AVEVAWORLD

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OCTOBER 2024

Visualizing your operations data with AVEVA™ PI Vision™

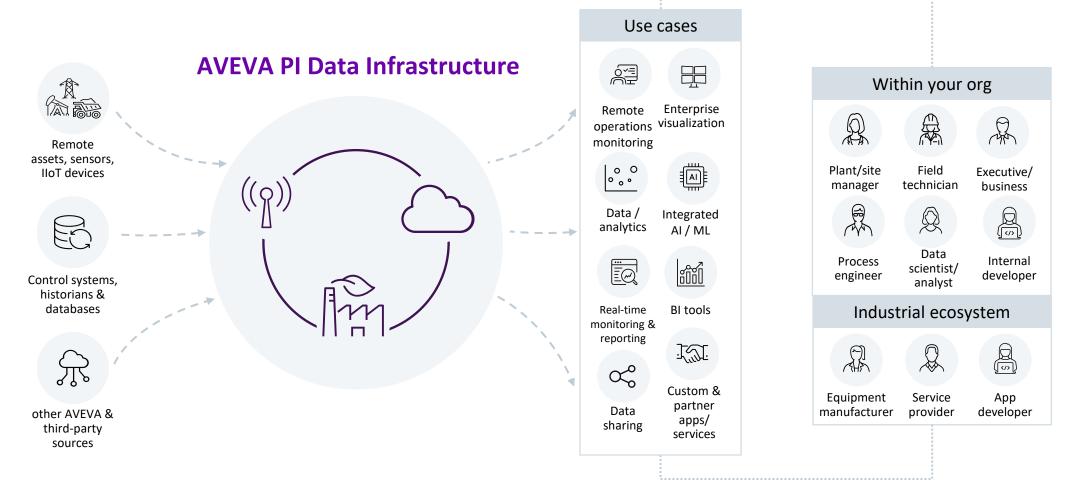
Amit Dutta – Senior Product Manager



Hybrid data infrastructure

From edge to plant to community

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AVEVA

AVEVA PI Vision

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The fastest, easiest way to visualize AVEVA PI Server data

- An easy to use, self-service, scalable solution
- Access data from any web browser, including **mobile** device browsers
- Organize and share displays across your organization



Gain visibility into operations

Operations data visualization outcomes for industrial organizations



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Rapid response

University of Maryland reduced electrical outage response times from up to 90 minutes to **almost instantaneous**



Collaboration

Algoma Steel users built over **1,500 displays** to provide deeper insights shared across departments.



Self-service

One user at ADM visualized over 550 assets' data in one display in **less than 10 minutes**

University of Maryland, College Park

<u>Algoma Steel</u>

<u>ADM</u>



Powerful capabilities added in recent releases

2019-2023 AVEVA PI Vision releases



2019

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- PI ProcessBook migration
- Ad hoc trending

2020

- Tag based calculations
- Multiple time contexts
- Display usage monitoring
- Additional PI ProcessBook migration

2021

- Asset based calculations
- Offline display management
- Attributes in events table

2022

- Enhanced event frame visualization
- Trend cursor on drag
- Unit of measure support
- Default display and symbol settings



- Modern authentication
- authentication
- Advanced tag search



Advanced tag search in AVEVA PI Vision 2023 SP1

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Streamline finding the right tags with advanced search features



AVEVA[™] PI Vision[™] AVEVA[™] PI Vision[™] Tags Tags \sim 123 📼 <u>il.</u> 123 \odot ХY 謪 +-×= +-×= Q sin* Θ 勖 勖 *temperature* Descriptor 诺 뼝 Advanced Search Criteria Advanced Search Criteria Point source ✓ R Point source ÷ Engineering units **∼** m K Home Digital set name ~ Digital set name < cspi Extended descriptor Descriptor = *temperature*, Point source = R Is good GE03 T CTRL BOX Instrument tag Turbine 03 Temperature Control Box Location 1 Location 2 GE03 T HUB Location 3 Turbine 03 Temperature Hub Location 4 GE03 T MAIN BOX Location 5 Turbine 03 Temperature Main Box Point ID Point type GE03 T NAC Point class Turbine 03 Nacelle Temperature Scan User integer 1 GE03_T_TOP_BOX Turbine 03 Temperature Top Box User integer 2 Value

Features

- Filter by multiple tag attributes at the same time.
- Select operator symbols for filtering on a relevant attribute.
- View description alongside tag name in tag search results.
- View current tag value and timestamp on hover in search results.

