



OSIsoft.

USERS 2013 CONFERENCE

The Power of Data

E M E A

THRIVING IN A WORLD OF CHANGE



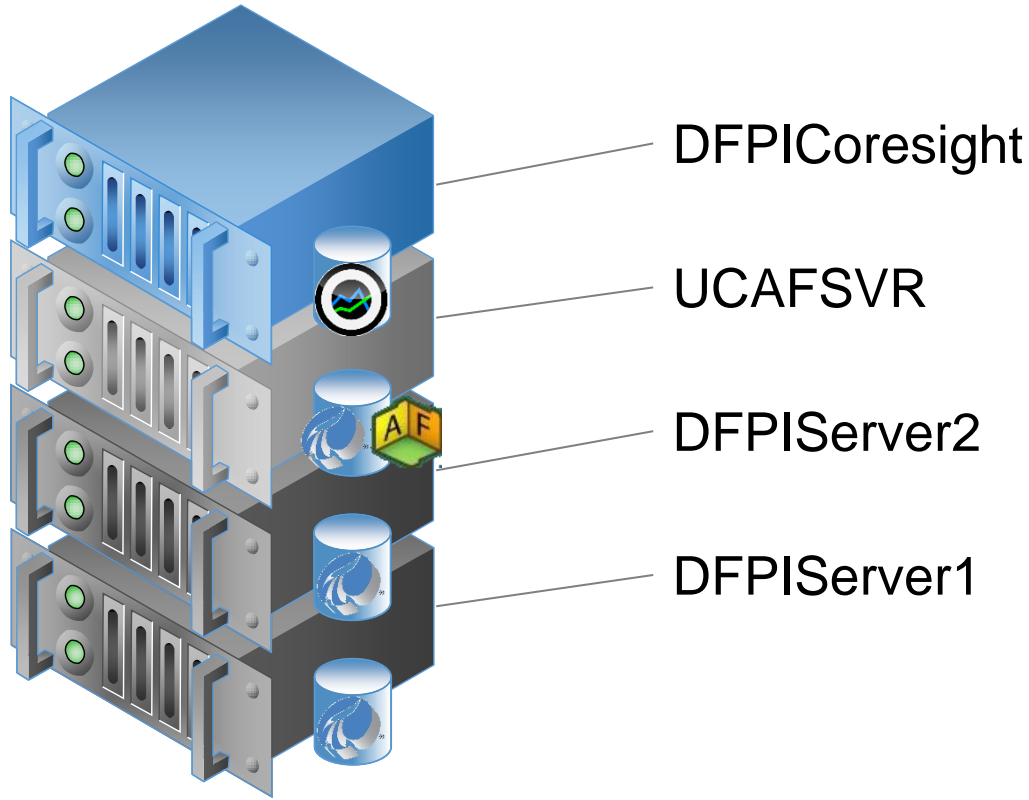


The Asset-Centric PI System: The Value of Asset-Based PI Now & in the Future

Presented by **Frank Batke, Chris Coen and Stephen Kwan, OSIsoft**

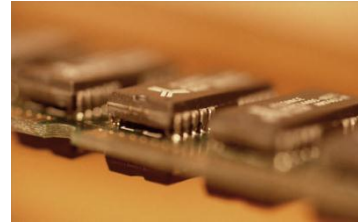
