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ArcGIS Pro Migration Guide

Essential tasks for migrating your organization
from ArcMap to ArcGIS Pro

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Task checklist

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1. Get to know ArcGIS Pro

We're glad you've decided to migrate your organization to ArcGIS Pro, Esri's next-generation desktop GIS. When you have years' worth of established workflows, data, and skills built around a piece of software, migration can seem daunting. The purpose of this guide is to make the process more manageable. The benefits that come with ArcGIS Pro will make it well worth your while.

Key characteristics of ArcGIS Pro

First released in 2015, ArcGIS Pro is the desktop component of Esri's integrated ArcGIS system. It isn't an update to ArcMap, but a new application designed to retain the same functionalities while incorporating the most modern technology. ArcGIS Pro features more powerful computing, an intuitive, accessible design, advanced sharing capabilities, and more.

The advantages of migration to ArcGIS Pro include the following:

- **A modern, fast application:** ArcGIS Pro is a 64-bit, multithreaded application. Its powerful processing and upgraded display engine allow for faster analysis and rendering.

- **An intuitive workspace:** Toolbars are replaced by a customizable ribbon that updates contextually depending on what you're doing within the application. Rather than having to dig through toolbars and dialog boxes, the tools you need appear when you need them.

- **Customizable user interface**: Dockable views and panes make up your ArcGIS Pro workspace. This means you can switch back and forth easily between working with symbology or geoprocessing tools and navigating your maps, tables, and layouts.

- **Project-based design:** The working unit for ArcGIS Pro is the project. A single project can contain multiple maps, 3D scenes, and layouts. Projects can be packaged in a few clicks into a convenient format that's shareable through the cloud or as a file. Alternatively, you can open ArcGIS Pro without a project to complete your data management tasks.

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- **Easy sharing:** ArcGIS Pro is tightly integrated into the ArcGIS system. Content such as projects, maps, and layers can be seamlessly shared to ArcGIS Online and ArcGIS Enterprise. ArcGIS Living Atlas of the World is an Esri-curated resource of data and basemaps and includes millions of third-party datasets available from ArcGIS Online. ArcGIS Pro makes it easy to access your organization's web content and ArcGIS Living Atlas data to use in your work.

- **ArcMap compatibility:** Maps, layouts, symbology, and models created in any ArcMap version can be ported into ArcGIS Pro, often with no changes needed. Python scripts can be easily updated to work in ArcGIS Pro. Once your projects are in ArcGIS Pro, you'll find the same functionality available (with very few exceptions) plus new updates not available in ArcMap. ArcGIS Pro projects can't return to ArcMap, but you can continue to run both ArcGIS Pro and ArcMap from the same machine and use the same data sources.

A solution for real-world problems

From artistic mapping to data-driven analysis and 3D models, ArcGIS Pro has a wide range of capabilities that are used across a diverse array of industries. With your ArcMap background, you probably already know what your organization plans to do with ArcGIS Pro, but the scenarios below demonstrate how ArcGIS Pro can be used to approach a variety of problems in a new way.

Each scenario is accompanied by a hands-on learning exercise, which you or your coworkers can return to after completing the other tasks in this guide. Even for experienced GIS users, switching software has a learning curve. Hands-on exercises are an informative, fun, and effective way to get familiar with ArcGIS Pro's design and capabilities.

- **Cartography:** In ArcGIS Pro, you can make beautiful maps and visualizations to evoke a sense of place while communicating data in a compelling way. For example, you can visualize environmental trends such as arctic sea ice decline, but the possibilities are nearly endless. ArcGIS Pro was used to make most of the entries in the Maps We Love gallery, Esri's curated collection of exemplary cartography.

- **Spatial analysis:** In industries ranging from retail to natural resources and national security, ArcGIS Pro helps professionals use data to address complex spatial issues. See how conservation scientists can use machine learning to predict seagrass habitats.

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- **3D GIS:** You can analyze data in both 2D and 3D within the same ArcGIS Pro project. Advanced 3D models provide the visualizations needed to make important decisions, seen in this tutorial of construction planning.

Note: ArcGIS Pro has somewhat different system requirements than ArcMap. Before proceeding, ensure you meet them. Get the details here.

2. Set up ArcGIS Online

If you have a current ArcGIS Desktop license, you already have an ArcGIS Pro license and an ArcGIS Online subscription. ArcGIS Online will provide the portal connecting you and your team members. The portal will enable team members to share data and use their ArcGIS Pro licenses across multiple machines. As you'll learn in the next section, it's also where you'll manage licenses. There's a little more setup involved than simply downloading licensing files like you did for ArcMap, but this portal connection is what allows ArcGIS Pro to use the type of cloud-based collaboration that has become the workplace norm.

> **Note:** If you have an ArcGIS Enterprise deployment, skip this section. See the ArcGIS Enterprise licensing guide for more information.

For detailed information on setting up ArcGIS Online, see the ArcGIS Online Implementation Guide. You won't need to read the entire guide—just follow the steps outlined in the *Activate your subscription* (page 4) and *Add members* (page 8) sections. Your main use for ArcGIS Online will be to manage ArcGIS Pro licenses.

Tips

- **Use existing Esri accounts:** If your team members have set up Esri accounts for other purposes in the past, when adding them to the organization, select the option to invite them using an account of their choice; this way, they won't have to merge two accounts. Questions about account merges can be directed to Esri Customer Service.

- **Enable Esri Access:** This setting must be enabled if you want members to access sites such as Esri Training, Esri Support, Esri Community, and My Esri. Find out how.

