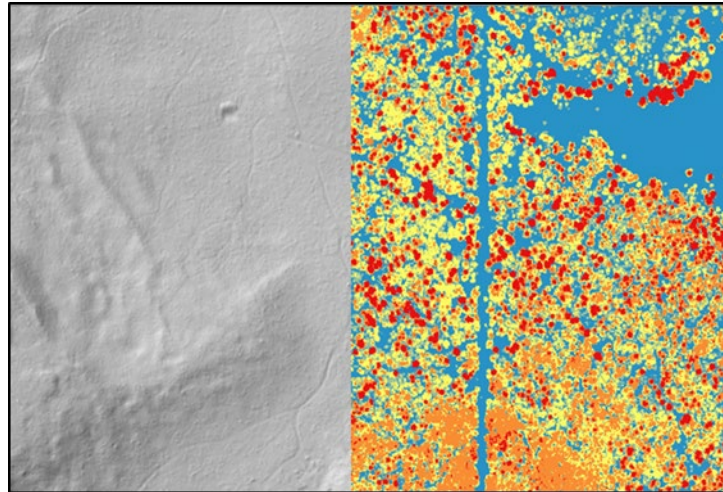


EXERCISE 1

Access the Services



Introduction

Image services and the RDW are GIS Services that allows users to efficiently access and display large volumes of raster data from a central server. You can enjoy easy access to current high resolution imagery such as NAIP without the hassle of storing so much data.

Objectives

- Learn how to connect to Image Services and the RDW within ArcGIS Pro and outside of it.

Table of Contents

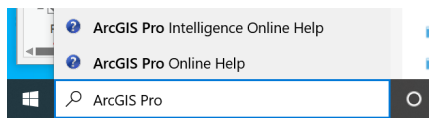
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Part 1: Access the Services in ArcGIS Pro

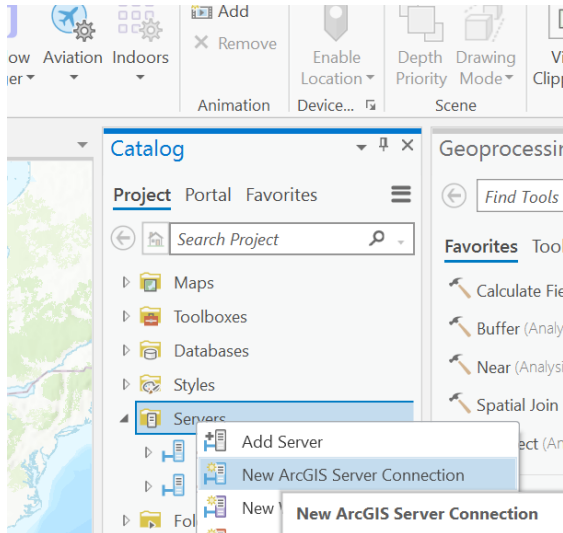
You can connect to Image Services and the RDW in ArcGIS Pro using either the Catalog or Connections menu.

A. Connect using Catalog

1. Launch **ArcGIS Pro** (hint: type ArcGIS Pro in the search field by the Start button to find it).



2. Open a new map.
3. If needed, open the Catalog by going to the **View** tab (**Windows** section) and clicking **Catalog Pane**.
4. In the Catalog right click **Servers** then click **New ArcGIS Server Connection**.



5. In the box next to Server URL:, copy and paste one of the following addresses:
 - i. Image Services: <https://image-services-gtac.fs.usda.gov/arcgis/services>
 - ii. Internal RDW Map: <https://apps.fs.usda.gov/arcn/services>
 - iii. Internal RDW Raster: <https://apps.fs.usda.gov/fsgisn01/services>
 - iv. External RDW Map: <https://apps.fs.usda.gov/arcx/services>
 - v. External RDW Raster: <https://apps.fs.usda.gov/fsgisx01/services>

Add ArcGIS Server Connection

Server URL:

Authentication (Optional)

