

# **Introduction to ArcGIS® Workflow Manager**

Copyright © 2018 Esri

All rights reserved.

Course version 1.1. Version release date November 2018.

Printed in the United States of America.

The information contained in this document is the exclusive property of Esri. This work is protected under United States copyright law and other international copyright treaties and conventions. No part of this work may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or by any information storage or retrieval system, except as expressly permitted in writing by Esri. All requests should be sent to Attention: Contracts and Legal Services Manager, Esri, 380 New York Street, Redlands, CA 92373-8100 USA.

**EXPORT NOTICE:** Use of these Materials is subject to U.S. export control laws and regulations including the U.S. Department of Commerce Export Administration Regulations (EAR). Diversion of these Materials contrary to U.S. law is prohibited.

The information contained in this document is subject to change without notice.

### **U. S. GOVERNMENT RESTRICTED/LIMITED RIGHTS**

Any software, documentation, and/or data delivered hereunder is subject to the terms of the License Agreement. The commercial license rights in the License Agreement strictly govern Licensee's use, reproduction, or disclosure of the software, data, and documentation. In no event shall the U.S. Government acquire greater than RESTRICTED/LIMITED RIGHTS. At a minimum, use, duplication, or disclosure by the U.S. Government is subject to restrictions as set forth in FAR §52.227-14 Alternates I, II, and III (DEC 2007); FAR §52.227-19(b) (DEC 2007) and/or FAR §12.211/12.212 (Commercial Technical Data/Computer Software); and DFARS §252.227-7015 (NOV 1995) (Technical Data) and/or DFARS §227.7202 (Computer Software), as applicable. Contractor/Manufacturer is Esri, 380 New York Street, Redlands, CA 92373-8100, USA.

@esri.com, 3D Analyst, ACORN, Address Coder, ADF, AML, ArcAtlas, ArcCAD, ArcCatalog, ArcCOGO, ArcData, ArcDoc, ArcEdit, ArcEditor, ArcEurope, ArcExplorer, ArcExpress, ArcGIS, ArcGlobe, ArcGrid, ArcIMS, ARC/INFO, ArcInfo, ArcInfo Librarian, ArcLessons, ArcLocation, ArcLogistics, ArcMap, ArcNetwork, ArcNews, ArcObjects, ArcOpen, ArcPad, ArcPlot, ArcPress, ArcPy, ArcReader, ArcScan, ArcScene, ArcSchool, ArcScripts, ArcSDE, ArcSdl, ArcSketch, ArcStorm, ArcSurvey, ArcTIN, ArcToolbox, ArcTools, ArcUSA, ArcUser, ArcView, ArcVoyager, ArcWatch, ArcWeb, ArcWorld, ArcXML, Atlas GIS, AtlasWare, Avenue, BAO, Business Analyst, Business Analyst Online, BusinessMAP, CommunityInfo, Database Integrator, DBI Kit, EDN, Esri, Esri—Team GIS, Esri—The GIS Company, Esri—The GIS People, Esri—The GIS Software Leader, FormEdit, GeoCollector, Geographic Design System, Geography Matters, Geography Network, GIS by Esri, GIS Day, GIS for Everyone, GISData Server, JTX, MapIt, Maplex, MapObjects, MapStudio, ModelBuilder, MOLE, MPS—Atlas, PLTS, Rent-a-Tech, SDE, SML, Sourcebook·America, Spatial Database Engine, StreetMap, Tapestry, the ARC/INFO logo, the ArcGIS logo, the ArcGIS Explorer logo, the ArcPad logo, the Esri globe logo, the Esri Press logo, the GIS Day logo, the MapIt logo, The Geographic Advantage, The Geographic Approach, The World's Leading Desktop GIS, Water Writes, www.esri.com, www.geographynetwork.com, www.gis.com, www.gisday.com, and Your Personal Geographic Information System are trademarks, registered trademarks, or service marks of Esri in the United States, the European Community, or certain other jurisdictions.

Other companies and products mentioned herein may be trademarks or registered trademarks of their respective trademark owners.

# C O N T E N T S

- 1 Workflow Manager introduction*
  - Introduction to ArcGIS Workflow Manager
  - Welcome to Esri Training
  - Virtual classroom environment
  - Course goals
  - Course Structure
  - Course materials
  - Lesson objectives
  - The ArcGIS platform
  - Our Organizations
  - What is ArcGIS Workflow Manager?
  - Benefits of Work Management
  - Example Workflow – Data Editing
  - Key Concepts
  - ArcGIS Workflow Manager System Framework
  - Applications Overview
  - Instructor led demo
  - Lesson review
  - Exercise introduction

- 2 Jobs*
  - Jobs
  - Learning objectives
  - Anatomy of a job
  - Job properties
  - Extending job properties
  - Job Assignee
  - Location of interest
  - Job maps
  - Restrict user editing
  - Version management
  - Job versioning
  - Job documentation
  - Attachments
  - Job history
  - Job notes
  - Instructor led demo
  - Exercise introduction

- 3 *Executing a job*
  - Executing a Job
  - Learning objectives
  - Workflows
  - Purpose of the workflow
  - Executing workflows
  - Executing steps: example 01
  - Executing steps: example 02
  - Step dependency
  - Types of Steps
  - Completed workflows
  - Instructor led demo
  - Exercise introduction
  
- 4 *Finding jobs*
  - Finding Jobs
  - Learning objectives
  - Methods of job discovery
  - Job queries
  - Job query types
  - Instructor led demo
  - Exercise introduction
  
