



AF2 There is a lot you can do today

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concern and content

Wrap up an Overview of today's features

Adding Structure
Accessing non time series sources

- Why AF 2?
- Architecture of AF 2
- Best Practice AF1 + AF2
- AF2 Security
- Demo



The PI System

The Server

PI Archive

PIAF

Real-Time Interfaces

Data Access

MCN Health Monitor

The Analytics

ACE

PI Analytics

RtReports

PI Notifications

Sigmafine

The Visuals Smart Clients

PI ProcessBook

PI DataLink

PI Activeview

PI BatchView

Thin Clients

RtWebParts

RtPortal iViews

RtReports Clients

The Server

PI Archive

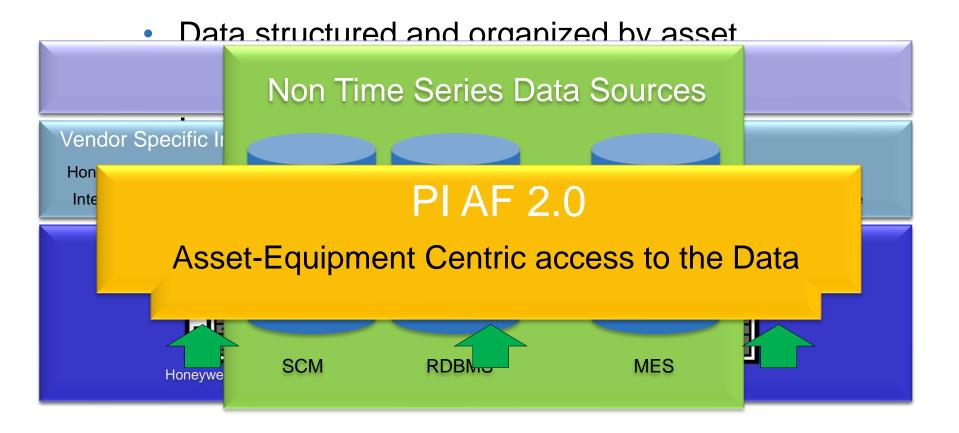
PIAF

Real-Time Interfaces

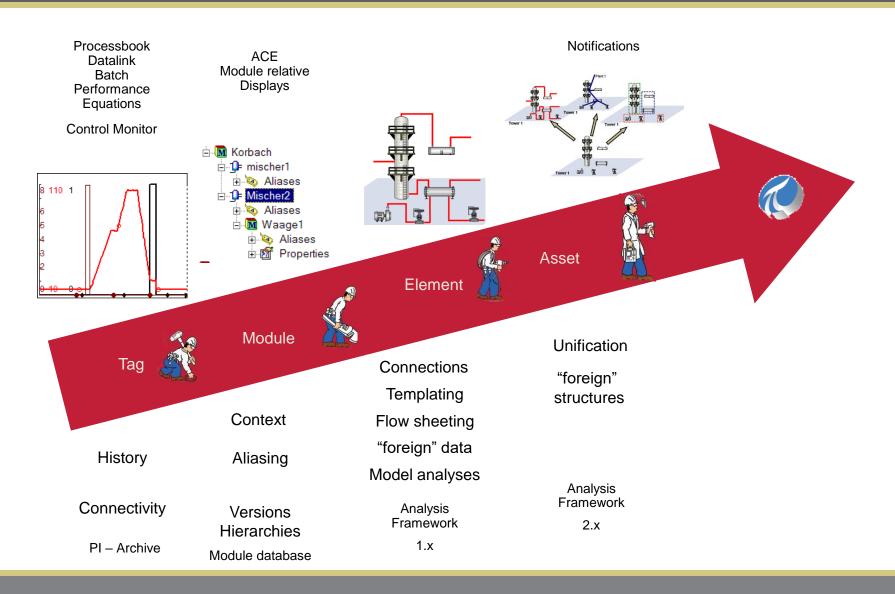
Data Access

MCN Health Monitor

PI AF 2.0 in the PI System



Evolution



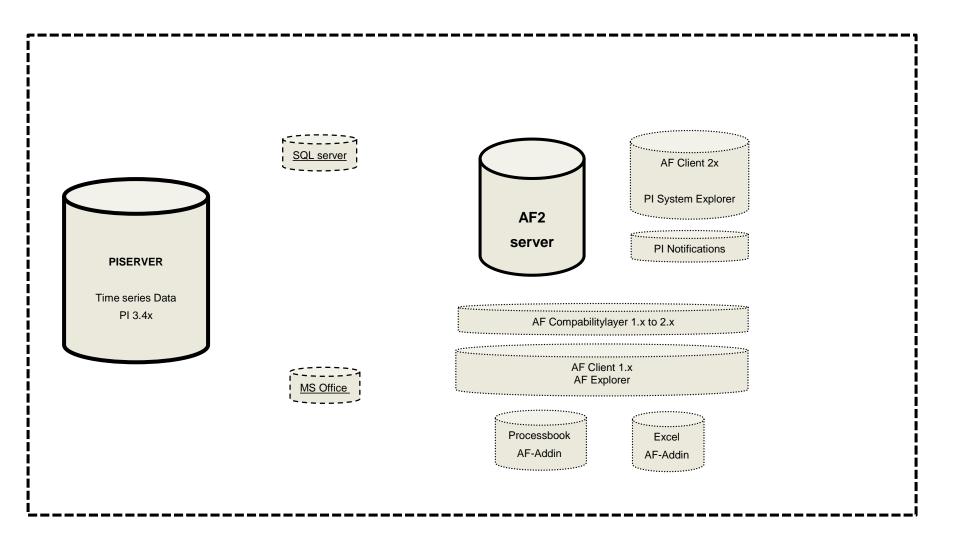
AF vocabulary

Databases	Place to Store	Modeling or Unit Of Measure classes	