Demo Framework



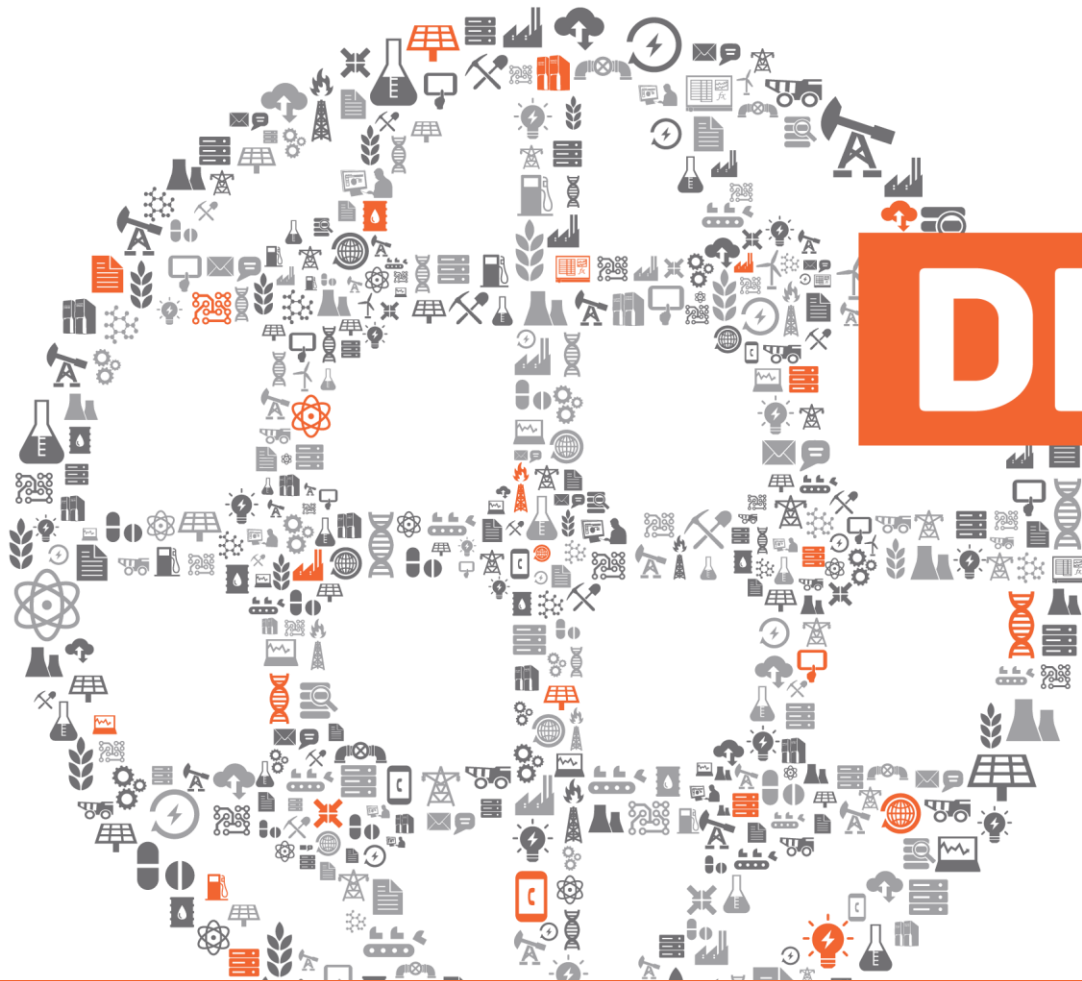


Important server metrics

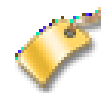
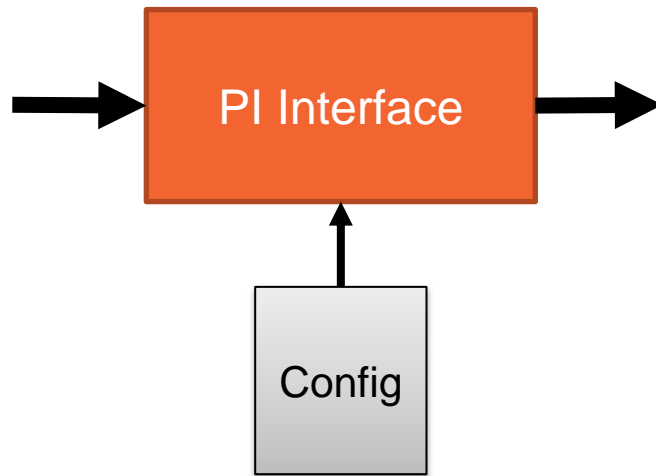
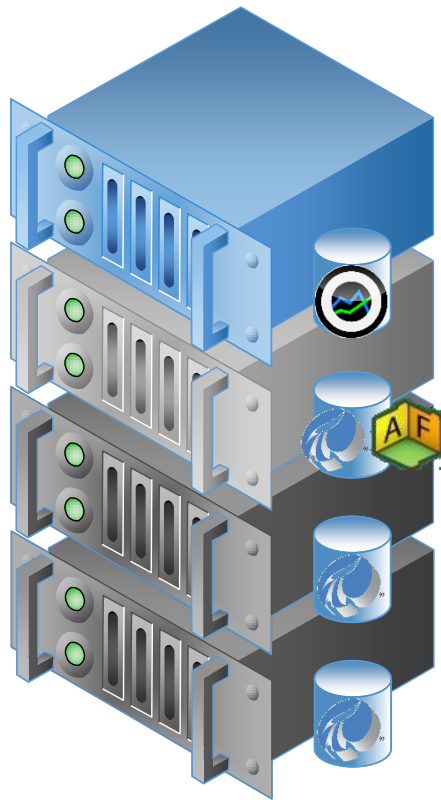
- Disk usage and space
- Memory usage
- Network bandwidth
- Processor usage
- Operating system



