What's coming in 2023 R2 for operations control - Supervisory

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System Platform 2023
System Platform Enterprise 2023

- Unified Operations Centre
- AVEVA™ Operations Control – Enterprise
- OMI Enterprise
- System Platform
  - 2023
- OMI Enterprise web client

Q3  Q4  Q1  Q2  Q3  Q4  Q1  Q2  Q3  Q4  Q1  Q2

2023  2022  2023
Patches

System Platform 2023

Operations Centre – Enterprise

System Platform
Enterprise 2023

SP 2023 P01

SVG Import

OMI
Enterprise
web client

Map App
OpenLayers

Discontinuation of
Enterprise edition

SP 2023
P02

SP 2023
P03

Q1
Q2
Q3
Q4

Q1
Q2
Q3
Q4

Q1
Q2
Q3
Q4

Q1
Q2
Q3
Q4

2022
2023
2024
System Platform 2023 R2

System Platform 2023

SP 2023 P01

SP 2023 P02

SP 2023 P03

SVG Import

Map App
OpenLayers

OMI web
client (Flex)
OMI in a browser

Operations Management Interface

- Web Widgets
- OMI Apps
- Visualization

Browser

Industrial Graphics

- JavaScript & HTML5
- .NET
- Won’t work in a Web browser

3rd Party Software/Systems

System Platform

Controllers

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OMI in a browser

Operations Management Interface
- Web Widgets
- OMI Apps
- Visualization

Additional Web Widgets

3rd Party Software/Systems

System Platform

Controllers

Browser

2 parts
OMI web client in browser!

Operations Management Interface

OMI Web client
Web Widgets  Draw

Layouts, Navigation, Auto-fill etc.

SP 2023 – Enterprise OMI web client

OMI Apps
Visualization Logic

Process/User  Scalable

3rd Party Software/Systems

System Platform

Controllers
EmbedContent()
Transient data

- Database
- Restful API
- CSV File
Runtime Graphic embedding!

- **Database**
- **Restful API**
- **CSV File**

![Diagram](image-url)
Runtime Graphic embedding!
System Platform 2023 R2

- Alarm Latching
- OMI web client
- EmbedContent()
A: Normal & dismissed
- Process: Normal
- Name: ACK_RTN
- Alarm status:
  - Inactive
  - Ack

B: Active & UnAck'ed
- Process: Abnormal
- Name: UNACK
- Alarm status:
  - Active
  - UnAck

C: Active & Ack'ed
- Process: Normal
- Name: ACK
- Alarm status:
  - Active
  - Acked

D: Normal & UnAck'ed
- Process: Normal
- Name: UNACK_RTN
- Alarm status:
  - Inactive
  - UnAcked

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A: Normal & dismissed
- Process: Normal
- Name: ACK_RTN
- Alarm status:
  - Inactive
  - Ack

B: Active & UnAck'ed
- Process: Abnormal
- Name: UNACK
- Alarm status:
  - Active
  - UnAck

C: Active & Ack'ed
- Process: Normal
- Name: ACK
- Alarm status:
  - Active
  - Acked

D: Normal & UnAck'ed
- Process: Normal
- Name: UNACK_RTN
- Alarm status:
  - Inactive
  - UnAcked

E: Normal & Latched
- Process: Normal
- Name: LATCHED
- Alarm:
  - Inactive
  - Acked
  - Latched (not dismissed)

2023 R2 Optional LATCH state
System Platform 2023 R2

- Treeviews
- Alarm Latching
- EmbedContent()

OMI web client

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System Platform 2023 R2

- Internationalized string translation
- Treeviews
- Alarm Latching
- EmbedContent()
- OMI web client

System Platform 2023 R2

Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1
---|---|---|---|---|---|---|---|---|---|---|---
2022 | 2023 | 2024

Information is subject to change – not for redistribution
System Platform 2023 R2

- Internationalized string translation
- Alarm Latching
- EmbedContent()
- OMI web client
- Global Buffering
- Treeviews
System Platform 2023 R2

- AVEVA Operations Control
- Connected experience
- Internationalized string translation
- Alarm Latching
- EmbedContent()
- OMI web client
- Global Buffering
- Treeviews

Q2 Q3 Q4 2022 Q1 Q2 Q3 Q4 2023 Q1 Q2 Q3 Q4 2024 Q1
System Platform 2023 R2

- AVEVA Operations Control connected experience
- Deployment Guides
- DCOM removal
- Internationalized string translation
- Global Buffering
- Treeviews
- Alarm Latching
- EmbedContent()
AVEVA™ Historian 2023 R2 Highlights

- AVEVA™ Connect Single Sign On support
- Ad Hoc Expressions
  - New built-in functions
  - Use in Historian Client Trend
- Historian Client Web
  - Flexible alarm grid filtering
  - Open chart data in Excel using add-in
  - Migration help from classic Excel add-in
  - Significant improvements to "Modern Look"
  - Content included in Configuration export/import
- Multi-lingual applications
  - Applies to description, units, alias & other extended properties
  - Runtime language switching for Trend
- Connectivity
  - New web service for current values from Historian (using PCS "iData")
  - New network communications between Historian components (using gRPC) with backward compatibility
Major Investment Themes

