ArcGIS Data Appliance: Esri Vector Basemaps

Table of Contents

Get started

What is ArcGIS Data Appliance: Esri Vector Basemaps?

Esri Vector Basemaps provides detailed maps from industry-leading data providers that you can use with your ArcGIS and web applications. Vector tiles enable dynamic cartography and provide the flexibility to create your own basemap style. The vector basemaps are available as tile layers, that can be added to existing maps as either a basemap or an overlay layer.

Esri Vector Basemaps provides a content solution that works with a Standard or Advanced configuration of ArcGIS Enterprise. It is included with ArcGIS Data Appliance 7.2 with World Standard, World Advanced, North America Standard, and North America Advanced product options. It can also be licensed as a stand-alone option.

Note:
This feature is not included with the World Basic product option.

The Esri Vector Basemaps help includes the following topics:
- Esri Vector Basemaps content
- Directory of map styles
- System requirements
- Set up Esri Vector Basemaps
- Information on how to use Esri Vector Basemaps
- Methods to customize and localize Esri Vector Basemap styles
- Reference information including FAQs, Troubleshooting, and Support

Esri Vector Basemaps content

Esri Vector Basemaps is delivered on a USB flash drive loaded with two vector tile packages, styles, and style publishing toolboxes (`.tbx` file). This version includes the following:

- Installation vector tile packages that you upload to your ArcGIS Enterprise portal using ArcGIS Pro and publish as a hosted vector tile service on your hosting server:
  - `Esri_Vector_Basemap_DA72_Install.vtpk`—A vector tile package for customers who want to use Web Mercator Auxiliary Sphere (WMA).

  - `Esri_Vector_Basemap_GCS_DA72_Install.vtpk`—A vector tile package for customers who want to use Esri Vector Basemaps in WGS84 Geographic (GCS). This `.vtpk` file uses the WGS84 Geographic, version 2 tiling scheme.

- Map styles (for each projection) that you publish as vector tile layers to your Enterprise portal to use in your maps and apps or customize. These styles require resources included in the VectorBasemapStyles folder for publishing.

- Vector Style publishing tools for managing your vector basemap tile layers (map styles) in your Enterprise portal:
  - `VectorStylePublisher.tbx`—This toolbox is used to create vector basemap tile layers.

  - `VectorStyleUpdater.tbx`—This toolbox is used to update existing vector basemap tile layers.

- Map style text files to help you with map style updates:
  - `DA72_WMA_StyleUpdater_template.csv`—This file manages WMA styles.

  - `DA72_GCS_StyleUpdater_template.csv`—This file manages GCS styles.

- Documentation file `data_appliance_esri_vector_basemaps.pdf` that includes instructions for getting started, setup, using Esri Vector Basemaps, and more.

Note:

Do not use the Esri_Vector_Basemap_DA72_Install and Esri_Vector_Basemap_GCS_DA72_Install vector tile packages for anything other than publishing the tile layer (hosted). Once you publish the tile layer to your Enterprise portal, do not share the `.vtpk` files publicly (Everyone), as distribution of these items outside of your organization is not permitted.

What's new

This update of ArcGIS Data Appliance: Esri Vector Basemaps contains two updated vector tile packages (`.vtpk` files) used to publish as hosted vector tile services in your ArcGIS Enterprise portal. One is in Web Mercator Auxiliary Sphere (WMA) projection and the other is in the WGS84/GCS (GCS) tiling scheme. Map styles can be published as vector tile layers for each option.

These vector tile packages contain updated global data from a variety of sources including HERE and OpenStreetMap, as well as local authoritative data from the Esri Community Maps Program.
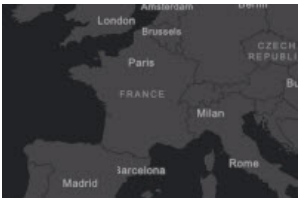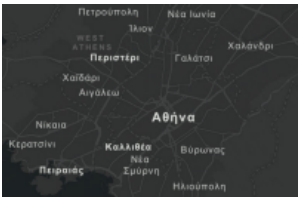
All of the Esri Vector Basemaps vector tile layers (map styles) include cartographic styling refinements.

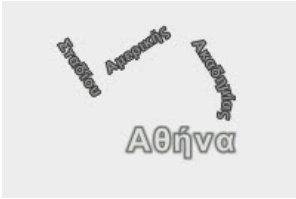Existing users of the vector basemaps in Data Appliance can update the hosted tile layer as well as 50 styles from version 7.1. The VectorStyleUpdater toolbox uses a template of existing item IDs and can be run in ArcGIS Pro.
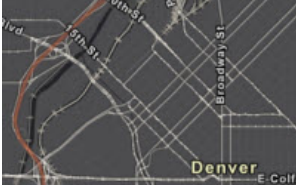
New users can publish any or all of the full set of 50 styles.

Directory of map styles
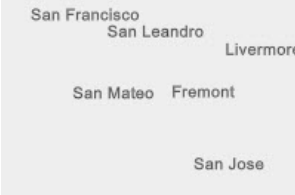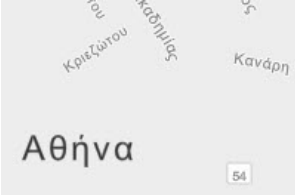
Esri Vector Basemaps includes the following 50 vector tile layers. The styles can be published in Web Mercator Auxiliary Sphere (WMA) projection or WGS84/GCS (GCS) tiling scheme.
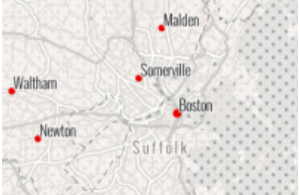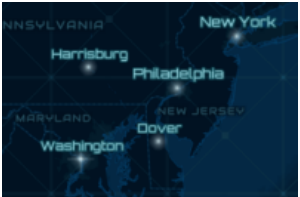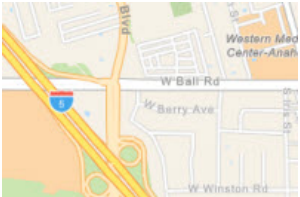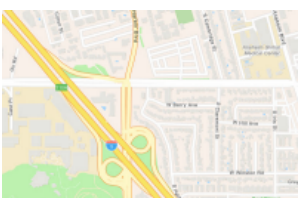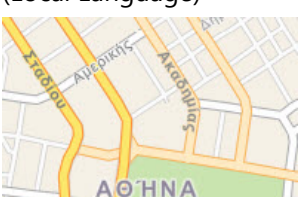
Layer name and thumbnail	Style folder name	Description
Charted Territory	chartedterritory	The Charted Territory vector tile layer provides a detailed basemap featuring a geopolitical style reminiscent of a printed atlas plate or a school classroom wall map. This layer is designed for use with the World Hillshade basemap.
Colored Pencil	coloredpencil	The Colored Pencil vector tile layer is presented in the style of hand-drawn, colored pencil cartography.
Community	community	The Community vector tile layer provides a detailed basemap featuring strong colors to emphasize large scale features.
Dark Gray Canvas	canvasdark	The Dark Gray Canvas vector tile layer provides a detailed basemap of the world featuring a dark neutral background style with minimal colors, labels, and features.
Dark Gray Canvas (Community Maps)	canvasdarkcommunity	The Dark Gray Canvas (Community Maps) vector tile layer provides a detailed basemap featuring a dark neutral background style with minimal colors, labels, and features with select roads provided by community contributors.
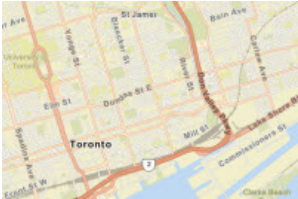
Layer name and thumbnail	Style folder name	Description
Dark Gray Canvas Base	canvasdarkbase	The Dark Gray Canvas Base vector tile layer provides a detailed basemap of the world featuring a dark neutral background style with minimal colors, labels, and features. This layer is designed for use with the Dark Gray Canvas Reference layer.
Dark Gray Canvas Reference	canvasdarkreference	The Dark Gray Canvas Reference vector tile layer provides a city reference overlay of the world designed for use over a dark neutral background style with minimal colors, labels, and features. This layer is designed for use with the Dark Gray Canvas Base layer.
Dark Gray Canvas Reference (Local Language)	canvasdarkreferencelocallanguage	The Dark Gray Canvas Reference (Local Language) vector tile layer provides a detailed reference label layer. Labels are in local languages at large scale. This layer is designed for use with the Dark Gray Canvas Base layer.
Human Geography Base	humangeographybase	The Human Geography Base vector tile layer provides a detailed vector basemap of the world symbolizing the land with a light gray, neutral background style.
Human Geography Dark Base	humangeographydarkbase	The Human Geography Dark Base vector tile layer provides a simple vector basemap of the world symbolizing the land with a very dark gray, neutral background style.
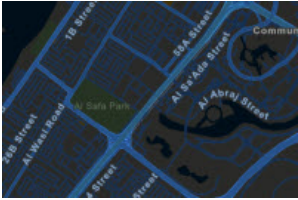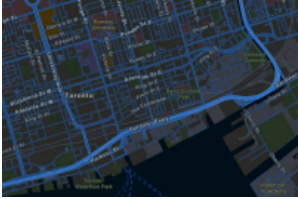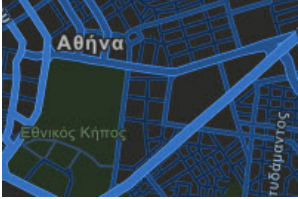
Layer name and thumbnail	Style folder name	Description
Human Geography Dark Detail	humangeographydarkdetail	The Human Geography Dark Detail vector tile layer provides a detailed basemap with a dark monochromatic style and content adjusted to support human geography information. This layer is a detailed reference layer that includes administrative boundaries, roads, and highways.
Human Geography Dark Label	humangeographydarklabel	The Human Geography Dark Label vector tile layer provides a detailed basemap with a dark monochromatic style and content adjusted to support human geography information. The map includes labels for highways, major roads, minor roads, water features, cities, landmarks, and administrative boundaries.
Human Geography Detail	humangeographydetail	The Human Geography Detail vector tile layer provides a detailed basemap with a monochromatic style and content adjusted to support human geography information.
Human Geography Label	humangeographylabel	The Human Geography Label vector tile layer provides a detailed vector basemap for world labels designed to draw attention to the thematic content.
Hybrid Reference Layer	hybrid	The Hybrid Reference Layer vector tile layer provides a detailed reference layer of the world designed to be overlaid on imagery.

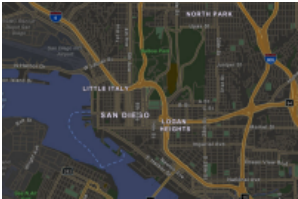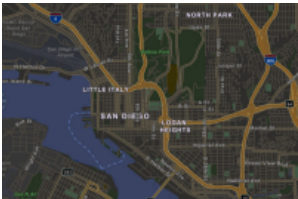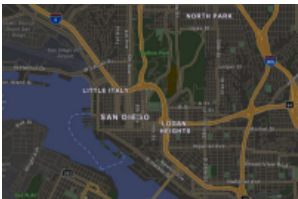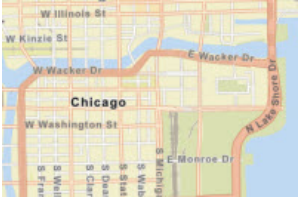| Layer name and thumbnail	Style folder name	Description
Hybrid Reference Layer (Community Maps)	hybridreferencecommunity	The Hybrid Reference Layer (Community Maps) vector tile layer provides a detailed reference layer of the world designed to be overlaid on imagery with select roads provided by community contributors.
Hybrid Reference Layer (Local Language)	hybridreferencelocallanguage	The Hybrid Reference Layer (Local Language) vector tile layer provides a detailed reference layer, including transportation and labels of the world. Labels are in local languages at large scale. This layer is designed for use with the World Imagery basemap.
Light Gray Canvas	canvaslight	The Light Gray Canvas vector tile layer provides a detailed vector basemap of the world symbolized with a light gray, neutral background style with minimal colors, labels, and features that is designed to draw attention to the thematic content.
Light Gray Canvas (Community Maps)	canvaslightcommunity	The Light Gray Canvas (Community Maps) vector tile layer provides a detailed basemap featuring a light neutral background style with minimal colors, labels, and features. Select roads are provided by community contributors.
Light Gray Canvas Base	canvaslightbase	The Light Gray Canvas Base vector tile layer provides a detailed basemap of the world featuring a light neutral background style with minimal colors, labels, and features. This layer is designed for use with the Light Gray Canvas Reference layer.
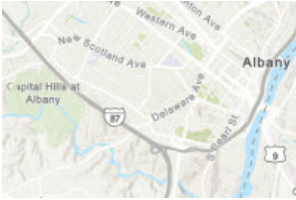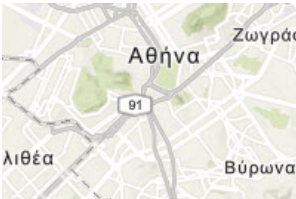
Layer name and thumbnail	Style folder name	Description
Light Gray Canvas Reference 	canvaslightreference	The Light Gray Canvas Reference vector tile layer provides a detailed reference overlay of the world featuring a light neutral background style with minimal colors, labels, and features. This layer is designed for use with the Light Gray Canvas Base layer.
Light Gray Canvas Reference (Local Language) 	canvaslightreferencelocallanguage	The Light Gray Canvas Reference (Local Language) vector tile layer provides a detailed reference label layer. Labels are in local languages at large scale. This layer is designed for use with the Light Gray Canvas Base layer.
Mid-Century 	midcentury	The Mid-Century vector tile layer provides a customized vector layer of the world symbolized with a unique mid-century styled map. It takes its inspiration from the art and advertising of the 1950s with unique fonts. The symbols for cities and capitals have an atomic slant to them.
Modern Antique 	modernantique	The Modern Antique vector tile layer provides a customized vector layer of the world symbolized with a unique antique-styled map and a modern flair—including the benefit of multiscale mapping.
National Geographic Style 	natgeostyle	The National Geographic Style vector tile layer provides a detailed basemap featuring boundary ribbons and other map content. This layer is designed for use with the World Hillshade relief basemap for added context.

