AVEVA™ PI System™ points creation training in hiring challenges

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Introduction

Kruger: We turn renewable resources into sustainable, high-quality essentials made for everyday life

- Private holding
- 10 Sectors
- 19 manufacturing and production operations
- 5000 employees
- +115 years of history
- 42 Renewable energy power plants

Sectors related to this presentation

Tissue Products
We make best-selling brands for consumers and businesses across Canada and the U.S.A.

Containerboard
Kruger manufactures 100% recycled linerboard and innovative containerboard products.

Publication Papers
Kruger is a leading manufacturer of newsprint, coated paper and a variety of specialty grades.

Specialty Papers
Kruger is constantly developing various grades of eco-friendly specialty papers such as OGR, C1S and.
Business challenge

- Training: as soon a training is done another one is required.
- All our production sites have been recently converted to a full AVEVA PI System environment with HA.
  - Resistance to changes
  - People focus on what they are losing.
- Workforce does not have the same education level everywhere.
- Hiring experienced employees = Hiring what they know and like.
- People must do more in less time. They are tempted to take shortcuts.
PI Point

What is a AVEVA PI System point (PI point)?

• Container to store the history of an attribute.
• See it as a calculator roll with 2 elements: timestamp and value.

• Multiple parameters
  • Name
  • Compression
  • AVEVA PI System interface (data source)
  • Security
Context

How things work for us when we need a new PI point?

• No PI point creation is allowed.

• Naming convention.

• Mainly using OPC DA interfaces.

• No more than 225 PI points per scan classes.

• Compression: 1% of the span.
Implementation

Create a Database

- 5 critical pieces of information
  1. Sites
  2. Site’s equipment
  3. List of the interfaces (*)
  4. List of the scan classes (*)
  5. PI Point value type
- SQL Server environment
- Use stored procedures for best performance and security
- (*) Create scripts to gather those information
Implementation

Create an interface

- Best question is no question.
- Form format.
- Only 8/15 questions are required to create a PI Point.
- Develop with PowerShell.
- Only 1 external DLL (OPC Lab QuickOPC).
- For light usage. Create 1 PI point at a time.
- Buzz work alert: Usage of “AI” (decision tree).
Implementation

Tricks / insights

• Propose only coherent values.
• Deduce values.
• Order questions logically.
• Bring functionalities that users want.
• Do not prefill fields with default values.
• Highlight fields in error / required fields.
• Use a vocabulary that users understand.
Implementation
Minimum fields to create a PI point

- Check if points are available in the reserve
- Check for duplicated tags
- Build PI point name according to naming the convention
- Place the PI point in the right OPC group
- Check if all groups are full
- Adjust compression (Archive and interface)
- Set security standards

Autofill those fields

Build short description from Item Id or desc.

1% of the span
Future improvement

• Build agent to:
  • Automate AVEVA PI System interface configuration synchronization
  • Synchronization of OPC tags
  • Multiple PI point creation
  • Manage other type of PI interfaces
  • Converting the tool to a Web App
AVEVA™ PI System™ points creation training in hiring challenges

Challenge

• With the current hiring challenges, we are required to give recurrent training on how to create PI points.
• Converting all sites to AVEVA PI System data archive server require training.
• How can we get users that are used to work with competing AVEVA products to embrace AVEVA PI System data archive?
• People don’t want to deal with compression, naming convention, OPC settings, etc. People want their PI points, and they want it fast.
• PI point naming convention is not always well followed.

Solution

• Build a tool to create PI point with a minimum of data entry.
• Propose functionality to ease the user’s work.

Results

• Training users on this tool take 1/3 of the time compared to PI Builder.
• Better feedback from experienced employees with AVEVA PI System data archive.
• Users require 50% less support.
Conclusion

Pros
• Easy to deploy
• People gets back functionalities they thought they lost
• A PI point can be created within a minute
• Standards are automatically followed

Cons
• Requires license for OPC Browser
• Works on OPC server machines (OPC security)
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