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Supporting High-Quality Printing in Web Applications with ArcGIS 10.1 for Server

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High Quality Printing

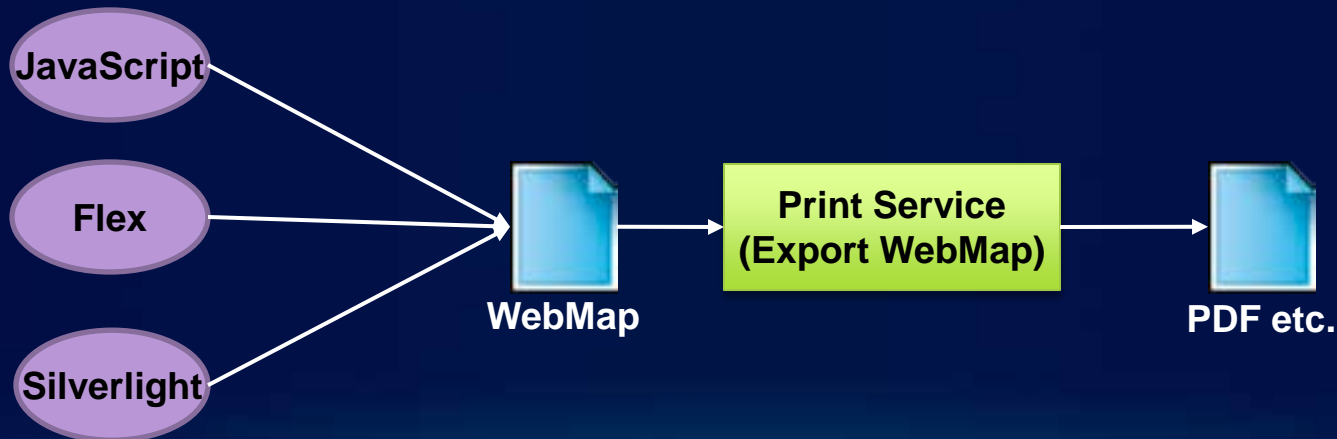
- Top request on ideas.arcgis.com
- Goals:
 - Create a printable document (**PDF** preferably)
 - Have that document printed to '**exact**' scale
 - Leverage **ArcMap layouts**
 - Support **large format plots**
 - Display ALL contents of my Web map
 - **Services, graphics, feature layers, etc.**
 - Be able to modify the map content during the process
 - High DPI
- We created a 3 tiered approach to meet these needs

High Quality Printing

- *Simple printing*
 - Out of the box Geoprocessing Service with ArcGIS Server
 - Small format
 - Synchronous
 - Token based secure services
- *Custom configuration*
 - Ability to supply your own templates
 - Change to asynchronous if desired
 - Handle HTTP secure services
 - Large format
- *Advanced cases*
 - Supported via ArcPy.Mapping
 - Map/Layer addition, replacement, etc.

Printing service overview

- **Print services are powered by WebMaps**
 - **Consistent format produced by all the WebAPIs**
 - **JSON based spec for sharing services, graphics, symbols etc.**
- **Note: The services in the WebMap must be accessible to the Print Service**
 - **HTTP security is a special case**



Demo

- **Simple print demonstration with the JavaScript API**

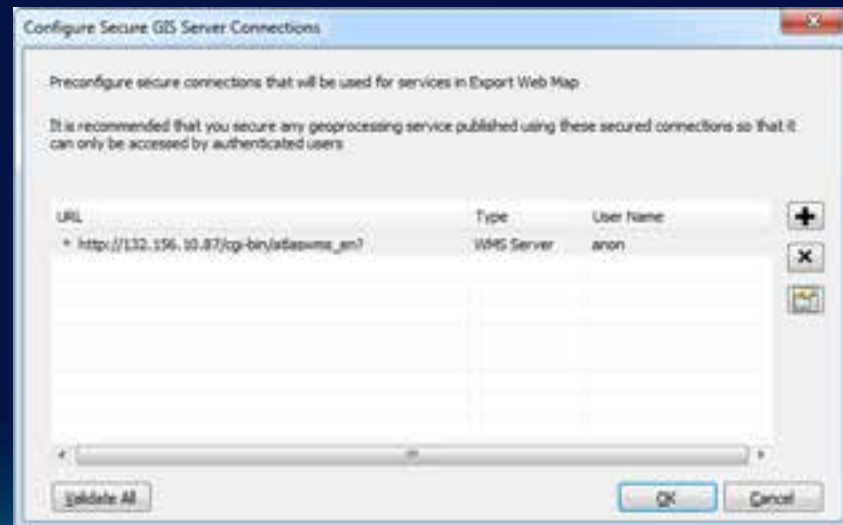
Custom configuration

- **Publish the Export Web Map tool as your own service**
 - Use your own layout templates
 - Choose to make the service asynchronous if desired
 - This choice depends on the size of your prints and the length of time they'll take
 - **Configure service security**
 - Token security handled automatically
 - HTTP security must be configured