Layer name and thumbnail	Style folder name	Description
National Geographic Style (Local Language) National Geographic Style thumbnail	natgeostylelocallanguage	The National Geographic Style (Local Language) vector tile layer provides a detailed basemap featuring boundary ribbons and other map content. This layer is designed for use with the World Hillshade relief basemap for added context. Labels are in local languages at large scale.
Newspaper Newspaper thumbnail	newspaper	The Newspaper vector tile layer provides a customized vector layer of the world symbolized with a unique newspaper-styled map. It has a black and white appearance with select features highlighted in red. Many of the area fills have halftone patterns commonly found in traditional newspaper printing.
Nova Nova thumbnail	nova	The Nova vector tile layer provides a detailed basemap of the world featuring a dark background with glowing blue symbology inspired by the ArcGIS.com splash screen. The Nova vector tile layer emulates this color scheme with a grid pattern across the ocean and stripes or square stippled patterns for land use features visible at larger scales.
World Navigation Map World Navigation Map thumbnail	navigation	The World Navigation Map vector tile layer provides a detailed basemap of the world featuring a custom navigation map style.
World Navigation Map (Community Maps) World Navigation Map (Community Maps) thumbnail	navigationcommunity	The World Navigation Map (Community Maps) vector tile layer provides a detailed basemap of the world featuring a custom navigation map style with select roads provided by community contributors.
World Navigation Map (Local Language) World Navigation Map (Local Language) thumbnail	navigationlocallanguage	The World Navigation Map (Local Language) vector tile layer provides a detailed basemap of the world featuring a custom navigation map style. Labels are in local languages at large scale.

Layer name and thumbnail	Style folder name	Description
World Navigation Map (Dark Mode)	navigationdark	The World Navigation Map (Dark Mode) vector tile layer provides a detailed basemap featuring a dark navigation map style.
World Navigation Map (Dark Mode - Community Maps)	navigationdarkcommunity	The World Navigation Map (Dark Mode - Community Maps) vector tile layer provides a detailed basemap featuring a dark navigation map style with select roads provided by community contributors.
World Navigation Map (Dark Mode - Local Language)	navigationdarklocallanguage	The World Navigation Map (Dark Mode - Local language) vector tile layer provides a detailed basemap featuring a dark navigation map style. Labels are in local languages at large scale.
World Ocean Reference	oceanreference	The World Ocean Reference vector tile layer provides a detailed basemap featuring a custom ocean style. This layer designed to be used with the World Ocean Base raster layer.
World Street Map	streetmap	The World Street Map vector tile layer provides a detailed basemap of the world featuring a classic Esri street map style.

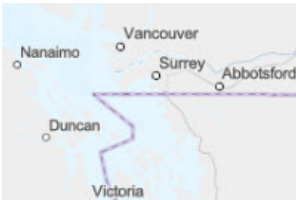| Layer name and thumbnail	Style folder name	Description
World Street Map (Community Maps)	streetmapcommunity	The World Street Map (Community Maps) vector tile layer provides a detailed basemap of the world featuring a classic Esri street map style with select roads provided by community contributors.
World Street Map (Local Language)	streetmaplocallanguage	The World Street Map (Local Language) vector tile layer provides a detailed basemap of the world featuring a classic Esri street map style. Labels are in local languages at large scale.
World Street Map (Night)	streetmapnight	The World Street Map (Night) vector tile layer provides a detailed basemap of the world featuring a custom nighttime street map style.
World Street Map (Night - Community Map)	streetmapnightcommunity	The World Street Map (Night - Community Map) vector tile layer provides a detailed basemap of the world featuring a custom nighttime street map style with select roads provided by community contributors.
World Street Map (Night-Local Language)	streetmapnightlocallanguage	The World Street Map (Night-Local Language) vector tile layer provides a detailed basemap of the world featuring a custom nighttime street map style. Labels are in local languages at large scale.

Layer name and thumbnail	Style folder name	Description
World Street Map (with Relief)	streetmaprelief	The World Street Map (with Relief) vector tile layer provides a detailed basemap of the world featuring a classic Esri street map style designed for use with a relief map.
World StreetMap (with Relief - Community Maps)	streetmapreliefcommunity	The World Street Map (with Relief - Community Maps) vector tile layer provides a detailed basemap of the world featuring a classic Esri street map style designed for use with a relief map. Select roads are provided by community contributors.
World Terrain Base	terrainlabelsbase	The World Terrain Base vector tile layer displays minimal map content: water and land fill, water lines, and roads. This layer is designed to be used as a base layer with the World Terrain Reference layer and World Hillshade basemap.
World Terrain Reference	terrainlabelsreference	The World Terrain Reference vector tile layer displays minimal map content: populated place names, administrative areas, and water labels with boundary lines. This layer is designed to be used as a reference overlay with the World Terrain Base layer and the World Hillshade basemap.
World Terrain Reference (Local Language)	terrainlabelsreferencelocallanguage	The World Terrain Reference (Local Language) vector tile layer provides a detailed reference layer of the world. Labels are in local languages at large scale. This layer is designed for use with the World Terrain Base layer and the World Hillshade basemap.

Layer name and thumbnail	Style folder name	Description
World Terrain with Labels	terrainlabels	The World Terrain with Labels vector tile layer provides a detailed basemap of the world symbolized with populated places, administrative areas, boundary lines, and roads. The minimal features and styling are designed to draw attention to the thematic content.
World Terrain with Labels (Community Maps)	terrainlabelscommunity	The World Terrain with Labels (Community Maps) vector tile layer provides a detailed basemap of the world symbolized with populated places, administrative areas, boundary lines, and roads. The minimal features and styling are designed to draw attention to the thematic content. Select roads are provided by community contributors.
World Topographic Map	worldtopomap	The World Topographic Map vector tile layer provides a detailed basemap of the world featuring a classic Esri topographic map style designed for use with a relief map.
World Topographic Map (Local Language)	worldtopomaplocallanguage	The World Topographic Map (Local Language) vector tile layer provides a detailed basemap of the world featuring a classic Esri topographic map style. Labels are in local languages at large scale. This layer is designed for use with the World Hillshade basemap.

Frequently asked questions

Listed below are frequently asked questions and answers regarding ArcGIS Data Appliance: Esri Vector Basemaps.

- How does ArcGIS Data Appliance: Esri Vector Basemaps work?
- How do I set up Esri Vector Basemaps?
- Where does the data come from?
- Does Esri Vector Basemaps include imagery?
- What services are available?
- Are there any use restrictions when using Esri Vector Basemaps?
- Where can I find more information about editing custom styles?
- Where can I find more information about using basemaps in my Portal for ArcGIS Map Viewer?
- What if I need further assistance?

How does ArcGIS Data Appliance: Esri Vector Basemaps work?

ArcGIS Data Appliance: Esri Vector Basemaps is published as a hosted vector tile service from your Enterprise portal along with several dozen map styles that you can share, use, and customize within your organization. For more information on vector basemaps and the differences between raster and vector tile layers, see Tile layers in the Portal for ArcGIS help.

How do I set up Esri Vector Basemaps?

Refer to the instructional video and help documentation on the Esri Vector Basemaps Additional resources section of the ArcGIS Data Appliance 7.2 website to learn how to set up and use Esri Vector Basemaps.

Where does the data come from?

The content used with Esri Vector Basemaps is the same content you see online for Esri Vector Basemaps. The data sources are included as part of the **Credits** in the map styles you publish to your portal.

Does Esri Vector Basemaps include imagery?

No. Esri Vector Basemaps does not include raster basemaps or imagery.

What services are available?

Esri Vector Basemaps only requires one service published as a hosted vector tile layer from your portal. Other maps are included as map styles that you publish to your portal as tile layers. See Directory of map styles for the vector tile layers included with Esri Vector Basemaps.

Are there any use restrictions when using Esri Vector Basemaps?

The data is provided by multiple third-party data vendors under license to Esri for inclusion in ArcGIS Data Appliance for use with Esri software. Redistribution rights are granted by Esri and the data vendor for hard-copy renditions or static, electronic map images (for example, `.gif` and `.jpeg` files) that are plotted, printed, or publicly displayed with proper metadata and source or copyright attribution to the respective data vendor or vendors. For copyright and attribution information, see **Credits** for a specific map published to your portal.

Where can I find more information about editing custom styles?

View the Working with and Customizing Esri Vector Basemaps: The Basics post on the ArcGIS Blog website for more information about editing custom styles.

Where can I find more information about using basemaps in my Portal for ArcGIS Map Viewer?

See Customize basemaps and Choose basemap in the Portal for ArcGIS help for more information about using basemaps in your Portal for ArcGIS Map Viewer.

What if I need further assistance?

For all questions, feedback, troubleshooting, and to report issues, contact Esri Technical Support.

System requirements

ArcGIS Data Appliance: Esri Vector Basemaps

Esri Vector Basemaps system requirements

The following software components and prerequisites are required before you deploy Esri Vector Basemaps:
- ArcGIS Pro Basic, Standard, or Advanced 2.5.1 or later

- An ArcGIS Enterprise 10.6.1, 10.7, 10.7.1,10.8, or 10.8.1 deployment meeting the base ArcGIS Enterprise deployment specifications.

> 📒 **Note:**
> ArcGIS Enterprise 10.6.1 deployments also require the ArcGIS Server 10.6.1 Vector Tile Layers Patch. This patch addresses issues related to the display of hosted vector tiles, ensuring that vector tile layers hosted in ArcGIS Enterprise zoom in successfully when viewed in the Map Viewer.

> Authentication exclusions—The Linux public key infrastructure (PKI) configuration is not supported.

Before you start

Before you begin your deployment, do the following:

1. Check with your portal administrator to verify or request the following:
   - A Portal for ArcGIS account with the Publisher or Administrative role enabled.

   - A named user license enabled for ArcGIS Pro Standard or Advanced.

   - A minimum of 64 GB of available space per `.vtpk` file for your portal content directory, 32 GB of available space for your hosting server's jobs directory, and 32 GB of available space for your hosting server's cache directory.

2. Check with your ArcGIS Server administrator to verify or request the following:
   - A minimum of 64 GB of available disk space per `.vtpk` file on your ArcGIS Server.

   - Enough pooling time for your ArcGIS Server. Successfully publishing a large `.vtpk` file as a hosted vector tile service requires more time for the web client to communicate with ArcGIS Server. Check with your ArcGIS Server administrator to confirm that the **The maximum time a client can use a service** option is set to 21,600 seconds.

     The following steps walk you through this process for ArcGIS Server 10.6.1, 10.7, 10.7.1, 10.8, or 10.8.1:

     - Open a new browser and access ArcGIS Server Manager, for example, `https://PORTALNAME/server/manager`, and sign in.

     - Click **Site (root)** > **System** > **PublishingTools**.

     - Click **Pooling**, and under **Specify Service Timeouts**, change the value for **The maximum time a client can use a service** from 3,600 seconds (1 hour) to `21600` seconds (6 hours).
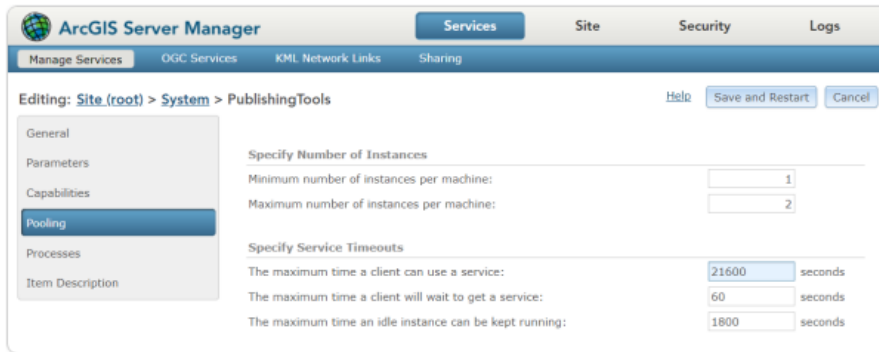
- Click **Save and Restart**.

- Sign out of ArcGIS Server Manager.

3. ArcGIS Data Appliance 7.2: Esri Vector Basemaps is delivered on a USB flash drive loaded with vector tiles, styles, and style publishing tools. Copy all contents of the USB flash drive to your local computer.

Setup

Set up ArcGIS Data Appliance: Esri Vector Basemaps

Instructions for how to set up ArcGIS Data Appliance: Esri Vector Basemaps depend on whether you are a new or an existing user, as follows:

- New user

- Existing user

When you've completed setting up ArcGIS Data Appliance: Esri Vector Basemaps, your vector basemaps will be ready to use.

