



ArcGIS Online Guide

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Get to Know ArcGIS Image for ArcGIS Online

Essential information for getting started with
ArcGIS Image for ArcGIS Online.



Task checklist

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1. Orientation

The purpose of the *Getting to Know ArcGIS Image for ArcGIS Online* guide is to help you become familiar with the capabilities available in ArcGIS Image for ArcGIS Online. Links to important information for working with your imagery and raster datasets are provided throughout this guide. See the [ArcGIS Image Online Implementation Guide](#) for information about setting up your ArcGIS imagery for ArcGIS Online system.

ArcGIS Image for ArcGIS Online - also known as ArcGIS Image Online - is an extension to ArcGIS Online. ArcGIS Image Online allows you to host, manage, visualize, and analyze your imagery and raster datasets. Supported imagery and rasters are accessible as ready-to-use hosted imagery and image services in your browser display. Stream as tiled imagery services for visualization and image backdrop, or as a dynamic imagery services that provide dynamic mosaicking, image analysis and on-the-fly processing. Perform advanced analysis including multidimensional and deep learning workflows, and custom algorithms and processing chains. With all your data and analysis results stored in the cloud, seamlessly transition from interpretation to analysis and sharing results with local, regional and global stakeholders.

Visualize imagery in the cloud

Display and visually analyze imagery in [Map Viewer](#) or [Map Viewer Classic](#), supported in popular web browsers. The map viewers allow you to roam, zoom, and enhance the appearance of imagery and raster datasets.

Analyze imagery in the cloud

Use an extensive suite of raster [functions](#), [tools](#), [templates](#), and [APIs](#) to process your raster analysis projects and solutions. Perform deep learning, image classification, suitability analysis, hydrologic analysis, terrain analysis and more. Process an image mosaic, large collection of individual images, or a single image from different sensors

and resolutions. Once analysis is performed, results can be saved for further analysis or integration into apps or dashboards.

Manage imagery in the cloud

Host, catalog, search and [manage](#) all your imagery collections and rasters in ArcGIS Image Online. Upload various image types and formats, including orthomosaics, satellite scenes, aerial images, multidimensional rasters, elevation datasets, and imagery products and layers. To ensure images are processed and displayed properly, the meta-information associated with your imagery remains intact and accessible.

Share imagery in the cloud

Imagery and raster products hosted in ArcGIS Image Online can be [shared](#) with your organization, stakeholders and the public. Provide access to hosted imagery and raster data in web map clients, ArcGIS Pro, and other desktop, mobile apps and OGC Web Map Service (WMS), Web Coverage Service (WCS), and Web Map Tile Service (WMTS). You can control which user groups and stakeholders have access to which image services, and what they can do with them.

ArcGIS Image Online credits for imagery operations

Organizations leverage ArcGIS Online Imagery capabilities to perform a number of important functions. These include:

- Storage and management of imagery and source data
- Performing image and geospatial analysis

These operations are performed using ArcGIS Online resources, and associated credits. [Credits](#) are consumed according to the operation specified, differ for data storage and analysis, and depend on the size and number of imagery data files.

The number of credits needed for data or database storage is calculated after the upload of data. Credits needed for imagery analysis operations can be estimated before the operation is initiated. The metering of credits is addressed in [Metering of ArcGIS Online credits for imagery operations](#).

2. Enable ArcGIS Image Online

ArcGIS Image for ArcGIS Online is a user extension license. Your organization administrator can enable the license for individual users. The imagery layer creation and imagery analysis privileges are compatible with several user types by default: Creator, GIS Professional Basic, GIS Professional Standard, and GIS Professional Advanced.

If you wish to provide or limit the privileges available for a specific user, you can do this using a custom role. Custom roles include view, edit, create and manage.

