elekon
Akıllı Yapı Teknolojileri

Serenity Studio
Graphical Interface Software

USER MANUAL

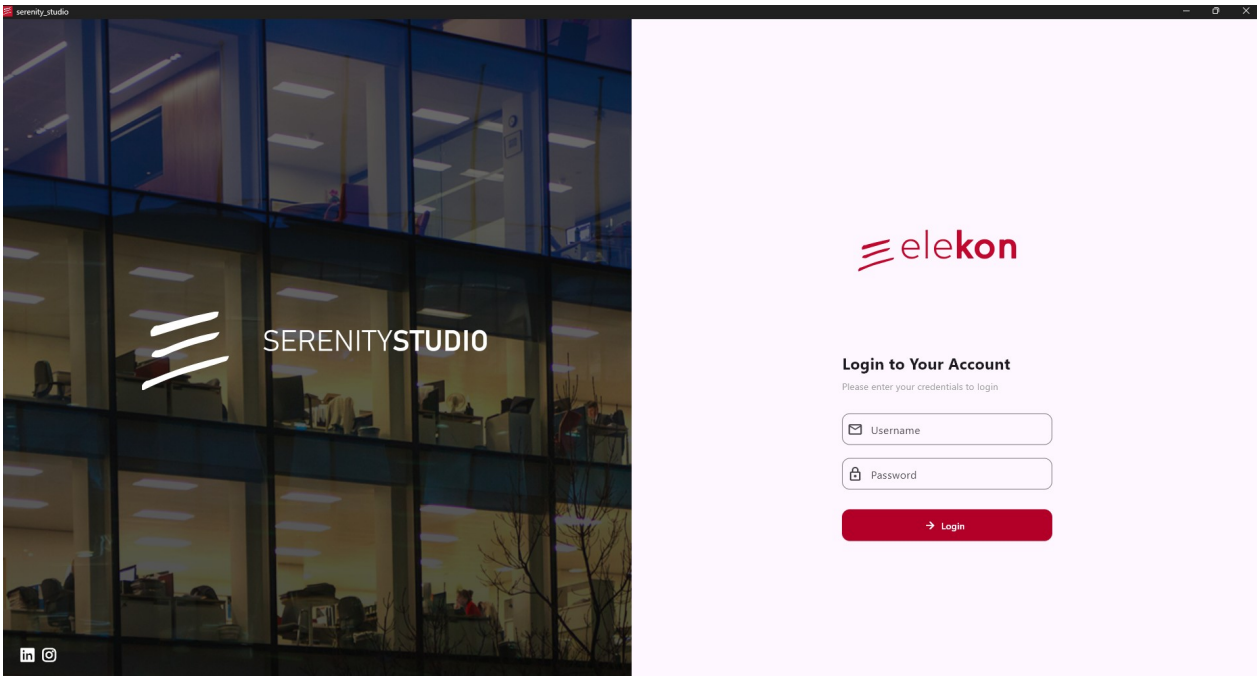


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1. Installation and First Sign-In

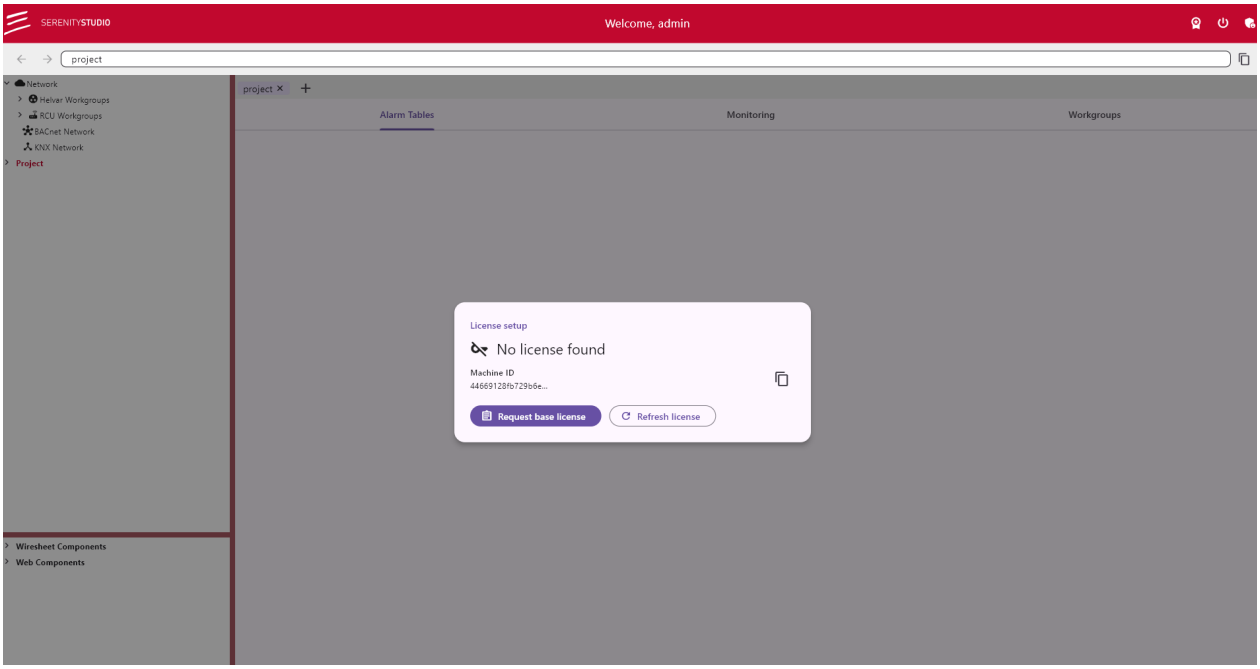
The application can be installed in any folder on your computer instead of following the standard installation flow under Program Files on the C: drive. Double-click serenity_studio_installer.cmd to install it. After the initial installation, you can launch the application with serenity_studio.exe. If an earlier version is already installed, the installer asks whether you want to replace it with the selected version. The default sign-in credentials are username admin and password admin.



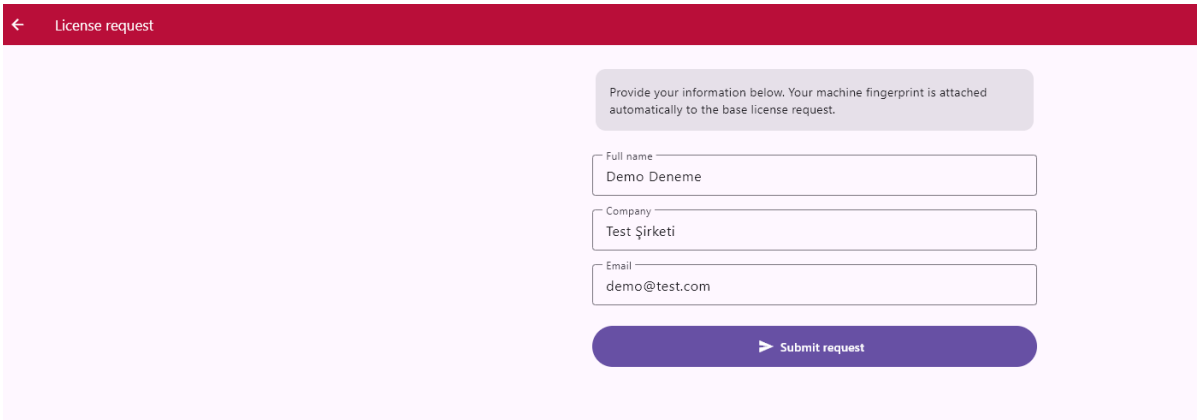
2. Licensing

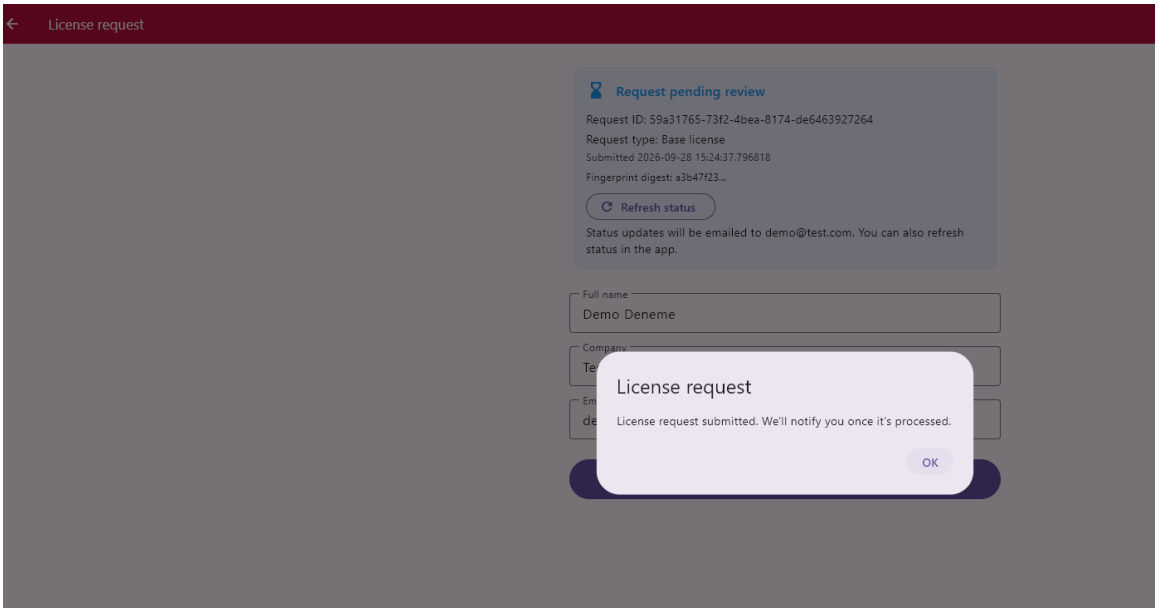
2.1 Base License

The screen indicates that the license required to start the application is missing. The application uses a base license for startup, followed by a driver license for the device family or protocol in use.

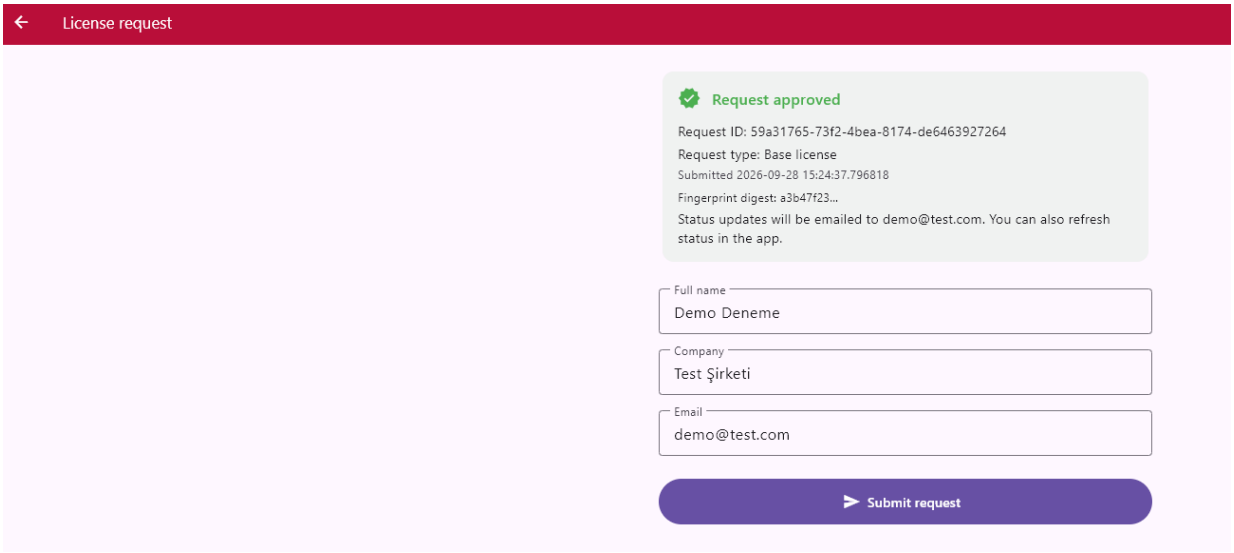


Enter the required base license details in the form and submit the request for approval.



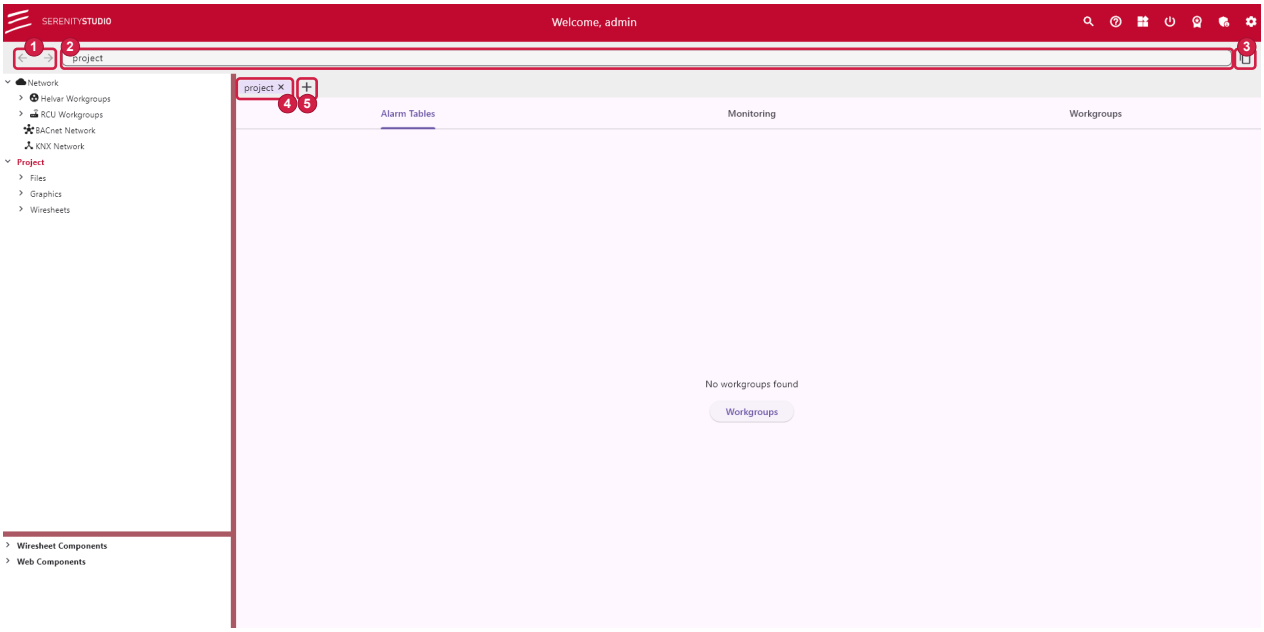


Once the license request is approved, the system automatically unlocks the application.



3. Home Screen

An internet connection is required on the computer when license requests are submitted. Local application features and device monitoring work without internet access. Cloud AI features and the initial download of a Local AI model require an internet connection. The left side of the home screen contains the driver and device trees. The lower-left area manages devices added to the system, as well as Graphics projects and wiresheet pages that use their respective protocols. Later sections describe these areas in more detail. The buttons at the top right are, in order: Device Search, Help, the control for showing or hiding wiresheet and Graphics components, the control for stopping the application service, the license dashboard, Admin Panel, and Settings. When you close the application with the X in the upper-right corner, the service continues to run in the background. During installation, serenity_studio_installer.cmd can configure the service to start with Windows. To stop the background service as well, use Close all instances.



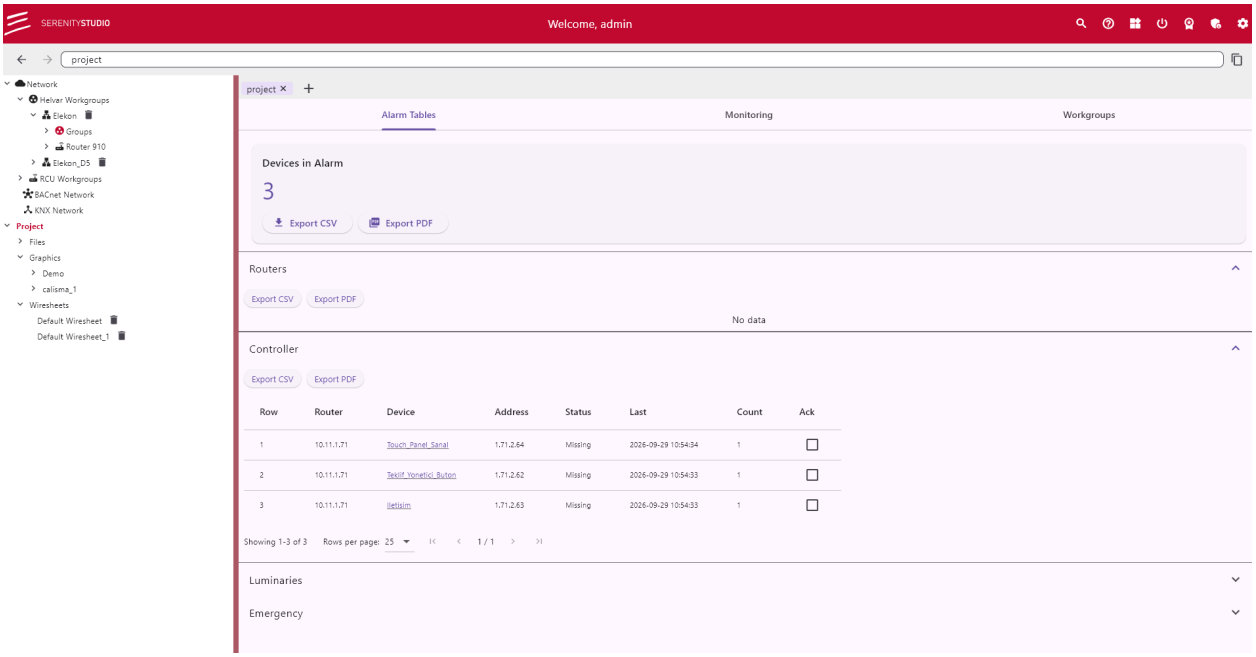
Home screen navigation and tab controls: 1 Back and forward; 2 Path field; 3 Copy path; 4 Tabs and close; 5 New tab.

The path field shows the application path for the screen currently selected. Enter a valid path and press Enter to go directly to that screen. If the field is empty or the path is invalid, the current path is restored and a warning appears. Use the back and forward buttons to move through the navigation history of the active tab. Select the copy button to the right of the path field to copy the current path to the clipboard.

Select + to open a new tab. Select a tab title to switch tabs, or select × to close that tab. If the target you open is already in another tab, Serenity Studio switches to that tab instead of opening a duplicate. Each tab keeps its own path and its own back and forward history; switching tabs returns you to that tab's screen without sharing its navigation history with other tabs.

If you switch tabs or close a tab while a Graphics page or wiresheet has unsaved changes, Serenity Studio offers Save, Discard, or Cancel. Save keeps the changes, Discard removes them, and Cancel leaves the current tab or screen as it is.

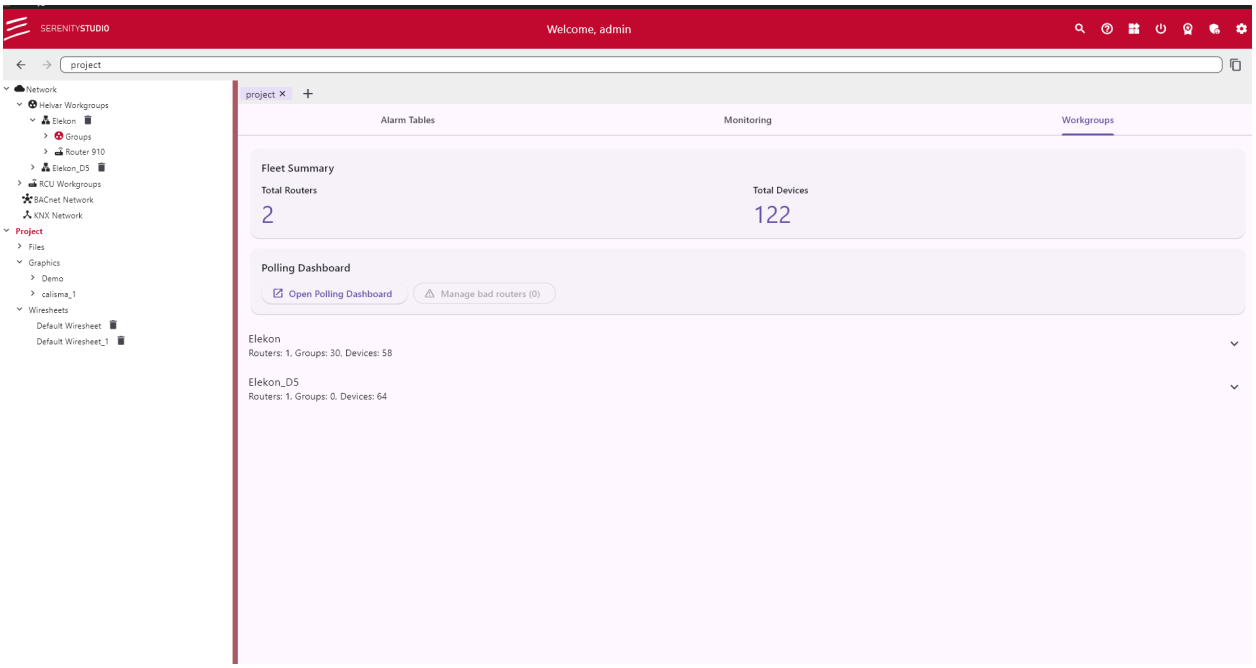
Project overview. Select the Project node in the navigation tree to view the Alarm Tables, Monitoring, and Workgroups tabs.



Alarm Tables: device alarms, grouped tables, acknowledgements, and exports.

In Alarm Tables, expand a group to view its alarm records. The Devices in Alarm card shows the current device count. Use a row's Ack checkbox to acknowledge or unacknowledge that alarm. Export CSV and Export PDF prompt you to choose a live snapshot or the full history.

Monitoring opens the Log Viewer. Search log messages, filter by level, clear the current view, control auto-scroll, or download the filtered logs.

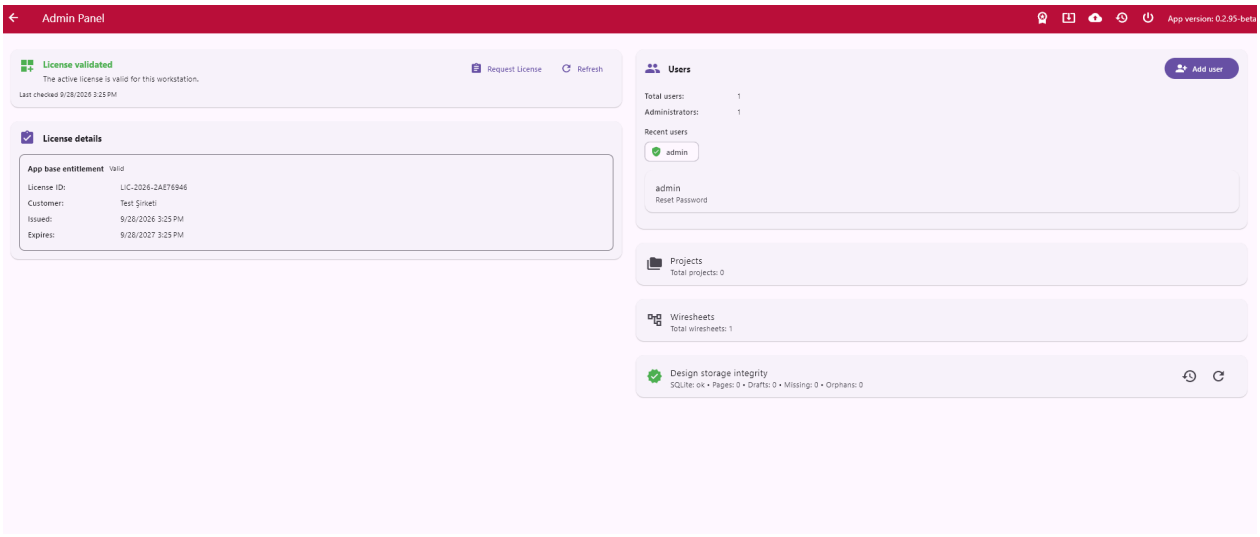


Workgroups: fleet totals, workgroup counts, and polling dashboard access.