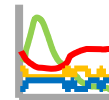
Windows Server 2012



DEMO



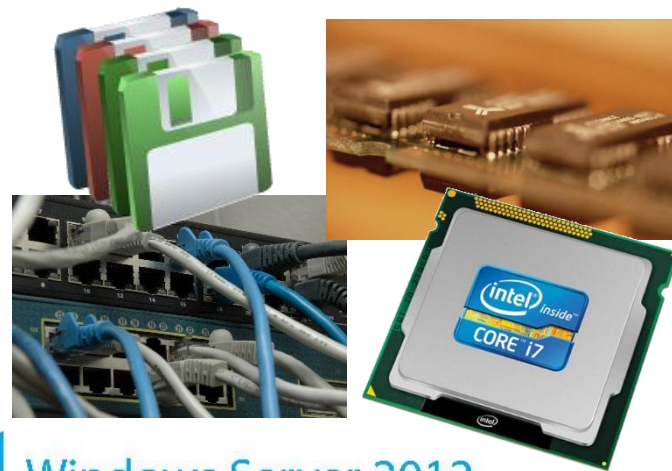
Tags



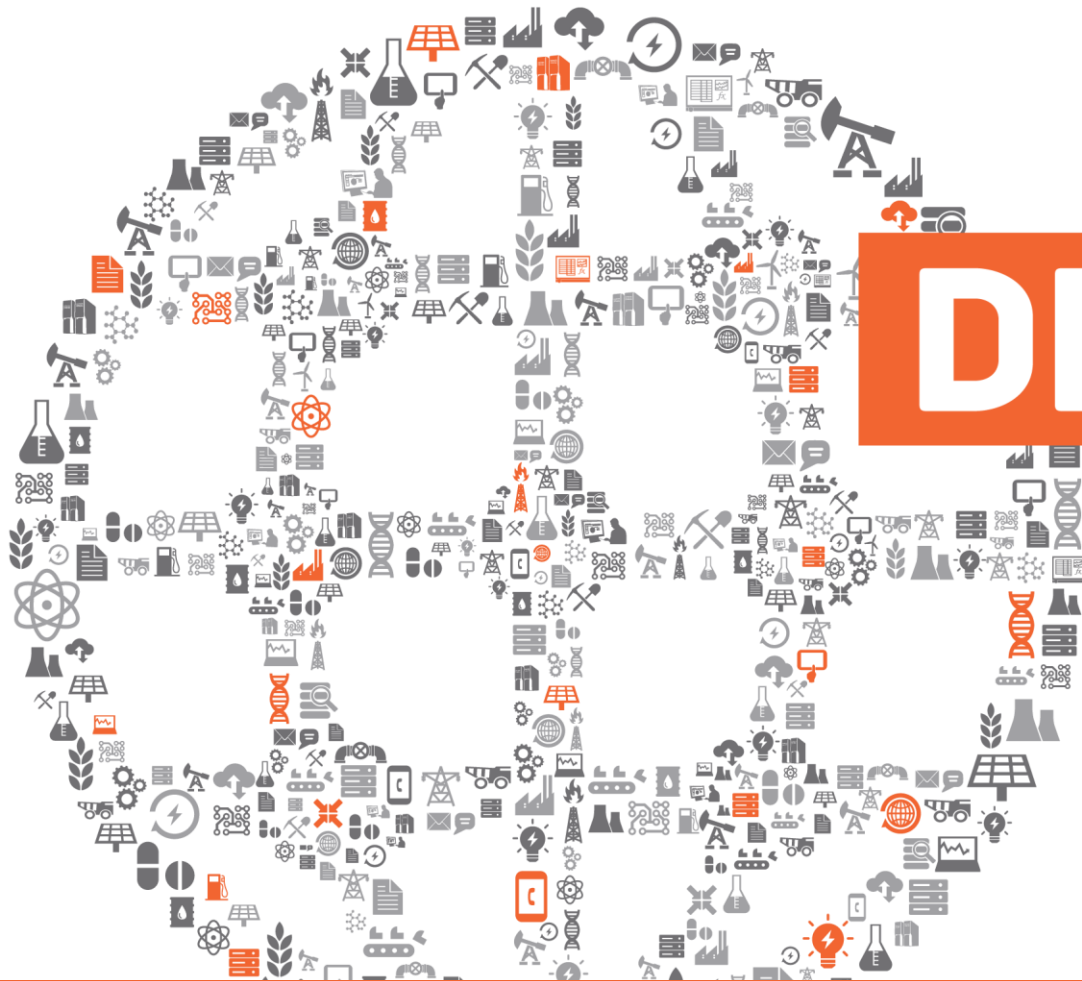
Data



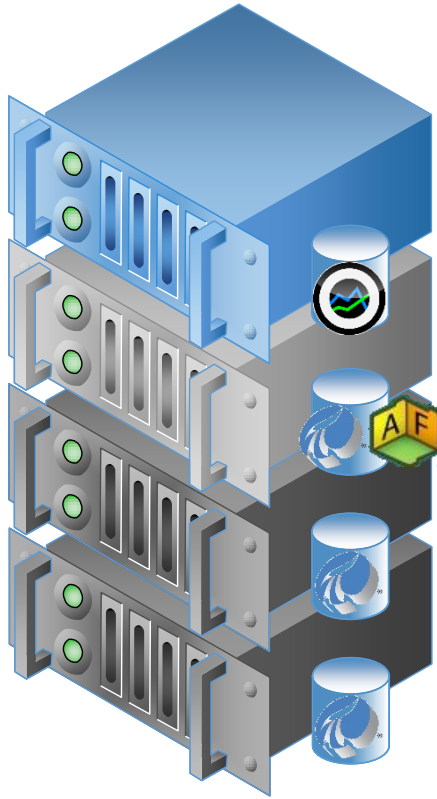
Assets



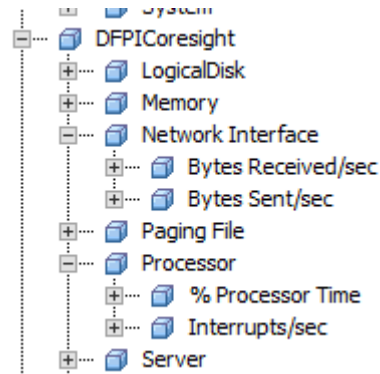
Windows Server 2012



DEMO



Auto created



Tags
Assets
Data

Calculated

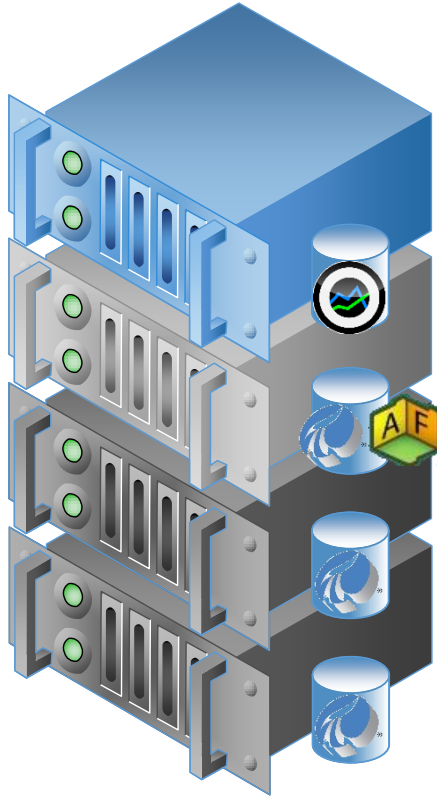
Data
Assets

Marked

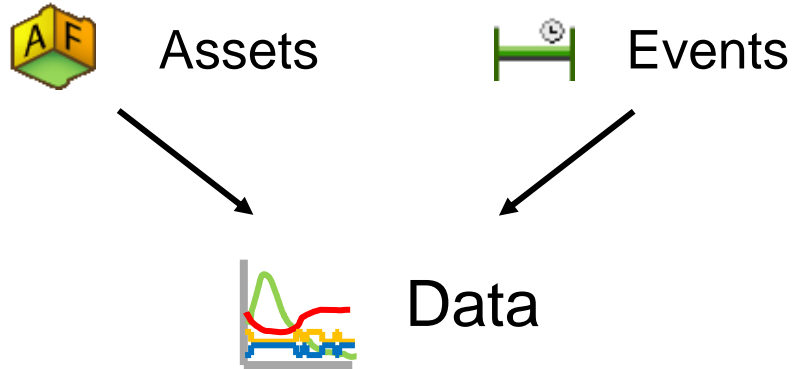
Events

Visualized and Reported

Assets Data Events



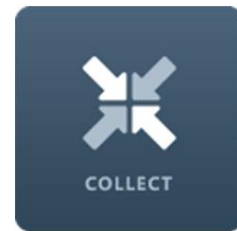
Browsed, Found and Discovered





What's Coming?

PI Interfaces



- Smart, Asset-based Interfaces
- Create tags, assets automatically
- Collect data at faster rates

See a live demo at the Product Expo

- Coming in 2013
 - PI Interface for IPMI
 - PI Interface for EtherNet/IP
 - PI Interface for RtScada

Asset Based Analytics



Introducing the Upcoming PI System Asset Based Calculation Engine

Wednesday, 09:00-09:30

See a live demo at the Product Expo