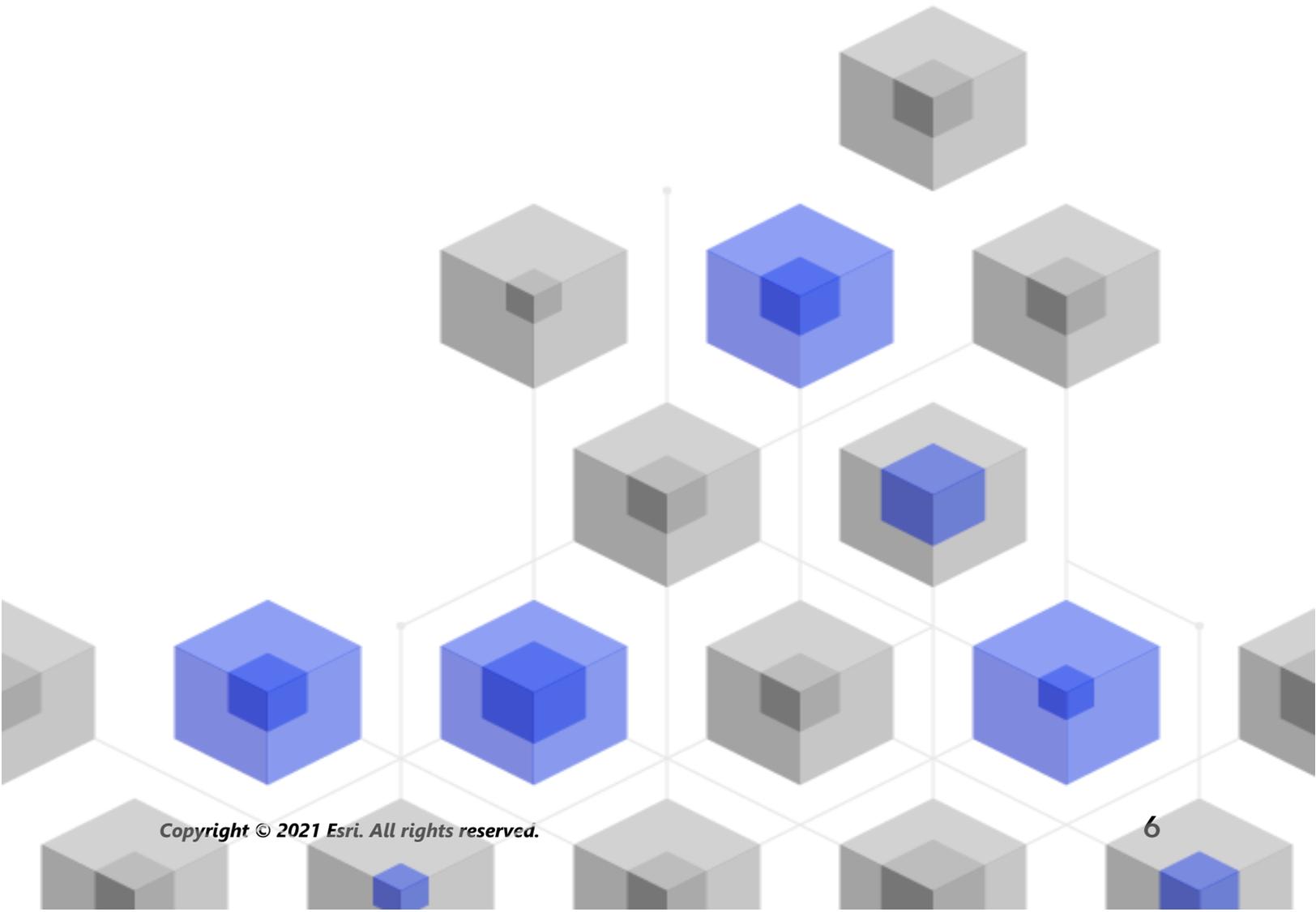
For details on how to license ArcGIS Image for ArcGIS Online and assign user roles, see the [ArcGIS Image for ArcGIS Online Implementation Guide](#).

3. Host and share imagery

Hosted imagery layers can be managed, shared, and analyzed in your organization. You can use a hosted imagery layer as an input to analysis tools, create custom workflows with raster functions, and include imagery layers in hosted apps and maps. Maps and apps such as [ArcGIS Pro](#) can access your services from anywhere on the internet if you choose to allow it.

Control which users and customers can access your image services by [assigning different privileges](#) to each service. These privileges also determine whether those with access to your services can view, edit, create or manage image content.

See [Publish hosted imagery layers](#) and [Your Guide to Sharing Imagery & Raster Data](#) for more information about hosting and sharing imagery with your organization, stakeholders, and the public.