Benefits

- Streamline finding the right tags, even when tag names lack standard conventions, mismatch the source system, or have similarities with other tags.
- Quickly narrow and interpret tag search results.
- Easily differentiate between recent tags and similar ٠ archived tags.

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Addressing critical visualization needs

Upcoming AVEVA PI Vision 2024 release

Ensure a better overall end-user experience.



		° mine	Temp 1	Time	Temp 2
	Temperature 36.696 DEG.	2:38:35 PM 2:37:05 PM	48.462 52.6	2:34:05 PI	
		2:37:05 PM 2:32:05 PM	52.6 36.332	2:12:35 PM 1:54:35 PM	
40		2:31:35 PM	33.233	1:39:35 PI	
		2:31:05 PM	32.897	1:39:05 PM	46.366
		2:30:35 PM	29.937	1:19:05 PN	
		2:28:05 PM	21.534	1:11:35 PM	
		2:00:35 PM 1:58:35 PM	21.951 21.436	12:52:35 P 12:34:05 P	
		1:58:05 PM	19.18	12:18:35 P	
		1:54:35 PM	11.822	12:18:05 P	M 42.368
	2:00 13:00 14:00		0.74641	11:58:05 A	M 39.213
		1:39:35 PM	0	11:49:35 A	
	$() _$	1:39:05 PM 1:35:05 PM	4.1175 8.1807	11:26:35 AI	
4 7.122))	(36.696))	1:35:05 PM	9.9817	10:57:35 A	
	<u> </u>	1:32:05 PM	11.794	10:57:05 A	
			13.612	10:37:05 A	M 38.873
Temperature 1 Te	mperature 2	1:26:35 PM	18.597	10:29:35 A	м 25.7
Time	Temperature	Time		Le	evel
4/18/2024 2:14:35 PM	184.19 DEG. C		11:58 PM		31.332
4/18/2024 2:09:05 PM	182.03 DEG. C		11:49 PM		40.644
4/18/2024 2:02:05 PM					
	176.14 DEG. C		11:37 PM		43.119
4/18/2024 1:52:35 PM	176.14 DEG. C 176.37 DEG. C		11:37 PM 11:17 PM		
4/18/2024 1:52:35 PM 4/18/2024 1:47:35 PM					43.119
	176.37 DEG. C		11:17 PM		43.119 22.594
4/18/2024 1:47:35 PM	176.37 DEG. C 174.18 DEG. C		11:17 PM 11:09 PM		43.119 22.594 21.571
4/18/2024 1:47:35 PM 4/18/2024 1:45:05 PM	176.37 DEG. C 174.18 DEG. C 169.46 DEG. C		11:17 PM 11:09 PM 10:58 PM 10:48 PM 10:39 PM		43.119 22.594 21.571 0.38098 0 11.156
4/18/2024 1:47:35 PM 4/18/2024 1:45:05 PM 4/18/2024 1:40:35 PM 4/18/2024 1:36:35 PM 4/18/2024 1:34:05 PM	176.37 DEG. C 174.18 DEG. C 169.46 DEG. C 170.23 DEG. C 169.96 DEG. C 168.86 DEG. C		11:17 PM 11:09 PM 10:58 PM 10:48 PM 10:39 PM 10:34 PM		43.119 22.594 21.571 0.38098 0 11.156 28.967
4/18/2024 1:47:35 PM 4/18/2024 1:45:05 PM 4/18/2024 1:40:35 PM 4/18/2024 1:36:35 PM 4/18/2024 1:34:05 PM 4/18/2024 1:24:35 PM	176.37 DEG. C 174.18 DEG. C 169.46 DEG. C 170.23 DEG. C 169.96 DEG. C 168.86 DEG. C 170.76 DEG. C		11:17 PM 11:09 PM 10:58 PM 10:48 PM 10:39 PM 10:34 PM 10:34 PM		43.119 22.594 21.571 0.38098 0 11.156 28.967 39.51
4/18/2024 1:47:35 PM 4/18/2024 1:45:05 PM 4/18/2024 1:40:35 PM 4/18/2024 1:36:35 PM 4/18/2024 1:34:05 PM 4/18/2024 1:24:35 PM 4/18/2024 1:21:35 PM	176.37 DEG. C 174.18 DEG. C 169.46 DEG. C 170.23 DEG. C 169.96 DEG. C 168.86 DEG. C 170.76 DEG. C 163.74 DEG. C		11:17 PM 11:09 PM 10:58 PM 10:48 PM 10:39 PM 10:34 PM 10:26 PM 10:14 PM		43.119 22.594 21.571 0.38098 0 11.156 28.967 39.51 41.305
4/18/2024 1:47:35 PM 4/18/2024 1:45:05 PM 4/18/2024 1:40:35 PM 4/18/2024 1:36:35 PM 4/18/2024 1:34:05 PM 4/18/2024 1:24:35 PM 4/18/2024 1:21:35 PM 4/18/2024 1:16:05 PM	176.37 DEG. C 174.18 DEG. C 169.46 DEG. C 170.23 DEG. C 169.96 DEG. C 168.86 DEG. C 170.76 DEG. C 163.74 DEG. C 163.8 DEG. C		11:17 PM 11:09 PM 10:58 PM 10:48 PM 10:39 PM 10:34 PM 10:26 PM 10:26 PM 10:14 PM 9:57 PM		43.119 22.594 21.571 0.38098 0 11.156 28.967 39.51 41.305 25.202
4/18/2024 1:47:35 PM 4/18/2024 1:45:05 PM 4/18/2024 1:40:35 PM 4/18/2024 1:36:35 PM 4/18/2024 1:34:05 PM 4/18/2024 1:24:35 PM 4/18/2024 1:21:35 PM	176.37 DEG. C 174.18 DEG. C 169.46 DEG. C 170.23 DEG. C 169.96 DEG. C 168.86 DEG. C 170.76 DEG. C 163.74 DEG. C		11:17 PM 11:09 PM 10:58 PM 10:48 PM 10:39 PM 10:34 PM 10:26 PM 10:14 PM		43.119 22.594 21.571 0.38098 0 11.156 28.967 39.51 41.305

