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Technical Workshop

Publishing GIS Services to ArcGIS for Server

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Agenda

- Introduction
- Publishing workflow
  - Configuring services
  - Registering data with the server's data store
- Consuming services
- Automating publishing workflows using Python

Introduction

Sharing GIS content on the web

- Share geographic information using the web
- Make geographic data available instantly across
  - Devices
  - Platforms
- Work on projects collaboratively

Map service layers

- Basemap service layers
  - Reusable background service
  - Provide context for operational layers

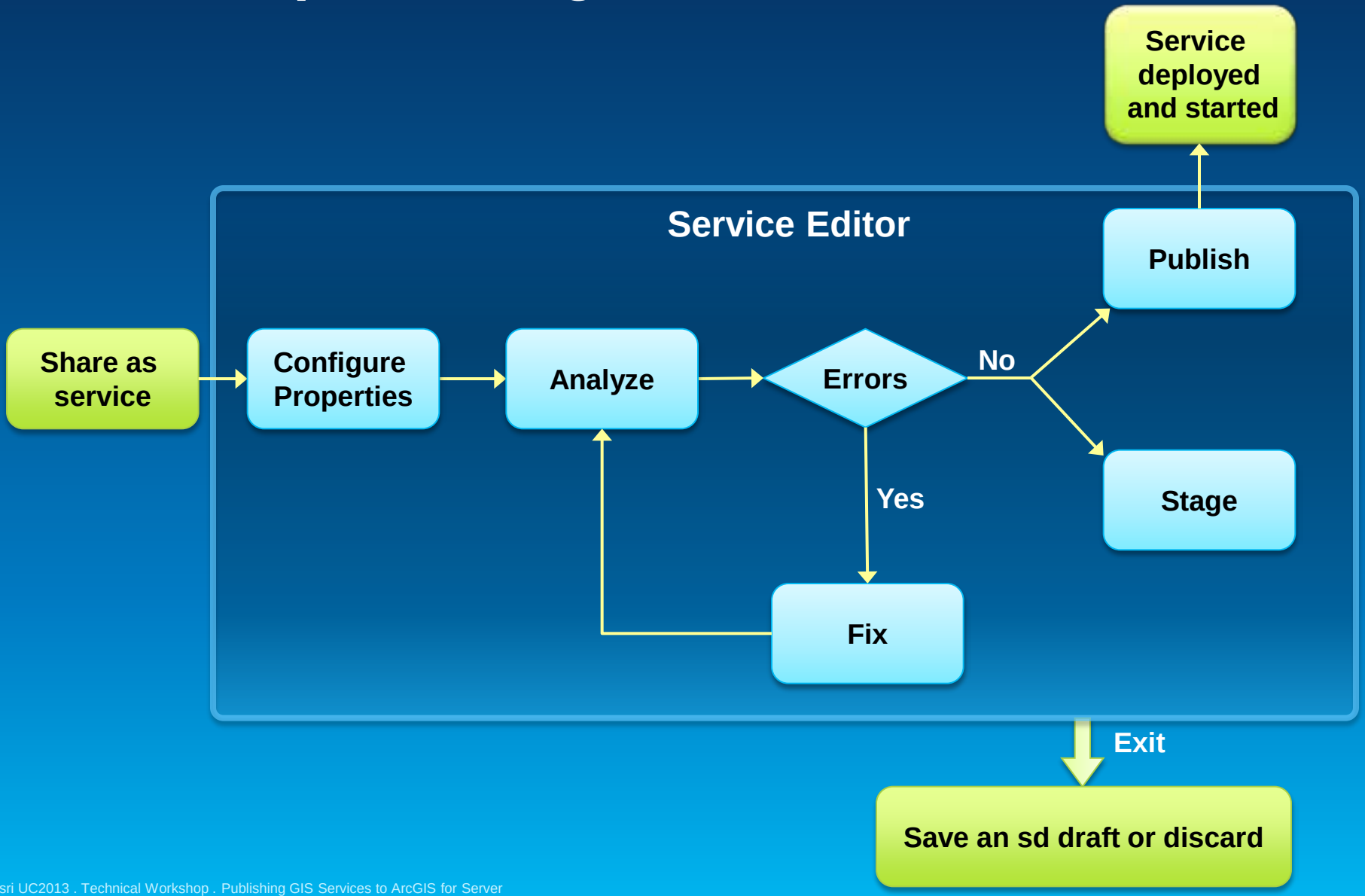
- Operational service layers
  - Interactive
  - Provide functions that meet a business need

