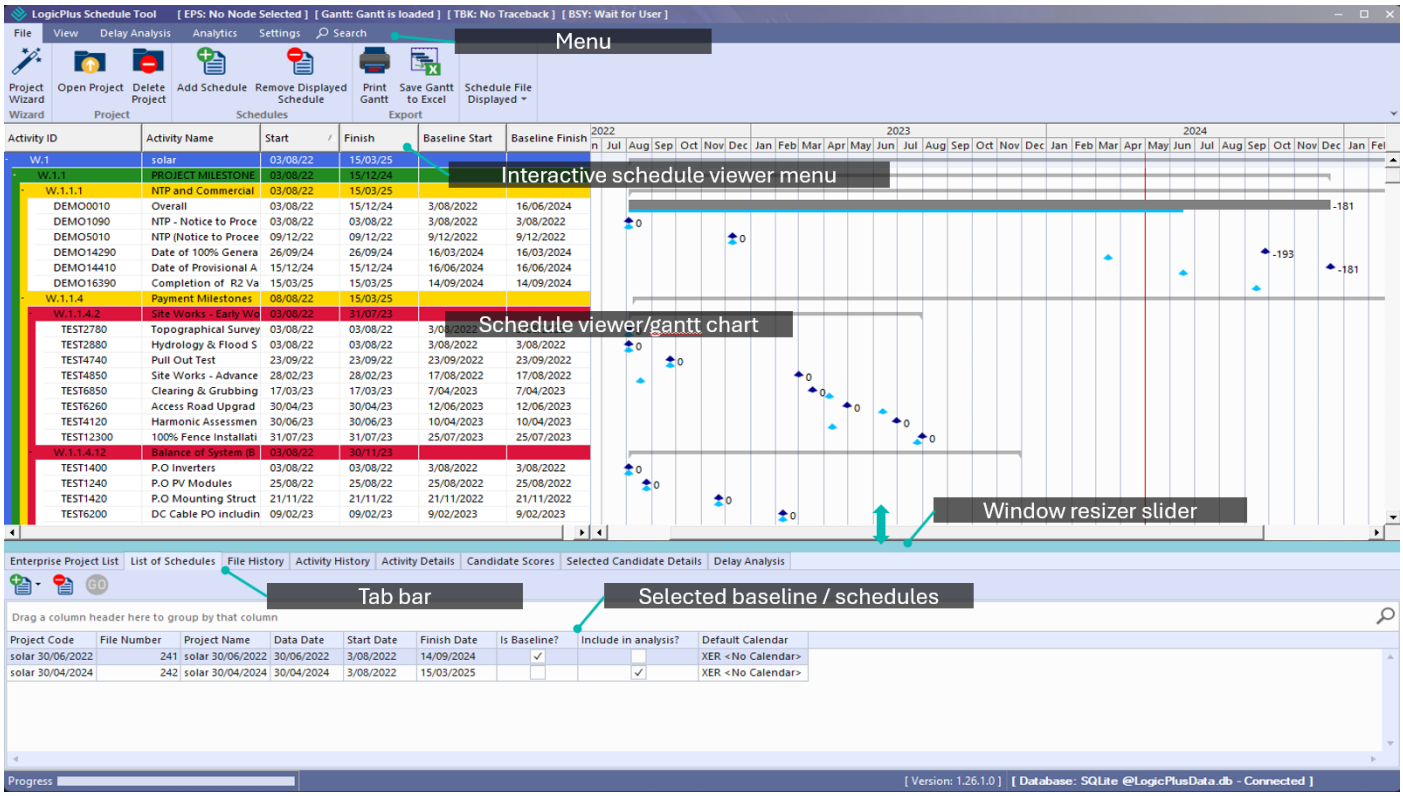
Logic+ Modules

There are four main modules to be familiar with:

Schedule Manager	Create and maintain Enterprise Project Structure, projects and schedule files. Load files from Oracle Primavera P6, Asta Powerproject, and Microsoft Project
Schedule Viewer	Visualise and compare schedule data
Analytics	Report schedule trends, performance, and forecast accuracy
Delay Analysis	Identify and visualise delay sources and critical path impact

Navigation terminology

The below outlines the terminology used throughout the Logic+ user documentation and guides:



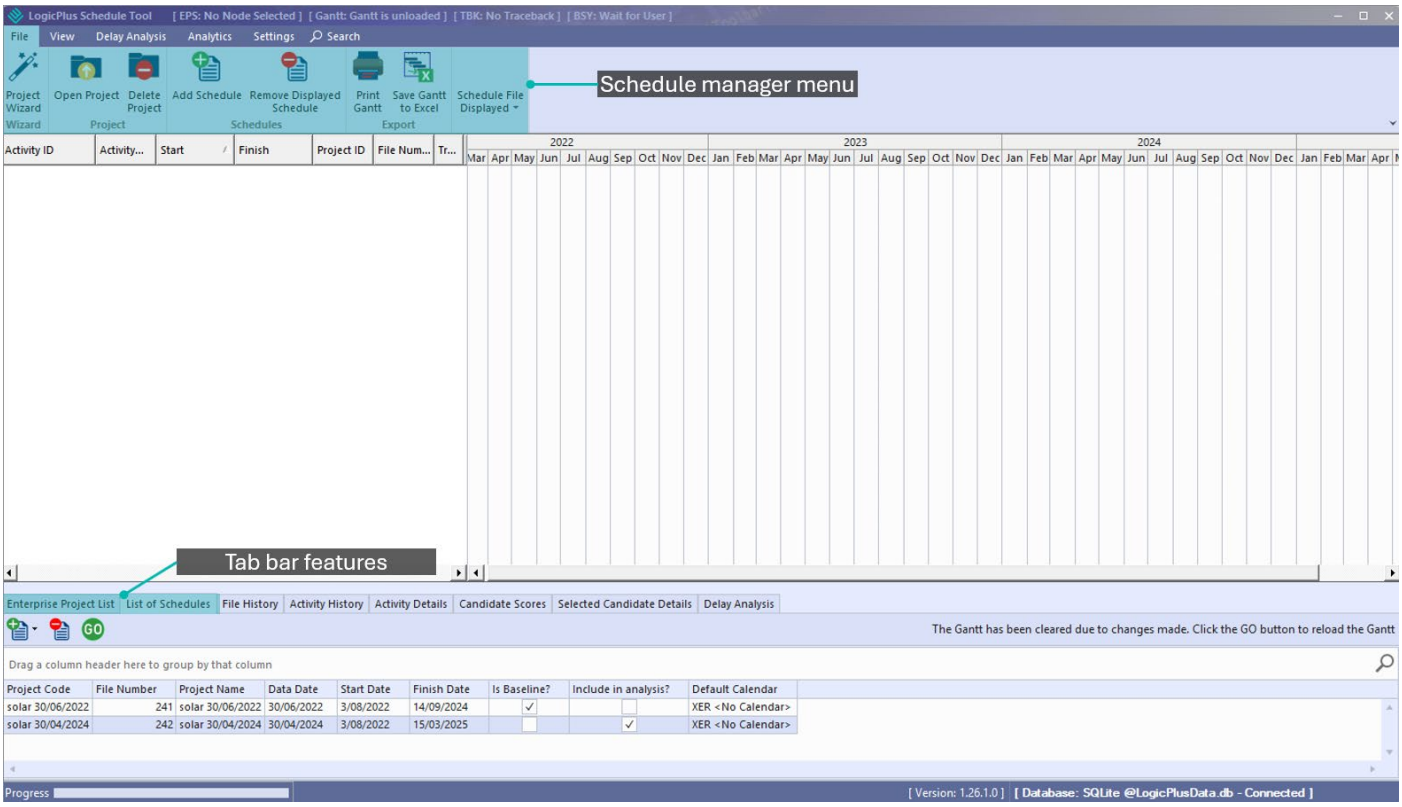
Module 1: Schedule Manager

Purpose

The Schedule Manager is used to define enterprise project lists and streamline the upload and management of associated schedule files. It also serves as the starting point for opening projects and selecting the baseline and other files to be loaded for analysis.

Documentation

Schedule Manager Feature Overview



Key Features & Navigation

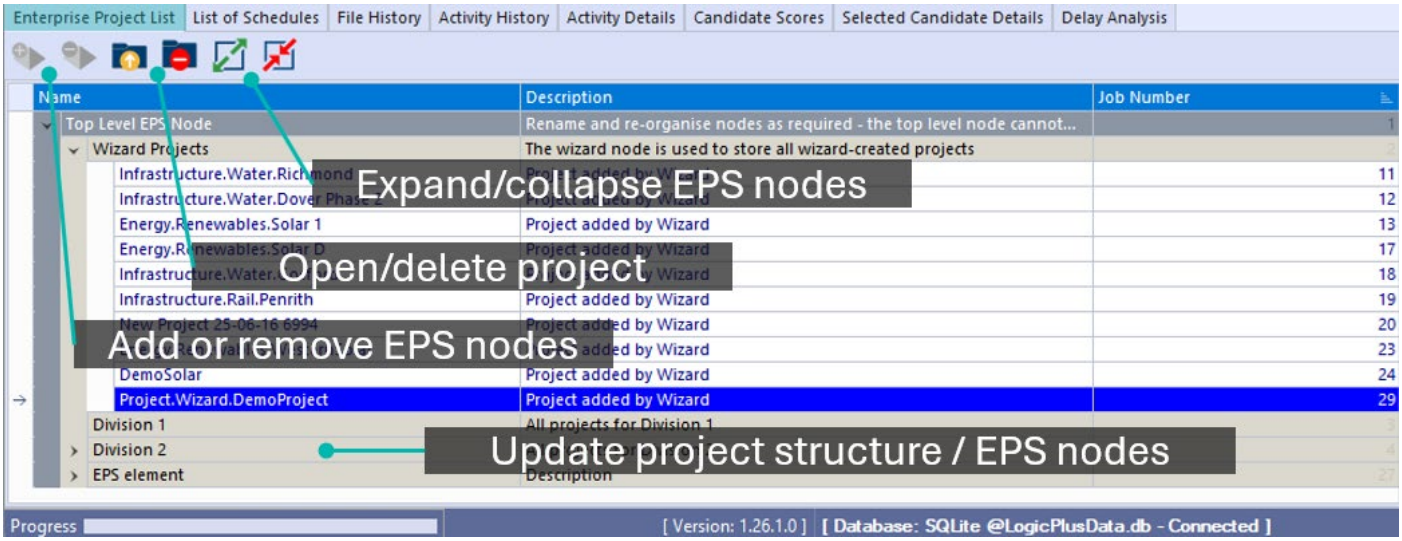
Feature	Navigation	Description
Create Project	File > Project Wizard **or** Enterprise Project List (right click in EPS Node)	A project is a repository of schedule files in Logic+. The Project Wizard is an easy guided way to create a project, upload schedules, and nominate a baseline (*see steps below on how to use Project Wizard)*.
Open/Delete Project	File menu **or** Enterprise Project List (tab bar)	Access or remove existing projects
Add/Remove Schedule	File menu **or** List of Schedules (tab bar)	Manage schedule files within a project
Select files for analysis	List of Schedules (tab bar)	Nominate baseline and analysis files

Feature	Navigation	Description
Load files for analysis	List of Schedules (tab bar)	GO button loads the selected files in Schedule Viewer, Analytics and Delay Analysis
Print/Export Gantt	File menu	Print or save the Schedule View to Excel
Schedule File Displayed	File menu	Change the schedule file displayed in the Schedule Viewer/Gantt view

---

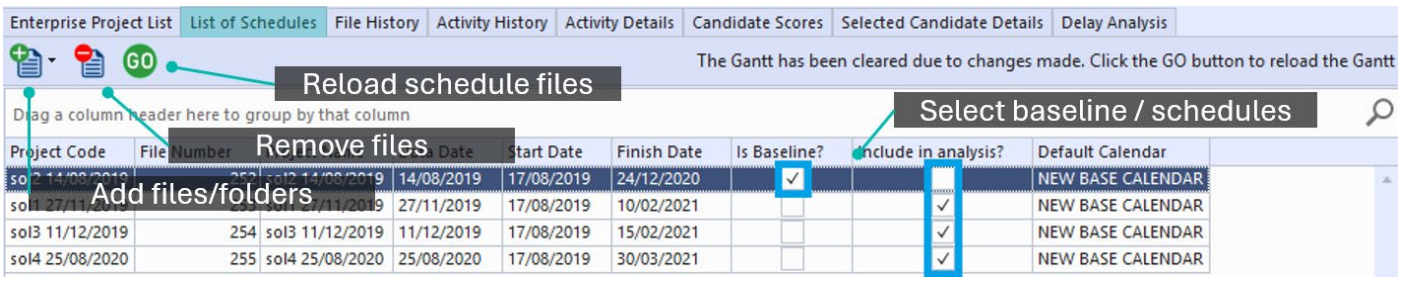
Enterprise Project List (bottom tab bar)

- Structure projects using an EPS-style hierarchy (e.g., Infrastructure.Water.Richmond)
- Add/remove EPS nodes and manage projects within each node
- Open projects for viewing and analysis