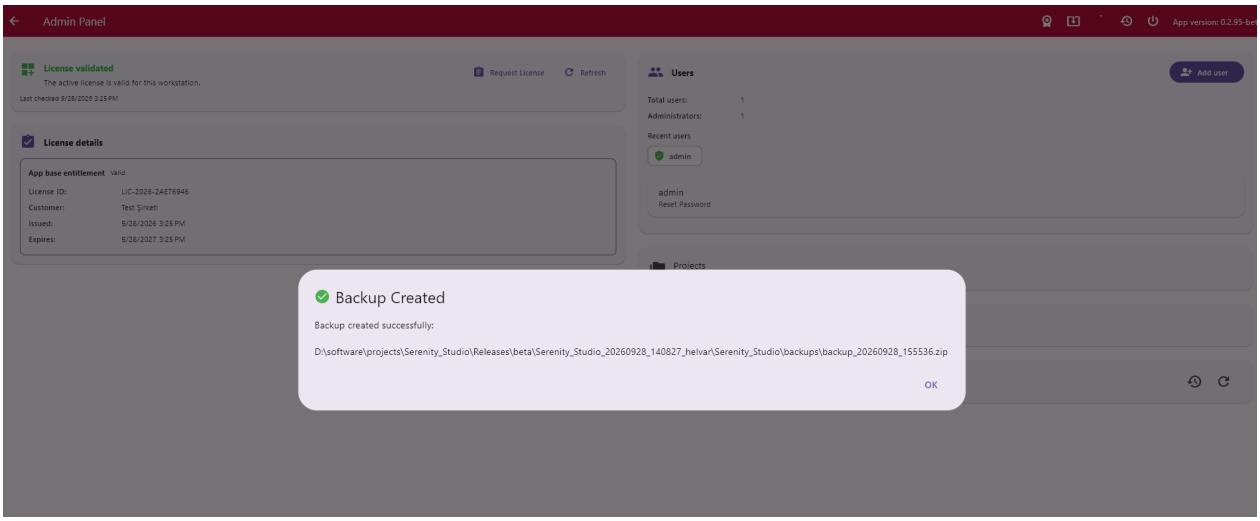
The Workgroups tab summarizes total routers and devices. Expand a workgroup to see its router, group, and device counts and the status cards for its routers. Open Polling Dashboard to view live polling metrics in a browser; Manage bad routers is available when there are routers to review.

4. Admin Panel

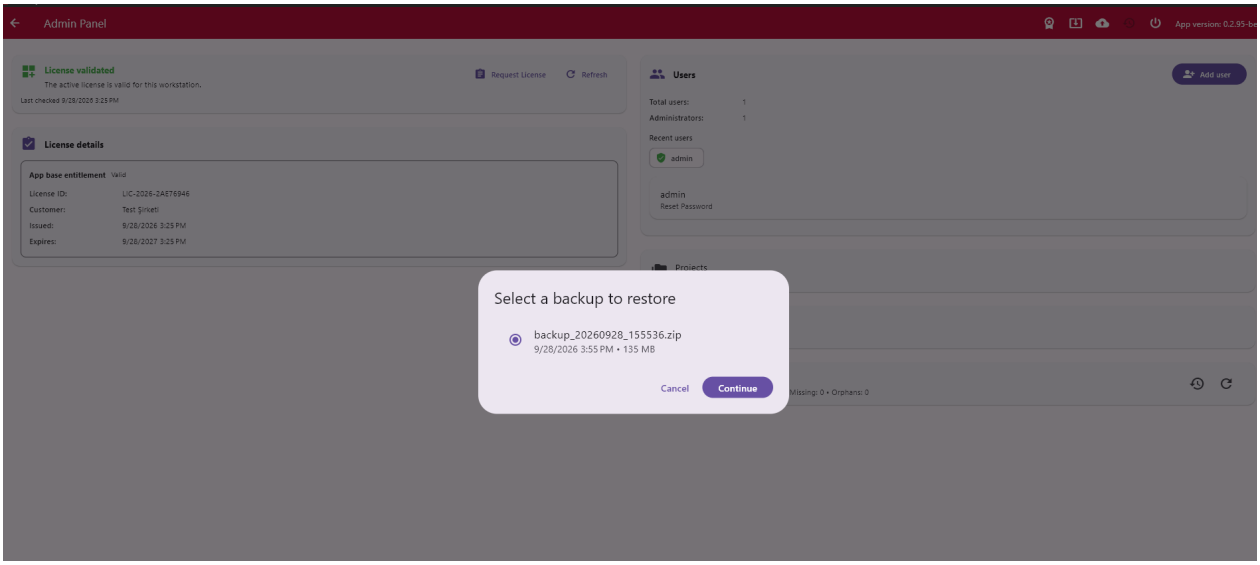
Select Admin Panel to view the current license and other basic information.



At the upper right, you can open the License dashboard, check for version updates, and create a backup.



The panel also lets you view and restore backups, stop background services, and check the current version.



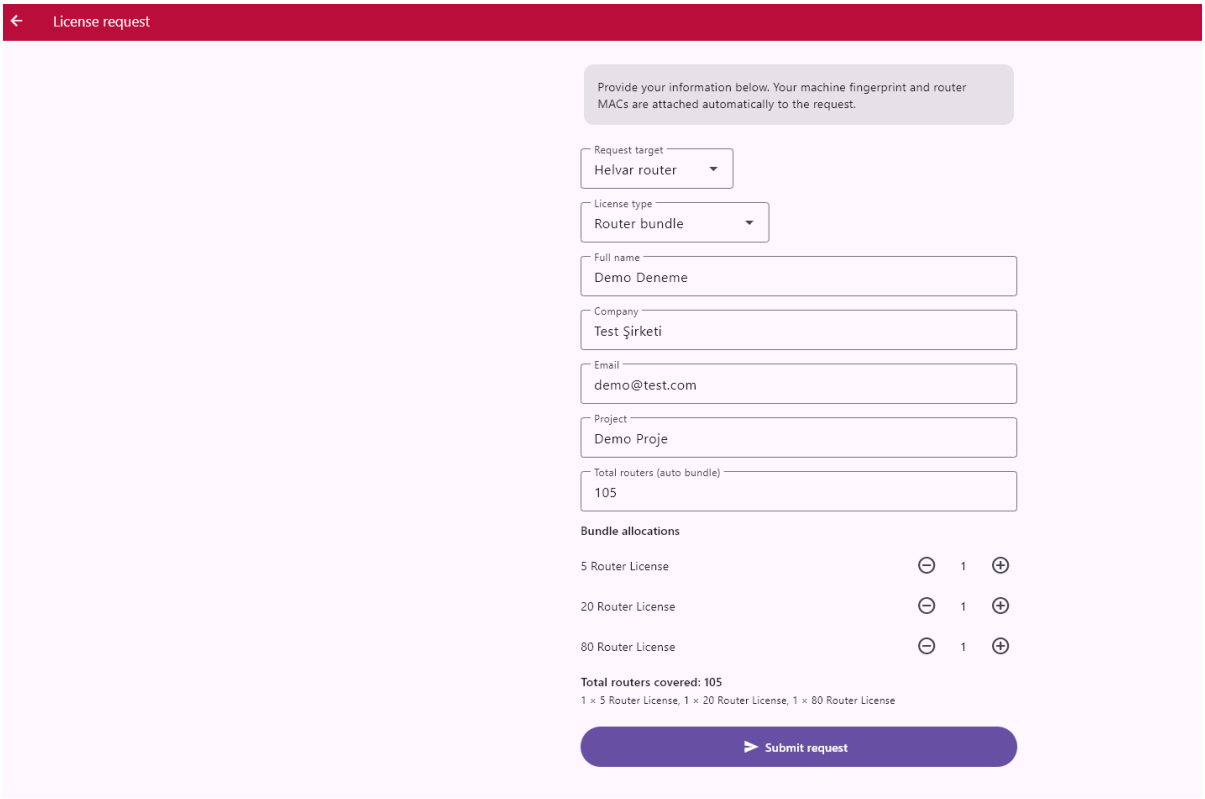
You can create additional user accounts here and assign the required permissions. After Graphics and wiresheet pages have been created, this panel also shows which roles can access each page.

Selecting the License dashboard opens the following screen.

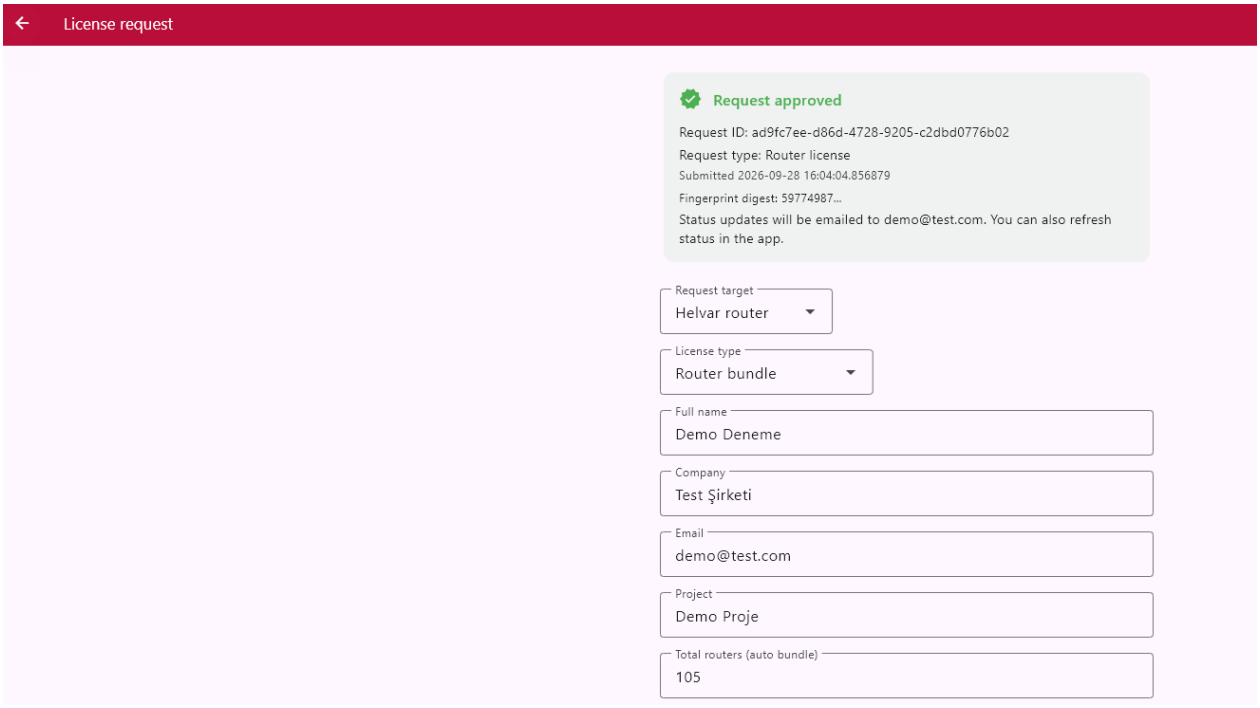


5. Helvar Driver License

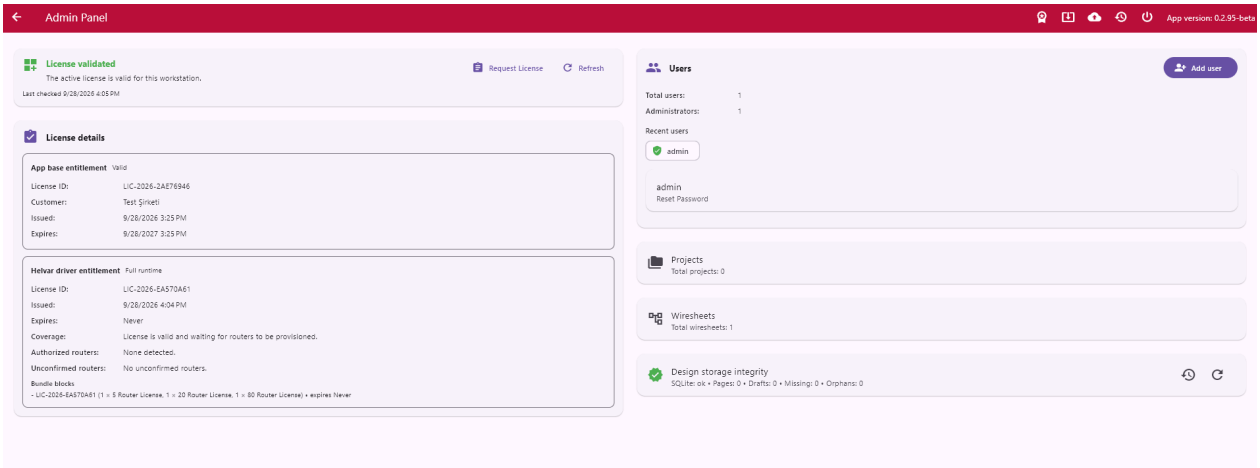
For Helvar routers, the application discovers and adds routers and their devices to the system. There are two license types: permanent and engineering. A permanent license authorizes a specified number of router MAC addresses for polling. Discovery and Helvar design-file import can add all selected routers to the project topology, regardless of available license seats. Only routers approved under the license are eligible for polling; routers without approval remain visible but are not polled. Other routers are identified by their MAC addresses. To request a Helvar license, complete and submit the form shown below.



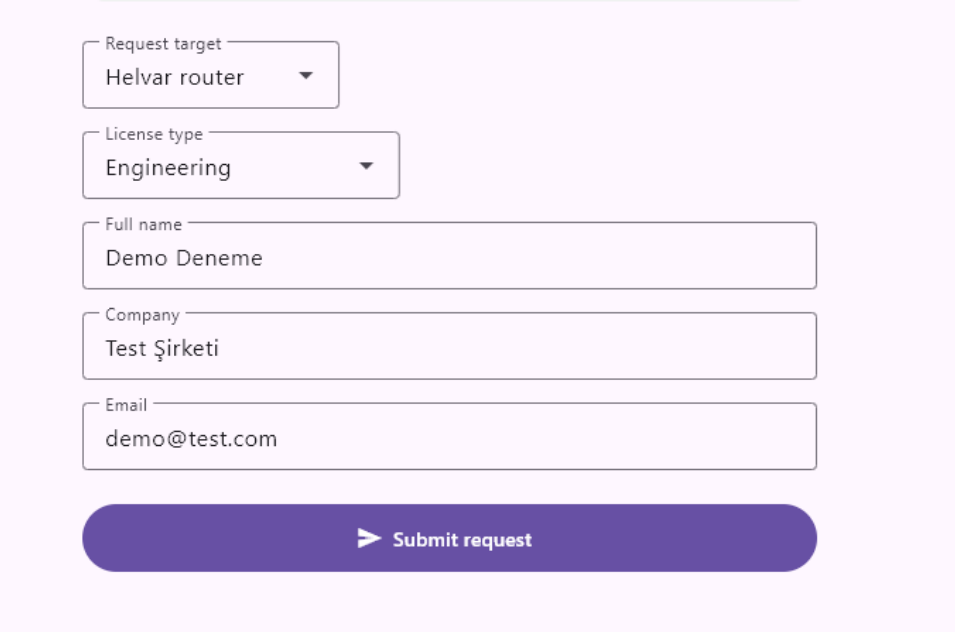
Once approved, the license automatically unlocks the Helvar routers.



In this example, a license for 105 routers has been approved.



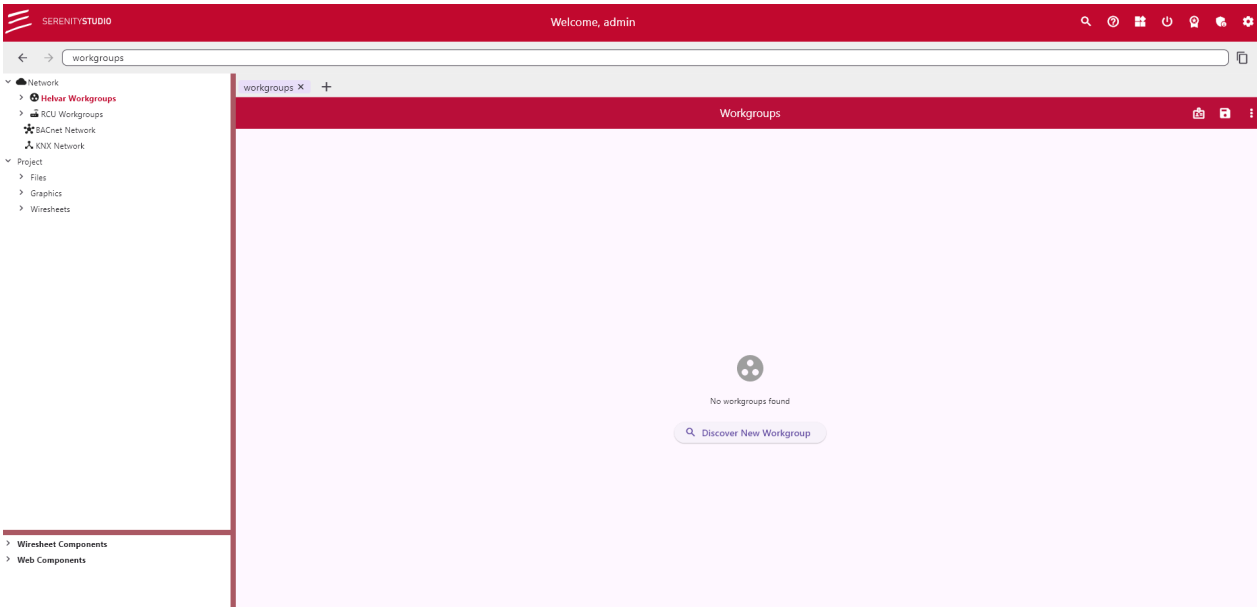
The other option on the license form is an engineering license. It supports an unlimited number of routers, but it is temporary and intended for creating and designing Graphics screens and wiresheet scenarios. This license also applies white labeling, which adds a logo banner to the application and its Graphics web pages. A computer using this license can later be upgraded to a permanent license.



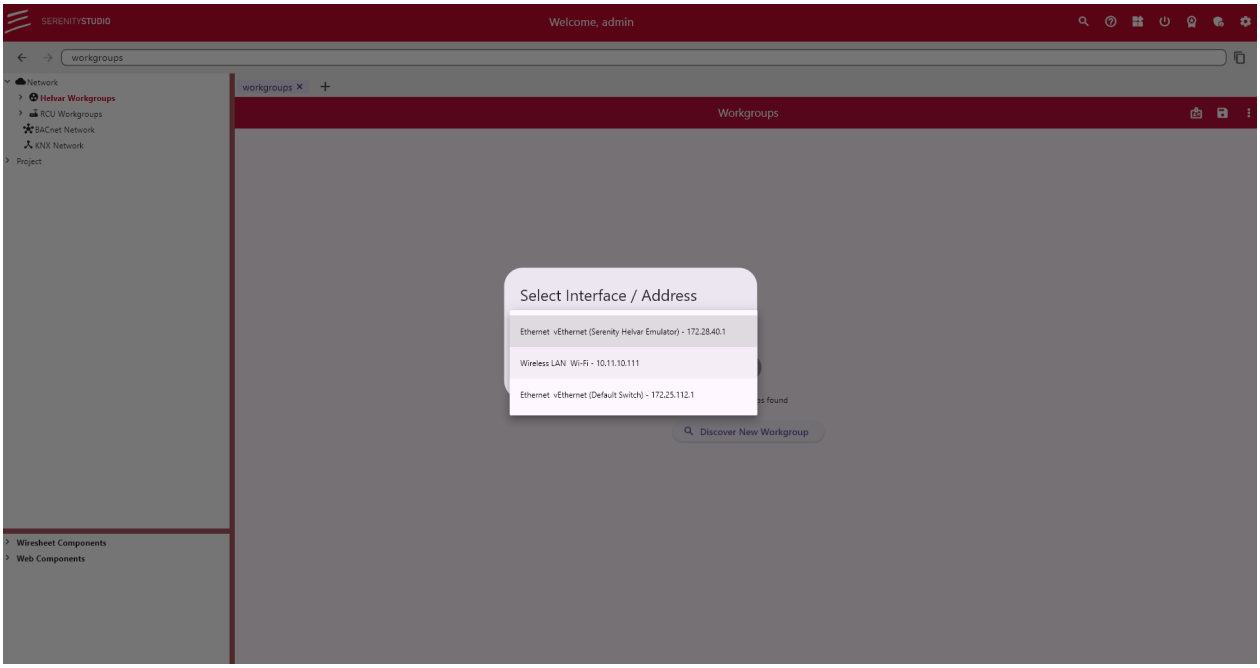
The rest of this guide uses a permanent license for its examples. You can request a Helvar license after discovering routers and adding workgroups, or while the application is empty. The system identifies routers by their MAC addresses and adds them to the license request. If you request a license before discovery, you must submit a separate approval request for routers added later. If you discover routers first and then request a license, the system includes the routers already in the system. Admin Review lists topology routers that are not authorized or already pending; you can submit no more routers than the free seats on the active licenses. When no seats are free, the candidates remain visible but cannot be submitted or polled.

6. Helvar Workgroups and Device Discovery

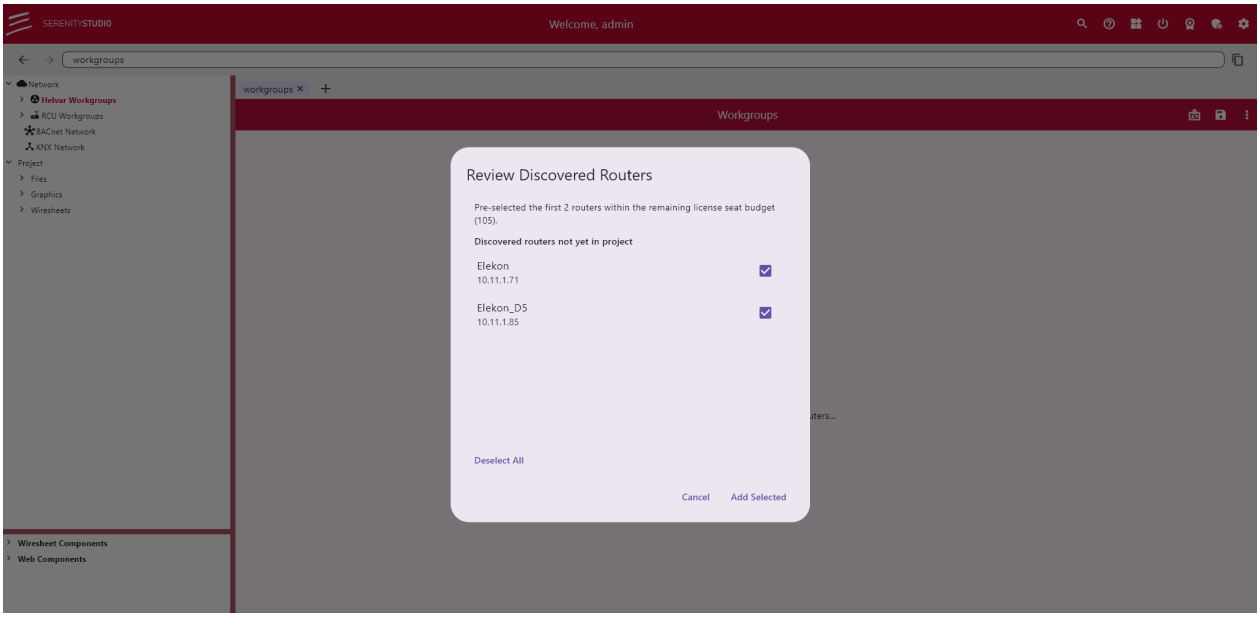
Return to the home screen and select Helvar Workgroups at the upper left to discover workgroups. You can also import Helvar design files to add routers and workgroups to the system.



Select Discover New Workgroup, choose the computer network interfaces to scan, and review the discovered workgroups. All newly discovered routers are selected by default; remove any that you do not want to add. Routers already in the project are shown separately and are not added a second time. License capacity does not limit adding routers to the project topology. If AnyDesk is running in the background, close it in Task Manager before discovery. It conflicts with the Helvar discovery port and can prevent discovery from working.



Selecting a workgroup automatically adds all routers under it to the application.



Discovered workgroups and their routers appear in a hierarchical tree on the left. Devices and groups must be added through discovery. Helvar design files automatically add the groups and devices they contain. After adding an item, select any node to open its details.