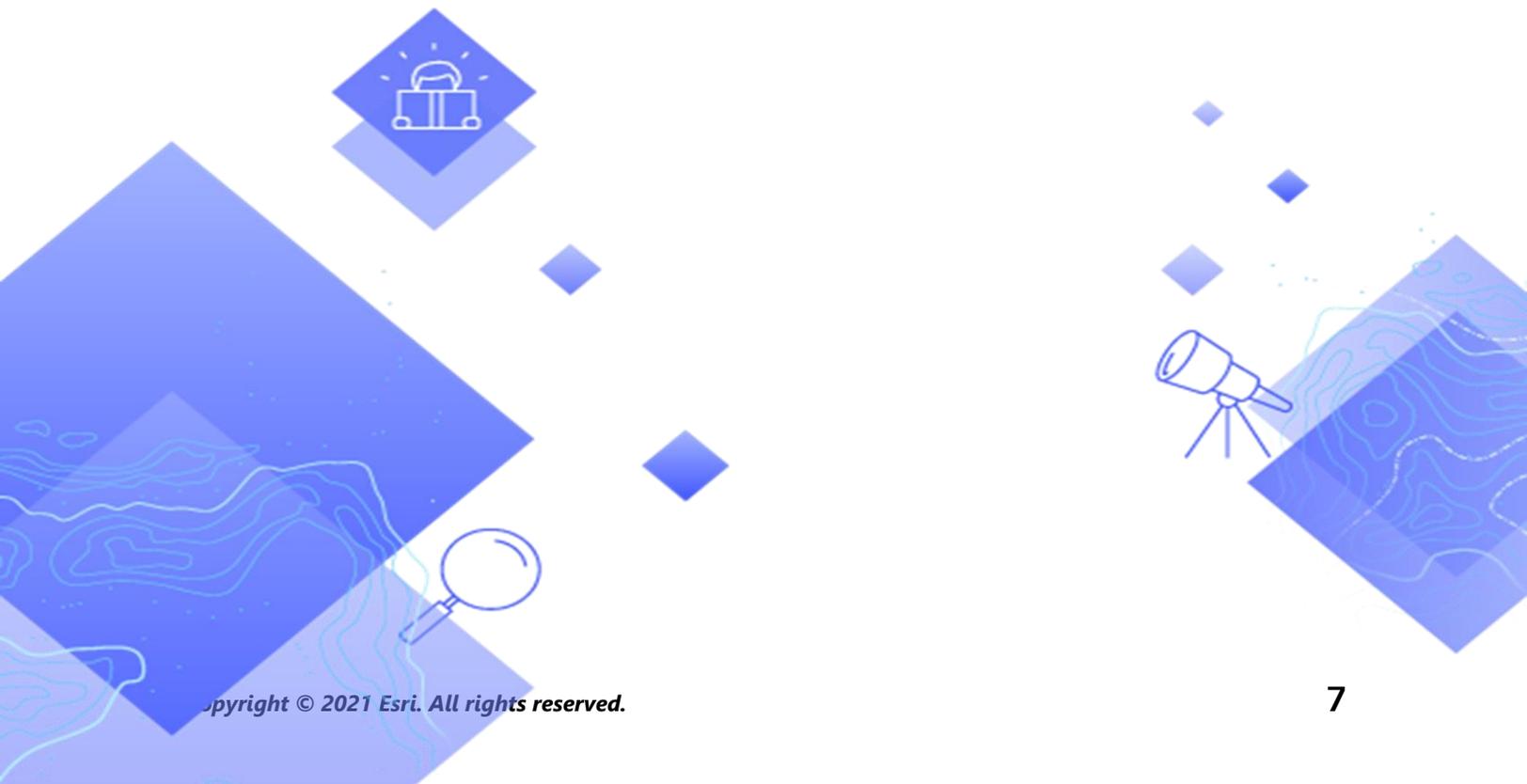


4. Visualize imagery

View, interpret and analyze imagery using Map Viewer and Map Viewer Classic (formerly called Map Viewer) in your browser.

[Map Viewer](#) and [Map Viewer Classic](#) provide the capabilities to view, enhance, and analyze your hosted imagery and image services. Supported raster datasets include raster formats supported in ArcGIS Pro, such as mosaic datasets and imagery collections, multidimensional datasets, more than 30 sensor and raster types. Imagery mosaics and multidimensional data can be filtered and visualized in time series animations. Image services are displayed and rendered using associated function templates.

Imagery and raster datasets can be enhanced using different histogram stretches, gamma, and dynamic range adjustment. Additional renderers include Unique Values, Classify, Shaded Relief and Colormap using predetermined or custom colormap styles.



5. Analyze imagery

ArcGIS Image Online provides an extensive suite of image processing and analysis tools, functions and capabilities. Raster Analysis tools, raster processing functions, and raster function model builder and editor are provided in Map Viewer and Map Viewer Classic.

Raster Analysis tools

The Raster Analysis pane in the Map Viewer and Map Viewer Classic contains ready-to-use tools categorized by:

- Analyze image
- Analyze patterns
- Analyze terrain
- Deep Learning
- Manage data
- Multidimensional analysis
- Use proximity
- Summarize data

See [Perform raster analysis](#) for more details about all the tools available in the Raster Analysis pane.