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3. Assign ArcGIS Pro

For all ArcGIS Desktop apps except ArcGIS Pro, your license type is either Single Use or Concurrent Use. You're probably accustomed to using ArcGIS License Manager to provision license files on a machine-by-machine basis. As mentioned previously, however, ArcGIS Pro defaults to Named User licenses, which are associated with user accounts.

For each ArcGIS Desktop license your organization has, you also have a Creator user type through ArcGIS Online and an ArcGIS Pro add-on license. Your ArcGIS Pro add-on licenses are of the same level—Basic, Standard, or Advanced—as your ArcMap licenses.

To give someone access to ArcGIS Pro, you assign the user type and add-on license in ArcGIS Online. You can re-assign them to different people if your team members change. These members, in turn, can sign in and use ArcGIS Pro on any machine where the program is installed. This allows for added flexibility in the workplace.

If you use ArcGIS Enterprise, learn how to configure ArcGIS Pro licenses in Portal for ArcGIS.

Alternative licensing options

Though licensing through ArcGIS Online is the default, it isn't required for ArcGIS Desktop users. You can keep the licensing setup you use for ArcMap by converting one or more of your ArcGIS Pro add-ons to Single Use or Concurrent Use. Organization members can still sign in to ArcGIS Online to share maps and access web content, but their credentials are not associated with a license. Instead, the license must be authorized separately for each machine, as with ArcMap.

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4. Download and install

Now that you've assigned ArcGIS Pro to team members, your organization's primary maintenance contact can download and install ArcGIS Pro. This is the person who communicates with Esri Customer Service and keeps your software active. If you're not sure who your primary maintenance contact is or would like to specify a new contact, reach out to Customer Service. If you don't have this role, forward this section to the person who does.

Get the steps to download and install ArcGIS Pro.

Tips

- **Link your organization:** Before downloading ArcGIS Pro, you must link your new ArcGIS Online organization to My Esri. To do this, log into My Esri, click the **My Organizations** tab and follow the prompts to request permissions.

- **Authorize if necessary:** If you've already assigned user types using ArcGIS Online, organization members simply need to sign in when starting ArcGIS Pro. If you converted licenses to Single Use or Concurrent Use, you should have received an email with authorization numbers and further instructions. You can also find this information in the licensing area of the **My Organizations** tab in My Esri. Learn about authorizing Single Use and Concurrent Use licenses.

Allow members to download their own software

For security and management reasons, organization members are not able to download ArcGIS Pro by default. As the administrator, you may want to oversee the download process. Alternatively, you can allow each member to download their own software.

5. Move content to ArcGIS Pro

The process of bringing your ArcGIS Desktop content into ArcGIS Pro is straightforward. You can also import your favorite styles and Python scripts. Depending on your organization structure, you may find the following workflows useful yourself, or you might want to forward them to team members.

Import an ArcMap document to ArcGIS Pro

You can import maps (.mxd), scenes (.sxd), and globes (.3DD) into ArcGIS Pro projects (.aprx). Depending on your planned workflow, you might find it more convenient to import several of these documents into a single project.

Begin with any ArcGIS Pro project and use the **Import Map** button on the ribbon to browse to the desired file. When the map opens, it should look the same as it does in ArcMap. You can check your Notifications to read messages about the import. Read detailed steps.

Import your styles to ArcGIS Pro

ArcMap styles (.style) must be converted to ArcGIS Pro styles (.stylx). There are two ways to do so. Many styles have already been converted for ArcGIS Pro and are available through ArcGIS Online. Learn how to search for and add styles. Alternatively, you can import a style you have saved locally. Learn how to import styles.

Modify your Python scripts for ArcGIS Pro

ArcGIS Pro uses Python 3 while ArcMap uses Python 2. Therefore, scripts and custom geoprocessing tools written for ArcMap may need to be modified to work in ArcGIS Pro. The geoprocessing tool Analyze Tools For Pro can highlight areas of code where changes must be made, and the Python 2to3 utility can automate much of the process. Learn more about Python migration.

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6. Explore with hands-on learning

In ArcGIS Pro, you'll have access to the newest advances in desktop GIS while still being able to do virtually anything you've done in ArcMap. However, you'll need to spend some time working with the software to get used to this new layout. ArcGIS Pro's intuitive design makes learning the software easy. If you're not sure where to start, there are a wide variety of lessons and documentation available to support and guide you throughout the process.

Get started using ArcGIS Pro

For a thorough introduction to ArcGIS Pro, consider watching this seminar for ArcMap users or completing this instructor-led course. Afterward, you can review the case studies at the beginning of this guide and follow the accompanying tutorials.

7. Learn more

Migrating to ArcGIS Pro will be a learning process for you and your team. The resources in this section will help you troubleshoot, answer questions, and find further training resources.

- More in-depth guidance for your transition to ArcGIS Pro is provided in the book *Switching to ArcGIS Pro from ArcMap* by Maribeth H. Price.

- For more hands-on learning experience, there are dozens of free tutorials available at Learn ArcGIS. A variety of educational resources can also be found at Esri Academy.

- Join the ArcGIS Pro community on Esri Community. Here, you can join discussions and read blog articles from a diverse group of ArcGIS Pro users and Esri staff. For more news direct from Esri teams, follow the ArcGIS Blog.

- Browse the ArcGIS Pro Resources page. This is your hub for all things ArcGIS Pro: news, learning materials, videos, documentation, and more.

Troubleshooting and support

Looking for assistance with ArcGIS Pro? The following resources are available:

- The ArcGIS Pro help is searchable by keyword and contains documentation for everything from program setup to individual tools.

- Consult the Esri Community and get specific answers from peers and members of Esri's ArcGIS Pro teams.

- If you've exhausted these options and still need help, contact Esri Technical Support for technical issues or Esri Customer Service for licensing questions.

View frequently asked questions in the ArcGIS Pro help.