Harnessing the Power of Event Frames Across the PI System

Presented by Todd Brown, Chris Nelson, and Frank Batke

PI AF: Asset Based Analytics – Event Detection

Start Trigger

Variable	Expression
Output	('Operating State' = 'Unloading') AND ('Tilt Dump Amps' > 'Tilt Dump Amps High Limit')
	Add a new expression

End Trigger ☐ Same as start trigger

Variable	Expression
Output	('Tilt Dump Amps' < 'Tilt Dump Amps High Limit')
	Add a new expression



Truck Trip Events Summary

Count	Cum. Duration	Avg Duration (Sec)	Expected Avg Duration (Sec)
29	22:24:00	2880	360

Truck Trip Events

Name	Start Time	End Time	Duration
RT: MT4 2013_04_07 12:44	4/7/2013 12:44:28 PM	4/7/2013 1:32:28 PM	00:48:00
RT: MT4 2013_04_07 13:32	4/7/2013 1:32:58 PM	4/7/2013 2:20:58 PM	00:48:00
RT: MT4 2013_04_07 14:21	4/7/2013 2:21:28 PM	4/7/2013 3:09:28 PM	00:48:00
RT: MT4 2013_04_07 15:09	4/7/2013 3:09:58 PM	4/7/2013 3:57:58 PM	00:48:00
RT: MT4 2013_04_07 15:58	4/7/2013 3:58:28 PM	4/7/2013 4:46:28 PM	00:48:00
