ArcGIS Workflow Manager
Advanced Workflows and Concepts

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Session Topics

• ArcGIS Workflow Manager Overview

• Configuring ArcGIS Workflow Manager
  - Designing Workflows
  - Integrating Business Data
  - Utilizing Tokens
  - Sending Notifications
  - Geoprocessing

• Extending ArcGIS Workflow Manager

• Developing with ArcGIS Workflow Manager Server
ArcGIS Workflow Manager
Overview
What is ArcGIS Workflow Manager

Allows users to:

• Plan and create workflows efficiently
• Execute and manage standardized workflows
• Evaluate and improve performance continuously

A framework for continuous process improvement
Workflow Manager System Framework

Server
- Web APIs
  - ...Standard or higher

Desktop
- Administrator
- Application
  - ...Standard or higher

Geodatabase

Web applications

Geospatial Data
Key Benefits of ArcGIS Workflow Manager

- Improve user productivity
- Centralize and simplify workflow management
- Controlled access to Geospatial Data
- Highly configurable
- Integrate GIS activities with business process
Configuring ArcGIS Workflow Manager
Configuring ArcGIS Workflow Manager

- Designing Workflows
- Integrating Business Data
- Utilizing Tokens
- Sending Notifications
- Geoprocessing
- What’s new in 10.1
Designing Workflows

- Drag-n-Drop workflow designer
- Step type library
  - Procedural
  - Ask question
  - Run executable
  - Open file
  - Launch URL
  - Custom
- Execution paths
- Workflow integrity rules
Designing Workflows

Workflow Design Cycle

- Create step types
- Create Workflow
  - Drag step types into canvas
  - Connect steps into paths
- Configure step properties and path conditions
Designing Workflows

Workflow Automation

- Embed Workflows within a Workflow
- Intelligent automatic step execution
Designing Workflows
Configuring Job Types

- Choose a workflow
- Associate maps
- Set Default Properties
- Execute upon creation
Demo
Designing Workflows
Integrating Business Data

- Extended Properties for Business-specific data
- Bound to an ArcGIS Workflow Manager Job
- *One-to-One or One-to-Many* Relationships Supported
Extended Properties

- Stored in separate geodatabase tables
- Must contain a long integer field that joins to job ID

Jobs Table

<table>
<thead>
<tr>
<th>job_id</th>
<th>job_name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>JOB_1</td>
</tr>
<tr>
<td>22</td>
<td>JOB_22</td>
</tr>
</tbody>
</table>

Extended property table

<table>
<thead>
<tr>
<th>ID</th>
<th>Requestor</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>Planning</td>
</tr>
<tr>
<td>1</td>
<td>Zoning</td>
</tr>
</tbody>
</table>
Configuring Extended Properties

- Create table in Workflow Manager Geodatabase
- Relate table to jobs using Administrator
- Configure Job Type to display the extended properties

Extended Property Display Types

- Date
- Text
- Files
- Folders
- GIS Dataset
- Value List
Utilizing Tokens

- Intelligent Text Substitution (Variables)
  - For job and system related information

- Example Uses
  - Job naming schemes and history messages
  - Queries
  - Step arguments

- Types of Tokens
  - Job Properties, Extended Properties, System Properties, Functions, Environment Variables

```plaintext
SYS:CUR_LOGIN
john43484

EMAILOF([JOB:ASSIGNED_TO])
john43484@esri.com
```
Utilizing Tokens

Configuration
Sending Notifications

- **Spatial Notifications**
  - What’s happening in a certain area
  - When a change happens to a dataset
  - When editing outside a certain area

- **Job Notifications**
  - Job events and activities
  - Important work milestones
Sending Notifications

Configuring Spatial Notifications

- Enable Geodatabase Archiving
- Create spatial notification rules
  - Attribute conditions
  - Area of interest
- Start Spatial Notification Service
Demo
Notifications
Integrated Geoprocessing

- Integrate ArcGIS Workflow Manager Geoprocessing tools into your models and python scripts
- Located in Workflow Manager system toolbox
Integrated Geoprocessing
Geoprocessing Steps in your Workflows

• Built-in LaunchGPTool or ExecuteGPTool steps
• Integrate ArcGIS or custom GP tools
• Invoke GP services
Demo
Integrated Geoprocessing
What’s New in 10.1
Sharing Workflow Packages

- Create Workflow Packages in Workflow Manager Administrator
  - Job type + Workflow + Step type + Map + more
- Publish to ArcGIS.com or to your ArcGIS Portal
What’s New in 10.1

Security

• Restrict or grant access to detailed parts of Workflow Manager
  - Control Job Panel visibility by Groups
  - Additional Privileges

• Use a secure SMTP server to send your Job and Spatial notifications
What’s New in 10.1

Productivity Tools

- Free text search for Jobs
- Manage your own profile and notification subscriptions
- Re-open closed Jobs
- Re-create Job Workflow
- Archive Jobs
Demo
Sharing Workflow Packages
Extending ArcGIS Workflow Manager
Extending ArcGIS Workflow Manager

Developer Options

• Extend the Workflow
  - Custom Steps

• Extend the Desktop User Interface
  - Commands and Tools
  - Application Panels
  - Job Views
Extend the Workflow

Custom Steps

- Encapsulate your business logic within a workflow
- Can provide UI dialogs to ease step configuration
- Use COM-compliant language: C#, C++, Java
Extend Desktop User Interface

Custom Commands and Tools

- Add custom commands to the Workflow Manager toolbar
- Add AOI tools to the Workflow Manager AOI tab
- Update configuration file to deploy
Extending Desktop UI

Custom Job Panels

- Custom Job Panel adds a new tab in Job View
  - Tied to a specific job
  - Display custom Business Information or an intranet portal
Demo
Extending ArcGIS Workflow Manager
Developing with ArcGIS Workflow Manager for Server
Developing with ArcGIS Workflow Manager for Server

- Architecture
- Web API
- Web Applications
Configuring ArcGIS Workflow Manager for Server

- Use Workflow Manager Administrator
  - Connect to your Workflow Manager Geodatabase
  - Publish as a Service
ArcGIS Workflow Manager Web APIs

- Flex, JavaScript, and Silverlight API
- Easy to use methods to interact with your Workflows
  - Create Jobs, Execute Workflow steps, and much more..
ArcGIS Workflow Manager Web Applications
Demo
Workflow Manager for Server
Resources

• Product Page
  - http://esri.com/workflowmanager

• Resource Center

• Training
  - http://training.esri.com/

• Forums
  - http://forums.arcgis.com/
Where to find us?

- **ArcGIS Workflow Manager - An Introduction**
  - Today 3:15 pm – 4:30 pm
  - Room 14A
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