



# ArcGIS Monitor: Monitor, Observe & Manage Systems

Forsyth County, GA GIS Department

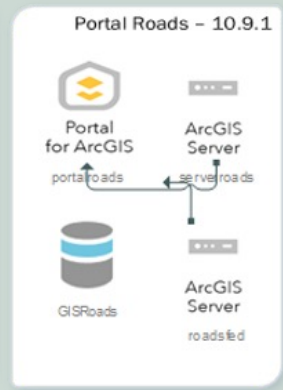
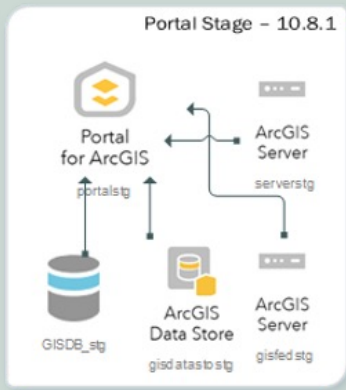
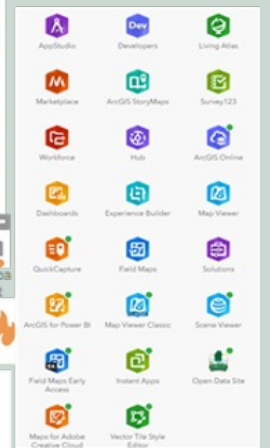
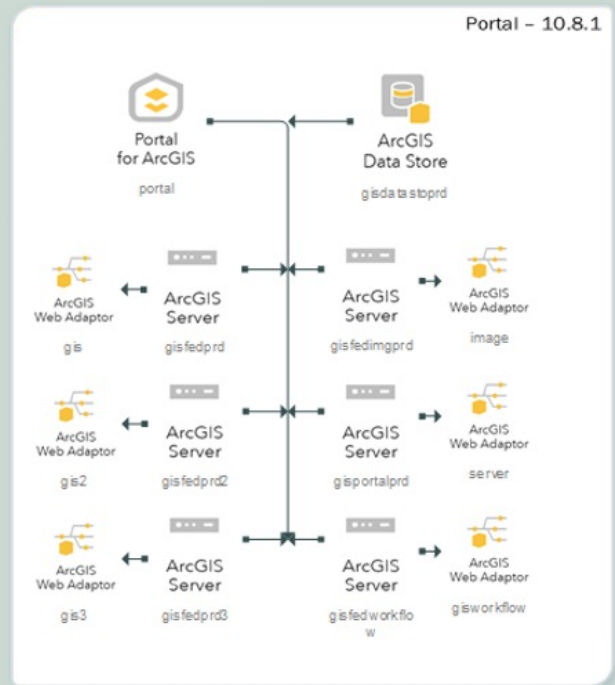
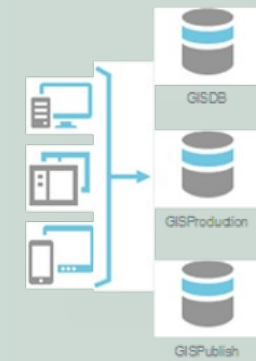
John Kilgore, Daniel Wade, and Michael Bellino

# Forsyth County GIS

**Forsyth County, Georgia, located just north of Atlanta, is one of the fastest-growing counties in the United States. The county has grown from 98,407 residents in 2000 to a population surpassing 260,000.**

- A team of 10 builds and manages the county's GIS IT infrastructure, which consists of over 450 data layers across all applications and solutions.
- The GIS Department maintains and manages 24 total servers across a production, stage and development environments.
- The GIS Department supports the following departments: Planning & Community Development, Water & Sewer, Engineering, Tax Assessors, Voter, E911, Roads & Bridges, and General Administration.

# Forsyth GIS Enterprise



# Our Problem

As the GIS department's services continue to extend its footprint, ensuring the health of the enterprise GIS system is imperative. The team lacked a method to monitor technical issues in the enterprise GIS, requiring them to troubleshoot through a manual, lengthy process. The team also needed a tool to observe system health across multiple enterprise environments to identify performance bottlenecks. Leadership also requested a data-centric approach towards growth justification.

