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# ArcGIS Pro Migration Guide

Essential tasks for migrating your organization  
from ArcMap to ArcGIS Pro.



# Task checklist

TASK	COMPLETE
1. <a href="#">Get to know ArcGIS Pro</a>	<input type="checkbox"/>
2. <a href="#">Set up ArcGIS Online</a>	<input type="checkbox"/>
3. <a href="#">Assign ArcGIS Pro</a>	<input type="checkbox"/>
4. <a href="#">Download and install</a>	<input type="checkbox"/>
5. <a href="#">Move content to ArcGIS Pro</a>	<input type="checkbox"/>
6. <a href="#">Explore with hands-on learning</a>	<input type="checkbox"/>
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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. This guide will make the process manageable, and the benefits that come with ArcGIS Pro will make it well worth your while.

## Key characteristics of ArcGIS Pro

ArcGIS Pro is the latest component of ArcGIS Desktop. It isn't an update to ArcMap, but a totally 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 much more.

The advantages of migration to ArcGIS Pro include:

- **A modern, fast application:** ArcGIS Pro is a 64-bit, multi-threaded application. Its powerful processing and upgraded display engine allow for faster analysis and rendering.
- **An intuitive workspace:** Toolbars are replaced by a customizable ribbon which 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.
- 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 via the cloud or as a file. Alternatively, you can open ArcGIS Pro without a project to complete your data management tasks.
- **Easy sharing:** Thanks to portal integration, you can upload projects, maps, or layers to your portal at ArcGIS Online (included with your Desktop subscription)

or ArcGIS Enterprise. Content is also shared with you through the Portal: the [ArcGIS Living Atlas of the World](#) is an Esri-curated resource of data and basemaps, and millions of third-party datasets have been made available for free on ArcGIS Online. All this data is accessible from within the application.

- **ArcMap compatibility:** Maps, layouts, symbology, and models created in any ArcMap version can be ported into ArcGIS Pro with minimal changes. Python scripts can be easily updated to work in ArcGIS Pro. Once your projects are in ArcGIS Pro, you'll find all 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 to 3D models, ArcGIS Pro has a wide range of capabilities that are utilized across an equally diverse array of industries. With your ArcMap background, you probably already know what your organization plans to do with ArcGIS Pro, but the sampling of scenarios below will 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 is a bit of 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 can visualize public health trends such as [shrinking malaria rates](#), but the possibilities are nearly endless. ArcGIS Pro was used to make most of the recent entries in the [Maps We Love](#) gallery, Esri's curated collection of the best cartography.
- **Spatial Analysis:** In industries ranging from retail to natural resources to national security, ArcGIS Pro helps professionals use data to address complex spatial issues. See how conservation scientists can use machine learning to [predict important seagrass habitat](#).

- **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, as with this model of [proposed urban development](#).

**Note:** ArcGIS Pro has somewhat different system requirements than ArcMap. Before proceeding, make sure you meet them. [Get the details here](#).

## 2. Set up ArcGIS Online

If you have an ArcGIS Desktop subscription, you already have ArcGIS Pro licenses and an ArcGIS Online subscription. ArcGIS Online will provide the portal connecting you and your team members. The portal will enable sharing, give access to data, and allow team members to 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; you'll use Portal for ArcGIS for licensing and collaboration.

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 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.](#)

## 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 per-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 log 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 subscribers. 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.

## 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 subscription 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 from [My Esri](#).

### 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 use types using ArcGIS Online, organization members simply need to log 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, but you can allow each member to download their own software.

## 5. Move content to ArcGIS Pro

The process of bringing your ArcMap maps, scenes, and layouts into ArcGIS Pro is straightforward. You can also import your favorite styles and Python scripts. Depending on your organization structure, you may find these 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.](#)

## 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 orient yourself. ArcGIS Pro's intuitive design facilitates learning, and a wide variety of lessons and documentation is available to guide you.

### Get started using ArcGIS Pro

For a thorough introduction to ArcGIS Pro, consider watching this [seminar for ArcMap users](#) or completing this [introductory course](#). Then, revisit 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 courses.

- 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 lessons available at [Learn ArcGIS](#). A variety of educational resources can also be found at [Esri Training](#).
- 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 even 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? Walk through this list.

- The ArcGIS Pro [Help](#) is searchable by keyword and contains documentation for everything from program set-up 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.

## FAQ

### **How close is ArcGIS Pro to having the same functionality as ArcMap?**

Very close. Esri teams have been working for several years to close the remaining gaps between ArcMap and ArcGIS Pro, while simultaneously advancing Pro with completely new functionalities. You can see a list of tools that are not available in ArcGIS Pro [here](#).

### **Will ArcGIS Pro replace ArcMap?**

Yes, eventually. Esri is now focusing on developing ArcGIS Pro as its main desktop GIS but will continue to maintain ArcMap for years to come.

### **If I have ArcGIS Desktop, what license do I have for ArcGIS Pro?**

Every ArcGIS Desktop license comes with an ArcGIS Pro add-on license at the same level (basic, standard, or advanced) as you originally selected for ArcMap, as well as ArcGIS Pro equivalents of any extensions. For example, if your organization has three Desktop licenses with Standard level ArcMap and the Spatial Analyst extension, you also have three Standard level ArcGIS Pro licenses with Spatial Analyst. The add-on and extensions can be used with a Creator ArcGIS Online user type, (also included with ArcGIS Desktop) or converted to Single Use or Concurrent Use.

### **Can I bring an ArcGIS Pro project into ArcMap?**

Unfortunately, ArcGIS Pro projects are not backward compatible with ArcMap. However, the two programs can use the same data and thus collaborate through a shared data source.

### **Can I run ArcMap and ArcGIS Pro on the same machine?**

Yes. You can keep any version of ArcMap on your computer and still download and use ArcGIS Pro.