Demo 1

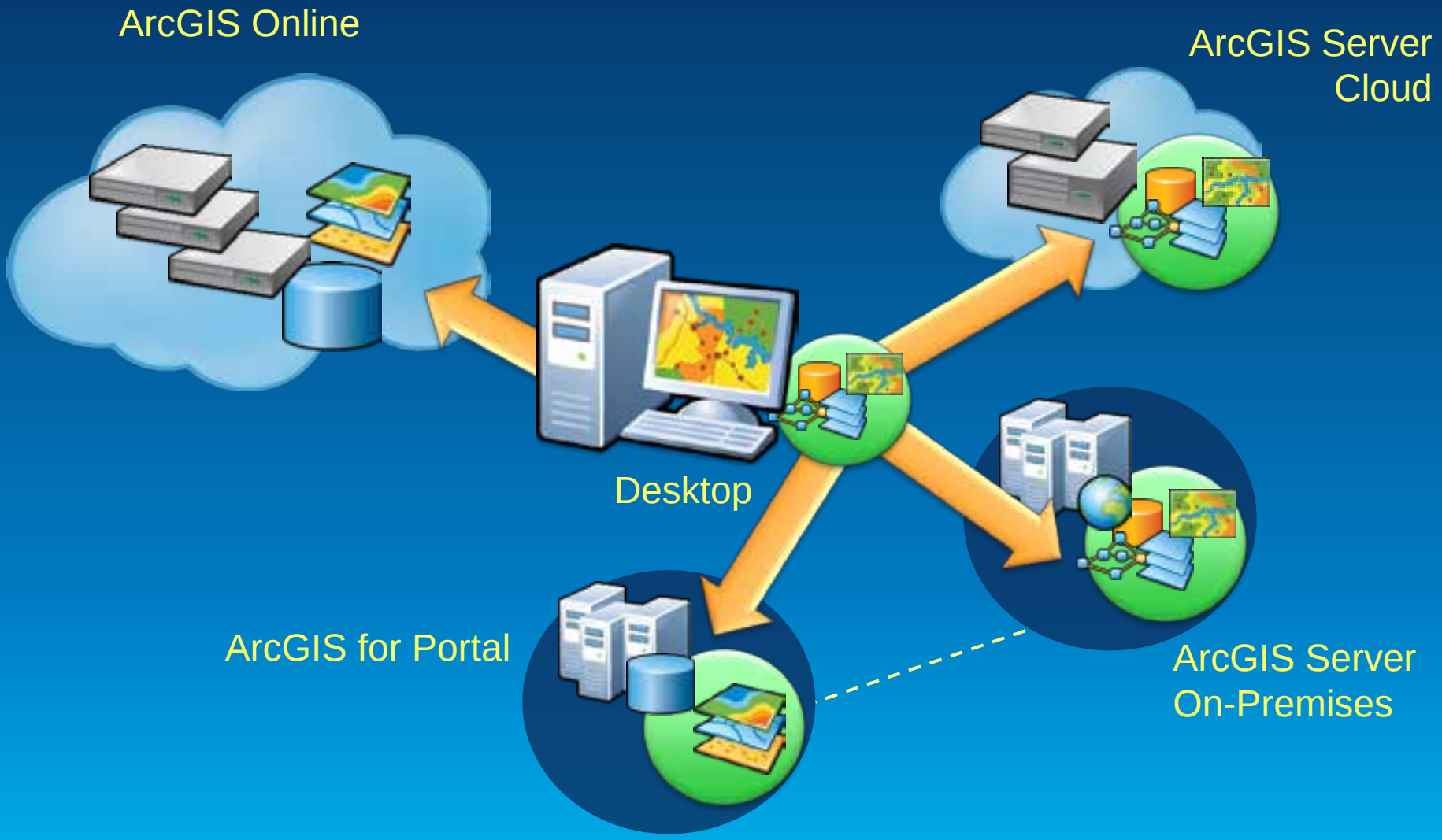
Publishing a simple map service

Publishing workflow

Service publishing workflow



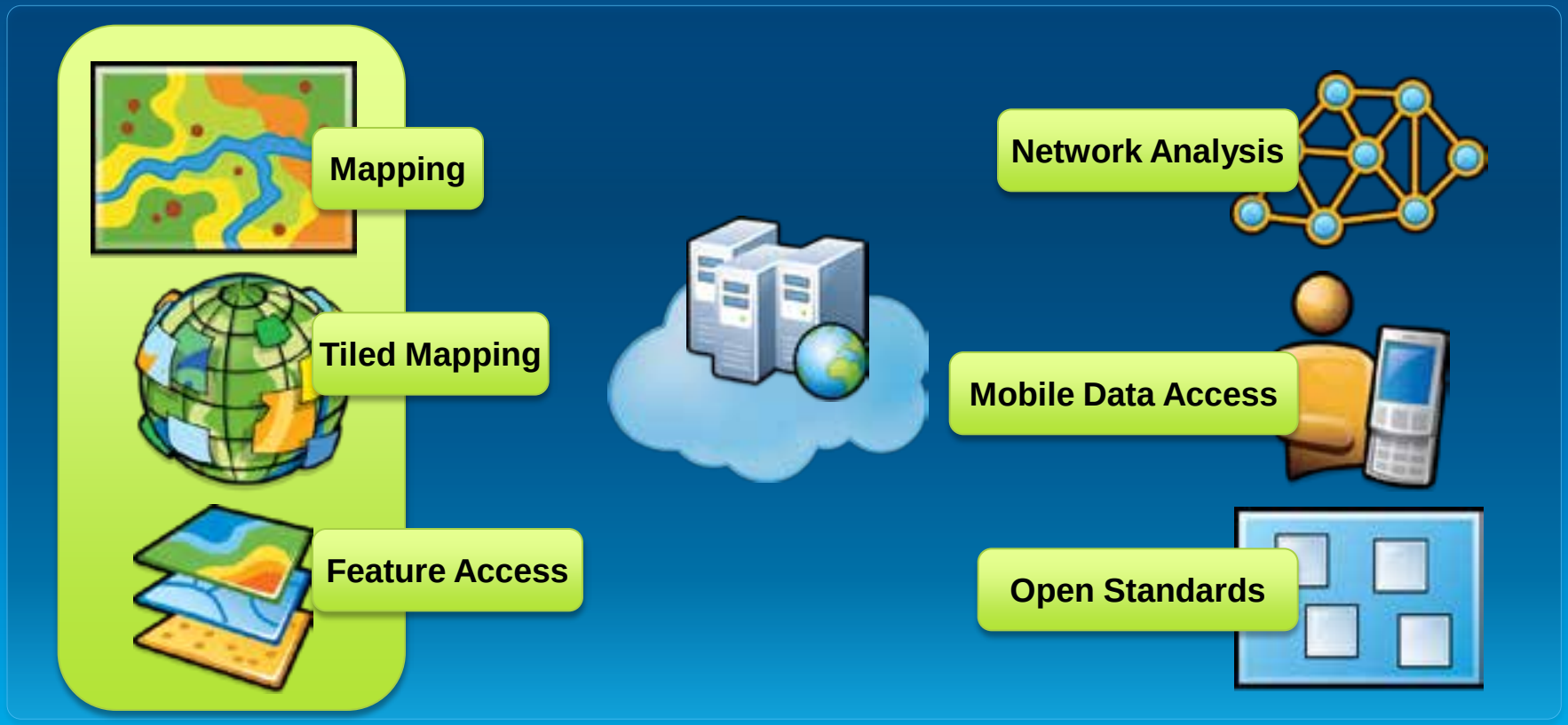
Choosing a server



Server	Characteristics
ArcGIS for Server	• Ability to publish a variety of GIS resources • Supports all capabilities • Ability to register data with the server
ArcGIS Online	• No server to buy, install or maintain • Scales automatically as user base increases • Only supports Tiled Map and Feature services • Data is private to each service
Portal for ArcGIS	• ArcGIS for Server + ArcGIS Online • Publish hosted services on premise
ArcGIS for Server on the Cloud	• Ability to publish a variety of GIS resources • Supports all capabilities • Ability to register data with the server • Configurable • No maintenance

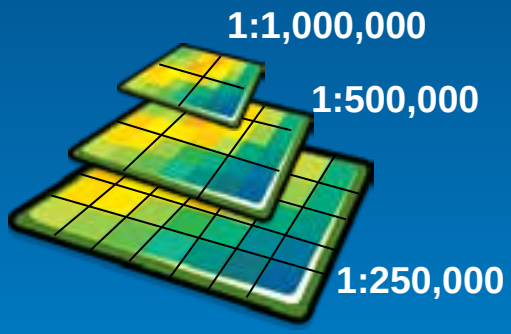
Service capabilities

- Depend on server and licensing



Common service capabilities

- Mapping
  - Dynamic
    - Server needs to retrieve data
  - Option to cache
- Tiled Mapping (cached)
  - Pre-rendered tiles at different scales
  - Improved performance
- Feature Access
  - Serve feature geometry and symbology
  - Allows for editing and querying