Feature highlights

- New time-series table symbol
- Configurable font and font size on all AVEVA PI Vision symbols
- Ability to bulk edit multiple symbols on a display
- Improved display sorting and tabular view of displays
- Granular folder and display permissions
- Additional multi-state capabilities

Addressing 20+ enhancements requests from the AVEVA[™] PI System[™] Feedback Portal, spanning 2500+ votes

View recorded values from AVEVA PI Server

New time-series table symbol

- View recorded PI tag values and timestamps over a specified time range
- Can be configured to show fixed number of values
- Supports multi-state configuration

	Temperature	Time	Temperature
:14:05 AM	82.5	4/18/2024 2:14:35 PM	184.19 DEG. C
:13:35 AM	84.8		
:09:35 AM	84.3	4/18/2024 2:09:05 PM	182.03 DEG. C
:08:35 AM	91.0	4/18/2024 2:02:05 PM	176.14 DEG. C
:07:35 AM	92.6	4/18/2024 1:52:35 PM	176.37 DEG. C
:04:35 AM	92.8	4/18/2024 1:47:35 PM	174.18 DEG. C
29:05 AM	82.0		
19:05 AM	77.2	4/18/2024 1:45:05 PM	169.46 DEG. C
18:35 AM	79.6	4/18/2024 1:40:35 PM	170.23 DEG. C
17:35 AM	81.4	4/18/2024 1:36:35 PM	169.96 DEG. C
17:05 AM	86.7	4/18/2024 1:34:05 PM	168.86 DEG. C
13:35 AM	85.9		
57:35 AM	78.7	4/18/2024 1:24:35 PM	170.76 DEG. C
	ll	4/18/2024 1:21:35 PM	163.74 DEG. C
		4/18/2024 1:16:05 PM	163.8 DEG. C
		4/18/2024 1:07:35 PM	171.86 DEG. C
		4/18/2024 1:03:05 PM	172.79 DEG. C