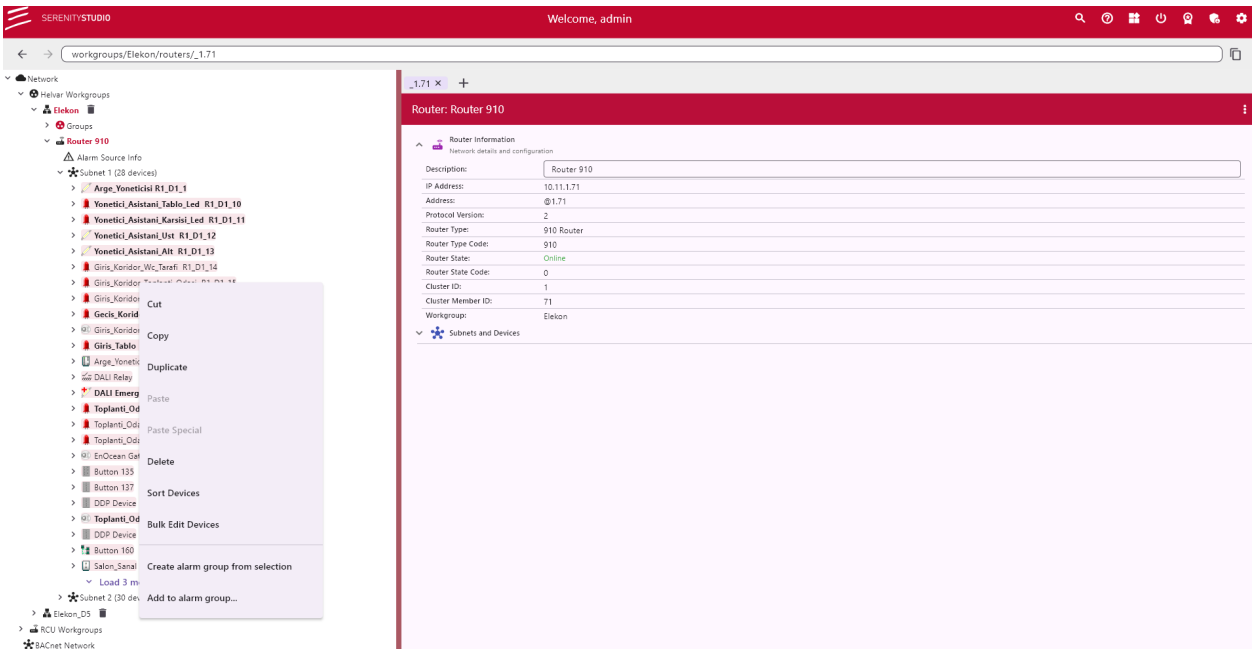
Click a node once to select it and preview its details in the current workspace. Use the small arrow beside a node to show or hide its child nodes. Double-click a node to open it in a persistent workspace tab; if it is already open, the existing tab is activated.

Hold Ctrl and click nodes to add them to or remove them from the selection. Shift-click selects a continuous range of sibling nodes. Right-click opens the context menu; if the clicked node is already part of a multi-selection, that selection is kept. Otherwise, the clicked node becomes the selection.

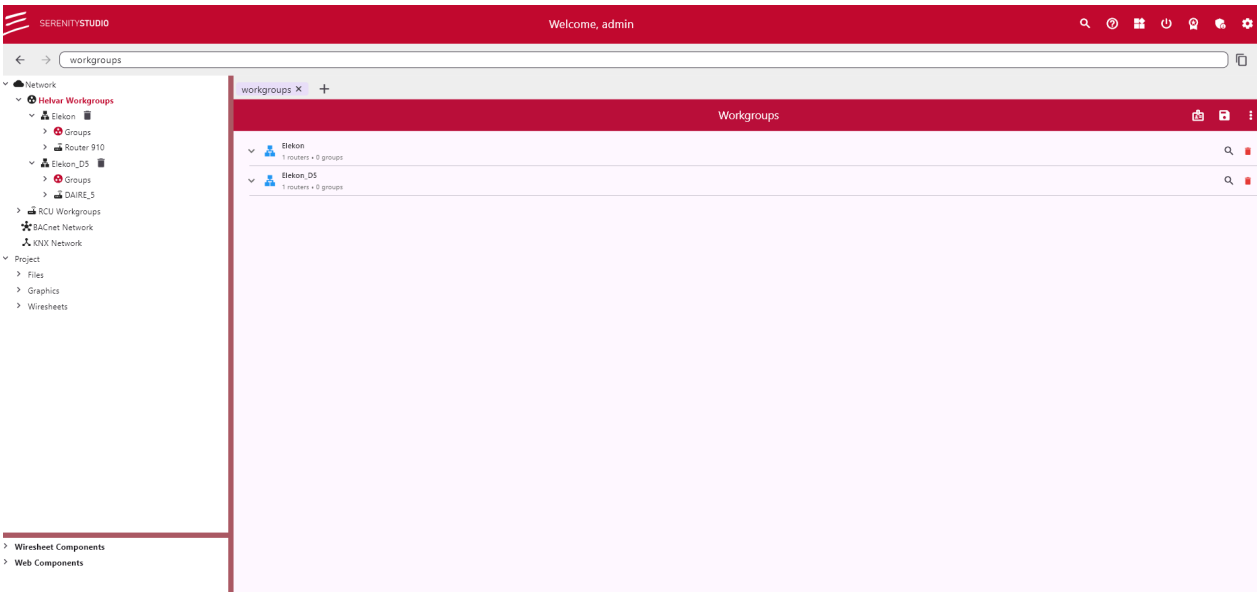
When the app tree has focus and a Helvar subnet selection context is active, Ctrl+A selects the devices in that subnet. It does not select every node in the tree. For Cut, Copy, Paste, Paste Special, Duplicate, Delete, and Rename, choose the corresponding command from the right-click menu when it is available.

The menu shows only actions valid for that node type and the current user access. For example, Cut and Paste can move selected items between supported locations, Copy and Duplicate can create another item, and Rename changes an item’s name. Paste Special opens its options for supported paste targets. Router and subnet menus can offer Sort Devices; a router can offer Change Router IP; and selecting multiple devices can offer Bulk Edit Devices. For example, sort a subnet’s device list, apply shared values to several selected devices, or update a router’s IP from its own menu.

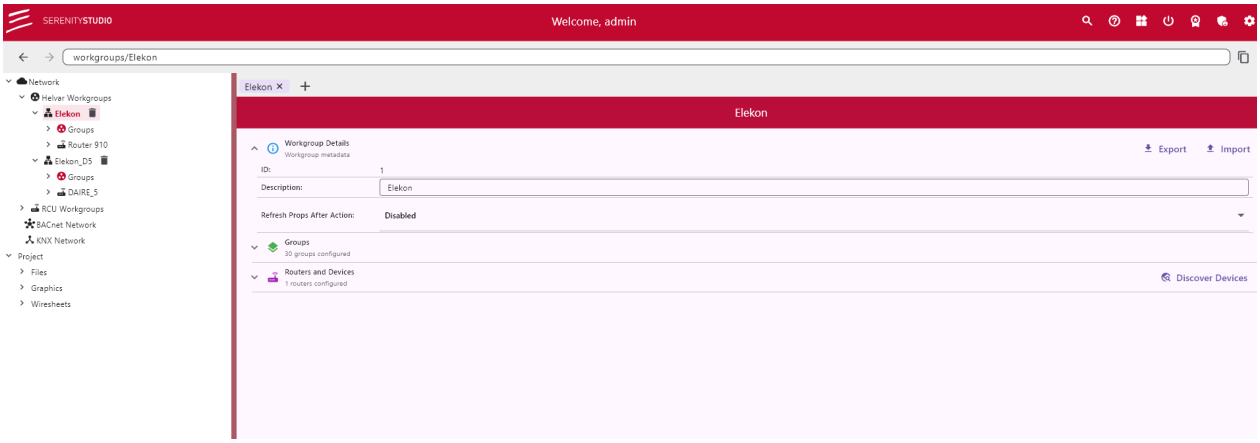
With multiple devices selected, the menu can also create an alarm group from the selection or add the selected devices to an existing alarm group. The Actions submenu is available for a single device and its commands depend on the device category—for example, output controls or emergency tests. Router operations such as Change Router IP appear in the router context menu. Before cutting, deleting, renaming, bulk-editing, or changing an IP address, check the selected node or devices and confirm that they are the intended targets.

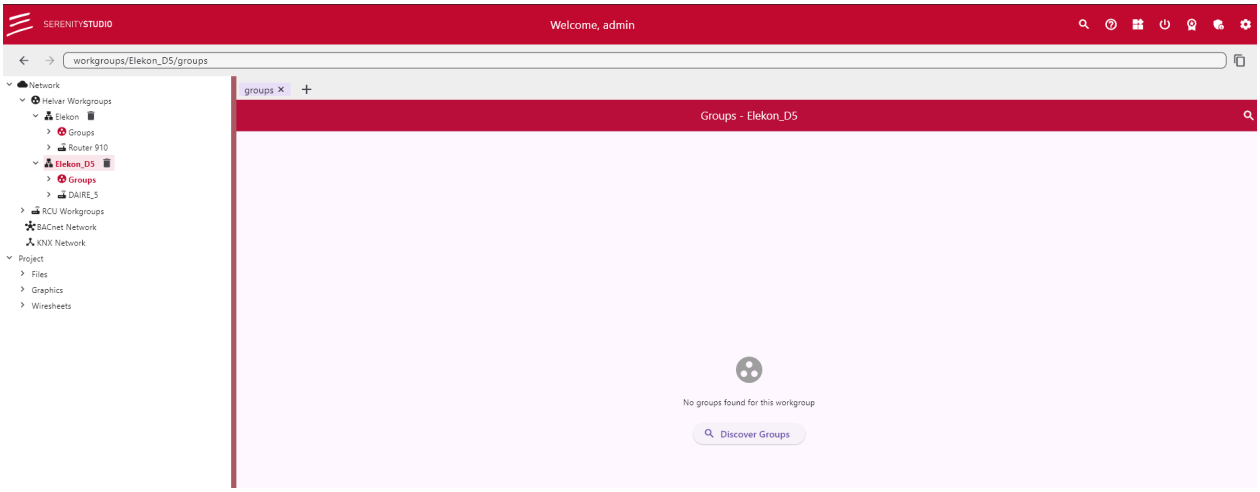


Multiple selected devices and their context menu.

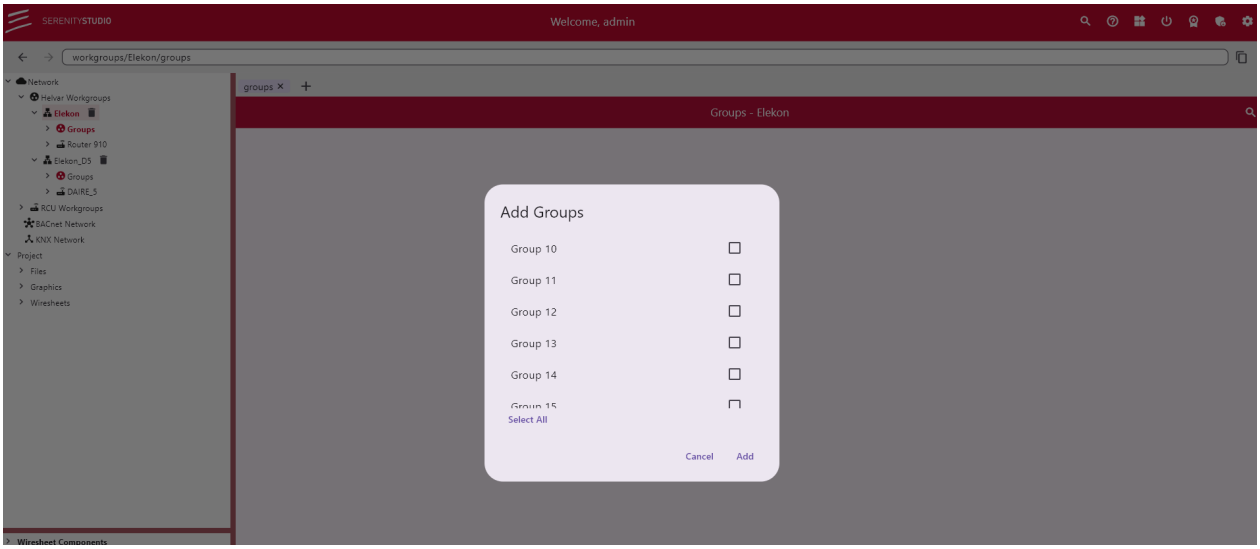


Workgroups and their groups

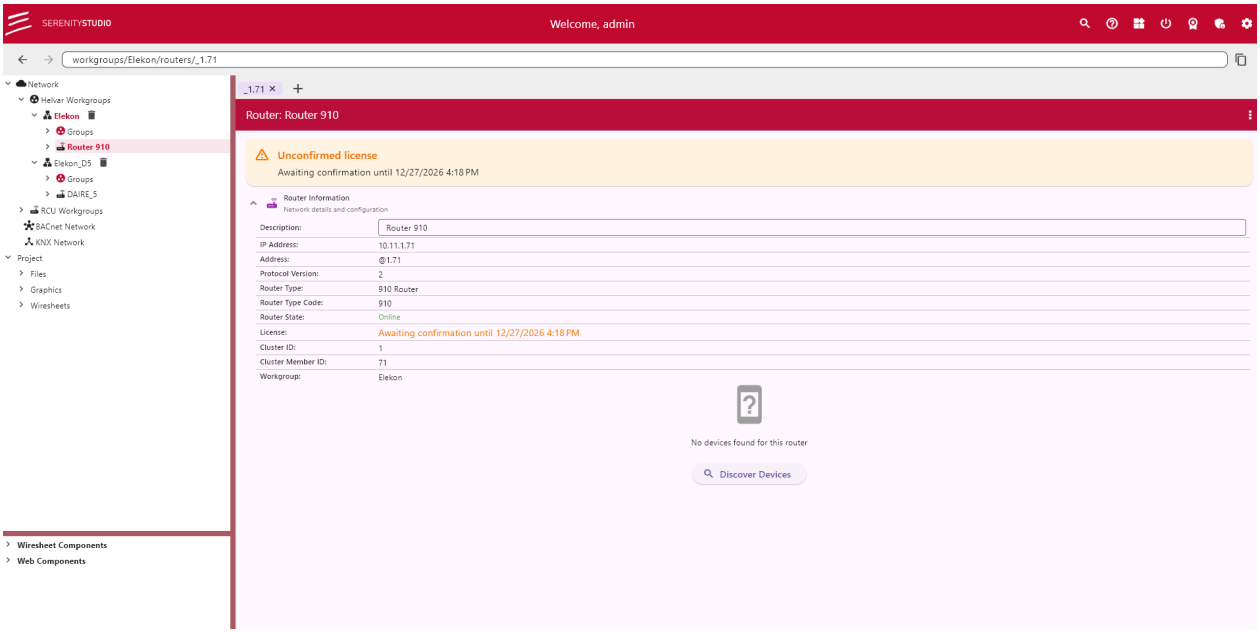




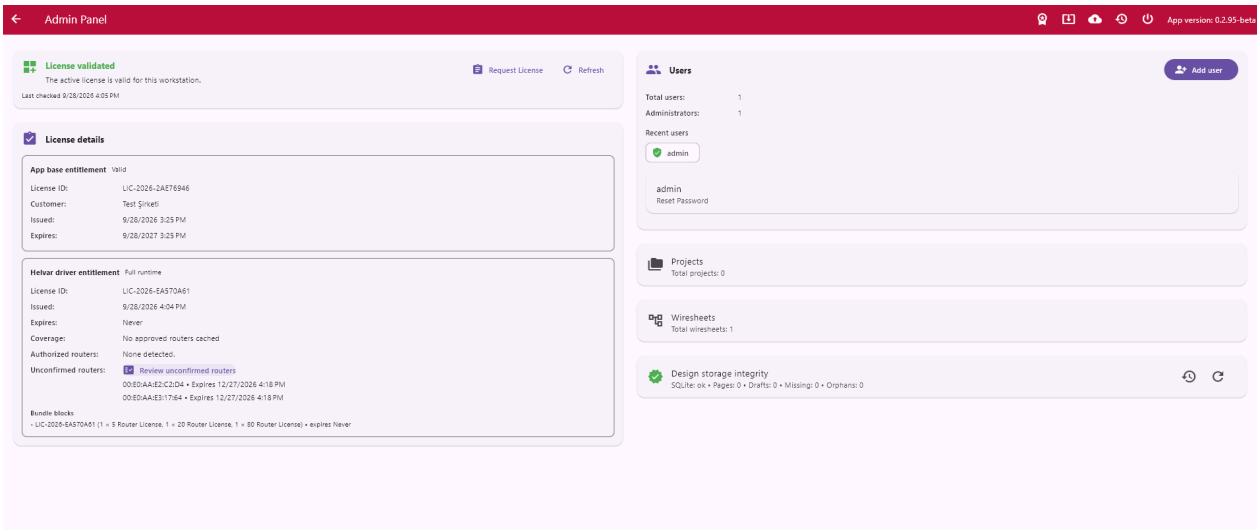
The Helvarnet protocol supports discovering groups under a workgroup and adding them to the system.

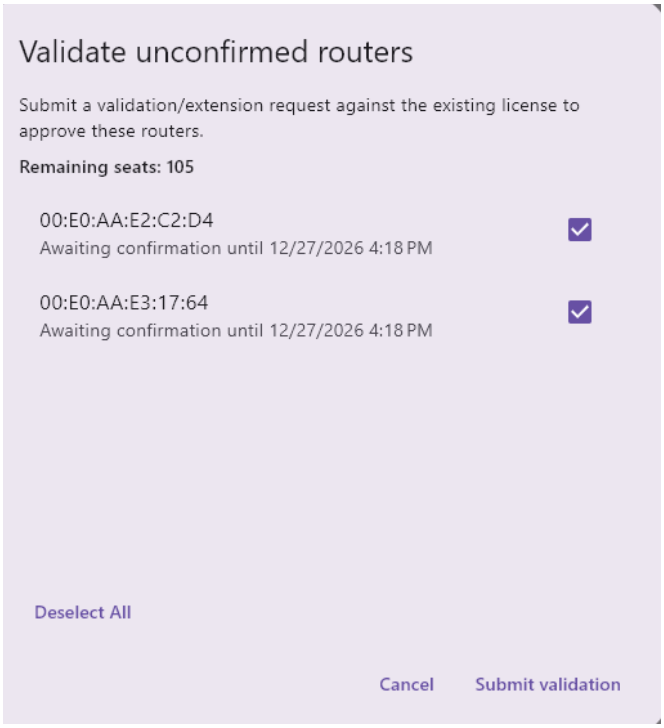


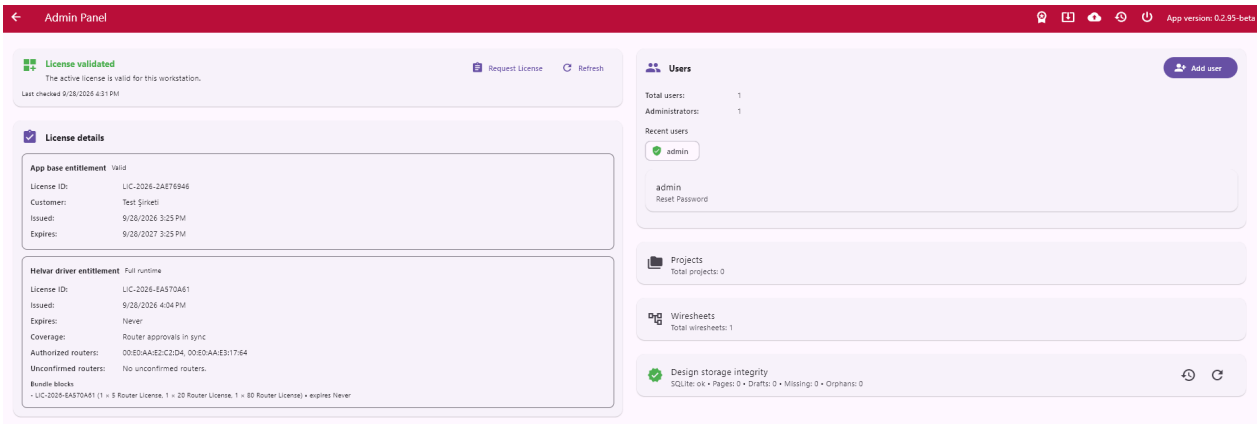
The routers shown here are in the project topology but have not yet been approved by the Helvar license, so a license warning appears. They remain out of polling until authorized.



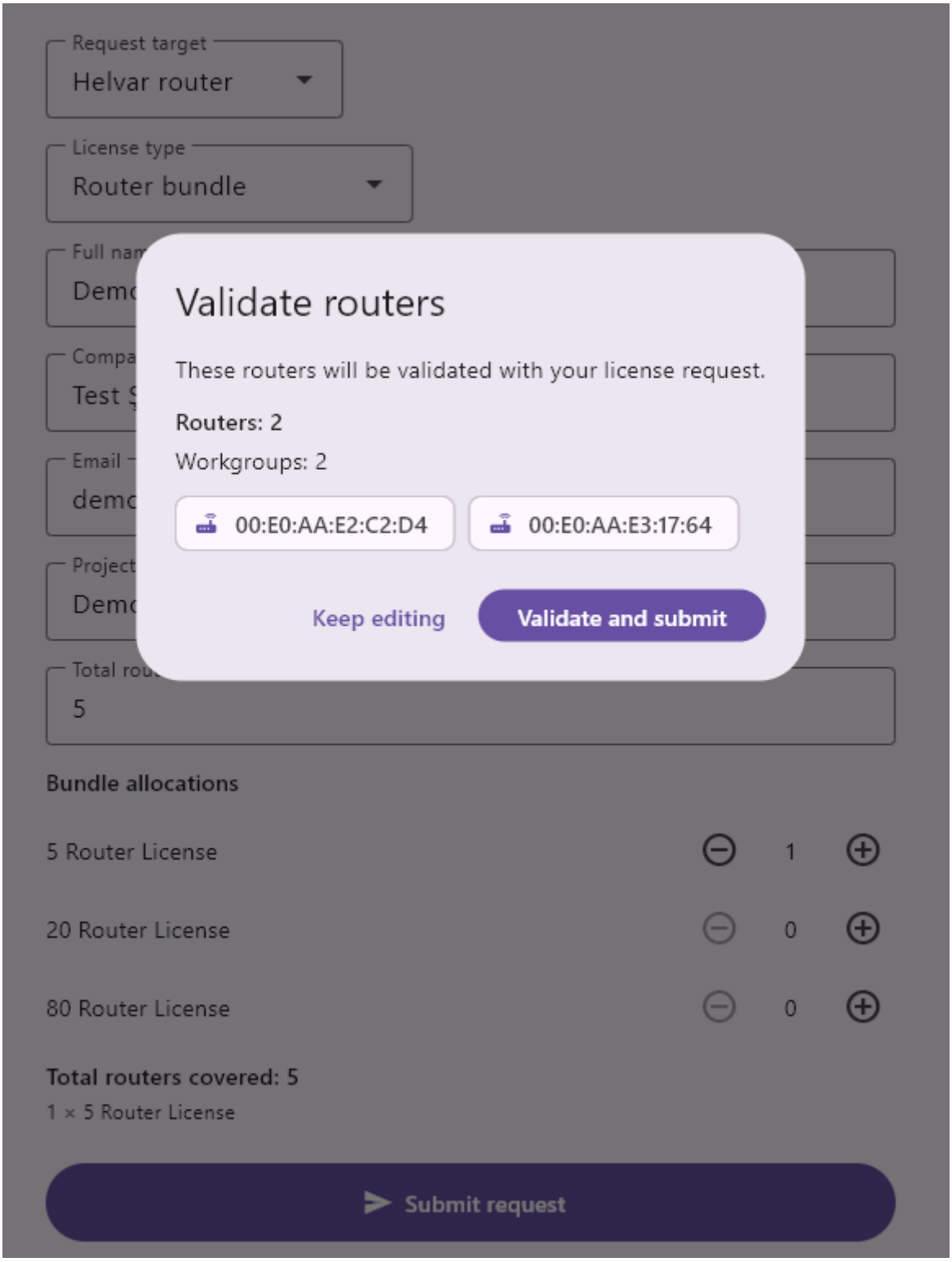
To submit routers already in the project for license approval, select Review unconfirmed routers in Admin Panel. Admin Panel lists every topology router that is neither authorized nor already awaiting a decision. Select up to the number of free seats across the active licenses. If no seat is free, the candidates remain visible but cannot be selected or submitted. Discovery or import alone does not authorize polling; a router enters polling only after the license policy recognizes its approval. Submitted routers appear under Pending until a decision arrives. After approval, the candidate list and polling eligibility refresh.