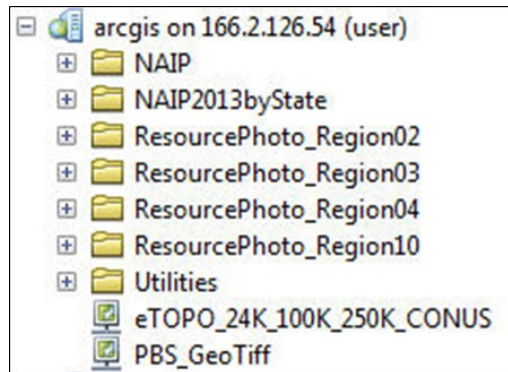
User Name:

Password:

Save Username / Password to Windows Credential Manager
 Save Username / Password to connection file

6. Leave the User Name and Password boxes blank, and click **OK**. The service will be added to the list under Servers.

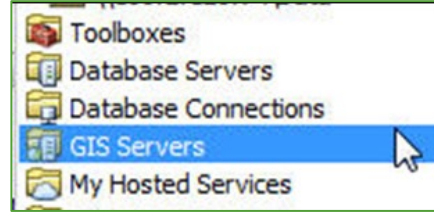
7. Expand the lists by clicking on the plus signs to see the available data (see below).



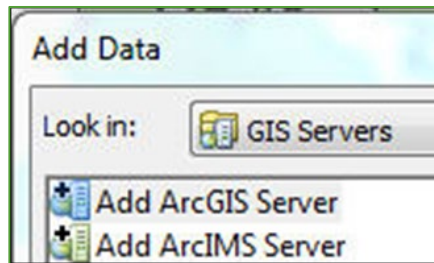
8. To add a service to your map, simply click-and-drag the service to your map window or Table of Contents.

B. Connect Using Add Data in ArcGIS Pro

1. Click on the **Add Data** button, or right-click on **Layers** in the Table of Contents and choose **Add Data**.
2. Next to **Look in**, click on the drop down and select **GIS Servers** (see below).



3. In the list, double-click on **Add ArcGIS Server** (see below).



4. Ensure that **Use GIS Services** is selected, and click on **Next >**.

5. In the box next to Server URL (see below), type in one of the addresses listed in the preceding section (step 6).

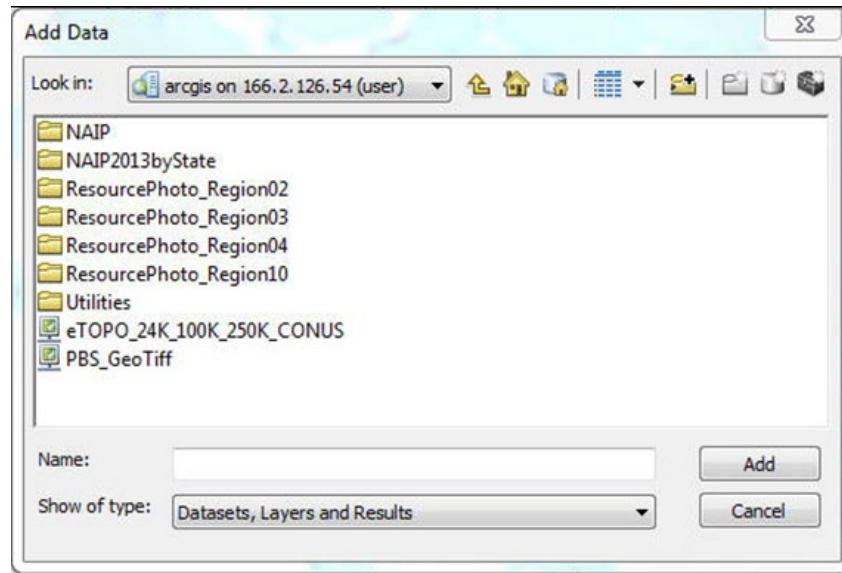


Note: Users of ArcGIS 10.2 and later do not need to add the "/services" at the end.

6. Leave the User Name and Password boxes blank, and click **Finish**.

7. The server **arcgis on 166.2.126.54 (user)** will be added to the list. Double click on it.

8. The list of services will now appear in the Add Data dialog (see below.) To see what is available in a folder, double-click it. To move up a level, click on the **Up One Level** tool to the right of the Look in drop down.



9. To add the desired service, click on it then click on **Add**.

The server will now be available below **GIS Servers** in the Look in drop down until you remove it.