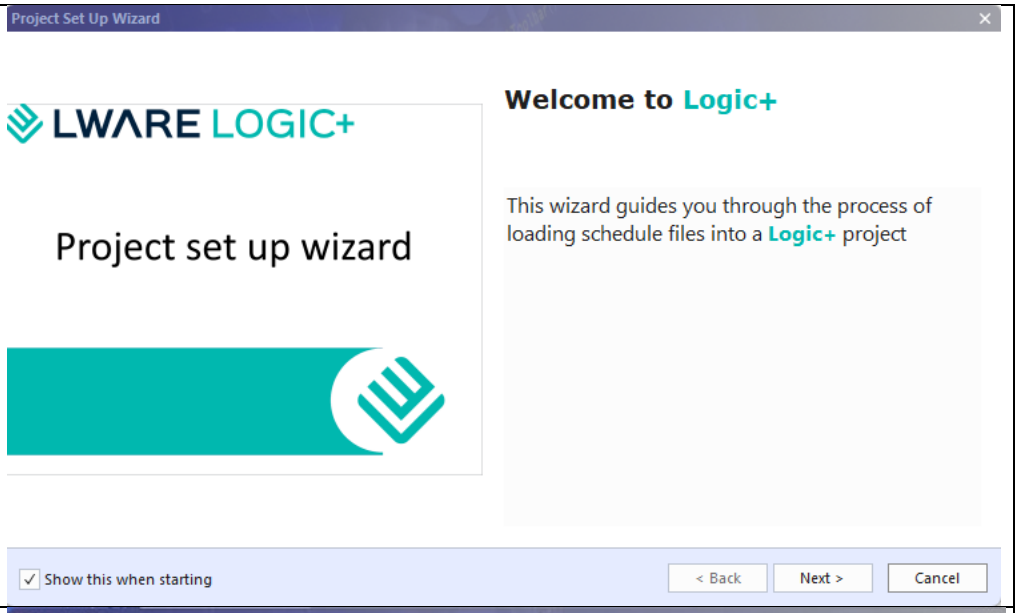
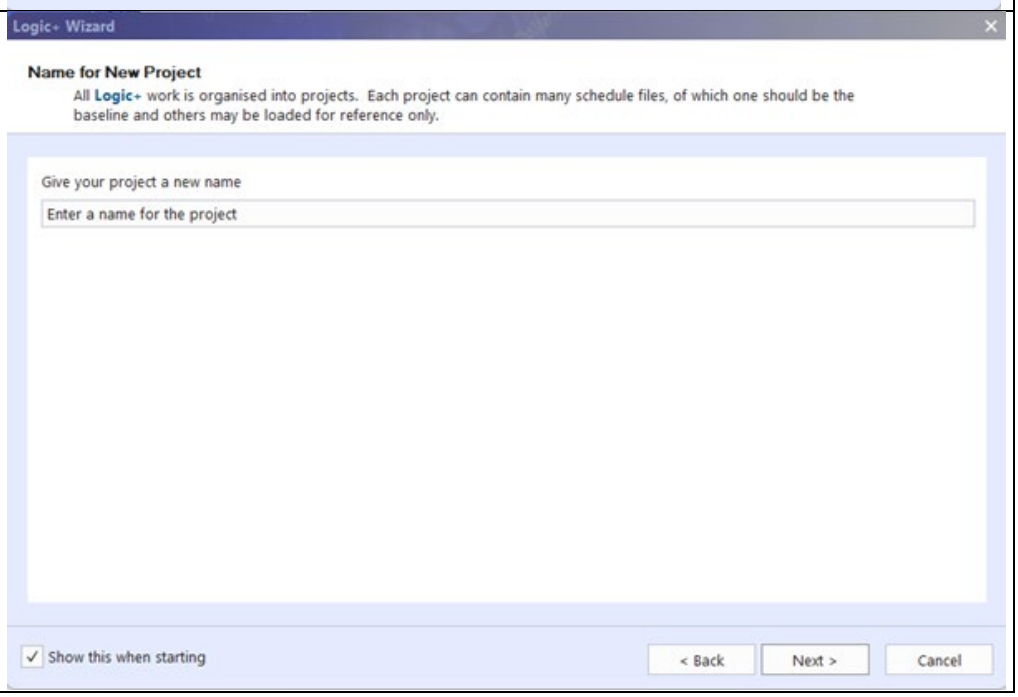
List of Schedules (bottom tab bar)

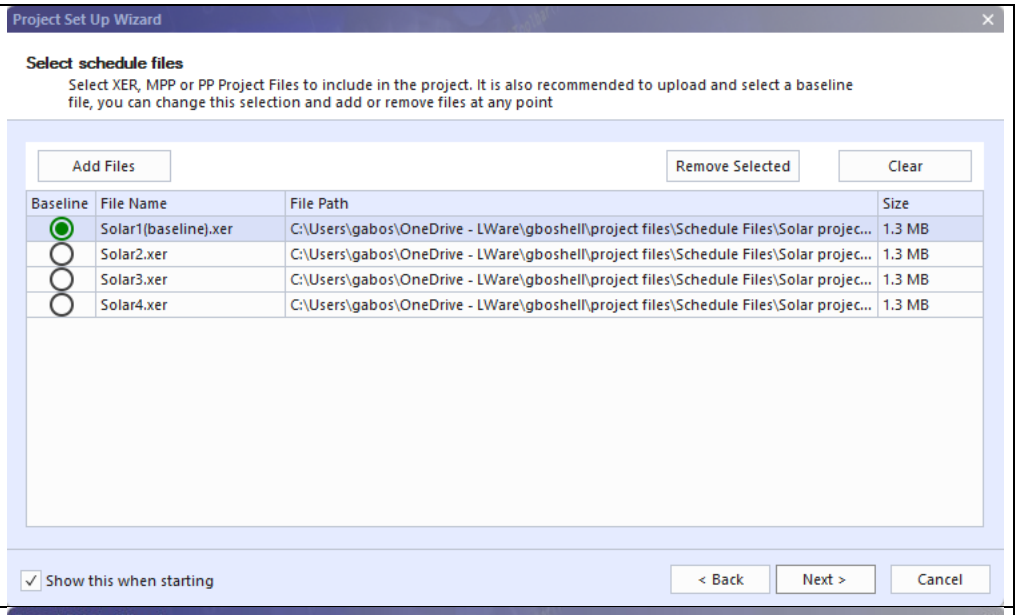
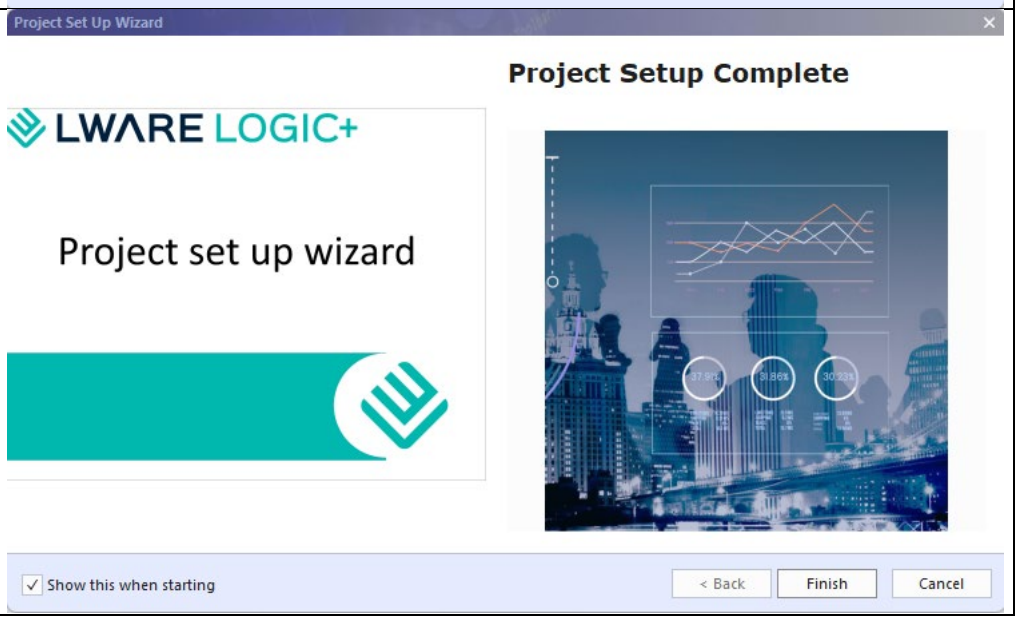
- Add/remove schedule files or folders (supports XER, MPP, and mixed formats)
- Nominate baseline and analysis files
- Click **GO** to load selected files for use in Schedule Viewer, Analytics and Delay Analysis



