Spatial Analysis in Portal for ArcGIS

ArcGIS Enterprise

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Agenda

• Introduction
• Demo - Perform Analysis
• Setup and Administration
• Demo - Administration
Spatial Analysis: Find Patterns, Assess Trends and Make Decisions

Perform Analysis: Introduced in 10.4

Analyze a variety of layers

Supported on Windows and Linux
Spatial Analysis: Performing Analysis

Portal for ArcGIS Map Viewer

ArcGIS Pro

Web AppBuilder Application

ArcGIS API for Python

REST API
Spatial Analysis: Demo
Spatial Analysis: Administration
Components Required to Support Standard Spatial Analysis

- Portal for ArcGIS
- ArcGIS for Server
- ArcGIS Data Store (relational)
- ArcGIS Webadaptor
Step 1: Set up a Base Enterprise Deployment

1. Install Portal for ArcGIS
2. Install ArcGIS Server (license as Std or Adv GIS Server)
3. Install ArcGIS Data store
4. Install and configure web adaptors for Server and Portal
5. Register Relational ArcGIS Data store with Server
6. Federate Server with Portal and configure as Hosting Server

Use ArcGIS Enterprise Builder

* Spatial Analysis not supported if Portal is configured with a Hosting Server that uses an Enterprise GDB
Step 2: Manually Enable Spatial Analysis (only for upgrade from pre 10.4)

Manually enable spatial analysis when upgrading from pre-10.4
Spatial Analysis: 17 Tools available out of the box
Tools that do not depend upon helper/utility services
Additional 10 Tools – available after configuring utility services

Utility service = Helper service that power specific analysis tools

- Powered by Elevation/Hydrology/Geocode and Network Utility Services
- Powered by Geoenrichment Utility Service
- Powered by Network Utility Services
Step 3: Choice of Utility Services

- Choice 1: Utility Services from ArcGIS Online
- Choice 2: Utility services from your own server
- Choice 3: Utility services from ArcGIS Online + your own server.
Choice 1: Utility services from ArcGIS Online

- Suitable for connected Portals (internet connection available)
- Requires ArcGIS Online Organization Credentials
- Consumes ArcGIS Online Credits when related tools are used.
Choice 2: Utility Services from your own server

- For disconnected portals
  - **Elevation Service:** [https://github.com/Esri/elevation-gp-python](https://github.com/Esri/elevation-gp-python)
    - Recently support added for multiple data sources.

- **GeoEnrichment**
  - 10.5/10.5.1 - US Data included with Business Analyst Server. Outside US supported via Professional Service engagement
Step 4: Configure Utility services from ArcGIS Online

Simple workflow to configure utility services from ArcGIS Online.
Step 5: Configure Utility Services from your own server

- Configure in Portal -> My Organization -> Utility services
Step 6: Grant Member Privilege for Performing Analysis

- Administrators
- Publishers
- Custom Role with Analyst Template
Step 7: (Optional) Increase Min/Max instance of Spatial Analysis Tools GP Service
Step 8: (Optional) Configure Living Atlas Content from ArcGIS Online
Performing Analysis – Input/Output Considerations

• **Input:** Feature layers, CSV, SHP, Map Notes, Route, GeoRSS and KML
  - If Input is a Hosted Feature – No limit on number of features
  - If Input is an external feature layer - 100,000 Features limit.
  - Supports spatial, attribute and time filter.

• **Output:** Hosted Feature Service
  - Result data stored in ArcGIS Data Store
  - Server is scalable to support 1000’s of feature services.
Documentation

Administrator Help
• What’s new in Portal for ArcGIS
• Configure the Portal to Perform Analysis
• About Utility Services
• Configuring Utility services

User Help
• What’s new in Portal for ArcGIS 10.5 and 10.5.1
• Perform Analysis
Thank you! Please submit your feedback survey