

SECTION 4



Data Layers



Many different types of data can be integrated into NICS and represented as a map layer. Some examples include: streets, parcels, zoning, flood zones, shopping centers, office buildings, demographics, etc. When these layers are placed on top of one another, trends and relationships often emerge enabling us to gain insight about relevant characteristics of a location.

With NICS, you can customize your view by overlaying different data layers in order to provide the combination of information required to allow users to make informed decisions.

Maps

Maps represent the base layers, while Data, Weather, and Tracking provide additional overlays to be added to the map.

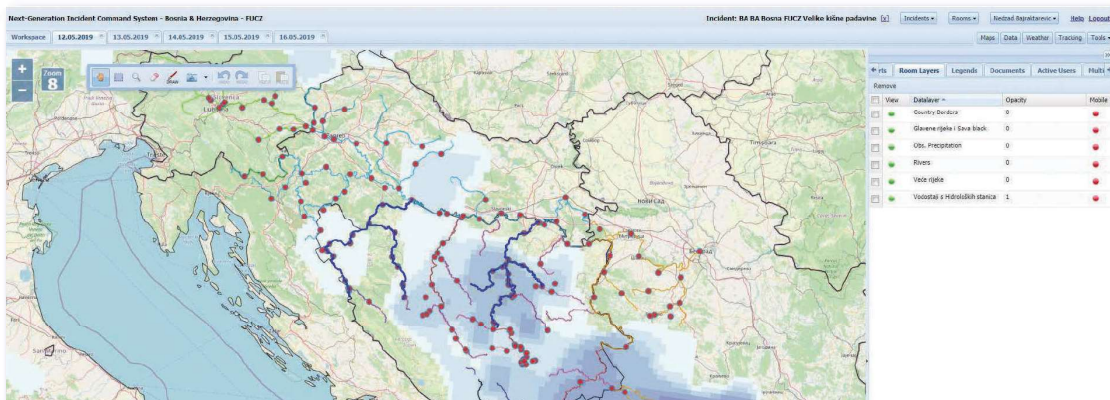
There are several types of maps, and new map types are added regularly.

- Open Street Map
- Bing Aerial with Labels
- Bing Roads
- Bing Aerial
- US Topo – 7.5 min. Quadrangle Maps: USGS 7.5/15 mins. Seamless topographical maps
- FAA – Sectional Aeronautical Charts

Organizations can also add their own maps by adding them to data layers.

Data Layers

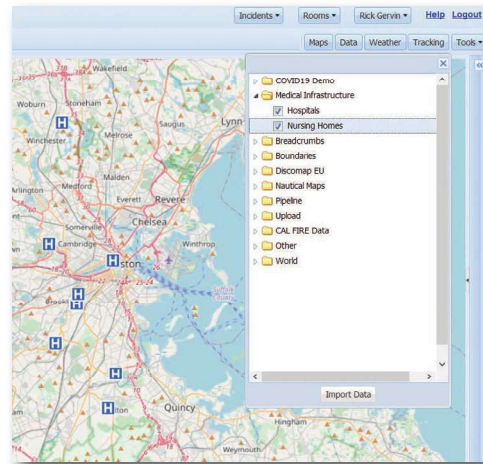
Data layers are the geo-information that can be placed on top of the base map layer. Layers are turned on and off by checking and unchecking boxes next to their names.



Data layers are organized in a tree file structure. NICS provides some general layers to every incident, and it is possible for authorized users to upload data from other sources, which will be located in the Upload Folder.