Project Wizard

The Project Wizard offers a quick, guided process for creating projects by stepping through the upload of project schedules and selection of a baseline file.

👉Select **Project Wizard** from the File menu 👉Click **Next**	
👉Enter **Project Name** 👉Click **Next**	

👉 Select **Add Files** to select schedule files and folders 👉Select Baseline to nominate the Baseline file. 👉Select Next	
👉Select **Finish** 👉Start viewing and analysing your schedule files.	

Module 2: Schedule Viewer

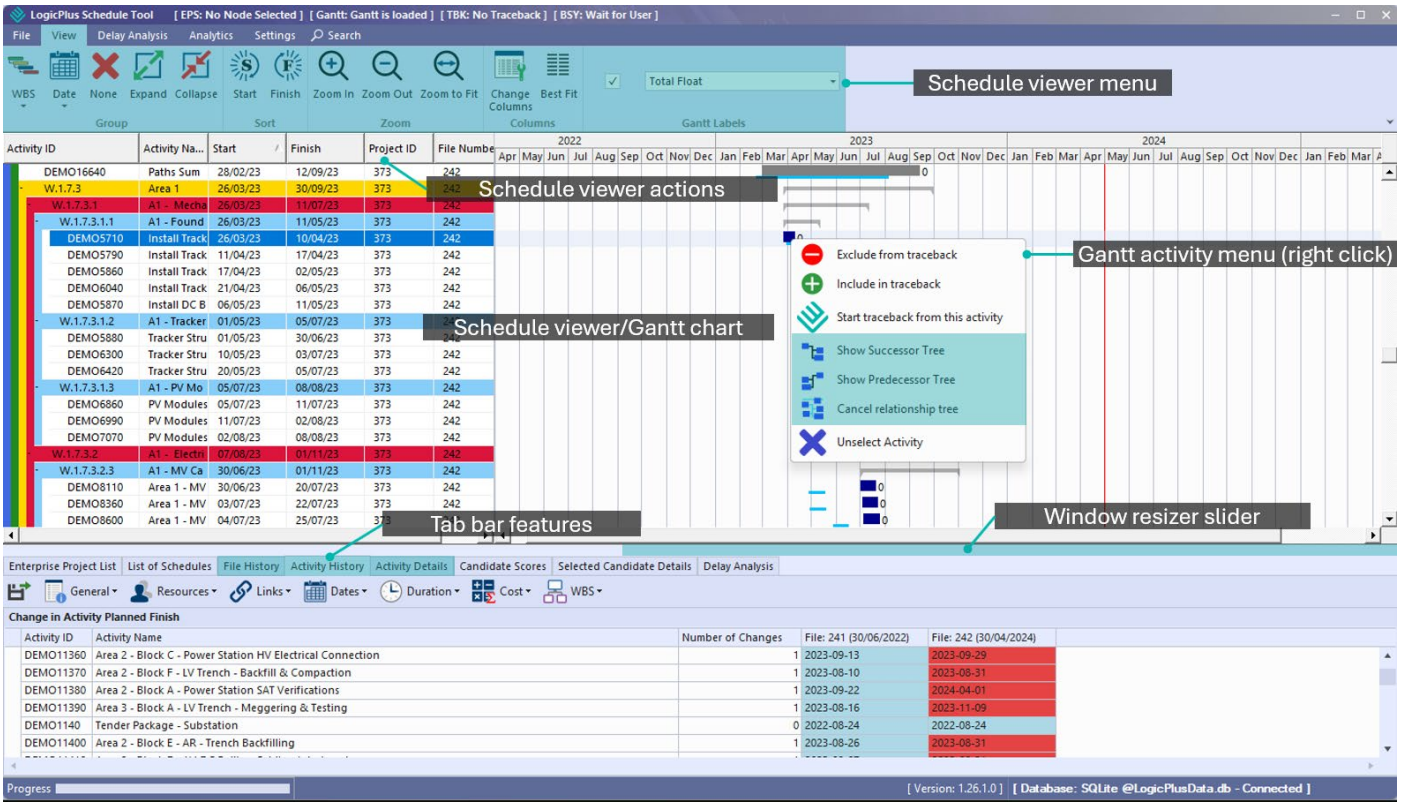
Purpose

Use the Schedule Viewer to display, compare, and analyse schedule files across formats (XER, MPP, mixed).

Activities are shown in both tabular and Gantt views, with tools to group, sort, zoom, and track changes across versions.

