PI AF 2.1 and PI MDB Upgrade
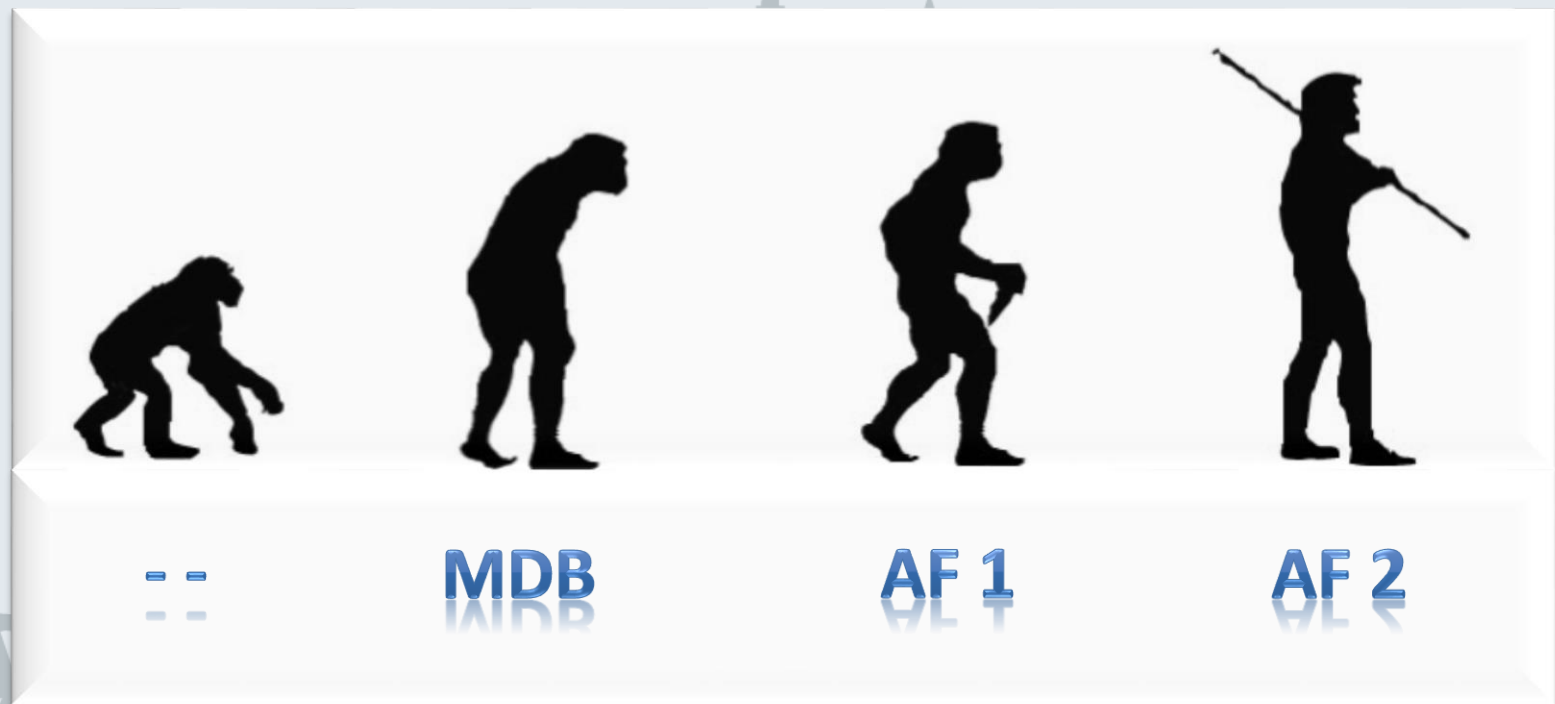
Laurent Garrigues, Product Manager
Satyam Godasi, Sr. Software Developer

Overview

- What is AF 2?