# Monitor Improvements

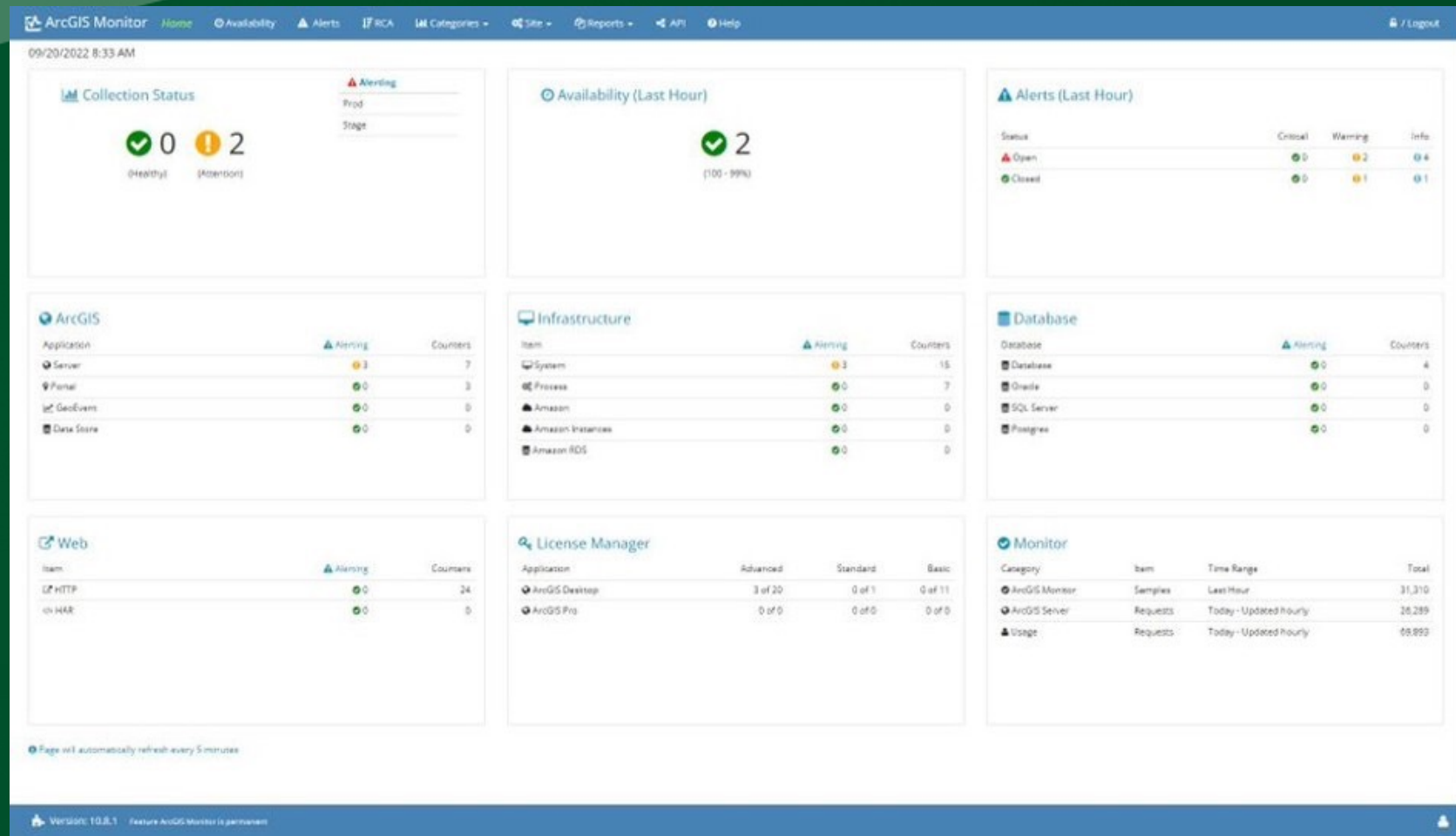
**The growth of the GIS Enterprise became increasingly challenging to maintain and monitor efficiently.**