Part 2: Access the Services on REST pages

You can access the Image Services and RDW data on their REST pages. REST is an acronym for Representational State Transfer which is a method of transferring information to your web browser. On the server REST pages you will find descriptions and metadata for each of the services.

1. Visit one of the following REST pages:
 - i. Image Services: <https://image-services.gtac.fs.usda.gov/arcgis>
 - ii. External RDW: <https://apps.fs.usda.gov/arcx/rest/services>
 - iii. Internal RDW: <https://apps.fs.usda.gov/arcn/rest/services>
2. On the page, click one of the folders then click one of the services.
 - i. You can navigate up levels using the breadcrumbs near the top of the page, or by using your browser's Back button.
3. You should now see a page with several options for viewing the service and a description of it (see following graphic).

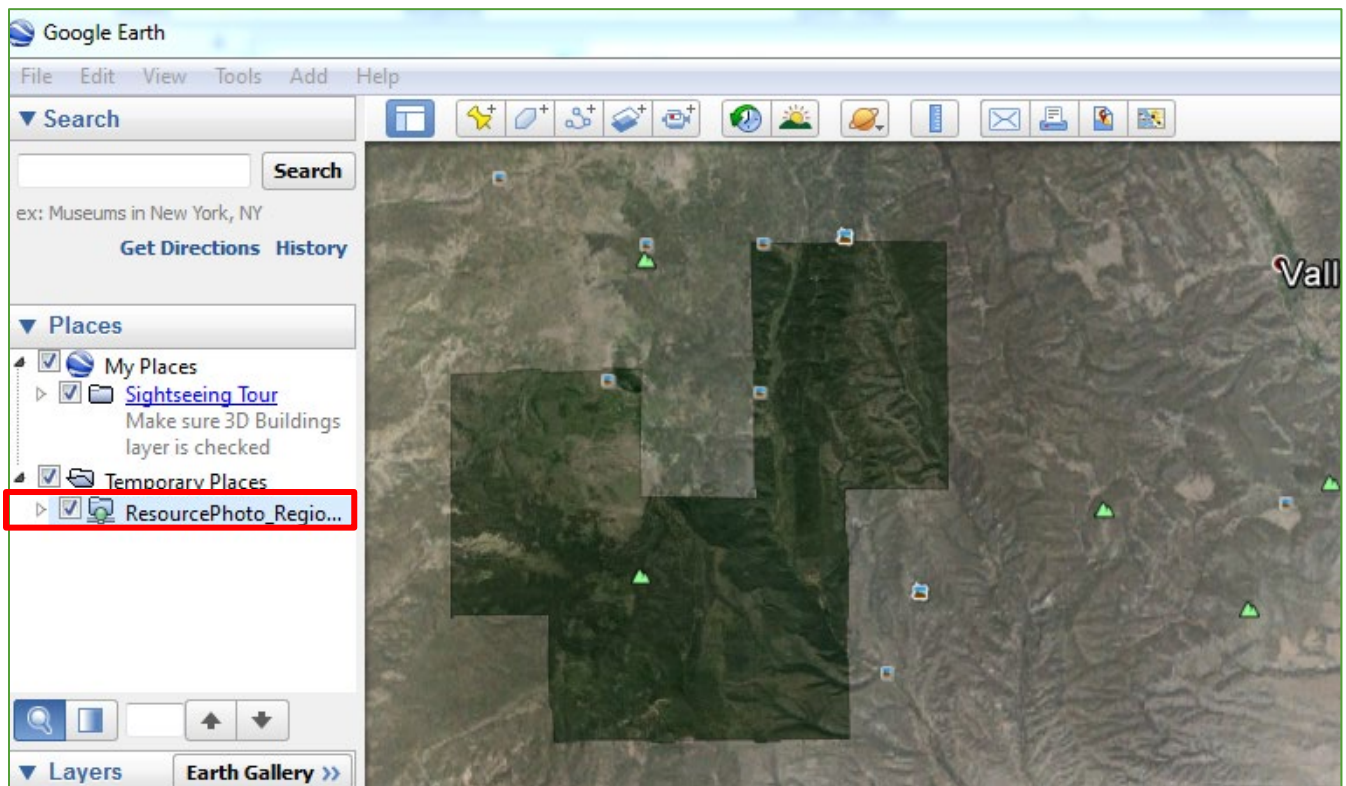


4. Click the **Google Earth** option for viewing the service. You should now see a **.kmz** file has been downloaded.

5. If you don't already have Google Earth installed, please visit the [Google Earth install page](#).

6. Open Google Earth and load the kmz file.

7. In the **Places** window, click on the file to zoom the viewer to the image layer (see following graphic).