- 5 *Creating jobs*
  - Creating Jobs
  - Learning objectives
  - Creating a new job
  - Ways to Create a Job
  - Instructor led demo
  - Exercise introduction
  
- 6 *ArcMap tools*
  - ArcMap Tools
  - Learning objectives
  - ArcMap tools
  - Job information
  - Instructor led demo
  - Exercise introduction
  
- 7 *ArcGIS Pro*
  - Introduction to Workflow Manager in ArcGIS Pro
  - Learning objectives
  - ArcGIS Pro

- User Interface in Pro
- Workflow Pane
- Distribution
- Working with Offline Jobs
- Differences with Desktop Applications
- Instructor led demo
- Exercise introduction

## 8 *Additional concepts*

- Additional Concepts
- Learning objectives
- Holds
- Job dependencies
- Dependency workflows
- Job dependency workflows
- Export jobs
- Overview of deleting jobs
- Deleting components
- Assigning jobs in bulk
- Instructor led demo

## 9 *Python*

- Python
- Learning objectives
- Workflow Manager Python Module
- Workflow Manager Functions
- Common Workflow Manager Classes
- Instructor led demo

## 10 *Database setup*

- Database Setup
- Learning objectives
- Installation process
- Users needed
- User setup or privileges
- Workflow Database Creation Tool Overview
- Add Data Workspace
- System tables
- Table documentation
- System tables
- Job tables
- Job tables cont.
- Tables that grow

- Tables that store big files
- Database settings
- Instructor led demo
- Exercise introduction

## *11 Introduction to Workflow Administrator*

- Introduction to WMX Administration
- Learning objectives
- Workflow Administrator - Connect Connection
- Management tools for Workflow database
- Exporting and importing configuration
- Logging
- Instructor Led Demo

## *12 Security and privileges*

- Users, groups, and privileges
- Learning objectives
- Users
- Differentiating users
- High-level architecture – Traditional user store
- High-level architecture – Portal user store
- Spatial data workspaces
- Connection models
- Simple connection model
- Common data model
- More Complex Model
- Groups
- Relationships
- Privileges
- Pre-defined privileges
- Job filters
- Impact of job filters
- Instructor Led Demo
- Exercise introduction

## *13 Designing workflows*

- Designing Workflows
- Learning objectives
- Workflows
- Anatomy of a workflow
- Workflow architecture
- Designing workflows

- Workflow steps
- Step type – Step and diagram relationship
- Step Types
- Manual vs. automated steps
- Design a workflow diagram
- Path assignment behavior
- Sample path execution
- Concurrent path execution
- Sample asynchronous path execution
- Sample synchronous path execution
- Path behavior
- Invalid workflows
- Instructor led demo
- Exercise introduction

## 14 *Job types*

- Job Types
- Learning objectives
- What is a job type?
- Anatomy of a job type
- Configuring due dates
- Naming schemes
- Map configuration
- Maps
- Instructor led demo
- Exercise introduction

## 15 *Advanced step types*

- Advanced step types
- Learning objectives
- Custom Step Types
- Step types - LaunchGPTool
- Step types – Launch ArcMap
- Launch ArcMap and Tasks
- Advanced step type: ExecuteWorkflow
- Tokens
- Token architecture
- Token Parsers
- Workflow Manager toolbox
- Instructor led demo
- Exercise introduction

- 16** *Extended properties*  
Extended Properties  
Learning objectives  
Extending job properties  
Architecture example  
Cardinality  
Table properties  
Field properties  
Display type  
Multi-Level Table List Display Type  
Instructor led demo  
Exercise introduction
- 17** *Status types and priorities*  
Status types and priorities  
Learning objectives  
Priorities  
Status types  
Manual status assignment  
Automatic step status assignment  
Activity types for job history  
Notification  
Notification types  
Configuring a notification type  
Holds  
Instructor led demo  
Exercise introduction  
Lesson review
- 18** *Reports*  
Reports  
Learning objectives  
Report overview  
Profile  
Filtering  
Row summary  
Report sections  
Permissions  
Instructor Led Demo  
Exercise introduction
- 19** *Workflow Manager System Settings*  
Workflow Manager System Settings



- Learning objectives
- General settings
- Working with tabs
- Notification settings
- Map view settings
- Workflow settings
- LOI settings
- Security
- Instructor led demo
- Exercise introduction

## 20 *ArcGIS Pro administration*

- ArcGIS Pro Administration
- Learning objectives
- ArcGIS Pro Administration
- Startup
- Create ArcGIS Pro Items
- Instructor Led Demo
- Exercise introduction

## 21 *Advanced concepts*

- Spatial Notifications
- Learning objectives
- Geodatabase Archiving
- Working with Archived Information
- Spatial Notifications Configuration
- Define Rules
- Sending Notifications
- What is Repository Replication
- Configuration Requirements
- How does this work?

## 22 *ArcGIS Workflow Manager Server*

- Workflow Manager for Server Architecture
- Learning objectives
- Why ArcGIS Workflow Manager for Server?
- Compatibility with ESRI Apps
- Server software
- ArcGIS Workflow Manager for Server Architecture
- Use cases for the server extension
- Configuring ArcGIS Workflow Manager for Server
- Accessing the WMX service
- ArcGIS Workflow Manager services

Sample web viewers available  
Java Script Viewer and Widgets  
Create Job widget  
Instructor led demo  
Exercise introduction  
Lesson review