OptiZeus SCADA

Complete User Guide

Operation Manual

Version 2.5.4.72
Generated: 2026-04-22

Contents

1. Getting Started

1.1 First login

Point your browser at the OptiZeus server URL. The login page looks like Figure 1.1:

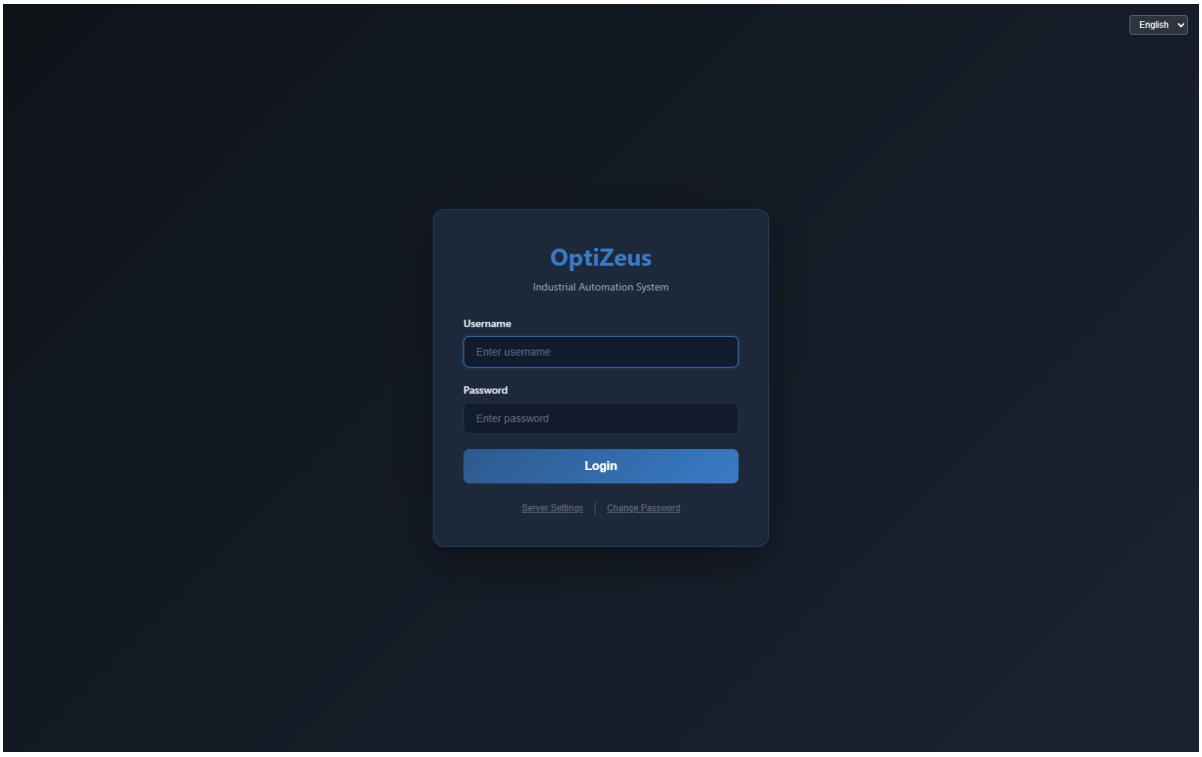

Figure 1.1 — The login screen — username, password, language picker, and change-password link.

1. Open https://<server-ip>:3443 in your browser.
2. Accept the certificate if you see a warning (first time only on self-signed setups).
3. Enter your username and password.
4. If MFA is enabled on your account and you have not set it up yet, the app walks you through scanning a TOTP QR code and entering a verification code. Use Google Authenticator, Authy, Microsoft Authenticator,

1Password, or any standard TOTP app.

5. You land on the default Synoptic screen (Figure 1.2). The navigation bar is across the top.

1.2 The home screen

A typical home screen is a process-overview synoptic — the entire plant on a single page with live values, colored status indicators, and click-through to detailed faceplates. The demo site's HVAC application (Figure 1.2) shows five air-handling units, five tanks, heat exchangers, and a side-panel for plant / floor / unit navigation.

Figure 1.2 — Default synoptic view — HVAC process with live temperatures, pressures, pump states, and side navigation.

1.3 Main navigation

The top bar carries the runtime tabs: Alarms/Events, Trends, Historian, Config. Operators live in the first three. Engineers go through Config — which opens an inner tab bar (Figure 1.3) with every configuration area.

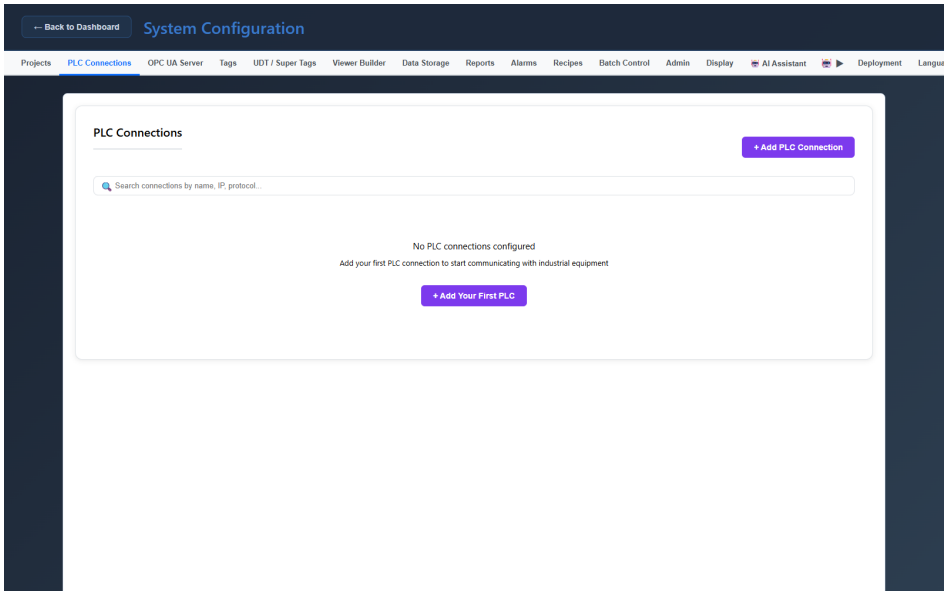

Figure 1.3 — Config landing — inner tab bar for Projects, PLC Connections, OPC UA Server, Tags, UDT/Super Tags, Viewer Builder, Data Storage, Reports, Alarms, Recipes, Batch Control, Admin, Display, AI Assistant, Deployment, Language.

Dashboard	Real-time tag values. Your home page - what operators see first.
Synoptic	Runtime view of the process screens drawn in Viewer Builder.
Trends	Live trend charts. Pick tags, pick a time range, see history.
Alarms	Active alarms, bulk actions, history, shelving.
Reports	Run saved report templates or build new ones.
Recipes	S88 recipes - create, edit, download to PLC.
Batch Control	Start / pause / stop batches on line. Enterprise+ tier.
Historian	Full historian view with zoom, pan, pen legend, navigator strip.
Configuration	Tags, PLC Connections, Viewer Builder, Data Storage, etc.
AI Assistant	Natural-language configuration + diagnostics.
Admin	Users, security, license, system logs, backups.

1.3 Conventions used in this manual

- Menu paths are written with "->". Example: Configuration -> Tags -> + Add Tag.
- Keyboard shortcuts use "+": Ctrl+S means hold Ctrl and press S.
- Fixed-width text references commands, file paths, or identifiers: server.js, /api/tags, Pump_1.flow.
- NOTE / TIP / IMPORTANT banners flag things that are easy to miss but costly if you do.

2. Tags

Tags are the most important object in the system — every PLC value, setpoint, and calculated variable is a tag. Figure 2.1 shows the Add New Tag form. All tag properties (type, data source, scaling, historian, alarms) are on this one form, organized into collapsible sections.