- AF 2.1 enhancements

- Motivation for MDB to AF upgrade

- Upgrade Procedure

- Demo

- Roadmap

AF 2 is a mature product

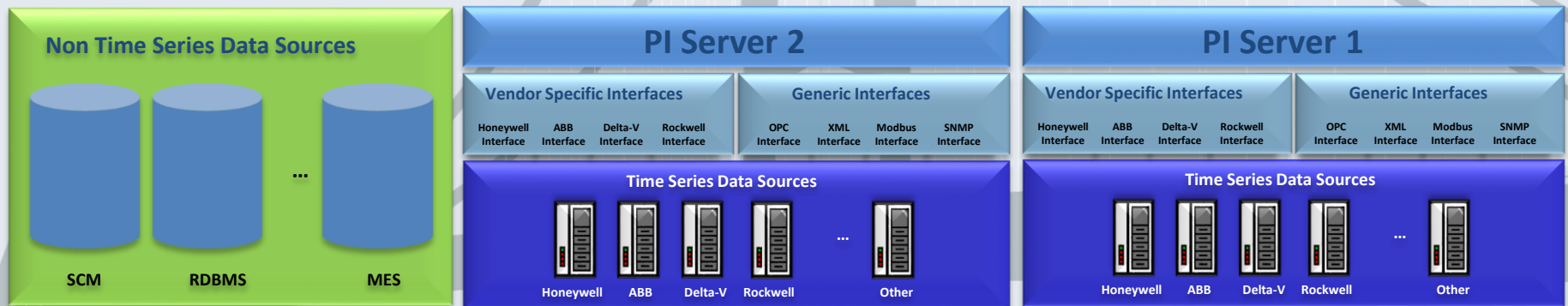# AF 2 in the PI System

- Structures/organizes the data by asset

- Spans multiple PI Systems

- Incorporates non time series data

AF Asset/Equipment centric access to information

Non Time Series Data Sources

SCM   RDBMS   MES

PI Server 2

Vendor Specific Interfaces

Honeywell Interface | ABB Interface | Delta-V Interface | Rockwell Interface

Generic Interfaces

OPC Interface | XML Interface | Modbus Interface | SNMP Interface

Time Series Data Sources

Honeywell | ABB | Delta-V | Rockwell | ... | Other

PI Server 1

Vendor Specific Interfaces

Honeywell Interface | ABB Interface | Delta-V Interface | Rockwell Interface

Generic Interfaces

OPC Interface | XML Interface | Modbus Interface | SNMP Interface

Time Series Data Sources

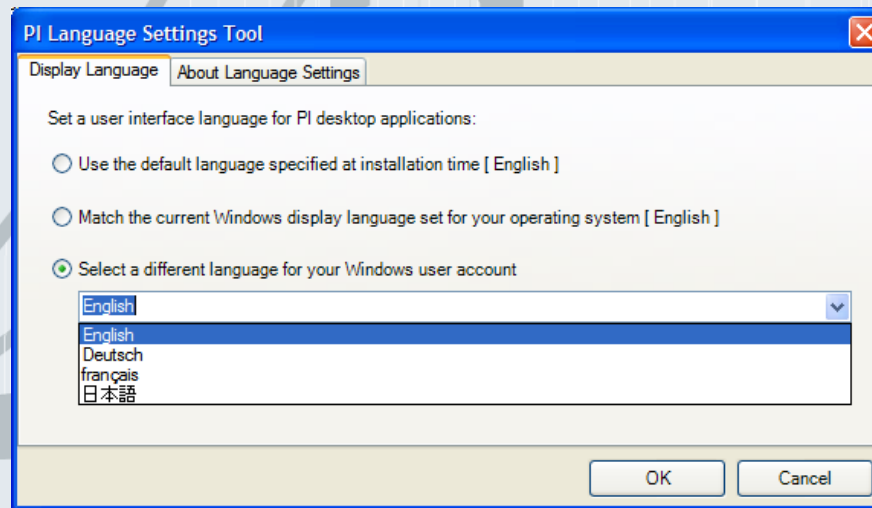Honeywell | ABB | Delta-V | Rockwell | ... | Other

New with AF 2.1 – 'Big ticket items'

- High Availability
  - Very similar to HA for the PI Server
  - Automatic Failover for clients
  - SQL replication for the AF database

