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How to apply User Defined Types (UDT) in AVEVA™ InTouch HMI

Scott A Kortier – Product Manager - operations control



AVEVA



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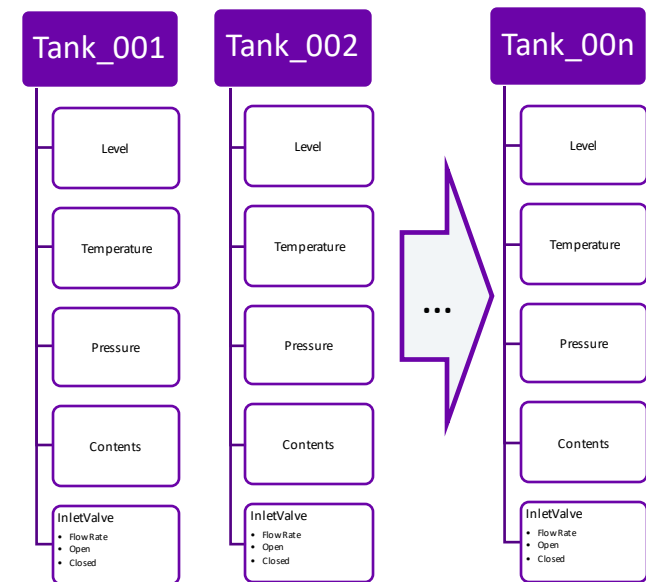
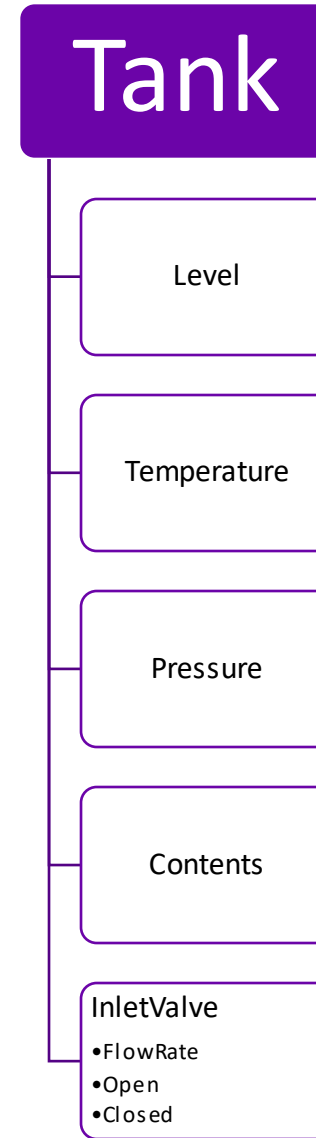
Product Manager – operations control

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What is a UDT?

- A “structure” (shape, template)
- Similar to:
 - Supertag (InTouch)
 - Class (Edge)
 - Equipment (Plant SCADA)
- User Defined Data type
 - Extension of existing data types, Bool, Int, Real/Float, String/Message
 - Allows the User to create their own
- First define the Template, then create Instances





Why use UDTs?

- Allows more efficient creation of tags/projects. Use UDTs as building blocks, or modular definitions
 - Repetitive station logic
 - Promotes modular design
- When you need to re-use the structure
 - A Tank could have Level, Temperature, Pressure, Contents
 - A mailing address (bill to, ship to)
- Multiple Levels (up to 6)
 - Nesting to group logical parts and subsystems
- Most PLCs and controllers have adopted UDTs

