

Publishing to AGOL

Key Concepts

DRAFT

Provided by:

GO!NC Maintenance & Support Team
NCDOT, GIS Unit
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Publishing to ArcGIS Online: Key Concepts

Introduction

This document provides information about important key concepts for AGOL Publishers and for publishing to AGOL.

Prior to beginning publishing activities, it is highly recommended that AGOL Publishers also review the following documents:

Publishing to AGOL: Standards, Guidelines, and Recommendations

Publishing to AGOL: How-to Become an AGOL Publisher

Publishing to AGOL: Creating Data for AGOL

Publishing to AGOL: Using ArcGIS Desktop 10.1

What is AGOL

AGOL, is an acronym for ArcGIS Online. ArcGIS Online is a service provided by Esri, Inc. that allows anyone to publish data and maps to Esri's cloud and manage that data and information. Anyone can publish maps and data to Esri's cloud.

From Esri's online help:

ArcGIS Online is a complete, cloud-based, collaborative content management system that lets organizations manage their geographic information in a secure and configurable environment. The platform provides an on-demand infrastructure for creating web maps, web-enabling your data, sharing your map, data, and applications, and managing content and multiple users from your organization.

More information about ArcGIS Online (AGOL) can be found here:

http://resources.arcgis.com/en/help/main/10.1/#/What_is_ArcGIS_Online/01w100000045000000/

What is NCDOT AGOL

NCDOT AGOL is NCDOT's presence on AGOL. NCDOT purchased a subscription to AGOL to provide the infrastructure and tools to empower NCDOT business units to publish, share, and manage their own data in a structured environment. Key features include:

- A purchased subscription to Esri's ArcGIS Online service.
- Single cloud-based storage repository for NCDOT's published data and maps
- Single web-based access point to the Organization's published data and maps
- Control access to data through sharing levels and groups
- How much we can publish is limited by the organization's subscription

The NCDOT AGOL access point is ncdot.maps.arcgis.com.

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NCDOT AGOL Subscription

The NCDOT AGOL Subscription consists of:

1. A home site on AGOL for NCDOT
2. A block of usage credits

Credits are used any time services or maps are created, data is uploaded, or published items are used.

As a publisher, it is important to be conscious of credit usage when designing and publishing maps and data.

What is a Publisher Account

A publisher account is an account within AGOL with the permissions that allow the owner of the account to upload, maintain, and share GIS data. An account will have a user name and password.

A publisher is typically a representative of a business unit with the responsibility of developing data and maps and publishing them to AGOL. Publishers may or may not have knowledge and experience in GIS, but typically have some proficiency in GIS data and Esri's ArcGIS Desktop products.

Refer to **Publishing to AGOL: How-to Become an AGOL Publisher** for more information about how to become an AGOL publisher

What is the Business Unit Publisher Account

What is it?

A Business Unit Publisher Account is a special type of publisher account created by NCDOT. It is used to "officially" publish maps and data in AGOL on behalf of the business unit.

The format for the Business Unit Publisher Account is: <business unit>.NCDOT.GOV

For example: PDEA.NCDOT.GOV, TSU.NCDOT.GOV, TPB.NCDOT.GOV

Why do we need it?

Within AGOL, anyone in the world can publish data and maps and attach any title, description, and tag to it. As a result, it is difficult to find maps and data that are "officially" published by NCDOT; anyone can add "NCDOT" to their map title, for example.

To see this, go to www.arcgis.com/home and enter "NCDOT" in the search box. You'll see that the first page or so lists services published by NCDOT (indicated by the NCDOT.GOV owner). But, towards the end of page 2 and beyond, the author is really unknown. However, "NCDOT" is still mentioned somewhere.

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So, by publishing their maps and data using the Business Unit Publisher Account, the business unit is communicating, the best that we can within AGOL, that “this is official.”

Who owns it?

The Business Unit Publisher Account is owned by the business unit. The person who is responsible for publishing the business unit’s data and maps will maintain the account (e.g. account description, password) and use the account when publishing final products.

Refer to **Publishing to AGOL: How-to Become an AGOL Publisher** for information about how to set up a Business Unit Publisher Account.

Sharing AGOL Services

“Publishing” to AGOL is a multistep process and an AGOL service is not completely published until it is shared. There are three levels of sharing within AGOL:

1. Everyone (public) – Everyone in the world can see the data/maps. This level is primarily how we share production-ready services in AGOL.
2. North Carolina Department of Transportation – Only users who are members of the organization can see the data/maps.
3. Specific Groups – Only users who are members of the group can see the data/maps; even if they are members of the Organization.

Important: If data/maps are not shared to the “Public,” a user must be registered with the Organization to view them.