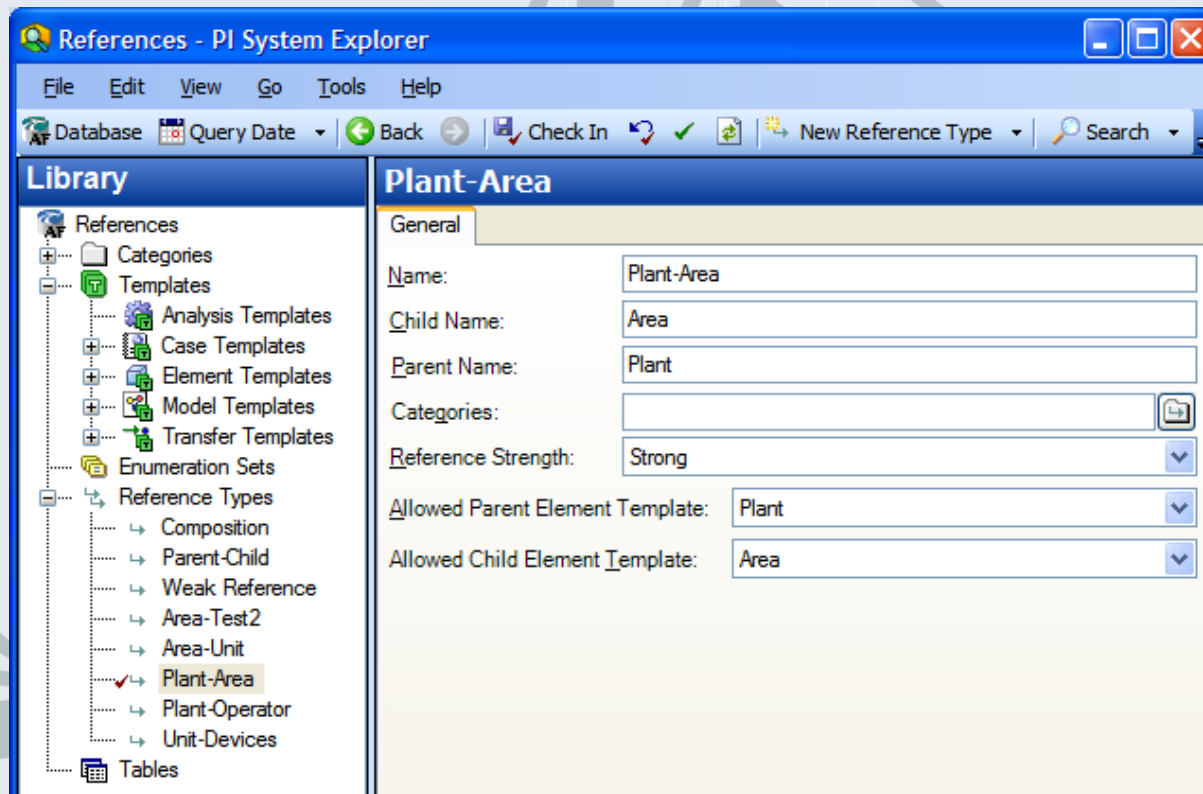- Notifications support
  - New Notifications template object

New with AF 2.1 – 'Big ticket items'

- 64 bits support

- Localization support

Value Now: Named References Types

- Enforce specific relationship between templates

- Guide user when creating structures

Value Now: Indexed attributes

- Up to 5 attributes per element
- Speed up the searches

Value Now: New Table Lookup

- Interpolate/extrapolate values

- Calculate summaries

Value Now: others enhancements

- Performance improvements
  - Loading objects, check-in changes
- AF Tables Refresh
- XML Import/Export command line tool
  - Support editing and deleting
- More support for PI Points DR
  - Bulk create tags
  - Summaries trending in PB
  - Data Quality Flags

