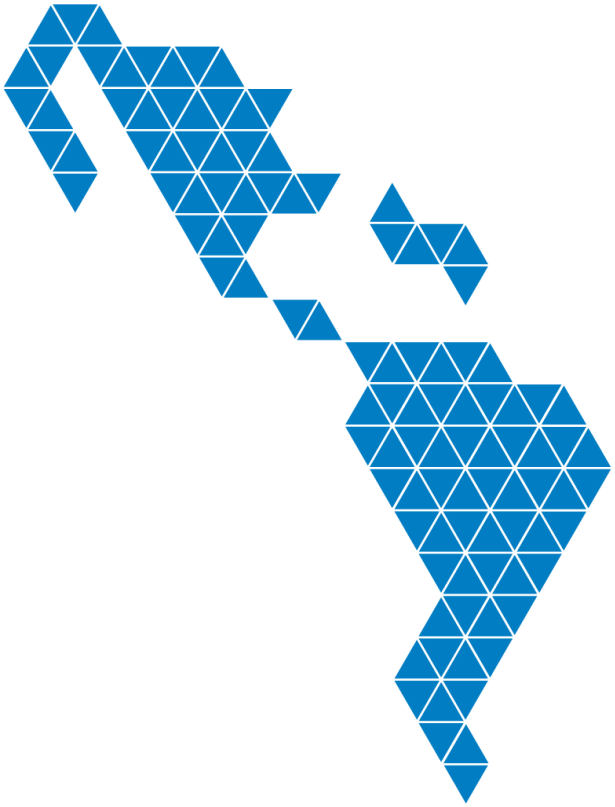

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LATAM SOUTH

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PI Analytics

The Tools and When To Use Them

Presented by

Brandon Perry
OSIsoft

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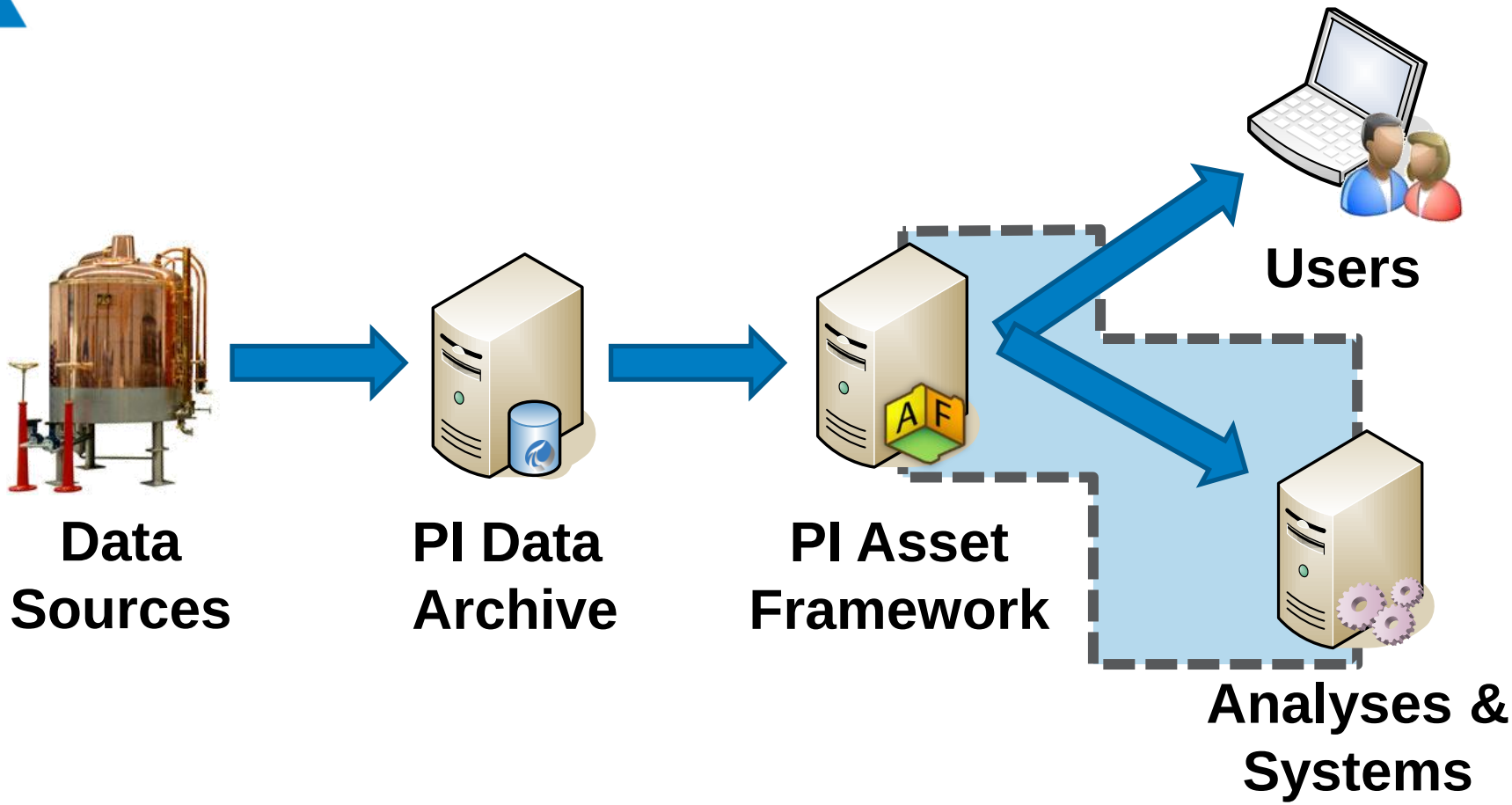
PI Analytics



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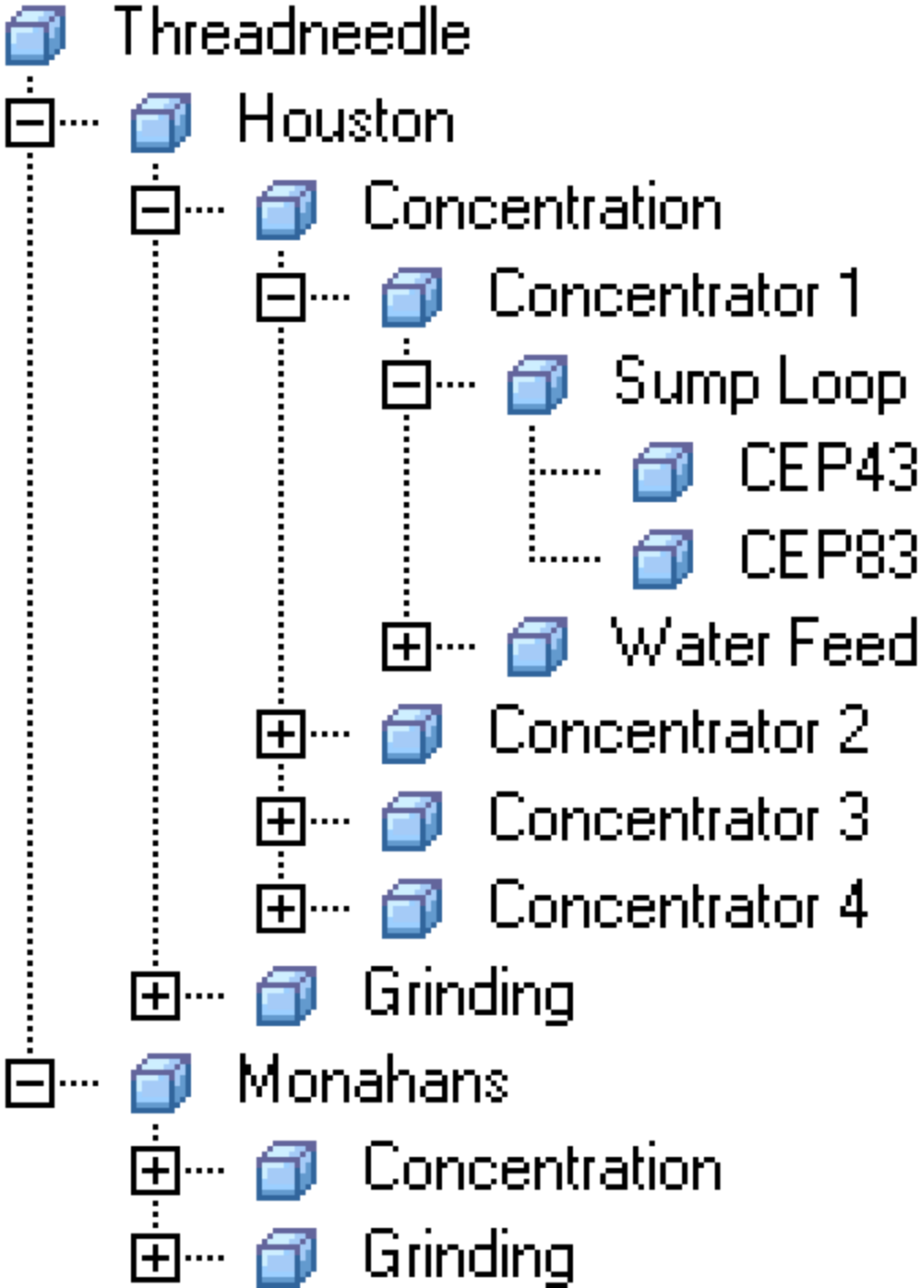