Set up Esri Vector Basemaps (new user)

For information about what's included with Esri Vector Basemaps, see Esri Vector Basemaps content.

📄 **Note:**
Before you proceed, review the system requirements to confirm that you can deploy Esri Vector Basemaps on your system.

Once you confirm that the system requirements are met, the workflow to set up Esri Vector Basemaps is as follows:

1. Upload the package to your ArcGIS Enterprise portal
2. Publish the hosted tile layer (service)
3. Publish tile layers (map styles)
4. Share tile layers (map styles)

📄 **Note:**
Esri Vector Basemaps includes two vector tile packages (`.vtpk`) on the flash drive. The `Esri_Vector_Basemap_DA72_Install.vtpk` file is in the Web Mercator Auxiliary Sphere (WMA) projection. The `Esri_Vector_Basemap_GCS_DA72_Install.vtpk` file is in the WGS84/GCS (GCS) tiling scheme. The following steps reflect the sharing process of the WMA vector tile package. To share the GCS package, you need to enter the correct `.vtpk` file name for the input package as well as take the GCS naming into consideration when publishing the hosted tile layer. The Esri Vector Basemaps styles in the GCS directory already take the GCS naming into account in the metadata files.

Upload the package to your ArcGIS Enterprise portal

First, you need to copy the entire USB flash drive contents to your local computer if you have not already done so.

1. Start ArcGIS Pro, sign in to your ArcGIS Enterprise portal, and select **Set As Active Portal**.

📄 **Note:**
You must sign in and connect to your portal before you proceed. You cannot enter your portal user name and password when using the Share Package tool later in these instructions. The tool obtains your credentials from ArcGIS Pro.

2. Create a project.

3. Select the **Analysis** tab, and select **Tools** in the **Geoprocessing** group.

The **Geoprocessing** pane appears.

4. In the **Geoprocessing** pane, search for Share Package, and select the **Share Package (Data Management Tools)** tool from the search results.

5. In the **Share Package** dialog box, provide the following:
   a. For **Input Package**, provide the path to the vector tile package, for example, C:\Projects\ Esri_Vector_Basemaps_7.2\VTPK\Esri_Vector_Basemap_DA72_Install.vtpk.

   b. For **Summary**, type Esri Vector Basemap for Data Appliance 7.2.

   c. For **Tags**, type 7.2, v2.

   ⚠ **Caution:**

   Do not change the **Credits** parameter value and do not check the boxes to share with **Everybody** or **Within Organization**.

6. Select **Run**.

   It will take approximately 30–120 minutes to upload the package to your portal. A **Share Package Uploaded Successfully** message appears in the **Share Package** window once the upload is complete.

7. Through your portal, confirm that the `.vtpk` file uploaded successfully.

   a. Open a web browser and sign in to your portal.
   The Esri_Vector_Basemap_DA72_Install tile package is located in the root folder.

   b. Confirm that the **Size** value of the tile package is 31,672 MB and **Shared with** indicates that the item is not shared.

   Your item should look like the following:

> 📙 **Note:**
> If the size is not 31,672 MB, delete the item and upload the Esri_Vector_Basemap_DA72_Install tile package again. You may want to discuss the problem with your portal administrator.
>
> For the Esri_Vector_Basemap_GCS_DA72_Install tile package, if the size is not 31,264 MB, delete the item and upload it again.
>
> See the Troubleshooting Esri Vector Basemaps topic for more information.

Publish the hosted tile layer (service)
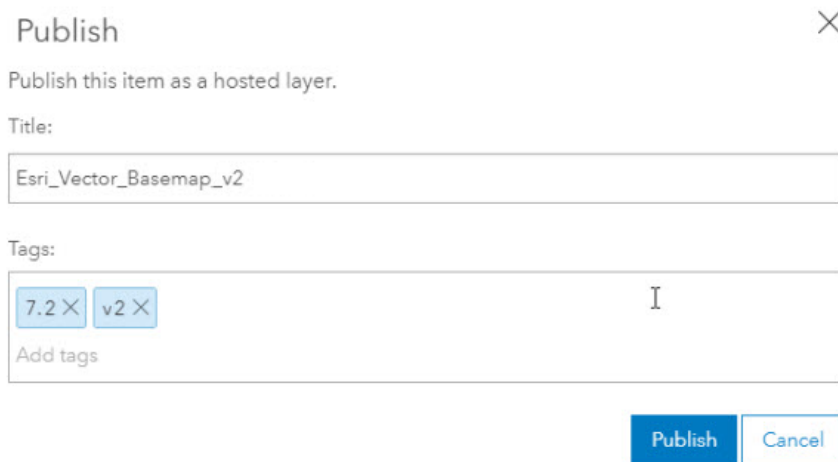
Now you'll publish the Esri Vector Basemap hosted tile layer service from your portal.

1. Sign in to your ArcGIS Enterprise portal.

📄 **Note:**

Your account must have publishing credentials.

2. In **My Content**, go to the item page for the vector tile package (`Esri_Vector_Basemap_DA72_Install.vtpk`) you uploaded to your portal.

3. Click **Publish**, change the title to `Esri_Vector_Basemap_v2`, and click **Publish** again.

Publish	✕
Publish this item as a hosted layer.	

Title:

Esri_Vector_Basemap_v2

Tags:

7.2 ✕   v2 ✕

Add tags

Publish   Cancel

📄 **Note:**

For the GCS tile package (`Esri_Vector_Basemap_GCS_DA72_Install.vtpk`), change the title to `Esri_Vector_Basemap_GCS_v2`.

📄 **Note:**

It will take 30–120 minutes to create the hosted layer, depending on your system configuration.

The Esri_Vector_Basemap_v2 hosted tile layer is created.

☐	Title		
☐	🗺️ Esri_Vector_Basemap_v2	Tile Layer (hosted)	🔒
☐	🗺️ Esri_Vector_Basemap_DA72_Install	Vector Tile Package	🔒

Publish tile layers (map styles)

You'll publish your map styles next.

The VectorStylePublisher geoprocessing toolbox can be run in ArcGIS Pro. This toolbox publishes 50 new tile layers to your portal.

These instructions assume that the toolbox and VectorBasemapStyles folder are on your local computer.
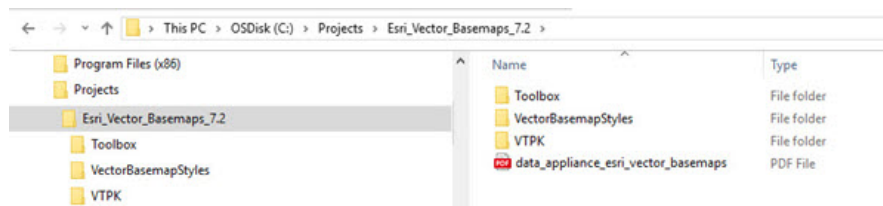
📒 Note:
You must have a portal account assigned to the default publisher or administrator role, or your account must be assigned to a custom role that has privileges to create content and publish hosted tile layers.

1. Start ArcGIS Pro, sign in to your ArcGIS Enterprise portal, and select **Set As Active Portal**.

2. Create a project.

3. Select the **View** tab, select **Catalog View** in the **Windows** group, right-click **Toolboxes**, and select **Add Toolbox**.
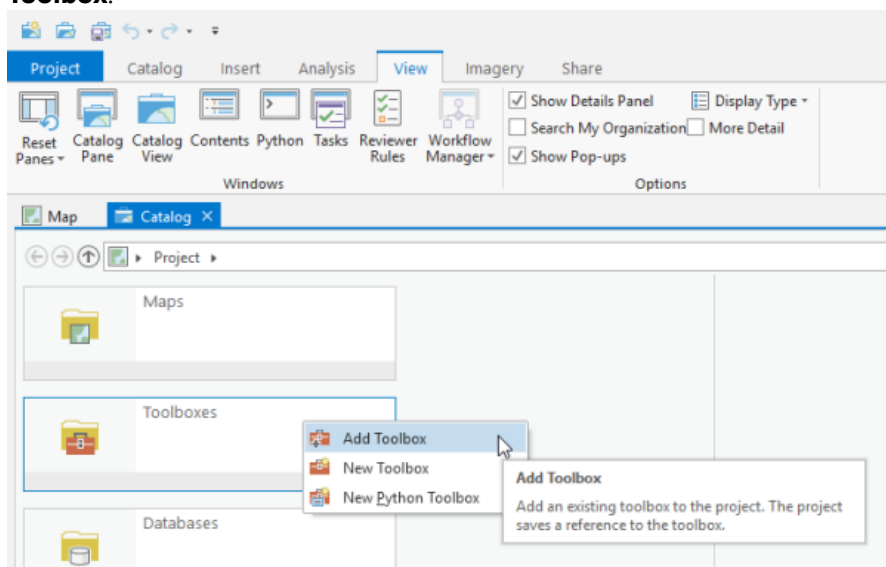
4. Browse to the location on your local computer where you copied the contents of the USB flash drive, select **VectorStylePublisher.tbx**, and select **OK**.
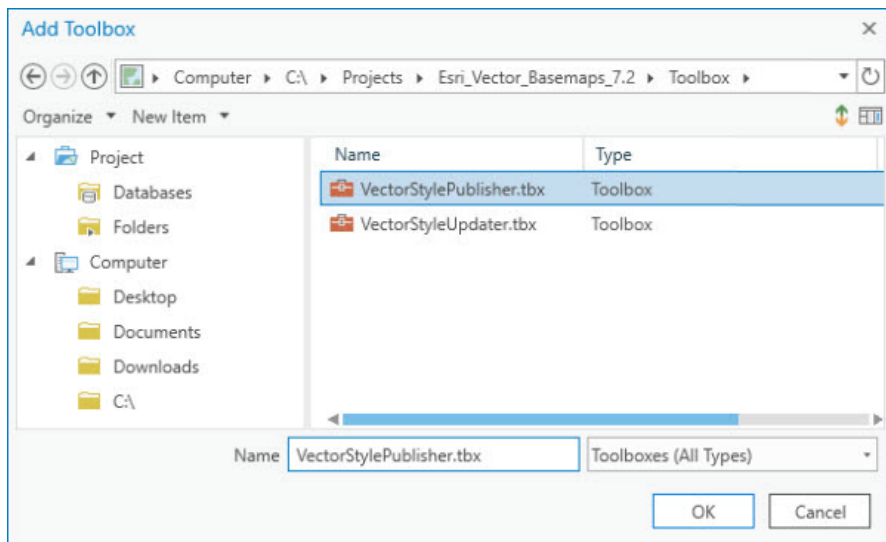
The VectorStylePublisher toolbox is added to the project.

5. Double-click **Toolboxes** and double-click **VectorStylePublisher.tbx**.
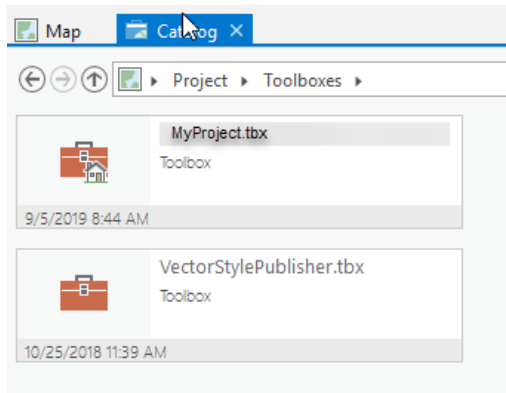
6. Double-click the **Vector Style Publisher** script.
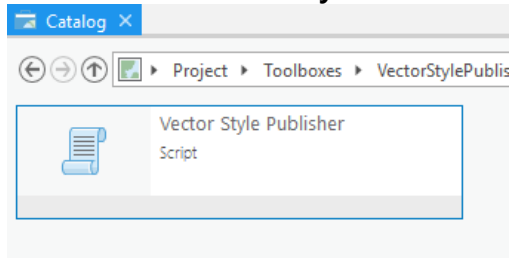
7. In the **Vector Style Publisher** dialog box, select the **Parameters** tab and provide the following:
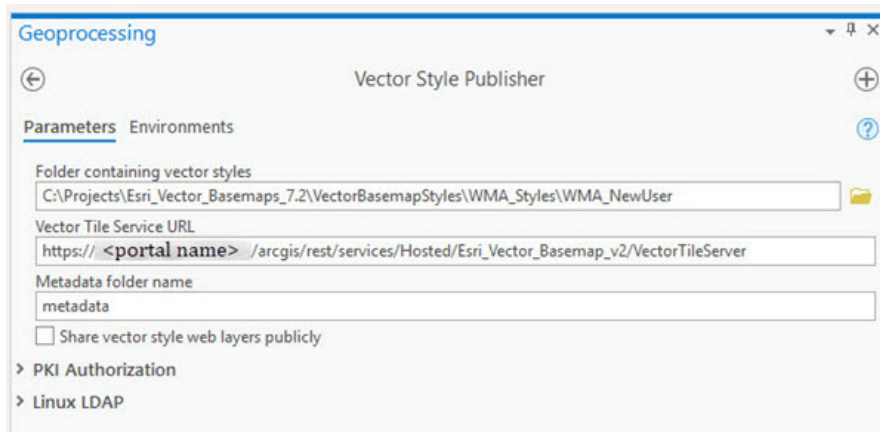
a. For **Folder containing vector styles**, browse to the location of the VectorBasemapStyles folder on your local computer, for example, `C:\Projects\Esri_Vector_Basemaps_7.2\VectorBasemapStyles\WMA_Styles\ WMA_NewUser`.

b. For **Vector Tile Service URL**, provide the URL of the Esri Vector Basemap hosted tile layer, for example, `https://portalname.domain.com/arcgis/rest/services/Hosted/Esri_Vector_Basemap_v2/ VectorTileServer`.