Motivation for MDB to AF upgrade
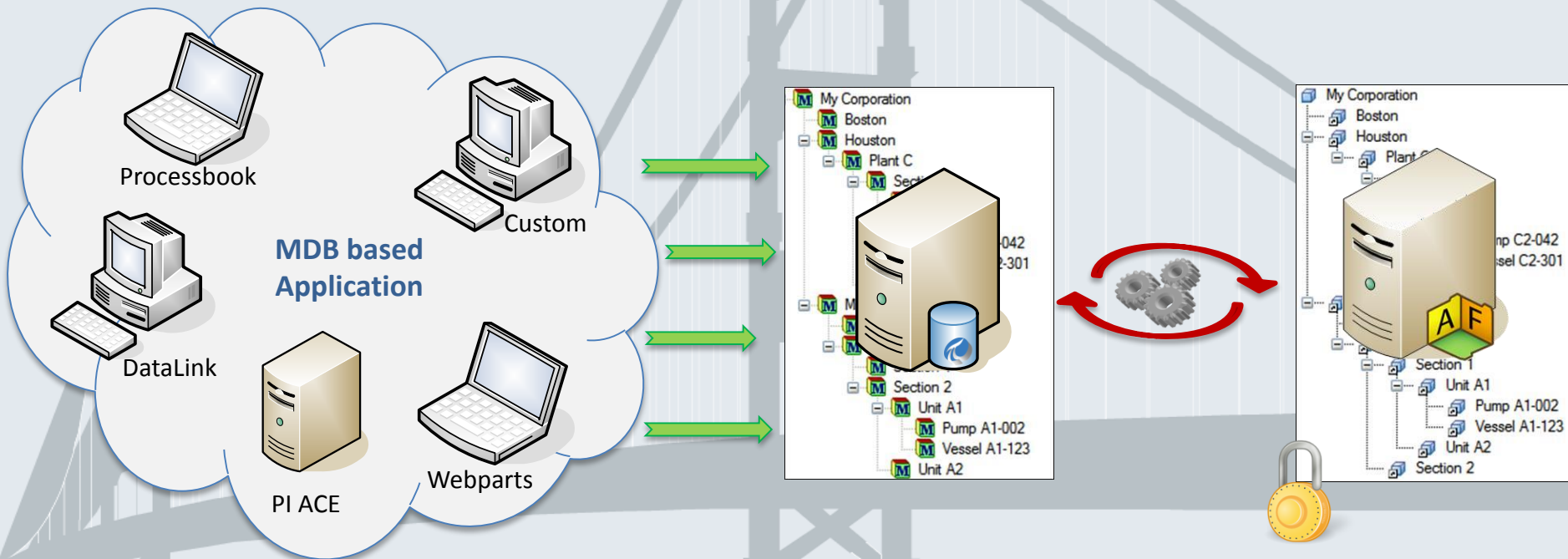
Move you forward

- AF 2 is the future for PI applications
- AF 2 is richer, more scalable and more flexible

Protect your investments

- No customer left behind policy
  - MDB based solutions keep working
- Gradual upgrade process from MDB to AF
  - The back-end first, and then the applications

Overview of MDB to AF upgrade

- Migrate & Synchronize
- AF 2 is the master record

PI Server 3.5 : MDB to AF Upgrade

- Requires AF Server 2.x

- Server Upgrade only from 3.4.380

  – MDB uses PI security

  – AF uses Windows security

  – 3.4.380 supports Windows security

Two Step Process

1. Prepare for PI Server upgrade

2. Upgrade PI Server

Step 1: Prepare For Upgrade

Upgrade Preparation Tool:

1. Select Target AF Database

2. Review Security Configuration

3. Review Migration Conflicts

4. Save Choices

– Schedule the PI Server Upgrade

Step 2: Upgrade PI Server

1. Run the installation kit
   - If PI Server Collective, run on the primary node

2. Start the PI Server
   - Migration starts automatically
   - PI Server is available, except MDB is read only
   - Progress can be monitored