Time

10

10: 10:

10:

10:

10:0 9:2

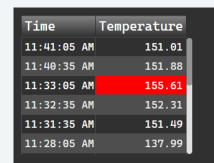
> 9:1 9:1 9:1 9:1 9:1 8:5

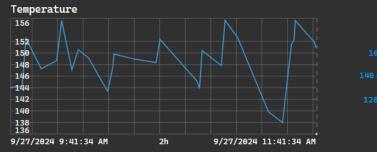
Increased visibility of symbols and displays

 Font and font size selection available on all symbols

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- New rich text editor for the static text symbol
- Display zoom level preserved for each user





Time		Pressure
11:40:35	AM	28.78
11:40:05	AM	27.31
11:32:35	AM	29.03
11:31:35	AM	27.02
11:29:35	AM	16.85
11:27:05	AM	17.34





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<u>Operators - click here for</u> equipment troubleshooting steps.



Bulk edit symbols on a display

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- Select multiple symbols on a display and configure them together
- Reduce the time to build complex displays
- Configure symbols to use the same properties

SP1|Engine Temperature 239.89 °F 9/25/2024 1:24:35 PM

SP1|Fuel Efficiency 433.83 L/100 km 9/25/2024 1:25:16 PM

SP1|Gas Tank Capacity 20 US gal 9/25/2024 1:25:16 PM

SP1|Gas Tank Level 68.277 % 9/25/2024 1:25:05 PM

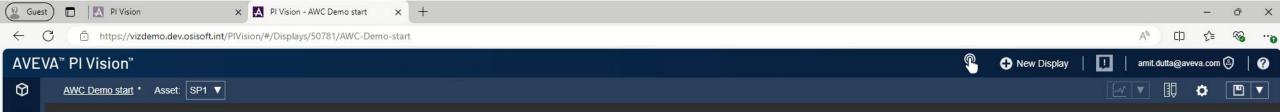
SP1|License Plate CA HYK427 9/25/2024 1:24:31 PM SP1|Engine Temperature 244.29 *F 9/25/2024 1:27:35 PM

SP1|Fuel Efficiency 479.74 L/100 km 9/25/2024 1:28:16 PM

SP1|Gas Tank Capacity 20 US gal 9/25/2024 1:28:16 PM

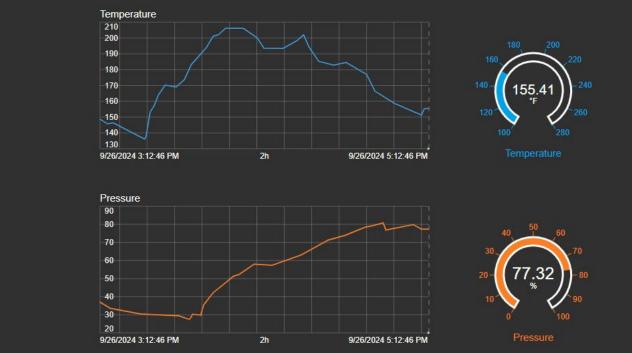
SP1|Gas Tank Level 66.958 % 9/25/2024 1:28:05 PM

SP1/License Plate CA HYK427 9/25/2024 1:27:21 PM



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Operators - click here for equipment troubleshooting steps.