Sharing items

- Must be signed into ArcGIS Online or your portal

My Content

Organization*

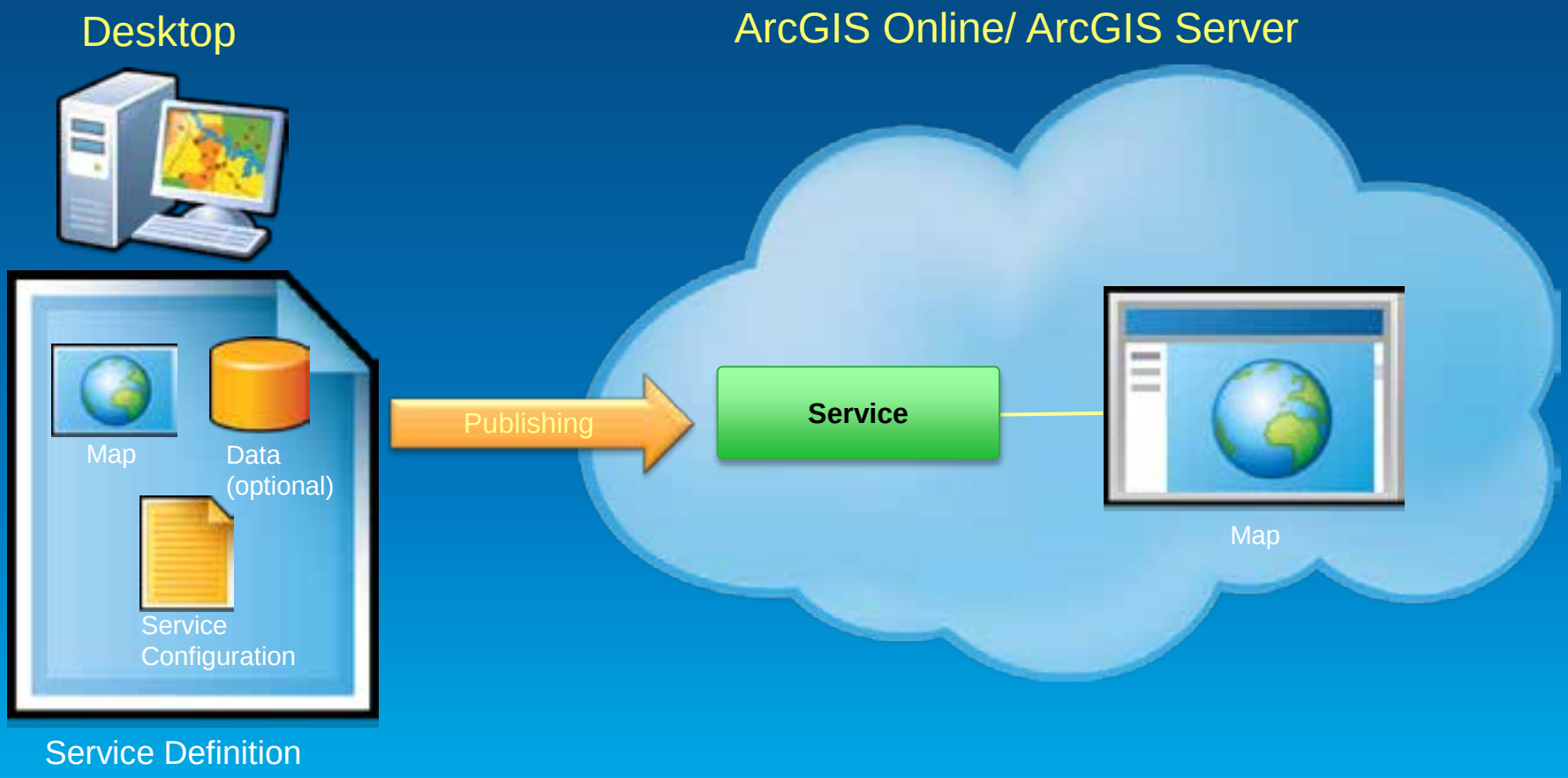
Everyone

Groups

Analyzers

- Help to
  - Identify critical errors
  - Create optimized map services
- Three types
  - Errors
  - Warnings
  - Information Messages
- Provide access to the help and solutions