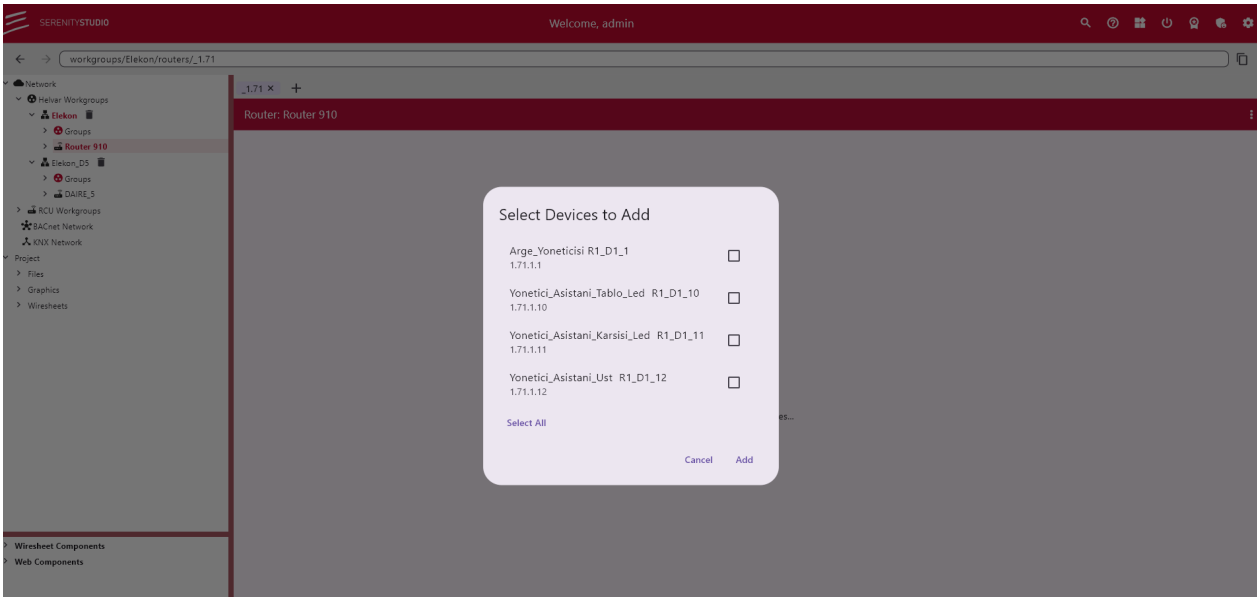




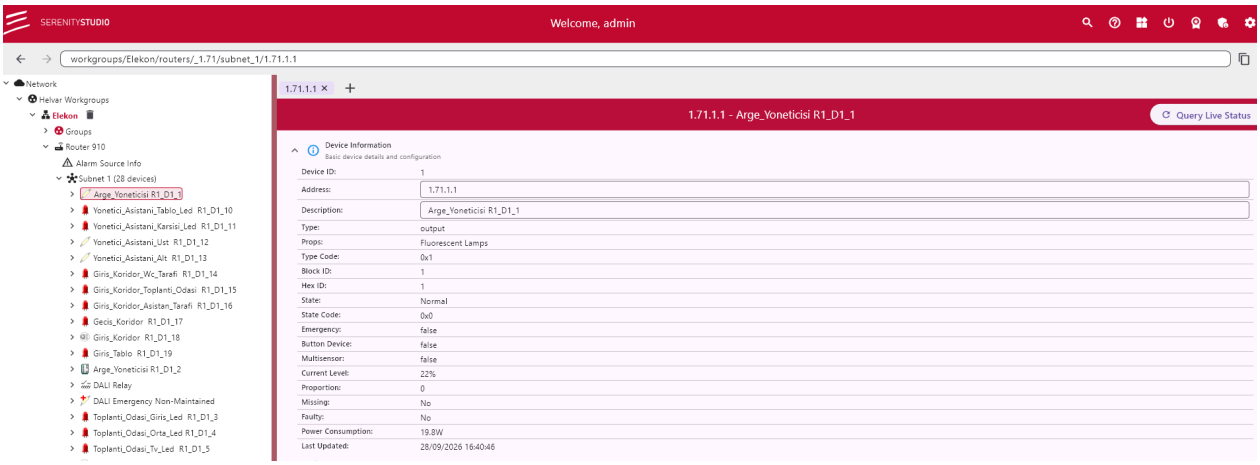
If you discover routers before requesting a license, their MAC addresses can be submitted for approval from the license form. Select only the routers you intend to authorize under the available license capacity.



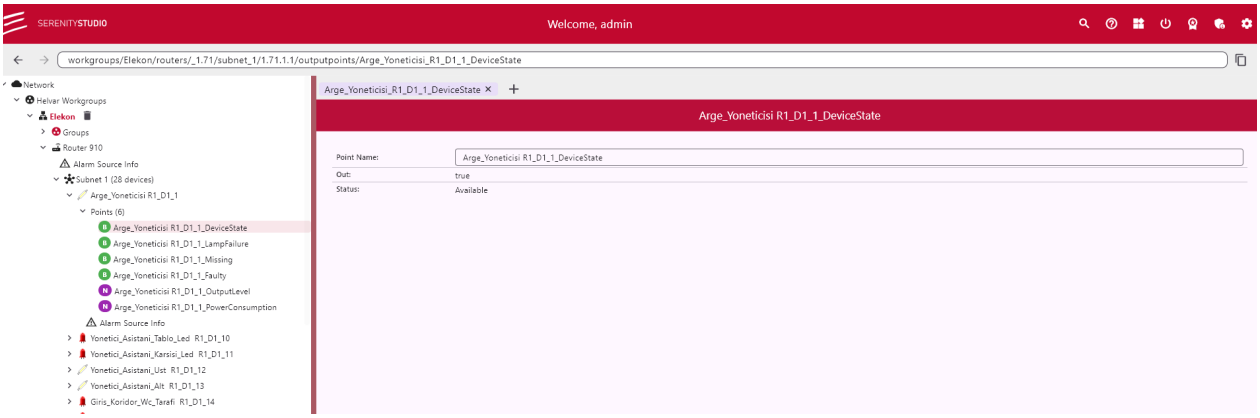
Next, open the router details and select Discover Devices to add the discovered devices to the system.



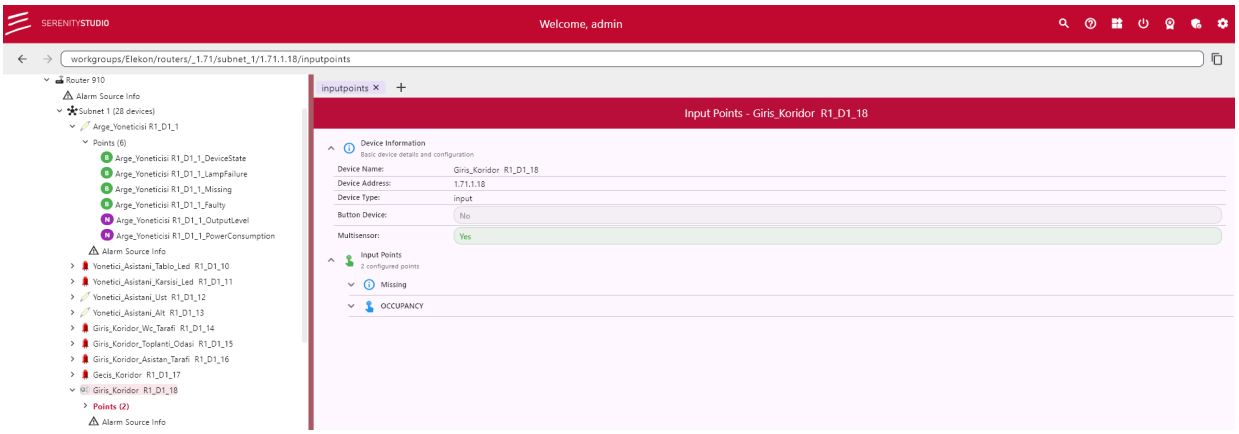
You can view Helvar device details in the tree. Select Query Live Status to refresh a device status in real time.

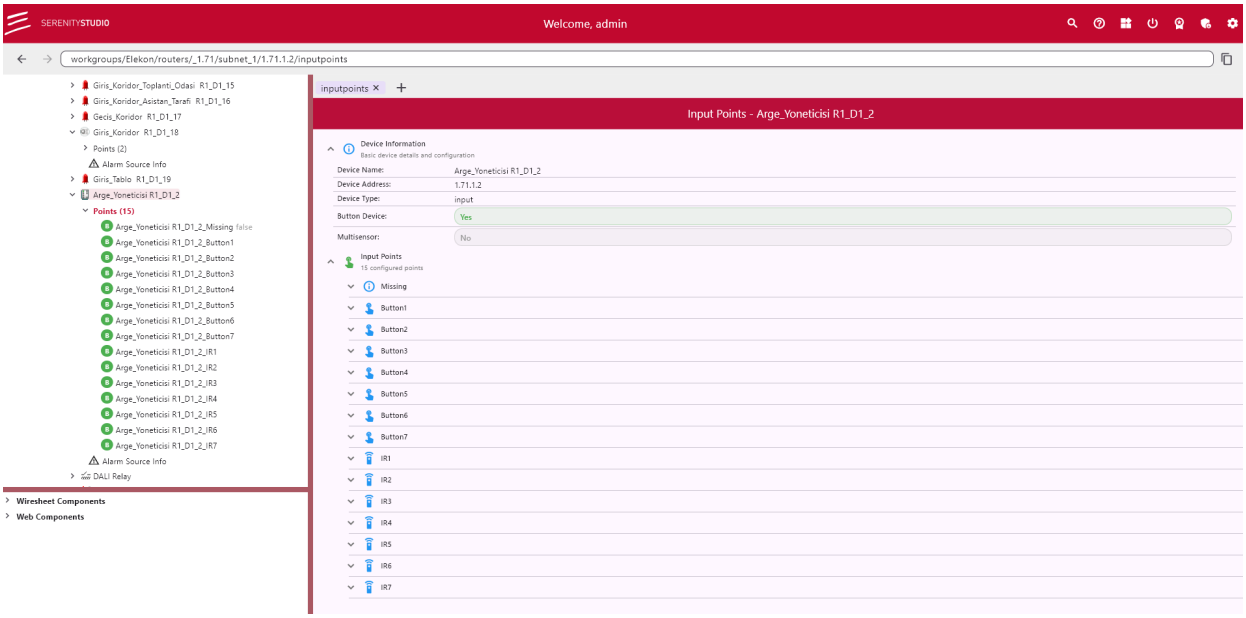


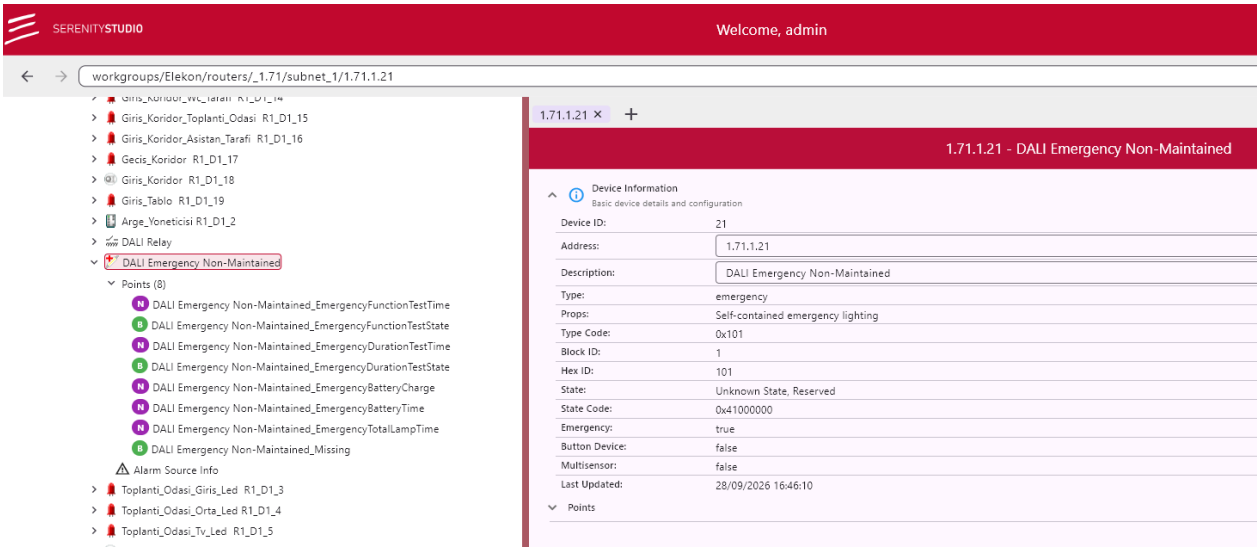
Each device has points based on its device type.



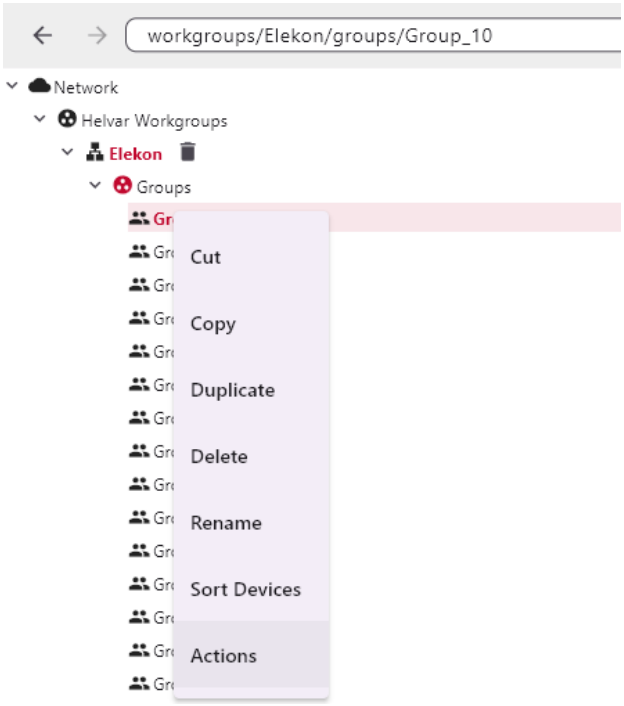
Output devices have six fixed points. Input devices include different types, such as buttons and sensors, so the available points vary by device.

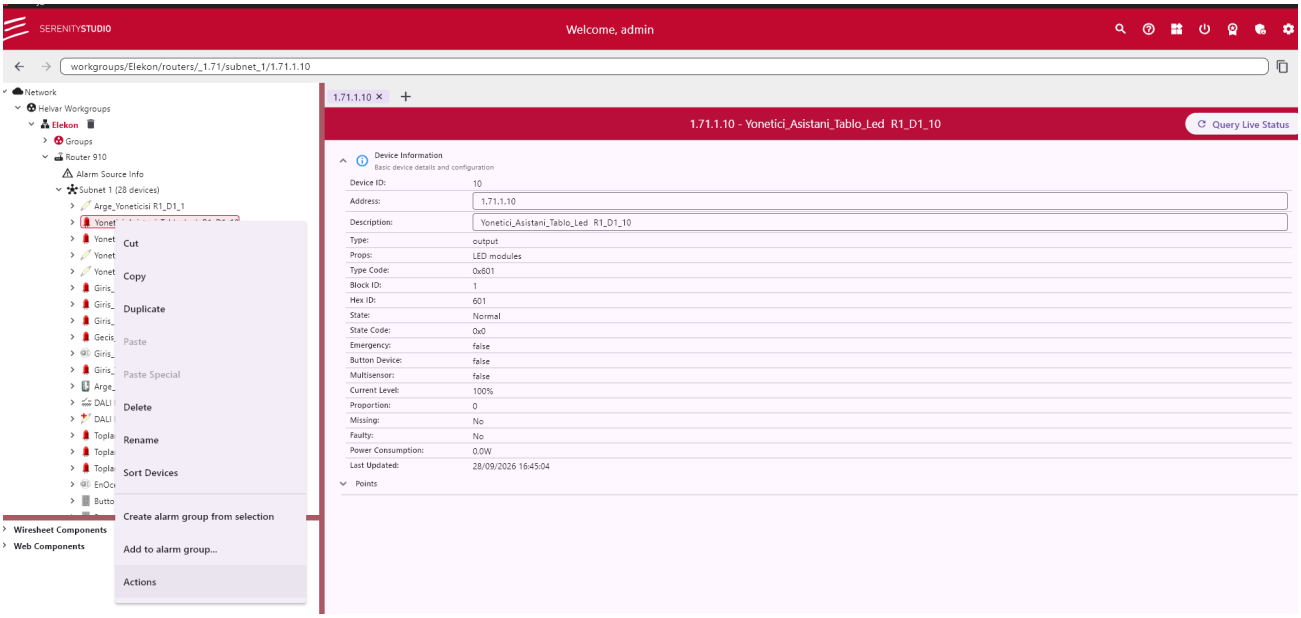






As in the detail pages, you can expand child nodes in the tree on the left to view additional information. Right-clicking a node provides operations for that item:



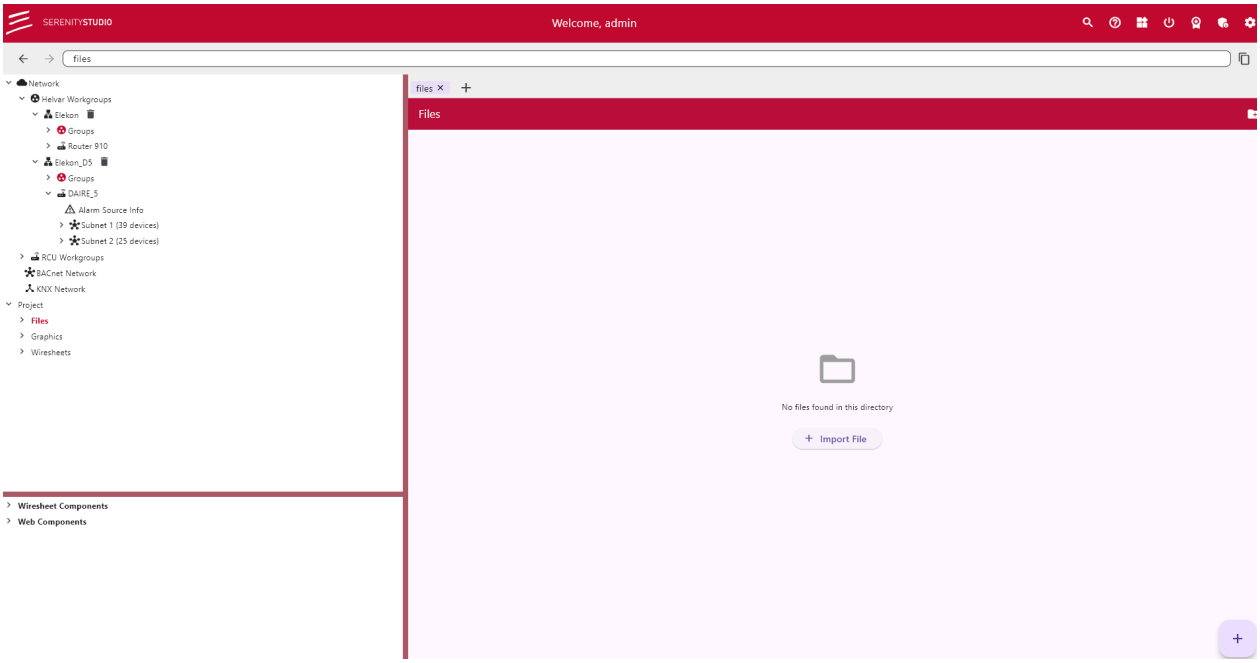


Keyboard shortcuts such as Ctrl+C, Ctrl+V, and Delete also work with these nodes.

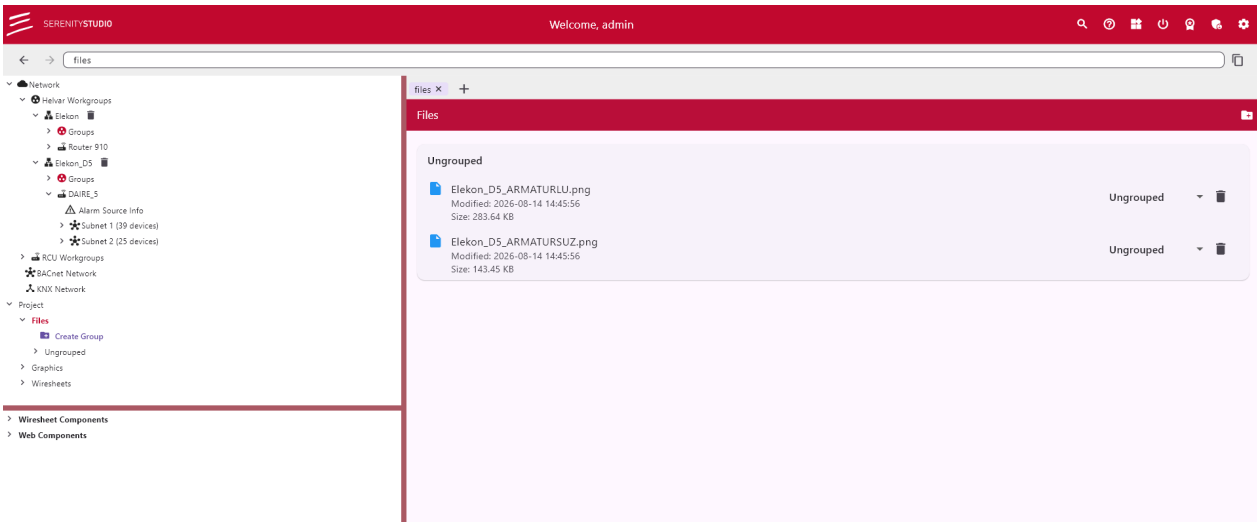
7. Files and Media

Tabs under the Project node:

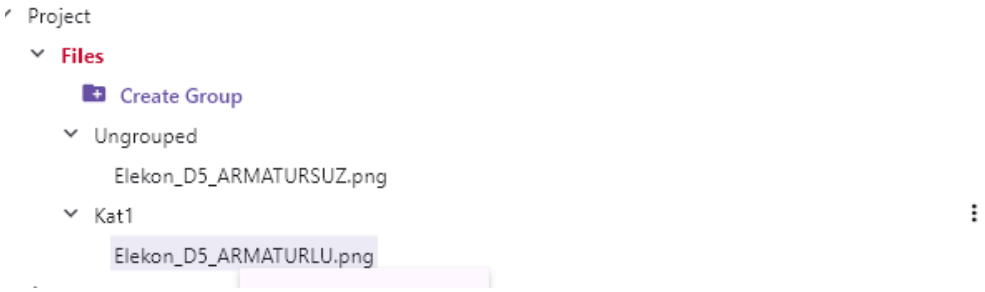
Import images in the Files tab. These images appear under this node and are available for use on Graphics pages.



Added images can be organized into logical groups.

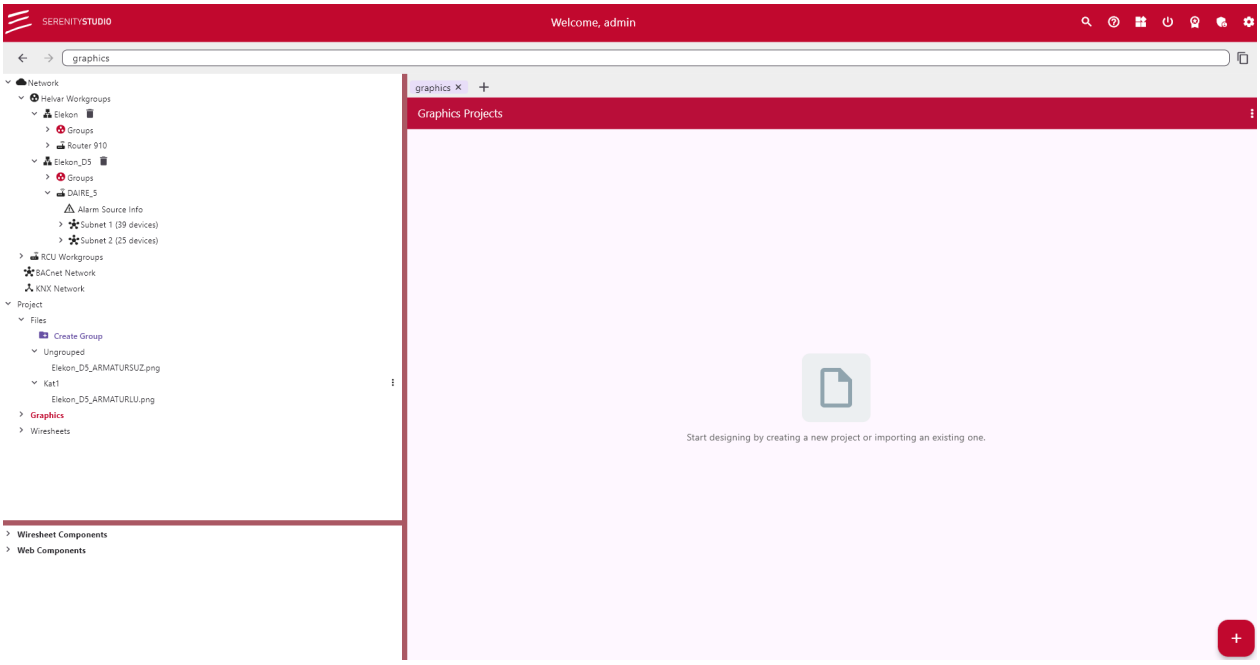


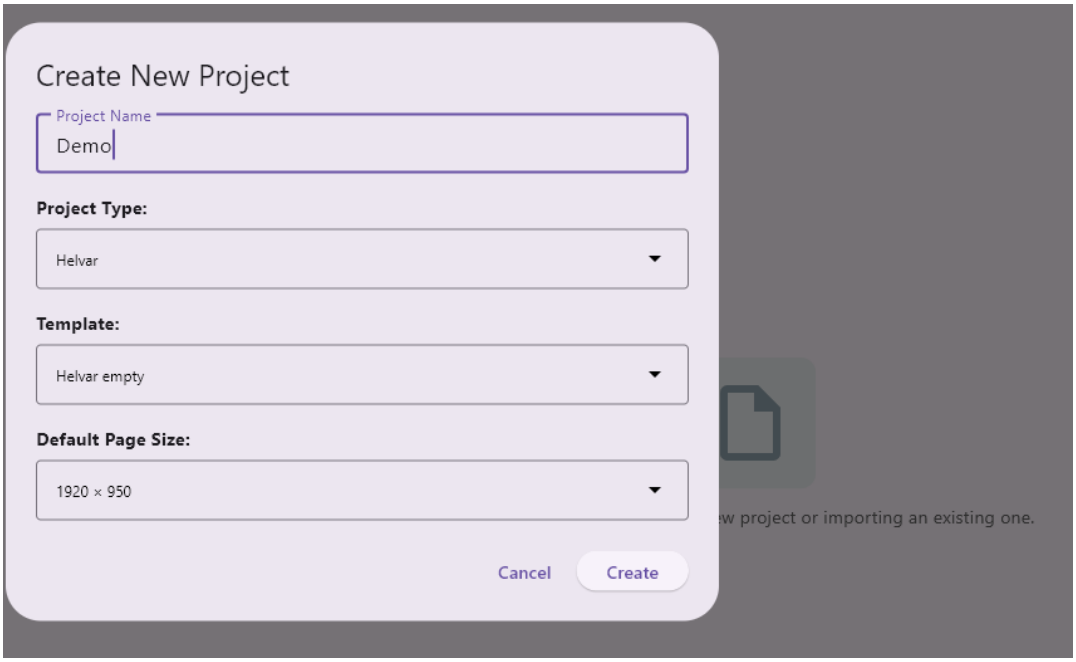
Grouping makes the hierarchy easier to browse. Select Create Group to make a group, then drag and drop nodes in the tree or use the dropdown on a detail page to assign items to a group.