📒 **Note:**
The vector tile service URL is found in the **URL** section of the **Esri_Vector_Basemap_v2** hosted tile layer item page. Click the **Copy** button and paste the URL into the **Vector Tile Service URL** parameter text box.
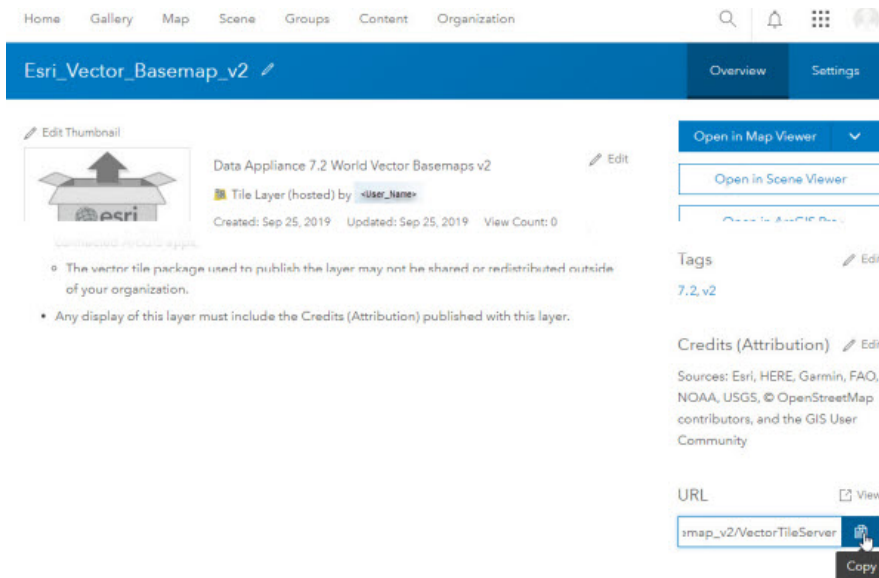
c. For **Metadata folder name**, keep the default name **metadata**.

> 📄 **Note:**
> If you are using a portal with PKI authentication, expand **PKI Authorization** and provide values for the **PKI Certificated file (.pfx)** and **PKI Private Password** parameters.

If you are using a portal with Linux LDAP authentication, expand **Linux LDAP** and provide information for the **Sign In Username** and **Sign In Password** parameters.

    d. Click **Run**.

The 50 vector tile layers (map styles) are created in your assigned ArcGIS Enterprise account. You can view the items in **My Content**. Fifty-two items are listed: 50 vector tile layers, the `.vtpk` file, and the hosted tile layer.

Share tile layers (map styles)

The items created are private unless you check the **Share vector style web layers publicly** check box to make them public.
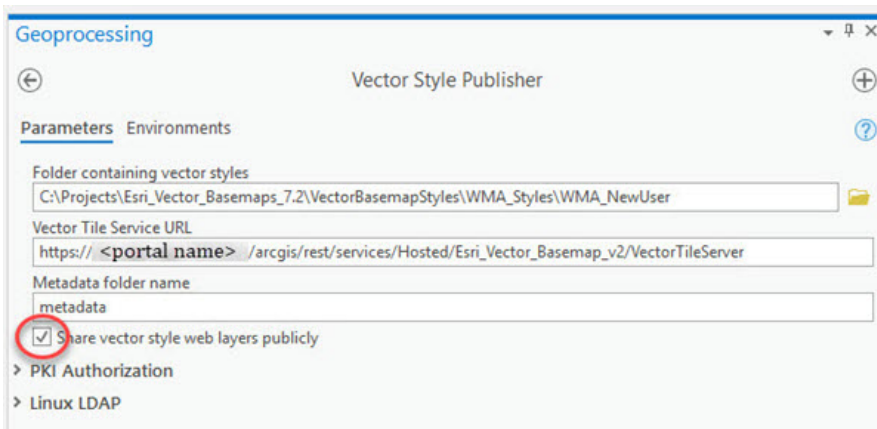
Alternatively, you can select the map items in your portal and change the sharing settings.
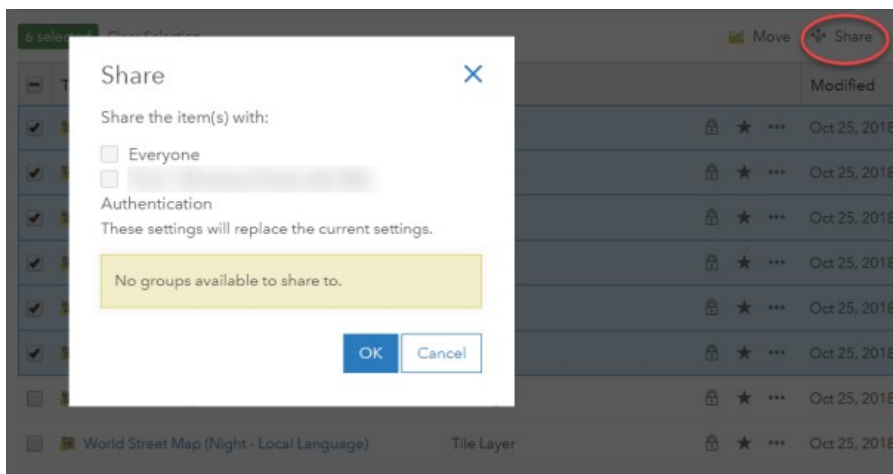
📒 **Note:**

Delete protection for all items is applied upon publishing the tile layers. To change the protection setting, open the item and click the **Settings** tab. Under **Delete Protection**, uncheck **Prevent this item from being accidentally deleted** and click **Save**.
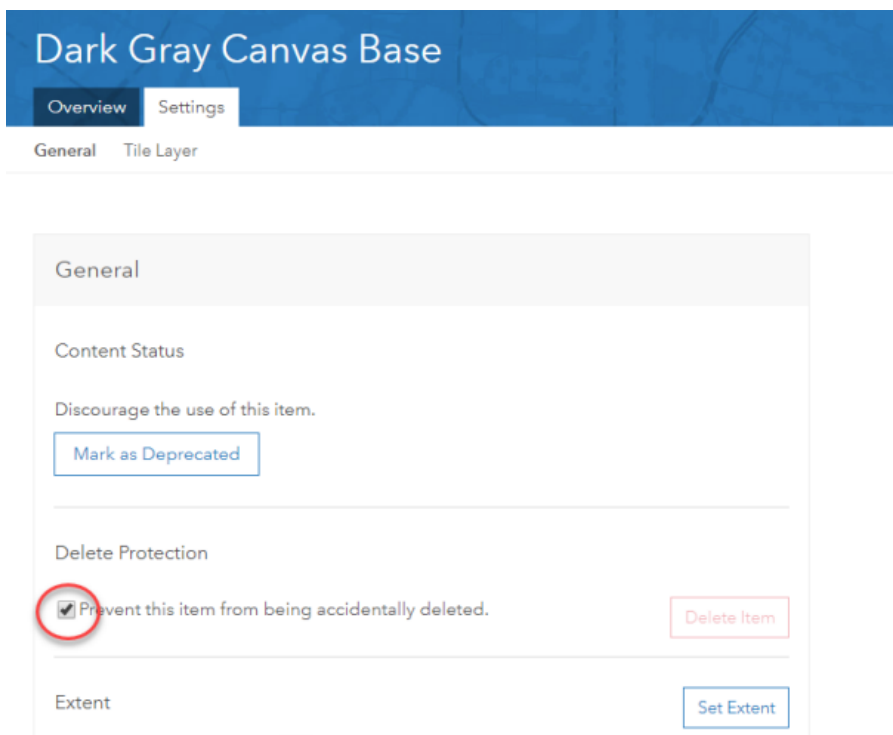
Once you set up Esri Vector Basemaps, you can do the following:

- Use Esri Vector Basemaps

- Customize styles

- Localize styles

Set up Esri Vector Basemaps (existing user)

These steps are for updating your Esri Vector Basemaps in WMA.

📄 **Note:**
To use Esri Vector Basemaps in the GCS format, complete the steps using the information for GCS.

For information about what's included with Esri Vector Basemaps, see Esri Vector Basemaps content and What's new.

You'll use the following workflow to update Esri Vector Basemaps:

1. Upload the package to your ArcGIS Enterprise portal

2. Publish the new hosted tile layer (service)

   📄 **Note:**
   The title of your new hosted tile layer must be different than the title of your existing hosted tile layer (for example, DA71).

3. Replace the existing hosted tile layer (service) with the new hosted tile layer

4. Update existing tile layers (map styles)

Upload the package to your ArcGIS Enterprise portal

First, you need to copy the entire USB flash drive contents to your local computer if you have not already done so. Review the system requirements to confirm that you can deploy the Esri Vector Basemaps update.

1. Start ArcGIS Pro, sign in to your ArcGIS Enterprise portal, and select **Set As Active Portal**.

   📄 **Note:**
   You must sign in and connect to your portal before you proceed. You cannot enter your portal user name and password when using the Share Package tool later in these instructions. The tool obtains your credentials from ArcGIS Pro.

2. Create a project.

3. Select the **Analysis** tab, and select **Tools** in the **Geoprocessing** group.

The **Geoprocessing** pane appears.

4. In the **Geoprocessing** pane, search for `Share Package`, and select the **Share Package (Data Management Tools)** tool from the search results.

5. In the **Share Package** dialog box, provide the following:
   a. For **Input Package**, provide the path to the vector tile package, for example, `C:\Projects\ Esri_Vector_Basemaps_7.2\VTPK\Esri_Vector_Basemap_DA72_Install.vtpk`.

   b. For **Summary**, type `Esri Vector Basemap for Data Appliance 7.2`.

   c. For **Tags**, type `7.2, v2`.

   ⚠ **Caution:**

   Do not change the **Credits** parameter value and do not check the boxes to share with **Everybody** or **Within Organization**.

6. Select **Run**.

It will take approximately 30–120 minutes to upload the package to your portal. A **Share Package Uploaded Successfully** message appears in the **Share Package** window once the upload is complete.

7. Through your portal, confirm that the `.vtpk` file uploaded successfully.

   a. Open a web browser and sign in to your portal.
      The Esri_Vector_Basemap_DA72_Install tile package is located in the root folder.

   b. Under **Details**, confirm that the **Size** value of the tile package is 31,672 MB and **Shared with** indicates that the item is not shared.

   Your item should look like the following:

> 📒 **Note:**
> If the size is not 31,672 MB, delete the item and upload the Esri_Vector_Basemap_DA72_Install tile package again. You may want to discuss the problem with your portal administrator.
>
> For the Esri_Vector_Basemap_GCS_DA72_Install tile package, if the size is not 31,264 MB, delete the item and upload it again.
>
> See the Troubleshooting Esri Vector Basemaps topic for more information.

Publish the new hosted tile layer (service)

Now you'll publish the Esri Vector Basemap hosted tile layer service from your portal.

1. Sign in to your ArcGIS Enterprise portal.

> 📒 **Note:**
> Your account must have publishing credentials.

2. In **My Content**, go to the item page for the vector tile package (`Esri_Vector_Basemap_DA72_Install.vtpk`) you uploaded to your portal.

3. Click **Publish**, change the title to `Esri_Vector_Basemap_DA72_v2`, and click **Publish** again.

Note:

For the GCS tile package, use the `Esri_Vector_Basemap_GCS_DA72_Install.vtpk` file. Change the title to `Esri_Vector_Basemap_GCS_DA72_v2` for the hosted tile layer that gets published.

Note:

It will take 30–120 minutes to create the hosted layer, depending on your system configuration.

The Esri_Vector_Basemap_ DA72_v2 hosted tile layer is created.

Replace the existing hosted tile layer (service) with the new hosted tile layer (service)

Next, you'll replace the 7.1 basemap hosted tile layer (service) with the 7.2 hosted tile layer (service).

1. Sign in to your ArcGIS Enterprise portal.

   Note:

   Your account must have publishing credentials.