UDT InTouch HMI 2023 R2

User Defined data Types (UDT) Structure support

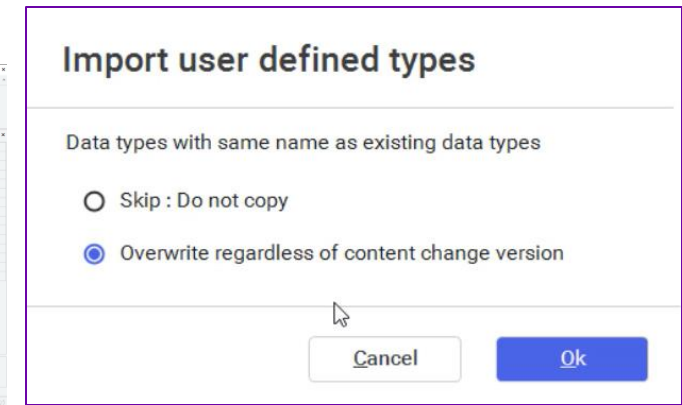
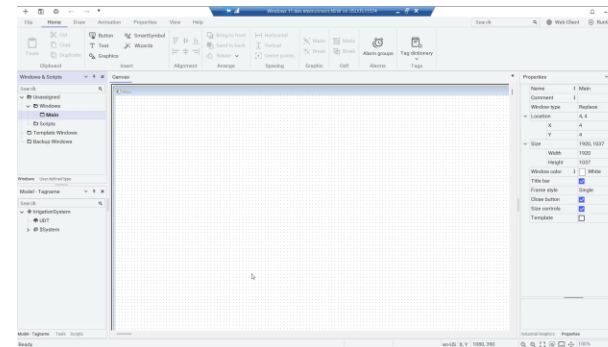
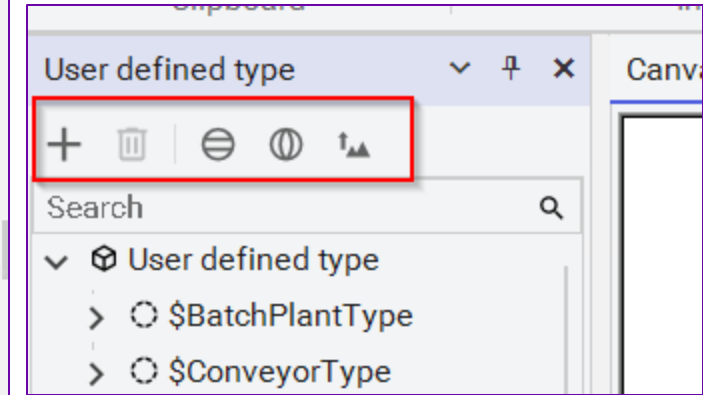
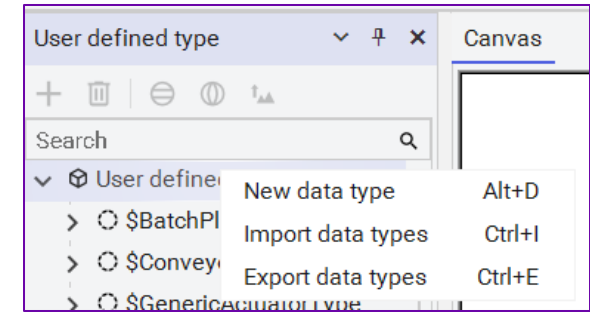
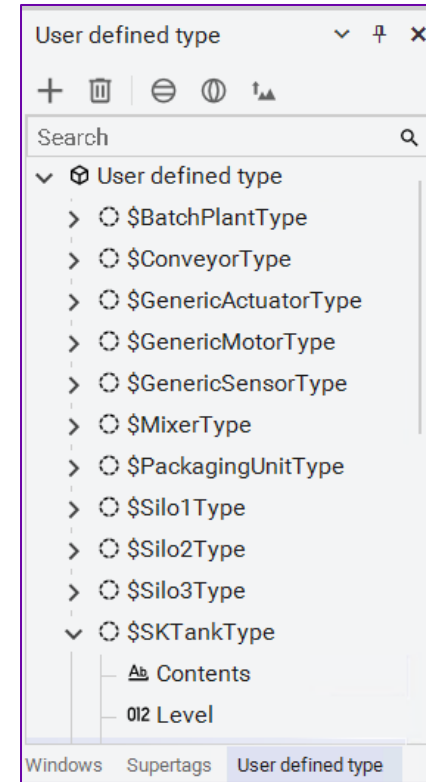
1. Define new Data Type

- UDT, Instance and default values are saved outside of Tagname Dictionary

2. Rename, Delete (Can't delete if used), Duplicate

3. Export/Import (JSON Format), to/from another application

- Can externally “bulk edit”
- Notepad++ with “JSON Viewer” plugin example
- Plan to add “bulk edit” in WindowMaker



UDT Continued

- All properties will be modifiable except name and type
- Alarm in Properties
- Alarms in EAC
- Drag-and-Drop to create graphic element
- Owning Object, “Me.” support

User1	State	Node	Group	Name	AlarmComment
0	UNACK	YanLF1	\$System	Datatype_001_001 Member001	

Displaying 1 to 1 of 1 alarms | Query: Default | Filter: | 100% Complete | Pacific Time (US Canada)

ON

Summary/Benefits

- Efficiency: Allows more efficient creation of tags/projects.
- Modularity: Use UDTs as building blocks, or modular definitions
- Alignment with PLCs: Most PLCs and controllers have adopted UDTs

Questions?

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