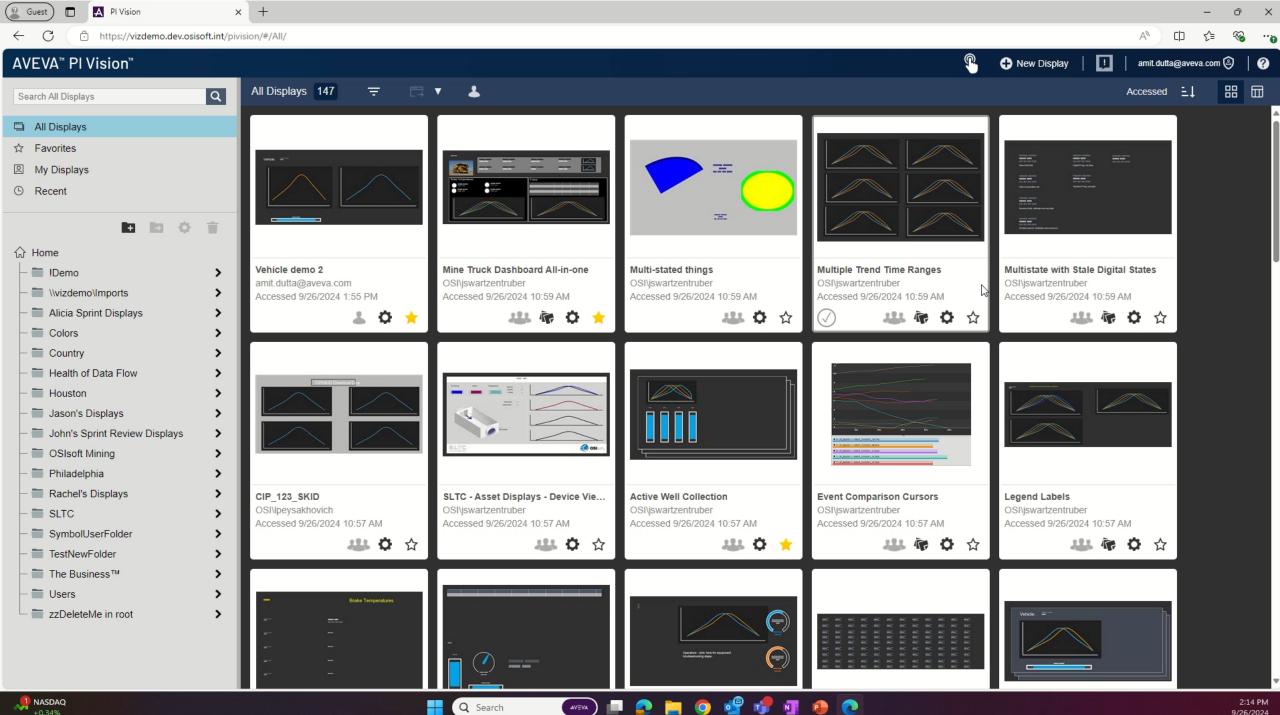
Home page enhancements and folder permissions

- Sort displays by name, owner, last modified, or last accessed
- Tabular view of displays

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- Access AVEVA PI Vision folders directly via URL
- More granular folder and display permissions model