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Plant	• Houston
Workshop	• Concentration
Sub Process	• Concentrator1
Load	• Pump

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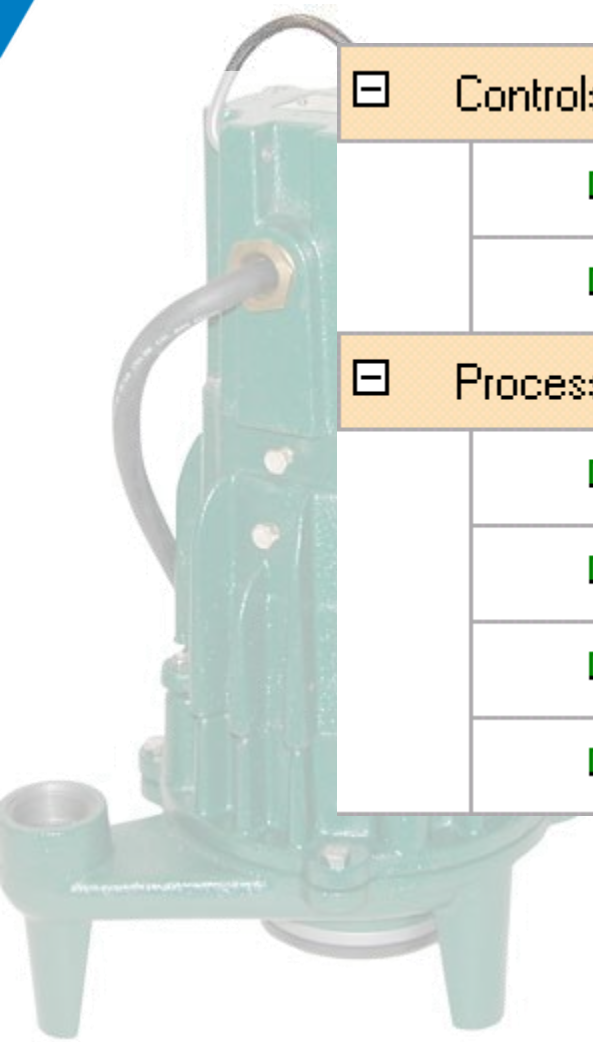
Process Data



Controls		
Operational State	Normal	
Target Flow	29.35795 m3/h	
Process		
Flow	20.4290657043457 m3/h	
Head Pressure	64.8066329956055 kPa	
Power Draw	71.4016 A	
Speed	482.1259 rpm	

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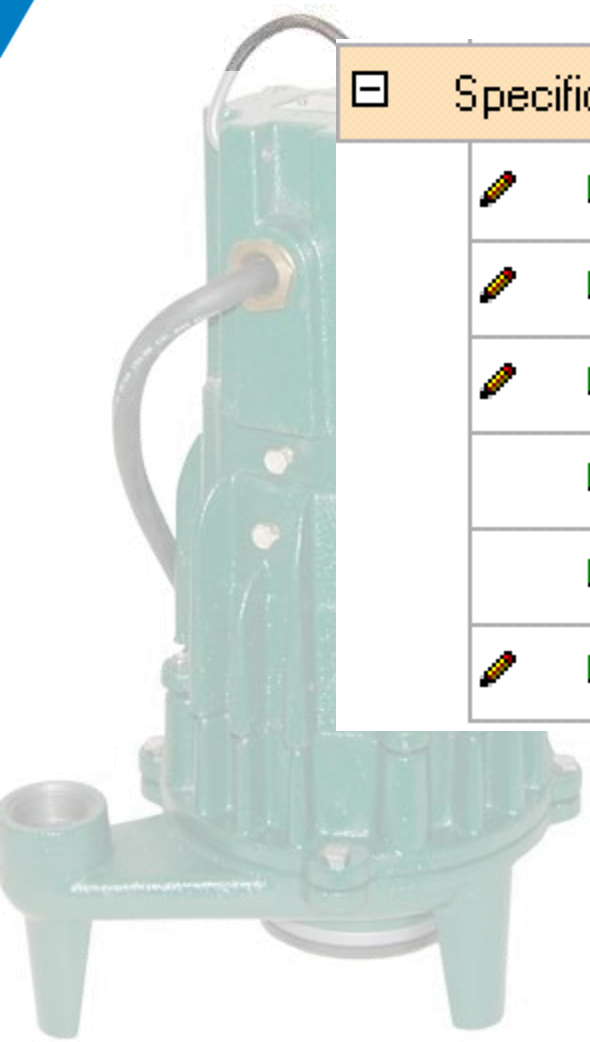
Metadata



Specifications	
Manufacturer	Zoeller
Model	PM-200
Phases	3
Rating	8 hp
Type	Centrifugal
Voltage	230 V

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Recycle Bin
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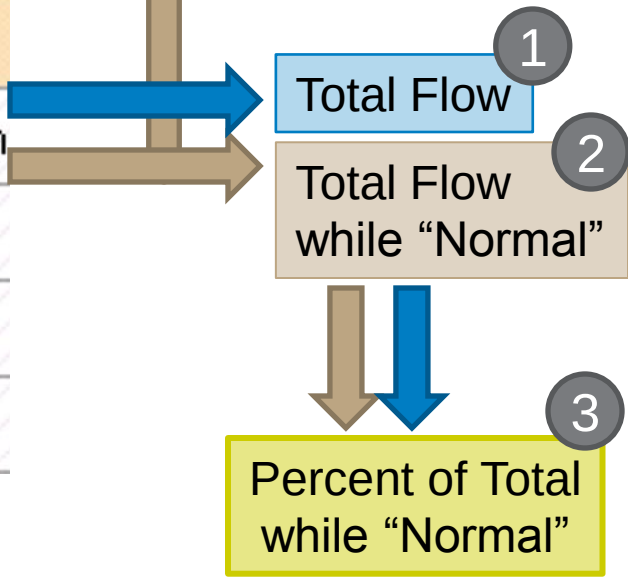
REGIONAL
LATAM SOUTH
2011
Start

Pump Analysis: % of Flow while “Normal”

Controls		
	Operational State	Normal
	Target Flow	29.35795 m3/h
Process		
	Flow	20.4290657043457 m3/h
	Head Pressure	64.8066329956055 kPa
	Power Draw	71.4016 A
	Speed	482.1259 rpm



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Demo: Calculating Total Flow