Documentation

Scheduler Viewer Feature Overview



Schedule Viewer/Gantt View Legend	In normal schedule viewer mode (traceback has not been run), the following legend applies to activities in Gantt view: • Blue bars: Activities from the selected schedule • Green bars: Added activities post-baseline • Light blue line: Baseline schedule reference • Dark grey bars: Excluded activities 💡 To change the displayed schedule file: File menu > Schedule File Displayed

---

Key Features & Navigation

Feature	Navigation	Description
Schedule View / Gantt View	Centre of application	Visualize activities by WBS, ID, name, and start/finish dates by month/year
Schedule Viewer Actions	View menu **or** Schedule view actions bar	Customize display: group, sort, zoom, filter, and label activities This includes the window resizer between the schedule viewer and the bottom tab bar. Click and slide up or down.
File History	File History (tab bar)	Track attribute changes across all loaded schedules
Activity History	Activity History (tab bar)	View how specific activity attributes evolve over time
Activity Details	Activity Details (tab bar)	Inspect dates, predecessors, and resourcing for selected activities
Show/Cancel Successor or Predecessor Tree	Right-click Gantt activity	Visualize task dependencies

---

Schedule Viewer Actions

➡️ Navigation: View menu **or**
Schedule view actions bar

Action	Description
WBS Grouping	Select levels 1–9; lower levels nested within selected level
Date Grouping	Adjust granularity of activity grouping
None	Remove WBS grouping
Sort Order	Order activities by planned start or finish dates
Column Chooser	Add or remove fields displayed in the schedule viewer. 💡 You can also click on the field header and drag out of view to remove.
Zoom	Zoom from yearly quarters to daily views
Best fit	Resize columns on the schedule viewer
Gantt Labels	Choose label display: Activity ID or Description

---

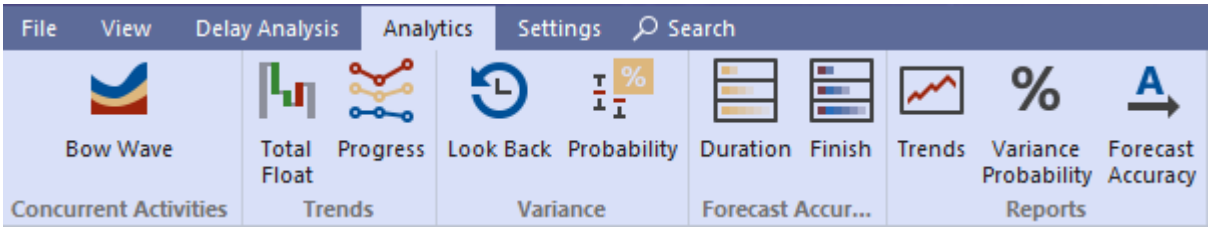
Module 3: Analytics

Purpose
Access a suite of reports to analyse schedule performance, forecast accuracy, and project trends across multiple schedule files.

- 💡 Before running reports, confirm selected schedules in the List of List of Schedules tab.
- 💡 Additional analytics related to delay are available in the Delay Analysis module.
- 💡 When an analytics report is run, all schedule files that are currently open will be included in the analytics.

Documentation

Analytics Menu



Analytics Summary

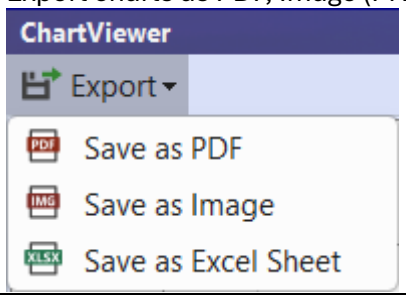
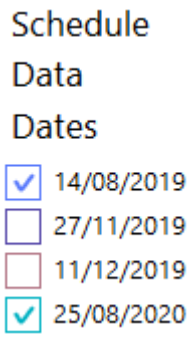
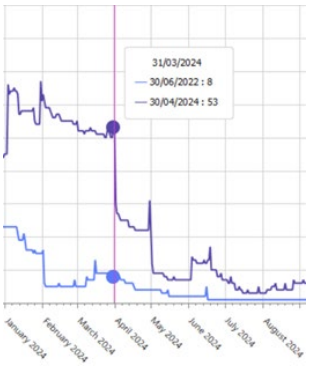
➡️ Navigation: Analytics menu

Report	Description
Concurrent Task Bow Wave	Visualizes monthly activity completions across schedules; highlights peak periods and resource pressure • Shows total activities planned per month across schedules • Highlights peak workload periods and evolving concurrency • Reveals resource strain and delay risks • Toggle visibility of schedule files using checkboxes
Delay Trends	Tracks project delay over time; compares baseline vs actual finish dates and forecasts cumulative impact • Displays finish variance (actual vs baseline) per schedule • Forecasts cumulative delay impact • Horizontal lines show baseline and latest finish dates
Float Trends	Reports average float per activity over time; forecasts float erosion and risk of negative float • Tracks average float per activity across schedules • Forecasts float erosion toward project finish • Zero-crossing indicates risk of missing target finish
Duration Forecast Accuracy	Compares planned vs actual durations, groups by duration range and variance • Groups activities by planned duration (0–9, 10–19, etc.) • Shows variance between planned and actual durations

	• Uses logarithmic scale to visualize distribution
Finish Forecast Accuracy	Evaluates accuracy of planned finish dates; shows probability of delay by forecast window • Groups activities by forecast window (0–30, 31–60, etc.) • Displays variance between planned and actual finish dates • Shows percentage of activities delayed within each window
Trend Report	Combines key trend reports into a single overview (Float, Progress, Bow Wave, Delay)
Forecast Accuracy Report	Combines Duration and Finish Forecast Accuracy into a single view

---

Analytics Features

Feature	Description
Chart Export Options	Export charts as PDF, Image (PNG/JPG), or Excel (data only) 
Schedule File Options	Use checkboxes to hide/unhide schedule files in chart viewer 
Chart Tooltips	Hover over chart elements to view detailed data 

Module 4: Delay Analysis

Purpose

Logic+ Delay Analysis automates the identification of the critical path in completed or as-built schedules. It helps planners and analysts attribute delays, visualize schedule impacts, and uncover the root causes of variation.

Logic+ uses the Traceback function to determine the critical path.

💡 To start using any of the Delay Analysis features, you first need to run a Traceback (Delay Analysis > **Start Traceback**).