Service Definition



Consuming services

Demo 2

Publishing a cached map service from a service definition file

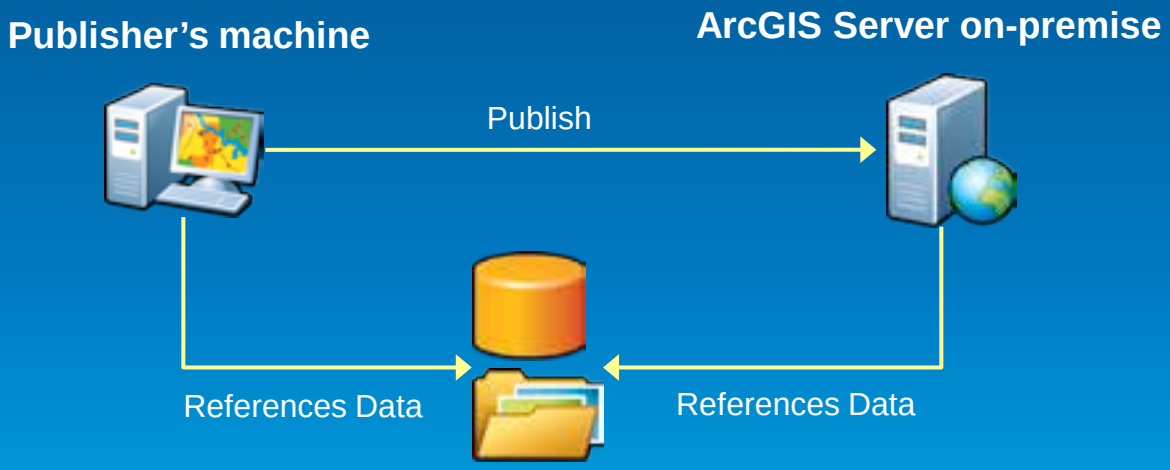
Data Stores

Data Stores

- Determine how published services access data
- Register data directories and databases
- Three registration options:
  - Referenced
  - Replaced
  - ArcGIS Server’s Managed Database