On-Demand Statistics in PI AF

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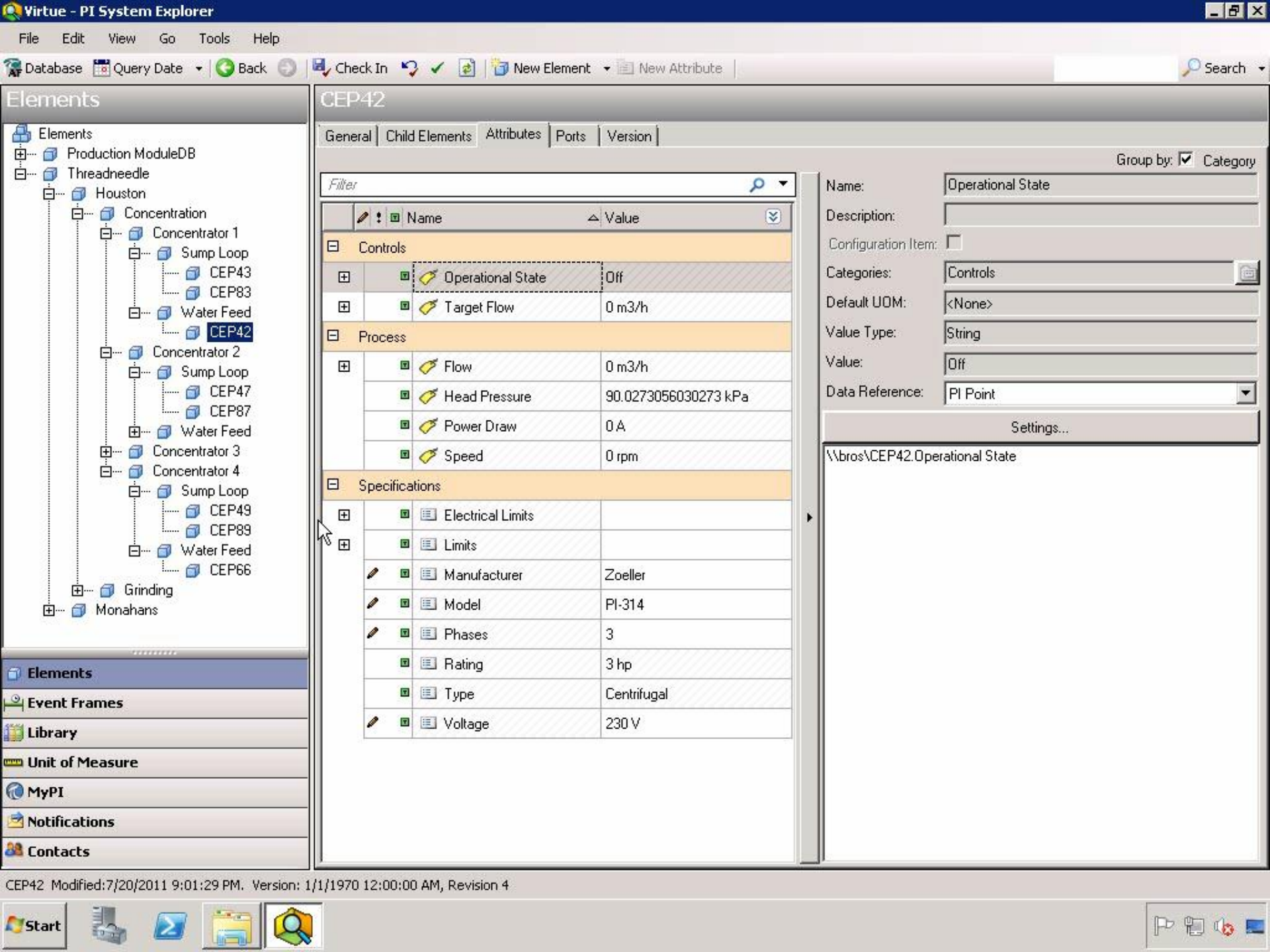
Virtue - PI System Explorer
File Edit View Go Tools Help
Database Query Date Back Check In New Element New Attribute Search
Elements
Elements
Production ModuleDB
Threadneedle
Houston
Concentration
Concentrator 1
Sump Loop
CEP43
CEP83
Water Feed
CEP42
Concentrator 2
Sump Loop
CEP47
CEP87
Water Feed
Concentrator 3
Concentrator 4
Sump Loop
CEP49
CEP89
Water Feed
CEP66
Grinding
Monahans
Elements
Event Frames
Library
Unit of Measure
MyPI
Notifications
Contacts
CEP42
General Child Elements Attributes Ports Version
Group by: Category
Filter
Name Value
Controls
Operational State Off
Target Flow 0 m3/h
Process
Flow 0 m3/h
Head Pressure 90.0273056030273 kPa
Power Draw 0 A
Speed 0 rpm
Specifications
Electrical Limits
Limits
Manufacturer Zoeller
Model PI-314
Phases 3
Rating 3 hp
Type Centrifugal
Voltage 230 V
Name: Operational State
Description:
Configuration Item:
Categories: Controls
Default UOM: <None>
Value Type: String
Value: Off
Data Reference: PI Point
Settings...
\\bros\CEP42.Operational State
CEP42 Modified:7/20/2011 9:01:29 PM. Version: 1/1/1970 12:00:00 AM, Revision 4
Start

Demo: Calculating Conditional Total Flow

Stored Statistics with PI Totalizers

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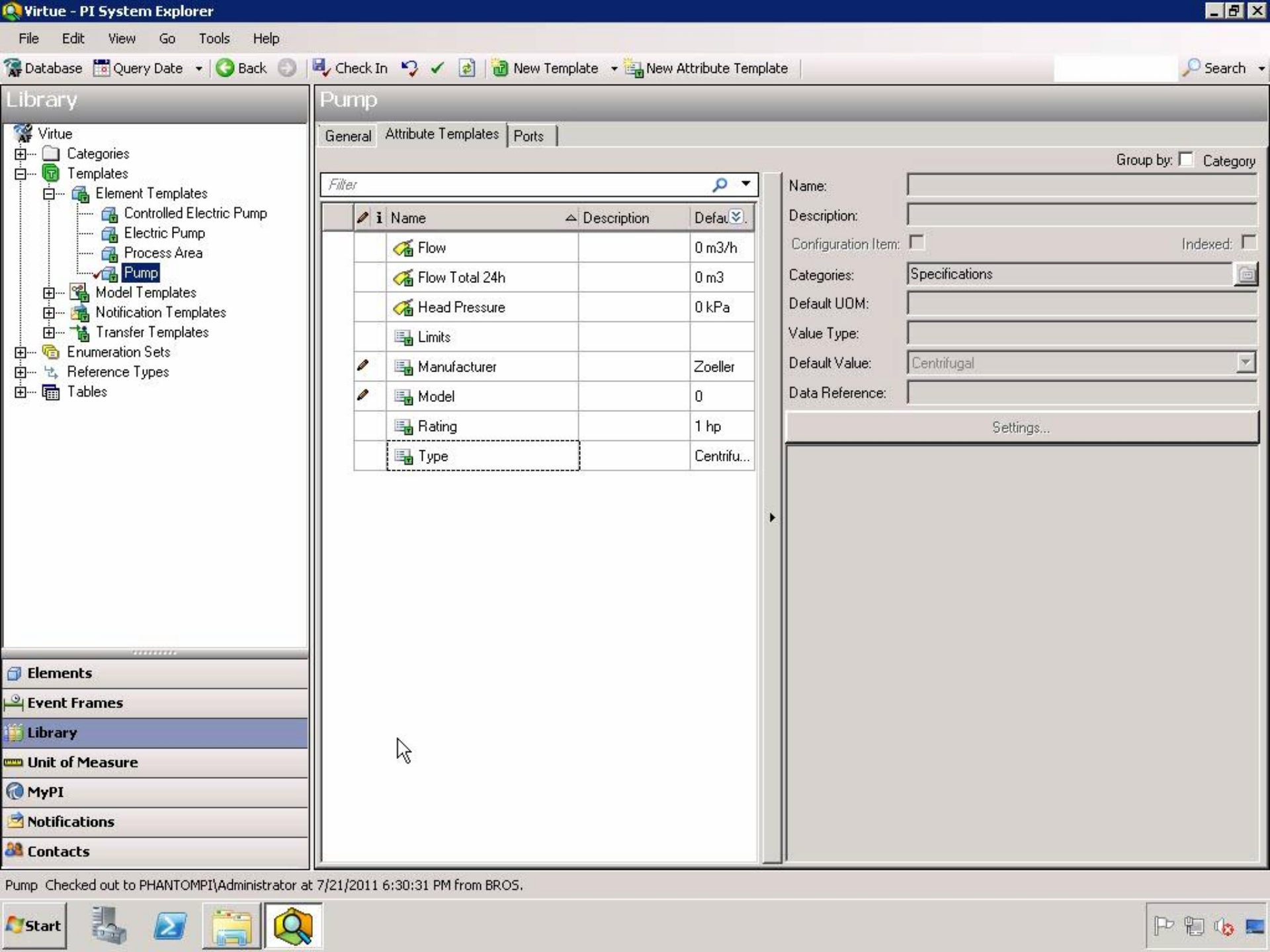
Virtue - PI System Explorer
File Edit View Go Tools Help
Database Query Date Back Check In New Template New Attribute Template Search
Library
Virtue
Categories
Templates
Element Templates
Controlled Electric Pump
Electric Pump
Process Area
Pump
Model Templates
Notification Templates
Transfer Templates
Enumeration Sets
Reference Types
Tables
Elements
Event Frames
Library
Unit of Measure
MyPI
Notifications
Contacts
Pump
General
Attribute Templates
Ports
Group by: Category
Filter
Name
Description
Defau
Flow 0 m3/h
Flow Total 24h 0 m3
Head Pressure 0 kPa
Limits
Manufacturer Zoeller
Model 0
Rating 1 hp
Type Centrifu...
Name:
Description:
Configuration Item:
Indexed:
Categories: Specifications
Default UOM:
Value Type:
Default Value: Centrifugal
Data Reference:
Settings...
Pump Checked out to PHANTOMPI\Administrator at 7/21/2011 6:30:31 PM from BROS.
Start