- Straight-forward install process
- User-friendly interface
- Web based monitoring environment from a local host
- Ability to configure custom dashboard, charts, and analysis environments
- Creation of collections vs adding individual servers/services/hosts
- Custom reports using SQL

# Migration to Monitor 2023

- Monitor 2023 was a fresh installation on a separate server
  - Allowed us to run both in tandem while we configured Monitor 2023
- No true data/configuration migration method
- Allowed us to look at our monitoring methods with fresh eyes
- Configuration of services vs data expressions for live monitoring
- Monitor 2023 installed with pre-configured ESRI analysis page
  - Allowed us to visualize possibilities and see working data expressions

# Designed Solution



# Results

**The adoption of ArcGIS Monitor has transformed the monitoring and troubleshooting capabilities of the GIS department. With greater awareness of their enterprise GIS system, the team members can be decisive on where to grow or allocate resources, helping them be proactive on outages and instability.**

- Minimizing the impact of outages
- Proactive alerting, growth, response
- Enabled quick response and transition to browser-based workflow
- Efficiency in troubleshooting
- Needs based approach with tangible metrics
- Increased GIS Reliability across Forsyth County



# Initial Setup



# Current Setup

## All Production Servers

Open Alerts

 **3** Open Alerts

Open Info Alerts

 **0** Info Alerts

Open Critical Alerts

 **1** Critical Alerts

Open Warning Alerts

 **2** Warning Alerts

RDP - gisdatastog

 **0** Active Users

RDP - fcvgisjob

 **0** Active Users

RDP - gisfedimgprd

 **0** Active Users

RDP - gisclassifier

 **1** Active Users

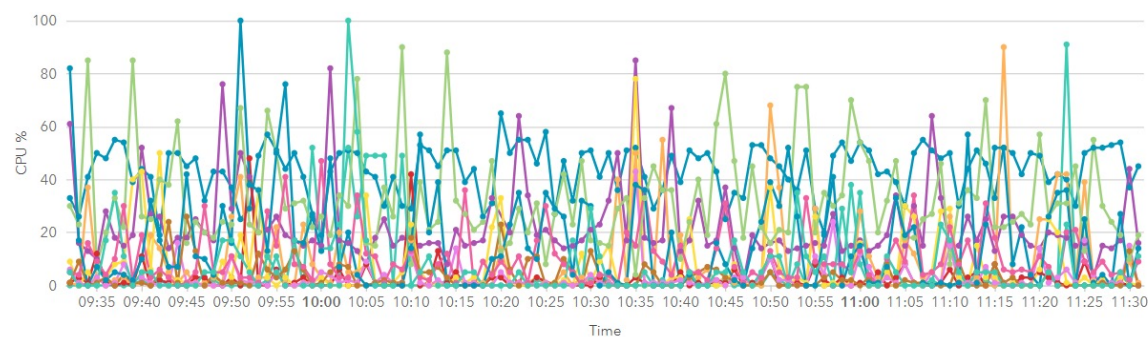
RDP - fcvgisarcom

 **1** Active Users

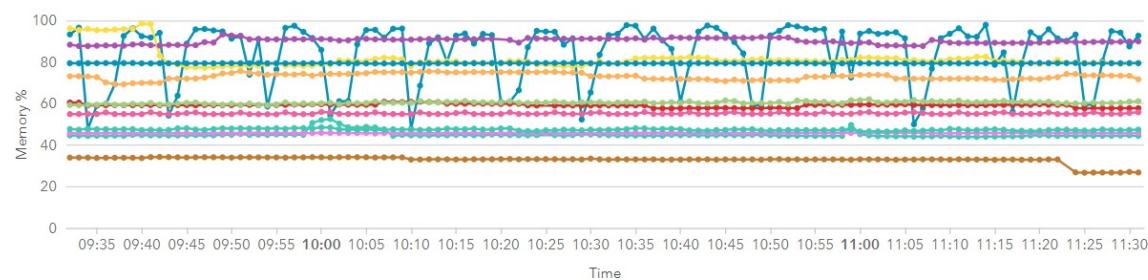
RDP - gisroadsfed

 **0** Active Users

CPU Utilized (%)