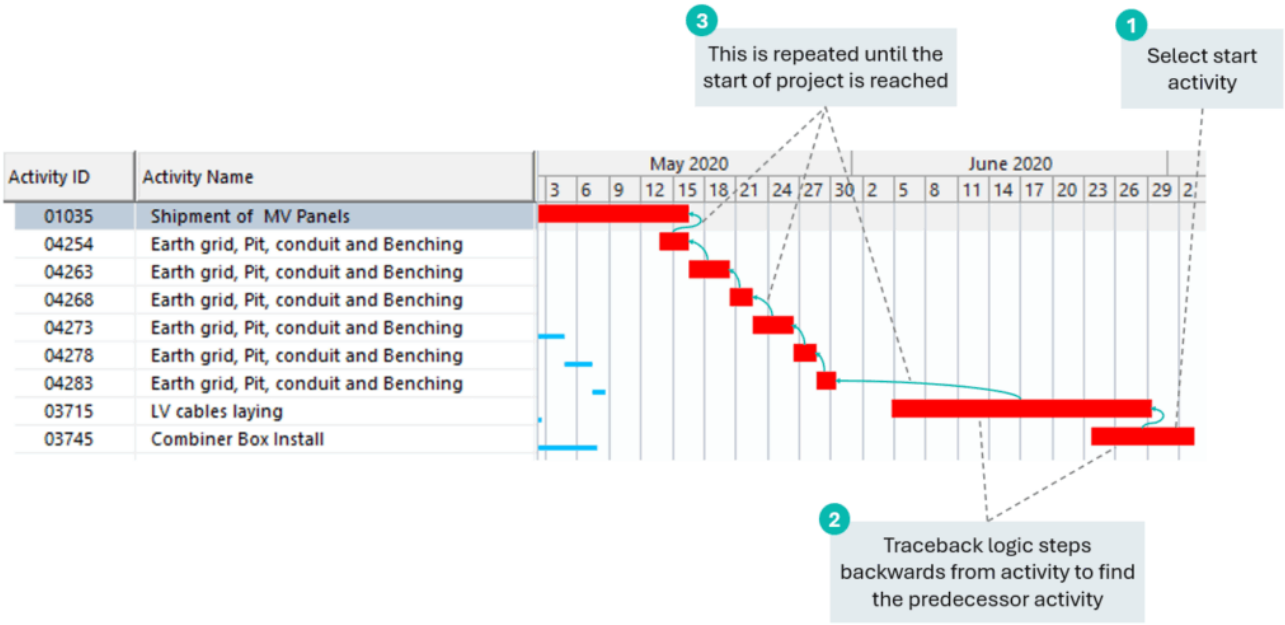
📚 Documentation

How Traceback Works

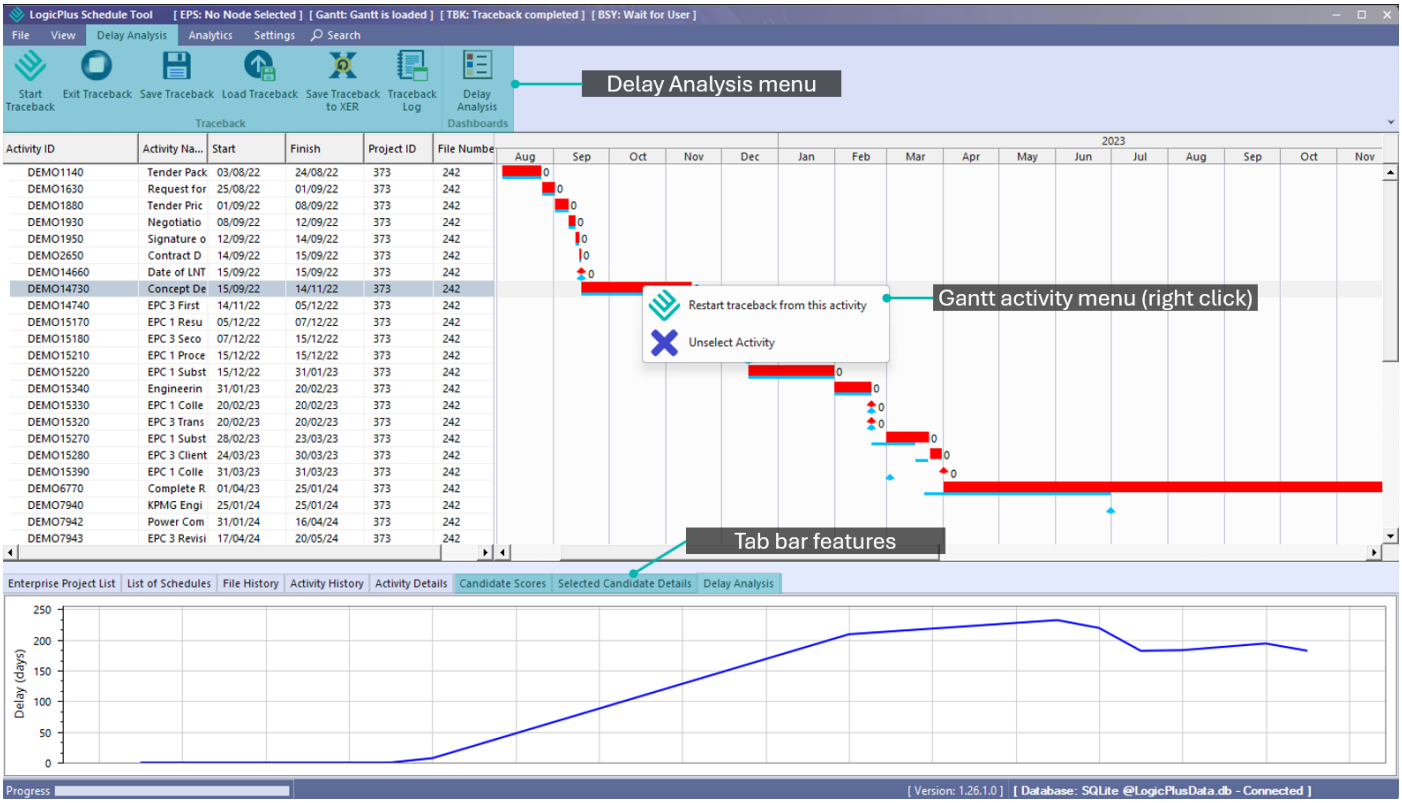
Traceback is the logic engine behind Logic+ Delay Analysis. It determines the critical path by evaluating both explicit and implied relationships between activities.

- Each activity is scored using 15 key attributes
- The analysis starts from the latest activity and works backward
- The highest-scoring predecessor is selected at each step to build the path

This approach reveals not just what changed—but why—making it easier to validate impacts and support delay claims.