2. In **My Content**, go to the item page for the **Esri_Vector_Basemap_v2** vector tile service.

3. Click **Replace Layer**.
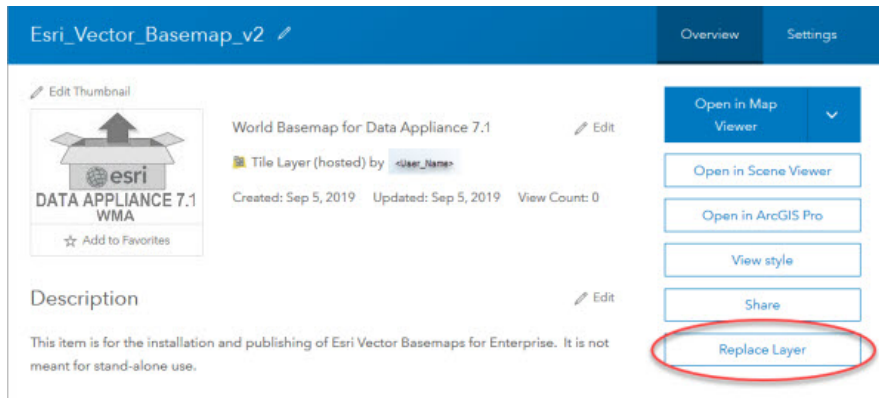
4. Click **Select layer** and select the newly published Esri_Vector_Basemap_DA72_v2 layer.
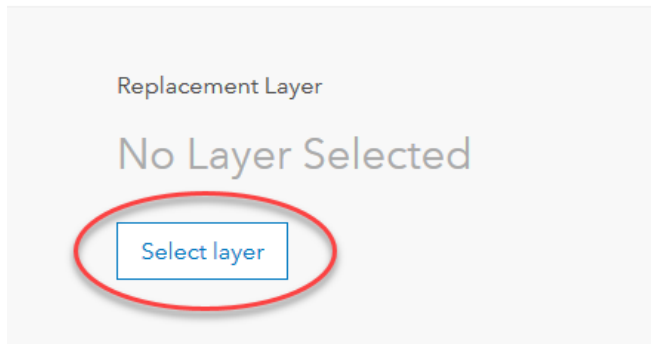
5. For **Archive this layer as**, click the edit button and change the value to `Esri_Vector_Basemap_DA71_v2`.

6. Click **Save**.

7. If you're using an ArcGIS Enterprise 10.7.1 or later portal, check the **Replace item information** check box.

Replacement options

☑ Replace item information.

This will use the following information from the replacement layer:

- thumbnail
- summary
- description
- tags

Cancel   Replace
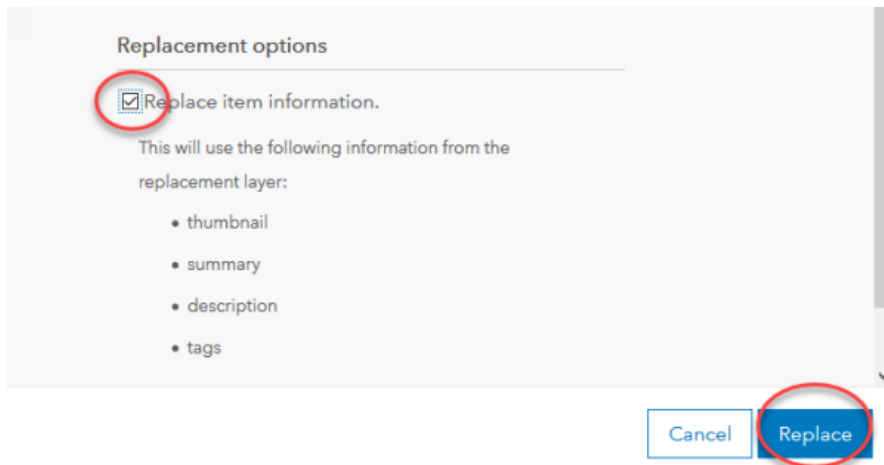
📒 **Note:**

The content of the current layer is archived.

A new layer is created to archive the current layer.

The replacement layer is deleted afterwards.

- The item id and URL of the current layer is retained so that apps and styles referencing the layer continue to work.
- The content of the current layer is archived as a new layer.
- The replacement layer is deleted after the current layer is replaced.
- Ideal for creating designated layers for archives.
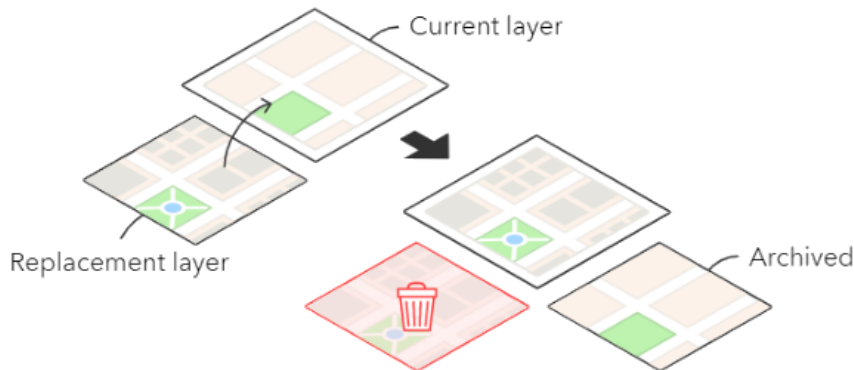
The image above shows the **Replace Layer** function. For ArcGIS Data Appliance: Esri Vector Basemaps 7.2, the current layer starts as DA7.1. The replacement layer is DA7.2. You are archiving the DA7.1 hosted tile layer, and the current layer (Esri_Vector_Basemaps_v2) now displays the DA7.2 hosted tile layer. Replacing the tile set allows the item ID and URL paths to remain intact so maps and apps continue to work with the current layer and display the new DA7.2 basemap content.

8. Click **Replace**.

In a few minutes, the **Success** message appears.
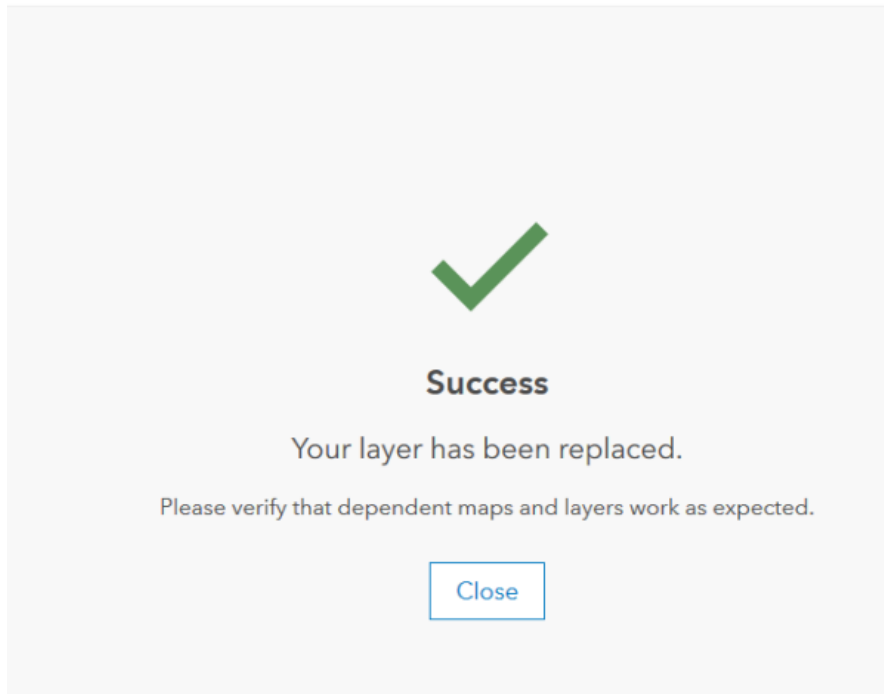
9. Click **Close**.

Update existing tile layers (map styles)

Use the Vector Style Updater tool to update your existing layers.

1. Open the `DA72_WMA_StyleUpdater_template.csv` file located in the `C:\Projects\`
   `Esri_Vector_Basemaps_7.2\Toolbox` folder.
   a. Include the item IDs of all your existing styles in the **itemid** column in this table. The item ID for each style can be obtained from the portal URL for each style. Only copy and paste the series of letters and numbers after `...id=`.
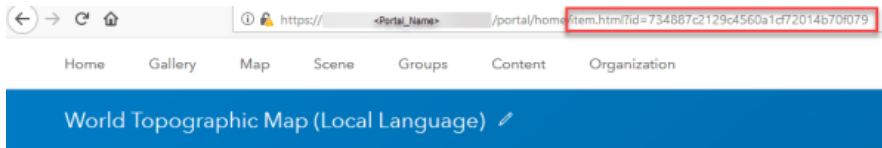
   b. Once you fill in the **itemid** column, save the file and rename it `DA72_WMA_StyleUpdater.csv`.
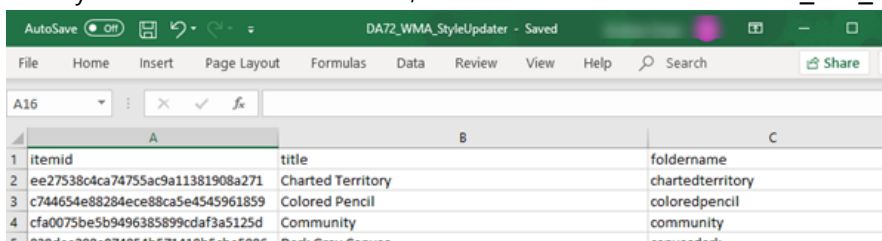
2. Run the Vector Style Updater tool.

   a. Start ArcGIS Pro, sign in to your ArcGIS Enterprise portal, and select **Set As Active Portal**.

   b. Create a project.

   c. Select the **View** tab, select **Catalog View** in the **Windows** group, right-click **Toolboxes**, and select **Add Toolbox**.

   d. Browse to the location on your local computer where you copied the contents of the USB flash drive, select **VectorStyleUpdater.tbx**, and select **OK**.
The VectorStyleUpdater toolbox is added to the project.

   e. Double-click **Toolboxes**, and double-click **VectorStyleUpdater.tbx**.

   f. Double-click the **Vector Style Updater** script.
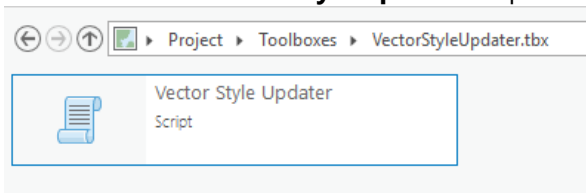
   g. In the **Vector Style Updater** dialog box, select the **Parameters** tab and provide the following:
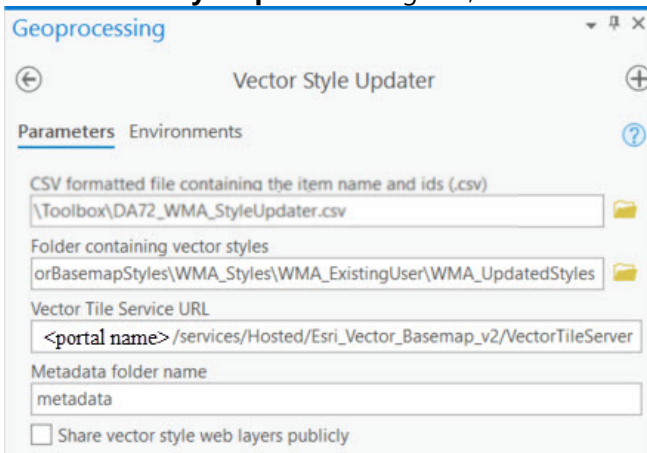
      i. For **CSV formatted file containing the item name and ids (.csv)**, browse to the location of the `DA72_WMA_StyleUpdater.csv` file on your local computer.

      ii. For **Folder containing vector styles**, browse to the location of the WMA Updated Styles folder on your local computer, for example, `C:\Projects\Esri_Vector_Basemaps_7.2\VectorBasemapStyles\ WMA_Styles\WMA_ExistingUser\WMA_UpdatedStyles`.

      iii. For **Vector Tile Service URL**, provide the URL of the Esri Vector Basemap tile layer that you replaced above, for example, `https://portalname.domain.com/server/rest/services/Hosted/ Esri_Vector_Basemap_v2/VectorTileServer`.

Note:

The vector tile service URL is in the URL section of the **Esri_Vector_Basemap_v2** hosted tile layer item page. Click the **Copy** button and paste the URL into the **Vector Tile Service URL** parameter text box.
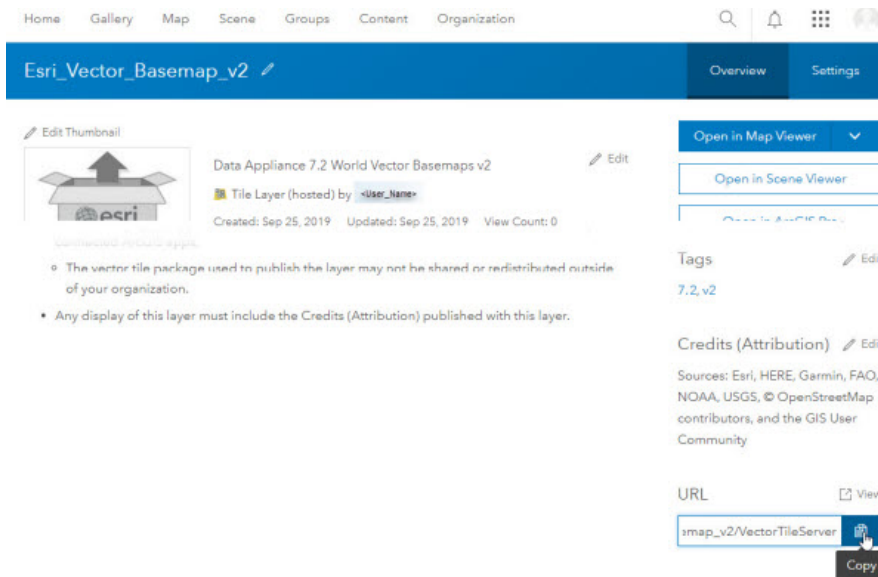
iv. For **Metadata folder name**, keep the default name **metadata**.