Memory Utilized (%)



Total Requests - GISFedPrd

 **18340** Total Requests

Total Requests - GISFedPrd2

 **21548** Total Requests

Total Requests - GISFedPrd3

 **897** Total Requests

Total Requests - GISFedWorkflow

 **15709** Total Requests

Total Requests - GISPortalPrd

 **15528** Total Requests

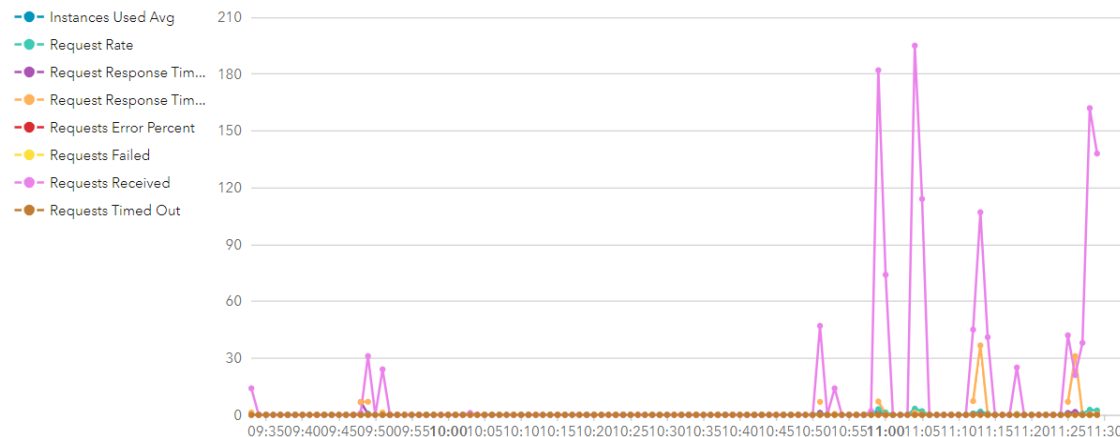