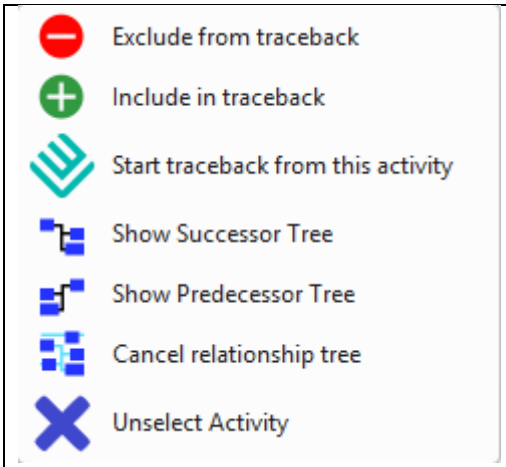


Delay Analysis Feature Overview

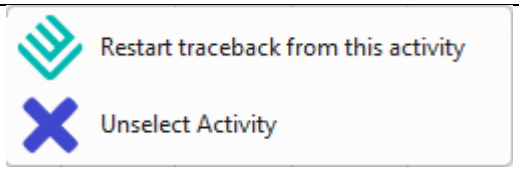


Gantt Activity Menu

➡️ Navigation: Right click activity in Gantt view



💡 You need to Exit Traceback to see this menu



💡 You need to be in a Traceback to see this menu

Key Features & Navigation

Feature	Navigation	Description
Start/Exit Traceback	Delay Analysis menu **or** Right-click Gantt activity	Begin or exit a traceback session to generate the critical path (*see steps below on how to Start Traceback)*
Save/Load Traceback	Delay Analysis menu	Save or reopen a previous traceback session
Export to XER	Delay Analysis menu	Export critical path to Primavera P6 format for further analysis
Traceback Log	Delay Analysis menu	View/export detailed audit trail of traceback logic and scoring.
Start Traceback from this activity	Right-click Gantt activity	Begin analysis from a specific task
Exclude/Include in Traceback	Right-click Gantt activity	Toggle activity inclusion (excluded = dark grey)
Show/Cancel Successor or Predecessor Tree	Right-click Gantt activity	Visualize task dependencies
Unselect Activity	Right-click Gantt activity	Clear current selection to analyse a different activity 💡 Use "Unselect Activity" when working with large files to reset the active selection.
Candidate Scores	Candidate Scores (tab bar)	View scoring logic for selected and alternate critical path candidates
Selected Candidate Details	Selected Candidate Details (tab bar)	Inspect attribute-level details of selected candidate predecessor
Delay Analysis Chart	Delay Analysis (tab bar)	Interactive timeline vs cumulative delay impact
Delay Analysis Dashboard	Delay Analysis > Delay Analysis	Visual dashboard showing delay attributes and schedule impact
Traceback Settings	Settings menu > Settings > Traceback	Configure scoring weights, exclusion criteria, and export preferences

---

Start Traceback

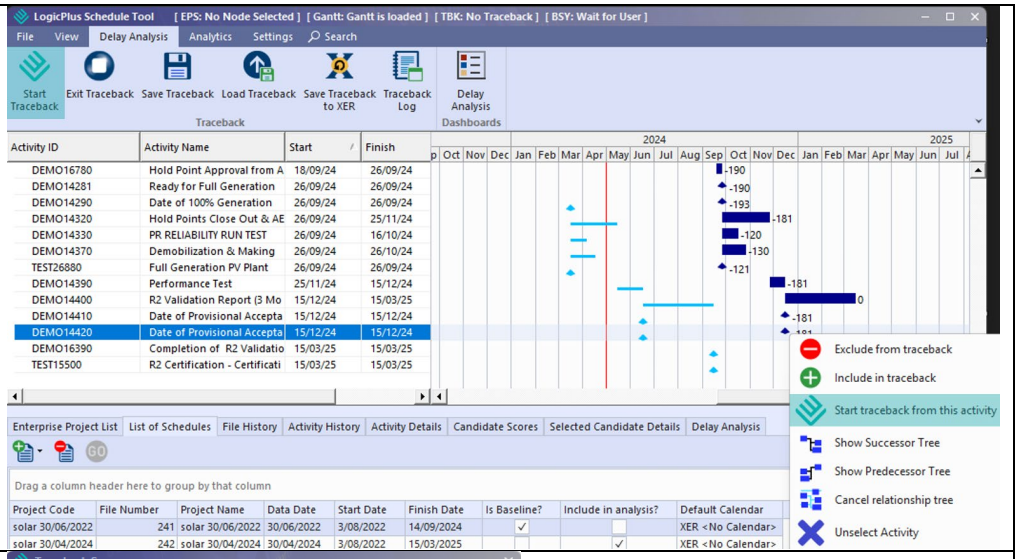
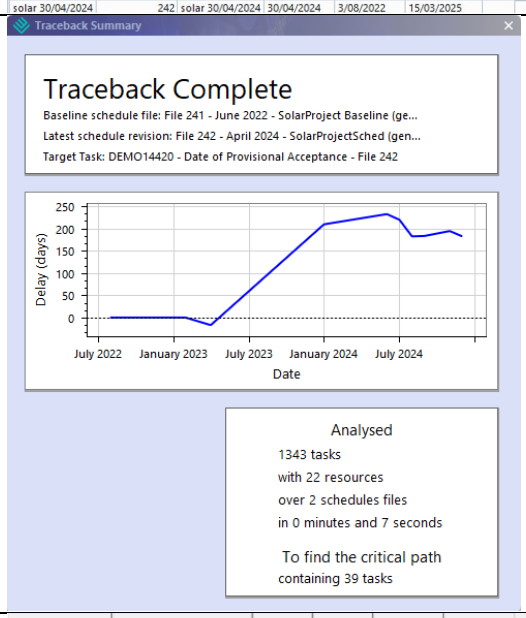
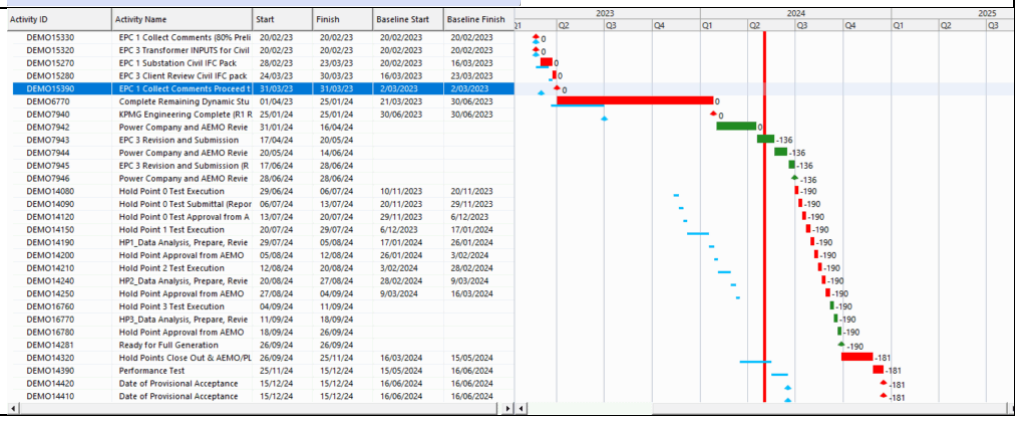
You run a traceback to generate the critical path for the baseline and schedule files selected.