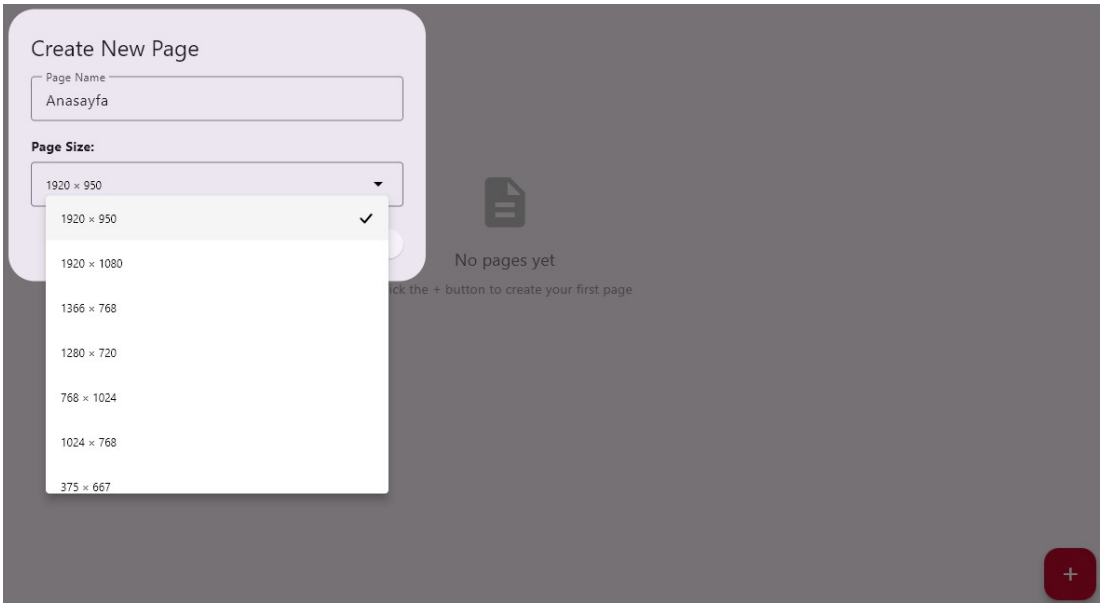
8. Graphics Projects

Create a new Graphics project by selecting the + button in the lower-right corner.

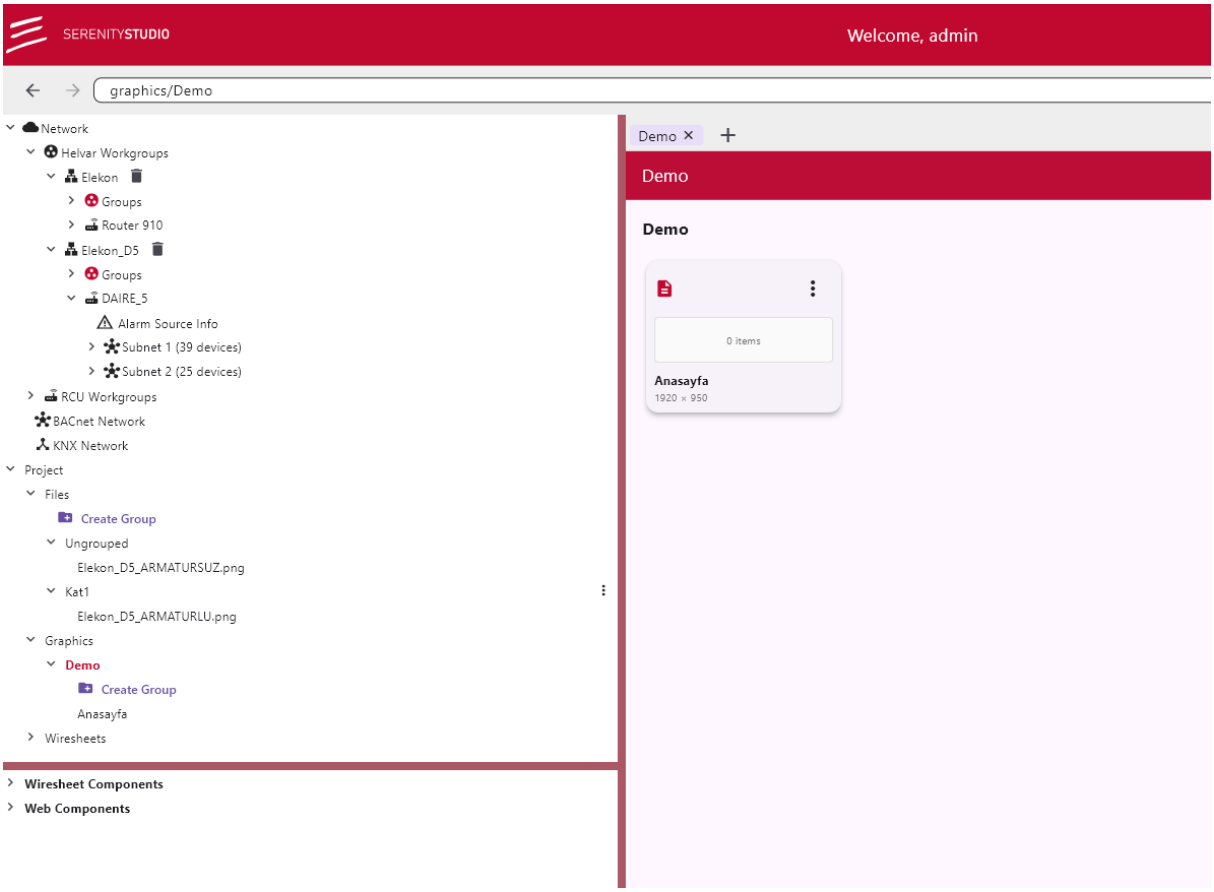




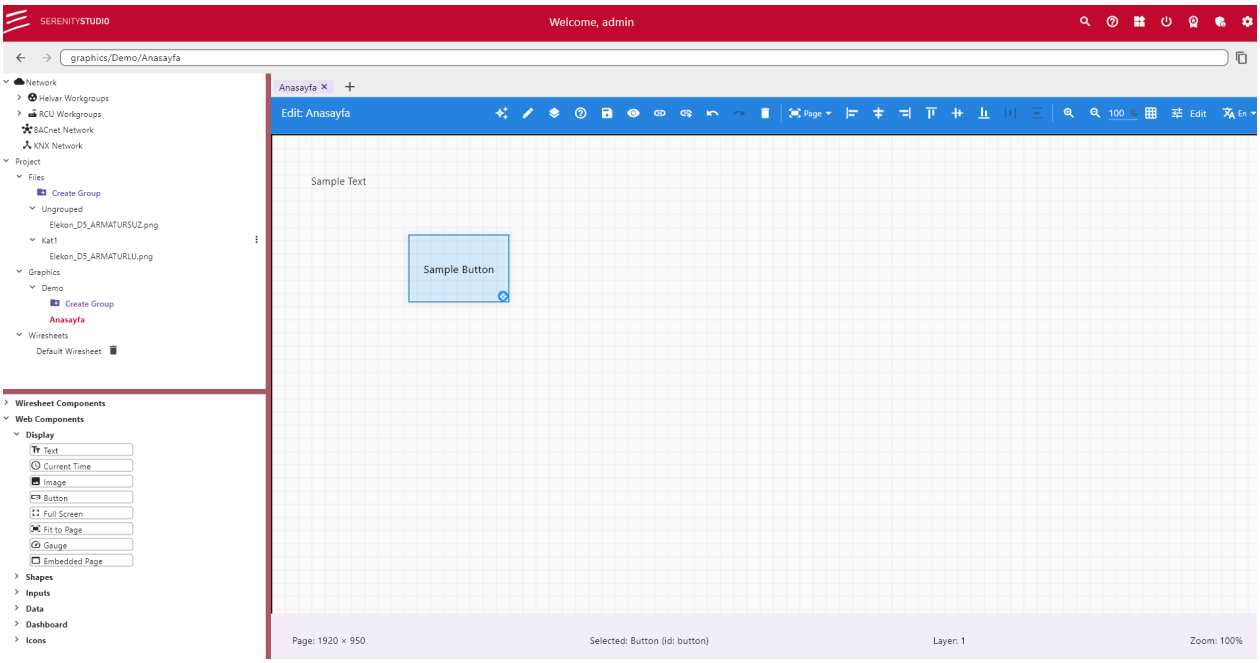
After creating the project, select the page creation button in the lower-right corner. In the form that opens, set the page name and dimensions, then create the page.



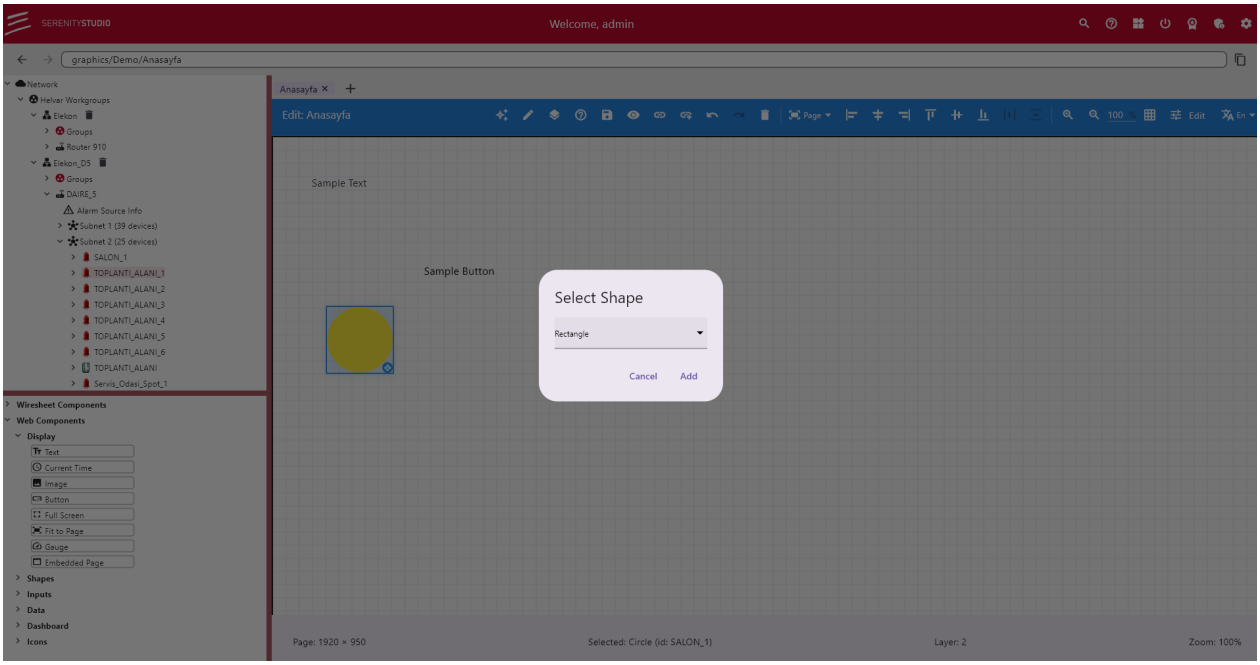
Graphics pages present device and scenario data visually, support user interaction, and let you build dashboards.



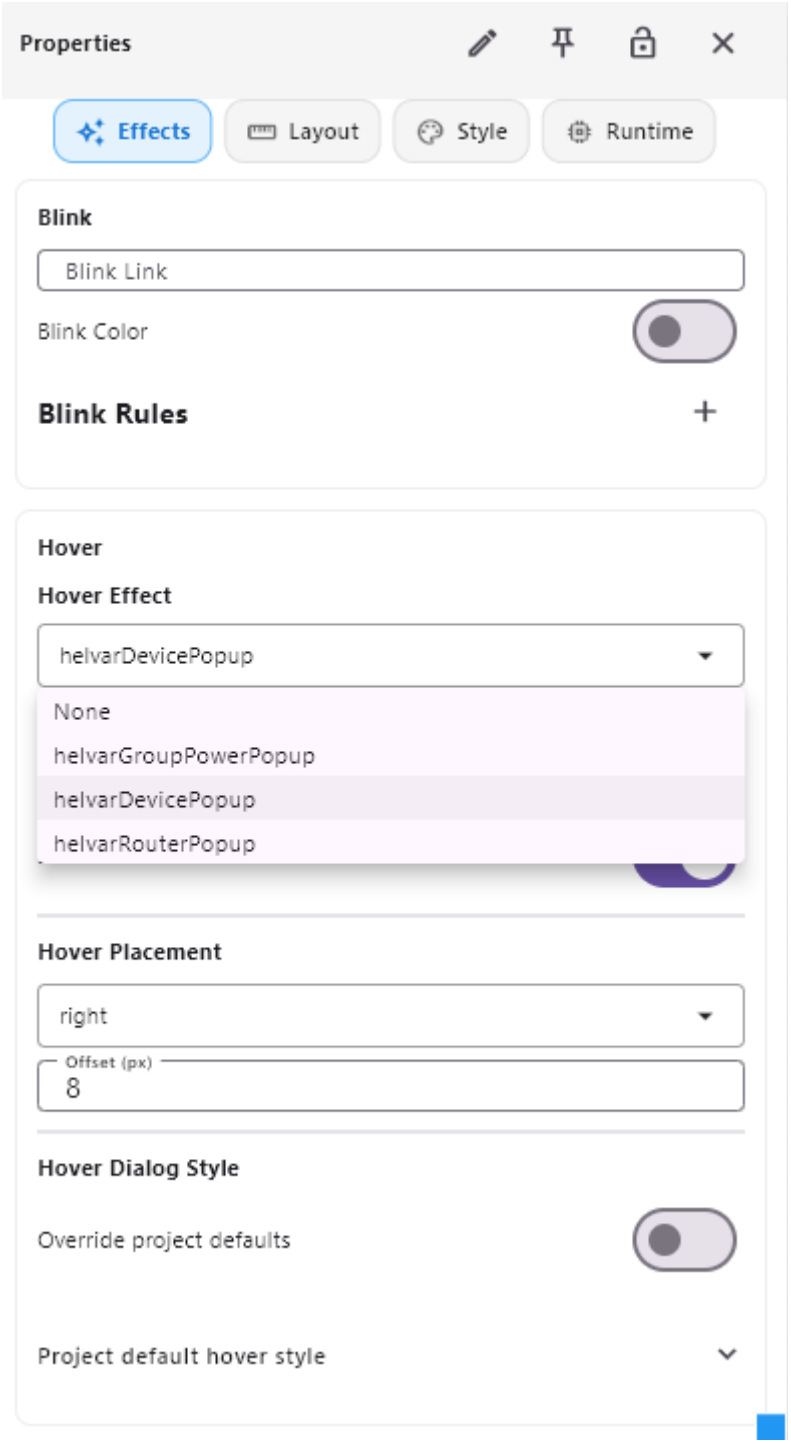
Select a page to open its design view. Drag Web Components from the lower-left panel or Helvar components from the tree onto the page to build the layout.



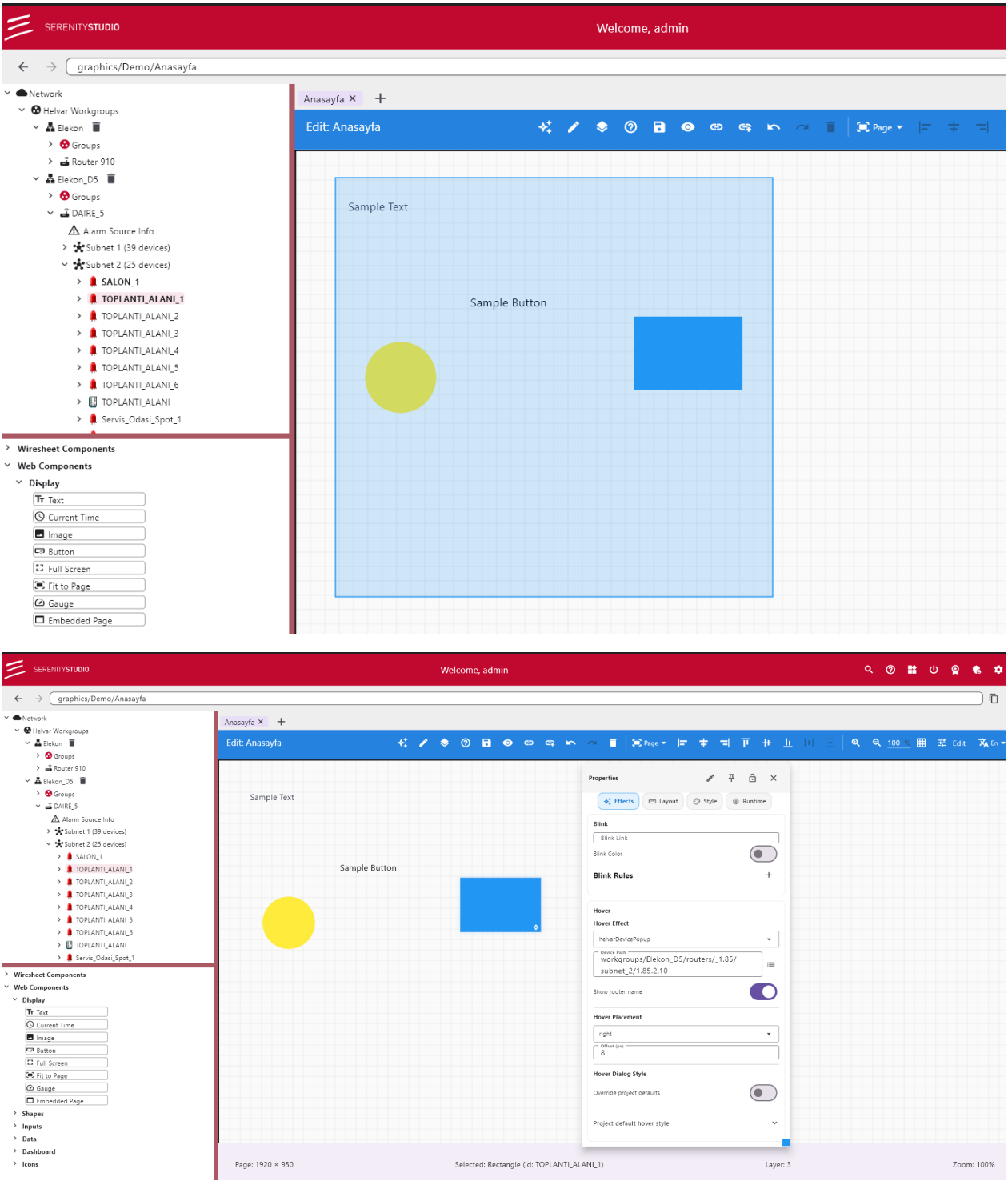
When you drag a device onto the page, you are asked to choose its shape.



Each page component has a Properties Panel with settings grouped under Effects, Layout, Style, and Runtime. Use the pencil button to change the order of these groups; the buttons in the panel's upper-right corner let you pin the panel and control its position. For Helvar devices, Effects can display device information on hover. Device components also show linked device details and health status.

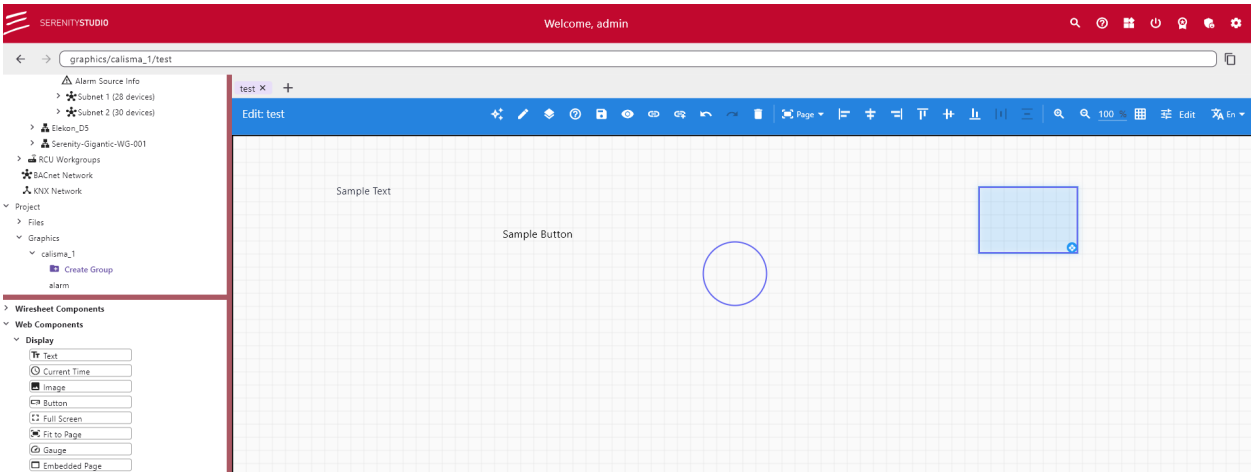


Graphics pages also support multi-selection, zooming, panning by right-clicking and dragging, and keyboard shortcuts such as copy, paste, delete, and moving components with the arrow keys.



The panel opened by the question-mark button in the top toolbar lists all shortcuts.