Templates	Schema how to attribute Elements	Changes are inherit to the children elements	
Elements	Created from Template Local for a Model Or global for the database	 Flows Measurements Boundaries Nodes Transfers Others User definable 	
Tables	Linked or imported or just defined	i.e. Component , material , Strapping	
Models (*)	Collections of connected elements	Have Layers	
Analyses (*)	To run against a model		
Case (*)	Duration of time to analyze	i.e. Monday's mass balance (*) AF 1.x explorer	

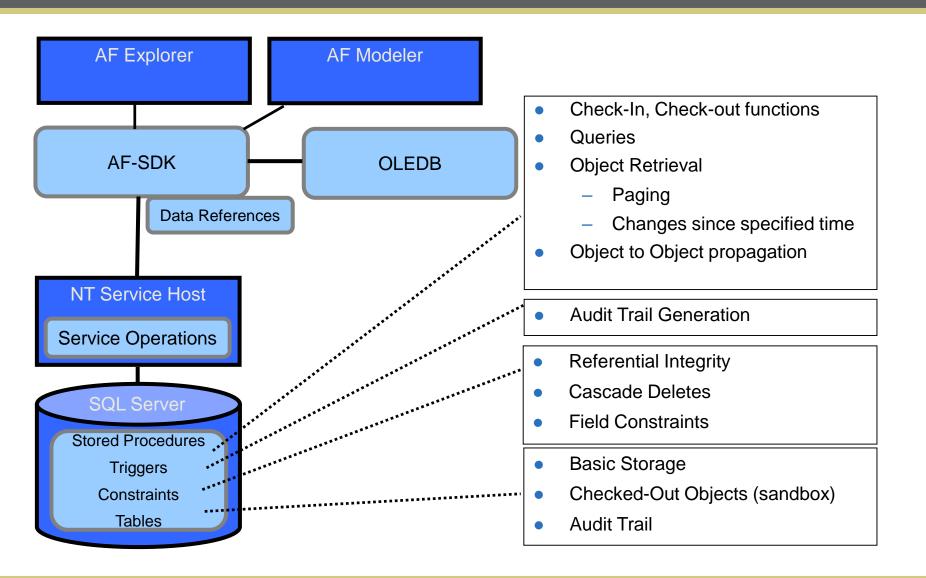
Plug-ins		Enhancing Functionality	Just assemblies made by Wizards	
	Data references	Feeding Attributes with Values	•Formula ■Pipoint	•UOM ■Table
	Analysis rules	Performed on a Model	Stoichiometric Balance Composition Tracking Component Balance Constraint Mass Balance Gross Error Detection	•Volume Balance •Imbalance •Mass Balance •Energy Balance
	Time rules	How to create a default case	i.e. Daily	