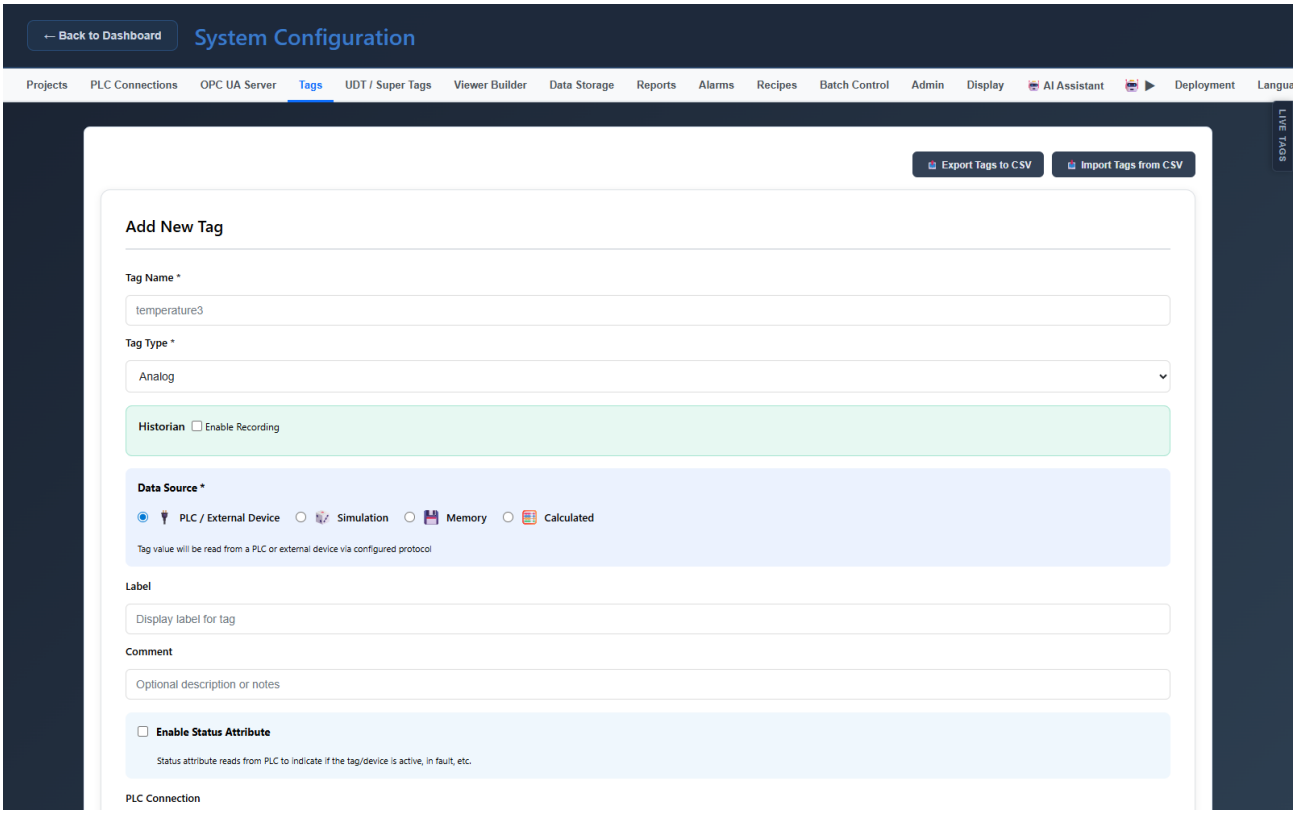

Figure 2.1 — Configuration → Tags → + Add Tag. Tag Type picker, Historian recording toggle, Data Source (PLC / Simulation / Memory / Calculated), Label and Comment fields.

2.2 Tag types

Analog	Floating-point value (temperature, pressure, flow). Has min/max/ engineering units.
Digital	Boolean (true/false, on/off, running/stopped).
Integer	Whole number. Used for counters, states, modes.
String	Text. Batch names, recipe IDs, operator messages.
Bit	Single bit of a larger word - specify word address + bit number.

2.2 Create a tag

1. Configuration -> Tags -> + Add Tag.
2. Enter the tag name - unique identifier. Spaces are allowed but require bracket notation [My Tag] in expressions; use underscores to avoid headaches.
3. Pick the tag type.
4. Pick the PLC connection - or "Simulation" for a virtual tag that ramps / cycles for testing.
5. Enter the PLC address in the format the driver expects (OPC UA node id, Modbus register number, S7 DB offset, etc.).
6. Set units, min, max, initial value.
7. If the raw value needs scaling (e.g. 4-20 mA -> 0-100 %), enable Scaling and set Raw Min / Raw Max / Eng Min / Eng Max.
8. Configure alarms on the Alarms sub-panel (Section 6).
9. Configure historian recording on the Historian sub-panel (Section 2.4).
10. Save.

2.3 UDT (User-Defined Types) and Instances

A UDT is a reusable tag structure. Example: a "Pump" UDT with members flow, pressure, state, runHours. An instance is a concrete application of the UDT to real tag names — e.g. instance "Pump_1" maps flow → Pump_1.FlowSensor, pressure → Pump_1.PressSensor, etc. Figure 2.2 shows the UDT / Super Tags configuration.

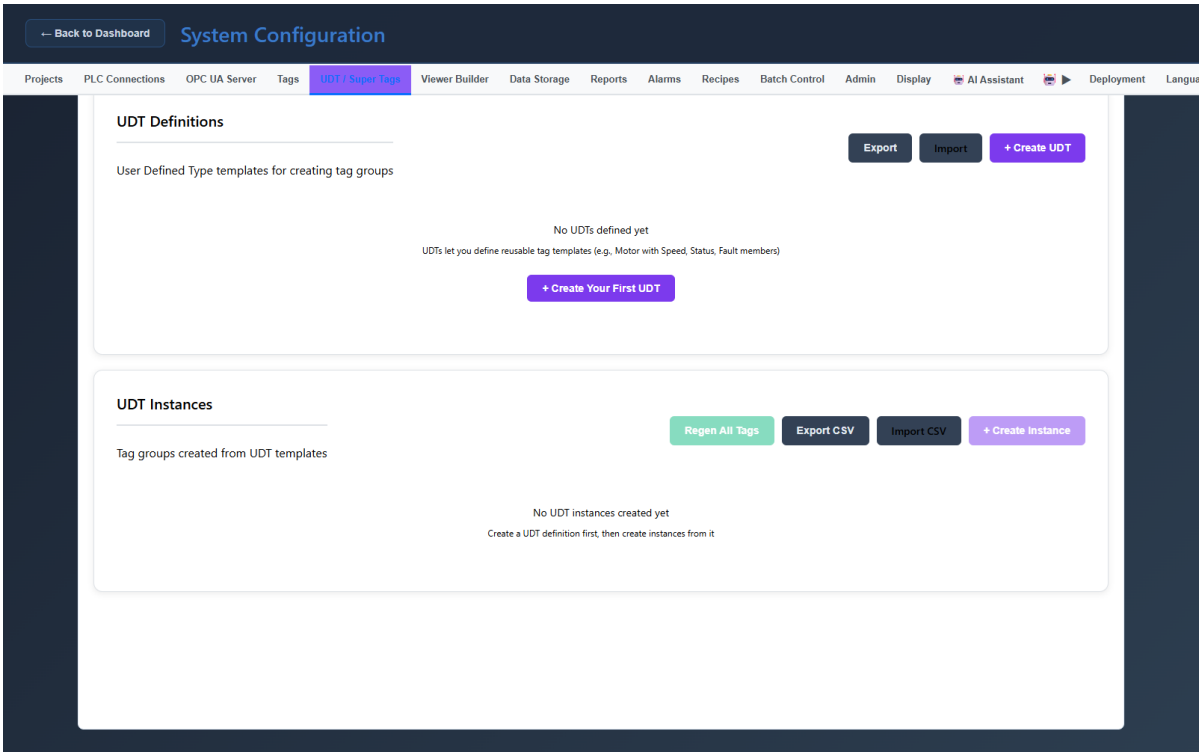

Figure 2.2 — Configuration → UDT / Super Tags — manage reusable tag structures and their instances.

1. Configuration -> UDT / Super Tags -> Definitions -> + Add Definition.
2. Name the UDT. Add members - each member has name, type, unit, optional default alarm thresholds.
3. Save the definition.
4. Instances tab -> + Add Instance. Pick the UDT.
5. For each member, map it to an actual tag. Autocomplete searches all tags in the system.
6. Save. The instance appears in the Tag Browser (left panel of the Viewer Builder) - drag its header onto any super-object to bulk-bind its members.

2.4 Historian recording per tag

On the tag edit form, open the Historian section:

Enabled	Record this tag to the historian.
Method	Interval / On Change / Both.
Interval (ms)	Record every N milliseconds. 1000 = 1 sample/second.
Deadband	Ignore changes smaller than this value - reduces archive noise.
Compression	Swinging-door algorithm for analog tags. Leave on for 80-90 % archive savings.

3. PLC Connections

Configuration → PLC Connections lists every configured protocol endpoint — OPC UA servers, Modbus devices, S7 PLCs, EtherNet/IP gateways, etc. Figure 3.1 shows the page. Each row has a status indicator (green = connected), protocol badge, and inline actions.