There is now an Early Access Web Service (EAWS) which is an ESRI Restful 4 band image service that contains pre-production NAIP imagery. The imagery is added to the service, on average, 5 business days after the imagery acquisition. This imagery is minimally processed to speed up the posting of imagery to the image service. For more information, refer to this [document](#).

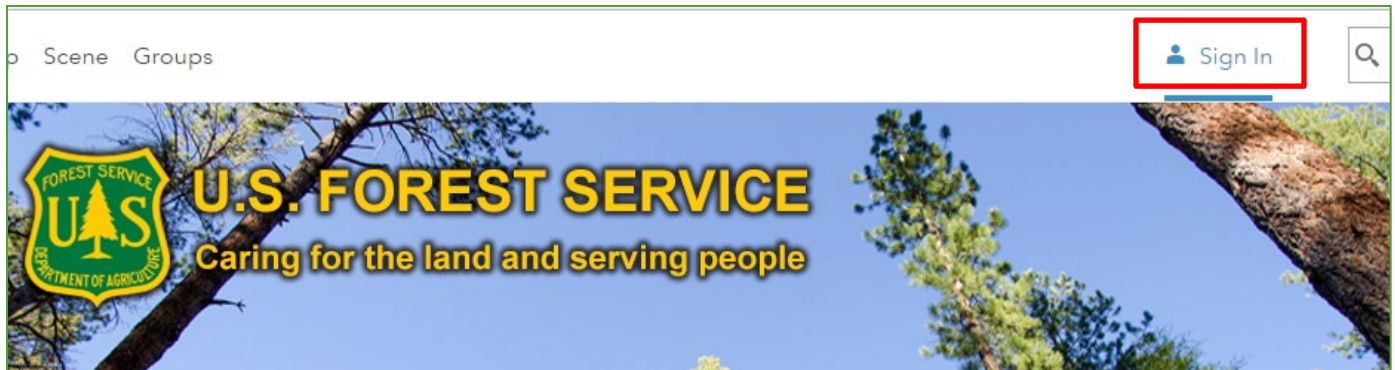
Part 3: Access the Services in AGOL

ArcGIS Online (AGOL) is a cloud based Web GIS content management platform for collaboration and sharing of maps, applications, data and other geospatial information. The Forest Service is implementing AGOL enterprise wide to provide a method for publishing and communicating both standard and non-standard, unit-level spatial information to the public, agency cooperators, and other government entities.

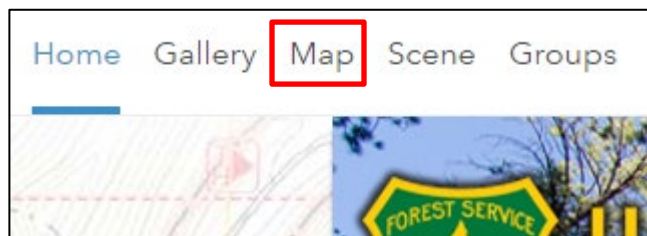
1. You must first setup an AGOL account by visiting this site:
http://fswebgstc.gsc.wo.fs.fed.us/services/applications_tools/AGOL/request_access.php
 - i. After you have submitted the application, you should receive an email from an FS AGOL administrator with directions to setup your password.
2. Visit the FS AGOL website: usfs.maps.arcgis.com.

The AGOL site often doesn't work well in Chrome so it's best to use a different browser.