Architecture



Architecture



Features

- Object History (versioning)
 - Keeps track of configuration changes over time
- Hierarchical Attributes and Categories
- Advanced Attributes Types
 - Files, Arrays, Tables
- Enumeration Sets
- Object Level Security
 - Windows Integrated Security

AF and context

TIME SERIES	TIME SERIES RELATIONAL DATA	TIME SERIES RELATIONAL DATA STRUCTURAL DATA	
Performance Equations (PE)	Performance Equations (PE)	Performance Equations (PE)	
	Advanced Computing Engine (ACE)	Advanced Computing Engine (ACE)	
		AF	
Plot-0 80 70 80 10 9/8/2004 11:19:03 AM 8:00 hours 9/18/2004 7:19:03 PM		Tower 1 Tower 1	
88.5	88.5		
sensor	equipment	process unit / plant	

Analysis brought into context becomes reusable and allows single point of maintenance

Putting AF into Best Practice

Shaping your data by:

Defining types of assets
 Schema how to attribute Elements



<u>Templates</u>

- Condensor
- Heatexchanger
- Column
- Valve
- Pipe
- Pump
- Column661
- Condensor661
- P661 1
- P661 2
- HeatExchanger661
- Valve661 1
- Valve661 2

SerialNumber

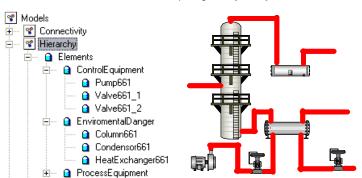
XZY

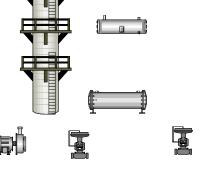
OpeningGrade PI Point: \MOBILEVBC\Valve661_1.OpeningGrade InspectionResult Table Lookup: SELECT InspectionResult FROM ...

LastInspection Table Lookup: SELECT LastInspection FROM ...

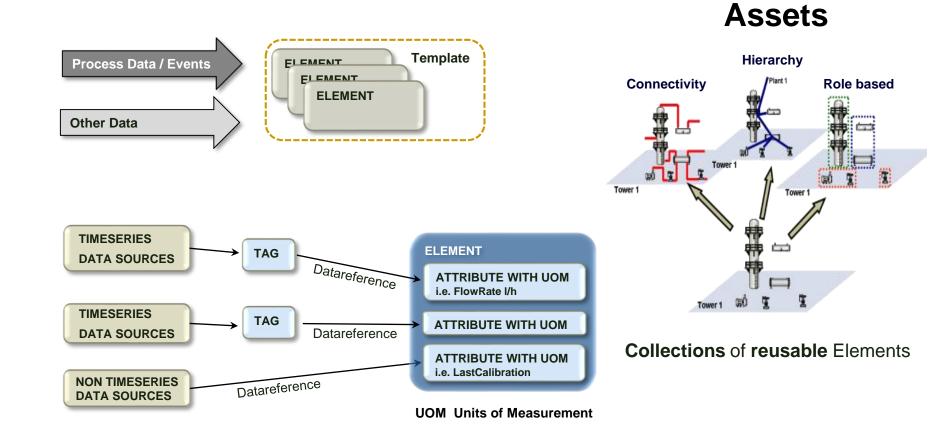
Formula: A=OpeningGrade;[A*0.98]

Table Lookup: SELECT SerialNumber FROM ...