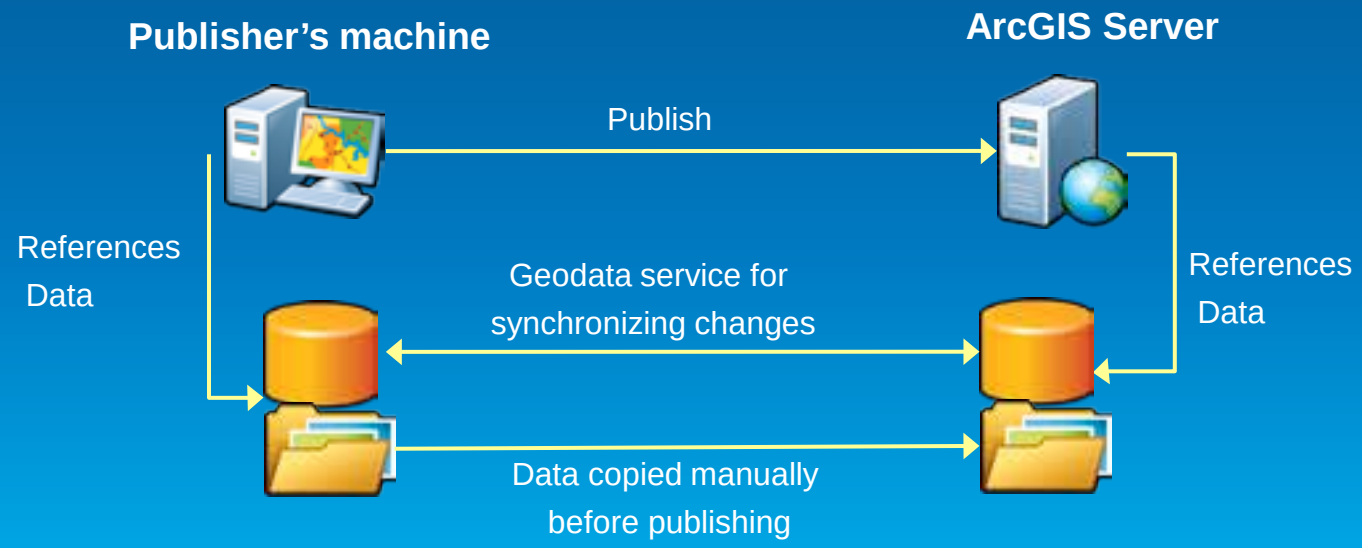
Data Store Registration: referenced

- Publisher and server reference the SAME
  - Database connection
  - Folder path
- Publishing using shared data



