



How to Add and Personalize Esri Basemaps in Your App

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slides: <https://esriurl.com/ds2021-vtse>

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DEVELOPER SUMMIT

Vector Tile Refresher

- Compressed vector geographic data
- Binary indexed tile scheme
- Transfer and render *LOTS* of features
- Styled on the client
- Separation of data (tiles) and style

Styling Spec

- Mapbox Style Specification
- Styles have ~150-300 layers
- Each layer has a "source" layer
- Layers can have an optional "filter" for data
- Background, fill, symbol, line layers
- Hard to write by hand

The background features a vibrant, abstract graphic design. It consists of various geometric and organic shapes in shades of blue, red, yellow, and cyan. There are patterns resembling a grid or a map, and some elements that look like stylized buildings or structures. The overall aesthetic is modern and digital.

Vector Tile Style Editor

- A visual editor for styling vector tile data
- Extra tools for editing Esri basemaps
- Goal: a complete editing experience

What's new?

- New styles: OSM Daylight, OSM Blueprint
- Places layers
- Developer specific styles

Showcase

Showcase App

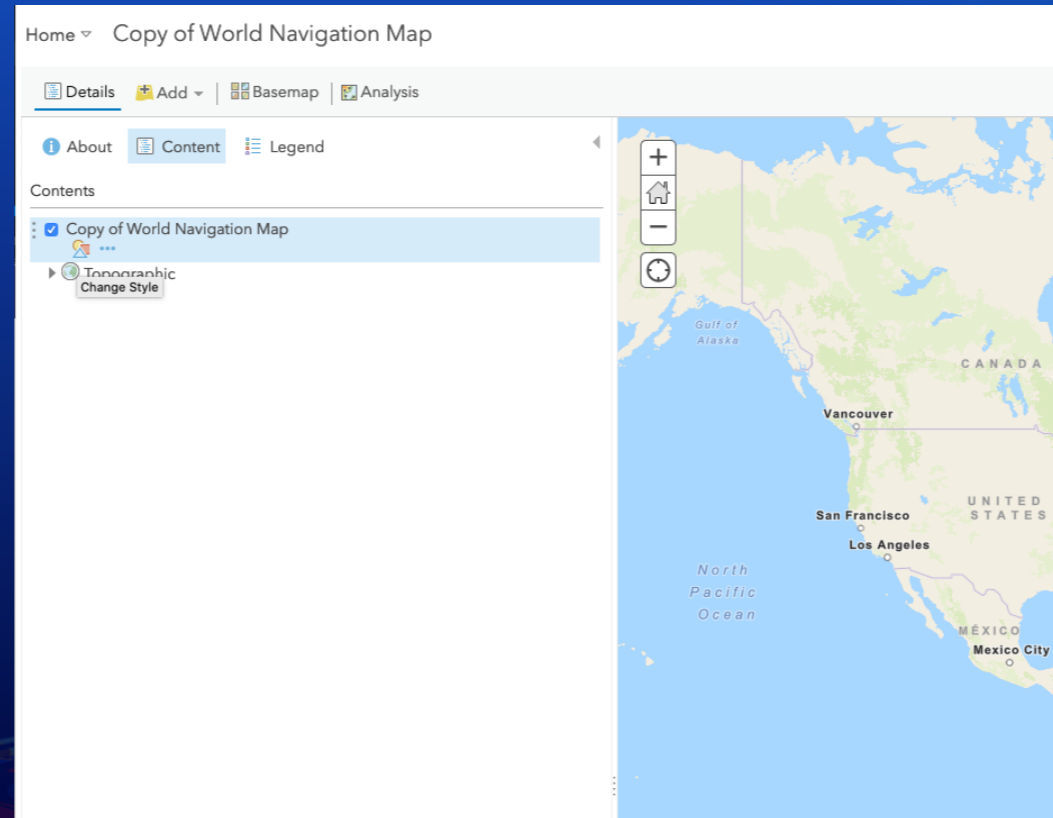




Editor Overview

Let's get started

In ArcGIS Online/Enterprise



In ArcGIS Developers

The screenshot shows the ArcGIS Developers dashboard. At the top, there is a navigation bar with links for Documentation, Features, Pricing, and Support. The user is logged in as Patrick Arlt. The main content area is titled 'Dashboard / Layers' and features a search bar and buttons for 'Import data' and 'Create data'. A dropdown menu is open under 'Create data', showing options for 'New hosted layer (Feature layer)' and 'New vector basemap layer style'. Below this, there is a list of layers. The first layer is 'date_test', which is a 'Feature Layer (hosted)' with a summary of 'No summary.' and a layer URL. The second layer is 'Copy of Copy of World Navigation Map', which is a 'Vector Basemap Layer Style' with a summary of 'No summary.' and a style URL. The right sidebar contains a 'Using Layers' section with three steps: 'Create your first layer', 'Access and display your layer data', and 'Manage your layer data'. Below that is a 'Developer Guide' section with links for 'Maps', 'Scenes', and 'Data hosting services'.

Quick Editor

- Fast, bulk styling for Esri and OSM basemaps
- 6 color groups
- ~500-1000 styling rules
- Label and road size editing

Inside Quick Editor

1. 6 color groups
2. Style rules run
3. Labels colored to meet contrast threshold
4. Shadows and road casings colored for contrast
5. Icons and patterns are tinted to match color groups

Group Editor

- Bulk edit 1 category of layers
- Same rules as quick editor
- Great for big categories like major or minor roads
- Edit a large number of layers fast

Layer Editor

- Edit any property of any layer
- Verbose, but detailed editing
- Use stops for different style across zoom levels
- Show/hide layers
- Customize zoom levels
- High level of control

Sprite Editor

- Recolors icons and patterns
- Upload new sprites
- Delete sprites

Color Editor

- Find and replace colors in a style
- Great for auditing a map to identify out of place colors

Using your custom basemap - ArcGIS JS API

```
const vectorTileLayer = new VectorTileLayer({
  portalItem: {
    id: "6976148c11bd497d8624206f9ee03e30" // Item ID of custom b
  }
});

const basemap = new Basemap({
  baseLayers: [
    vectorTileLayer
  ]
});

const map = new Map({
  basemap: basemap,
});
```


Using your custom basemap - MapBox GL JS

```
const map = new mapboxgl.Map({  
  container: "map", // the id of the div element  
  style: `https://basemaps-api.arcgis.com/arcgis/rest/services/st  
  zoom: 12, // starting zoom  
  center: [-118.805, 34.027] // starting location [longitude, lat  
});
```

[https://codepen.io/patrickarlt/pen/xxRgwEb?
editors=100](https://codepen.io/patrickarlt/pen/xxRgwEb?editors=100)

How do I get started?

- Create a custom basemap style
- Display a custom basemap style
- Feedback on Geonet: <https://bit.ly/2RzadCc>



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