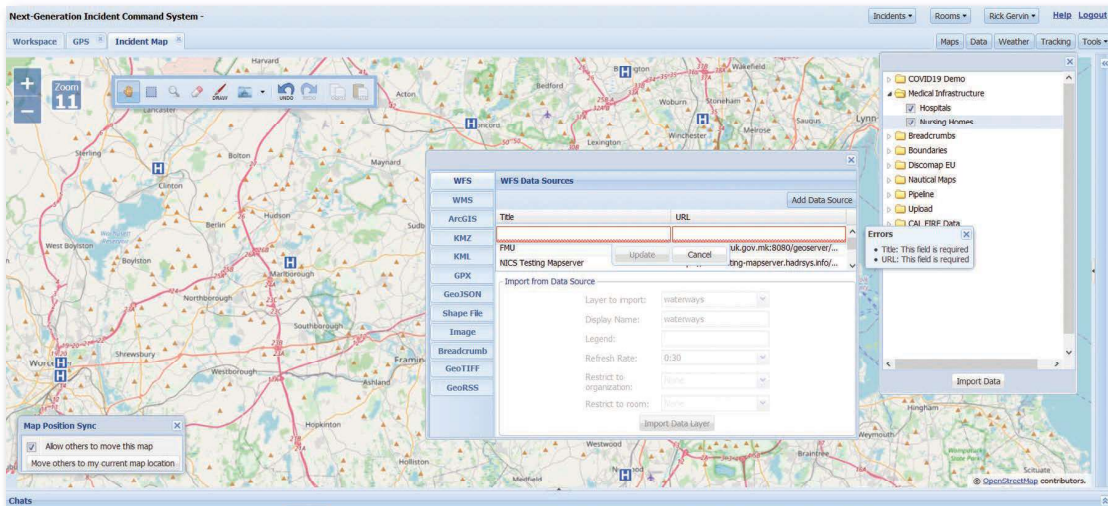
In order to access existing data layers in NICS, click on the Data button located on the right side of the application window. This will open a drop-down window with multiple folders to choose from. Open the folder to see the available layers included within the folder. To turn on a layer, simply select the check box next to the layer you want displayed.

In the image to the right, you can see local hospitals have been displayed on the map by turning on the data layer in the dropdown menu.



Import Data Layers

NICS also has the ability to upload dynamic data layers, such as WFS/WMS/ArcGIS, just to name a few. There are a few different steps required to upload different data layers; we will first look at WFS/WMS/ArcGIS.



1. First, select the Data button from the right side of the application window.
2. When the data layer folder window opens, select the Import Data button at the bottom of the window.
3. A window with all the import options will open. Select one of the first three



options (WFS/WMS/ArcGIS) and click Add Data.

4. Enter a title and URL for the WFS/WMS/ArcGIS service in the blank entry fields that pop up. If the service is valid it will be added to the grid service list and ask if you would like the data source secured. If you select Yes, you can add a user name and password.

If the service is invalid, the editable fields are still displayed along with an error message.

Once you've selected the data service you want to use, the Layer to import drop-down dynamically populates once the service you selected has been registered. Clicking on another service in the table populates the drop-down with layers from that service.

5. Use the Layer to import drop-down to select the desired Layer.
6. Use the existing layer name or enter a name in Display Name. This data layer name is ultimately shown in the Data tree.
7. (If desired) Enter a URL address to be used as a Legend for this data layer.
8. Set the Refresh Rate for the layer enabling all updates to automatically pull and display at the given interval.
9. (If desired) Select an organization to access this data layer. If you use the default (None), there are no restrictions on using this data layer, and it will be added to the Upload folder.

Note: Only the organization chosen in the drop-down box will be able to access the data layer from the Data tree.

10. (If desired) Select a room to access this data layer. If you use the default (None), there are no Room restrictions on using this data layer.

Note: If a room is selected, the data layer will only turn on when a user is in the specified room. To pick a room, the user must be in an incident when uploading a data layer.

11. Click Import Data Layer.

All imported layers are automatically placed in the Upload folder of the Data tree unless they were explicitly added to a room.

Upload Other Data Layers

To add (KMZ, KML, GPX, GeoJSON) data layer click Data from the buttons on the right side of the NICS screen. A list of data folders appears.

1. Click Import Data.
2. Click the desired static file type (KMZ, KML, GPX, GeoJSON) from the button list.
3. Use Browse to select the file to be imported.

Note: The file must have the proper file extension associated with the data layer type.

4. Enter a name in Create Display Name in NICS. This data layer name is ultimately shown in the Data tree.
5. The Refresh Rate only applies to any file that may contain a dynamic link (e.g., KML).
6. (If desired) Select an organization to access this data layer. If you use the default (None), there are no restrictions on using this data layer, and it will be added to the Upload folder.

Note: Only the organization chosen in the drop-down box will be able to access the data layer from the Data tree.

7. (If desired) Select a room to access this data layer. If you use the default (None), there are no Room restrictions on using this data layer.

Note: If a room is selected, the data layer will only turn on when a user is in the specified room. To pick a room, the user must be in an incident when uploading a data layer.

8. Click Upload.

Upload Shape Files

To add a shape file as a data layer, click Data from the buttons on the right side of the NICS screen. A list of data folders appears.