💡 A traceback works in reverse chronological order. Therefore, to start a traceback, select the activity with the ***latest*** date.

Before you start:

💡 Check the selected schedules before you start on the List of Schedules tab.

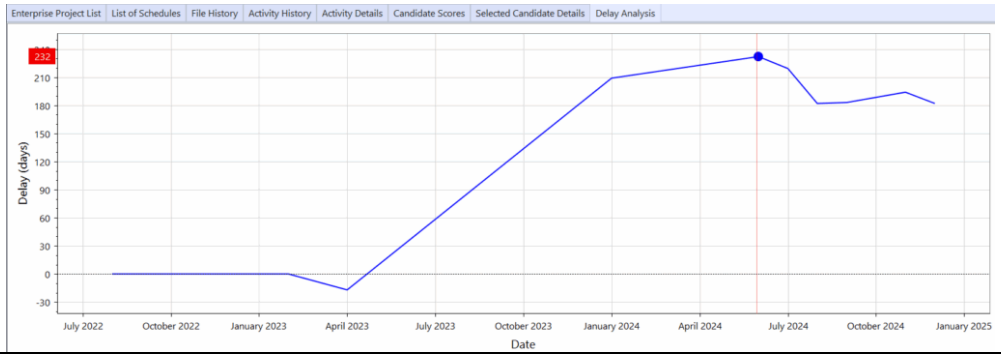
💡 Remove WBS grouping and sort by finish date to quickly locate the final activity.

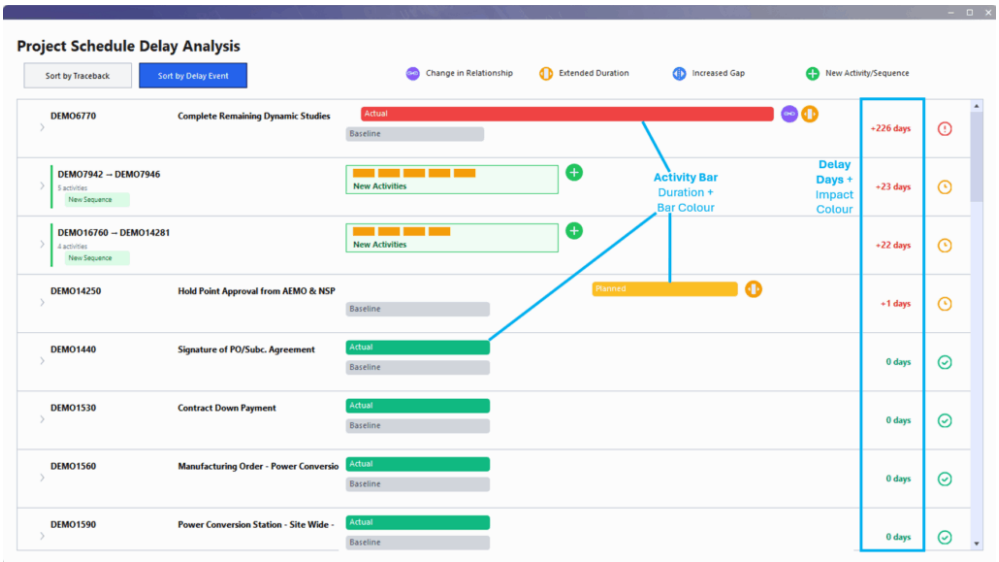
👉 Highlight the ***latest*** activity in the Schedule Viewer 👉 Select **Start Traceback or** 👉 **Start traceback from this activity**	
👉View the **Traceback Summary** 👉Click the 'x' to close the window	
👉View the critical path determined by the traceback	

Schedule Viewer/Gantt View Legend	After running a traceback, the following legend applies to activities in Gantt view: • Red bars: Critical path activities from baseline • Green bars: Critical path activities added post-baseline • Light blue line: Baseline schedule reference • Dark grey bars: Excluded activities

Delay Analytics Summary

Use the Delay Chart or Delay Analysis Dashboard to analyse changes.

Report	Description
Delay Analysis Chart	➡️ Navigation: Bottom tab panel > Delay Analysis Displays an interactive timeline (x-axis) against cumulative delay (y-axis) to help visualize project delay. • Mouse-over reveals delay in days at each point in time • Used alongside the Delay Analysis Dashboard to understand root causes 
Delay Analysis Dashboard	➡️ Navigation: Delay Analysis > Delay Analysis Interactive dashboard for investigating critical path delays and their cumulative impact on project schedules. • Displays activity-level delay details after running a Traceback • Highlights how individual delays contribute to overall schedule impact • Enables tracking of timing changes over time and across schedules • Supports substantiating delay claims with clear, data-driven insights • Works in tandem with the Delay Analysis Chart for full context **Sort Options** Quickly toggle between views to prioritize analysis: • **Traceback Order** – chronological sequence of delay events • **Delay Event Impact** – sorts by delay magnitude (positive to negative) **Delay Days Visualization** Calculates total delay by summing changes in duration, gaps, and new sequences: • **Color-coded bars** indicate severity: ○ 🔴 Major delay (≥30 days) ○ 🟠 Moderate delay (>10 days) ○ 🟢 No delay (0 days) ○ 🔵 Acceleration (negative delay) • **Bar length** reflects delay magnitude (approximate scale) **Delay Categories** Categorizes root causes of delay with expandable activity insights: • **Change in Relationship** – flags altered dependencies (e.g., FS added) • **Extended Duration** – highlights longer-than-baseline activity durations

Report	Description
	• **Increased Gap** – shows widened gaps between predecessor and successor • **New Activity/Sequence** – identifies added tasks and calculates their impact 

Settings

Delay Analysis Settings

Purpose
Configure how Logic+ determines the critical path during a Traceback. These settings allow users to fine-tune exclusion criteria, scoring logic, and export preferences - ensuring the analysis reflects project-specific priorities and delay scenarios.

📚 Documentation

➡️ Navigation: Settings > Traceback

Feature	Description
Activity Exclusion Criteria	Define which activities should be excluded from Traceback logic
Candidate Score Presets	Save and reuse scoring presets for different delay analysis scenarios
Candidate Score Weights	Adjust attribute weightings used to calculate candidate scores (must total 100%)
Exporting Tracebacks	Configure export format and labelling for XER files

💡 Traceback Settings can only be modified when no active Traceback is running.
💡 After making changes, click Apply and confirm the “Changes Applied” message to activate settings.