Total Requests - GISFedImgPrd

 **3714** Total Requests

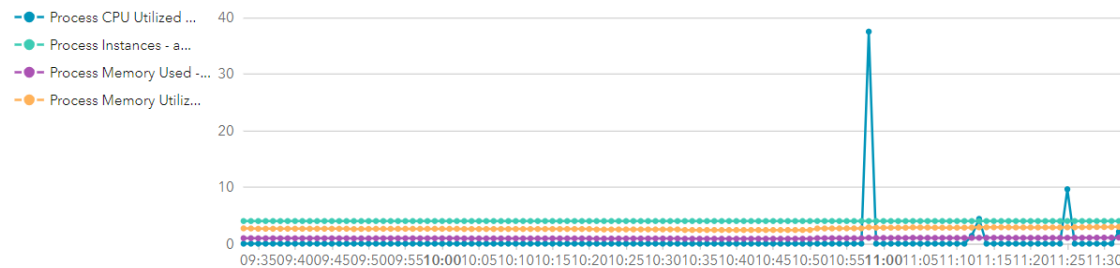
# Current Setup

## Roads & Highways - LRS.GIS Editing

### LRS GIS Editing



### Arc Soc.exe Process Utilization Metrics



### Request Rate

0.19

### Request Received

1318

### Response Time Avg

0.69

### Request Failed

0