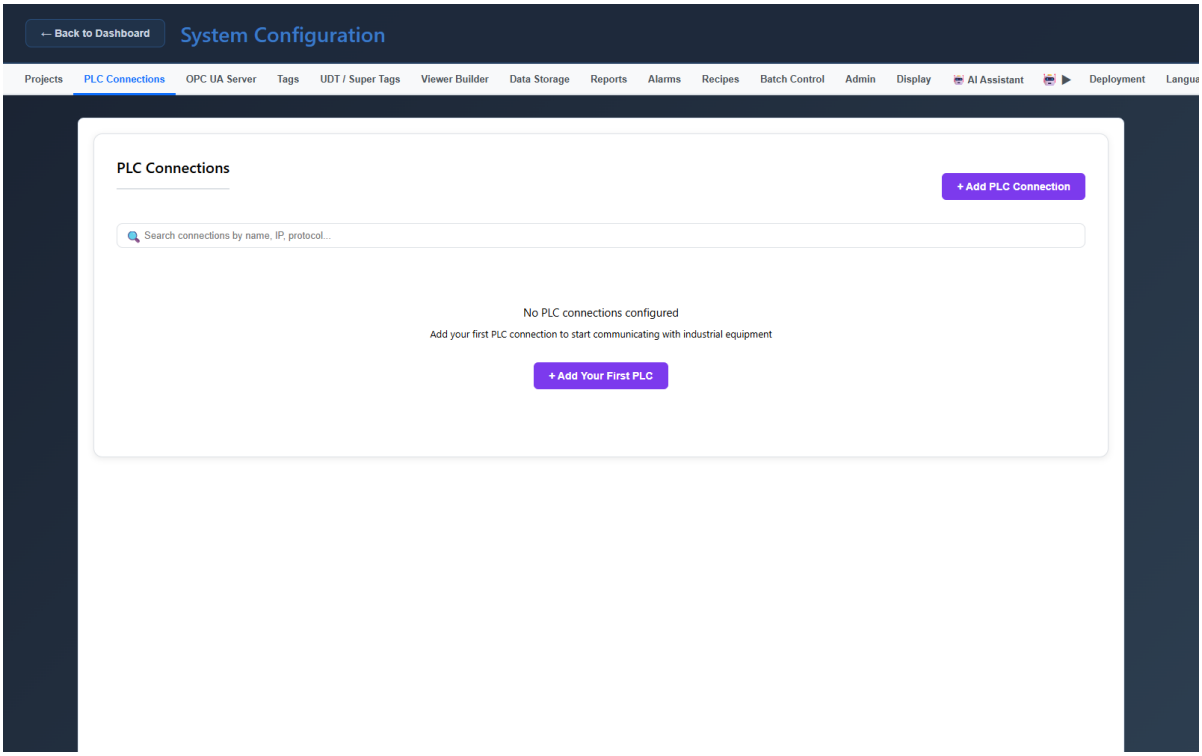

Figure 3.1 — PLC Connections list with per-row status, protocol badges, and actions.

3.1 Add a connection

See Installation Manual Section 5 for per-protocol field reference. The workflow in the runtime app is the same:

1. Configuration -> PLC Connections -> + Add Connection.
2. Pick protocol. The form adapts to the fields relevant to that protocol.
3. Fill in fields. Click Test Connection. Green indicator = success.
4. Save. Polling starts immediately.

3.2 OPC UA Server (built-in)

Besides acting as a client to external PLCs, OptiZeus can also expose every configured tag as an OPC UA server. Other systems (MES, analytics, third-party HMIs) can then subscribe to your tag model directly. Configuration → OPC UA Server shows the settings (Figure 3.2).

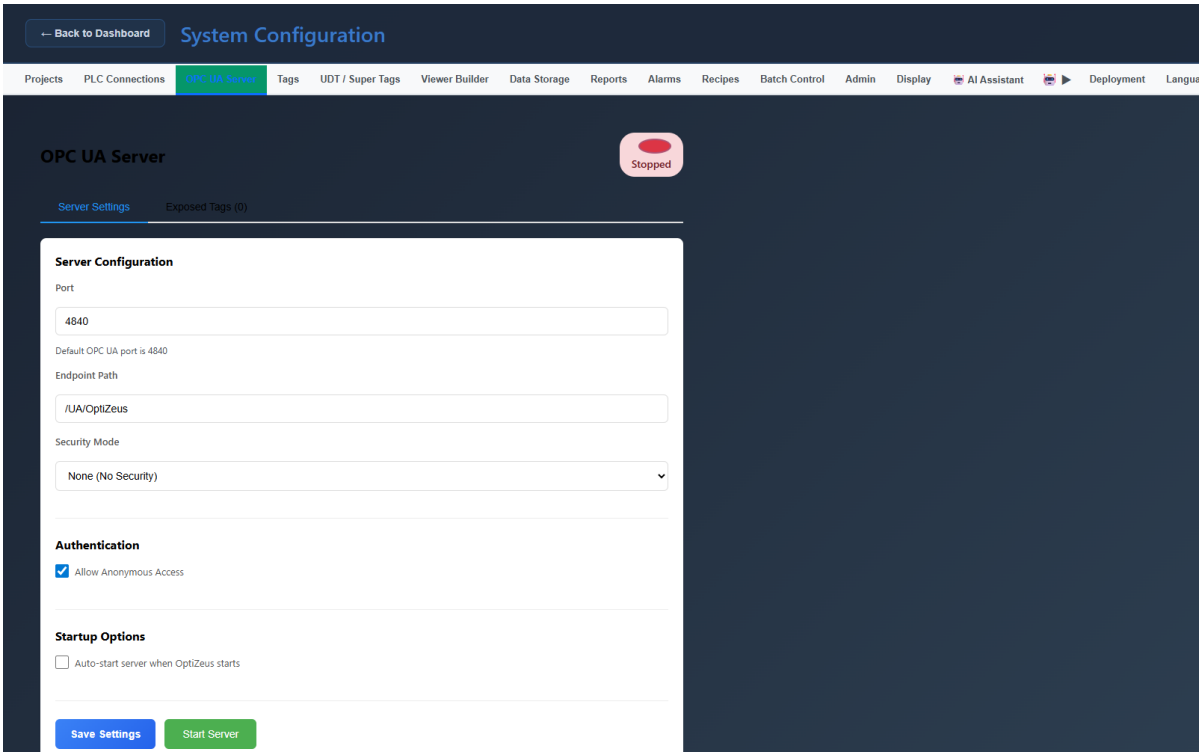

Figure 3.2 — Configuration → OPC UA Server — endpoint URL, security, namespace, enabled/disabled toggle.

3.3 Diagnose a connection

PLC Connections -> (connection row) -> Diagnostics.

Status	Running / Degraded / Down / Stopped
Throughput	Tags read per second
Latency	ms per poll cycle
Errors/min	Recent errors (timeouts, parse errors)
Last error	Short message with timestamp
Sample history	Last 100 poll cycles visualized

> **TIP:** If you see Latency > Interval, you are asking the connection to poll faster than it can physically finish. Either increase the interval, split tags across two connections, or enable batch read if available on the driver.

4. Viewer Builder

Viewer Builder is where you draw the screens operators will see at runtime. It has three main panels — the object library (left), the canvas (center), and the properties panel (right). Figure 4.1 shows the workspace with an HVAC clean-room screen loaded.

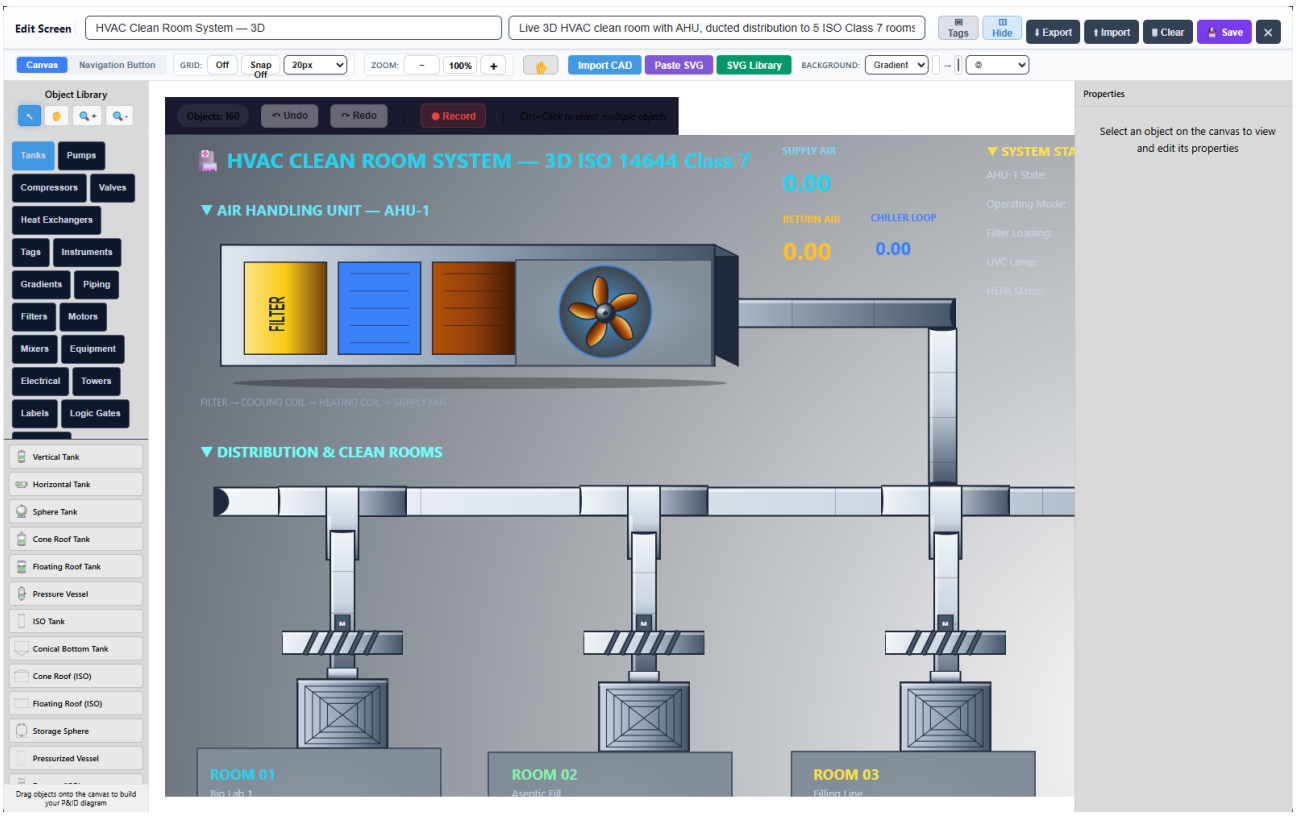

Figure 4.1 — Viewer Builder — object library (left), canvas with an HVAC clean-room screen (center), and properties panel (right).

