ArcGIS Runtime Offline APIs

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Three Things That Don’t Exist

1. The perfect day
2. The greatest and best song in the world
3. An always-on Internet connection
Modern apps consider the offline case.
ArcGIS Runtime Supports Offline Apps

Fully supported in ArcGIS Runtime 10.2.3 (current release)

Basemaps
Addresses

Features
Directions
Basemaps Offline

• Generate tile package or compact cache from a service
  - ExportTileCacheTask
  - Service must have exportTiles enabled
  - Alternative: generate in ArcGIS for Desktop

• Display tile package or compact cache
Basemaps Offline

1. Local tiled layer
2. Download tile cache
• Generate a local geodatabase from a feature service
  - GeodatabaseSyncTask
  - Service must have sync enabled
  - Alternative: generate in ArcGIS for Desktop

• Use a local geodatabase
  - Display features
  - Query features
  - Edit features
Features Offline

1. Offline editing workflow
2. Offline table query
Addresses Offline

- Use the Locator class
  - Geocode an address or place-name
  - Reverse-geocode a point
- Uses an ArcGIS locator file (.loc)
- `Locator localLocator = Locator.createLocalLocator("c:/path/to/myLocator.loc");`
Addresses Offline

Offline geocoding
Directions Offline

- **RouteTask**
- **Use a local geodatabase containing a network dataset**
  - Generate in ArcMap
  - Sample dataset for San Diego is on ArcGIS Online
Directions Offline

Offline routing
## Licensing

<table>
<thead>
<tr>
<th>License Level</th>
<th>Available functionality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developer (development and testing</td>
<td>All functionality&lt;br&gt;(watermarks and debug messages will be generated, nag screens with local server *)</td>
</tr>
<tr>
<td>only)</td>
<td></td>
</tr>
<tr>
<td>Basic</td>
<td>Connected - all functionality&lt;br&gt;Offline - map viewing only</td>
</tr>
<tr>
<td>Standard</td>
<td>Connected and offline - all functionality, includes:&lt;br&gt;• Local locators (geocoding)&lt;br&gt;• Local routing&lt;br&gt;• Local geodatabase editing&lt;br&gt;• Local geodatabase sync operations&lt;br&gt;• Local server *)</td>
</tr>
</tbody>
</table>

*For those SDKs that include the local server (Windows/Linux/Mac)*
Road Ahead

- Raster layers – create from local raster data (GDAL)
- New vector layers – create from local vector data (geopackage, shapefile, kml)
- More offline capabilities
  - Feature service table – equivalence with ArcGISFeatureLayer
  - Versioned data support
Consider the offline case.
## ArcGIS Runtime SDK sessions Wednesday

<table>
<thead>
<tr>
<th>Session Name</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>ArcGIS Runtime SDK for Qt: Tips and Tricks</td>
<td>9:30am – 10:00am</td>
<td>Developer Island (demo theatre)</td>
</tr>
<tr>
<td>Building .NET Apps with ArcGIS Runtime SDK: Tips and Tricks</td>
<td>11:30am – 12:00pm</td>
<td>Developer Island (demo theatre)</td>
</tr>
<tr>
<td>Offline Routing and Geocoding in ArcGIS Runtime SDK</td>
<td>3:00pm – 3:30pm</td>
<td>General Theater 2 (demo theatre)</td>
</tr>
<tr>
<td>Developing Windows Desktop Apps with ArcGIS Runtime SDK for .NET</td>
<td>8:30am – 9:45am</td>
<td>Room 09</td>
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</table>
## ArcGIS Runtime SDK sessions Thursday

<table>
<thead>
<tr>
<th>Session Name</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create your own Android App Tools Using ArcGIS Runtime SDKs</td>
<td>9:30am – 10:00am</td>
<td>Developer Island (demo theatre)</td>
</tr>
<tr>
<td>Dive Deep into the Performance of the ArcGIS Runtime SDKs Core Display Architecture</td>
<td>10:30am – 11:00am</td>
<td>Developer Island (demo theatre)</td>
</tr>
<tr>
<td>10 Things you Didn’t Know You Can Do with ArcGIS Runtime SDK for iOS</td>
<td>11:30am – 12:00pm</td>
<td>Developer Island (demo theatre)</td>
</tr>
<tr>
<td>Animating Thousands of Graphics and Features with ArcGIS Runtime SDK for Java SE</td>
<td>12:30pm – 1:00pm</td>
<td>Developer Island (demo theatre)</td>
</tr>
<tr>
<td>Developing Mobile Apps with ArcGIS Runtime SDK for .NET</td>
<td>10:15am – 11:30am</td>
<td>Room 05 A</td>
</tr>
<tr>
<td>ArcGIS Runtime SDKs: The Road Ahead</td>
<td>1:30pm – 2:45pm</td>
<td>Room 07 A/B</td>
</tr>
</tbody>
</table>
Thank you...

• Please fill out the session survey:

Offering ID: 2127

Online – www.esri.com/ucsessionsurveys