1. Click Import Data.
2. Click Shape File from the button list.
3. Browse and select a file for each file type associated with the shape file.

Note: The SLD file is optional.



4. Enter a name in Display Name. This data layer name is ultimately shown in the Data tree.
5. Click Upload.

The Shape files are uploaded and displayed as a WMS layer.

Upload Images as Data Layers

To add images as a data layer click Data from the buttons on the right side of the NICS screen. A list of data folders appears.

1. Click Import Data.
2. Click Image from the button list.
3. Enter a name in Create Display Name in NICS. This data layer name is ultimately shown in the Data tree.
4. Browse and select geotagged images that will be aggregated into one data layer and displayed on the map as points.

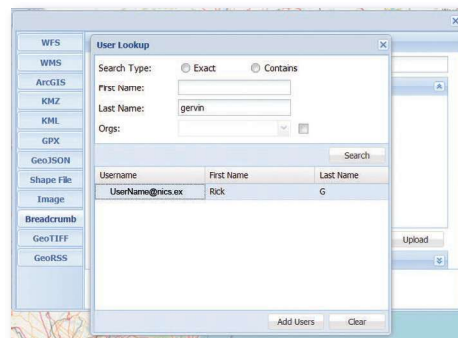
Note: When a user clicks on the points, the image displays in a popup window.

5. Click Upload.

Upload Mobile Tracking Info

To add mobile tracking information as a data layer, click Data from the buttons on the right side of the NICS screen. A list of data folders appears.

1. Click Import Data.
2. Click Breadcrumb from the button list.
3. Enter a name in Create Display Name in NICS. This data layer name is ultimately shown in the Data tree.
4. Click Lookup to search for a mobile user by name.
5. Enter a number into Hours Past to create a track for the desired number of past hours, or choose a time frame by clicking on the Date button which will open a Date/Time picker. Choose a Time from the dropdown at the top.



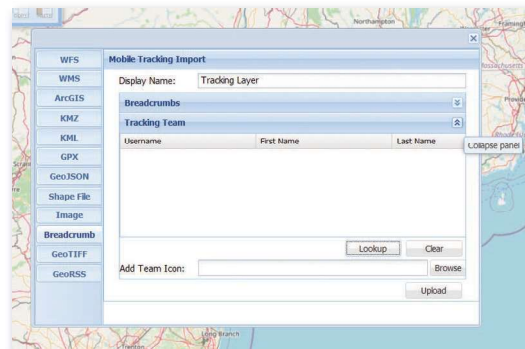
6. Checking the Segment checkbox connects the points for the breadcrumb
7. Checking the Style checkbox allows you to style each location as directional arrow or a point.
8. Click Upload.

The layer is added to the Upload folder as a WFS layer. You can click each location point and display the time of that location in a popup window.

Tracking Teams

Not only can you track individual responders in NICS, but you can also group individuals into teams.

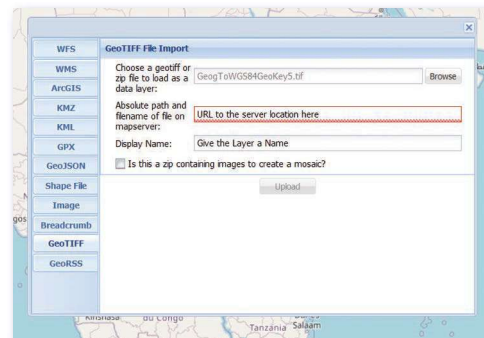
1. Click Import Data.
2. Click Breadcrumb from the button list.
3. Open the tracking teams panel by clicking on the down arrow.
4. Look up as many users as you would like to add to the team.
5. Assign an icon (upload a small graphic that will be displayed on the map).
6. Click Upload and the layer will be added to the “Tracking” menu.



Upload GeoTIFF

GeoTIFF is based on the TIFF format and is used as an interchange format for Geo-referenced raster imagery. To upload a GeoTIFF as a data layer, click the Data button on the side of the NICS screen. A list of data folders appears.

1. Click Import Data.
2. Click the GeoTIFF button from the left side of the pop up menu.
3. Upload a GeoTIFF that is located on your local machine by selecting the browse button.
4. To upload a GeoTIFF from a map server, enter the direct URL link to the server file.
5. If it's a ZIP file used to create a mosaic, be sure to select the check box.