### Response Time Max

5.81

### Request Error Percent

0 %

### Average Instances Used

0.06

### Requests Timed Out

0

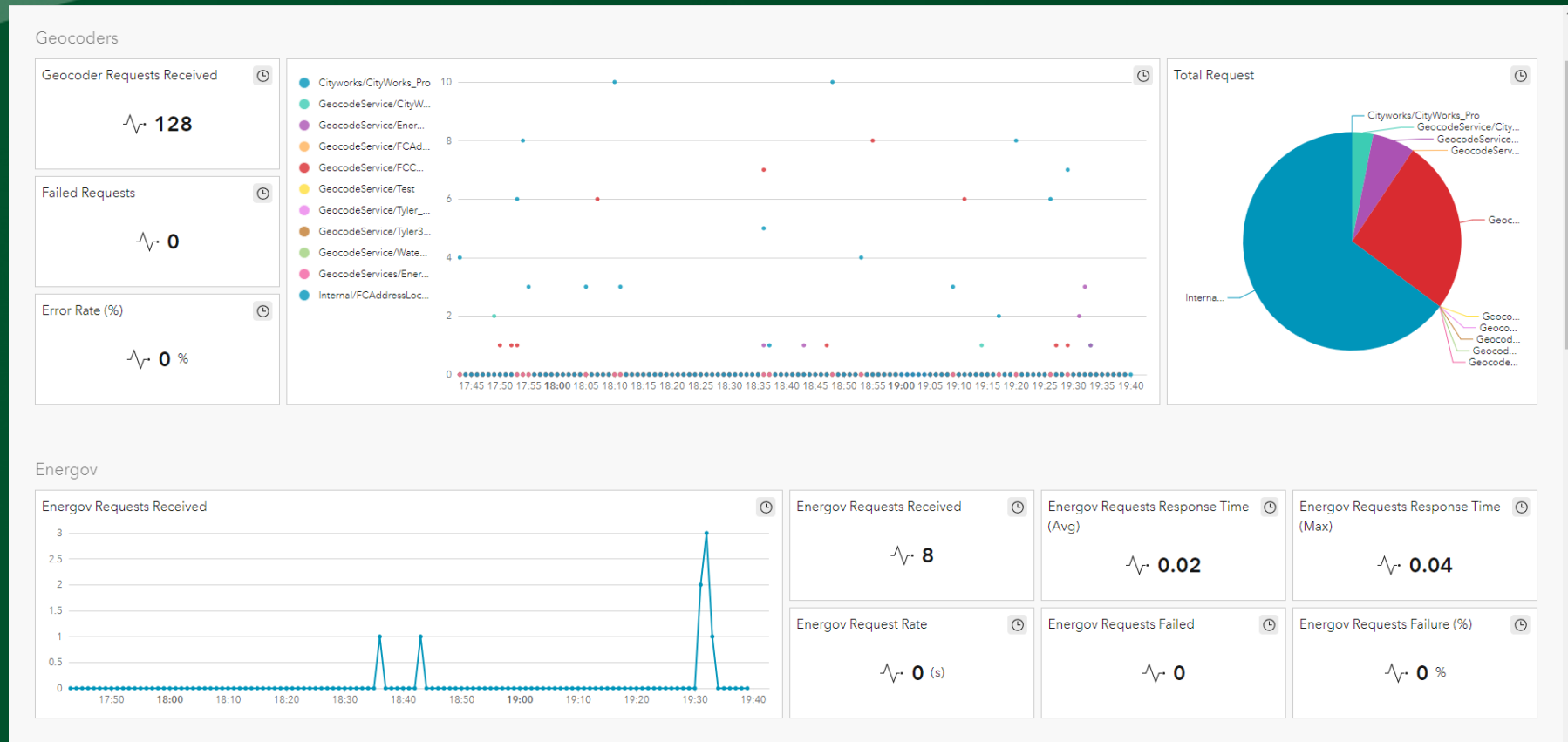
### ArcSoc.exe Process Instances

4

### ArcSoc.exe Instance Saturation (%)

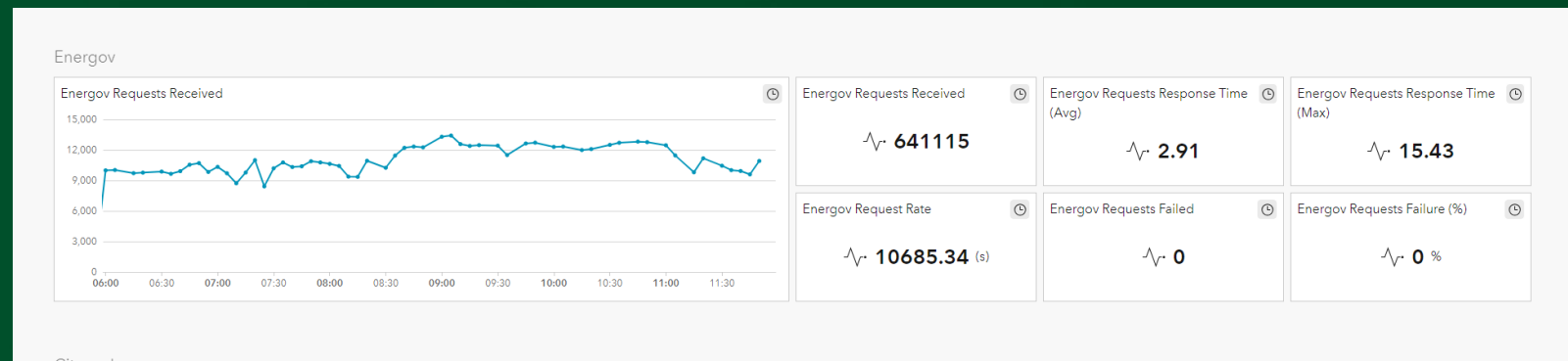
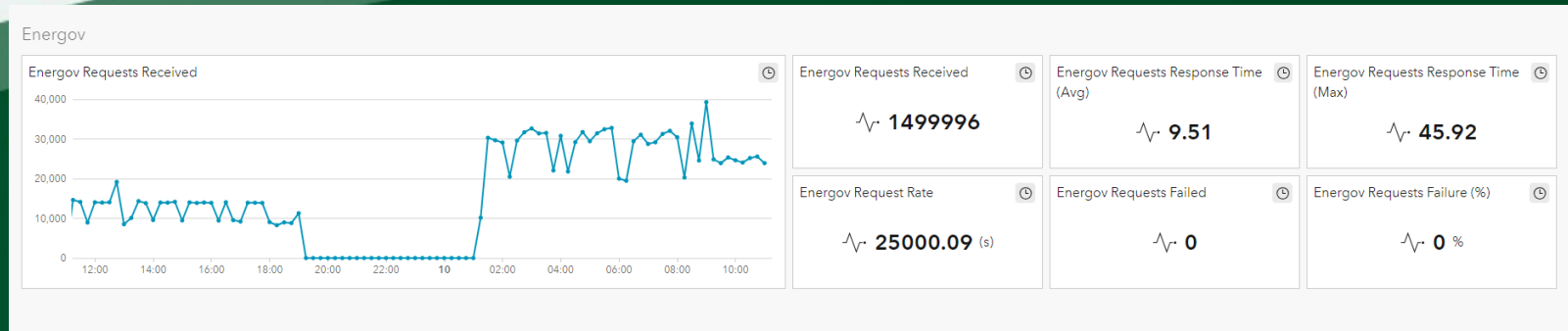
0%