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3	AVEVA [™] PI Vision [™]						New Display	amit.dutta@aveva.com 🔕 📔 🔮
A	Search All Displays	1	Il Displays 147 \Xi 🖽 🗶					88 🖽
3	All Displays		Name			Owner	Last Modified	Your Last Access
A	ជ់ Favorites	E	Mine Truck Dashboard All-in-one		× 4	U OSI\jswartzentruber	5/23/2024 10:32 AM	9/26/2024 10:59 AM
A	My Displays		Multi-stated things		4	OSI\jswartzentruber	2/7/2020 2:10 PM	9/26/2024 10:59 AM
A	Recent		Multiple Trend Time Ranges		4	OSI\jswartzentruber	12/13/2023 3:04 PM	9/26/2024 10:59 AM
A	■ 10 0 T	I.	Multistate with Stale Digital States		1	OSI\jswartzentruber	12/13/2023 3:04 PM	9/26/2024 10:59 AM
Ą	☆ Home		CIP_123_SKID		4	OSI/Ipeysakhovich	2/15/2017 4:37 PM	9/26/2024 10:57 AM
Ą	- IDemo >		SLTC - Asset Displays - Device View - VAVCO		4	SI\jswartzentruber	3/25/2019 4:20 PM	9/26/2024 10:57 AM
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	Health of Data Flow Houston		Brake Temperatures			OSI\jswartzentruber	9/26/2017 12:08 PM	9/26/2024 10:57 AM
	- 🖬 Jason's Displays 🔉		 Velocity Terminal Pump - Overview and Details 	o	습	. OSI\jswartzentruber	9/26/2017 12:05 PM	9/26/2024 10:56 AM
	- 🛅 John's Sprint Review Displays 🔹 🗲	н	AD-Fonts		4	amit.dutta@aveva.com	9/18/2024 2:55 PM	9/26/2024 10:39 AM
	- OSIsoft Mining >		AD-bulk edit			amit.dutta@aveva.com	9/13/2024 2:24 PM	9/26/2024 10:39 AM
	- Thiladelphia		Vehicle demo			amit.dutta@aveva.com	7/23/2024 4:23 PM	9/26/2024 10:39 AM
	- 🖿 SLTC 🔸		AD-TST			amit.dutta@aveva.com	9/13/2024 2:23 PM	9/26/2024 10:39 AM
	- SymbolUserFolder		Pizza Truck		4	USI\tlebay	1/5/2017 12:52 PM	9/26/2024 10:38 AM
	TestNewFolder The Business™	I.	AD - Edit multiple			amit.dutta@aveva.com	7/23/2024 4:21 PM	9/26/2024 10:38 AM
	- 🖀 Users >	I.	Vehicle demo 2		*	amit.dutta@aveva.com	8/20/2024 10:24 AM	9/26/2024 10:38 AM
	ZZDeleteMe in root		Pizza and Mine Trucks		J.	OSI\jswartzentruber	9/26/2017 12:03 PM	9/26/2024 10:38 AM
			SLTC - Energy Management Overview			OSI\jswartzentruber	3/25/2019 4:20 PM	9/26/2024 10:38 AM



