GIS Cloud PowerPlus Documentation

Contents

GCMap Component

Overview

The GCMap component integrates GISCloud's map viewer into the PowerApps framework.

Out of the box, the component allows users to

- View their GISCloud maps.
- Select and display information about features and layers.
- Draw geometry on the map.

However, the true power of the GCMap component comes from its ability to easily integrate with other PowerApps components such as the GCForm component or your own custom components. Some example integrations are:

- Rendering the GCForm to edit a feature's data when it is selected.
- Query an API using the properties of a selected feature.
- Validate newly drawn geometry and display any issues found during validation.

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Rendering a Map

To render a map, create a GCMap component and fill in `Map ID` field with the ID of the map you would like to render.

If the map is private, you will also need to fill in the `API Key` field with your GISCloud API key. It is highly recommended that you encrypt your API key. If you have encrypted your API key, you will also need to fill in the `API Secret Key` field with the secret key needed for decryption.

You will notice that by default the map is rendered with a toolbar. If you wish to disable and hide the toolbar, disable the `Show Toolbar` field by clicking on its toggle.

Similarly, you can disable and hide the list of layers, map panning buttons and feature popups by toggling the `Show Layer List`, `Show Pan Buttons` and `Show Feature Popups` fields respectively.

Accessing the Properties of a Selected Feature

Once a feature is selected, you can access a JSON string containing its properties from the `Selected Feature` field.

Sometimes you might only want the ID of the selected feature or the ID of the layer the selected feature is contained in. You can access these values directly from the `Selected Feature ID` and `Selected Layer ID` fields respectively.

Accessing the Properties of Drawn Geometry

You can access the well-known text of geometry drawn on the map via the `Drawn Geometry` field. If you only want to know the type of the drawn geometry (e.g. `Point`, `Line`, `Polygon`, etc), you can directly access this information using the `Drawn Geometry Type` field.

For drawn geometry of type `Line` and `Polygon`, the GCMap component also outputs the length and area respectively of the geometry under the `Drawn Geometry Dimensions` field.

Scaling for Mobile/Tablet

When rendering the GCMap component on mobile or tablets, the scale of UI elements like the toolbar or panning buttons may be too small. To scale these elements to their preferred size, set the `UI Scale` field to your desired scale. For example, to scale the UI elements up by `50%`, set the value of this field to `1.5`.

Setting the Default Tool and Default Type of Geometry to Draw

By default, the GCMap component activates the `select` tool when it is created. If you want to set a different tool to be activated on startup (e.g. the `pan` tool), select a different option for the `Default Tool` field.

Similarly, if you want to change the default selected type of geometry to draw (e.g. from `Point` to `Line`), select a different option for the `Default Geometry Type` field.

Accessing the Current Bounds of the Map's Viewport

The `Current Bounds` field specifies the geographical area a user is currently viewing within the GCMap component. The bounds are specified by four numbers which indicate the top/bottom latitudes and left/right longitudes of the geographical area in view. The format of this array of four numbers is `[left, bottom, right, top]`.

Setting the Initial Bounds of the Map's Viewport

The `Initial Map Bounds` field determines the geographical area a user sees when the component is first loaded. The bounds are set by supplying an array of four numbers which define the top/bottom latitudes and left/right longitudes which bound the initial geographical area to view. The format of this array of four numbers is `[left, bottom, right, top]`.

Clearing Drawn Geometry Programatically

If you want to clear newly drawn geometry programatically (e.g. you want to clear the geometry using another PowerApps component like a button), you can do so by toggling the `Clear Drawn Geometry` field from `false` to `true`.

Note: Since the geometry is only cleared when the field is toggled from `false` to `true`, you must reset the field to `false` before any subsequent clearing using this field.

Fields Reference

API Key

The GISCloud API key that is used to access your private maps/data. If your API key is encrypted (which is highly recommended), you will need to fill the `API Secret Key` field with the secret key needed for decryption.

property name: apiKey

usage: input

type: SingleLine.Text

API Secret Key

The secret key used to decrypt your API key. This field is only required when you have encrypyted your GISCloud API key (which we highly recommend).

property name: clientSecret

usage: input

type: SingleLine.Text

Clear Drawn Geometry

Clears any newly drawn geometry when toggled from `false` to `true`.

property name: resetNewGeom

usage: input

type: TwoOptions

default value: false

Current Bounds

The top/bottom latitudes and left/right longitudes of the current viewport bounding box. The output of the bounding box follows the following format: [left, bottom, right, top].

property name: bounds

usage: bound

type: SingleLine.Text

Default Geometry Type

The selected type of the geometry to draw when the component is first rendered.