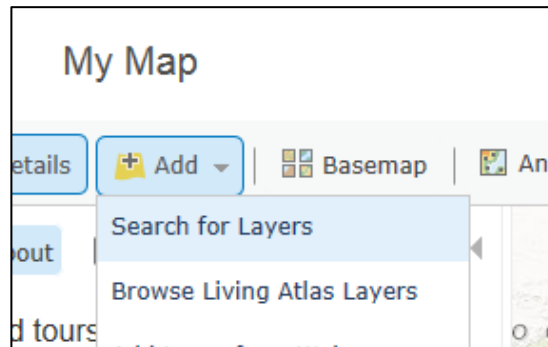
3. Click the **Sign In** button in the upper right corner of the page (outlined in red below).



4. Click the **Map** button on the main menu (outlined in red below).

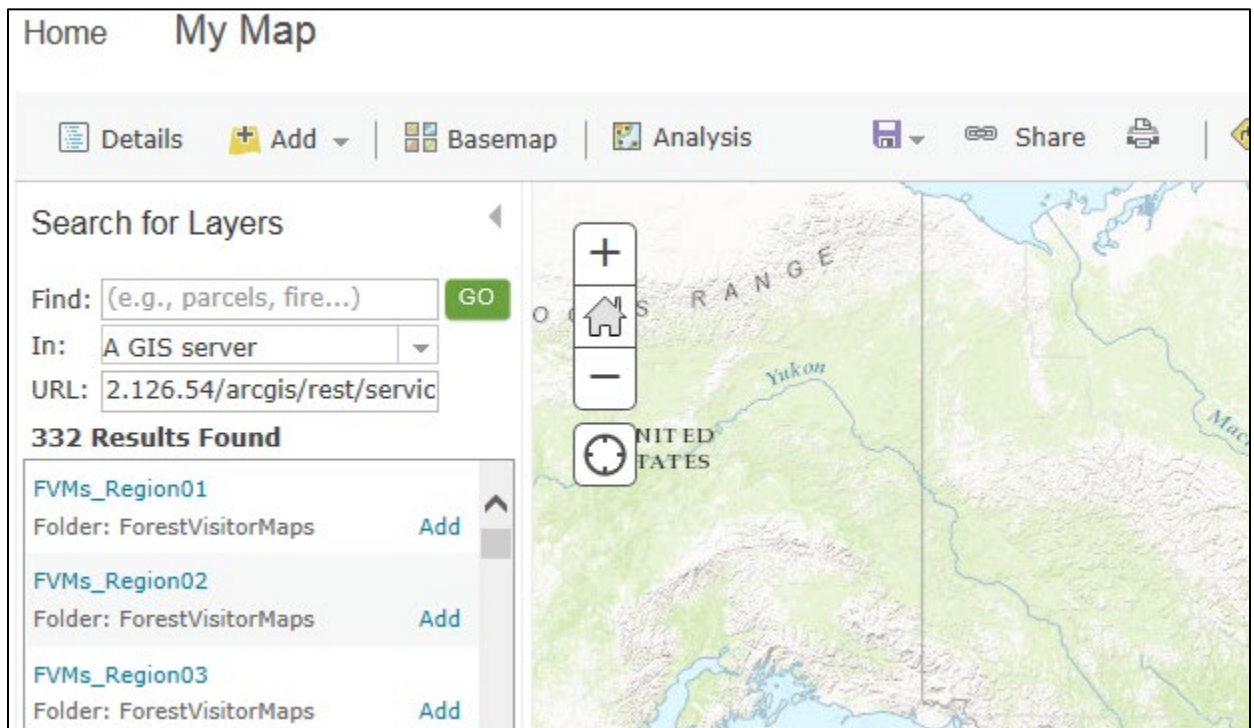


5. On the top menu bar, click **Add | Search for Layers** (see below).



6. In the Search for Layers window, set the **In:** field to **“A GIS server”**.
7. In the URL field, enter one of the following REST URLs:
 - i. Image Services: <https://image-services.gtac.fs.usda.gov/arcgis/rest/services>
 - ii. RDW Internal Services: <https://apps.fs.fed.us/arcn/rest/services>
 - iii. RDW External Services: <https://apps.fs.fed.us/arcx/rest/services>

*Important: The URLs **must** start with **https**, not **http**.*



8. Add one of the service layers to the map by click the **Add** button to the right of its name (see above).