- Browser-based, Self-service Access
- Integrated Alarm History
- Cybersecurity
- Flexible Topologies
## SVR22

<table>
<thead>
<tr>
<th>Time</th>
<th>In Alarm</th>
<th>Condition</th>
<th>Tag</th>
<th>Asset</th>
<th>Parent</th>
<th>Value</th>
<th>Limit</th>
<th>Unacknowledged</th>
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<td>R22</td>
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<td>R22</td>
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<td>0.2</td>
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<tr>
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<td>✅</td>
<td>High</td>
<td>M22.Agitator</td>
<td>M22</td>
<td>Line2</td>
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<td>00:00:48</td>
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<td>M22</td>
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<td>High</td>
<td>M22.Level</td>
<td>M22</td>
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<td>Line2</td>
<td>Line2</td>
<td>151.098817</td>
<td>151</td>
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</table>
## Ad Hoc Expressions

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<th>Arithmetic</th>
<th>Scalar</th>
<th>Statistics</th>
<th>Time Series</th>
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<tbody>
<tr>
<td>+</td>
<td>SIGN</td>
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<td>TIMESHIFT</td>
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<tr>
<td>-</td>
<td>ABS</td>
<td>AVERAGES</td>
<td>DURATION</td>
</tr>
<tr>
<td>/</td>
<td>SQRT</td>
<td>TOTAL</td>
<td>PREV</td>
</tr>
<tr>
<td>*</td>
<td>LOG</td>
<td>TOTALS</td>
<td>PREVGOOD</td>
</tr>
<tr>
<td>^</td>
<td>ROUND</td>
<td>MIN</td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>TRUNCATE</td>
<td>MAX</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AND</td>
<td>COUNT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OR</td>
<td>COUNTALL</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NOT</td>
<td></td>
<td></td>
</tr>
<tr>
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<td>IF</td>
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<tr>
<td></td>
<td>IFSHORTER</td>
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</tr>
</tbody>
</table>

### Units

- UOM
- CASTUOM

New in Historian 2023 R2
Multilingual Applications
Major Enhancements

- Double Point Status Alarms
- New Installation Framework
- Kernel Now Works Running as a Service
- Equipment ID's
- Equipment Update Speeds
- New Online Help System
- Support for Microsoft Excel 64 Bit (Project DBF Add-On Utility)
- Minor Enhancements
- Cyber Security Improvements
Double Point Status Alarms

What are DPS Alarms?

**Designed by the Power Industry**
- Circuit breaker switch positions in substations
- Single Contact to signal a switch position
- Specific to Power Meter Data capture

**Protocols**
- IEC61850 / IEC 60870-5-104 / DNP3

**Single Point Status Alarm** (1 Digital State for Open / Close)
- Voltage detected on the input contact: Switch Closed
- No Voltage detected on the input contact: Switch Open

“Single Point” Status Indication (conventional wiring)
Double Point Status Alarms

What are DPS Alarms?

**Double Point Status Alarm** (2 Digital States for Open / Close)

- Two Bits for the representation of "open" and "close" make the status message secure.
  - Broken Wire
  - Defective / Corroded Contact
    - No Electrical Signal feedback
  - A single bit may cause a wrong interpretation of the value!

**Requested by Schneider Electric**

- Plant SCADA Power Connect Driver Pack (Speciality Driver Pack)
- EcoStruxure Power Operation

“Double Point” Status Indication (conventional wiring)
Double Point Status Alarms

Double point status alarm responds to eight states in a field device that are represented in Plant SCADA as a single integer tag. For each state you can specify:

- State Name <n> Represents the Alarm state
- State Type <n> Action for this state

State Type Options:

- Alarm: Show on Active Alarms page, event logged to SOE
  State Name shows in State field
- Event: Event logged to SOE
  State Name shows in State field
- None: No action

Define up to 8 states with custom names
Double Point Status Alarm

Plant SCADA February Program review demo

Graeme Davey
New Installation Framework

- New modern installation framework that simplifies the selection and installation of required components
  - Built using AVEVA’s common technology stack for a similar Installation Experience leveraging the Install Toolkit (ITK)
New Installation Framework

• New modern installation framework that simplifies the selection and installation of required components
  ○ Built using AVEVA’s common technology stack for a similar Installation Experience leveraging the Install Toolkit (ITK)

• Core components appear as a single entry within the Programs and Features list in Windows Control Panel, making it easier to modify, repair or remove the application.
New Installation Framework

• New modern installation framework that simplifies the selection and installation of required components
  - Built using AVEVA’s common technology stack for a similar Installation Experience leveraging the Install Toolkit (ITK)
• Core components appear as a single entry within the Programs and Features list in Windows Control Panel, making it easier to modify, repair or remove the application.
• Can be executed via a command line, enabling support for an unattended silent installation.