Note:

If you are using a portal with PKI authentication, expand **PKI Authorization** and provide values for the **PKI Certificated file (.pfx)** and **PKI Private Password** parameters.

If you are using a portal with Linux LDAP authentication, expand **Linux LDAP** and provide values for the **Sign In Username** and **Sign In Password** parameters.
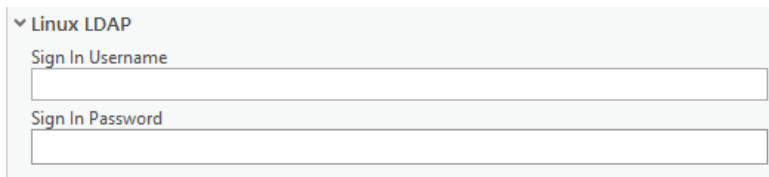
3. Click **Run**.

It can take up to a minute to update each existing style in your portal using the Vector Style Updater tool.

The VectorStyleUpdater toolbox displays a successful update message when complete.

The 50 vector tile layers (map styles) are updated in your assigned ArcGIS Enterprise account. You can view the 50 items in **My Content**.

Once you set up the Esri Vector Basemaps update, you can do the following:

- Use Esri Vector Basemaps
- Customize styles
- Localize styles

Troubleshooting Esri Vector Basemaps

Listed below are issues you may encounter when working with Esri Vector Basemaps content as well as recommended solutions.

- What if the size of the uploaded .vtpk file does not match the size of the source .vtpk file?
- What if I encounter the There was an error message when I try to publish the service?
- What do I do if the progress bars keep loading when I'm trying to publish my service?

What if the size of the uploaded `.vtpk` file does not match the size of the source `.vtpk` file?

If your tile layer (hosted) service did not publish successfully, an issue may have occurred during the upload of the vector tile package (`.vtpk`) to your portal. The size of the `.vtpk` file on disk and the size of the uploaded file on your portal must match.

The size of the `Esri_Vector_Basemap_DA72_install.vtpk` file is 31,672 MB and the `Esri_Vector_Basemap_GCS_DA72_install.vtpk` file is 31,264 MB.

You can check the size of the uploaded vector tile package (supporting the service) on the item details page. The following screen capture shows the Esri_Vector_Basemap_DA72_install vector tile package details.

Details

Size: 31,672 MB
Shared with: **The item is not shared.**
★ ★ ★ ★ ★

If the size does not match, check the log via the server manager to see if there are any errors.

In some cases, the ArcGIS Pro Share Package geoprocessing tool may have produced a **Success** message, but when you check the size of the `.vtpk` file on the item details page, it does not match. Here are some things that you can try to resolve this issue:

- Upload the `.vtpk` file again. First, delete the `Esri_Vector_Basemap_DA72_install.vtpk` or `Esri_Vector_Basemap_GCS_DA72_install.vtpk` file from your portal. Next, upload the `Esri_Vector_Basemap_DA72_install.vtpk` or `Esri_Vector_Basemap_GCS_DA72_install.vtpk` file again using the ArcGIS Pro Share Package geoprocessing tool.
- Verify with your portal administrator that there is at least 64 GB of disk space per `.vtpk` file available on your portal. Make sure there is space on `<ArcGIS portal install drive>\arcgis\arcgisportal` where the content items are stored.
- Verify that you are using a supported version of ArcGIS Pro. See the system requirements for details.

Contact Esri Technical Support if you still cannot successfully upload the `.vtpk` file.

📒 **Note:**
The following answers reflect troubleshooting of the WMA vector tile package and service. To troubleshoot the GCS vector tile package and service, you need to take the GCS naming into consideration.

What if I encounter the There was an error message when I try to publish the service?

Work with your system administrator to check the ArcGIS Server Manager logs. If there is an error due to a geoprocessing service (PublishingTools) timing out or crashing, you may have skipped a system requirements step. Confirm that you changed the value of **The maximum time a client can use a service** to 21,600 seconds.

Once you have updated the geoprocessing service maximum time, do the following:

1. On your server, delete the `Esri_Vector_Basemap_v2` or `Esri_Vector_Basemap_GCS_v2` hosted tile layer.

2. On the ArcGIS Server machine, delete the job in the `<ArcGIS_Server_Install_Path>\arcgis\ arcgisserver\directories\arcgisjobs\system\publishingtools_gpserver\<Job_ID>` folder.

   Note:
   You can find the job ID in the log file.

3. Restart the server.

4. Verify that you have at least 64 GB of available space on the ArcGIS Server machine.

5. In your portal, publish the `Esri_Vector_Basemap_v2` or `Esri_Vector_Basemap_GCS_v2` tile layer again.

What do I do if the progress bars keep loading when I'm trying to publish my service?
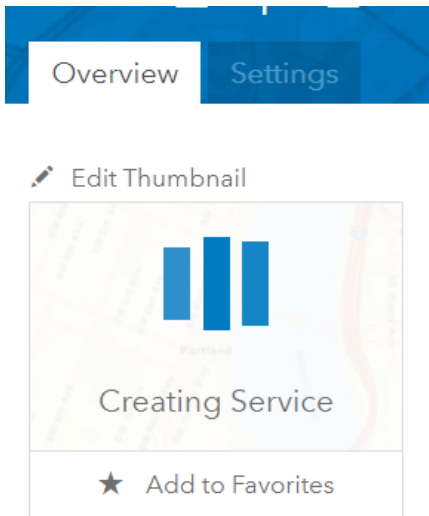
If the **Creating Service** animated bars continue to load after two hours, the browser connection to the portal may have failed.

Sign out of the portal and sign in again to see if the thumbnail has changed to the Data Appliance 7.2 icon, because the browser connection does not affect the creation of the service.
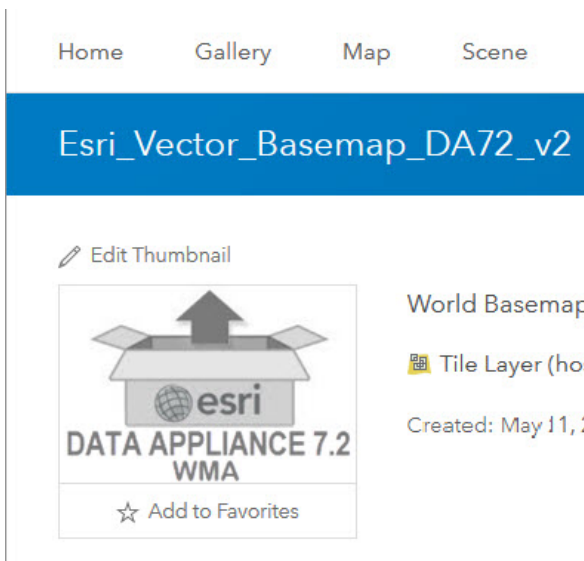
If the thumbnail changes to the Data Appliance 7.2 icon, verify that the map displays as expected.

Additional resources

The following resources are available for Esri Vector Basemaps:

- ArcGIS Data Appliance 7.2: Esri Vector Basemaps help [PDF]

- ArcGIS Data Appliance 7.2: Esri Vector Basemaps New users video [captioned MP4] demonstrating uploading, updating and publishing Esri Vector Basemaps to your portal

- ArcGIS Data Appliance 7.2: Esri Vector Basemaps Existing users video [captioned MP4] demonstrating uploading, updating and publishing Esri Vector Basemaps to your portal

- Tile layers, Customize basemaps, and Choose basemap in the Portal for ArcGIS help

- Working with and Customizing Esri Vector Basemaps: The Basics blog post

- Style a vector basemap using the ArcGIS Vector Style Editor in the ArcGIS for Developers website (for ArcGIS 10.8 or later users only)

Use

Use Esri Vector Basemaps

With the addition of vector tile packages (`.vtpk`), hosted tile layers, and tile layers in your portal, you will have a number of items in your ArcGIS Enterprise **Content** window. With the correct administrative privileges, you can create folders, groups, and categories. By creating folders and moving items into them, you can organize your **Content** window to make it easier to find the items you are looking for. The following image shows some folder name suggestions. See Manage content in the Portal for ArcGIS help for information about managing content in ArcGIS Enterprise.
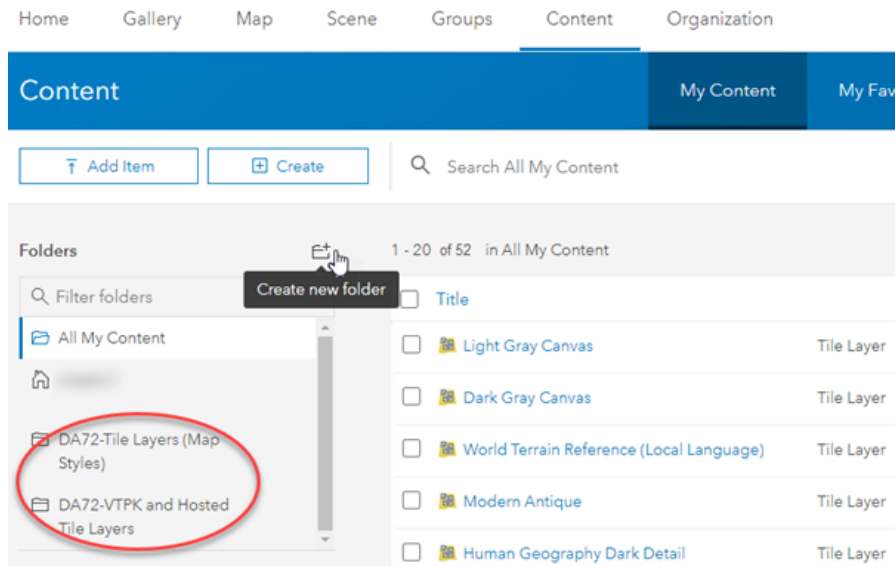
You can use Esri Vector Basemaps in your applications in the following ways:

• The 50 map tile layers (styles) can be added to a map in ArcGIS Pro or to Map Viewer in your Enterprise portal.
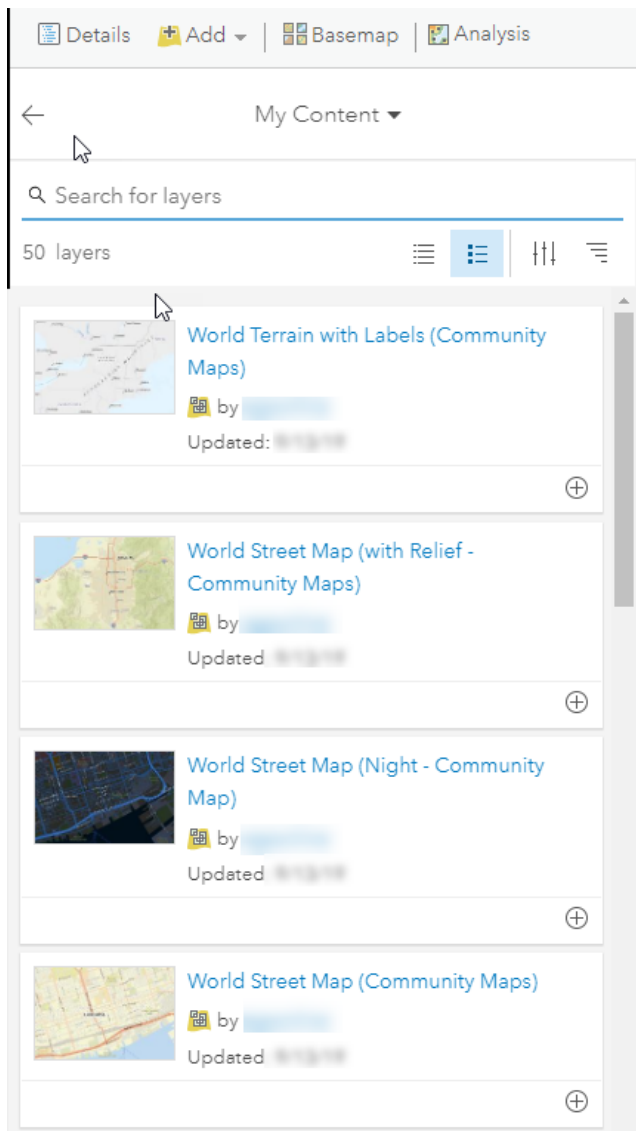
- The tile layers (styles) can be added to an existing basemap, or they can be added as the basemap.
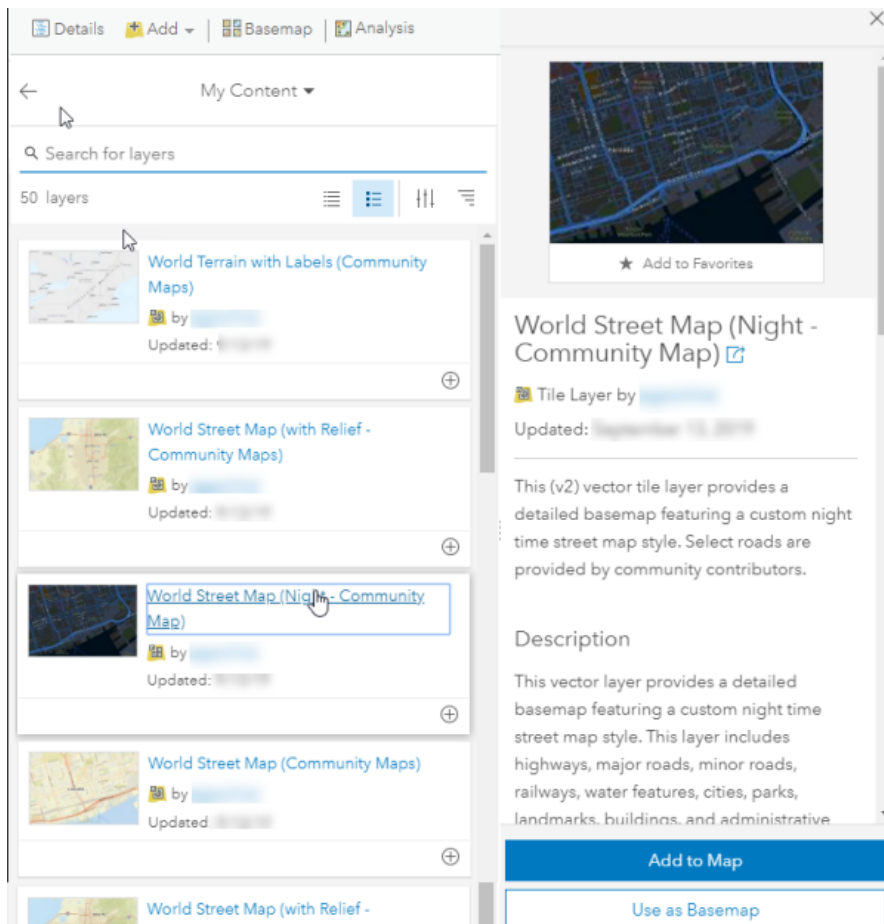
- Seventeen of the 50 map tile layers (styles) can be used with a raster layer—World Hillshade, World Imagery, or World Ocean Base—as the basemap in their web map.
  - Charted Territory—World Hillshade
  - Modern Antique—World Hillshade
  - National Geographic Style—World Hillshade
  - National Geographic Style (Local Language)—World Hillshade
  - World Street Map (with relief)—World Hillshade
  - World Street Map (with relief - Community Maps)—World Hillshade
  - World Terrain Base—World Hillshade
  - World Terrain Reference—World Hillshade
  - World Terrain Reference (Local Language)—World Hillshade
  - World Terrain with Labels—World Hillshade
  - World Terrain with Labels (Community Maps)—World Hillshade
  - World Topographic Map—World Hillshade
  - World Topographic Map (Local Language)—World Hillshade
  - Hybrid Reference Layer—World Imagery

