



How the Mighty Feature Service Enables Real-time GIS

Presented by **David Jacob, Esri**
Michelle Kuiee, OSIsoft





Feature Services

Web Services – powering the Web GIS platform



OSIsoft.

EMEA USERS CONFERENCE • BERLIN, GERMANY

© Copyright 2016 OSIsoft, LLC

Web Services – powering the Web GIS platform



OSIsoft.

EMEA USERS CONFERENCE • BERLIN, GERMANY

© Copyright 2016 OSIsoft, LLC

Web Services – powering the Web GIS platform



OSIsoft.

EMEA USERS CONFERENCE • BERLIN, GERMANY

© Copyright 2016 OSIsoft, LLC

Web Services – powering the Web GIS platform



OSIsoft.

EMEA USERS CONFERENCE • BERLIN, GERMANY

© Copyright 2016 OSIsoft, LLC

Web Services – powering the Web GIS platform



OSIsoft.

EMEA USERS CONFERENCE • BERLIN, GERMANY

© Copyright 2016 OSIsoft, LLC

Web Services – powering the Web GIS platform



OSIsoft.

EMEA USERS CONFERENCE • BERLIN, GERMANY

© Copyright 2016 OSIsoft, LLC

Web Services – powering the Web GIS platform

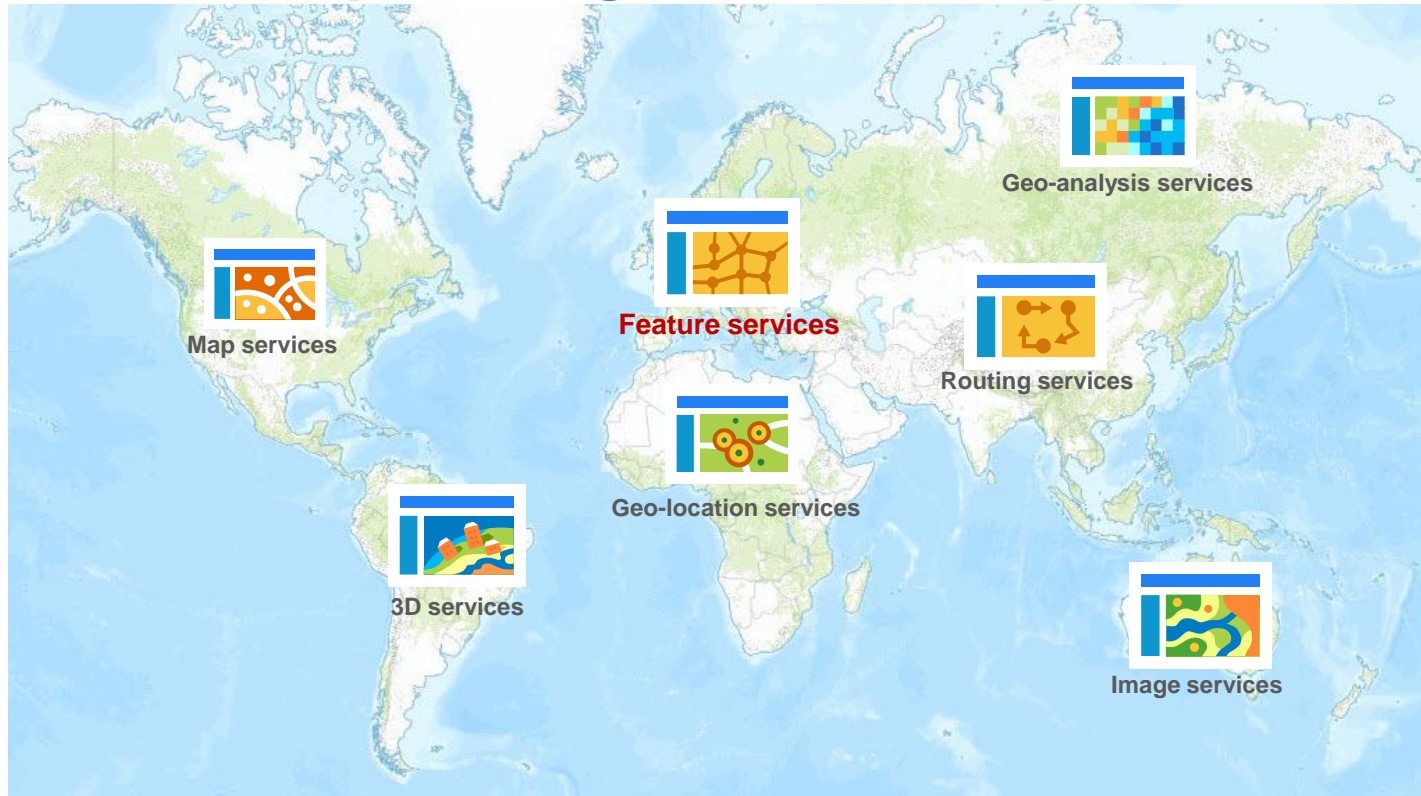


OSIsoft.

EMEA USERS CONFERENCE • BERLIN, GERMANY

© Copyright 2016 OSIsoft, LLC

Web Services – powering the Web GIS platform



Feature Services

- Deliver spatial features to client applications
- RESTful (*<http://...?give-me-some-map-data>*)
- Follows a well-known Esri specification
- Contains one or more layers (or tables)
- Capabilities
 - Spatial and attribute queries
 - Web editing of features
 - Offline, disconnected data capture and synchronization



Feature Services: Sources

- ArcGIS Online (Esri's SaaS platform)
- Portal for ArcGIS
- Enterprise databases such as Microsoft SQL Server, SAP HANA
- Partner implementations



Feature Services: Demo

Latest Readings.csv - Excel

David Jacob

File Home Insert Draw Page Layout Formulas Data Review View ArcGIS Maps Team Tell me what you want to do Share

Clipboard Font Alignment Number Styles Cells Editing Mindjet

30.24173039

