Working with OGC Services
Using JS API and Web App Builder Widget
@martenhogeweg
Context
GeoSUR (Latin America)
Group on Earth Observations
Systems of Systems
ArcGIS JavaScript API
OGC Support
ArcGIS Serves OGC Service Types – Arctic Elevation Services

- [http://elevation2.arcgis.com/arcgis/rest/services/Polar](http://elevation2.arcgis.com/arcgis/rest/services/Polar)

- Developed by Esri Image Server Team together with NGA, Polar Data Center

- OGC service endpoints enabled: WMS, WCS.
ArcGIS JavaScript API 3.x – OGC Layer Types

Layer
- Feature Layer
  - KML
  - WCS
  - WFS
- Dynamic Layer
  - WMS
- Tiled Layer
  - WMTS
ArcGIS JavaScript API 3.x – Other OGC Types

- WPS
- CSW
- SOS
- SensorThings
- Context
- Other
Sensor Networks
OGC SOS, SensorThings
IOOS SOS Input Connector

ArcGIS GeoEvent Manager

us.glos_GVSU1_wind_speed-input (SOS IOOS Input-Connector)

Name*: us.glos_GVSU1_wind_speed-input

URL*: http://sos.glos.us/32n/soa

Offering*: um.ioos.station.us.glos/GVSU

Observed Property*: http://mnsw.org/ondf/parameter/wind_speed

Procedure*: um.ioos.station.us.glos/GVSU

Request interval (in seconds)*: 500

Initial beginning of the event time (in days)*: 1

Perform initial request: Yes

ArcGIS GeoEvent Manager

GeoEvent Components Settings

GeoEvent Definition Name: 509-1000-Definition

Owner Name: org.r32.conservewb.sos.adapterbounding/5093/boundingAdapter.IOOS/19.4.1

Fields for SOS-IOOS-Definition

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IOOS SOS GeoEvent Service
IOOS SOS Web Apps
Bringing it All Together

OGC Testbeds
https://gptogc.esri.com/genericClient

http://gptogc.esri.com/arcticClient/
Geoportal Federated Search Widget

- Search remote OpenSearch or OGC CSW catalogs
- Show footprints of search results
- Consume supported services in WAB viewer
OGC Context Document Widget

- Open GeoJSON formatted OGC Context documents
- Then select layer/service to add to map
- For WMS: the entire service is added
- For WMTS, WCS: user selected the tileset or coverage
- Limited success with WMTS due to fixed projection
  - Limited success with WCS due to unsupported coverage profiles in OGC Testbed 12 WCS services
- We use COTS JS API 3.18 in this app, no testbed-specific code
WFS Data Extraction - Geoprocessing Widget

- Fill in Data Store (USGS) and WFS TypeNames
- Set Extent
- Set email address
- Send Async Request to CubeWerx WFS that
  - Clips/Zips the Data
  - Sends Email when Data is Ready for Download
- Geoprocessing Service: http://geoss.esri.com/arcgis/rest/services/OGC/A007/GPServer
  - OGC WPS Enabled
  - Consumable in ArcGIS Desktop & WAB
Widgets for Web AppBuilder and Portal 10.5.1
Enable discovery across ArcGIS platform

- Federated Search Widget
- Add to Map Widget
- OGC Context Widget
- ArcGIS Layers
- Koop Feature Services
- OGC Support
  - WMS
  - WCS
  - WFS
  - KML
  - Context Documents

http://gptogc.esri.com/genericClient/
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