Create Applications to monitor PI Analysis Service

David Pugal, PhD, Sr. Software Developer, OSIsoft

What are we going to do?

Live Coding against PI Analysis Service!

What does it mean?

No laptop needed, just follow along

Discussion form – please feel free to ask questions

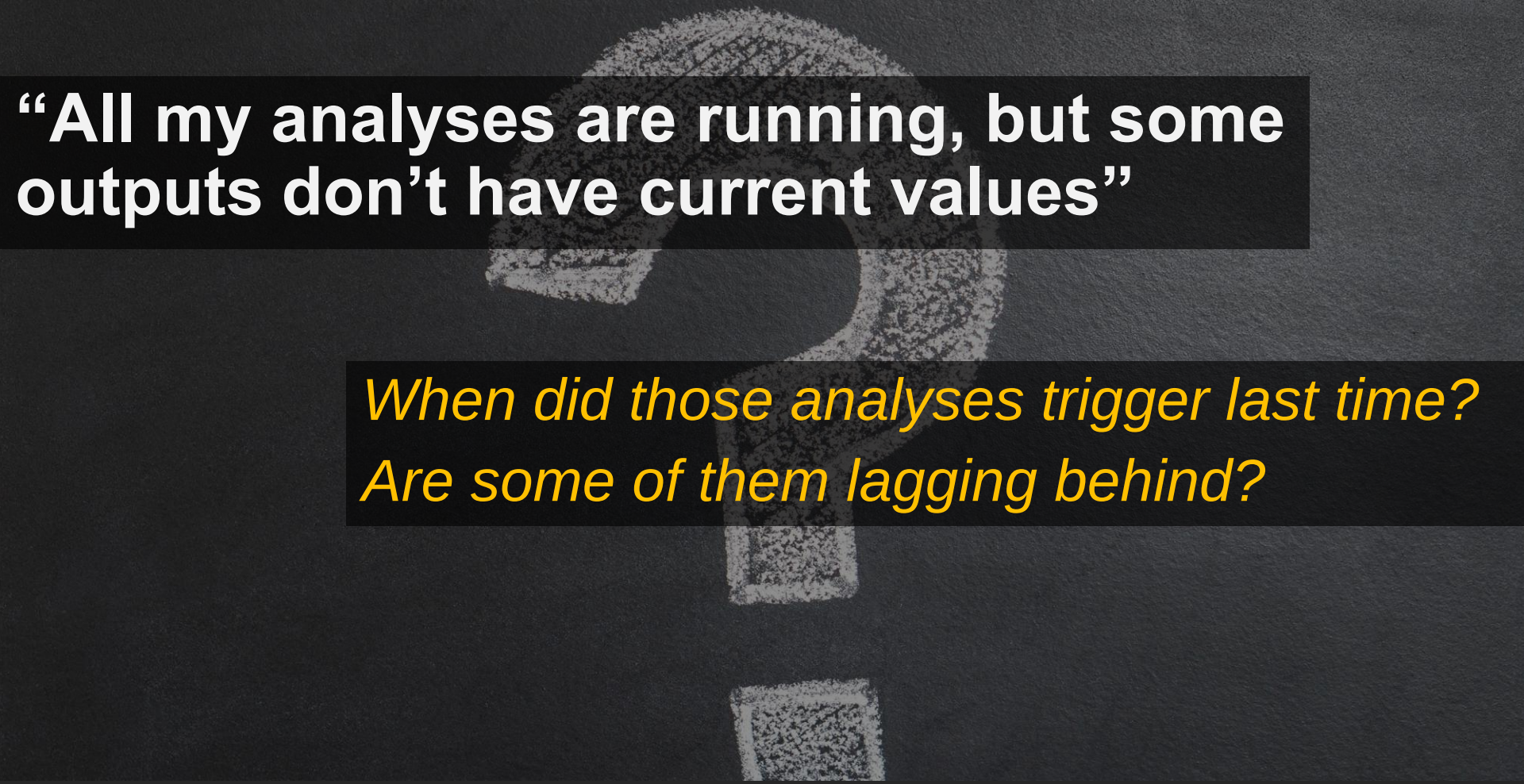
What problem are we going to solve?