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
	FLOWCAPACITY	METERTYPE	ASSETUNITCODE	RouteID	Measure	FlowRate	Pressure	EventID	RouteName	LONGITUDE	LATITUDE	RETRIEVAL TIME			
1	9000	Orifice	ML-116-M1	116	127375.4818	4839.5	345.4875	4babb960-6934-11e6-9826-a63752019423	ML-116	-99.13686201	30.52440476	26/9/2016 11:00 am			
2	9000	Orifice	ML-119-M3	119	110.1314192	4951.425	405.2025	ba9c4c40-6934-11e6-9826-a63752019423	ML-119	-98.74796133	30.43900713	26/9/2016 11:00 am			
3	9000	Orifice	ML-123-M4	123	56747.50034	4936.05	409.248	0eb5fdd0-6935-11e6-9826-a63752019423	ML-123	-98.02277074	30.24173039	26/9/2016 11:00 am			
4	9000	Orifice	ML-124-M5	124	56.778074	5927.35	521.7875	269404d0-6935-11e6-9826-a63752019423	ML-124	-98.02210885	30.24160769	26/9/2016 11:00 am			
5	9000	Orifice	ML-132-M7	132	47179.97121	5938.32	484.08	9cd88ec0-6935-11e6-9826-a63752019423	ML-132	-97.11451541	30.05116247	26/9/2016 11:00 am			
6	9000	Orifice	ML-133-M8	133	26043.82405	3586.45	371.032	98830ff0-6938-11e6-9826-a63752019423	ML-133	-96.91464559	30.04226728	26/9/2016 11:00 am			
7	9000	Orifice	ML-117-M2	117	176.9923566	5248.65	480.015	72ee3b10-6934-11e6-9826-a63752019423	ML-117	-99.13674117	30.52439028	26/9/2016 11:00 am			
8	9000	Orifice	ML-130-M6	130	56.778	5231.43	455.6	5990bde0-6935-11e6-9826-a63752019423	ML-130	-97.55089912	30.13283383	26/9/2016 11:00 am			
9	9000	Orifice	ML-132-M9	200	32.92900727	1875.78	266.191	07253c10-6936-11e6-9826-a63752019423	L1-200	-97.11438149	30.05129566	26/9/2016 11:00 am			
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															
26															
27															
28															
29															
30															

Latest Readings

Ready

Feature Services: Clients

- Web mapping applications
- Professional GIS applications
 - ArcGIS Pro
 - ArcMap
- Focused applications
 - Collector for ArcGIS
 - Explorer for ArcGIS
 - Operations dashboard for ArcGIS
 - Survey 123