Demo: Calculating Ratio of Flows

On-Demand Calculations in PI AF

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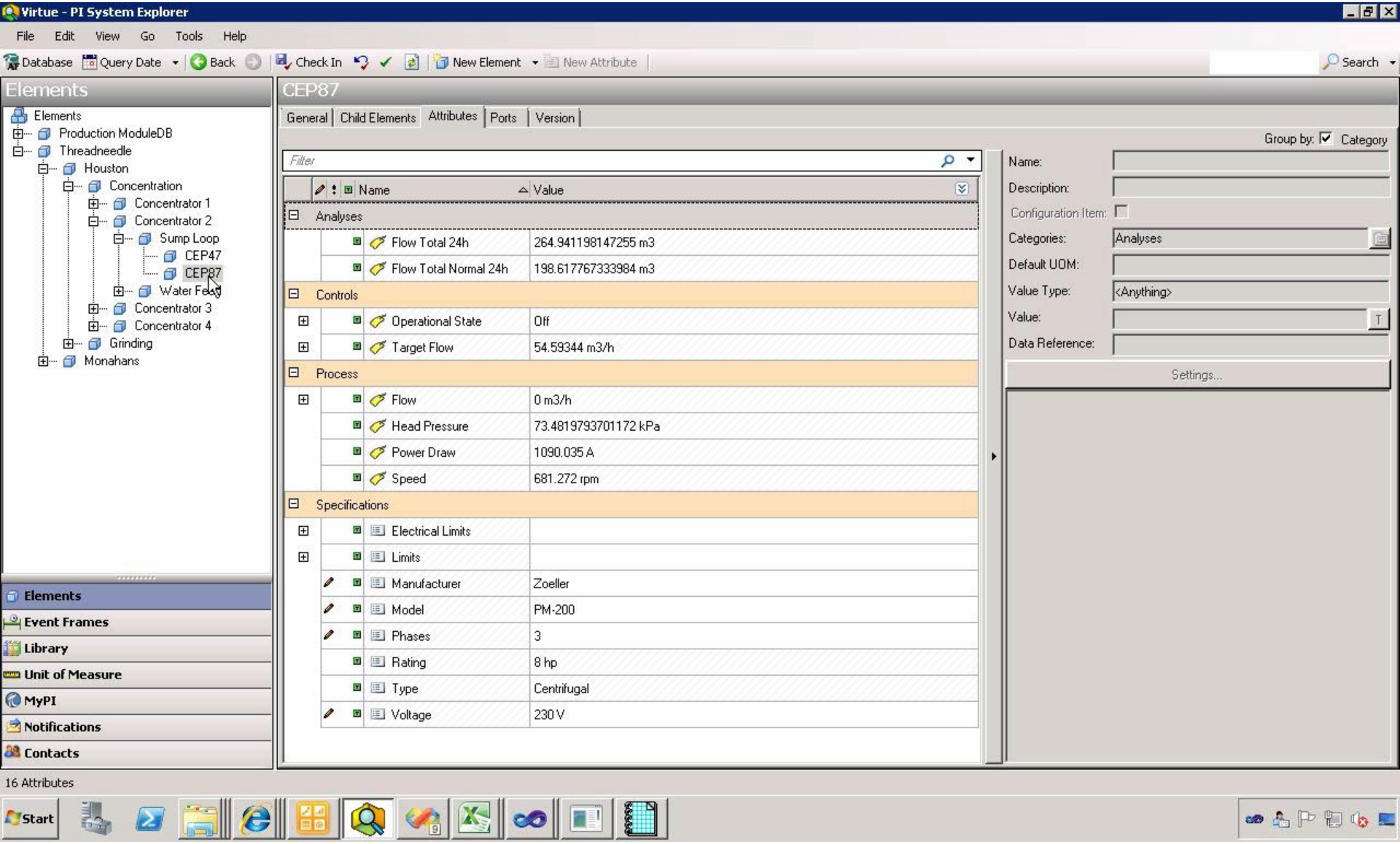

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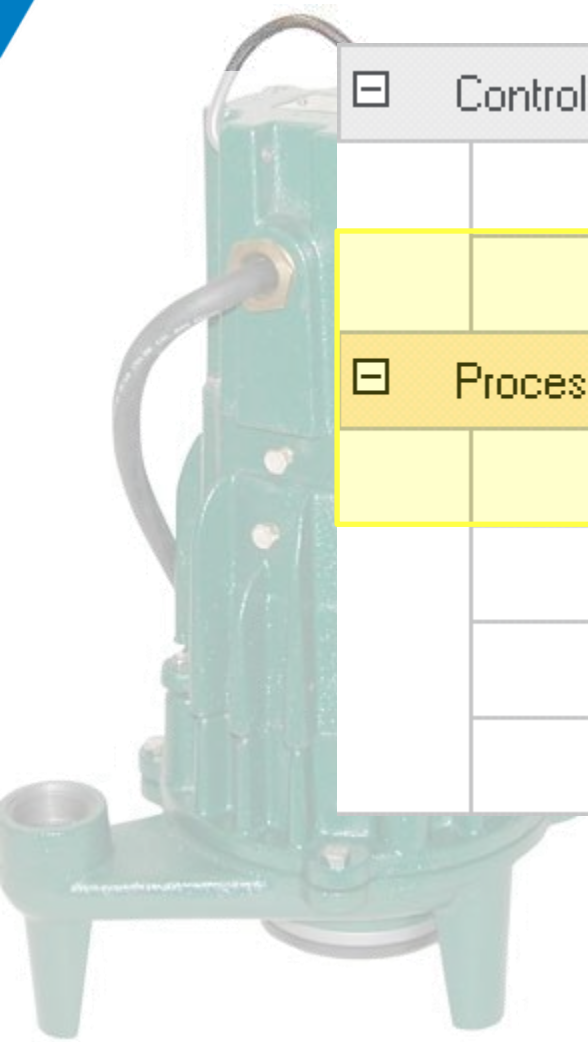
Pump Analysis: Flow vs. Target Flow



Controls		
Operational State		Normal
Target Flow		29.35795 m3/h
Process		
Flow		20.4290657043457 m3/h
Head Pressure		64.8066329956055 kPa
Power Draw		71.4016 A
Speed		482.1259 rpm

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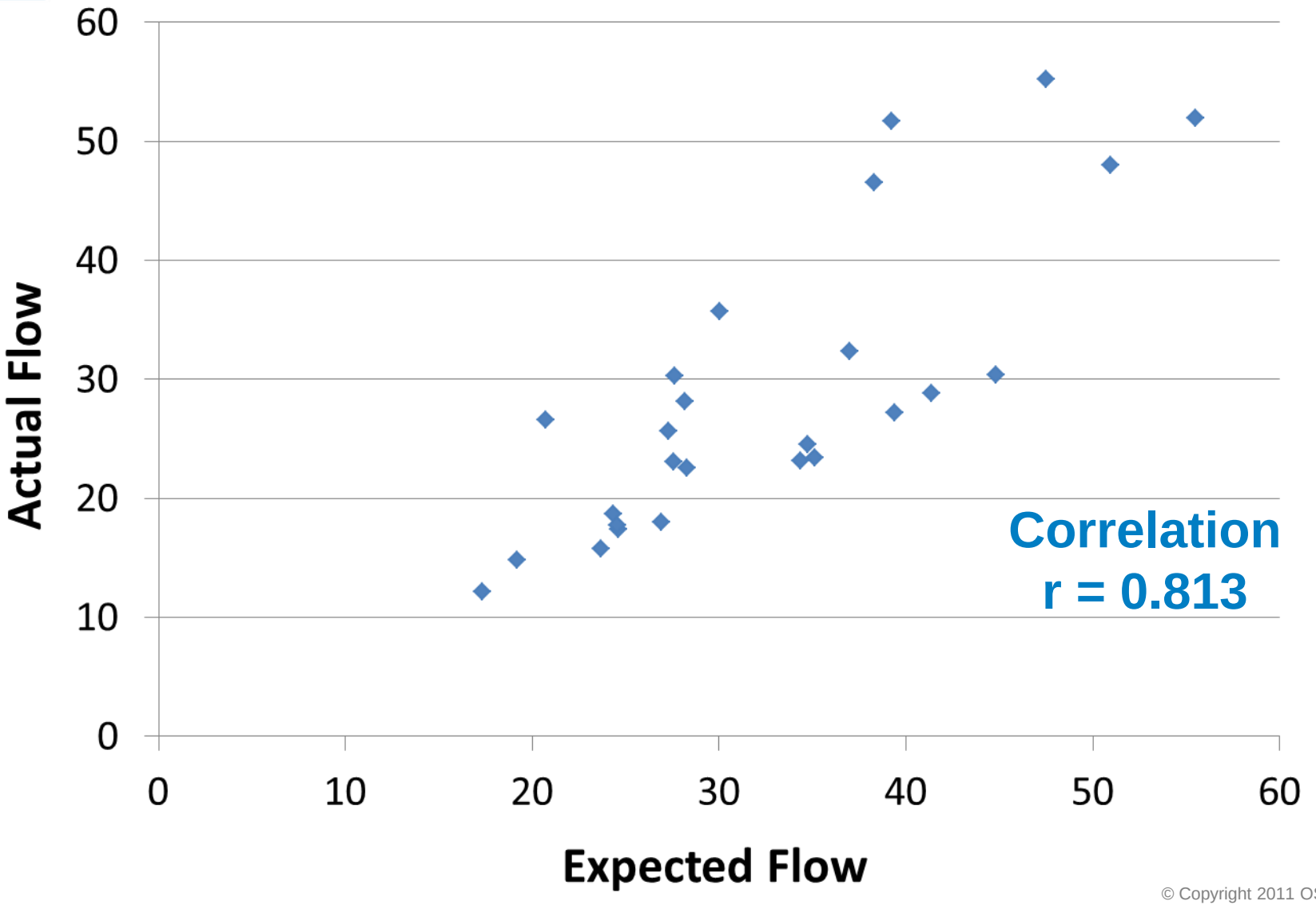
Control Correlation