- ▪ Hybrid Reference Layer (Community Maps)—World Imagery

- ▪ Hybrid Reference Layer (Local Language)—World Imagery

- ▪ World Ocean Reference—World Ocean Base

- If you have a tile layer (style) in your map, it can be moved to the basemap.
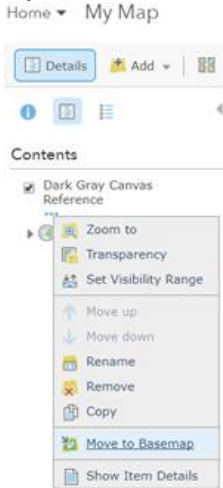
- The Dark Gray and Light Gray Canvas Reference layers can be moved to the basemap and set as the Reference layer over the Canvas Base layer. This is also applicable for the World Terrain Base and Reference, Hybrid Reference, Human Geography Labels, and Human Geography Dark Labels tile layers.
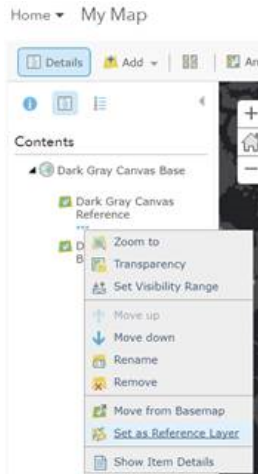
Customize styles

With ArcGIS Data Appliance: Esri Vector Basemaps, you can modify and customize the map style. You can customize the map by changing the hex color codes of map features or labels, removing feature classes, changing fonts (face, size, and color), or making other edits. For more information, see the vector basemap blog post on the ArcGIS Blog website.

Customization requires changes to the map style's `resources\styles\root.json` file. There are two main ways to customize your maps: add a style to the map in Map Viewer or copy a `root.json` style from the USB flash drive. If you are using ArcGIS Enterprise 10.8 or later, you can use the new Vector Tile Style Editor. Then you can edit the custom style map item to include a new thumbnail and update the item's information for your custom style.

Add a style to the map in Map Viewer and rename the style

To add a style using Map Viewer, complete the following steps:

1. In your Enterprise portal, open the style you want to customize in Map Viewer, for example, Dark Gray Canvas Base.

2. Click **More Options** •••, and select **Copy**.
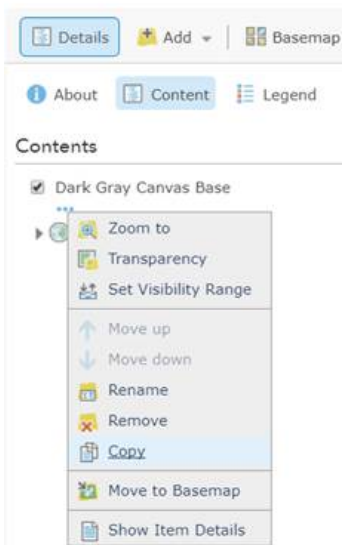
   A new Dark Gray Canvas Base - Copy layer is added to the top of the **Contents** pane.

3. Click **More Options** •••, and select **Save Layer**.

4. Rename the style, for example, `Custom Canvas Base`, and select the portal folder where you want to save the new style.

5. In **My Content**, go to the item page for the new style, and click the **Download style** button.
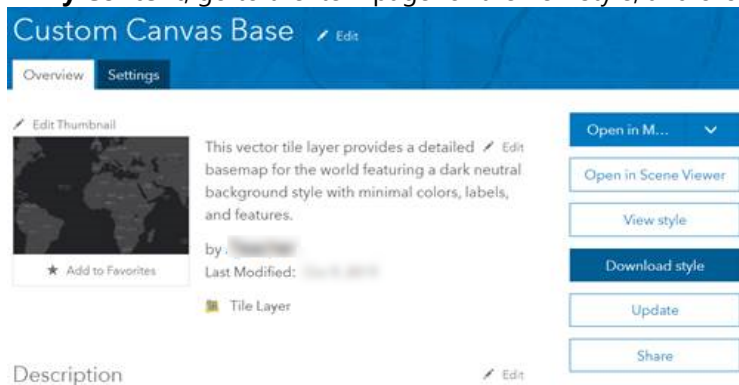
The style (`root.json` file) is saved to your computer.

6. Open the `root.json` file in a text editor such as Adobe Brackets or Notepad++, and edit and save the file. Edits to the `root.json` file can be color value, line width, font size, and so on.

7. Validate the JSON using JSONLint or a similar JSON validation tool. You can also use this website to parse the JSON into a more user-friendly format before editing.

8. On the item page for the new style, click the **Update** button to update the item and load the modified `root.json` file from your computer to your portal.

Copy a style from the USB flash drive and rename the map style directory

To copy a `root.json` style from the USB flash drive, complete the following steps:

1. On your local computer, create a directory called `CustomStyles` at the same directory level as the GCS and WMA directories.
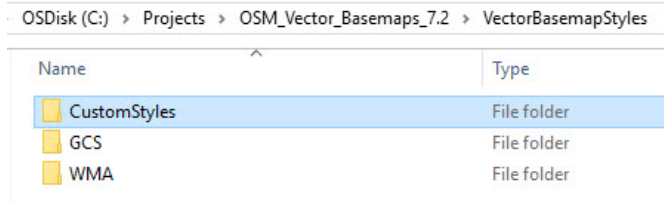
2. Copy a style from the USB flash drive and rename the map style directory; for example, copy the canvasdarkbase directory into a new directory and change the name to `customcanvasbase`.
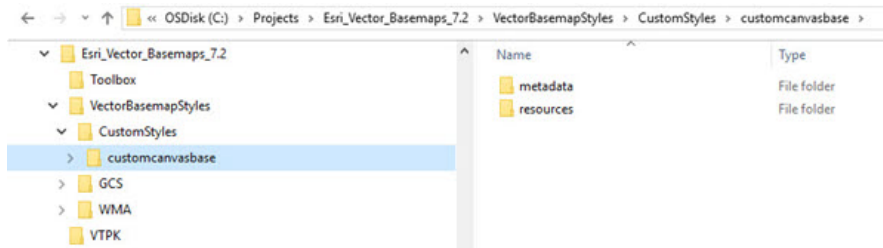
3. In the new customcanvasbase directory, open the `resources\styles\root.json` file (for example, `CustomStyles\customcanvasbase\resources\styles\root.json`) in a text editor such as Adobe Brackets or Notepad++, edit the map code, and save the file.
   An example of a style edit in the `root.json` file is changing the highways in dark gray (#2A2B2B) to red (#FF0000).
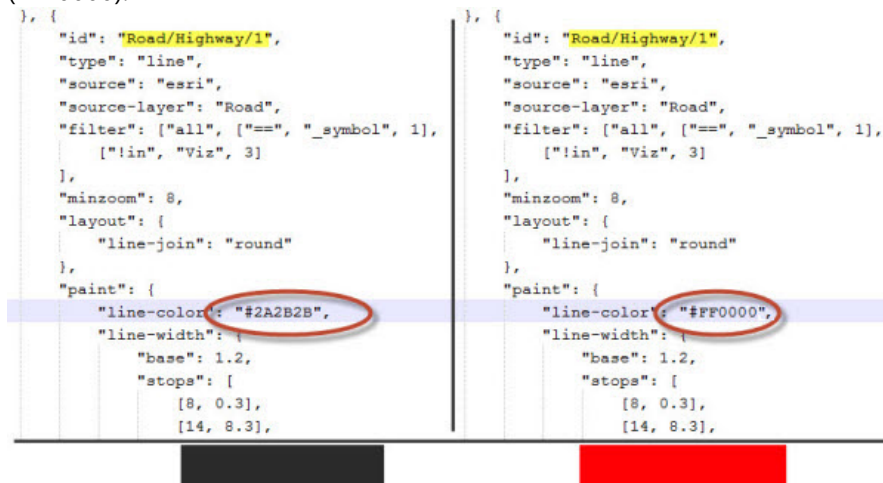
4. In the new customcanvasbase directory, open the `metadata\metadata.json` file (for example, `CustomStyles\ customcanvasbase\metadata\metadata.json`) in a text editor such as Adobe Brackets or Notepad++, and edit `"title":`, replacing `"Dark Gray Canvas Base"` with a new map title, for example, `"Custom Dark Base"`, and save the file.

5. Validate the JSON using JSONLint or a similar JSON validation tool.

6. Perform the Publish tile layers (map styles) steps, this time pointing to the new directory containing your custom style.

The new style is created in your Enterprise portal under **My Content**. Following the naming conventions in steps 1–4 produces a new item in your portal named Custom Canvas Base.

Edit the custom style map item in your portal

On the map item page of your custom map style, you can update the summary, description, tags, and thumbnail to better describe the new map you styled.

It is recommended that you apply **Delete Protection** to your custom style map item on the item's **Settings** tab.
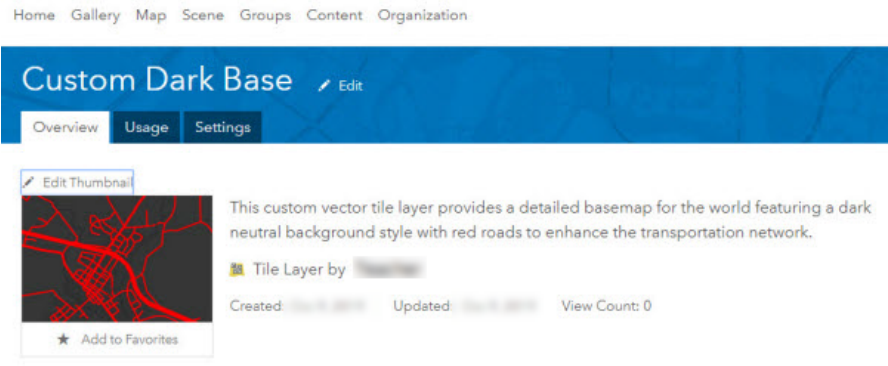
Esri Vector Tile Style Editor

If you're using ArcGIS Enterprise 10.8 or later, you can customize vector map styles through an app in the Map Viewer. Access the Style Editor from the **Change Style** button under any Esri vector basemap tile layer. Save the new style to your portal.
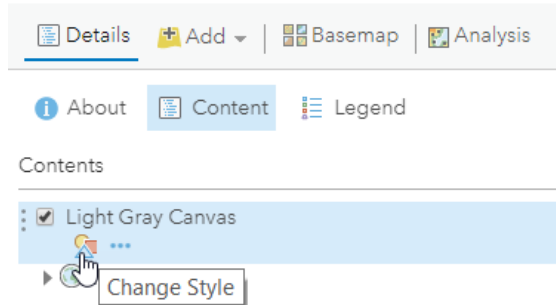
Styling options include the **Quick Edit** tool, in which layers are customized across groups of features, and the **Layer Style Editor** list for individual feature style controls. Colors, line weights, font faces, and sprite symbology are examples of the style changes that can be applied to your custom map item.
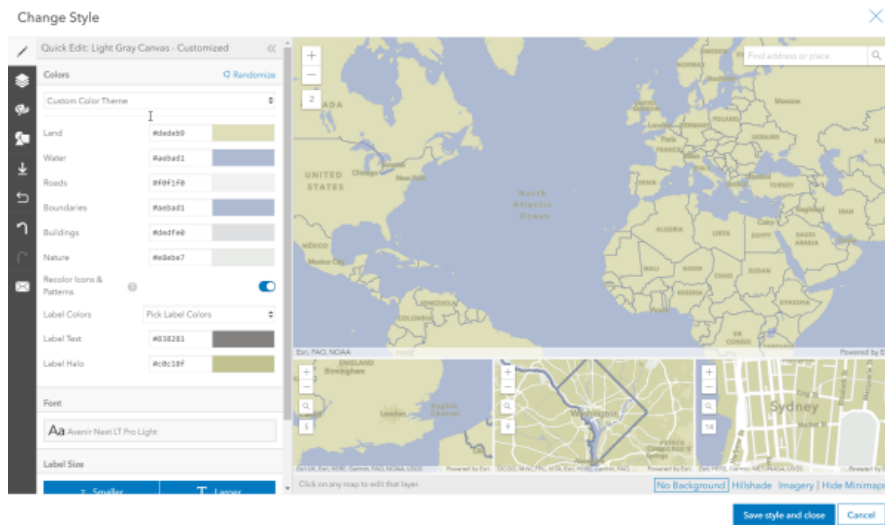
Information about using the ArcGIS Vector Style Editor to style a vector basemap is available in the ArcGIS for Developers website.