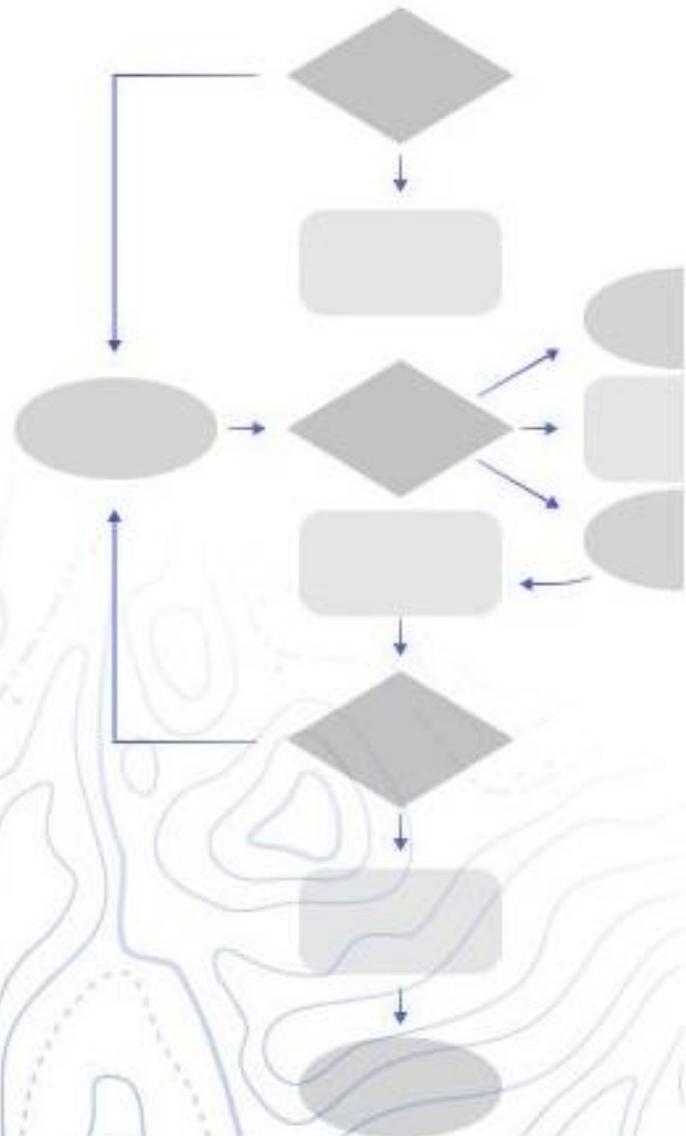
See [Use raster analysis tools](#) for more information about necessary user type privileges settings to use these tools.

Raster functions

In addition to raster analysis tools, ArcGIS Image Online provides more than 150 [raster functions](#) to perform complex image and raster processing workflows. You can use individual raster functions, or use the [Raster Function Editor](#) to combine multiple raster functions into processing chains, or raster function templates, using the visual programming tools in Map Viewer. Raster function templates can be edited, saved, and shared with other members of your organization.

Raster functions are operations that apply processing directly to the pixels of imagery and raster datasets on-the-fly. Only pixels that are visible on your screen are processed so the computation time is fast. The advantage of this dynamic image processing approach is you can adjust and fine tune parameters setting for each raster function in your processing chain before creating a new or updated image service.

If you're a developer, you can access these tools through [ArcGIS REST API](#) and [ArcGIS API for Python](#).



6. Learn more

If have questions or want to learn more about ArcGIS Image Online, please visit the topics linked below.

Get to know ArcGIS Image for ArcGIS Online

- ArcGIS Image for ArcGIS Online extension [product page](#).

Setup and licensing for ArcGIS Image for ArcGIS Online

- See [ArcGIS Image for ArcGIS Online Implementation Guide](#) for essential tasks and best practices for setting up ArcGIS Image for ArcGIS Online

Publish and share

- [Publish imagery layers](#)

Raster processing and analysis

- [Perform raster analysis](#)
- [Use raster analysis tools](#)
- [Use raster functions to customize raster analysis](#)
- [Raster function editor](#)

Manage

- [Get started managing data](#)
- [Use hosted layers](#)
- [Manage hosted imagery layers](#)

Image display

- [Get started with Map Viewer](#)
- [Style imagery in Map Viewer](#)
- [Display imagery](#)