6. Click Upload.

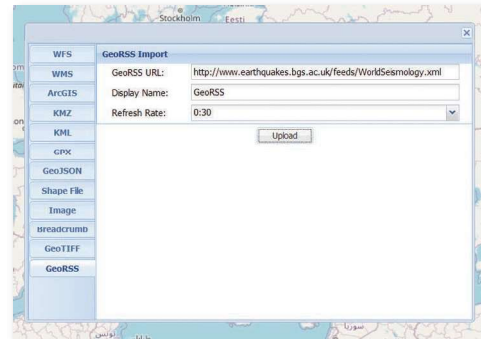
A load screen will appear and confirm that the GeoTIFF has been uploaded.

Upload GeoRSS Feeds

GeoRSS is a specification for encoding location as part of a Web feed. To upload a GeoRSS feed as a data layer click the Data button on the side of the NICS screen.

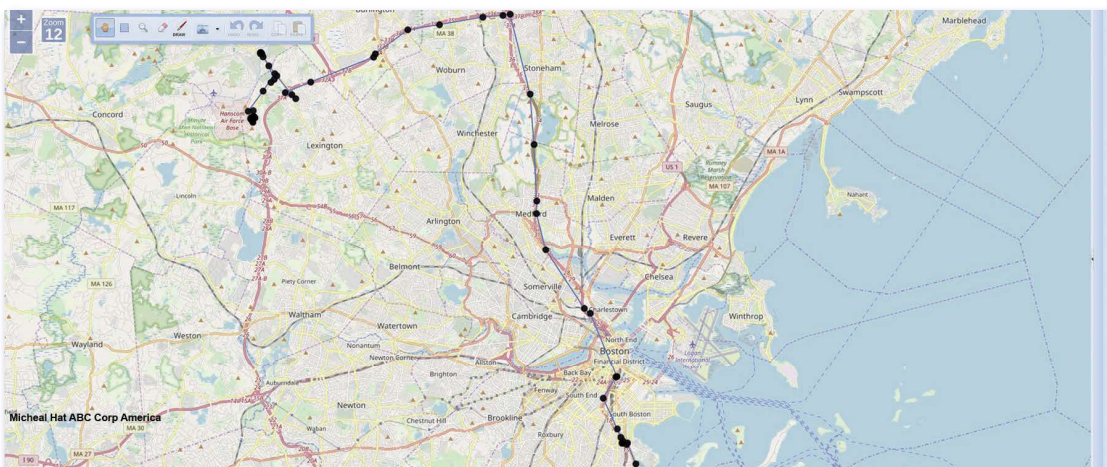
A list of data folders appears.

1. Click Import Data.
2. Select the GeoRSS on the bottom left-hand side of the pop up window.
3. Enter the URL of the GeoRSS you want to upload.
4. Provide a name for the Data Layer.
5. Select the refresh rate you would like the GeoRSS feed updated.
6. Click Upload.



Tracking Dropdown Menu

The tracking menu gives the user the ability to turn on or off tracking layers. It also provides the ability to locate an individual or team quickly by utilizing the search feature.



Types of tracking layers:

- Individual NICS User
- Teams of NICS Users

To turn on a tracking layer, simply select the check box next to the tracking layer display name.

Right Click Options on Data Tree

When you are in the Data tree, which can be found by clicking on the Data button on the top right-hand side of the application window, you can right click on a Data layer or folder for more options.

Additional features:

Show Legend:

You can configure a URL on a data layer that should point to a graphic. Toggling Show Legend will create a popup/overlay on the map displaying that graphic. If there's not a URL set, it's grayed out.

Add to Room:

You can add this layer to show in a room you're in. First you have to be in a room. The active room you're in is the one the data will be added to. This way you can organize a handful of layers to be on in a room, but they won't show elsewhere unless you toggle them on via the Data menu. There's also a tab on the side panel, "Room Layers", where you can manage these layers. Toggling it on/off within the room, setting the opacity, and setting whether or not mobile users should have the layer on. You can also remove the layers from the room here.

Folder Management:

If you have the permissions, admin or higher, you can create, rename, and delete folders in the Data menu. You can also move layers into folders by dragging and dropping them.

Export to GeoJSON:

If the layer is of a certain type, it'll show Export to GeoJSON, so not all layers will show this option. You can export the layer's content as GeoJSON to download.