Synchronization

Primary
PI Server Node

Sync Engine

AF Server

MDB

M

M

System of Record

Upgrading Clients

PI SERVER COLLECTIVE

MDB

MDB

AF SERVER

ACE

PI ProcessBook
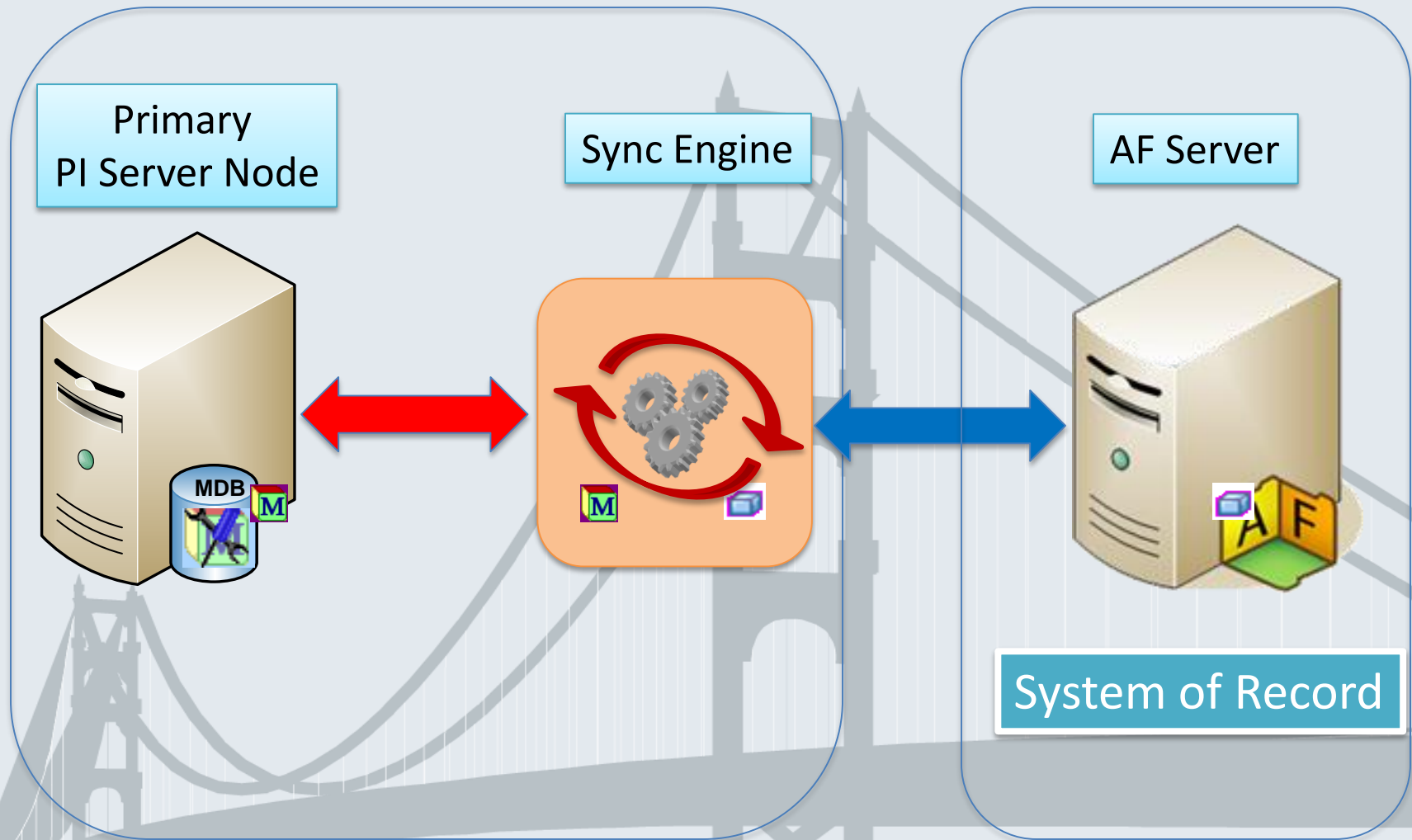
PI Notifications
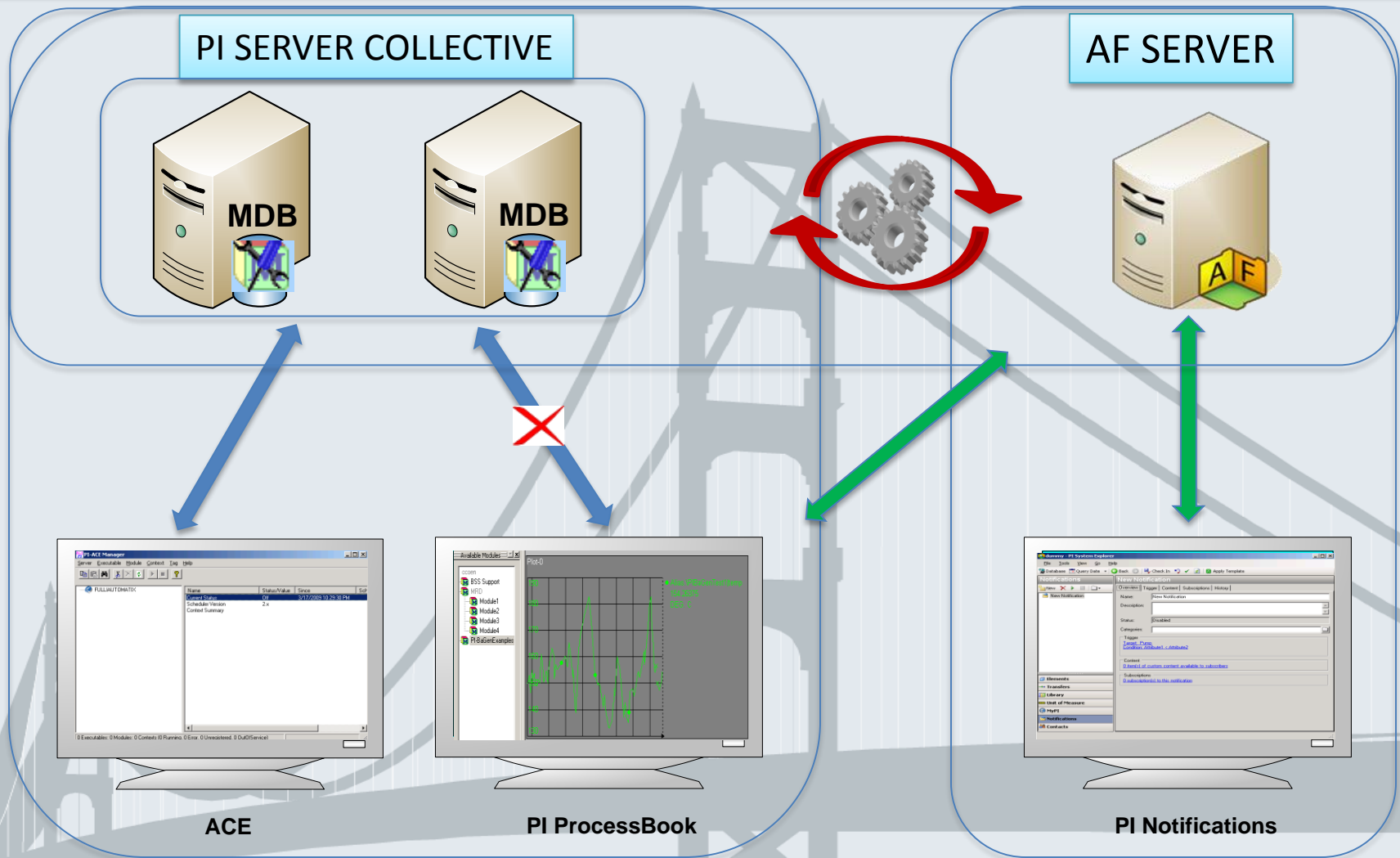
PI Batch Data

- PI Batch data stays on the PI Server

- All PI Batch clients work as usual

- All PI Batch units will be migrated

Performance of MDB Clients

- One time migration of MDB to AF
  - Quick and non-disruptive to operations

- No impact on reading from MDB
  - AF access not required for reading MDB

- Slight impact on writing to MDB
  - AF access required for editing MDB

Also visit PI Server or AF Server Pod

Quick Roadmap

- MDB to AF: PI Server EAM 3.5.xx
  - Release Candidate for mid-June 2009
- AF 2.1
  - Release Candidate for end of April 2009
- AF 2.2
  - Targeted for Q1 2010
  - Native support in clients tools (PB, DL & Webparts)
  - Advanced searching capabilities
  - Support for AF Analysis