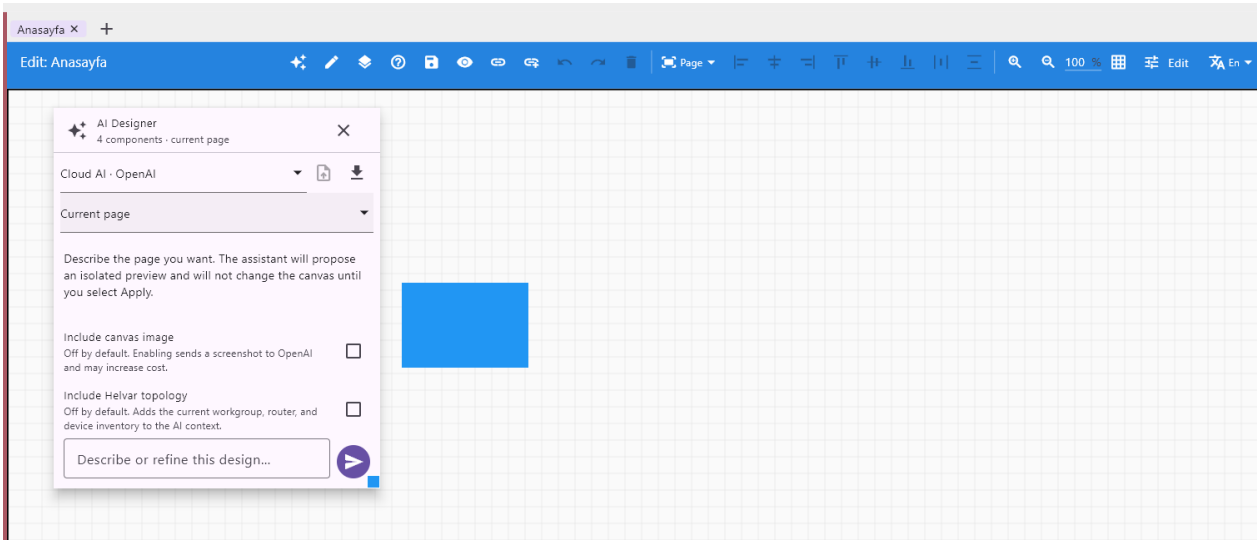
8.1 Graphics Page Toolbar



Graphics page toolbar

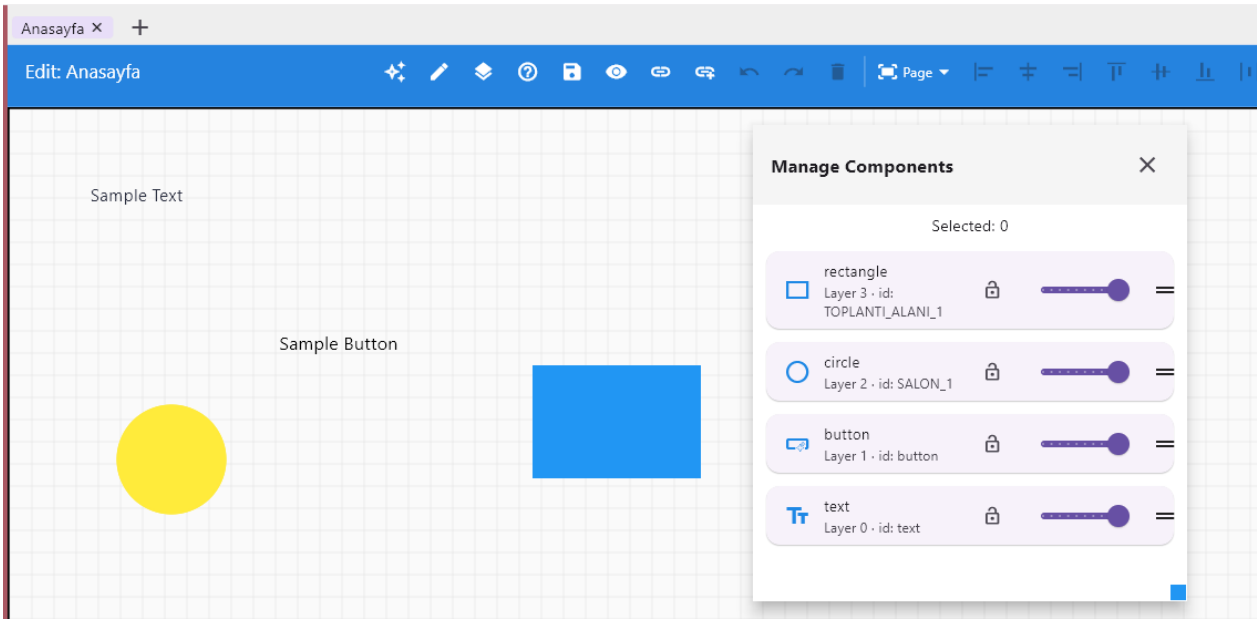
The blue toolbar at the top of the graphics editor is used to save the page, arrange components, and preview the finished design. The open page name appears beside Edit on the left. Hover over a button to see its name. The buttons shown below are described from left to right.

AI Designer (sparkles) opens a panel where you can describe a page change in natural language. Review the proposed changes and select Apply to use them.



Rename Page (pencil) changes the name of the open graphics page. Enter the new name and confirm to update it.

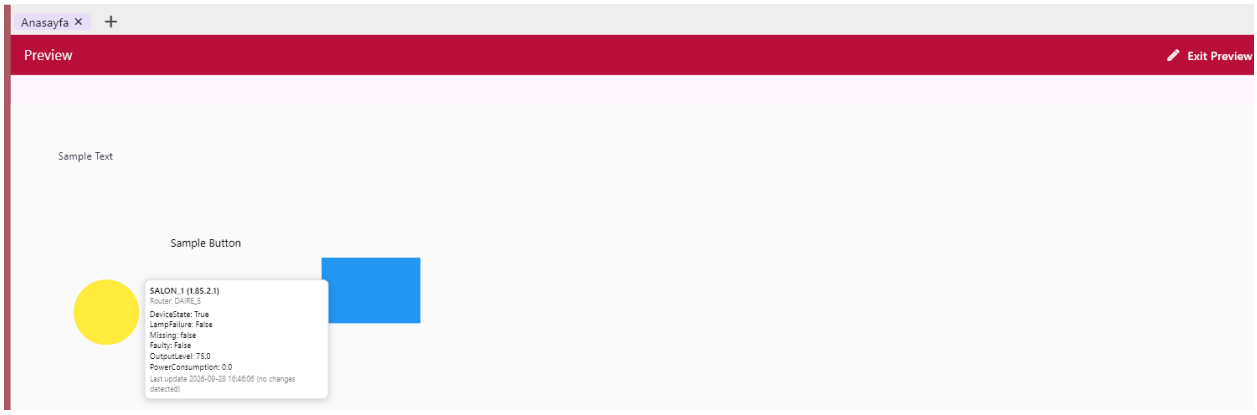
Manage Components (stacked layers) shows or hides a list of components on the page. Select a component in the list, drag items to change their layer order, or adjust their visibility and opacity.



Keyboard and Mouse Shortcuts (question mark) opens a help panel with shortcuts for multi-selection, copy and paste, deletion, zooming, and moving around the page.

Save Page (floppy disk) saves changes to the page. A progress indicator appears while saving. Save after editing to keep the latest design.

Preview (eye) opens the saved page in the application's preview. Use it to check the page's runtime appearance and behavior. Unsaved changes are not included.



Copy Dashboard URL (chain) copies the URL of the open graphics page to the clipboard. Paste it into a browser to open the page, provided the web view is available to the user.

Create Shortcut (chain with a plus) creates a Windows internet shortcut that opens the graphics page in a browser. Choose the Desktop or another folder in the save dialog.

Undo (curved left arrow) reverses the last edit. Redo (curved right arrow) reapplies an undone edit. These buttons are disabled when there is no action to undo or redo.

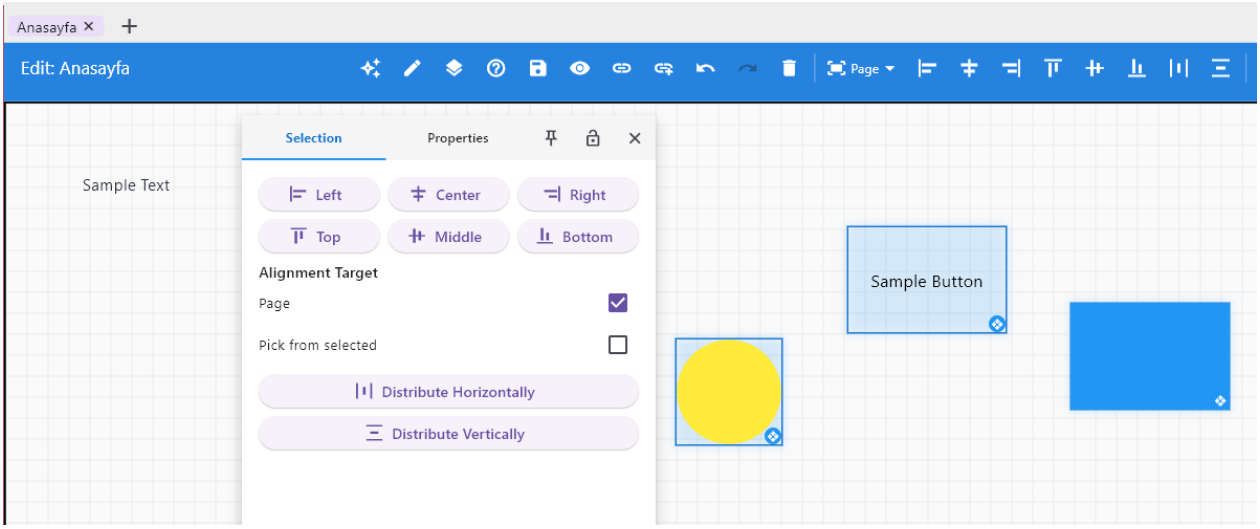
Delete Selected (trash can) removes the selected components. It is disabled when nothing is selected.

The Page dropdown sets the reference used by the alignment buttons beside it. With Page selected, components align to the page edges or center. Select Pick from selected to align relative to a selected component; this requires at least two components.

Align Left aligns the left edges of selected components to the reference's left edge. Align Center aligns their horizontal centers. Align Right aligns their right edges.

Align Top aligns the top edges of selected components to the reference's top edge. Align Middle aligns their vertical centers. Align Bottom aligns their bottom edges.

Distribute Horizontally makes the horizontal gaps between selected components equal. Distribute Vertically does the same for vertical gaps. Select at least three components to use either command.



Zoom In (magnifier with plus) enlarges the design view; Zoom Out (magnifier with minus) reduces it. Zoom changes the view scale, not the components' actual size.

The percentage field beside the magnifiers shows the current zoom level. Enter a percentage and press Enter to set it directly; for example, enter 100 for a 100% view.

Show Grid / Hide Grid (grid) shows or hides the design canvas grid. Use it as a visual guide when positioning components.

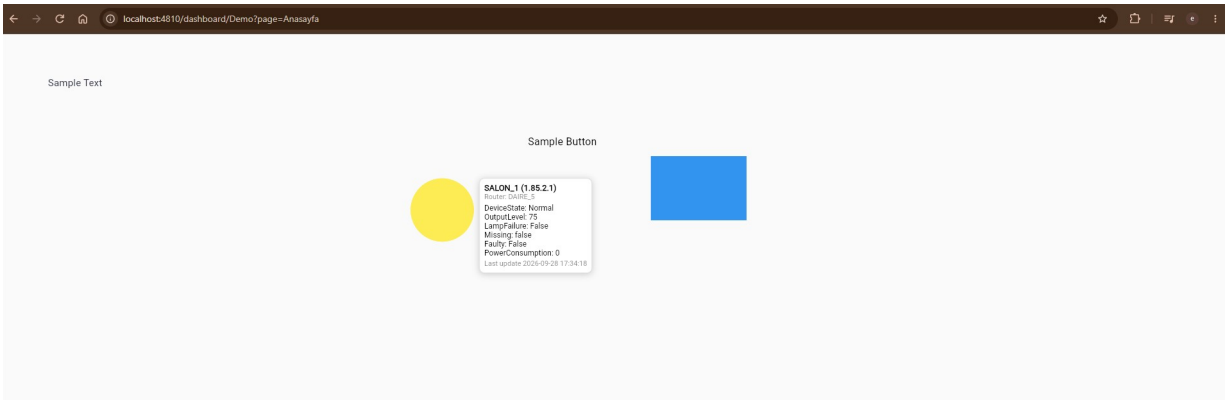
Show Properties / Hide Properties (sliders) shows or hides the Properties Panel for the selected component. Select one or more components first; the panel supports multi-selection.

The Edit menu contains Copy, Paste, Select All, and Delete. Copy duplicates the selected components to the clipboard; Paste inserts copied components; Select All selects every component on the page; Delete removes the current selection. Copy and Delete require a selection, while Paste requires copied components in the clipboard.

The language menu at the far right changes the language of supported component labels and built-in text in the graphics project between English and Turkish. The selection is saved for the project. Text entered by the user is not translated automatically.

Some buttons are disabled when the required selection is missing or the user lacks edit permission. Page alignment needs at least one component, alignment relative to a selected component needs at least two, and distribution needs at least three.

The URL copied with Copy Dashboard URL opens the designed page as a live web view in a browser.



8.2 Graphics Components

Many components have Value Link, Text Link, Color Link, or Blink Link fields that accept links copied from a wiresheet with Copy Link. This lets a scenario value appear on the page and, for controls that accept user input, sends changes back through a suitable Writable point. Left-click or double-click actions can navigate to another page, open a popup or external URL, or write a value. Hover effects can show information about a device, group, or router.

The Web Components panel in the lower-left corner contains the Display, Shapes, Inputs, Data, Dashboard, and Icons groups.

Display

Display components show text and images, provide indicators, and control how content appears on the page.

- Text: Displays fixed or linked text. Enter content in Text, or use Text Link and Text Rules to show live values or rule results. The %path_link% and %rule_result% placeholders can be used in the text. Color Link and Blink Link control color and blinking. For example, use Text to label a sensor reading or scenario result.
- Current Time: Shows the client’s current date and time and updates live. Choose a format such as HH:mm:ss or dd/MM/yyyy in Time Format. It has no Text Link, but supports color and blink links. Use it to keep a clock visible on a dashboard.
- Image: Adds an image to the page. Choose an image imported through Files, then adjust its size, crop, and fit options. Use it for logos, plans, or other visual references.
- Button: Adds an interactive button. Set its label and appearance, then configure an action such as navigating to a page, opening a popup or URL, or writing a value through a link.
- Full Screen: Adds a control that switches the graphics page to full-screen view. It is useful on operator displays where the page should occupy the whole screen.

- Fit Page: Adds a control that fits the graphics page to the available viewing area. Use it to restore the complete layout after zooming or panning.
- Gauge: Displays a linked numeric value on a gauge. Set the value range and appearance so users can read a measurement or operating level at a glance.
- Embedded Page: Displays another graphics page inside the current page. Choose the page to embed and set its size and display options to present related information together.

Shapes

Shapes are visual elements used to organize a page, highlight areas, or illustrate a layout.

- Line: Adds a straight line. Adjust its endpoints, color, and thickness to divide or connect areas of the design.
- Circle: Adds a circle with equal width and height. Use its fill and border to highlight a point or status.
- Ellipse: Adds an oval shape. Set its dimensions, fill, and border to mark an area.
- Rectangle: Adds a rectangle whose width and height can be set independently.
- Square: Adds a square with equal sides. Adjust its fill and border to create a consistent tile or marker.
- Polygon: Adds a polygon with editable points. Use it for custom areas or symbols.
- Arrow: Adds an arrow shape to indicate direction or a relationship between areas.
- Curve: Adds a curved line that can be shaped by adjusting its points.

Inputs

Input components let users enter or change values on a graphics page. Link them to appropriate writable points to pass those values to a wiresheet.

- Numeric Input: Lets the user enter a number. Set the label, limits, and display format, then connect Value Link to a suitable Numeric Writable point.
- String Input: Lets the user enter text. Set the label and input options, then connect it to a String Writable point when the value should be used in a scenario.
- Boolean Input: Lets the user switch a true/false value. Configure its labels and appearance, then link it to a Boolean Writable point.
- Slider: Lets the user choose a numeric value by moving a slider. Set its minimum, maximum, and step, then connect it to a Numeric Writable point.

Data

Data components display structured information such as tables, trees, alarms, emergency tests, and schedules.

- Table: Displays rows and columns of data. Configure its data source and visible columns to present information in a tabular form.

- Tree Menu: Creates a tree menu for navigating between pages. Each item can have a label, optional Text Link or Value Link, and a Navigate action. Configure the selected-row color, indentation, and spacing to create a menu for floors, areas, or zones.
- Alarm Table: Displays the live alarms for the selected alarm group. Configure the visibility, order, and width of columns such as router, device, address, status, last event, count, and acknowledgement. Date filters and pagination are available for reviewing active alarms.
- Emergency Test Table: Lists Helvar emergency-lighting test results. Limit the scope to the system, a workgroup, router, or group. Function and Duration results and their timestamps are shown. To pair it with an Emergency Test Scheduler, enter that scheduler component's ID in Scheduler Source ID.
- Emergency Test Scheduler: Schedules Function and Duration emergency tests for a workgroup, router, or group. Recurring schedules can be configured. An Emergency Test Table on the same page can filter results from this scheduler when its ID is set as Scheduler Source ID.
- Calendar: Defines time ranges in a weekly schedule and assigns a value to each range. The active range is determined by the current time. Connect Value Link to a Calendar or Writable point on a wiresheet to pass the selected value to a scenario. For example, use it to enable a scenario during working hours. This component has no hover or click actions.

Dashboard

Dashboard components display system health, Helvar device summaries, energy, and alarm information in ready-made cards. They retrieve their own data and do not use Value Link. Energy Date Range on the page sets the period used by the energy cards.

- Machine RAM: Shows the computer's available and total RAM.
- Machine CPU: Shows processor usage as a percentage.
- Machine Storage: Shows the free and total capacity of the monitored disk.
- Log File Size: Shows the size of the log file monitored by the application.
- Routers: Shows the number of online Helvar routers and the total number.
- Luminaires: Shows the healthy and total number of lighting devices.
- Buttons: Shows the healthy and total number of button devices.
- Sensors: Shows the healthy and total number of sensors.
- Emergency: Shows the healthy and total number of emergency-lighting devices.
- Polling Speed: Shows the Helvar polling rate in queries per second.
- Energy Savings %: Shows the energy savings percentage compared with baseline consumption.
- Tree Equivalent: Shows the estimated tree equivalent associated with energy savings.
- Energy Avoided: Shows the amount of energy saved.
- Avoided CO2: Shows the carbon emissions avoided through energy savings.

- Energy Baseline: Shows the reference consumption used to calculate savings.
- Total Energy: Shows total energy consumption for the selected period.
- Energy Date Range: Selects the day, month, year, or all-time view used by the energy cards and Energy Chart on the same page. In day, month, or year view, choose a date to inspect consumption for that period.
- Alarmed Devices: Shows the number of devices in an alarm state.
- Total Devices: Shows the total number of devices in the alarm scope.
- Alarm Percentage: Shows the percentage of devices in an alarm state.
- Alarm Report: Provides a control for downloading an alarm report. It is a download button, not a value card.
- Maintenance: Combines maintenance dates and status in one card. View upcoming and previous maintenance and manage the related settings here.
- Router Communication: Shows router communication status in a tabbed summary. Configure the colors used for healthy and faulty states.
- Energy Chart: Shows energy consumption as a chart and updates to match the period selected in Energy Date Range.

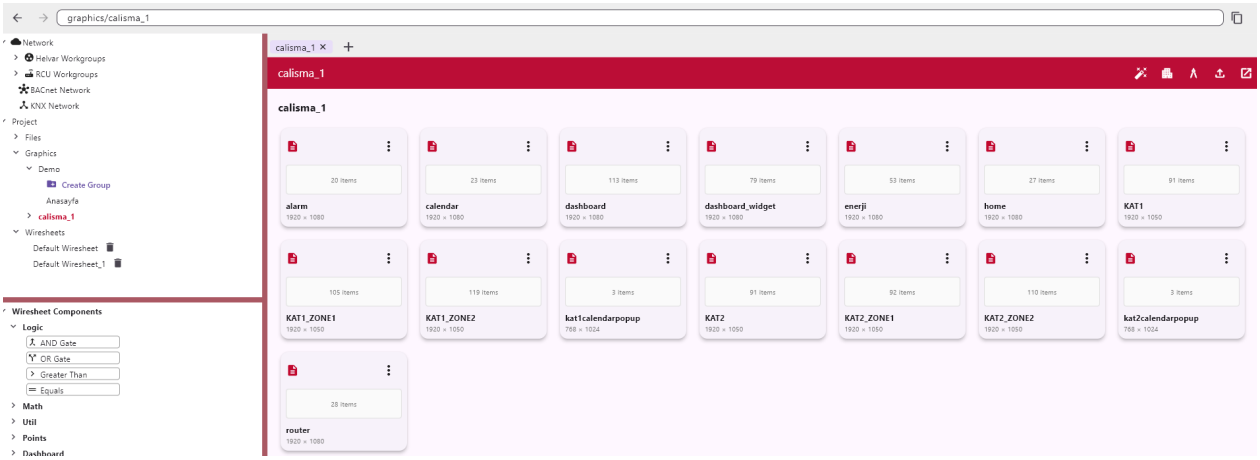
Icons

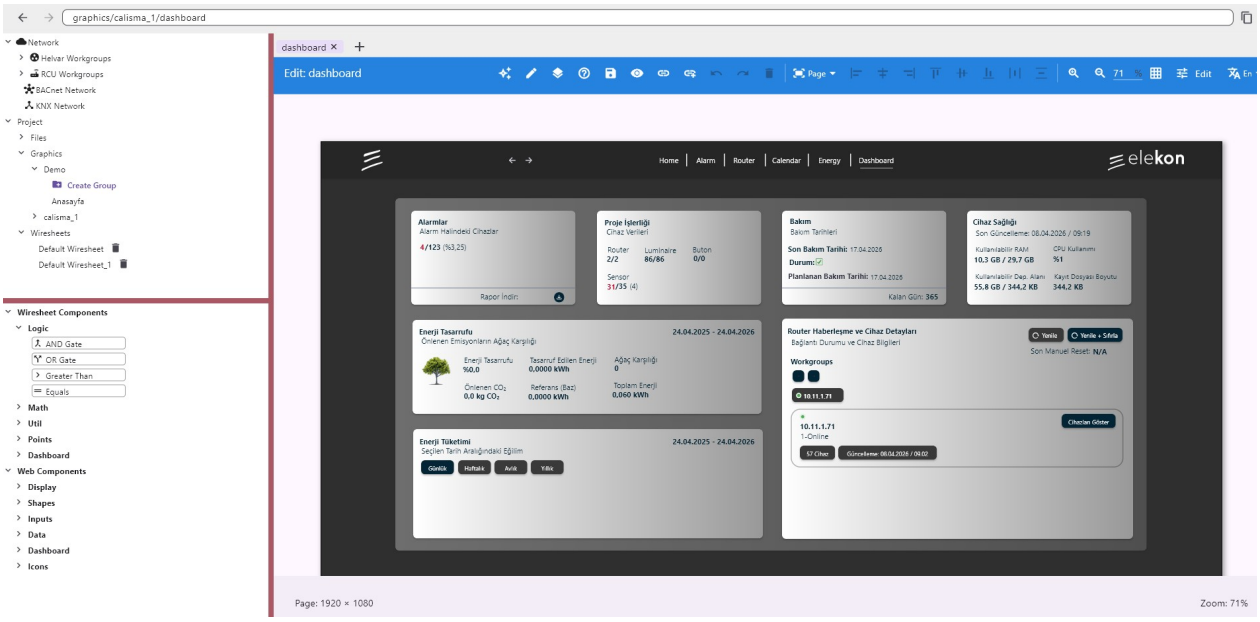
The Icons group contains Material Icons. Drag it onto the page to open the icon library; the selected icon is added as an Image. Use icons to show status, navigation, or visual emphasis.

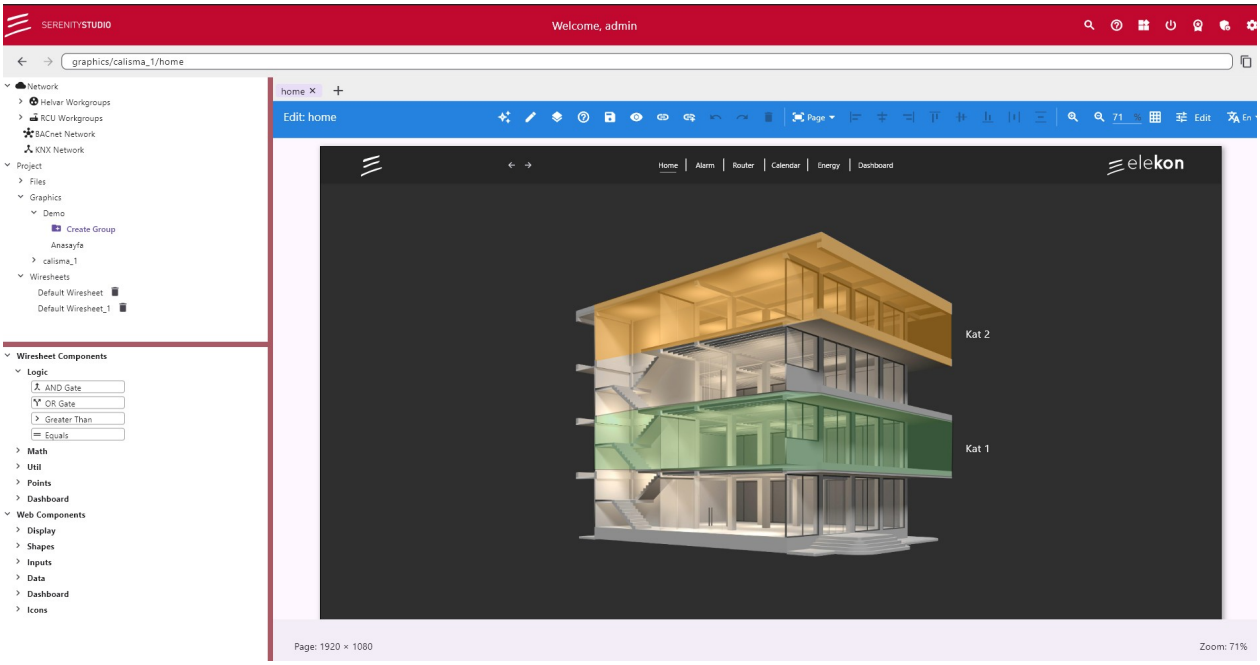
To connect a graphics component to a wiresheet, right-click the wiresheet component and select Copy Link, then paste the link into the appropriate field. Text Link supplies text, Value Link supplies a numeric or writable value, and Color Link and Blink Link control appearance. Dropping a device or router from the Network tree can also create live hover and status links automatically.