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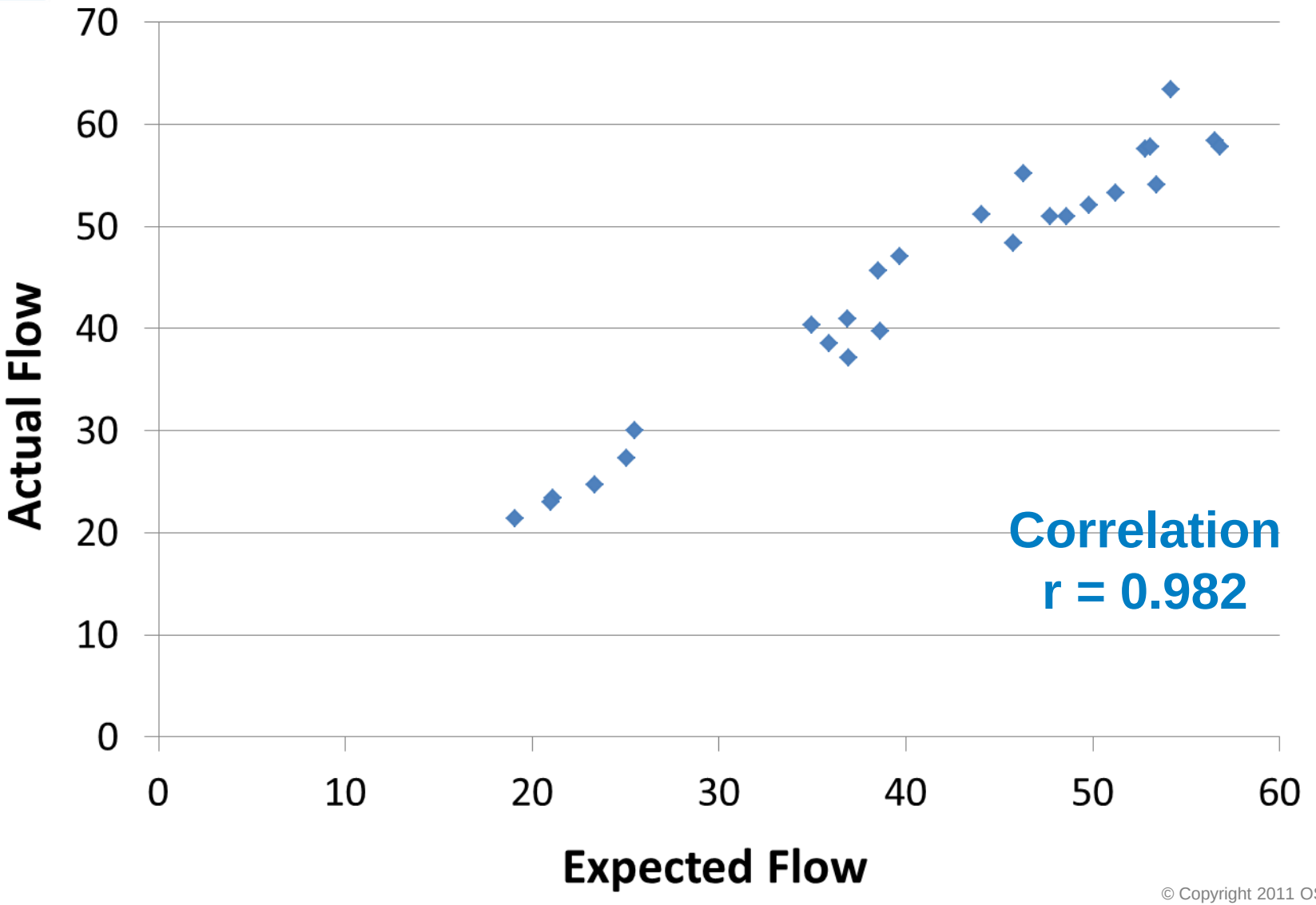
Flow Comparison



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PI ACE: Advanced Calculation Engine

Power
Full .NET environment

Ease of use
Wizard in Visual Studio

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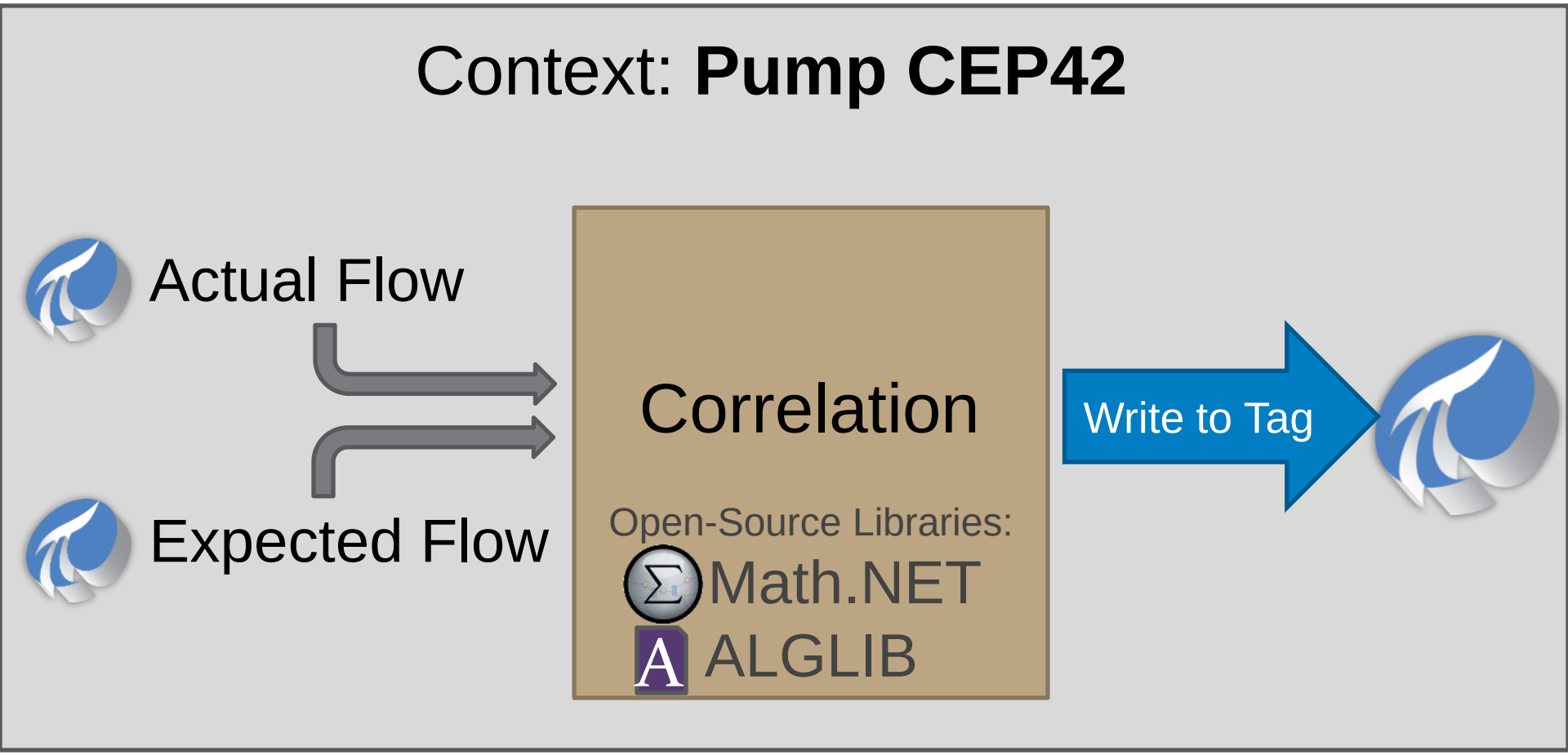
PI ACE Calculation