4.0 Object library categories

The left panel has one category per group of objects: Tanks, Pumps, Valves, Pipes, Shapes, Text, Images, Components, Super Objects, Tags, Datalogs. Figures 4.2 through 4.5 show the Tanks, Pumps, Shapes, and Components categories — each shows a preview of what the object will look like when dropped.

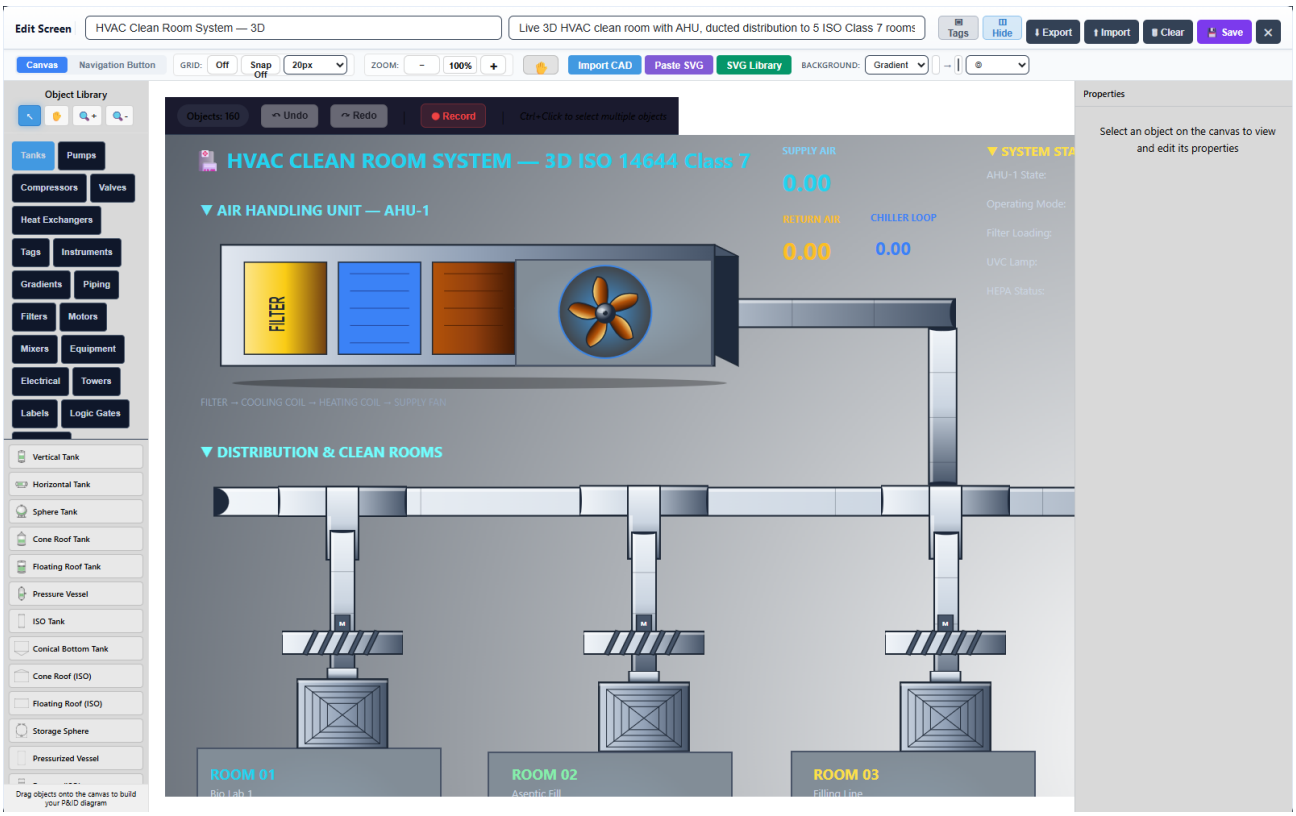

Figure 4.2 — Object library → Tanks. Multiple industrial tank shapes with different cap styles.

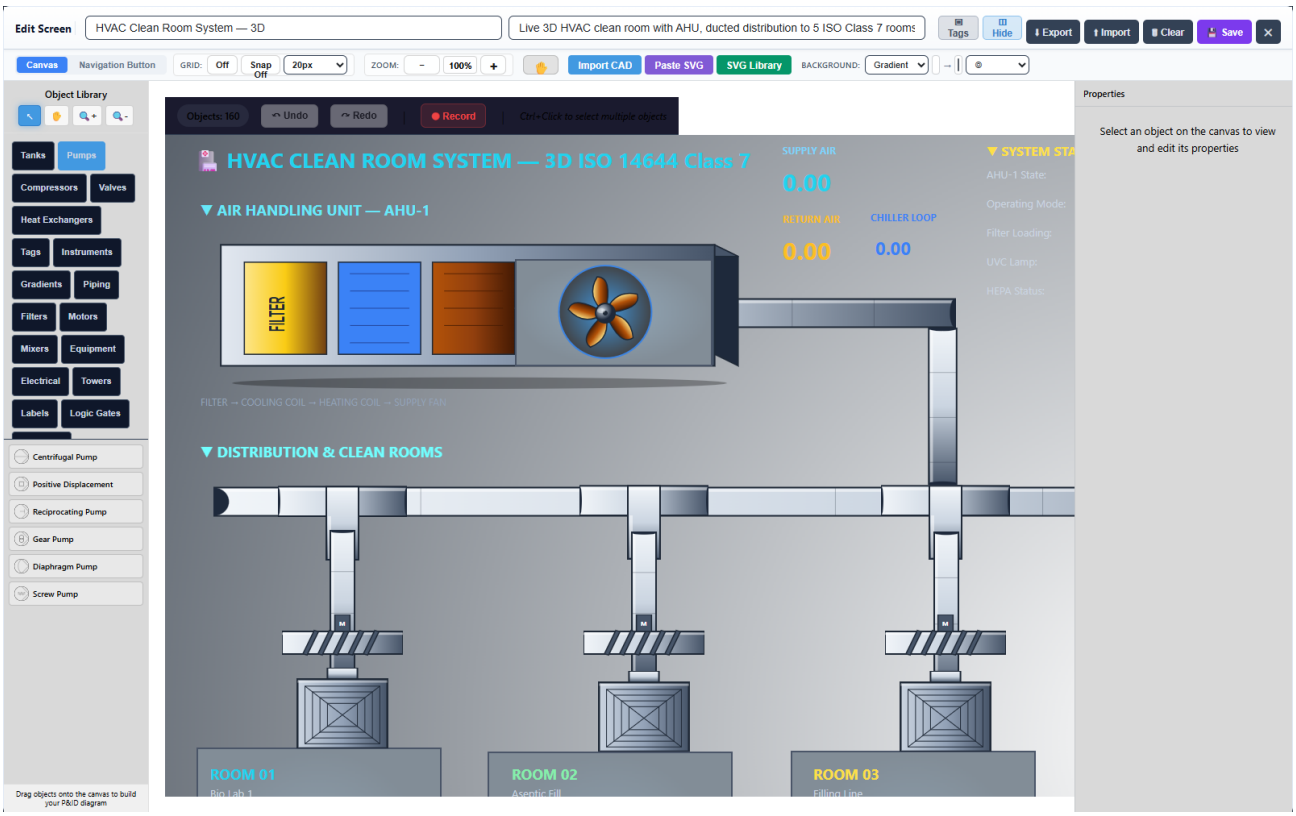

Figure 4.3 — Object library → Pumps. Centrifugal, screw, peristaltic, diaphragm variations.