property name: defaultGeomType

usage: input

type: Enum

expected values: Point, Line, Polygon

default value: Point

Default Tool

The tool that is activated when the component is first rendered.

property name: defaultTool

usage: input

type: Enum

expected values: Select, Pan

default value: Select

Drawn Geometry

The well-known text of newly drawn geometry. The well-known text is specified under the WGS84 reference frame.

property name: newGeom

usage: output

type: SingleLine.Text

Drawn Geometry Dimensions

The area or length of newly drawn geometry.

property name: newGeomDim

usage: output

type: SingleLine.Text

Drawn Geometry Type

The geometry type of newly drawn geometry.

property name: newGeomType

usage: output

type: Enum

expected values: Point, Line, Polygon

GPS Latitude

The latitude of the position of GPS marker. The latitude must be specified using the WGS84 reference frame.

property name: gpsLat

usage: input

type: SingleLine.Text

default value: 0.0

GSP Longitude

The longitude of the position of the GPS marker. The longitude must be specified using the WGS84 reference frame.

property name: gpsLong

usage: input

type: SingleLine.Text

default value: 0.0

Initial Map Bounds

The top/bottom latitudes and left/right longitudes of the initial bounding box of the map. The input of bounding box follow the following format: [left, bottom, right, top]. For example, providing the field with the value [30, 45, 100, 70] sets the bounding box to have left, bottom, right and top coordinates of 30, 45, 100 and 70 respectively.

property name: initialBounds

usage: input

type: SingleLine.Text

Map ID

The GISCloud identifier of the map.

property name: mapId

usage: input

type: SingleLine.Text

default value: 271340

Selected Feature

The properties of the currently selected feature formatted in JSON.

property name: selectedFeature

usage: output

type: Multiple

Selected Feature ID

The identifier of the currently selected feature.

property name: selectedFeatureId

usage: output

type: SingleLine.Text

Selected Layer ID

The identifier of the layer of the currently selected feature.

property name: selectedLayerId

usage: output

type: SingleLine.Text

Show Feature Popups

Show or hide popups that contain information about a feature when it is selected.

property name: usePopups

usage: input

type: TwoOptions

default value: true

Show Layer List

Show or hide the list that contains information about the layers of the map.

property name: useLayerList

usage: input

type: TwoOptions

default value: true

Show Pan Buttons

Show or hide the map panning buttons.

property name: usePanButtons

usage: input

type: TwoOptions

default value: true

Show Toolbar

Show or hide the toolbar.

property name: useToolbar

usage: input

type: TwoOptions

default value: true

UI Scale

Scales the UI elements of map (such as the toolbar and panning buttons). The amount of scaling is relative to the default value of `1`. For example, to scale the UI up by `50%`, you would set the value of this property to `1.5`.

property name: uiScale

usage: input

type: SingleLine.Text

default value: 1

GCForm Component

Overview

The GCForm component integrates GISCloud's mobile data collection into the PowerApps framework.

Out of the box, this component allows users to:

- Display and edit the properties and geometry of your features with all of the validation provided by GISCloud.
- Take photos relating to your features and submit them to GISCloud.

However, the true power of the GCForm component comes from its ability to easily integrate with other PowerApps components such as the GCMap component or your own custom components. Some example integrations are:

- Selecting a feature using the GCMap component and then using the GCForm component to edit it.
- Create a new feature from geometry on the GCMap component and then set the values of its properties using the GCForm component.

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Editing a Feature

Before we can edit the properties of a feature using the GCForm component, we first need to load the feature into our form. To do this, set the ID of feature you want to edit and the ID of the layer the feature is contained in to the fields `Feature ID` and `Layer ID` respectively. *Note*: If you are loading a feature from a private data set, you will also need to provide an API key to the `API Key` field and optionally provide the secret key to the `API Secret Key` field if your API key is encrypted (which we highly reccommend to do!).

Now, after a few moments of loading, the feature should be ready to edit using the form.

Fields Reference

API Key

The GISCloud API key that is used to access your private maps/data.

property name: apiKey

usage: input

type: SingleLine.Text

Feature Geometry

The geometry of the feature that is being edited. The geometry is formatted in the well-known text under the WGS84 reference frame.

property name: featureGeom

usage: bound

type: SingleLine.Text

Feature ID

The GISCloud identifier of the feature that is being edited.

property name: featureId

usage: input

type: SingleLine.Text

Form Status

The status of the form. For example, while the form is loading or the status will be set to Loading.

property name: formStatus

usage: output

type: Enum

expected values: Loading, LoadSuccess, LoadFailure, Submsitted, SubmitSuccess, SubmitFailure, Cancelled

default value: Loading

Layer ID

The GISCloud identifier of the layer the form will be editing.

property name: layerId

usage: input

type: SingleLine.Text