8.3 Import, Export, and Sample Project

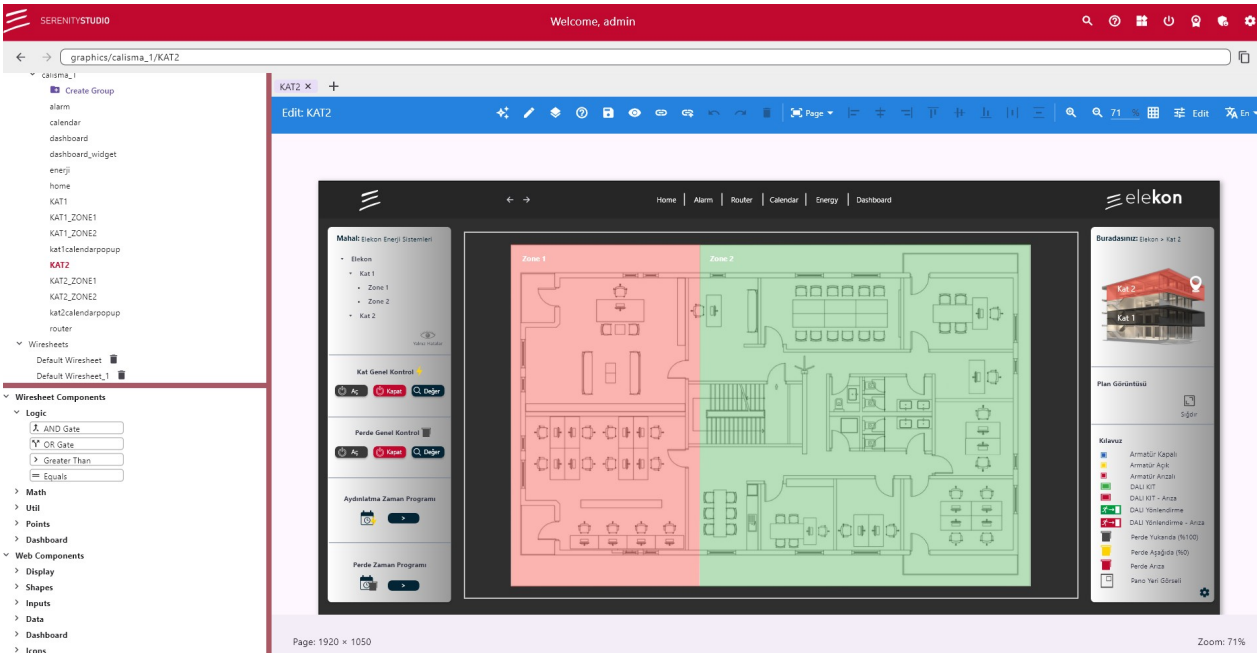
The following image shows a sample project design.







Projects and graphics pages can be shared as JSON files through import and export. Other available operations include resizing, duplicating, and grouping.



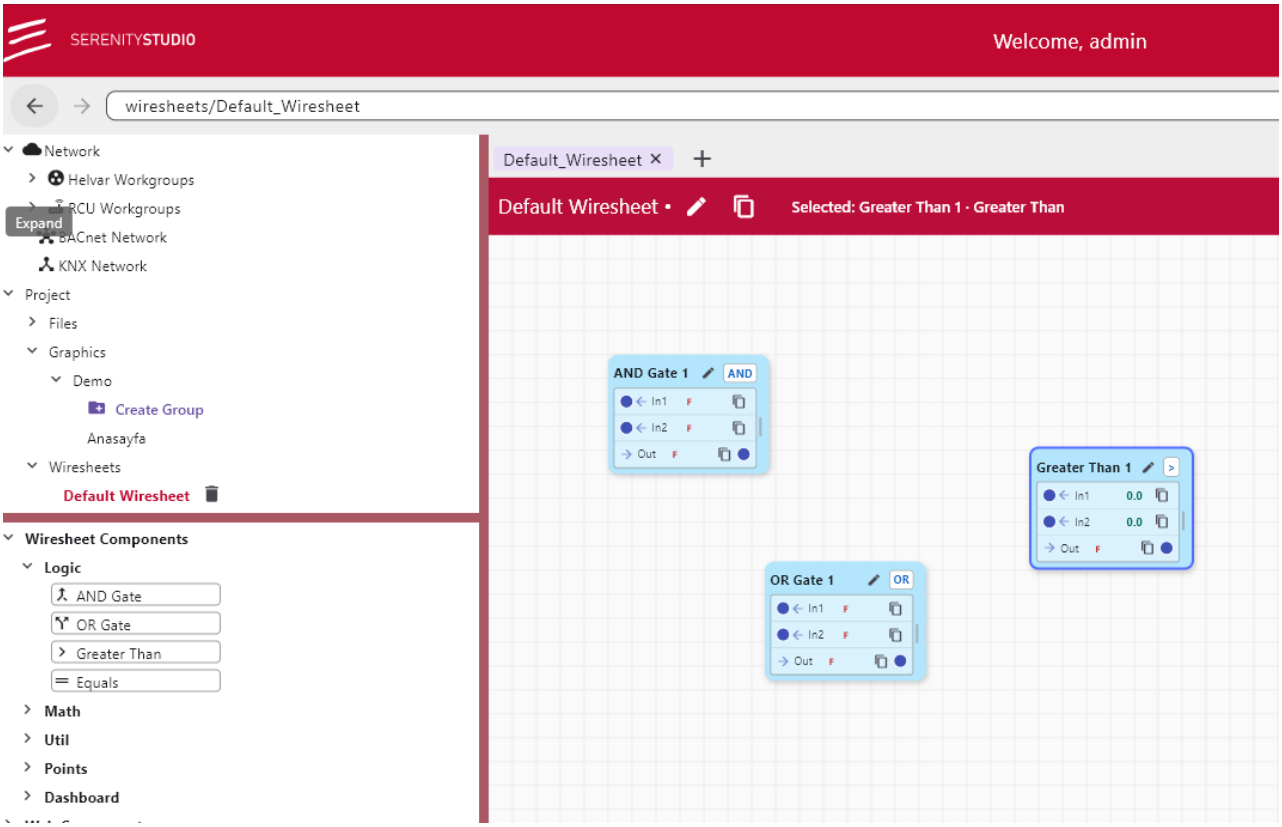
9. Wiresheet Pages (Scenarios)

Wiresheet pages are used to process information from devices and build scenarios from it. Drag components from Wiresheet Components in the lower-left corner onto the page, then connect their inputs and outputs to define the logic.

If every selected component has one Boolean or Numeric output, select at least two components, right-click, and choose the desired function item (for example, Create Add function). Numeric selections offer Add, Multiply, Min, Max, and Average; Boolean selections offer AND, OR, and Sum. Sum counts true as 1 and false as 0. The generated Custom Code component has one input for each source. Inputs are ordered from top to bottom and then left to right on the canvas, with component ID as the tie-breaker. Source components and existing connections stay in place. The new component is placed to the right of the selection, and the operation is one Undo/Redo step. Its Out port has the generic any type, so it is not eligible as the source of another aggregate from this menu; aggregates cannot be chained through this menu.

When creating router wiresheets automatically, turn on Include Device Points and narrow the point filters below it. The filters cover six standard output points, eight emergency output points, and the Missing and Occupancy/PIR input points. They work independently of the device component filters, so matching points from selected router data can be created even when their device components are excluded. No points are created when Include Device Points is off.

Use Ctrl+C and Ctrl+V to copy and paste selected components. The wiresheet places each pasted group to the right of its source, with space between the groups and existing components. When you choose a paste location from the right-click menu, the editor keeps it if the area is clear and shifts the group to the right if it is occupied. Paste Special places its copies side by side.



In or Input identifies an input; Out or Output identifies an output. Boolean values are true or false, Numeric values are numbers, and String values are text. Event outputs such as On Done and On Tick trigger connected operations.

Wiresheet Components contains the Logic, Math, Util, Points, and Dashboard groups.

Logic

Logic components compare incoming values and create conditions.

- **AND Gate:** Out is true only when both In1 and In2 are true; otherwise it is false. For example, use it to act only when motion is detected and the operating schedule is active.
- **OR Gate:** Out is true when either In1 or In2 is true. It is false only when both inputs are false. For example, either of two motion sensors can trigger a response.
- **Greater Than:** Checks whether In1 is greater than In2. It outputs true when it is and false when In1 is equal to or less than In2. For example, connect a sensor reading to In1 and a threshold to In2.
- **Equals:** Checks whether the values at the two inputs are equal. It outputs true when they match and false when they differ. It can compare numbers, text, or true/false values.

Math

Math components perform calculations on numeric values. The result is available at Out.

- **Add:** Adds the values at In1 and In2. For example, inputs of 20 and 30 produce 50.
- **Subtract:** Subtracts In2 from In1, so input order matters. For example, In1 = 80 and In2 = 30 produce 50.
- **Multiply:** Multiplies the values at the two inputs. Use it to scale a value by a factor.
- **Divide:** Divides In1 by In2. For example, inputs of 100 and 4 produce 25. If In2 is 0, no valid result can be calculated and Out is null.
- **Maximum:** Sends the larger of the two input values to Out. Use it when the higher of two sensor readings is needed.
- **Minimum:** Sends the smaller of the two input values to Out.
- **Average:** Calculates the arithmetic mean of the two input values. Inputs of 40 and 60 produce 50.
- **Power:** Raises the number at Base to the value at Exponent. Base = 2 and Exponent = 3 produce 8.
- **Absolute Value:** Outputs the absolute value of the number at Input. For example, an input of -25 produces 25.

Util

Util contains helper components for scheduling, text processing, custom calculations, and alarm monitoring.

- **Ramp:** Produces changing numeric values. It starts when Start is true. Interval sets the change interval in seconds, and Range sets the upper limit for the random value added at each step. The current value is available at Output.
- **Timer:** Waits for a set period after a condition occurs. When Start becomes true, it waits for the Duration in seconds, then triggers On Done.
- **Cron:** Triggers an operation repeatedly at a set interval. Enter the repeat period in seconds. For example, a value of 60 triggers On Tick every 60 seconds. The value at Value is passed to the connected operation on each tick.
- **Print:** Writes the supplied text to the debug log. When the event connected to Print is triggered, its value is logged. Use it to inspect when a scenario runs or what value it produces.
- **Current Time:** Outputs the current date and time at Time. It updates every second in yyyy-MM-dd HH:mm:ss format. Use Substring and comparison components to create conditions based on the hour or minute.
- **Date Time:** Outputs a date and time selected by the user. Date uses yyyy-MM-dd format and Time uses HH:mm:ss. Unlike Current Time, it does not advance continuously; it provides the selected date and time as a reference.
- **String Concat:** Joins the text at In1 and In2 in order. For example, Kat and 1 produce Kat 1. Enter spaces or separators in the inputs if needed.

- **Substring:** Extracts part of a text value. Provide the text at Text and the starting and ending positions at Start and End. Positions start at 0, and the character at End is excluded.
- **Custom:** Runs a custom calculation or conversion when the built-in components are not sufficient. Adjust the number of inputs as needed and write JavaScript in Custom Code. Values from the inputs are available to the code, and its result is passed to the outputs.
- **Calendar:** Connects a schedule on a graphics page to a wiresheet scenario. A time-range value defined by the graphics Calendar can be passed to this component's In1 through Value Link.
- **Energy Integrator:** Calculates energy consumption over time from instantaneous power inputs. Provide power in watts at In1–In4. Valid inputs are added and hourly, daily, weekly, monthly, and yearly energy totals are produced in kWh.
- **Alarm Class:** Outputs the number of devices currently in alarm within the selected scope at Alarmed device count. Limit the scope by workgroup or alarm group. Connect the output to Greater Than to trigger an action when the count exceeds a threshold.
- **Alarm Groups:** Lists the alarm groups defined in the system. Drag a group onto the wiresheet to create a summary component for it. Group name gives the name, Assigned device count gives the assigned-device total, and alarm status outputs provide the group's alarm summary.

Points

Points components hold values in a scenario, use incoming information, and exchange data with graphics pages.

- **Boolean Writable:** Holds a changeable true/false value. Use it for a user control that enables or disables a scenario, for example. Connect it to a suitable graphics control, such as Boolean Input, when users need to change the value.
- **Numeric Writable:** Holds a changeable numeric value. Use it for a user-set threshold, duration, level, or factor.
- **String Writable:** Holds a changeable text value. Use it for a user-entered description, status message, or other text parameter used by a scenario.

Writable components have an Out output and In1–In4 inputs. When multiple inputs are connected, the first non-null value takes priority, starting with In1. The selected input value can be changed by a user through an appropriate linked graphics control.

- **Boolean Point:** Provides a readable true/false value at Out, such as a device status or the result of a condition.
- **Numeric Point:** Provides a numeric value at Out, such as a sensor reading, level, or counter.
- **String Point:** Provides a text value at Out, such as a device description or text status.

Point components do not have the In1–In4 inputs found on Writable components. They pass the value of their associated source into the scenario. Adding a Point to a page does not by itself associate it with a device; select or link the intended source in its settings.

Dashboard

Dashboard components make system, Helvar device, and energy information available to a wiresheet scenario. Connect their numeric outputs to comparison or calculation components when the scenario needs to use those values.

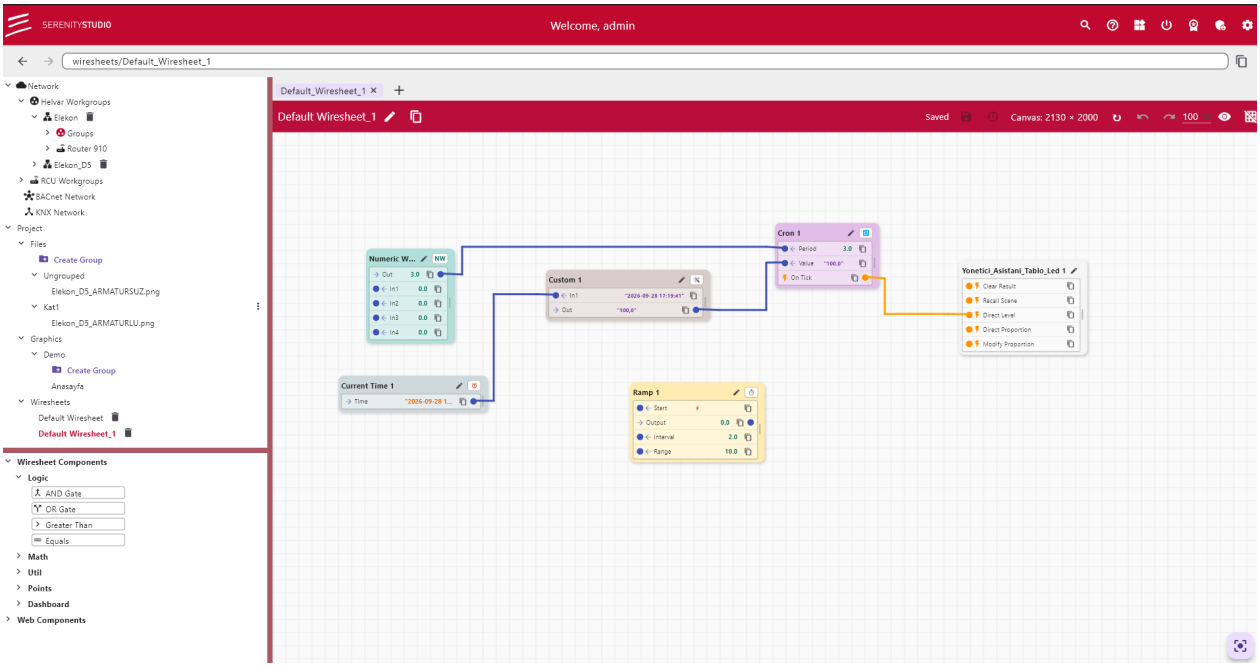
- **RAM:** Outputs the computer's available memory at Free and total memory at Total. Values are in MB.
- **CPU:** Outputs processor usage as a percentage. Use it to check whether usage exceeds a chosen limit.
- **Storage:** Outputs free disk capacity at Free and total capacity at Total for the monitored storage. Values are in MB.
- **Log File Size:** Outputs the size of the application's monitored log file in MB.
- **Routers:** Outputs the number of online Helvar routers at Online and the total number at Total.
- **Luminaires:** Outputs the number of healthy lighting devices at Healthy and the total number at Total.
- **Buttons:** Outputs the number of healthy button devices and the total number of button devices.
- **Sensors:** Outputs the number of healthy sensors and the total number of sensors.
- **Emergency:** Outputs the number of healthy emergency-lighting devices and the total number of emergency-lighting devices.
- **Polling Speed:** Outputs the Helvar polling rate in queries per second. Use it to monitor the rate at which device data is collected.
- **Energy Savings:** Outputs the energy savings percentage calculated against baseline consumption.
- **Trees Saved:** Outputs the estimated tree equivalent associated with energy savings. This is a comparative indicator calculated by the application.
- **Energy Avoided:** Outputs the energy saved compared with baseline consumption, in kWh.
- **Avoided CO2:** Outputs the estimated carbon emissions avoided through energy savings, in kg CO2.
- **Baseline:** Outputs the reference energy consumption used in savings calculations, in kWh.
- **Total Energy:** Outputs total energy consumption for the selected period, in kWh.

Use the From and To inputs on energy components to set a date range. Connect both inputs, and make sure the start date is earlier than the end date. For example, connect two Date Time components to define the period.

To use wiresheet connections on a graphics page, right-click the relevant wiresheet component and select Copy Link. Paste the link into the graphics component's Value Link or Component Link field. Choose the link type that matches the value or behavior needed.

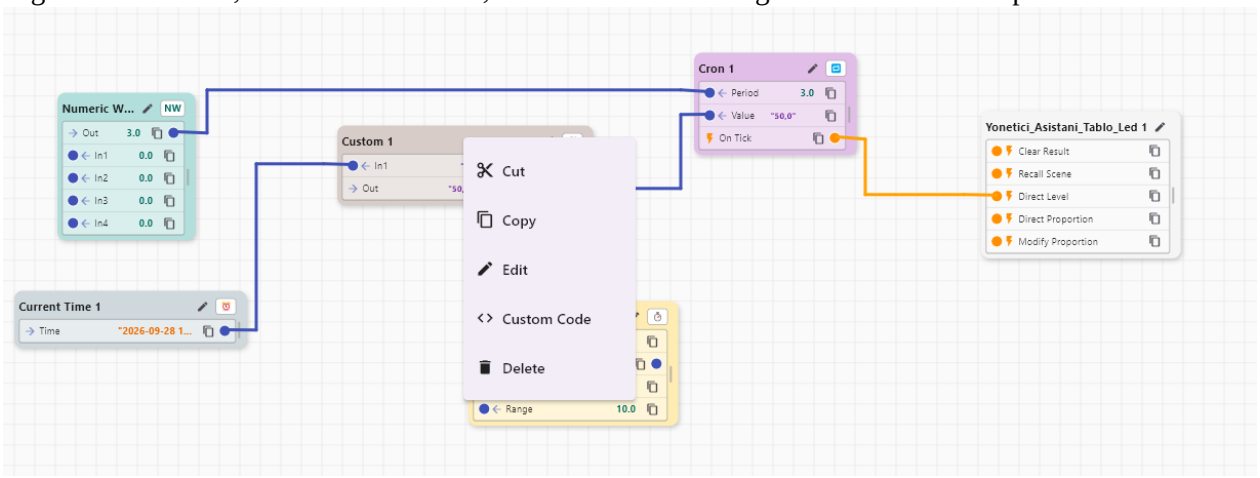
Saving a scenario applies the changes to the scenario running in the background. While you test unsaved edits in the editor, the last saved version continues to run.

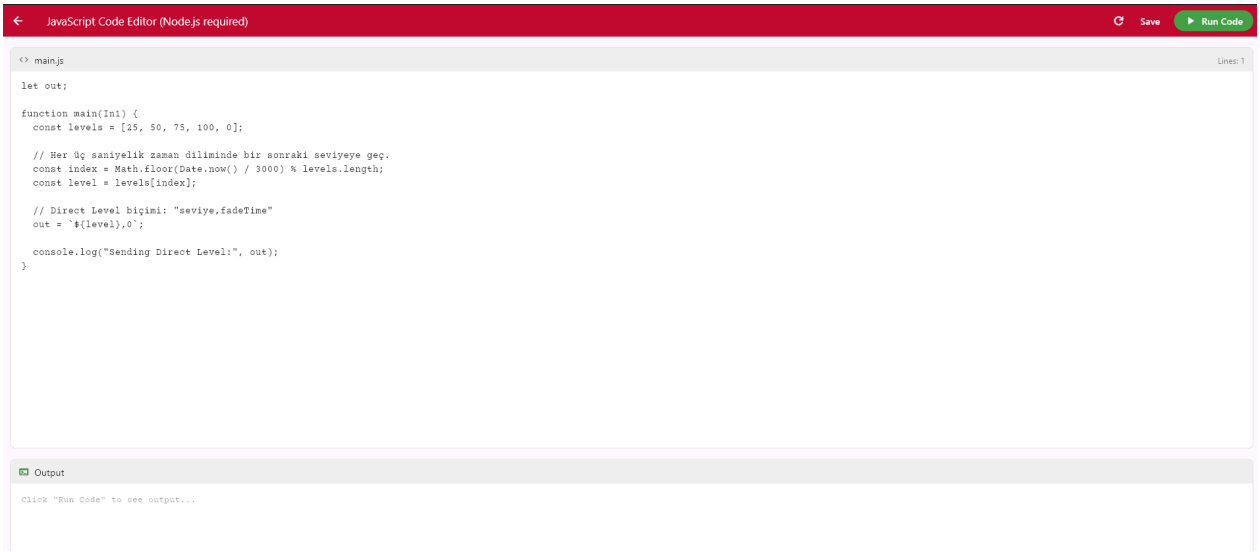
The example below shows a simple wiresheet scenario. A value of 3 assigned to Numeric Writable is connected to the Cron period, so the action runs every three seconds.



The goal is to change the brightness of the Yonetici_Asistani_Tablo_Led Helvar device every three seconds. Connect Custom and Current Time as shown below.

Right-click Custom, select Custom Code, and enter the following code in the JavaScript editor.






```
let out;

function main(In1) {
  const levels = [25, 50, 75, 100, 0];
  const index = Math.floor(Date.now() / 3000) % levels.length;
  const level = levels[index];

  out = `${level},0`;
  console.log("Sending Direct Level:", out);
}
```

The value at Current Time updates every second, so the Custom code also runs at that interval. The code divides the current time into three-second intervals and returns the next value in the levels array. Cron sends that value to the Helvar device every three seconds.

10. User Creation and Permissions

Create user accounts and grant access to pages and projects from the Admin Panel, as shown below. User creation defines accounts that can sign in to the application and the resources each account can access.

The dialog is titled New User. Set the username, password, role, and access permissions here. Select Add to create the account or Cancel to close the dialog.

- Username: The account name the user enters when signing in. This field is required. A username cannot be changed after the account is created; enter it when adding a new user.
- Password: The user’s sign-in password. It is required when creating an account; Add remains disabled if it is blank. The system stores the password securely. No minimum length or special-character requirement is enforced by this form.
- Role: Sets the user’s general permission level. There are two options:

- admin: Provides full access to all projects, wiresheets, and project settings, and allows access to the Admin Panel. No individual wiresheet or graphics-project permissions are needed for this role.
- standard: Allows access only to the resources granted below. This is the default role.

When you select the standard role or create a new user, set permissions for each resource. Choose None, View, or Edit:

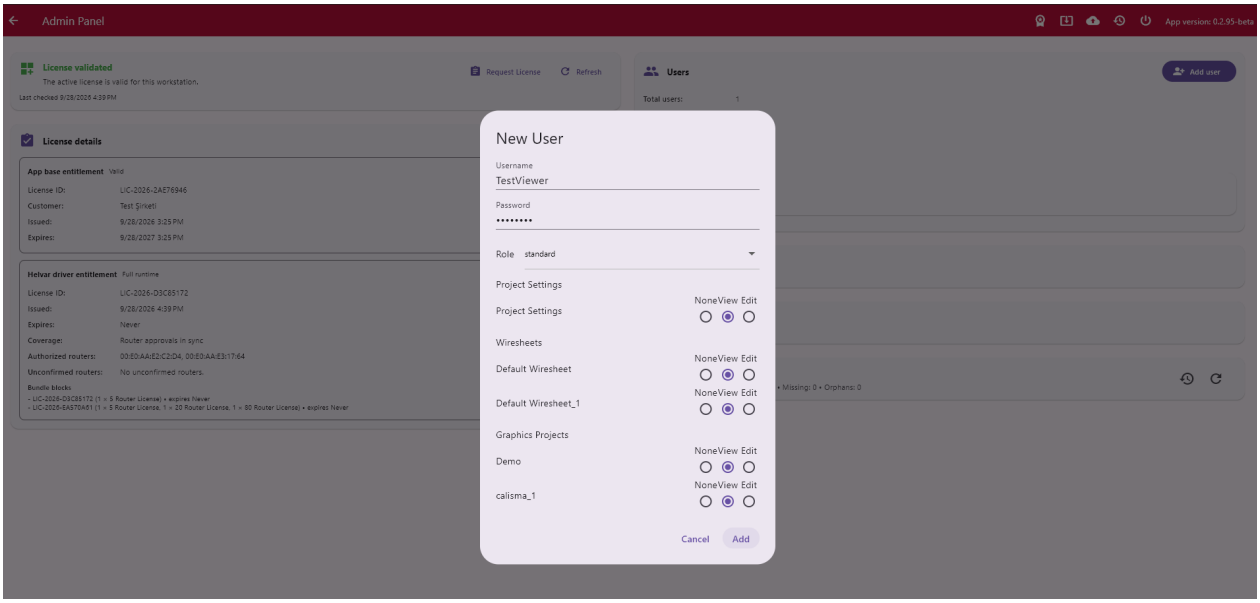
- None: Prevents access to the resource. For graphics projects and pages, these permissions apply when authorization is enabled for the project or page.
- View: Allows the user to view the resource but not edit its design. Use of controls at runtime also depends on the behavior configured for each component.
- Edit: Allows the user to view and edit the resource.