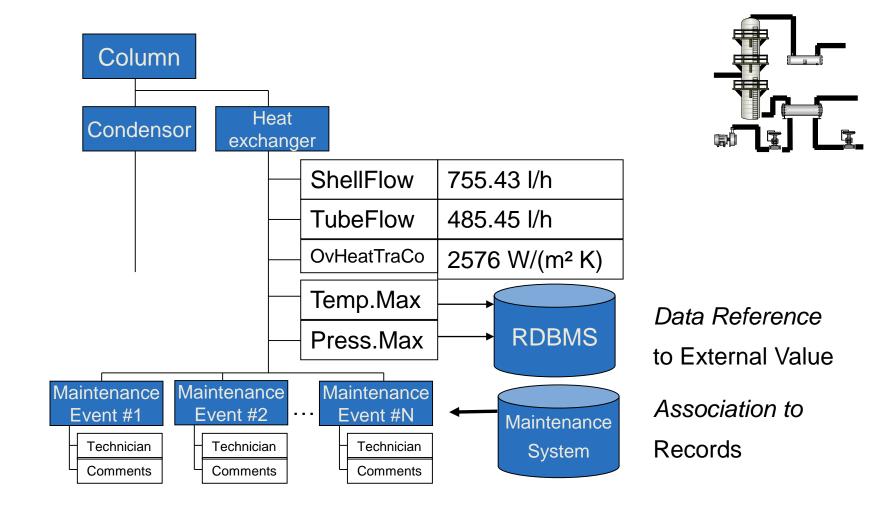




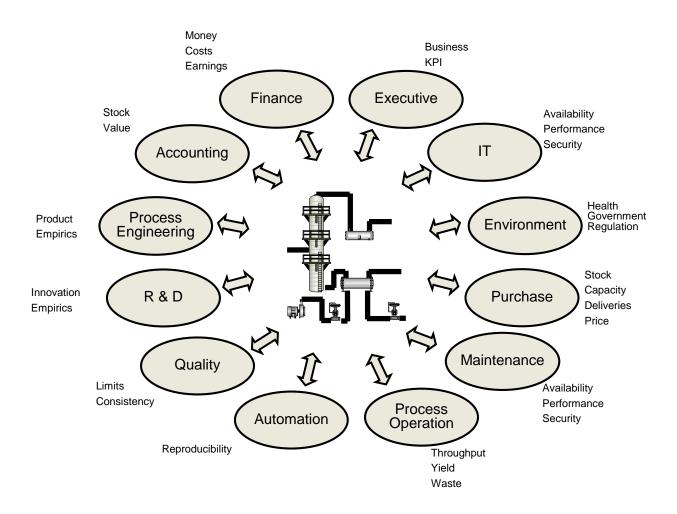
Developed Once – Deployed Everywhere



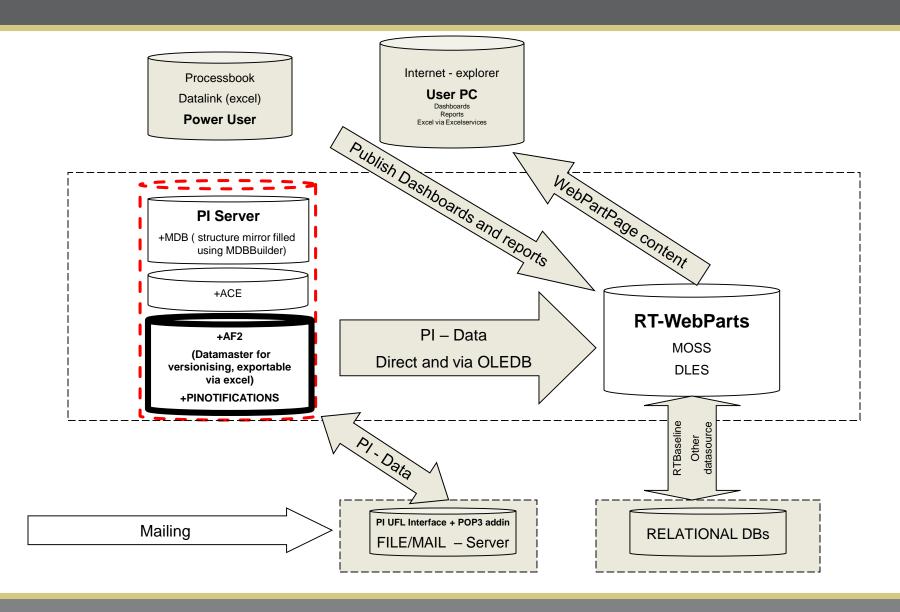
Scope: Exposing "non-PI" Data



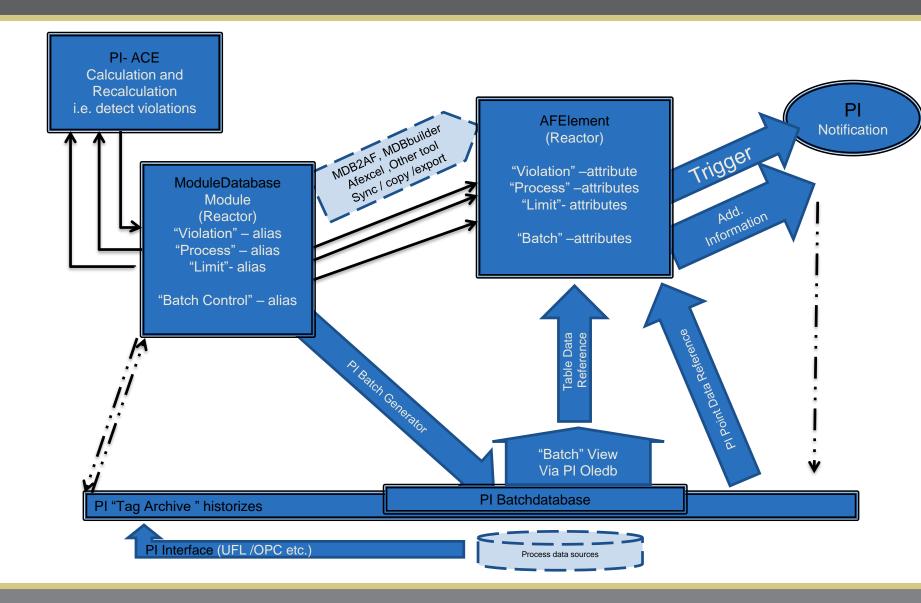
Categories



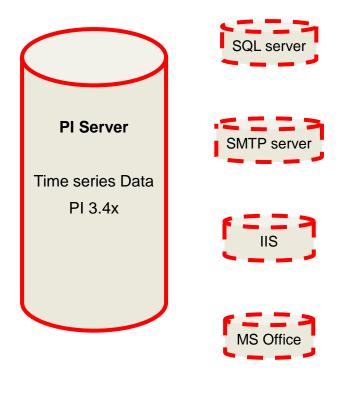
Use case – master of configuration

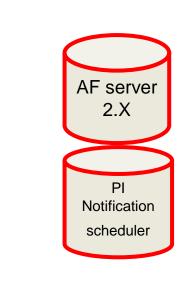


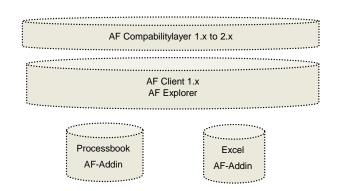
Use case – "batch" notifications

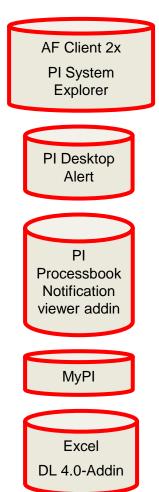


Demo Architecture – Active Directory









Demo

- Windows 2008 server + DC functionality
- mailserver
- office
- PI 3.4.375.80
- AF 2
- MSSQL 2008 Express
- DL 4.0
- PB 3.1
- On Vmware server with 1.5 GB Memory

We are resource friendly ©

Summary

- AF is ready to use
- what you invest in structuring is save
- don't do conceptual work not taking in account AF
- AF is not isolated
 AF-excel addin and MDB builder is the first "glue"
- Notification is one of the first usecases
- AF future is bright