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AVEVA

NASDAQ

9/26/2024

View connected users

AVEVA[™] PI Vision[™] Administration

Overview

Configuration

Security

Display Defaults User Settings

Display Management

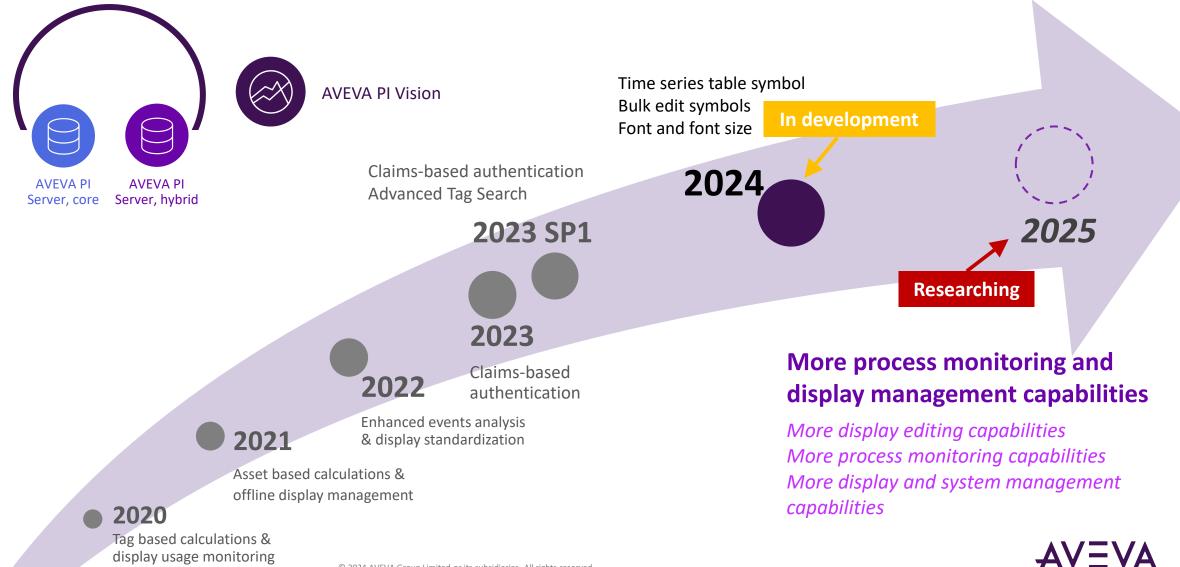
Reports Display Sessions

Display Sessions (10) C Last refresh: 09/26/24 11:05:32 AM

ID †	Name	User ID	Opened	Updated	First	Latest	Min	Max	Avg	Session ID
-1	New Unsaved Display	OSI\jswartzentru	09/26/24 10:46:22 AM	913ms ago	471ms	18ms	2ms	5s	193ms	7f58a632-0547-4d33-bdb5-b1a7125c3616
2	SLTC - Asset Displays - AC RTU Displa	OSI\adutta	09/26/24 11:05:25 AM	2s ago	3s	77ms	77ms	3s	1s	35f101ea-7364-4790-9883-fb3bf30df7d8
6	SLTC - Asset-Displays - Device-View	OSI\eschwamm	09/26/24 10:51:50 AM	3s ago	1 s	2ms	2ms	1s	18ms	1fbbfc14-37f7-48e7-abb7-3c60dd2ecfc0
11	SLTC - Energy Management	OSI\avv-croman	09/26/24 10:54:43 AM	2s ago	978ms	151ms	147ms	978ms	174ms	433b05b4-fb82-4da5-ba9e-414a5142b8c8
15	SLTC - Energy Management Overview	OSI\aalisha	09/26/24 10:51:59 AM	913ms ago	152ms	151ms	145ms	323ms	160ms	46c7ca3d-2795-4777-80ae-682558fe965c
26	SLTC - Fault and Site Management - C	OSI\aalisha	09/26/24 10:52:46 AM	913ms ago	774ms	462ms	437ms	866ms	486ms	a3b0713a-c0d9-435e-b850-23befb452c1b
71	Compressor State Changes	OSI\eschwamm	09/26/24 10:50:50 AM	913ms ago	566ms	2ms	1ms	846ms	93ms	c8610278-c8cb-47e1-8f5f-73524c93716b
82	Wind Farm Overview	OSI\lposner	09/26/24 10:48:35 AM	5s ago	455ms	11ms	6ms	455ms	12ms	e3d7c790-8843-4d6e-81e5-084def87f4b0
87	Generator Overview	OSI\jdryden	09/26/24 10:52:21 AM	3s ago	312ms	4ms	4ms	820ms	29ms	830858c0-a7d0-4e00-a41f-674bdbb41818
87	Generator Overview	OSI\jswartzentru	09/26/24 10:45:23 AM	5s ago	3s	10ms	4ms	3s	43ms	e530345f-81b9-4e22-b02c-fdff289f65a4

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Roadmap: Future considerations for AVEVA PI Vision



We hear you loud and clear

AVEVA PI System Feedback Portal is your platform to tell us what you want, and we have been listening!

AVEVA PI Vision 2024 includes 20+ new enhancements based on 2500+ votes from AVEVA PI System Feedback Portal.





AVEVA

Recommended sessions and labs

Support expanding needs with AVEVA PI Vision 2024

Wednesday, October 16 @ 5:00pm Room 241

PI Vision: Basics

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Wednesday, October 16 @ 1:00pm

PI Vision: Beyond the Basics

Thursday, October 17 @ 9:00am

Migration from PI ProcessBook to PI Vision

Wednesday, October 16 @ 9:00am

Amit Dutta

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Questions?



This presentation may include predictions, estimates, intentions, beliefs and other statements that are or may be construed as being forward-looking. While these forward-looking statements represent our current judgment on what the future holds, they are subject to risks and uncertainties that could result in actual outcomes differing materially from those projected in these statements. No statement contained herein constitutes a commitment by AVEVA to perform any particular action or to deliver any particular product or product features. Readers are cautioned not to place undue reliance on these forward-looking statements, which reflect our opinions only as of the date of this presentation.

The Company shall not be obliged to disclose any revision to these forward-looking statements to reflect events or circumstances occurring after the date on which they are made or to reflect the occurrence of future events.



ABOUT AVEVA

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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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