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Intelligenza del Territorio

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Introduction to ArcGIS[®] Server

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Introduction

- Introduction
- Course goals
- Using the course workbook
- Additional resources
- Installing the course data

1 What is ArcGIS Server?

- Lesson introduction
- ArcGIS Server and the Web
- ArcGIS Server components
- ArcGIS Server 10 licensing
- Virtual computing deployment
- Exercise 1: Enable Web GIS
 - Author GIS service content in ArcMap
 - Connect to your GIS server
 - Publish a map service using the Catalog window
 - Create a Web application using ArcGIS Server Manager
 - (Optional) View the service in an ArcGIS API for JavaScript application
- Lesson review
 - Answers to Lesson 1 questions

2 Overview of GIS services

- Lesson introduction
- ArcGIS Server services and applications
- Enabling Web GIS with ArcGIS Server
- Discover GIS services in a Web mapping application
- Authoring the GIS resource
- Best practices for publishing GIS resources
- Enabling capabilities
- Exercise 2: Geocoding in a Web application
 - Author a map document in ArcMap
 - Create an address locator
 - Publish a map service and a geocoding service
 - Create a parcel search application
 - Test the parcel search application
- Lesson review: Case study for the City of Riverside

3 Planning and design for map services

- Lesson introduction
- The evolution of Web maps
- Web GIS framework
- Explore a Web mapping application
- Display techniques
- Choosing display techniques

- Additional design considerations
- Exercise 3: Design a map service
 - Identify the audience and purpose of your map
 - Organize your basemap layers
 - Organize your operational layers
 - Publish a map service
 - Use a map service
- Lesson review
 - Answers to Lesson 3 questions

4 Authoring dynamic map services

- Lesson introduction
- Dynamic services
- Review...GIS services
- Using the Map Service Publishing toolbar
- Workflow for updating an MSD-based service
- When can I use MSD-based services?
- Tips to improve response time
- Exercise 4: Author a dynamic map service
 - Design an MSD-based map
 - Save an MSD file and publish a dynamic map service
 - Preview a dynamic service in a Web mapping application
- Lesson review
 - Answers to Lesson 4 questions

5 Authoring cached map services

- Lesson introduction
- What is a cache?
- Dynamic services vs. Cached services
- Cached tiles
- Caching workflow
- Properties of a tiling scheme
- Build only the scales you need
- Tile origin and size
- Image and storage format
- Determining cache extent
- Exercise 5: Generate a map cache
 - Review the map document
 - Publish a map service in ArcMap
 - Create a map cache
 - View a cached map service in a Web application
- Lesson review
 - Answers to Lesson 5 questions

6 Using GIS services for visualization

- Lesson introduction
- Using GIS services for visualization
- Using services to visualize change over time
- How are rasters used for visualization?
- Serving raster data
- Exercise 6: Work with image services
 - Author image data in ArcMap
 - Publish an image service
 - Use an image service and view its properties
 - Export selected data from an image service
 - View time-enabled applications
- Lesson review
 - Answers to Lesson 6 questions

7 Using GIS services for analysis

- Lesson introduction
- How have you seen spatial analysis on the Web?
- Workflow to create a geoprocessing service
- Authoring a geoprocessing service
- Geoprocessing service components
- Authoring: Desktop -> Server
- Geometry services
- Exercise 7: Work with a geoprocessing service
 - Explore a map document
 - Review the geoprocessing environment
 - Examine your geoprocessing model
 - Test the model
 - Add the model as a tool layer to the map document
 - Publish map and geoprocessing services
 - Create a Web mapping application that implements the Geoprocessing task
 - Use the service in your Web mapping application
 - Use a geoprocessing task in an ArcGIS API for JavaScript application
- Lesson review: Configure geoprocessing services
 - Answers to Lesson 7 questions

8 Using GIS services to edit spatial data

- Lesson introduction
- Use cases for editing spatial data on the Web
- Workflow for creating feature services
- Feature service data requirements
- Exercise 8: Use a feature service to edit spatial data
 - Create an ArcSDE geodatabase and specify SOC permissions
 - Authoring a feature service
 - Publishing a feature service

Contents

- Incorporate feature layer URLs into JavaScript sample code
- Perform simple edits using an ArcGIS API for JavaScript application
- Behind the scenes - How to replicate the workflow
- Lesson review
- Answers to Lesson 8 questions

9 Putting it all together: Serving GIS data on the Web

- Lesson introduction
- What clients have you used to consume your GIS services?
- Recipe for Web GIS
- Which Web application should you choose?
- Which ArcGIS API should you choose?
- Exercise 9: Implement an ArcGIS Server solution
 - Author map documents
 - Publish map services
 - Interact with a live ArcGIS API for JavaScript sample
 - Modify the sample code
 - Test the application
- Lesson review
- Answers to Lesson 9 questions

Appendixes

- Appendix A: Esri data license agreement