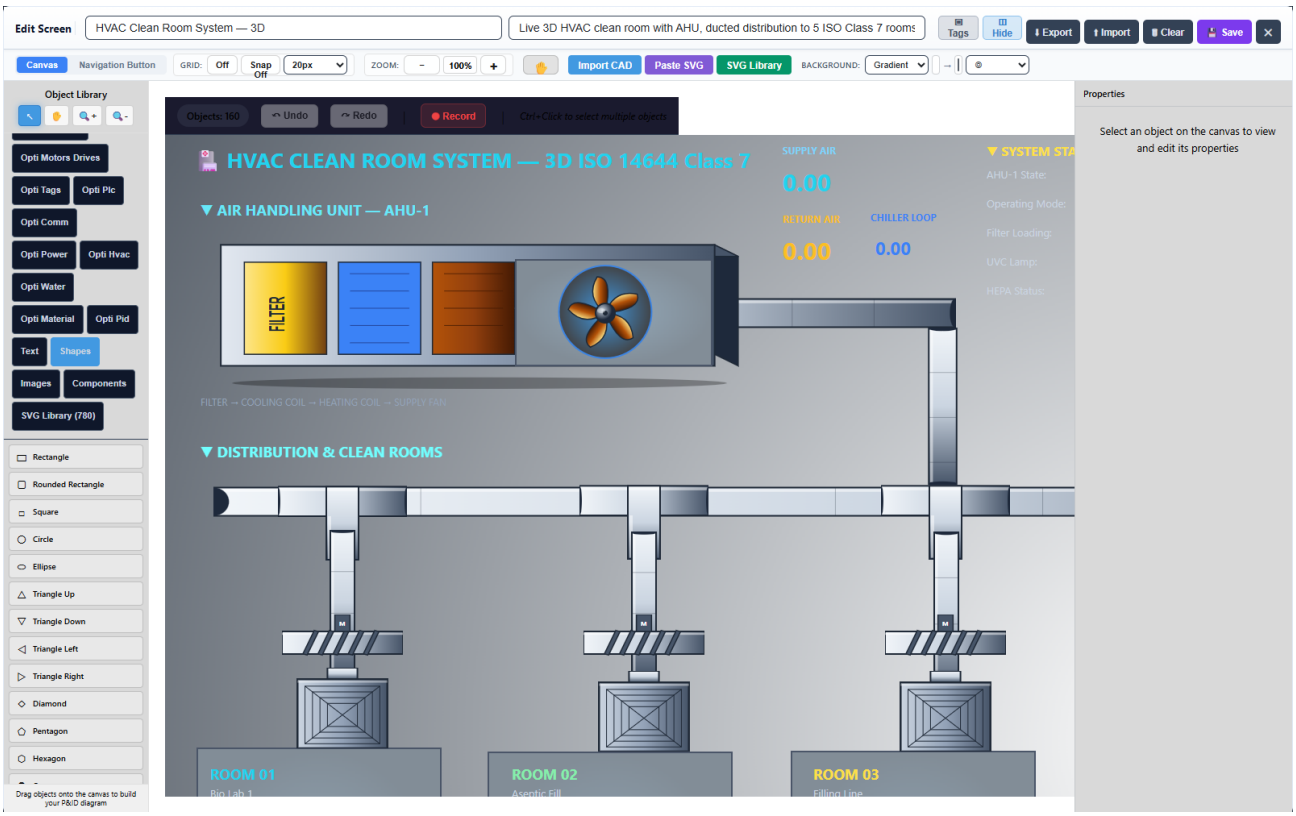

Figure 4.4 — Object library → Shapes. Rectangles, circles, triangles, polygons for custom drawings.

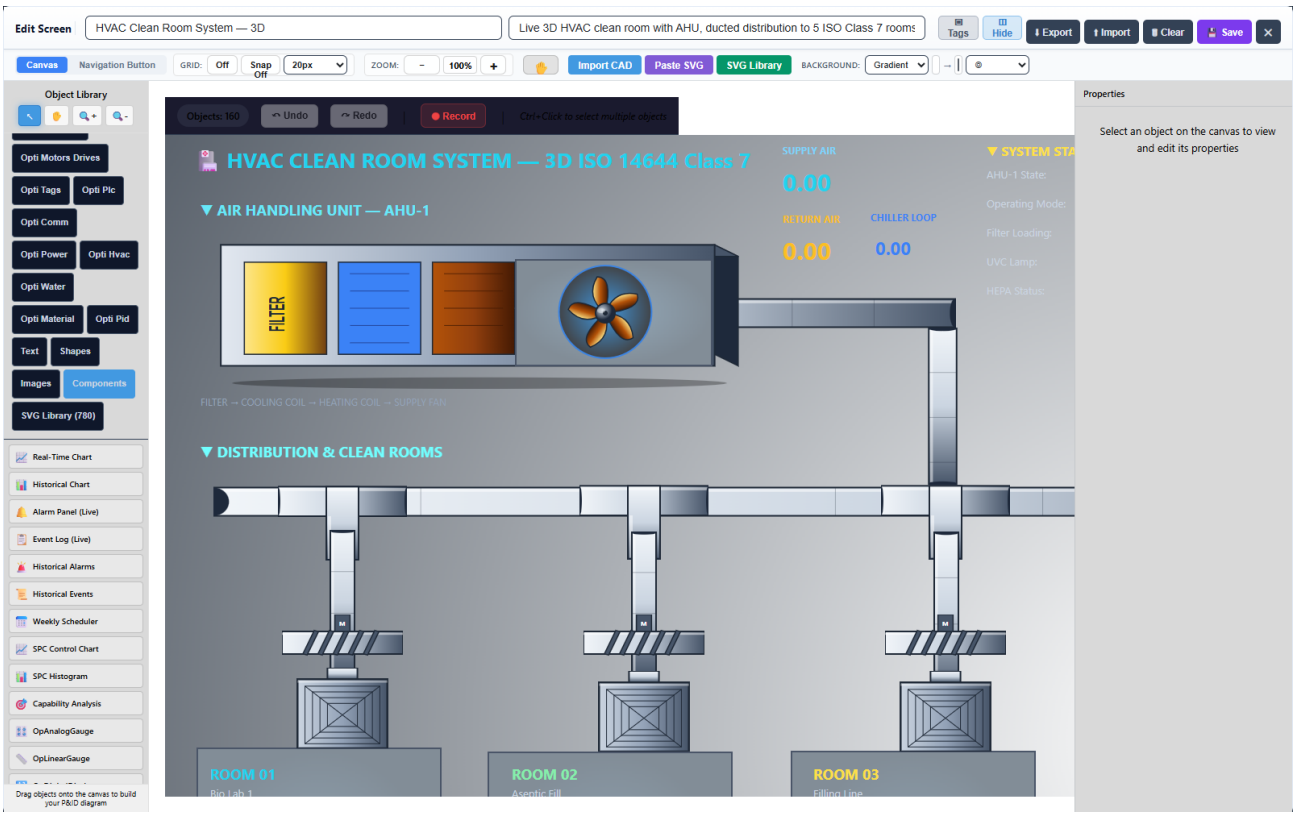

Figure 4.5 — Object library → Components. Pre-built widgets — Current Alarms table, State Text, Recipe Table, Process Viewer, IP Camera, Query Table.

4.1 Layout

```
+-----------------+-----------------------------------+---------------------+
| Object Library |            Canvas                  |   Properties        |
|                |                                    |                      |
| > Tanks        |  +----------+     +----------+    | General  Anim   Act|
| > Pumps        |  |  Tank-01 |     | TT-TK-01 |    | Attr  Script Popup |
| > Valves       |  |  55.2%   |     |  72 C    |    |                     |
| > Pipes        |  +----------+     +----------+    | Position            |
| > Shapes       |     |                              |   X 120  Y 80       |
| > Text         |     v                              | Size                 |
| > Components   |  +---------+                       |   W 160  H 60       |
| > Super Objects|  | Pump-1 |                        | Fill                 |
| > Tags         |  | Run    |                        |   #22c55e           |
| > Datalogs     |  +---------+                       | Text                 |
|                |                                    |   "Pump 1"          |
+-----------------+-----------------------------------+---------------------+
|  Zoom 100%   Grid 20px   Snap off   Objects 165   Undo   Redo   Save    |
+-------------------------------------------------------------------------+
```

Figure 4.1 - Viewer Builder workspace

4.2 Drag-and-drop workflow

1. Open a category on the left (Tanks, Pumps, etc.).
2. Drag an object onto the canvas. Release - the object appears where you dropped it.
3. Select the object. The Properties panel on the right shows its fields (position, size, colors, text).
4. Click Anim in the properties header to see animations for the selected object.
5. Click Action to add click behavior (write tag, toggle, open popup, open URL, run script).

4.3 Binding a tag to an object

Drag a tag from the Tag Browser (left side) onto any canvas object. A popup asks how you want to bind:

Value	Sets linkedTag so the object displays the tag's live value.
Animation	Adds a new animation entry (color change, visibility, blink, multistate).
Action	Adds a click action to toggle (digital) or write (analog) the tag.
Both	Animation + Action in one step.
Everything	Value + Animation + Action.

> **V2.5.4.68+:** When the target is a super-object, a different picker opens listing the super-object's internal variables. Pick one and the tag is bound via tagBindings[variable] - this is what the super-object actually reads at runtime.

4.4 Animations

Color	Object color changes based on tag value (thresholds or bool).
Visibility	Object shows/hides based on condition.
Blink	Object blinks at configurable speed when condition true.
Multistate	Cycle through colors/states based on integer tag (0,1,2,...).
Value Display	Formatted text of the tag value with unit and decimals.
Fill Level	Tank-style fill based on analog % (0-100).
Rotation	Rotate object by degrees from tag value.

4.5 Actions (click behavior)

Write Tag	Prompt for a value and write to a tag.
Toggle Tag	Flip a digital tag on<->off on each click.
Set Value	Write a predefined literal value to a tag.
Open Popup	Open another screen as a popup overlay.
Navigate	Switch to another main screen.
Open URL	Open an external URL in a new tab.
Run Python	Trigger a Python event script.
Run System Command	Execute OS command (admin-only, carefully).
Generate Report	Open the report runner for a named template.
Download Recipe	Download a recipe to the PLC.

4.6 Super Objects (reusable templates)

A Super Object is a reusable group (e.g. a Pump faceplate) with internal variables. You build it once and instantiate it many times, each instance rebinding the variables to different tags.

1. Draw the objects for one unit. Select them all -> right-click -> Convert to Super Object.
2. Give the super-object a name. Declare variable placeholders (e.g. pumpState, flowTag, pressureTag).
3. Inside the super-object's child animations / actions, reference the variables (not real tag names).
4. Save. The super-object appears in the Super Objects category.
5. Drag it onto any screen. In the TAG VARIABLE BINDINGS panel, bind each variable to a real tag, UDT instance, or super-object instance.