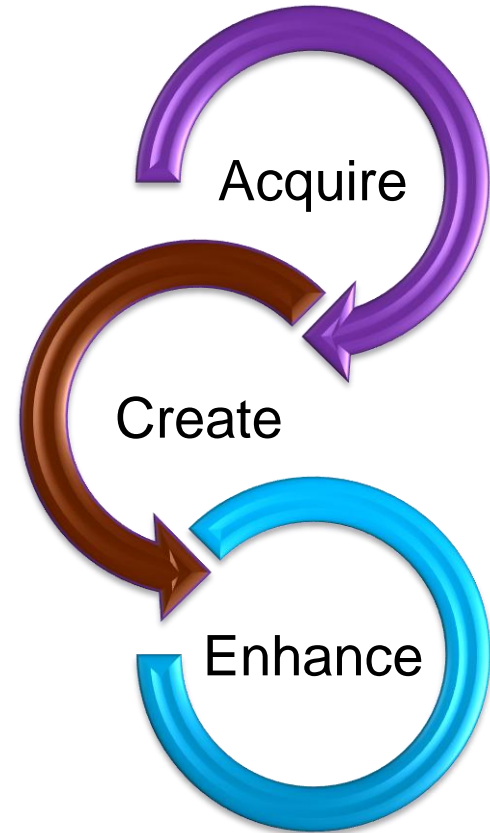




Integrator Utilitization

Use ArcGIS Feature Services to Build AF Models

- 21% of survey respondents report full AF adoption
- 75% report asset data in ArcGIS



[home](#) / [tools](#) / [extractor](#)

PI Asset Extractor for Esri ArcGIS

Desktop edition also available for download

Load features

Read assets automatically from a Feature Layer URL

This should be an address to an ArcGIS Feature Layer within a MapServer or FeatureServer.

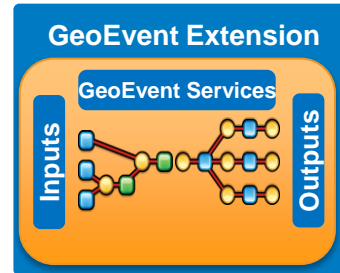
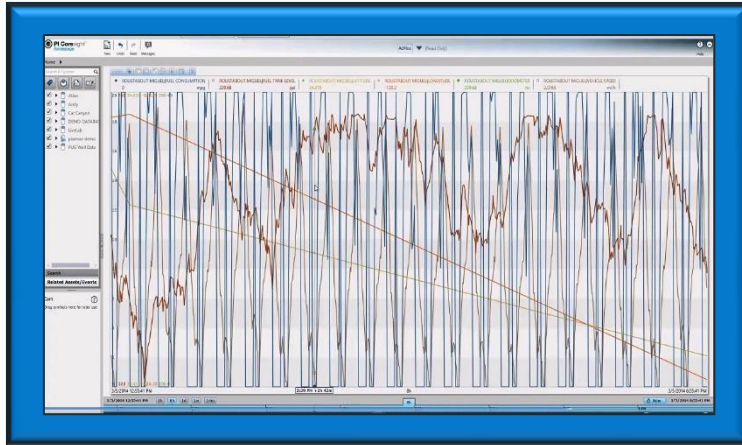
The address can include an Esri-defined query to restrict elements. For example, if you are extracting oil well data, you might want to restrict the query to show only those wells that are located in a particular state or region.

Address**Authenticate**☐ *necessary for non-public map layers***No features loaded yet****Apply**

Next



Publish and Update a New Feature Service



Integrator creates Feature Service and all orchestration objects in ArcGIS GeoEvent Extension- updates values from PI System data.



1. Feature Service Environment 2. Create Feature Service 3. Configure GeoEvent Extension 4. Advanced Settings 5. Summary

Choose where you would like to host your features :