# Current Setup



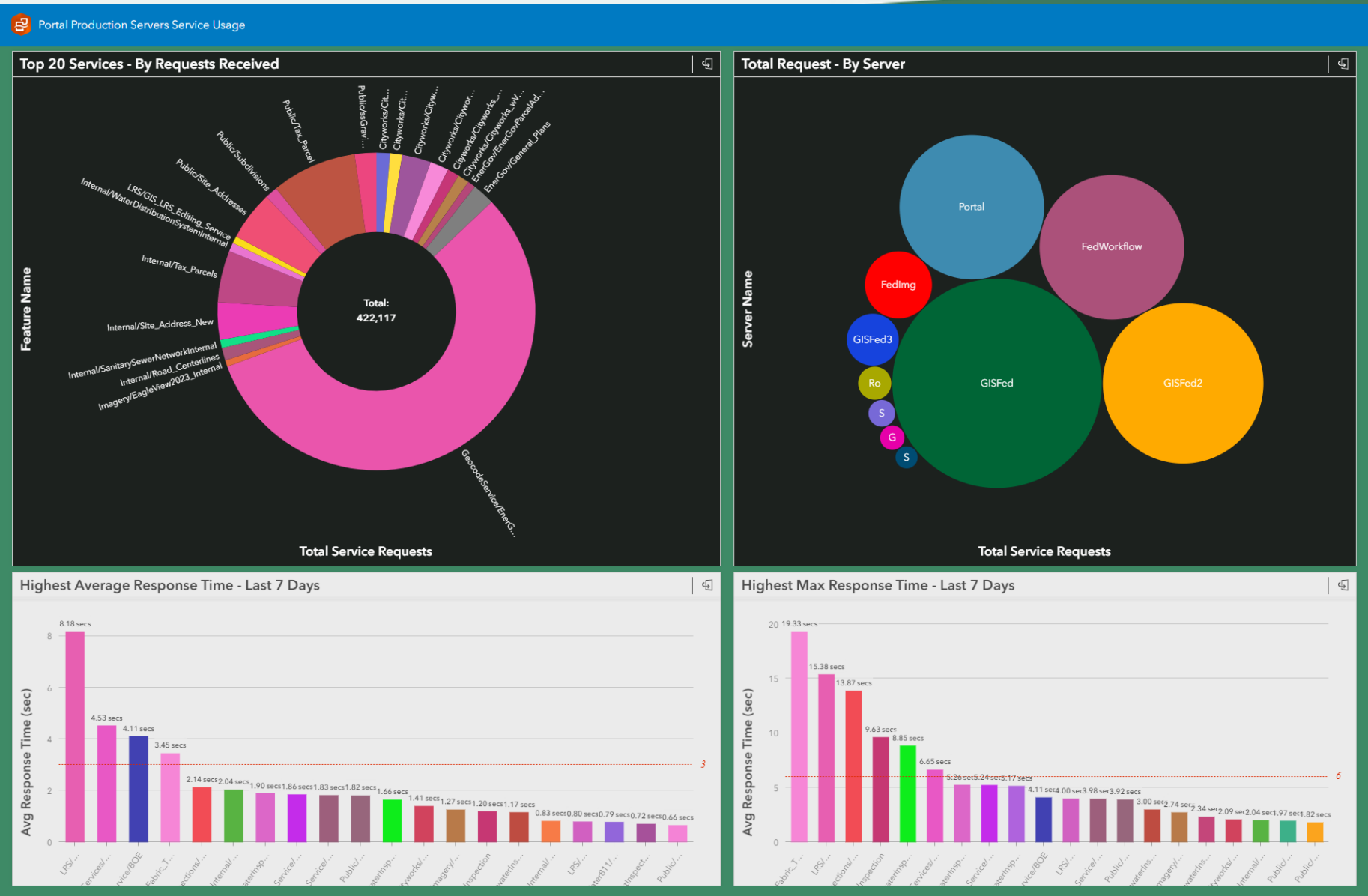
# Use Case – EnerGov Geocoder

- Unusually high requests with hosted geocode service
- Able to pinpoint source of excessive server load quickly
- Reached out to the admin and issue was resolved within 12 hours
- Without knowledge of our ecosystem via ArcMonitor, this issue would have persisted, and troubleshooting would have been extensive