Configuring secured services

- HTTP security requires configuration
 - Add service connections for each secure service before publishing
 - “Edit” the tool to edit security configurations
- **Secure the print service itself if you configure security for services**

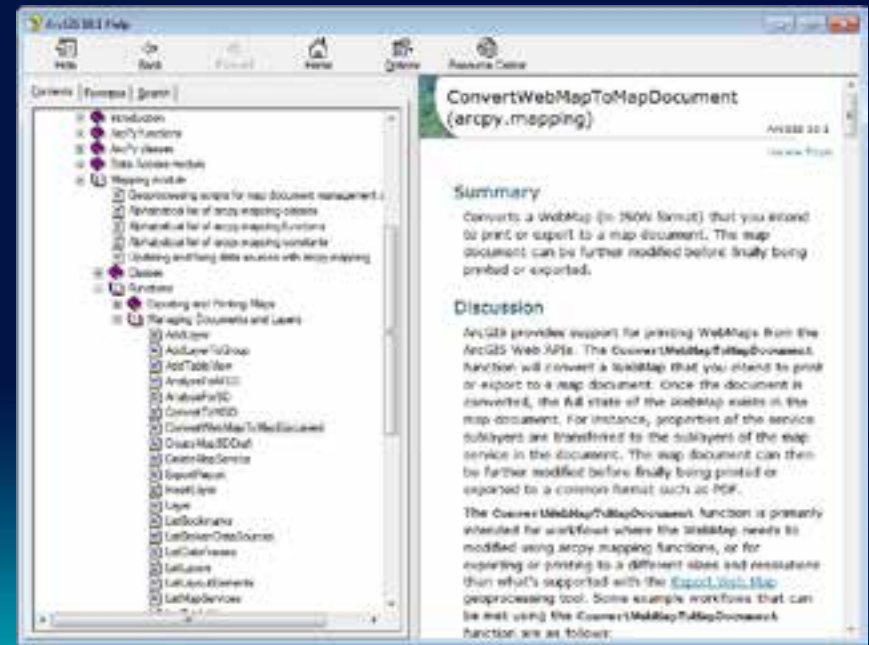


Demo

- **Printing with custom templates in the Silverlight API**

Custom print workflows: ArcPy.Mapping

- New ArcPy.Mapping method for converting Web Maps to MapDocuments
- `ConvertWebMapToMapDocument` (`webmap_json`, `{template_mxd}`, `{notes_gdb}`, `{extra_conversion_options}`)
- Secure services handled via the *extra conversion options* parameter



ArcPy.Mapping workflows

- **Once a WebMap is converted to a map document**
 - **Full capabilities of ArcPy.Mapping on the document**
 - **Modify content**
 - **Add content**
 - **Export using custom options**
 - **etc.**

- **See the ArcPy.Mapping help for examples**

Demo

- Large format vector print with the Flex API

Wait! You didn't actually print anything.

- Printing services are about generating printable documents (PDF etc.)
- If you wish to send the output to a physical printer automatically
 - Use the ArcPy.Mapping workflow
 - Local printers – xcopy to local share on some printers
 - Cloud printing workflows (e.g. [Google Cloud Print](#))
 - Driverless printing
 - Simple APIs that can be called from Python

Questions?

```
esri.symbol.SimpleLineSymbol({
  color: [0, 0, 255],
  width: 2,
  style: 'solid'
});
feature.setSymbol(new dojo.Color([0, 0, 255], {
  alpha: 0.5
}));
else if(f == 1) {
  var polysymbolGreen = new esri.symbol.SimpleLineSymbol({
    color: [0, 0, 0.5],
    width: 2,
    style: 'solid'
  });
  polysymbolGreen.setOutlineColor([0, 0, 0.5]);
  polysymbolGreen.setSymbol(polysymbolGreen);
  feature.setSymbol(polysymbolGreen);
} else if(f == 2) {
  polysymbolBlue = new esri.symbol.SimpleLineSymbol({
    color: [0, 0, 255],
    width: 2,
    style: 'solid'
  });
  polysymbolBlue.setOutlineColor([0, 0, 255]);
  polysymbolBlue.setSymbol(polysymbolBlue);
  feature.setSymbol(polysymbolBlue);
}
```