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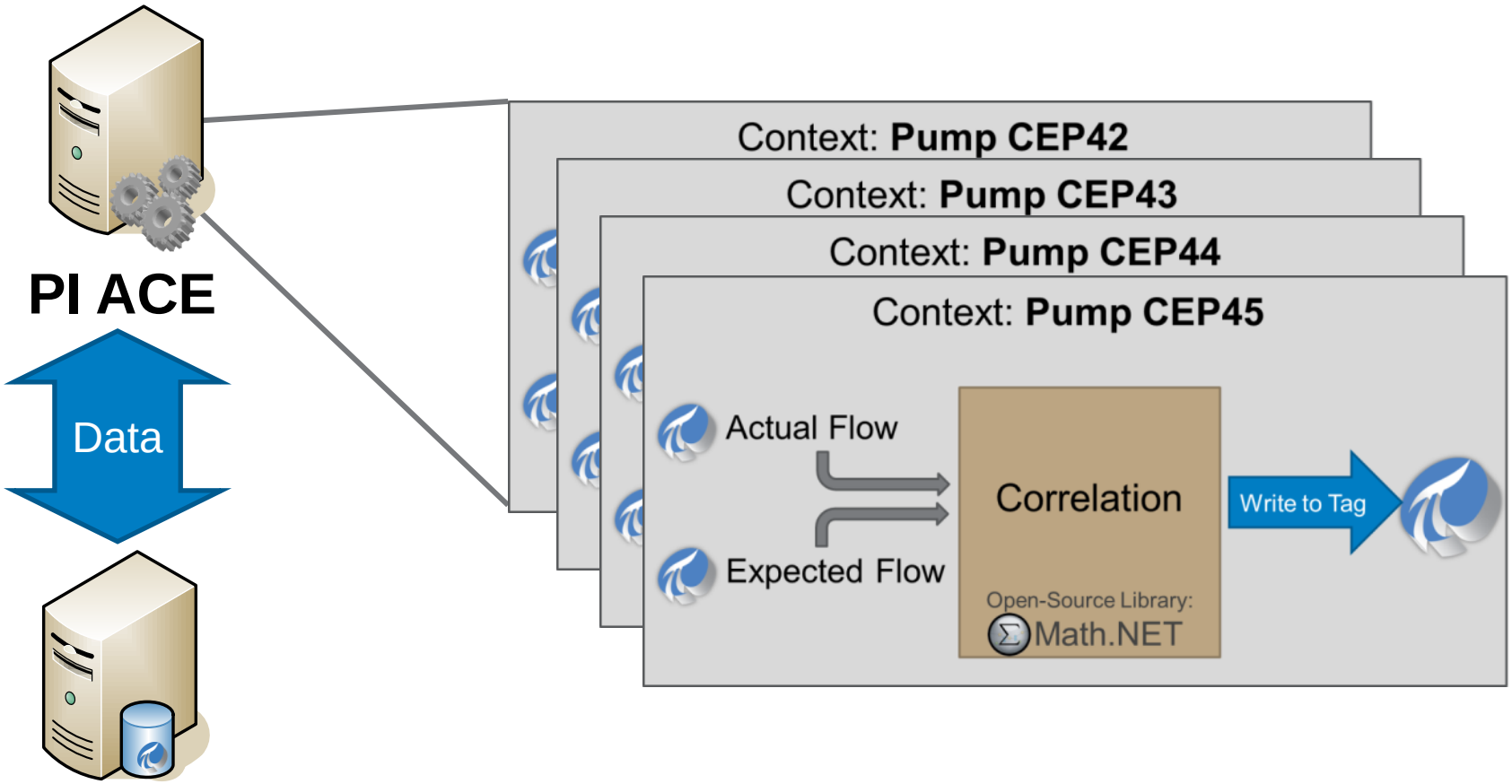
PI ACE Server



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Demo: Calculating Correlation

Stored Calculations with PI ACE

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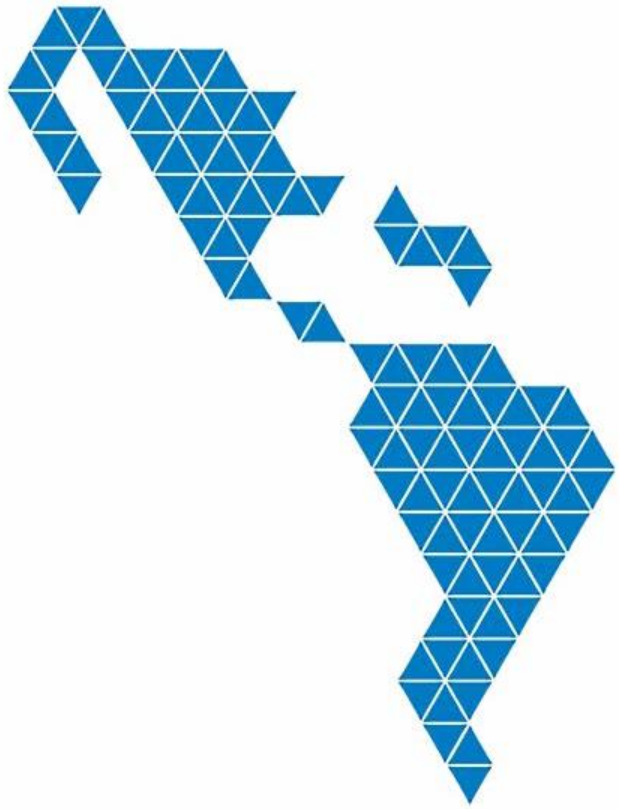

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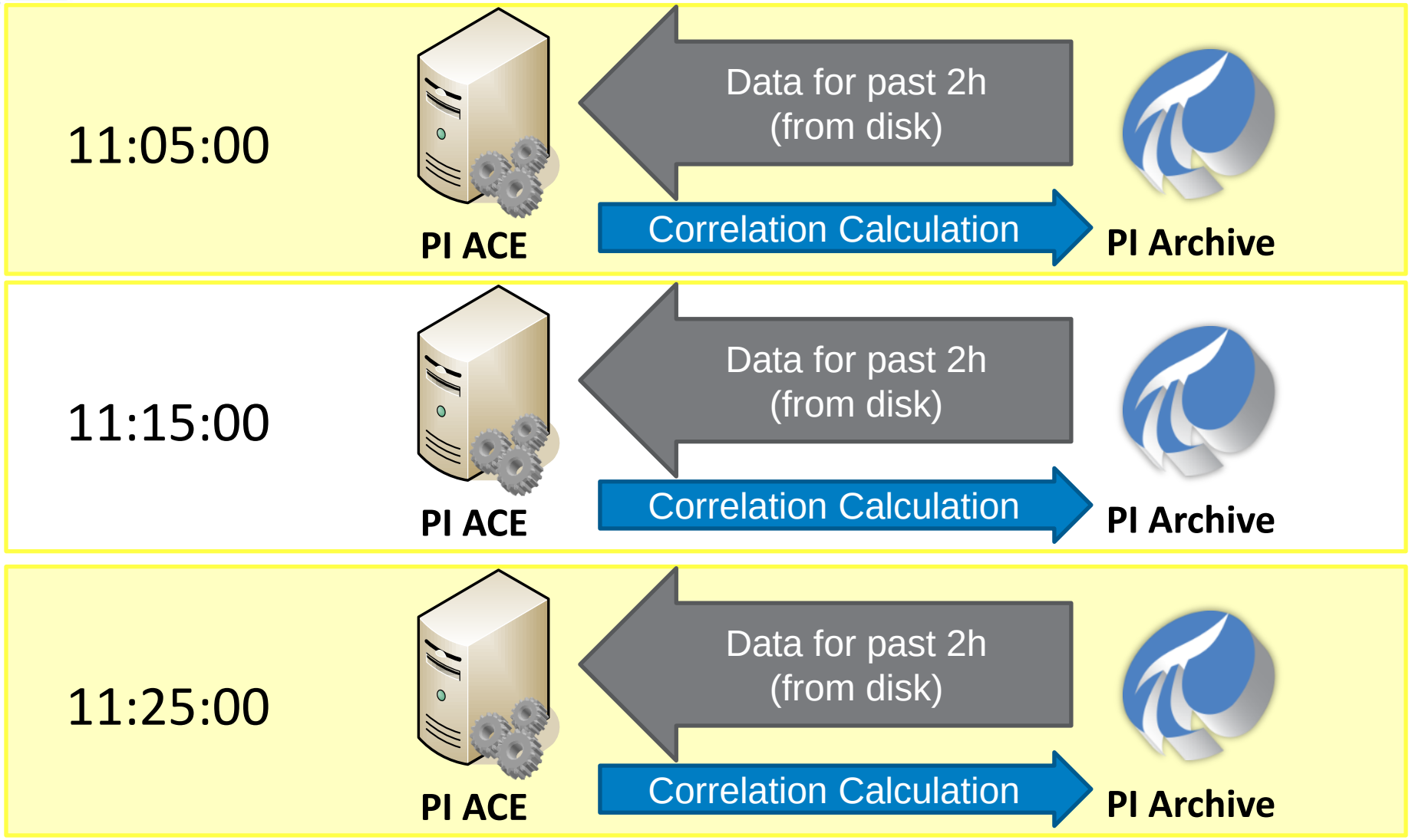
Duplication of Effort



