Agenda

• Extending/Building Custom Web Services
• Some Application scenarios
  - Java SE - ArcGIS Runtime SDK
  - Java EE - SOAP API
• Demos
• Summary
• Open Q & (hopefully) A
ArcGIS Server for the Java Developer

Ajit Dharmik
Eric Bader
ArcGIS is a Complete System
Managing and working with geographic information

- Online (public or private cloud)
- Server (on premises or private cloud)
- Desktop
- Mobile/devices
- Content

Many deployment options: Cloud, Enterprise, Web, Mobile, Desktop

- Visualize
- Create
- Collaborate
- Discover
- Manage
- Analyze
Developing with ArcGIS Server
ArcGIS Server Development Patterns

1. Extending the Server
   - Server Object Extensions (SOEs)
   - Geoprocessing Services (GP)

2. Using Applications
   - Viewers
   - Runtime APIs
   - Web APIs
   - Java EE / SOAP
Extending ArcGIS Server Services
Server Object Extensions (SOEs)

- SOEs are used to **extend your Server with custom ArcGIS Web Services**

- SOE implementations need **careful consideration**
  - Are there GP Services that already do the job?
  - SOEs are synchronous, so they must execute quickly

- The 10.1 SOE workflow is **simpler**, refined and streamlined

- SOEs provide the **migration path** for many Web ADF users
About SOEs at 10.1

- Updated Eclipse wizards for creation and export
- One-step deployment
- 64-bit
- REST API for managing SOEs
- Manager experience
  - Logging framework
  - Debugging
  - Property Pages
- Easier access of SOE properties in ArcGIS for Desktop
- More visibility in the ArcGIS for Server Help System
The scenario…

- Plan a new building site in a city
- Find out which available parcels are suited for the building
- Determine the optimal entrances and exits for the building’s parking structure
- Focus on the impact of existing traffic flows
The Demo and how it works
Ajit Dharmik
The Application Scenarios
The ArcGIS Java Web Services Toolkit

“AgsJWS”

- Pure Java SOAP API for accessing ArcGIS Web Services
- A custom SOAP stack and framework for XML serialization
- JAX-B

JEE clients

SOAP Request

ArcGIS Server

Deserialize

XML

Server Object

Serialize

ArcObjects

SOAP Response
The AgsJWS Toolkit

- **Proxy Objects**
  - Communication with server and endpoints.
  - Call methods on the proxy to execute server-side logic.

- **Value Objects**
  - Native types designed to support input & output from proxy objects.
ArcGIS Server
SOAP API
(AgsJWS) Demo
Eric Bader
Introducing: ArcGIS Runtime SDK for Java

WPF and Java

- Reduced memory footprint
- 32 and 64 bit
- Easy to deploy
- Windows and Linux platforms
- Excellent performance
  - Good parity with both Windows and Linux
ArcGIS Runtime SDK for Java

- 32 and 64 bit JVM
- Simpler API
- Simpler deployment
- Additional Linux platforms: Ubuntu 10 and 12
- Excellent performance
  - Good parity with both Windows and Linux
Notes for Engine and Add-in Java developers

- Plan on migrating from ArcObjects Java to Runtime Java
- The ArcGIS Runtime SDK for Java is the future
- New development projects: use the Runtime SDK
- Add-ins: Python
Summary

- There are strong Java apis for Extending ArcGIS Server for solving advanced GIS problems

- There are powerful Java SE and Java EE SDKs for building ArcGIS applications

- Engine Java developers have a new SDK: ArcGIS Runtime SDK for Java!
  - Migration topics coming soon
Summary

Use the Resource Centers:

ArcGIS for Server

ArcGIS Runtime SDK for Java

ArcGIS Runtime SDK for Android
• Thank you for attending
• Have fun at UC2012
• Open for Questions

• Please fill out the evaluation:
  
  www.esri.com/ucsessionssurveys

  First Offering ID: 1576
Steps to evaluate UC sessions

- My UC Homepage > “Evaluate Sessions”
- Choose session from planner
  OR
- Search for session

www.esri.com/ucsessionssurveys