Localize Esri Vector Basemap styles

ArcGIS Data Appliance: Esri Vector Basemaps supports localizing select map labels into the languages listed below. The default map displays a primarily English global view. Localization is another form of basemap customization. As with other customization, there are two main ways to create a style for customization: add a style to the map in Map Viewer or copy a `root.json` style from the USB flash drive. Review the information in the previous section on how to Customize Esri Vector Basemap styles.

Localization changes the labels on the map for many of the small-scale features when the data supports it. Localize the map by changing the `"text-field"` value of the map style's `resources\styles\root.json` file. Use the corresponding codes for the language you want to display. It is also recommended that you change all `"text-font"` to an Arial Unicode font to allow all glyphs to display on the map. After the localization changes are applied to your JSON, validate the JSON using JSONLint or a similar tool, and update or upload the new localized map style as previously detailed in this help document.

Languages and codes supported in Data Appliance 7.2

The following language codes are supported in Data Appliance 7.2:

Language	Code
Arabic	ar
Chinese (Hong Kong)	zh_hk
Chinese (Simplified)	zh_s
Chinese (Taiwan)	zh_tw
Czech	cs
Danish	da
Dutch	nl
Finnish	fi
French	fr
German	de
Hebrew	he
Italian	it
Japanese	ja
Korean	ko
Norwegian	no
Polish	pl
Portuguese (Brazilian)	pt_br
Portuguese (Portuguese)	pt_p
Romanian	ro
Russian	ru

Language	Code
Spanish	es
Swedish	sv
Turkish	tr
Ukrainian	uk

Features supported for localization

The following features can have their `"text-field"` values changed to support these languages. The map labels that can be localized are primarily features displayed at small scale. At large scale, the default JSON labels the map in English `"{_name_global}"` or you can change it to the local language `"{_name_local}"` in each country where the map data supports it. Apply the small scale feature changes first, before any changes to large scale features. Using a text editor, find each `"id"` name and change its `"text-field"` value accordingly.

Small scale features

The default JSON for these features is `"text-field": "{_name_global}"`. Listed below are the 88 `"id"` fields in the worldtopomap style JSON available for localization when the data supports it at primarily small scales. Other styles may have all or fewer of these features.

For example, to display the map in Chinese (Simplified), the JSON for each of these features changes `"text-field": "{_name_global}"` to `"text-field": "{_name_zh_s}"`, for French, `"text-field": "{_name_fr}"`, and so on.

Water point/Sea or ocean	Water area large scale/label/River	City large scale/medium	City small scale/large non capital
Water point/Island	Water area large scale/label/Lake or lake intermittent	City large scale/large	City small scale/large admin0 capital
Water point/Dam or weir	Water area medium scale/label/Default	City large scale/x large	City small scale/x large non capital
Water point/Playa	Water area small scale/label/Default	City small scale/town small non capital	City small scale/x large admin1 capital
Water point/Canal or ditch	Marine waterbody/label/small	City small scale/town large non capital	City small scale/x large admin0 capital
Water point/Stream or river	Marine waterbody/label/medium	City small scale/small non capital	Admin0 point/2x large
Water point/Lake or reservoir	Marine waterbody/label/large	City small scale/medium non capital	Continent
Water point/Bay or inlet	Marine waterbody/label/x large	City small scale/other capital	Disputed label point/Island
Water line/label/Default	Marine waterbody/label/2x large	City small scale/town large other capital	Disputed label point/Waterbody
Water line large scale/label/Default	Indigenous/label/Default	City small scale/small other capital	Landform/label/Round small

Water line medium scale/label/Default	Military/label/Default	City small scale/medium other capital	Landform/label/Round medium
Water line small scale/label/Default	Admin1 forest or park/label/Default	Admin0 point/x small	Landform/label/Round large
Water area/label/Dam or weir	Admin0 forest or park/label/Default	Admin0 point/small	Landform/label/Round x large
Water area/label/Playa	Admin1 area/label/x small	Admin0 point/medium	Landform/label/Round small
Water area/label/Canal or ditch	Admin1 area/label/small	Admin0 point/large	Landform/label/Round small point
Water area/label/Small river	Admin1 area/label/medium	Admin0 point/x large	Landform/label/Round medium
Water area/label/Large river	Admin1 area/label/large	City small scale/town small admin0 capital	Landform/label/Oblong medium point
Water area/label/Small lake or reservoir	Admin1 area/label/x large	City small scale/town large admin0 capital	Landform/label/Oblong large
Water area/label/Large lake or reservoir	Admin1 area/label/2x large	City small scale/small admin0 capital	Landform/label/Oblong large point
Water area/label/Bay or inlet	City large scale/town small	City small scale/medium admin0 capital	Landform/label/Oblong x large
Water area/label/Small island	City large scale/town large	City small scale/large other capital	Landform/label/Oblong x large point
Water area/label/Large island	City large scale/small	City small scale/x large admin2 capital	Disputed label point/Admin0

Large scale features

Apply JSON changes to the small scale features first. For large scale features, the default JSON is `"text-field": "{_name_global}"` and displays labels in English. If you are changing the map to the local language in each country where the data supports it, the JSON for these features changes to `"text-field": "{_name_local}"`. Find and replace `"{_name_global}"` with `"{_name_local}"` throughout the JSON file. Listed below are the 47 `"id"` fields in the streetmap style JSON available for local language in each country where the data supports it. Other styles may have all or fewer of these features.

For example, `"text-field": "{_name_global}"` becomes `"text-field": "{_name_local}"`.

Ferry/label/Ferry	Pedestrian/label/Default	Government/label/Default	Education/label/Default
Marine park/label/Default	Road/label/Pedestrian	Finance/label/Default	Medical/label/Default
Marine area/label/Default	Road/label/Local	Emergency/label/Default	Airport/label/Airport property
Ferry/label/Rail ferry	Road /label/Minor	Transportation/label/Default	Exit/Default
Railroad/label/Default	Road/label/Major	Beach/label/Default	Point of interest/Bus station

Trail or path/label/Default	Road/label/Highway	Golf course/label/Default	Point of interest/Rail station
Road tunnel/label/Pedestrian	Road/label/Freeway Motorway	Zoo/label/Default	Point of interest/General
Road tunnel/label/Local	Cemetery/label/Default	Retail/label/Default	Admin2 area/label/small
Road tunnel/label/Minor	Freight/label/Default	Landmark/label/Default	Admin2 area/label/large
Road tunnel/label/Major	Water and wastewater/label/Default	Openspace or forest/label/Default	Neighborhood
Road tunnel/label/Highway	Port/label/Default	Park or farming/label/Default	Building/label/Default
Road tunnel/label/Freeway Motorway	Industry/label/Default	Point of interest/Park	–

Other features

There are other features on the map with `"text-field": "{_name}"` in the JSON file. These features do not support localization; do not change their JSON code.

Changing the font

It is recommended that you change the fonts to Arial Unicode (bold or regular). Esri Vector Basemap styles can have different default fonts. For example, the default fonts for streetmap style are Arial Bold, Arial Italic, and Arial Regular. For the worldtopomap style, the default fonts are Noto Sans Bold, Noto Sans Italic, Noto Serif Regular, and Roboto Condensed Light Italic. Refer to the font list in the ArcGIS Data Appliance: Esri Vector Basemap Reference Document (v2) PDF in the Additional resources topic for complete details. Change the fonts to `"text-font" : ["Arial Unicode MS Regular"]`. Fonts that are bold by default can be changed to `"text-font" : ["Arial Unicode MS Bold"]`. There is no italic font in the Arial Unicode family.

An example of the streetmap style is shown in Chinese (Simplified).

An example of the navigation style is shown in Spanish.

Additional JSON edits for Arabic language maps

To ensure that Arabic glyphs appear correctly on the map, either set the text-spacing setting to 0 (zero) or completely remove the `"text-letter-spacing"` style attribute from the `root.json` file. JSON styles may display this attribute as follows:

`"text-letter-spacing" : 0.05,`

Or the style may have more complex syntax such as the following:

`"text-letter-spacing" : { "stops" : [[4, 0.1], [8, 0.18]] }`

Either change these to `"text-letter-spacing" : 0,` or remove the lines completely. Be sure to validate any `root.json` before updating the file on your portal.

Terms of use

Terms of use for ArcGIS Data Appliance: Esri Vector Basemaps

ArcGIS Data Appliance: Esri Vector Basemaps should only be served up from ArcGIS Server and Portal for ArcGIS (10.6.1, 10.7, 10.7.1, 10.8, or 10.8.1). ArcGIS Data Appliance: Esri Vector Basemaps cannot be transferred to or used with non-Esri technology.

For more information, see the Master License Agreement on the Esri website.

Copyright information

Copyright © 1995-2020 Esri. All rights reserved. Published in the United States of America.

You may have received Products or Services that include Graph Editor Toolkit, Copyright © 1992-1999 Tom Sawyer Software, Berkeley, California, All Rights Reserved, and Tom Sawyer Visualization, Ver. 8.0 Copyright © 1992-2009 Tom Sawyer Software, Berkeley, California, All Rights Reserved. Portions of this computer program are Copyright © 1995-2016 Celartem, Inc., dba LizardTech. All rights reserved. This application supports the ECW data format and ECWP compression protocols. Portions of this computer program are Copyright © 2007-2015 Intergraph Corporation. All rights reserved. Creating compressed files using ECW technology is protected by one or more of U.S. Patent No. 6,201,897, No. 6,442,298, and No. 6,633,688.

The information contained in this document is subject to change without notice.

Third Party OSS-FOSS Acknowledgement Documents

Esri's use of open source software libraries is disclosed in the Third Party OSS-FOSS Acknowledgement Documents found at the link below.

Open Source Acknowledgements

ArcGIS Notebooks make use of The FreeType Project, following The FreeType Project License.

EXPORT NOTICE

Use of these Materials is subject to U.S. export control laws and regulations, including the U.S. Department of Commerce Export Administration Regulations (EAR). Diversion of these Materials contrary to U.S. law is prohibited.

US GOVERNMENT CUSTOMER

The Products are commercial items, developed at private expense, provided to Customer under this Master Agreement. If Customer is a US government entity or US government contractor, Esri licenses or provides subscriptions to Customer in accordance with this Master Agreement under FAR Subparts 12.211/12.212 or DFARS Subpart 227.7202. Esri Data and Online Services are licensed or subscribed under the same DFARS Subpart 227.7202 policy as commercial computer software for acquisitions made under DFARS. Products are subject to restrictions, and this Master Agreement strictly governs Customer's use, modification, performance, reproduction, release, display, or disclosure of Products. Agreement provisions that are inconsistent with federal law regulation will not apply. A US government Customer may transfer Software to any of its facilities to which it transfers the computer(s) on which it has installed such Software. If any court, arbitrator, or board holds that a US government Customer has greater rights to any portion of the Products under applicable public procurement law, such rights will extend only to the portions affected. Online Services are FedRAMP Tailored-Low authorized but do not meet higher security requirements, including those found in DFARS 252.239-7010.

Esri Trademarks

Esri trademarks and product names mentioned herein are subject to the terms of use found at the following website: Copyrights and Trademarks.

Other companies and products or services mentioned herein may be trademarks, service marks, or registered marks of their respective mark owners.

Support

Support

Support for ArcGIS Data Appliance: Esri Vector Basemaps is provided by the Esri Technical Support team.

Contact the following:

- United States users—Contact Esri Technical Support using one of the following options. Hours are Monday through Friday, 9:00 a.m. to 5:00 p.m. (Pacific time), excluding Esri holidays:
    - Phone: 888-377-4575

    - Email: support@esri.com

    - Web page: http://support.esri.com/contact-tech-support

- International users—Support is provided by your local Esri distributor.