Smart GIS Program Management: ArcGIS Enterprise Logs to the Rescue

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The Need for Smart Program Management

FDOT Identified a need to have GIS Usage metrics Created Including:

- Service Usage & Layer Usage
- Department Usage
- Application Use of ArcGIS Services
- Historical Tracking
Research of Options (2014-2015)

• Several options were reviewed for potential solutions including:

  • Third Party Apps – Not able to track ArcGIS Server to level desired

  • ESRI – ArcGIS Server Log Applications were still being built – provided good content but lacked an easy to use interface

  • Custom Build of Application
Custom solution

• To Fully deliver what FDOT District 5 needed a custom analytical viewing application (AVA) was needed

• AVA Could Display
  • Usage of Services, Layers, Applications, Departments
  • Historical trends of the data
  • Be designed to be user friendly
Use of Log Files – ArcGIS Server

• Pros
  • Show the Service Usage
  • Show the Layer Usage

• Cons
  • User Information due to security rules – Anonymous Identity
  • Tracking of Application request calls and usage
Use of Log Files – IIS

• Pros
  • Provide tracking capability of users via Active Directory
  • Provides Tracking of Application Calls through the IIS

• Cons
  • Does not track the layer usage requests of ArcGIS Server
  • Difficult to Parse Through
• AVA was built to use both the IIS and ArcGIS Server Logs

• The logs are written to SQL based on a desired interval

• Through WebAPI calls the AVA application reads and queries the data to display in the application
### Department Views / Hits

<table>
<thead>
<tr>
<th>Department</th>
<th>Hits</th>
</tr>
</thead>
<tbody>
<tr>
<td>[PROGRAM MANAGEMENT]</td>
<td>65</td>
</tr>
<tr>
<td>CONSULTANT</td>
<td>64</td>
</tr>
<tr>
<td>CONSULTANT PROJECT MANAGEMENT</td>
<td>25</td>
</tr>
</tbody>
</table>

**Total Views:** 278

### Chart for Department Utilization

The chart shows the top 3 utilizing departments over a date range. The chart highlights the utilization of [PROGRAM MANAGEMENT], CONSULTANT, and CONSULTANT PROJECT MANAGEMENT.
### Service Views / Hits

<table>
<thead>
<tr>
<th>Service</th>
<th>Hits</th>
</tr>
</thead>
<tbody>
<tr>
<td>D5GEV Tentative Work Program</td>
<td>8453</td>
</tr>
<tr>
<td>D5GEV Candidate Projects</td>
<td>4842</td>
</tr>
<tr>
<td>D5GEV Geotechnical</td>
<td>4533</td>
</tr>
</tbody>
</table>

### Filter

- **Start Date:** 05-01-2017
- **End Date:** 06-16-2017

### Chart for: Service Utilization

#### Top 3 Utilizing Services
- D5GEV Tentative Work Program
- D5GEV Candidate Projects
- D5GEV Geotechnical
For Date: 05-01-2017

Service: DSGEV Candidate Projects

Found 8 Layer(s)

- BRIDGE
- LIGHTING PROJECTS
- RESURFACING
- SAFETY
- TRAFFIC OPERATIONS
- DRAINAGE IMPROVEMENT
- CAPACITY
- ENHANCEMENTS
• Filter Capability

• Review by Layer, Service, Application, or Department

• Set a Time Range to View
Future Enhancements

• Summary Table for the Views

• Expanded Active Directory for Departments

• Expanded Export and Print Functionality

  • Including export to Table
Lessons Learned

• Using Both IIS and ArcGIS Server Logs was key

• Take Security/Firewall Settings into place for retrieval

• Configure ArcGIS Server to Report needed level of Detail
Thank You

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