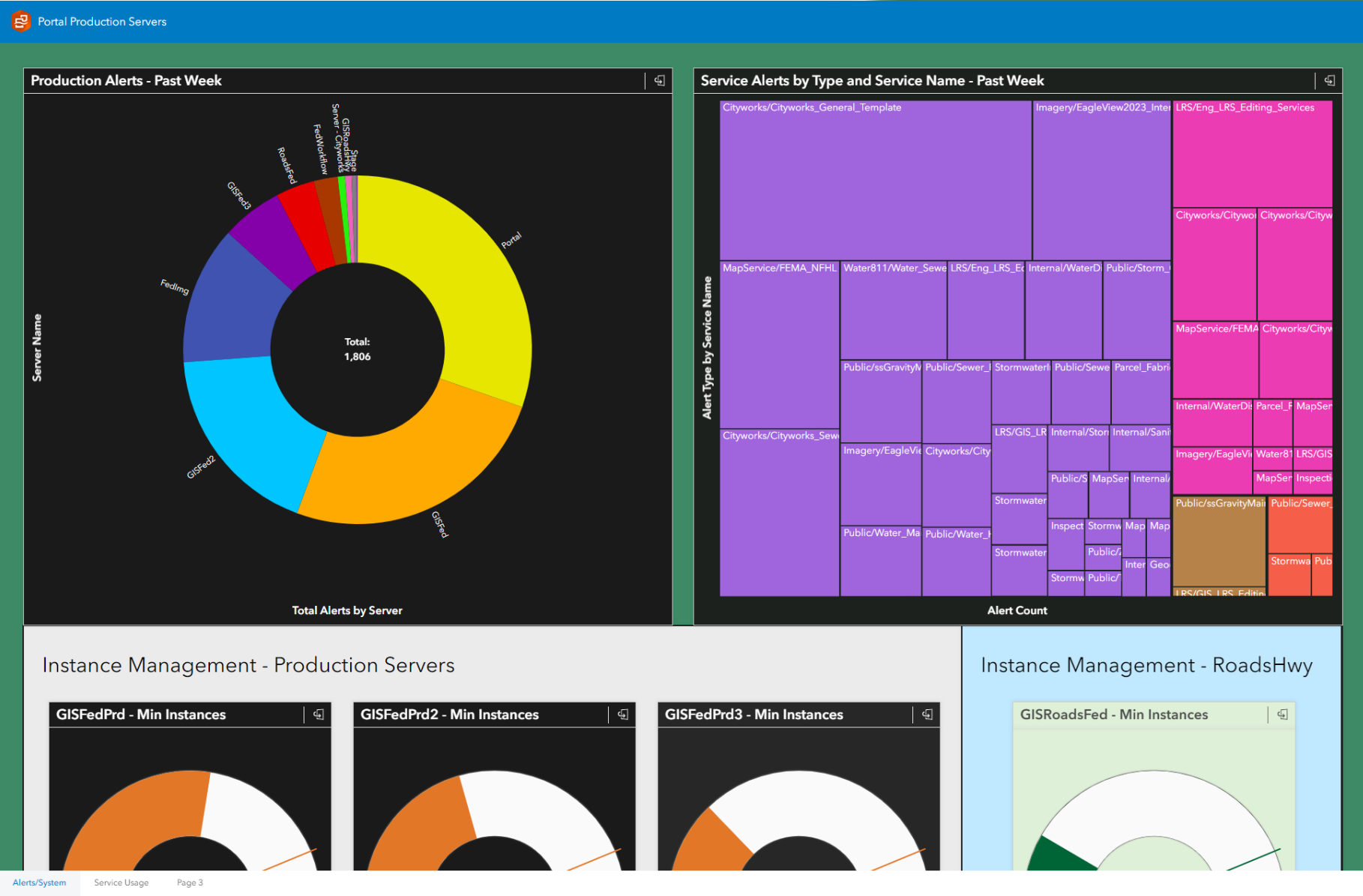
# Monitor And Insights



# Monitor And Insights



# Monitor And Insights





# Monitor And Insights