RT: MT4 2013_04_07 16:46	4/7/2013 4:46:58 PM	4/7/2013 5:34:58 PM	00:48:00
RT: MT4 2013_04_07 17:35	4/7/2013 5:35:28 PM	4/7/2013 6:23:28 PM	00:48:00
RT: MT4 2013_04_07 18:23	4/7/2013 6:23:58 PM	4/7/2013 7:11:58 PM	00:48:00
RT: MT4 2013_04_07 19:12	4/7/2013 7:12:28 PM	4/7/2013 8:00:28 PM	00:48:00
RT: MT4 2013_04_07 20:00	4/7/2013 8:00:58 PM	4/7/2013 8:48:58 PM	00:48:00

Trip Operational State Events

Name	Start Time	End Time	Duration
Running	4/7/2013 3:41:28 PM	4/7/2013 3:57:58 PM	00:16:30

PI System Access + PI WebParts

Engine RPM Analysis

sort by Average of Engine RPM - Maximum + desc

Average of Engine RPM - Maximum by Driver

Driver	Max RPM
Jeremy Cortese	1800
Brandon Bricks	1800
Jason Rice	1800
Sam Spillman	1800
Neil Barthman	1800
Mike Moore	1800
Mace Mason	1800
Daniel Davis	1800
Chris Sautman	1800
Lebron James	1800
Gerthsen Green	1800
Ryanne Raber	1800
Sorlie Ottens	1800
Reuil Swivel	1800
Latrice Lewis	1800
CRAZY AL	1800
No Data	1800
Neil Macer	1800
Sam Jackson	1800