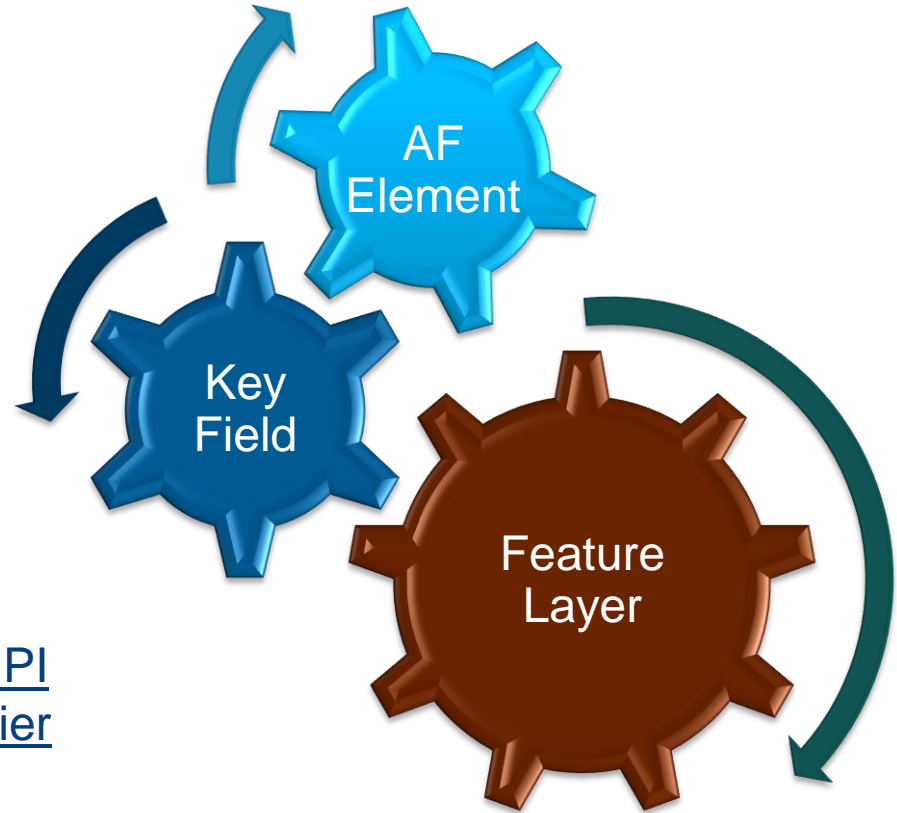
ArcGIS Online



ArcGIS Portal
Extension

Decorate an Existing Feature Service

I want to add PI Server
Data to an existing
Feature Layer



[YouTube video demonstrating how with PI Integrator for Esri ArcGIS 2015 and earlier](#)