Remember, others publishers and users may use your feature services in their maps. So metadata can be very useful in communicating proper use of the published information.

Tip: You may want to get into the habit of reviewing how others are using your feature services to ensure they are used correctly.

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Groups

Groups within AGOL can be used to organize services and maps. However, remember that access to services and maps are controlled at the service and map. A user does not have to go through a group to get to the service.

The following documents the groups currently configured in AGOL.

General Use Groups

Featured Maps and Apps (default by AGOL)

This is a public group that is featured on the home page. This group contains services and maps that we are showcasing or are very important. Most business units will share to this group, but not everything uploaded will go in this group.

Since all content available through this group should always be available through NCDOT Gallery, this group is NOT a featured group except on the organization's home page.

For administration, only the GIS Unit administrators can add or remove contents for this group.

NCDOT Gallery

A public group containing what is listed when a user clicks on the "Gallery" button in AGOL and is the default view when accessing content through other clients. This would contain everything in Featured Maps and Apps as well as other services and maps that we want users to easily find.

This group is available as a featured group which means anyone accessing the organization's site can see the group.

For administration, only the GIS Unit administrators can add or remove contents for this group.

NCDOT Services

A public group containing services that support web maps in the Gallery and Featured Maps and Apps but that we may not want to be quite so easy to find. For example, we have several web maps that are made up of multiple services and we'd prefer users use the web map and not the service. By placing the web map and services in the Gallery, as we have now, it is not always clear what the user should open. So, this group can be used to kind of hide the supporting services.

Additionally, this would give a user (publisher or user) an easy way to get access to a list of available AGOL services for their use.

This group is available as a featured group which means anyone accessing the organization's site can see the group.

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For administration, all publishers can add or remove contents for this group.

NCDOT Public Review

A public group into which services and maps that require review by someone outside the organization (that is, without an account) are placed. Using this group prevents review or test services from being exposed through the more available Gallery or other group.

This group is NOT available as a featured group so cannot be easily found by users.

For administration, all publishers can add or remove contents.

NCDOT Internal Review

An organization-level group into which services and maps that require review by someone with an organization account and that should not be exposed to anyone outside of the organization are placed. Using this group prevents review or test services from being exposed through the more available Gallery or other group.

This group is NOT available as a featured group so cannot be easily found by users.

For administration, all publishers can add or remove contents.

Specialty Groups

NCDOT Strategic Planning Office of Transportation (SPOT)

A private group used by SPOT for the review and presentation of services and maps to a specific user group. Only members of the group can view the contents.

Metadata

A basic set of metadata is required for all services published through AGOL. Make sure your metadata is ready before you begin the publishing process. You can add metadata after the service is published, but having it ready when publishing ensures everything happens together.

Refer to **Publishing to AGOL: Standards, Guidelines, and Recommendations** for more information about AGOL metadata standards.

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AGOL Feature Service vs Web Map

Feature Service

A Feature Service in AGOL provides users access to symbology and attributes of one or more data sets published to AGOL.

Since the recommended technique for publishing AGOL data is through Esri's ArcMap product, for the purpose of this document, a feature service can also be thought of as an ArcMap .mxd project. All layers in the .mxd are considered part of one feature service.

More information about Feature Services can be found through Esri's online help:

http://resources.arcgis.com/en/help/main/10.1/#/What_is_a_feature_service/0154000002w8000000/

Additionally, Feature Services are supported by most clients except SDV 1.0.

Web Map

An AGOL Web Map is similar in function and appearance to a Feature Service, but is created using AGOL's online map viewer mapping template. You can add multiple feature services to a web map, manipulate some symbology and attributes, and save and share the web map.

Web maps are not supported in some clients or have limitations in some clients. For example, you cannot open more than one web map at a time in Esri ArcMap.

Tip: Create a more generic symbology and attribute configuration for your feature services and manipulate it for more specific uses through web maps.

Tiled Map Service vs Feature Service

Feature Service

Feature Service provides access to symbology and attributes from various client applications.

Tiled Map Service

Tiled Map services provide only an image of the data layers. Tiled map services create very large data sets in AGOL and require some specialized knowledge about tiling schemes.

Tiled map services should be used only in special situations and should be reviewed by the GIS Unit and Publishers group prior to deployment to AGOL.

When publishing Esri ArcMap .mxd projects to AGOL, the default setting is Tiled Map Service. It is very important that these be changed each time you publish a service.

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Backup/Recovery

Since the source documents of services published in AGOL are not actually stored in AGOL, it is recommended that the .mxd and data be stored in a standard location (e.g. file server folder) such that a simple upload of the service can be performed if needed.

It is also recommended that the AGOL-specific metadata be saved to a document and stored with the .mxd. This way, everything is together should the service need to be recreated.

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