Average of Engine RPM - Maximum by Route

Route	Max RPM
Route B	1800
Route A	1800
Route C	1800
Route D	1800
No Data	1800

Average of Engine RPM - Maximum by Truck

Truck	Max RPM
Mine Truck 2	1800
Mine Truck 1	1800
Mine Truck 4	1800
Mine Truck 5	1800

PI System Access + Microsoft Power View

ROUNDTRIP INFORMATION

Truck RoundTrip Name	RT: MT4 RoundTrip 20130407 15:09:58
Truck	Mine Truck 4
Start Time	07-Apr-13 15:09:58
End Time	07-Apr-13 15:57:58
Duration	0 0:48:00
Duration (min)	48.0
Route	
Driver	
Comment	
Element Path	VULCAN/VUL001 Mining Corporation/Trucks/Mine Truck 4

ENGINE ECM

Engine RPM.Avg	1714.83
Engine RPM.Max	1714.83
Ground Speed.Avg	
Ground Speed.Max	

PAYLOAD SYSTEM

Load.Max	
Load.Range	
Tilt Dump Amps.Avg	
Tilt Dump Amps.Max	

BRAKE TEMPERATURE & TIRE PRESSURE

Brake Temp	
Tire Pressure	

PI DataLink retrieving Event Info

Asset Based PI System

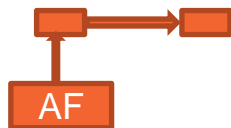
- PI AF SDK – high performance access to PI System time series data
- Support for time context for external tables
 - Aggregate external data with PI System data
 - Calculations
 - KPIs



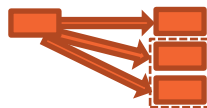
Asset Based PI System

Buffer SS

PI Server



AF-SDK Support



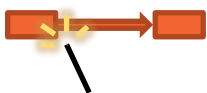
Buffer to Multiple PI Servers/ Collectives



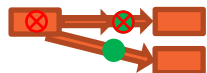
Higher Throughput (2-3X faster)



More Resilient



Simpler to Configure



Easier to Monitor

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DECEMBER 3 - 6, GRAND HYATT SAN FRANCISCO

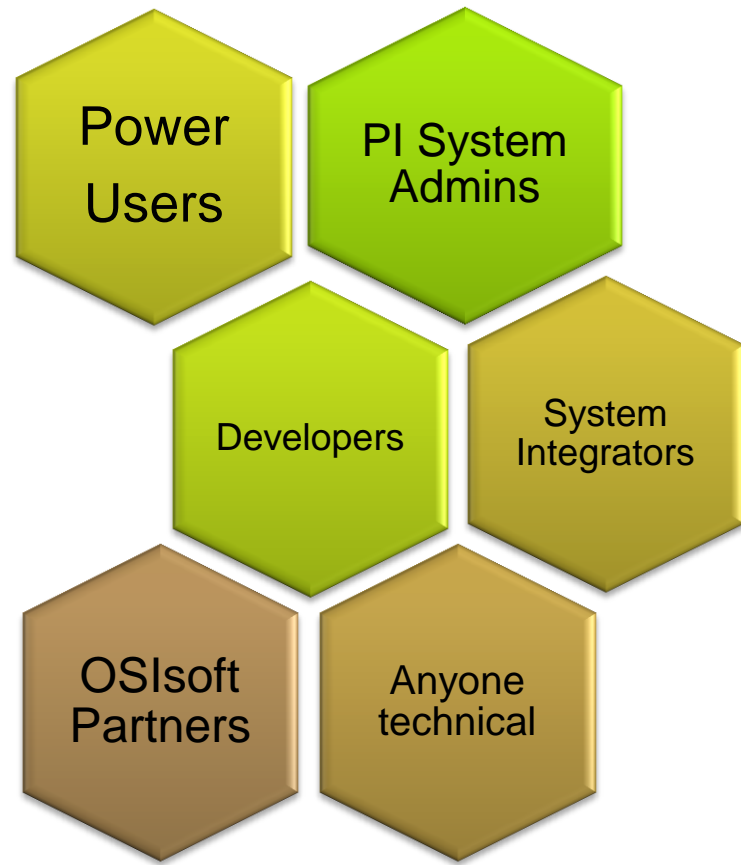
vCampus Live! 2013

WHERE PI GEEKS MEET



SAVE THE DATE

Get hands on knowledge of how to use and get value from the PI System!



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Complete the Online Survey
for this session



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