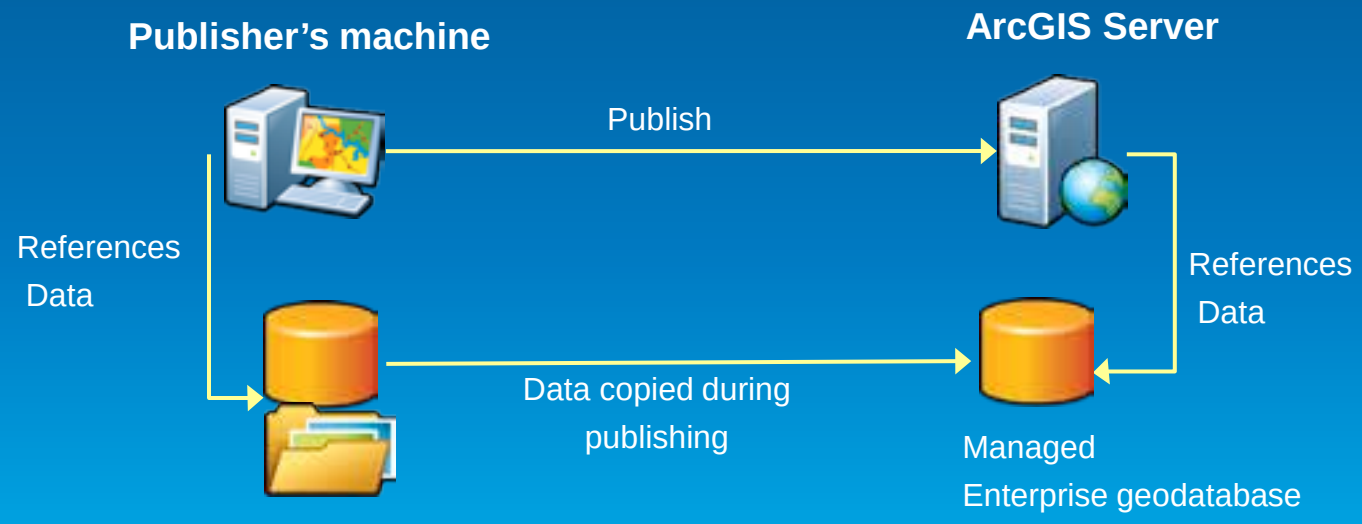
Data Store Registration: replaced

- Publisher and server reference DIFFERENT
  - Database connections
  - Folder paths
- Data sources are replaced during publishing



Data Store Registration: managed

- Used only when publishing a Feature service or a Web Feature Service-Transactional (WFS-T) by not referencing the data
- Must be an enterprise geodatase



Demo 3

Publishing a feature service

Automating publishing using Python scripts

Arcpy library

- CreateMapSDDraft()
- StageService_server()
- UploadServiceDefinition_server()

Set up the variables

Configure the service

Stage into a SD file

Publish as service

```
import arcpy

#Setting the variables
mxd = arcpy.mapping.MapDocument(r'c:\temp\MapDemo.mxd')
conn = r'c:\temp\myserver.ags'
sddraft = r'c:\temp\service1.sddraft'
sd = r'c:\temp\service1.sd'
service = 'services1'


analysis = arcpy.mapping.CreateMapSDDraft(mxd,sddraft,
                                          service,'ARCGIS_SERVER',con)


arcpy.StageService_server(sddraft,sd)


arcpy.UploadServiceDefinition_server(sd,con)
```

Demo 4

Publishing using Python

Tips & Tricks

- If you get a consolidation error, check:
  - There's enough space on the publisher/server machine
  - Path names are not too long
  - The appropriate extension is enabled
- If publishing services that reference enterprise data
  - Ensure you install the appropriate database client libraries on both the client and server machines
  - Be sure the ArcGIS Server account has the appropriate permissions to the database
- Videos
  - http://video.arcgis.com/series/40/server

Summary

- Publishing allows you users:
  - To share and use gis resources via the web
- Publishing workflow is the same
  - Configure the service
  - Analyze the service
  - Publish/Stage the service
- Data store ensures data is accessible to the server
- Ability to automate the publishing workflow

Thank you…

Please fill out the session evaluation

First Offering ID: 1208

Second Offering ID: 1318

Online – www.esri.com/ucsessionsurveys

Paper – pick up and put in drop box

Wrap-up & Questions

- Related presentations

7/9	3:15PM	4:30PM	Technical Workshop	Online Services	ArcGIS for Organizations: An Introduction	Ball06 C
7/9	3:15PM	4:30PM	Technical Workshop	Web and Server	ArcGIS Server—An Introduction	Ball06 D
7/10	3:15PM	4:30PM	Technical Workshop	Web and Server	Portal for ArcGIS -- An Introduction	14 B
7/10	3:15PM	4:30PM	Technical Workshop	Web and Server	Using ArcGIS Server in the Amazon Cloud	Ball06 D

Understanding our world.