• Four preconfigured response files are provided:
  1. All.txt  All components
  2. DevelopmentWorkstation.txt  Components for development
  3. RuntimeClient.txt  Components for runtime client
  4. Server.txt  Components for runtime server
New Installation Framework

- New modern installation framework that simplifies the selection and installation of required components
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- Four preconfigured response files are provided:
  1. **All.txt** All components
  2. **DevelopmentWorkstation.txt** Components for development
  3. **RuntimeClient.txt** Components for runtime client
  4. **Server.txt** Components for runtime server

E.g. Setup.exe /silent "D:\PlantSCADA\MyResponseFiles\All.txt"
Please select the features you would like to install.

- Platform Common Services
  - Platform Common Services
  - AVEVA Plant SCADA
  - Configuration Environment
  - Runtime
  - Deployment Server
  - Project DBF Add-in for Microsoft Excel

- AVEVA Plant SCADA Communication Drivers
  - ABCLX (5.04.00.004)
  - ABMLXEIP (2.01.00.000)
  - ABTCP (3.02.00.002)
  - BACNET (4.06.00.008)
  - CTICMP (4.02.00.003)
  - DNPR (5.02.00.001)
  - GETCP (3.02.00.002)
  - IEC870IP (5.02.00.004)
  - KNX (2.04.00.003)
  - MELSECO (2.02.00.000)

Provides the following services:
- System Management Server
- Identity Management Service
- Data Storage Service
- Diagnostic Portal

This feature and any children use 348201 KB
Kernel – Access Improvements

• Improved Security while monitoring the Runtime System
  o Typically used for Diagnostics
• Display the Kernel while running as a Service
• Launch the Kernel of any process
  o Runtime Manager
  o Control Menu / DspKernel()
• New Login Prompt Screen
• Assigned to Role with Kernel Access property
  1. No Access  No access at all
  2. Full Access  No restrictions
  3. Read Only  No privilege to run Cicode
• Legacy “Kernel user” has been deprecated
Unique IDs for Equipment

• Unique ID is applied to any equipment and equipment types
  o Typically referred to as the Globally Unique Identifier (GUID)

• Used for consistent identification for integration with future software releases.

• Automatically generated whenever equipment is added

• Migration Tool includes option to Create unique IDs for Variables and Equipment.

• Future Use Case:
  o Integration with Version Control Software
Equipment Update Speeds

Performance of Equipment Update has been improved.

- The time taken to generate tags and equipment is significantly reduced compared to earlier versions.
Equipment Update Speeds

Test Projects:

• Large Project
  - 12K Pieces of Equipment
  - 50K Tags
    Older Versions
    PS2023R2
    3 hours 7 minutes

• Small Project
  - 1K Pieces of Equipment
  - 9K Tags
    Older Versions
    PS2023R2
    3 hours 7 minutes
New Online Help System

AVEVA™ Help

• Documentation for Plant SCADA is now presented using AVEVA Help

• Browser-based tool that allows any installed AVEVA products to share a common platform for the delivery of product information

• The move to the AVEVA Help platform means the Plant SCADA documentation is ready for distribution on emerging documentation platforms, including cloud-based environments and the AVEVA Documentation portal

  • https://docs.AVEVA.com

• AVEVA™ Help is accessible from the AVEVA branch of the Windows Start menu.
  • When launched, it will display in your default browser
  • The panel to the left includes a list of any locally-installed AVEVA products that utilize the AVEVA Help platform. You can open the documentation for a product on its own browser tab.
Support for Microsoft Excel - 64 Bit

- Project DBF Add-On Utility
  - Add-in is specifically designed for use with Microsoft Excel

- Enhanced the add-on tool
  - Microsoft Excel 64 bit

- Open Microsoft Excel, Selection Toolbar Appears
  1. Select your Project
  2. Select Table
     a) Equipment
     b) Tags
     c) Alarms
     d) Trends
  3. Save changes made to a .dbf file (table).
Minor Enhancements

Web Content Object for Standard Graphics
A new parameter has been added which will help improve the creation of standard graphics in the graphics builder.

Continuous Updates and Integrations
AVEVA Enterprise Licensing Update to Version 4.0

Operating Improvements
The default value of the INI parameter (Kernal) has been increased to 512 from 256.

Graphics Builder Updates
A shortcut text has been added to the close menu item in graphics builder. Currently in English only versions.

Font Selection in AlarmList Genie
The user can now specify the font of their choice for the selected rows of the alarm pages provided with the Situational Awareness Starter Project.

Increased Capacity with Cicode Stack Window
The size of the stack window buffer has now been doubled to help reduce certain problem scenarios.

Secondary Trend Backfill
The default backfill limit has been increased to reflect large trend counts possible with modern computer hardware. The list backfill requests can now be processed faster.
Questions?

Please wait for the microphone.
State your name and company.

Please remember to...

Navigate to this session in the mobile app to complete the survey.

Thank you!
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Over 20,000 enterprises in over 100 countries rely on AVEVA to help them deliver life’s essentials: safe and reliable energy, food, medicines, infrastructure and more. By connecting people with trusted information and AI-enriched insights, AVEVA enables teams to engineer efficiently and optimize operations, driving growth and sustainability.

Named as one of the world’s most innovative companies, AVEVA supports customers with open solutions and the expertise of more than 6,400 employees, 5,000 partners and 5,700 certified developers. The company is headquartered in Cambridge, UK.

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