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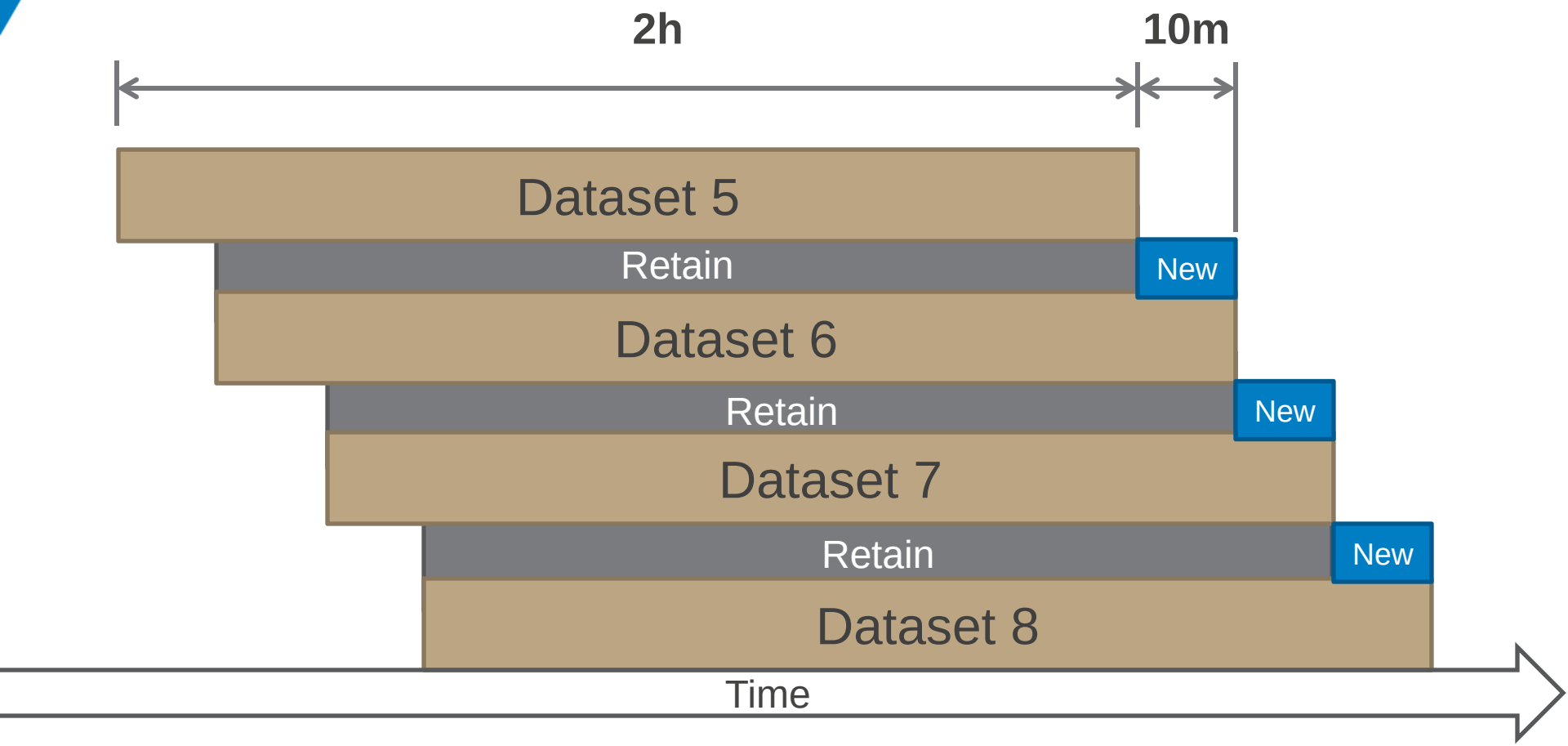
No Duplication of Effort



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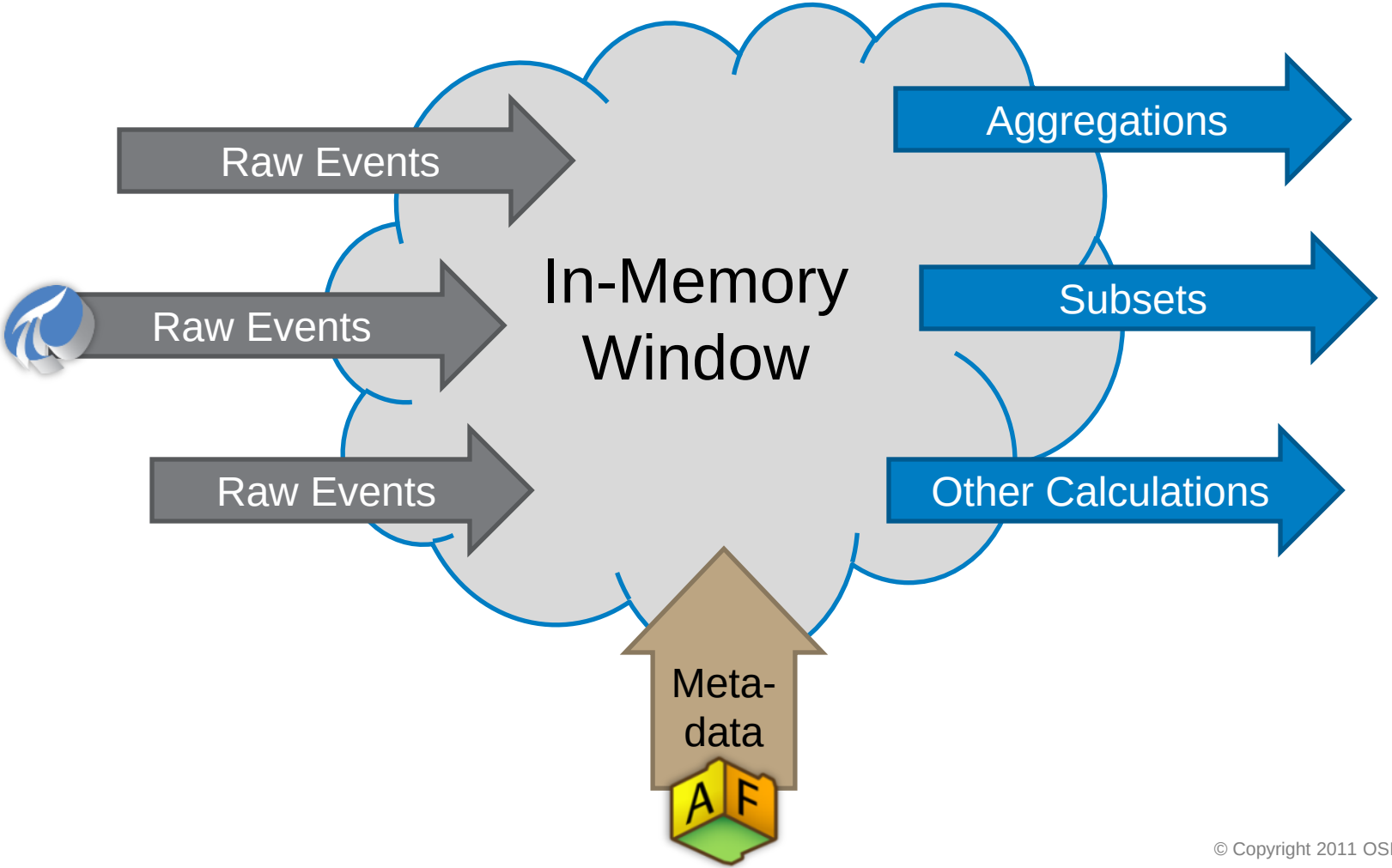
Complex Event Processing



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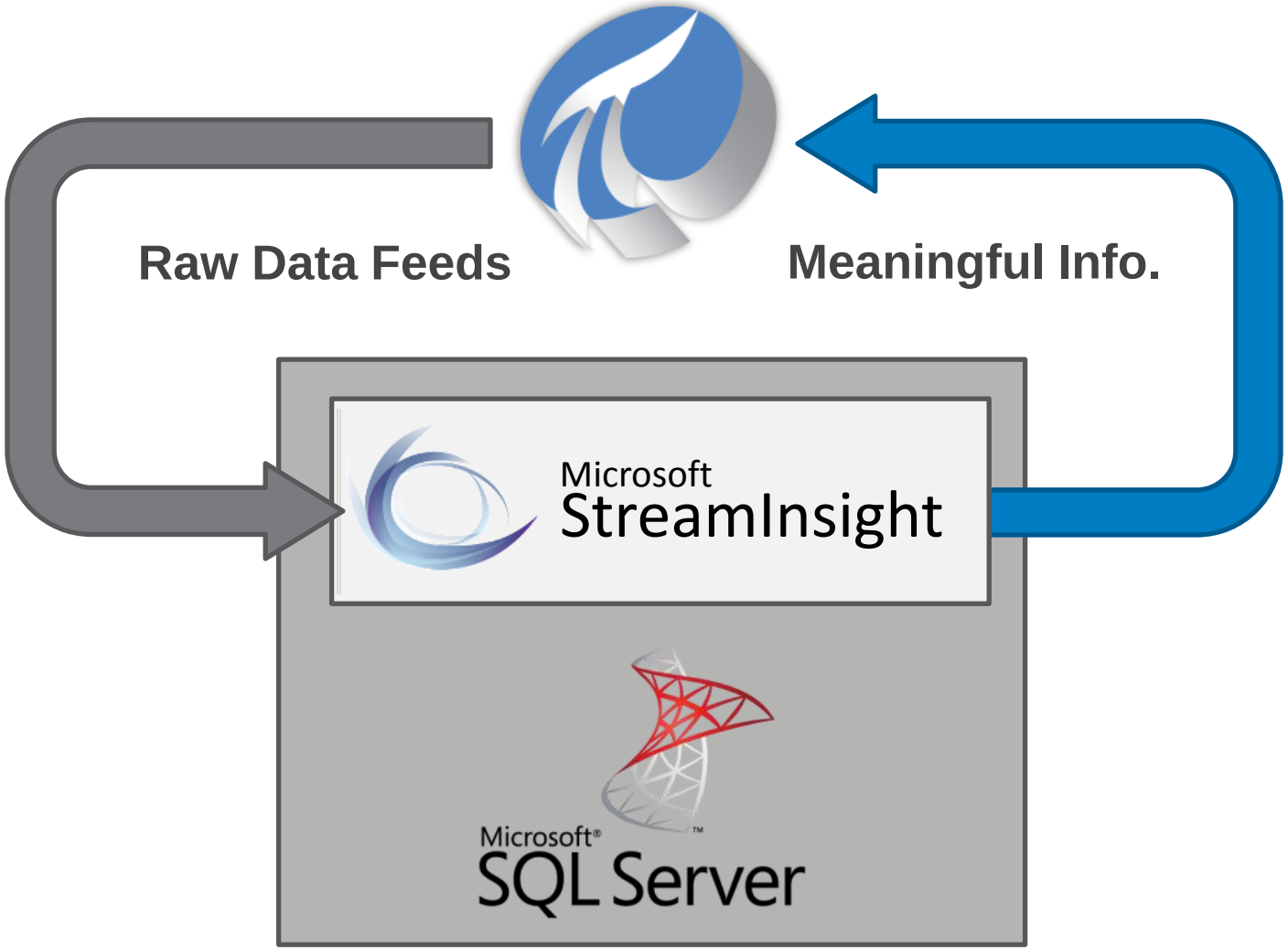
PI for StreamInsight