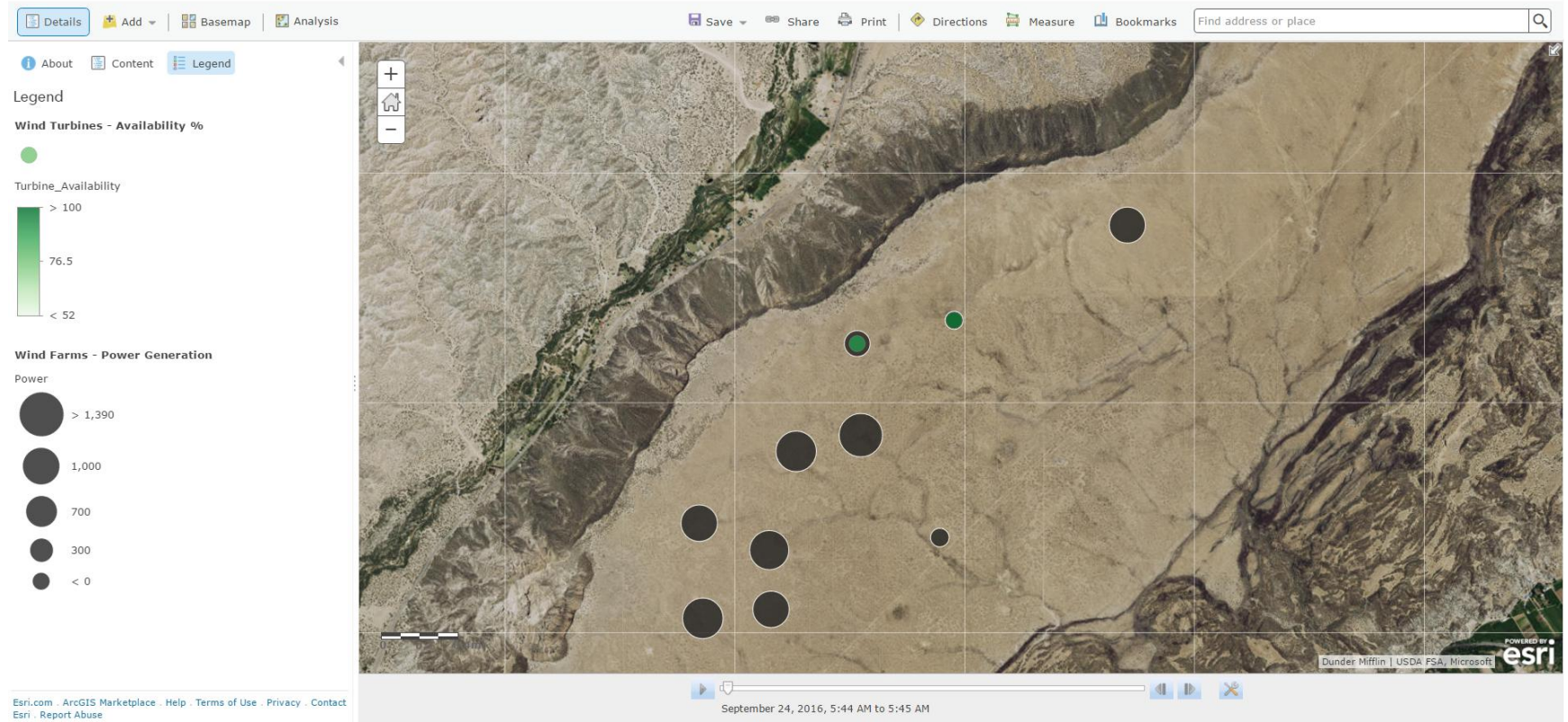


Future - 1Q2017

Replay PI Server Data History through Time Enabled Feature Layer*

Home ▾ Wind Map for History

New Map ▾ Michelle ▾



Esri.com · ArcGIS Marketplace · Help · Terms of Use · Privacy · Contact
Esri · Report Abuse

September 24, 2016, 5:44 AM to 5:45 AM

Replay PI Server Data History through Time Enabled Feature Layer*



Update PI System when ArcGIS Data is Updated*



Field worker calls in location
and status of asset

Updates
PI System with
data from ArcGIS
on a schedule

PI Connector for ESRI

CatCanyonWells Configuration

Data source description (optional)
Oil & Gas Wells in Cat Canyon CA

Please provide the link to the feature service layer:
<http://services.arcgis.com/SDRiK3lojFEsZQ2z/arcgis/r/>

Please specify AF asset update interval in the unit of hours:
24

Please specify the offset to
2

***Forecast release 1Q2017**

Display all the fields available on this layer

Click on the button above and select a unique field from below to name your element

All Fields		Unique Field
APINumber	>>	AssetName
ActiveWell	>	
CountyName	<	
FieldName	<<	
LeaseName		
OBJECTID		
OperatorNa		

Please specify template name for this feature service layer, if not, the default value below will be used.
Wells_Layer0

Save Cancel

For More Information About Next Release

- Product Expo
 - Esri booth
 - PI Integrator for Esri ArcGIS booth
- Presentation Day 3
 - OSIssoft Track 1 – New User
 - 15:05 – 15:35
 - With Vadim Fedorov

감사합니다

谢谢

Danke

Merci

Gracias

Thank You

ありがとう

Спасибо

Obrigado



OSIsoft.

EMEA USERS CONFERENCE • BERLIN, GERMANY

© Copyright 2016 OSIsoft, LLC

Contact Information

David Jacob
Solution Engineer
Esri
djacob@esri.com



Michelle Kuiee
Product Manager
OSIsoft LLC
michelle@osisoft.com



Questions

Please wait for the **microphone** before asking your questions

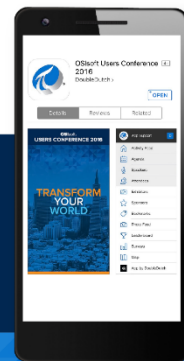


State your **name & company**

Please remember to...

Complete the Online Survey for this session

Download the Conference App for OSISOFT Users Conference 2016



- View the latest agenda and create your own
- Meet and connect with other attendees



HTML

search **OSISOFT** in the app store



<http://ddut.ch/osisoft>



OSISOFT.

EMEA USERS CONFERENCE • BERLIN, GERMANY

© Copyright 2016 OSISOFT, LLC

29