> **V2.5.4.67:** Super Objects now have a grid/list toggle and search. List view scales to libraries with hundreds of super-objects. Preference persists in localStorage.

4.7 Expression bindings

Any text property (label, tooltip, popup title, URL, confirmation message, text content) can be a live expression beginning with =. The engine is a sandboxed recursive-descent parser - no eval(), no access to JS globals.

Supported syntax

- Tags: Tag_Name, Instance.Member, or [Tag Name With Spaces]
- Literals: numbers, 'strings' or "strings", true, false, null
- Math: + - * / %
- Comparison: > < >= <= == !=
- Logic: && || !
- Ternary: cond ? a : b
- String concat with + (either side a string => concat, else numeric add)

Built-in functions

Math	round, min, max, abs, floor, ceil, sqrt, pow
Transform	scale(v, inMin, inMax, outMin, outMax), clamp(v, lo, hi), lerp(a, b, t), map(v, k1, v1, k2, v2, ..., default)
String	upper, lower, trim, startsWith, endsWith, contains, replace, left, right, substring, len
Type	toNumber, toString, toBool, isNaN, isNull
Time	now(), today(), time(), date()
Format	format(n, digits) -> fixed decimal string; concat(...) -> joined

Examples

```
// Color by threshold
=Temp > 80 ? 'red' : (Temp > 60 ? 'orange' : 'green')

// Composed label
="Tank: " + format(Level, 1) + "%  " + (Pump_Running ? '(filling)' : '(idle)')

// State-to-label map
=map(MachineState, 0, 'Off', 1, 'Running', 2, 'Fault', 3, 'Maint', '?')

// Linear scaling with clamp
=clamp(scale(RawPressure, 0, 4095, 0, 10), 0, 10)

// Current time in header
=today() + ' ' + time()
```

4.8 Query Table component

Drag Query Table from Components. Pick a Named Query. Bind its parameters - each parameter can be a tag reference (re-runs the query whenever the tag changes) or a literal (prefix with =). Configure refresh interval, max rows, header/row colors. The component renders as a scrollable table with sticky header and alt-row striping.

5. Operator Screens

5.1 Runtime view

The Synoptic tab loads a screen designed in Viewer Builder. Objects are live — values update automatically, animations respond to tag changes, and click actions fire on user input. Figure 5.1 shows the demo HVAC plant: five air-handling units, five tanks, inlet/outlet pressures, inlet temperatures, and operator controls (the hand icons on each unit). The side panel lists named sub-screens ("HVAC Classroom Plant", "Water Treatment Plant", "Batch Reactor with Silos", etc.) — clicking any of them navigates to that sub-area.

Figure 5.1 — Process synoptic at runtime — live values update automatically; side-panel lists sub-screens.

5.2 Popups and faceplates

A faceplate is a small dialog that opens when you click an object and shows detailed info + controls for that device. OptiZeus uses Popup screens for this - design them in Viewer Builder and configure an "Open Popup" click action on the parent object.

5.3 Value input

When an operator clicks a Write Tag action, an input dialog opens. It validates against the tag's min / max and unit. If CFR 21 Part 11 is enabled, a reason field and e-signature box are required for critical tags.

6. Alarms

6.1 Configure thresholds

Configure alarms either on the tag edit form (per-tag), or globally from Configuration → Alarms which lists every configured threshold across the system (Figure 6.1).

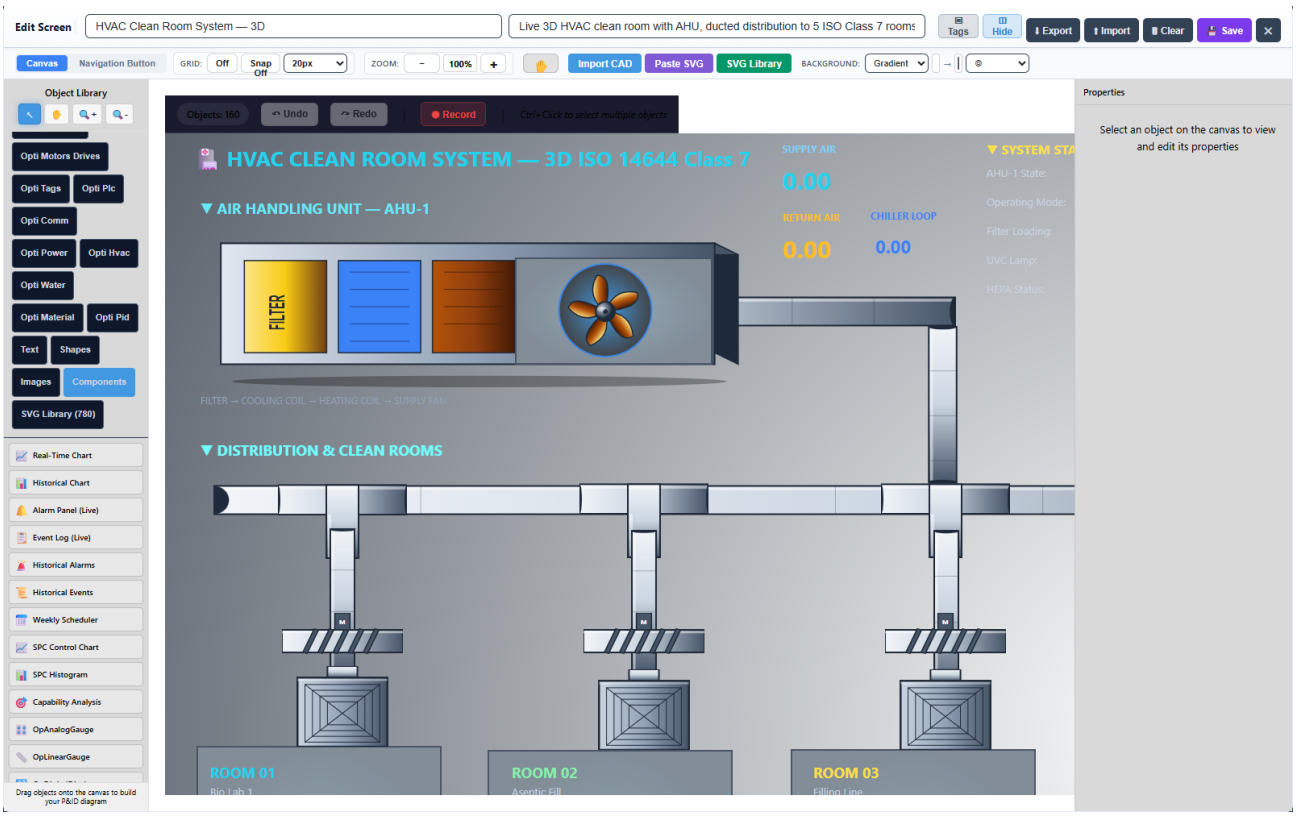

Figure 6.1 — Configuration → Alarms — global view of every threshold: tag, condition, severity, enabled/disabled, message template.

On the tag edit form → Alarms section:

Analog thresholds	HH (critical high), H (high), L (low), LL (critical low)
Digital expected state	On or Off - alarm fires when tag != expected.
Severity	Critical / High / Medium / Low / Info
Delay on / off	Seconds the condition must persist before raising/clearing.
Message template	Free text shown in the alarm list and notifications.

6.2 Alarm runtime

The top-right of the navigation bar shows a red alarm-count badge whenever there are active alarms — Figure 6.1 shows two active alarms (the red "2 ALARMS.CURRENTALARMS" badge) with a plant-wide red banner indicating the root cause ("PLC DISCONNECTED: Zeus — Affected values showing XXXX").