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Demo: Calculating Correlation II

Stored Calculations with PI for StreamInsight

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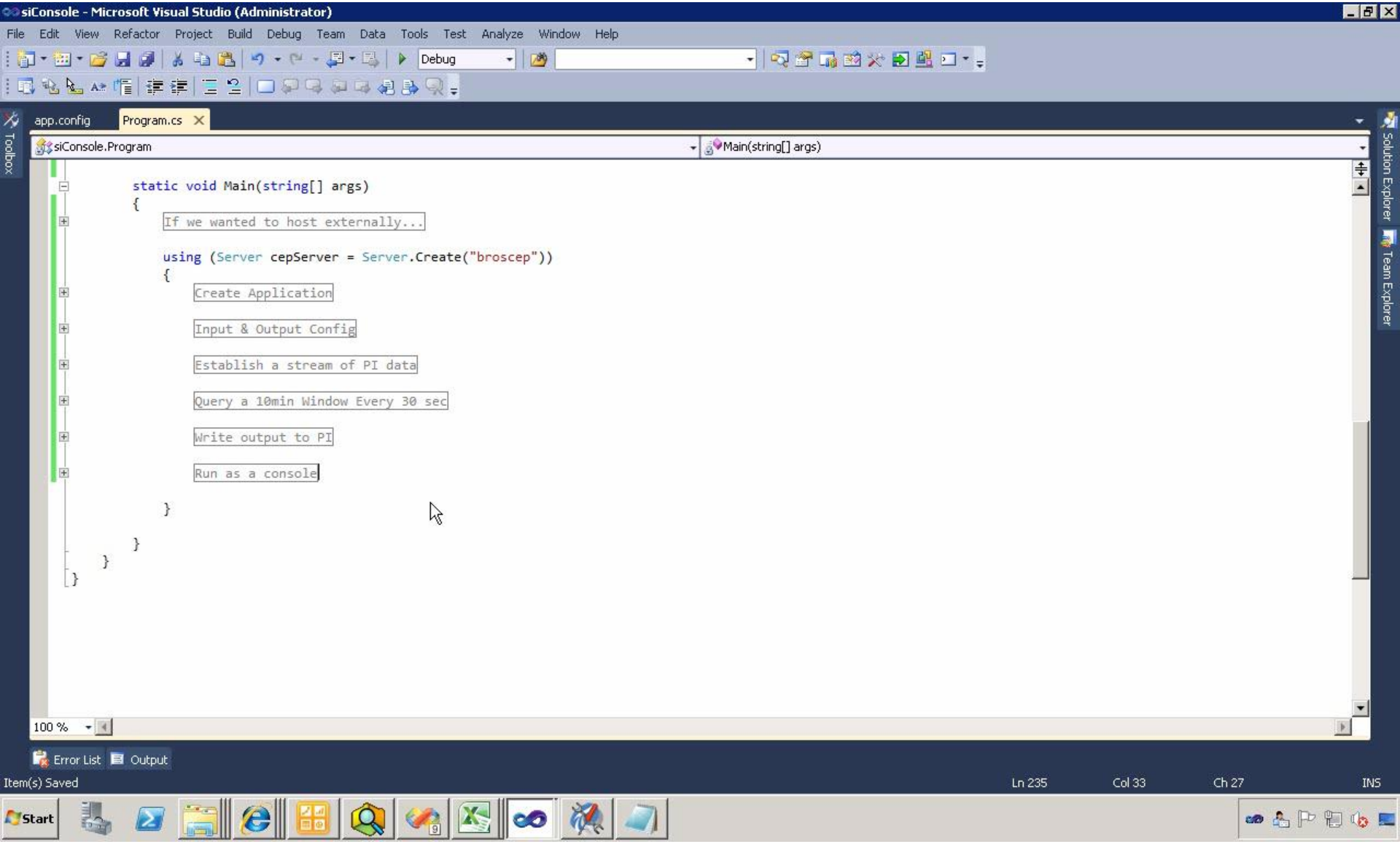

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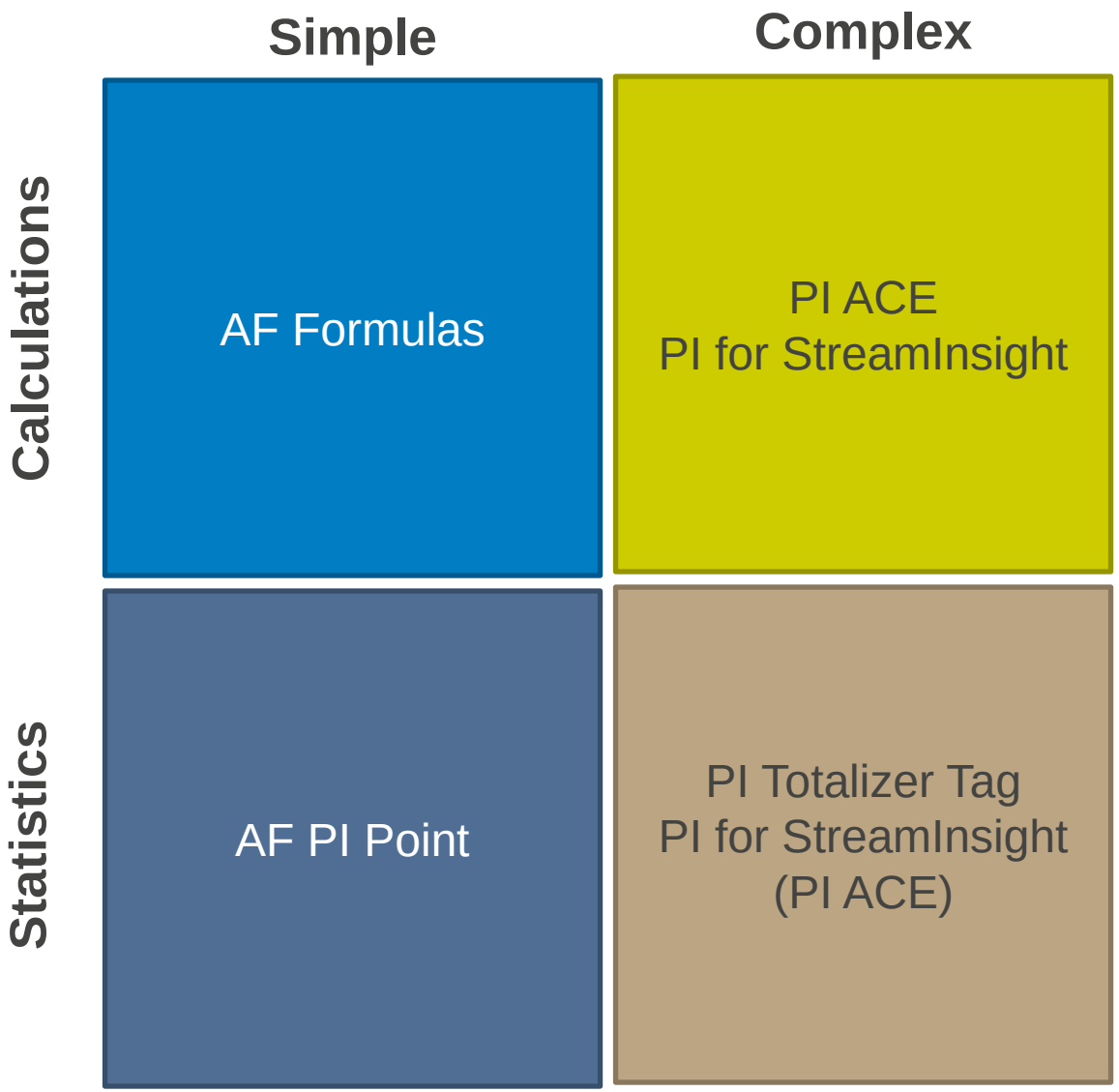
When To Use What



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Thank you

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