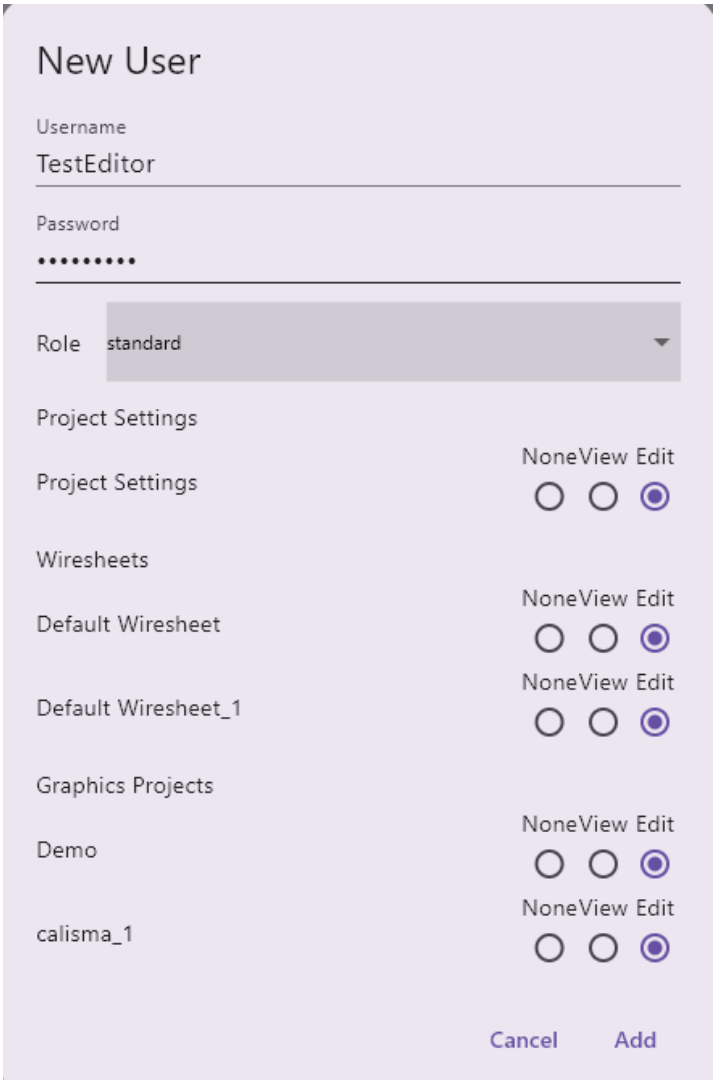
The following permissions can be assigned to a standard user:

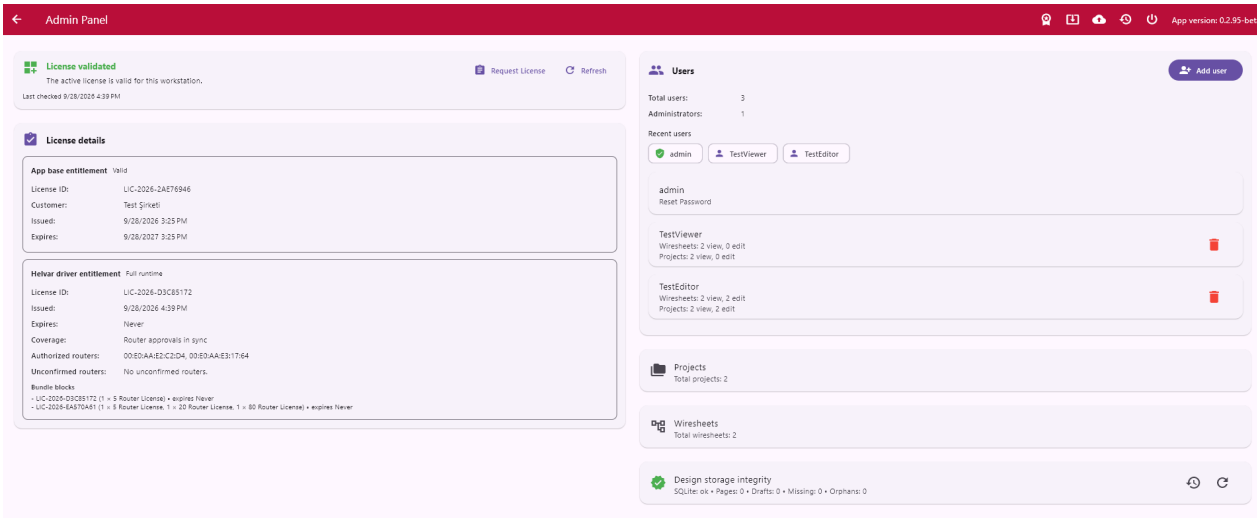
- Project Settings: Controls access to the Project tab in Settings.
- Wiresheets: Controls access to wiresheet pages. Edit permission allows the user to change and save scenarios.
- Graphics Projects: Controls access to graphics projects and pages. Project-level and page-level authorization can further restrict access where enabled.

Permissions are assigned to available projects and resources. New projects or pages created later may need to be granted separately, depending on their authorization settings.

Select Add to save the user and permissions. The account can then sign in with the username and password you set.




New User
Username
TestEditor
Password
Role
standard
Project Settings
Project Settings
None View Edit
Wiresheets
Default Wiresheet
None View Edit
Default Wiresheet_1
None View Edit
Graphics Projects
Demo
None View Edit
calisma_1
None View Edit
Cancel
Add


Admin Panel
License validated
The active license is valid for this workstation.
Request License
Refresh
License details
Users
Add user
Total users: 3
Administrators: 1
Recent users
admin
TestViewer
TestEditor
Projects
Total projects: 2
Wiresheets
Total wiresheets: 2
Design storage integrity

11. Settings

Settings screen on the home page

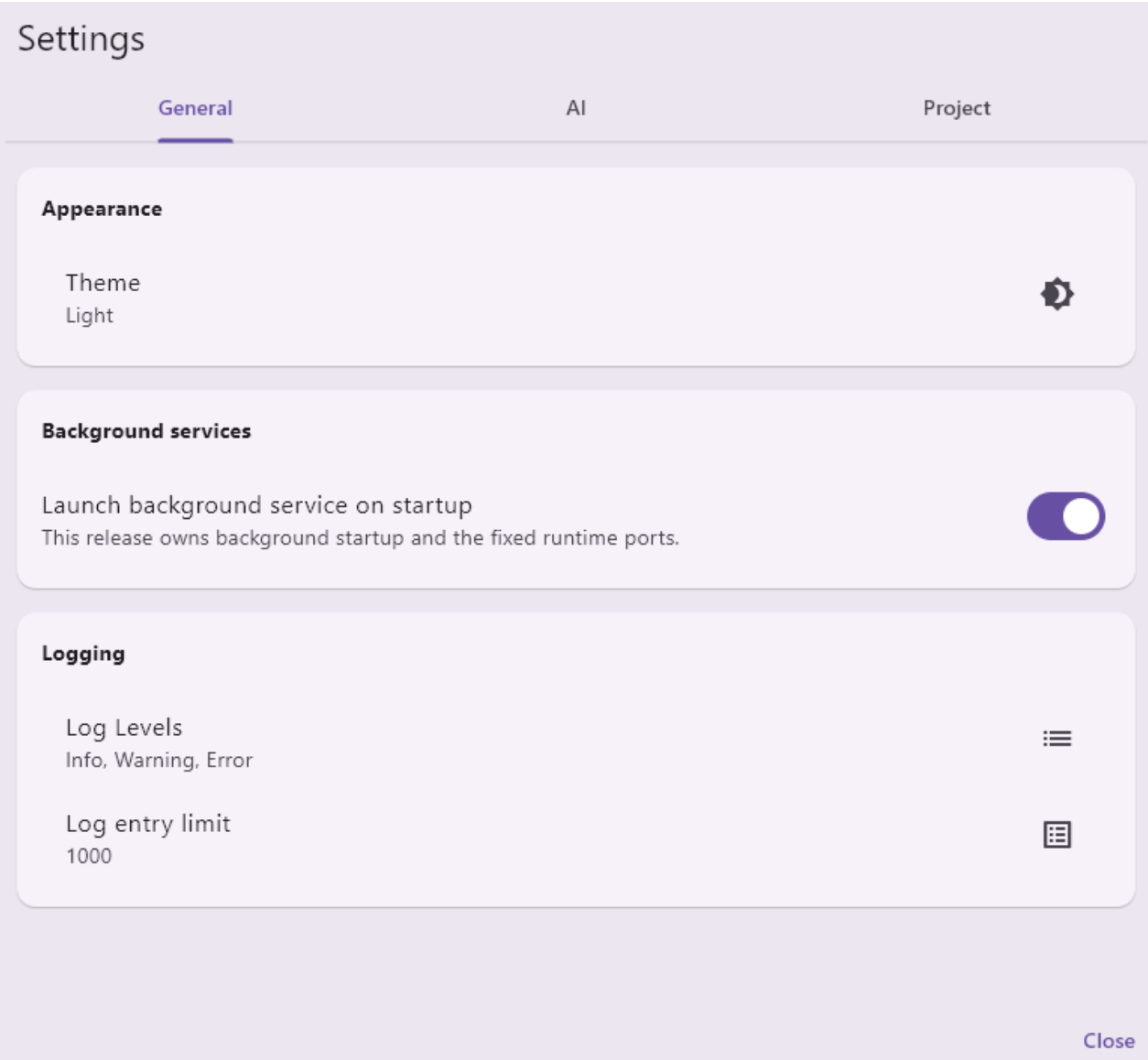
Settings is where you manage general application appearance, AI, and project behavior. Open it by selecting the gear in the home page’s top bar. The dialog is titled Settings and contains the General, AI, and Project tabs.

Signed-in users can see the General and AI tabs. The Project tab is available only to admin users or users granted View or Edit access to Project Settings.

11.1 General

Use the General tab to configure the application’s appearance, background service, and logging behavior.

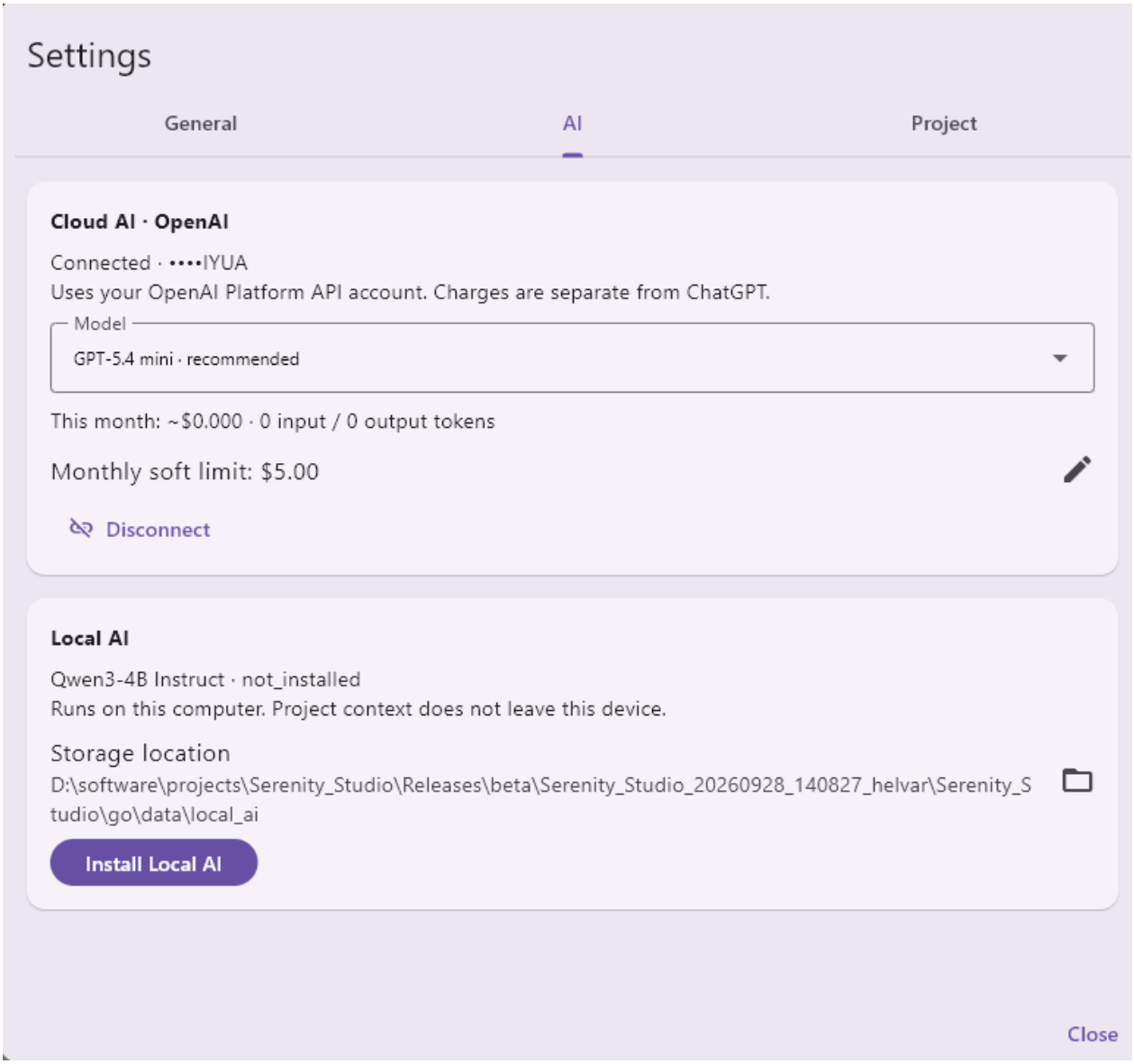
- Appearance / Theme: Sets the application theme. System follows the operating system theme; Light and Dark use the corresponding appearance. For example, Dark can be useful on a monitoring screen at night.
- Background services / Launch background service on startup: Controls whether the application’s background service starts automatically when Windows starts. This option can be configured only on Windows. Turn it off if the service should start only when the application opens.
- Logging / Log Levels: Selects which log levels are recorded: Verbose, Debug, Info, Warning, and Error. Enable Verbose or Debug when troubleshooting; use a less detailed level for normal operation.
- Log entry limit: Sets the maximum number of log entries kept in memory and shown in the application. When the limit is reached, the oldest entries are removed. This setting does not change the size or retention period of log files on disk.



11.2 AI

Use the AI tab to manage connection and model settings for AI features such as AI Designer on graphics pages.

- Cloud AI – OpenAI: Shows the status of the cloud AI connection. When connected, the masked account details and selected model are shown; otherwise, the status reads Not connected. Select a recommended or lower-cost model as needed.
- Soft limit: Optionally sets a soft limit for approximate monthly spending. The limit can be disabled or set to an amount. Select Disconnect to remove the connection.
- Local AI: Manages the model running on this computer. Install, start, stop, update, or remove it here. Choose its folder with Storage location. After setup, the local model can be used without an internet connection.

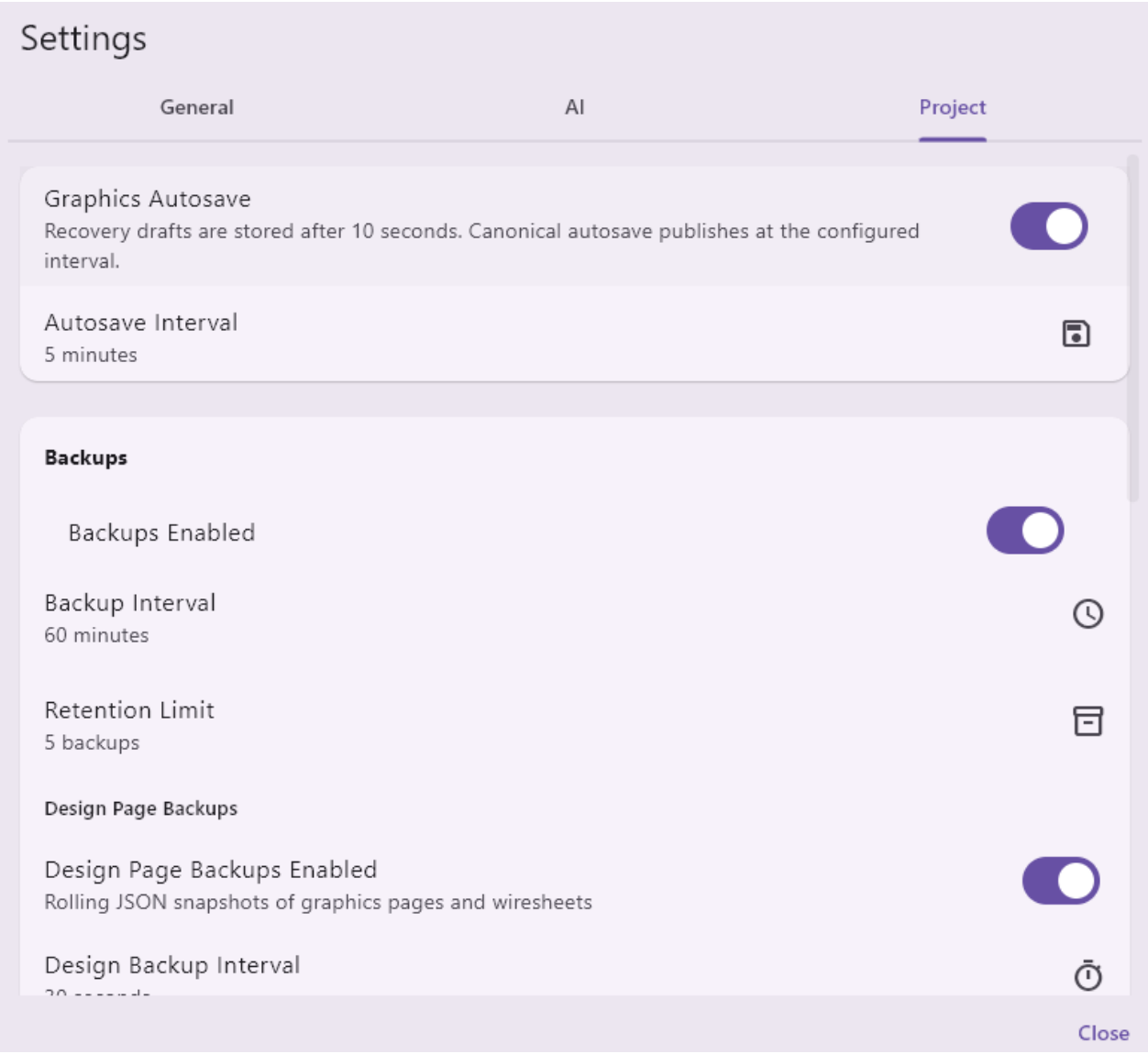


11.3 Project

The Project tab contains graphics saving, backup, calendar location, and simulation settings. The Project Settings permission assigned when creating a user controls whether this tab can be viewed or edited.

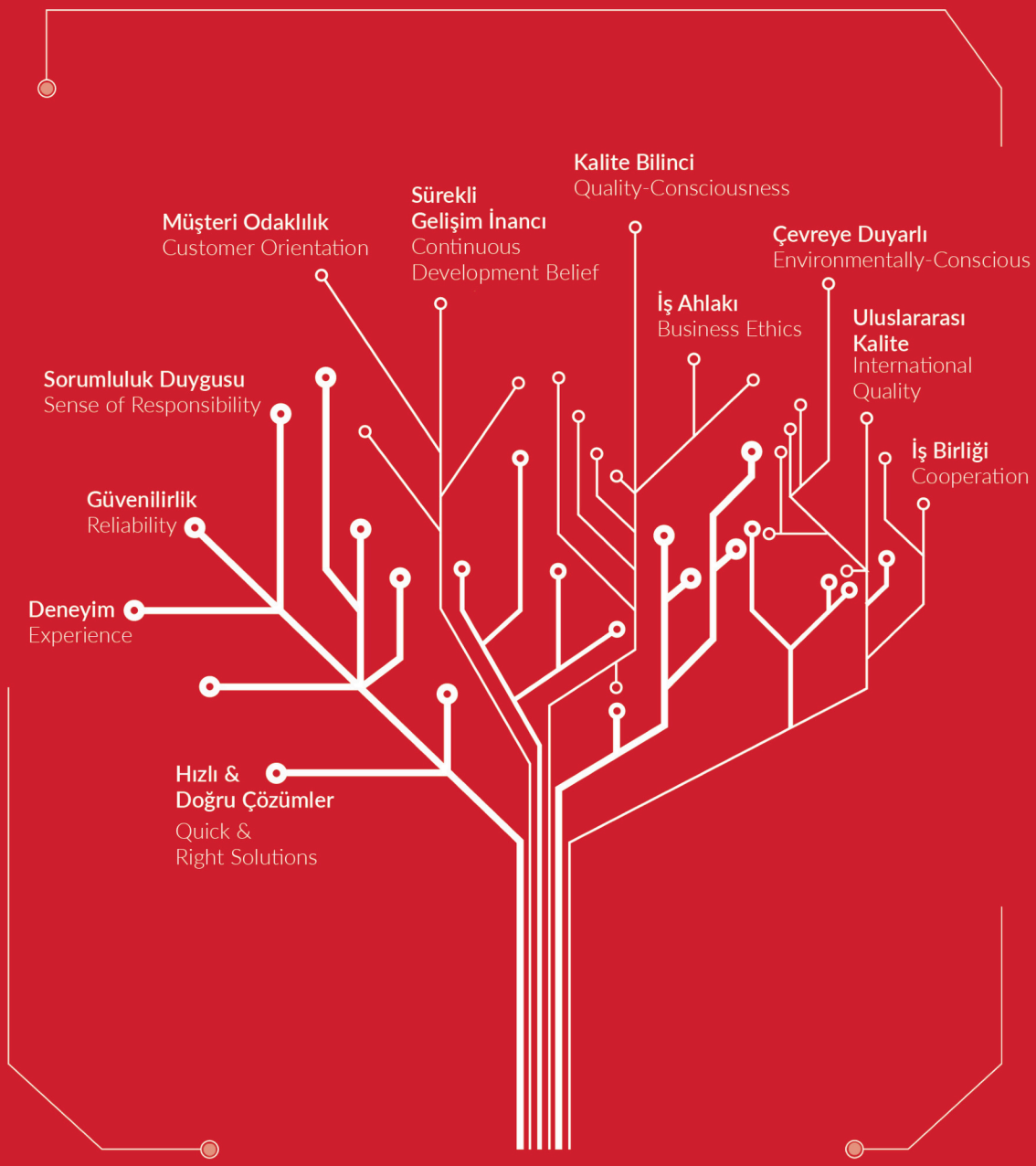
- Graphics Autosave: Turns automatic saving of graphics pages on or off. A recovery draft of unsaved changes is kept automatically after about 10 seconds. When this setting is on, the page is also saved permanently at the interval below.
- Autosave Interval: Sets how often graphics pages are permanently autosaved, in minutes. For example, 5 saves approximately every five minutes.
- Backups / Backups Enabled: Turns the full application backup schedule on or off.
- Backup Interval: Sets how often a full application backup is created, in minutes.

- Retention Limit: Sets how many full backups to retain. Older backups may be removed when the limit is exceeded; mark important backups as Persistent to keep them.
- Design Page Backups Enabled: Turns rolling JSON backups of graphics pages and wiresheets on or off. Use this for more frequent backups of page or scenario content.
- Design Backup Interval: Sets how often page and wiresheet backups are created, in seconds.
- Design Backup Retention: Sets how many backups to retain for each graphics page or wiresheet.
- Full App Backups: Lists full application backups. Mark a backup as Persistent or select one and choose Load Backup Data to restore it; restoration requires confirmation. The list is empty when no backups are available.
- Calendar Astronomical Location: Sets the latitude and longitude used by the Calendar component on graphics pages to calculate sunrise and sunset. Enter the coordinates manually or select Use this computer location.
- Communication / Simulation mode: Turns simulation mode for the background Go polling layer on or off. Use it to test scenario or graphics links without connecting to real devices.



Changes in Settings take effect when saved in the relevant area. The backup and autosave settings on the Project tab help protect graphics and wiresheet work. General settings apply to the application, while AI settings control model connections.

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Akıllı Yapı Teknolojileri



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