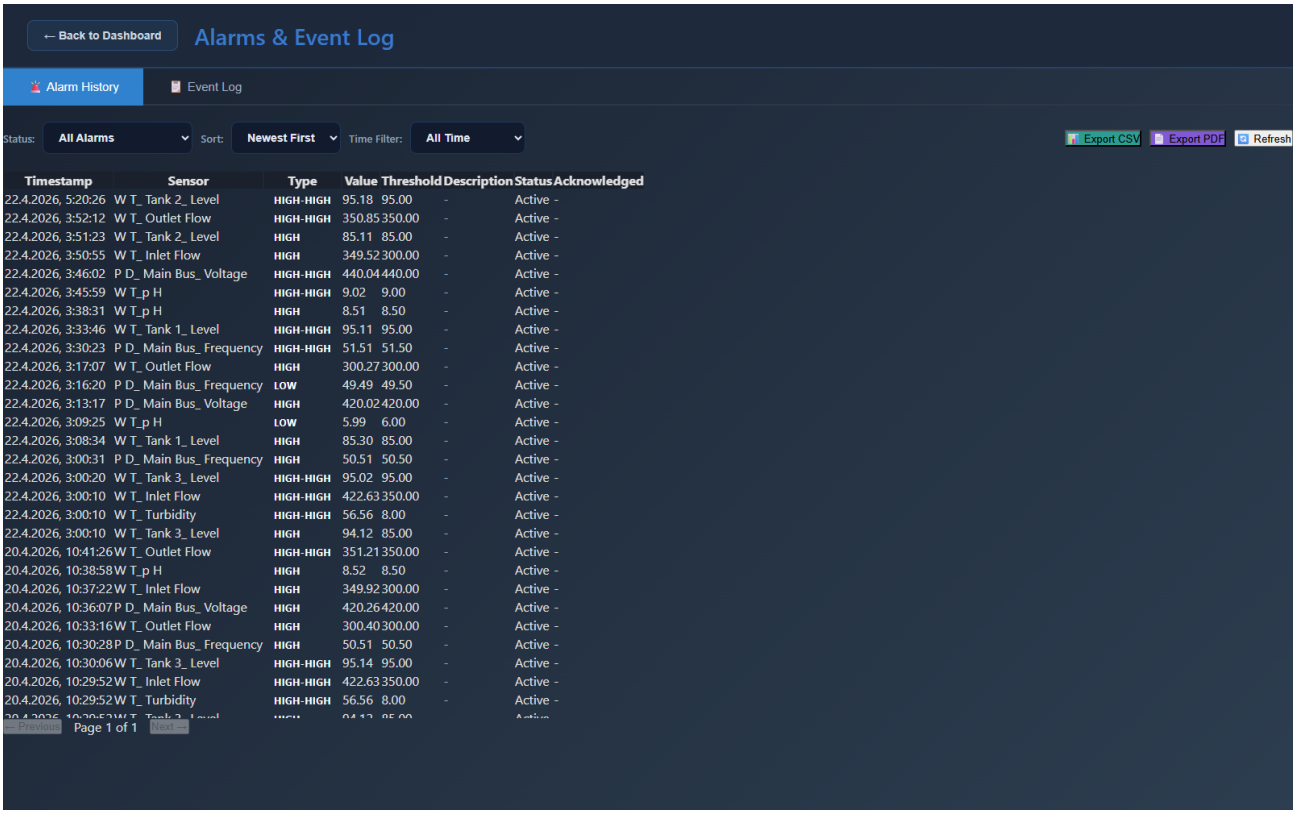

Figure 6.2 — Alarms & Event Log at runtime — history table with timestamp, sensor, type, value, status, and acknowledgment columns.

Alarms tab -> Active. Each row shows:

- Timestamp (raised / cleared / acknowledged)
- Tag name + current value
- State: Alarm / Acknowledged / Cleared
- Severity - color-coded left band
- Message
- User who acknowledged (if any)

Acknowledge one or more alarms: select rows -> Acknowledge. For critical alarms with reason-required enabled, a text box pops up.

6.3 Notifications

Configuration -> Alarms -> Notifications. Configure SMTP, SMS (GSM modem or SMS gateway), WhatsApp, Telegram. Assign groups of operators to severity levels and days of week. SMS / WhatsApp / Telegram available on Professional Max tier and above.

6.4 Security Areas

Admin -> Security -> Security Areas. Each area combines allowed roles, required security letters, allowed IP / CIDR / wildcard ranges, and tag-name or screen-name patterns. Common use cases:

- Control Room area - role "operator" + IP 10.0.0.0/24 - can write setpoint tags.
- Remote VPN area - role "viewer" - read-only even if logged in with operator creds.
- Maintenance mode - tag pattern Maint_* - requires letter "M" to open or acknowledge.

6.5 Shelving and alarm floods

- Shelving temporarily suppresses an alarm (e.g. during maintenance). Shelve time is configurable per alarm, default 4 hours.
- Flood detection auto-groups bursts of > 10 alarms from the same area within 60 seconds and presents them as a single row.
- SOE (Sequence of Events) records 1 ms resolution events even during floods so root-cause analysis is possible after the fact.

7. Historian + Trends

7.1 Trend chart

Trends tab — pick tags, pick a time range, see the history. Figure 7.1 shows the Trends page with the screen-navigation side panel on the right; once you pick tags and click Update, the chart area fills with live-plotted lines.

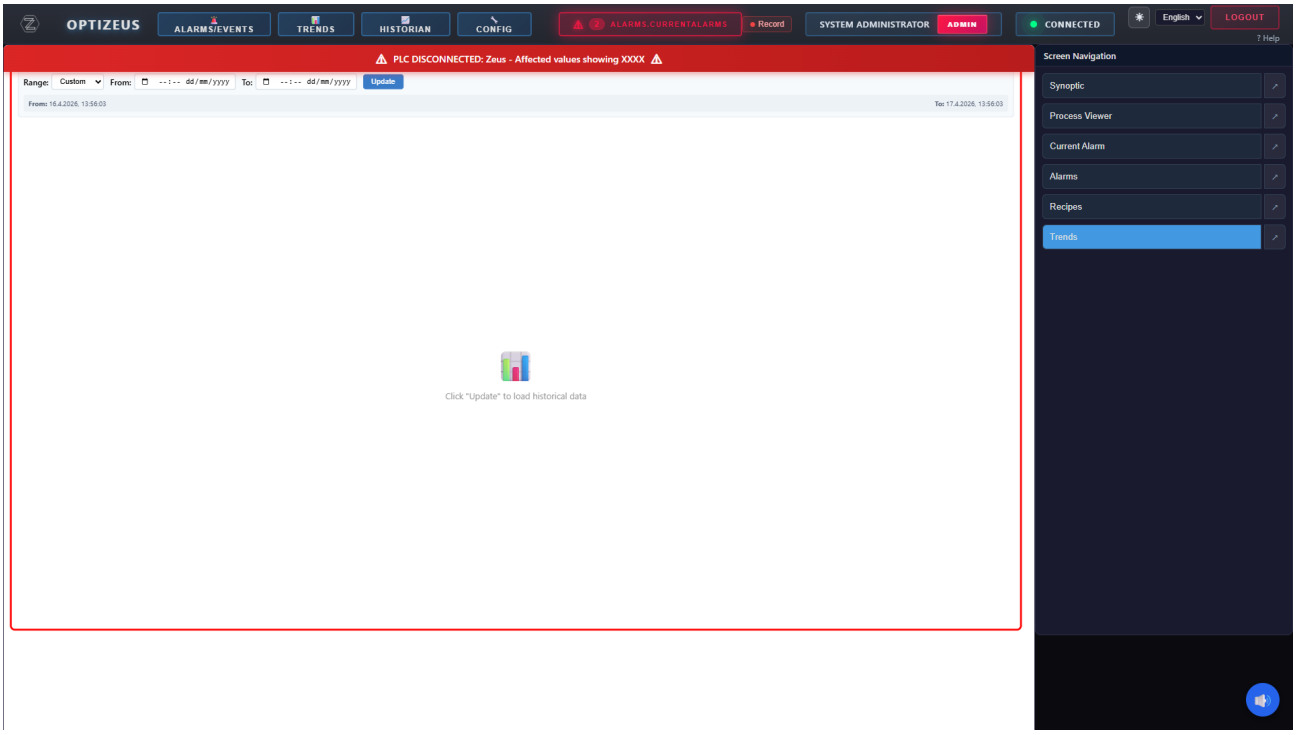

Figure 7.1 — Trends tab — Range dropdown, From / To date pickers, Update button, and screen-navigation panel.

Full-chart features:

- Drag-to-zoom: click and drag a rectangle on the chart.
- Double-click anywhere: reset zoom.
- Pen legend (v2.5.4.62+): click a pen chip to hide/show that pen. Hidden pens also hide alarm markers for their tag.
- Navigator strip (v2.5.4.62+): mini-chart at the bottom with a draggable window. Pans the main chart in real time.
- Statistics panel: min, max, avg, stdev, count for the visible range.
- Alarm markers: red dots on each pen where an alarm fired, with hover tooltips.
- Export: PDF or CSV of the visible data.

7.2 Tiered historian storage

Data Storage -> Historian Tiers. Three tiers, automatically managed by a nightly migration job:

Hot	Raw .hda samples at full resolution. Default 30 days retention.
Warm	Downsampled .whda files - configurable 10s / 30s / 1m / 5m / 10m / 1h buckets. Default 365 days.
Cold	Gzipped .hda.gz archive - 80-90 % smaller than raw. Indefinite retention.
	A query that spans multiple tiers is transparently merged - you never have to think about which tier a sample lives in.

8. Reports

8.1 Run a saved template

1. Reports -> pick a template from the list.
2. Set parameters (time range, specific tags, batch number, etc.).
3. Preview. If the preview looks good, Download PDF or Export CSV.

8.2 Create a template

1. Reports -> + New Template.
2. Pick a report type: Datalog (tag values over time), Batch, Events, Alarms, or Named Query (arbitrary SQL).
3. Fill in type-specific fields (tags, parameters, etc.).
4. Toggle sections: chart, statistics, table, custom text pages.
5. Save template. Optionally Schedule it - daily/weekly/monthly cadence with email delivery of the PDF.

