



University of Idaho
Library

ArcGIS Image for ArcGIS Online Tool Talk

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What is ArcGIS Image for ArcGIS Online?

- Software-as-a-Service that lets users in an ArcGIS Online organization host, analyze, and stream imagery and raster collections.
 - Previously limited to tile layer for rasters (picture)
- Expands imagery data management, visualization, and analysis to a hosted environment.



How Long Has This Been Available?

- Summer 2021 – initial release
- Spring 2022 – U of I participated in pilot for higher education
- Summer 2022 – added to Esri Educational Institution Agreement

Next "Big" Transition for Sharing Rasters?



- Early Years – SDE rasters & ArcIMS
- Middle Years - .ISDef files Image Server --> ArcGIS Server
- Recent Years – Mosaic datasets w/ ArcGIS Server --> Enterprise sharing to ArcGIS Online
- Looking Ahead – ArcGIS Image for ArcGIS Online?



Getting started

- Licensing
 - Using Vandal NetID sign into the U of I Teaching & Scholarly Research Portal (<https://uidaho.maps.arcgis.com>) using a web browser or ArcGIS Pro



Publishing Hosted Imagery

ArcGIS Pro

The screenshot shows the ArcGIS Pro interface. In the top-left corner, the 'Create Hosted Imagery' button is highlighted with a red box. Below it, the 'Create Hosted Imagery Layer' dialog box is open. The dialog has a 'Get Started' button and a central instruction: 'Create hosted imagery layers on ArcGIS Online by uploading data.' Below this, there are options to 'Choose layer type(s)'. The 'Tiled Imagery Layer' option is checked, while 'Dynamic Imagery Layer' is unchecked. Underneath, there are options for 'Do you have a single image or a collection of images?'. The 'Single image' option is selected with a radio button, while 'Collection of images' and 'Mosaic Dataset' are unselected.

Web Browser

The screenshot shows a web browser interface for creating a new item. The 'New item' menu is open, displaying several options. The 'Imagery layer' option is highlighted with a red box. The options listed are: 'Feature layer' (Create an editable layer with fields copied from a template or feature layer.), 'Application' (Link to an application on the web or create a new registered application.), 'Tile layer' (Create a fast drawing vector tile layer or raster tile layer.), 'Locator' (Find places and addresses using the ArcGIS World Geocoding Service or your own geocode service.), 'URL' (Link to an ArcGIS Server web service, KML, OGC WFS, OGC WMS, OGC WMTS, or GeoJSON.), 'Imagery layer' (Create an imagery layer using images from your computer.), and 'Scene layer' (Create a fast drawing scene layer using 3d content.).

Publishing Hosted Imagery



- General steps:
 - Choose a layer type
 - Choose a layer configuration
 - Select and define imagery
 - Add item description



Publishing – Layer Type (ArcGIS Online)

STEP 1 **Get started** STEP 2 Configure layer STEP 3 Define imagery STEP 4 Set item details

Choose the layer types that best suit your needs

	<p><input checked="" type="checkbox"/> Tiled Imagery Layer</p> <ul style="list-style-type: none">• Provides imagery access as static tiles and associated metadata• Supports client side processing and rendering• Can be used as an input to raster analysis	<p>Can publish both or just one</p>
	<p><input checked="" type="checkbox"/> Dynamic Imagery Layer</p> <ul style="list-style-type: none">• Provides versatile dynamic imagery access capabilities• Supports on-demand server side processing and dynamic mosaicking• Supports managing a collection of images• Can be used as an input to raster analysis	<p>Share: Everyone OGC WMTS (RGB w/ JPEG comp.) Feb. 22 – Raster Function Templates (Beta) No update (delete & replace)</p> <p>Share: Organization Comparable to Image Service Raster Function Templates work Service can be updated (ArcGIS API for Python)</p>



Publishing – Configure Tiled (ArcGIS Online)

STEP 1 Get started

STEP 2 **Configure layer**

STEP 3 Define imagery

STEP 4 Set item details

Choose a layer configuration based on your imagery

- One Image
 - Uses a single, processed image to create one layer
 - Compatibility: Supports all common image formats
- One Mosaicked Image
 - Mosaics multiple images into a single dataset to create one layer
 - Compatibility: This option supports all common image formats and satellite products at various levels
- Multiple Imagery Layers
 - Creates one layer for each input image
 - Compatibility: Supports all common image formats

Publishing – Configure Dynamic (ArcGIS Online)



STEP 1 Get started **STEP 2 Configure layer** STEP 3 Define imagery STEP 4 Set item details

Choose a layer configuration based on your imagery

- One Image
 - Uses a single, processed image to create one layer
 - Compatibility: Supports all common image formats
- One Mosaicked Image
 - Mosaics multiple images into a single dataset to create one layer
 - Compatibility: This option supports all common image formats and satellite products at various levels
- Image Collection
 - Manages a collection of images using a single layer
 - Mosaics images dynamically
 - Each image can be accessed independently
 - Compatibility: This option supports all common image formats and satellite products at various levels
- Multiple Imagery Layers
 - Creates one layer for each input image
 - Compatibility: Supports all common image formats



Publishing – Define Tiled (ArcGIS Online)

STEP 1 Get started STEP 2 Configure layer **STEP 3 Define imagery** STEP 4 Set item details

Choose the raster type that best describes your imagery

Raster Dataset

Select input imagery

Converted to cloud raster format

No imagery selected.

Drag and drop image files or folders here, or

Publishing – Details Tiled (ArcGIS Online)



STEP 1 Get started

STEP 2 Configure layer

STEP 3 Define imagery

STEP 4 Set item details

Dynamic Imagery Layer

Title



Tags

Summary

Save in folder



Result – New Item(s) in ‘Content’

<input type="checkbox"/>	Title	
<input type="checkbox"/>	ArcGIS Image for ArcGIS Online Demo - Tiled	 Tiled Imagery Layer (hosted)
<input type="checkbox"/>	ArcGIS Image for ArcGIS Online Demo - Dynamic Collection	 Imagery Layer (hosted)



Raster Analysis (Map Viewer Example)

The screenshot displays the ArcGIS Map Viewer interface. On the left, the 'Layers' panel shows 'ArcGIS Image for ArcGIS Online Demo - Tiled' with an 'Add' button. The central map area shows a satellite view of a rural landscape with a grid of green and brown patches overlaid, representing a raster analysis. On the right, the 'Tools' panel is open, showing a search bar and a list of analysis tools. The 'Raster analysis' option is selected and highlighted with a blue border. Other tools include 'Summarize data', 'Analyze patterns', 'Use proximity', 'Manage data', 'Analyze terrain', 'Use deep learning', and 'Use multidimensional analysis'.

Layers

- ArcGIS Image for ArcGIS Online Demo - Tiled
- Add

Tools

- Search by name or keyword
- Summarize data
 - Zonal Statistics
 - Zonal Statistics as Table
- Analyze patterns
- Use proximity
- Manage data
- Analyze terrain
- Use deep learning
- Use multidimensional analysis

Analysis type

- Feature analysis
- Raster analysis**

Testing Results

- 4 individual 3-band .tif files totaling 4.3GB published as a mosaic in 15 minutes
- 6 individual 3-band .tif files totaling 7.8GB published as a mosaic in 30 minutes



Resources

- [ArcGIS Blogs - ArcGIS Image for ArcGIS Online](#)
- [Get Started with ArcGIS Image for ArcGIS Online - Esri Community](#)