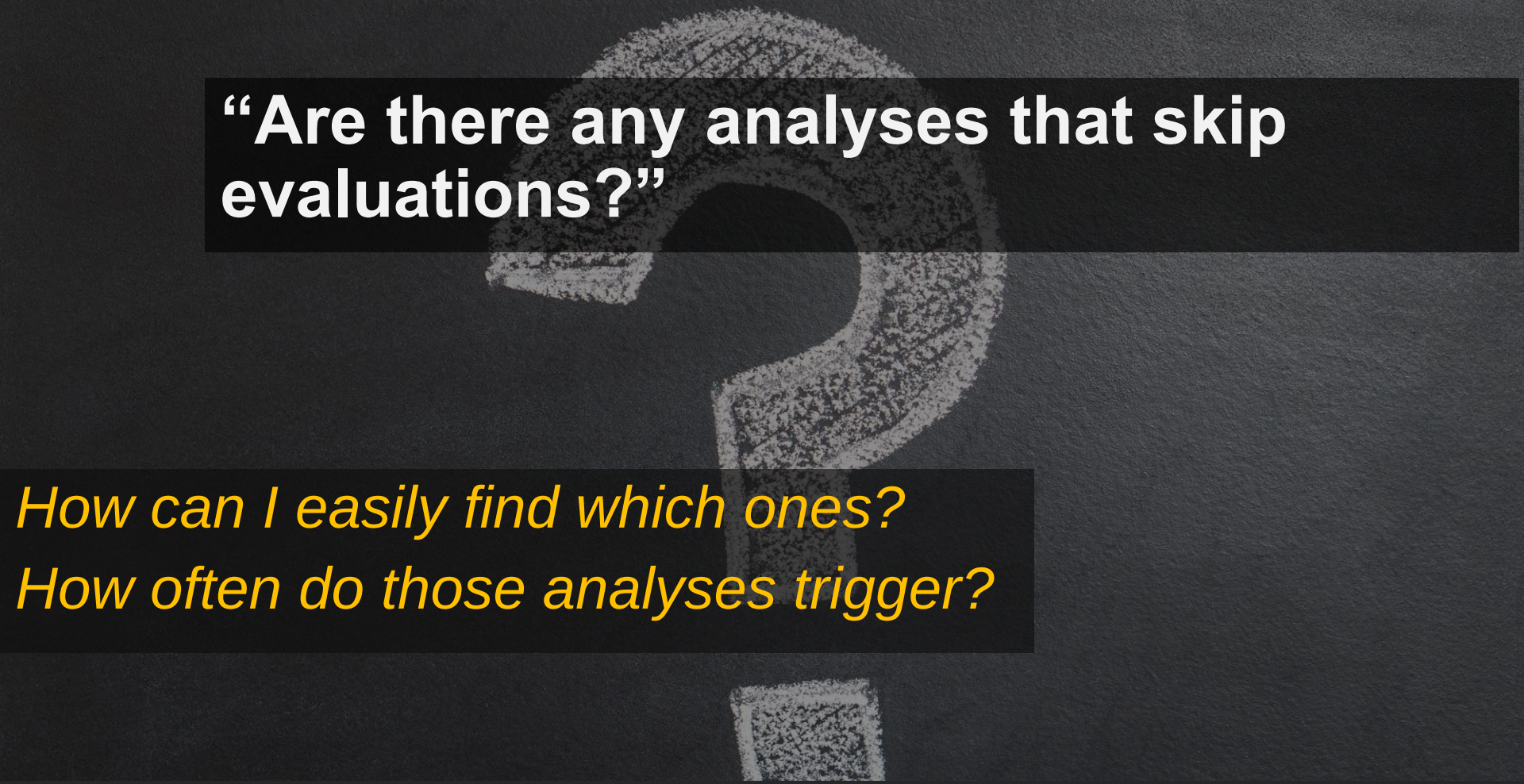
Identify couple of common challenges

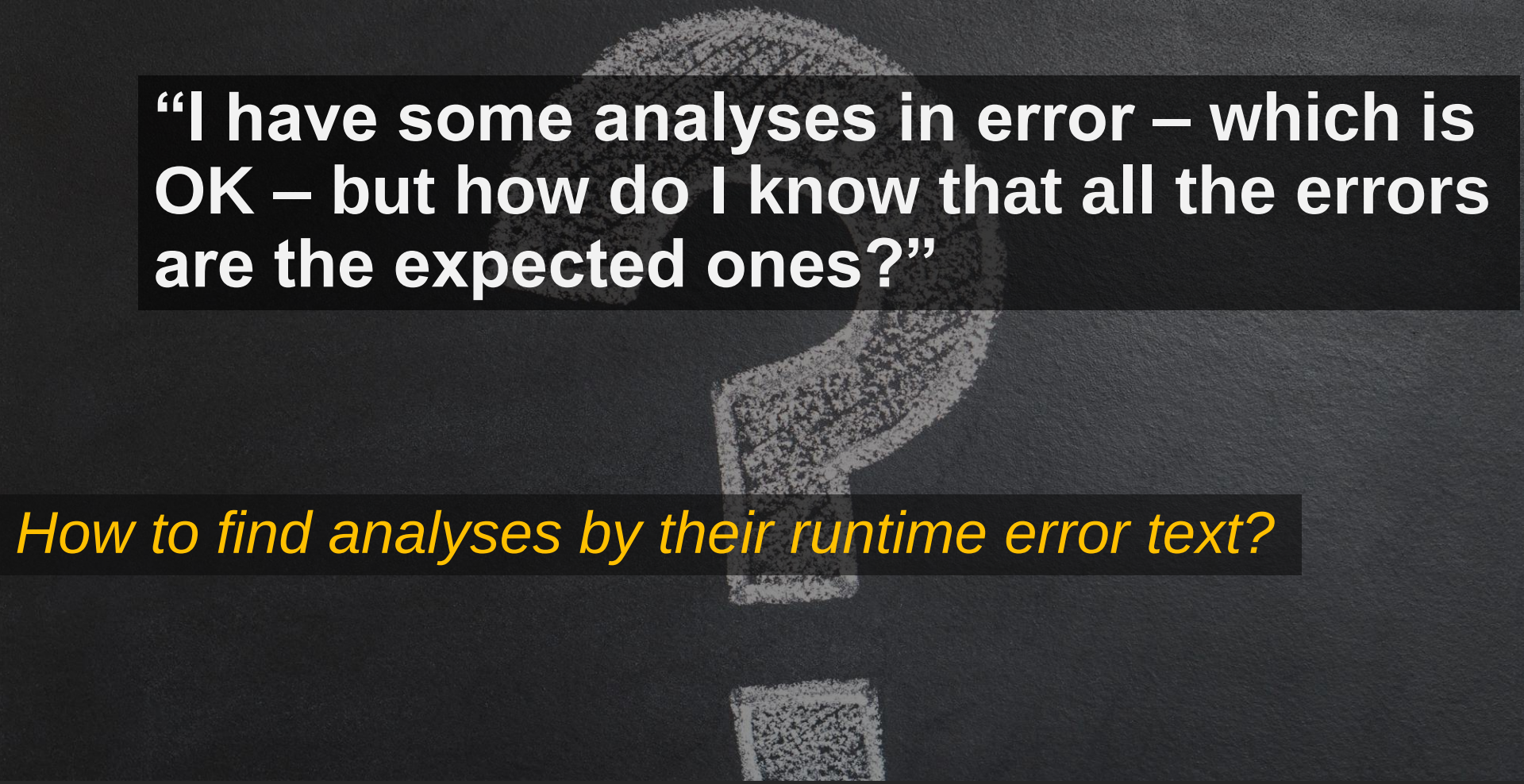
Explore new ways to overcome those

“All my analyses are running, how do I know the analyses evaluate good values?”

Everything is “green”, but what’s actually going on?







Getting answers to those, and similar questions has been quite a challenge…
until now!

2018 SP2 release of PI Server makes it possible to query analyses *runtime* information via **AFSDK**

Let’s explore what it means!

*"Include **running** analyses with 'Wind Farm' in the **path** with **average Lag** > 10 s"*

"Execute programmatically, determine offending analyses"

"I want to know the analyses elements, last lag, average lag, and how long it took to evaluate the last trigger."

DEMO

AFSDK documentation

Live coding exercise #1

Write an AFSDK program in C# to explore running analyses fields

Consider different ways to consume the data

Live coding exercise #1 recap

New *AFAnalysisService* methods:

- *RuntimeInformationFields*
- *QueryRuntimeInformation*

Retrieved running analyses information in 3 ways:

1) As *RuntimeFieldValue* objects
2) As user-defined objects
3) dynamic/JSON objects

Live ~~coding~~ investigation exercise #2

Explore the running analyses in a database and see if there are any problems

Live investigation exercise #2 recap

Explored a database to find analyses that…

1) evaluate ‘Calc Failed’, using *lastEvaluationStatus* and *lastEvaluationDetail*
2) are lagging, using *lastLag, averageTrigger averageElapsed, skipCount*
3) Have unexpected configuration error, using *statusDetail*

Live coding exercise #3

Write an application to monitor whether any analysis is falling behind or skipping evaluations

Live coding exercise #3 recap

Wrote a simple program that queries PI Analysis Service to determine if any analysis appears to be lagging or skipping.

The used fields: *lastLag, skipCount, lastTriggerTime*

Performance tip!

Always exclude ‘Stopped’ analyses if not needed.

Speakers

- David Pugal, Ph.D.
- Sr. Software Developer
- OSIsoft, LLC
- dpugal@osisoft.com

Questions?

Please wait for the **microphone**

State your **name & company**

Please remember