8.3 Named Queries

Data Storage -> Named Queries. Save parameterized SELECT statements using :paramName placeholders. Callable from:

- Report Builder (as a report data source)
- Synoptic Query Table component
- Python event scripts via run_named_query(name, params)
- External tools via REST API: POST /api/named-queries/{id}/execute

Only SELECT and WITH statements are accepted. Parameters are bound safely per dialect - no string concatenation, SQL-injection proof.

```
-- Example named query: batches_by_line
SELECT batch_id, start_time, end_time, status, recipe_name
FROM batches
WHERE line_id = :lineId
  AND start_time >= :sinceDate
ORDER BY start_time DESC
LIMIT :maxRows
```

9. Recipes (S88)

9.1 Create a recipe

1. Recipes -> + New Recipe.
2. Name the recipe. Pick the equipment model (if defined).
3. Add parameters - one row per parameter with name, type, units, default, min, max.
4. For each parameter, map it to a PLC tag.
5. Save. The recipe appears in the grid with its values shown.

9.2 Download to PLC

Select a recipe -> Download. Supports S7, EtherNet/IP, PCCC, Modbus, MQTT, BACnet, GE SRTP, OPC UA. All parameter tags are written atomically. Recipe table auto-refreshes and switches to show the downloaded recipe as the active one.

10. Batch Control

Batch Control is Enterprise+ tier. It implements ISA-88 / S88 with:

- Equipment model (unit, phase, operation, procedure hierarchy)
- SFC (Sequential Function Chart) recipe execution
- PLI (Procedure Level Interface) for cross-phase coordination
- Batch tracking grid with start / pause / stop / abort controls
- Per-batch report generation

11. Users + Security

11.1 Roles and security letters

Each role has a 26-letter security grid (A-Z). Individual objects, tags, and actions can require a specific letter for access. Example: a setpoint write button requires letter "W"; only roles with "W" enabled in their grid can press it.

11.2 Security Areas

Admin -> Security -> Security Areas. Combine:

- Allowed roles (e.g. operator, admin)
- Required security letters (e.g. "W" and "H")
- Allowed IPs - exact, CIDR (192.168.1.0/24), or wildcard (10.0.*.*)
- Tag patterns (glob): Setpoint_*, Recipe_*
- Screen patterns (glob): Maintenance_*, Control_Room_*

On tag write, all enabled areas are checked. If any area's tag pattern matches and the user fails role/letter/IP rules, the write is denied (HTTP 403) and logged as area_write_denied.

11.3 Identity Providers (SSO)

Admin -> Security -> Identity Providers. OptiZeus supports two SSO mechanisms:

OIDC	OpenID Connect authorization-code flow. Works with Azure AD / Entra ID, Google Workspace, Okta, Auth0, Keycloak, PingFederate, AWS Cognito. Provide issuer URL + client ID + secret.
LDAP / AD	Direct-bind authentication against a Windows domain controller. Provide bind URL, base DN, bind user, and group mappings.

With auto-provision enabled, new users are created on first SSO login using the default role you configured. ID token signatures are verified against the IdP's JWKS - no tokens are trusted blindly.

11.4 MFA (TOTP)

Profile -> Security -> Set up two-factor. Scan the QR code with Google Authenticator, Authy, Microsoft Authenticator, 1Password, or any standard TOTP app. Enter the 6-digit code to confirm. Print the backup codes and store them securely.

12. Python Event Scripts

12.1 Event types

tag_change	Run when a specific tag value changes. Rate-limited to once per N ms.
alarm_raise	Run when an alarm is raised. Optional tag / type filter.
alarm_clear	Run when an alarm clears.
gateway_startup	Run once at server startup.

gateway_shutdown	Run once at graceful shutdown.
scheduled	Run on cron-like schedule.
manual	Run from the UI button or API trigger.

12.2 Script helpers

Every script runs with a helper prelude that exposes:

```
# Read a tag value (None if unknown)
value = get_tag('Pump_1.flow')

# Log to the script output panel (visible in Admin -> Scripts)
log('Current flow:', value)

# Run a saved Named Query by id or name
result = run_named_query('overdue_batches',
                         {'since': '2026-04-01'})
log('Batches:', result['rowCount'])
for row in result['rows']:
    log('  -', row['batch_id'])
```

12.3 Sandbox

- Scripts run in a child Python process with a 30-second timeout.
- No access to Node process, file system outside the working directory, or arbitrary network endpoints.
- Named Queries are callable only over a loopback-only internal endpoint gated by a per-process secret token.
- Each script execution has an audit-trail entry (named_query_executed, script_run).

13. AI Assistant

AI Assistant uses a large language model (your choice: Claude, GPT-4, Gemini, Ollama, local models) to accept natural-language commands:

- "Create 20 flow tags for line 3 with units L/min and range 0 to 500."
- "Show me all alarms on Pump_* from the last 24 hours."
- "Generate a GAMP5 User Requirements Specification for this application."
- "Why is tag TT-TK-01 reading -999?"

The assistant sees the system state (tags, connections, alarms, screens), reads the context, and either returns an answer or proposes a set of changes for you to review and apply.

14. Admin Tasks

14.1 Backups

Admin -> Backup & Restore. Backups include tag config, screens, users, roles, data source configs, named queries, security areas, and scripts. Schedule daily backups to a local folder, NAS path, or cloud storage. Encrypted ZIPs available for regulated sites.

14.2 System logs

Admin -> System Logs. Filter by severity (debug/info/warn/error), category (security/tag/alarm/historian/system/script), time range. Export CSV or archive.

14.3 Multi-server deployment

See Installation Manual Section 6. In the runtime app, Admin -> Multi-Server shows the current role, status of peers, and the Deploy button for Test -> Production transitions.

14.4 Auto-update

Admin -> Auto Update. Point at your update server (or use optizeus.org for customer sites with internet access). The updater checks nightly for new patches, downloads them, and applies them on the next restart window - or alerts an operator to approve before applying.

14.5 License maintenance

OptiZeus is sold as a perpetual license with an optional 10%/year maintenance program that grants free version updates and priority support. Admin -> License Activation shows the current expiration of your maintenance window. Renew annually to stay on the latest version.

15. Keyboard Shortcuts

15.1 Viewer Builder

Ctrl+S	Save current screen or template
Ctrl+Z	Undo
Ctrl+Y	Redo
Ctrl+D	Duplicate selected object(s)
Ctrl+C / Ctrl+V	Copy / paste
Ctrl+A	Select all
Delete	Remove selected
Arrow keys	Nudge 1 px (hold Shift for 10 px)
+ / -	Zoom in / out
Ctrl+0	Fit canvas to window
Esc	Cancel drag / close popup / deselect
F2	Rename selected object
Home / End	Scroll to top / bottom of the canvas

15.2 Runtime (operator view)

Alt+N	Jump to next alarm
Alt+A	Acknowledge focused alarm
Alt+S	Silence active alarm sound
Ctrl+F	Find tag / screen
F11	Toggle full-screen kiosk mode
Esc	Close popup / exit kiosk input

16. FAQ + Glossary

16.1 Frequently asked questions

Q: My tag shows "?" instead of a value.
The PLC connection is down or the tag address is invalid. Check Configuration -> PLC Connections -> Diagnostics. If the connection is green, open the tag and verify the PLC address matches what is in the PLC program.

Q: My alarm is not firing even though the tag is out of range.
Check (1) alarm is enabled on the tag, (2) severity is set, (3) delay_on is not masking a brief excursion, (4) no Security Area with enforceWrites is blocking the value change path.

Q: I lost my MFA device.
An admin can reset your MFA from Admin -> Users -> (your user) -> Reset MFA. If all admins have lost their devices, contact OptiZeus support - a one-time recovery key can be generated against your Hardware ID.

Q: Can I migrate from another SCADA?
Admin -> SCADA Convert Tools imports CSV exports from InTouch / Wonderware, FactoryTalk, and WinCC. OPC UA browsing works against any OPC UA server to pull in tag lists wholesale.

Q: How do I downgrade my tier?
Contact sales@optizeus.org. Downgrade is manual - the system needs to verify you are under the new tier's limits (tags, clients, screens) before a new license key is issued.

16.2 Glossary

Tag	A named variable - a value that the system reads from a PLC or calculates internally.
UDT	User-Defined Type - a reusable tag structure with named members.
Instance	A concrete application of a UDT to real tag names.
Super Object	A reusable group of screen objects with internal variables.
Screen / Synoptic	A canvas of objects that represents part of the process.
Animation	A rule that makes an object react to tag values (color, visibility, blink).
Action	Click behavior attached to an object (write tag, open popup, run script).
Datalog	A configured recording job that writes tag values to an external database.
Historian	The OptiZeus internal time-series store (file-based .hda archive).
Named Query	A saved parameterized SELECT statement callable from multiple places.
Security Area	A rule that combines role + letter + IP + patterns to gate writes/access.
Recipe	An S88 data-set written to the PLC when an operator selects a product.
Batch	An S88 execution of a recipe on a unit - has start/end times and a batch ID.
SOE	Sequence of Events - 1 ms resolution record for incident analysis.
PLC	Programmable Logic Controller - the field device that runs the process.
OPC UA	Open industrial communication protocol. Modern, secure, widely adopted.

17. Support

For technical questions, feature requests, or bug reports, email support@optizeus.org with:

- Your Hardware ID (Admin -> License Activation)
- The version string (bottom of any page in the app)
- A description of the symptom and the steps to reproduce
- The last 200 lines of backend/logs/service.log (redact any sensitive values first)
- If possible, a screenshot of the problem

Active-maintenance customers receive priority support via a dedicated channel - details in the welcome email sent when maintenance was enrolled.

Website: optizeus.org | Docs: optizeus.org/docs | Blog: optizeus.org/blog