



# HEXAGON

Release guide

---

## Release guide

© M.App Enterprise 2021

Version 16.7.1520.4

10 January 2022

# Contents

<b>About this release .....</b>	<b>4</b>
<b>Important Note .....</b>	<b>4</b>
<b>New platforms – M.App Enterprise 2021 .....</b>	<b>4</b>
Windows® Server 2022 .....	4
JAVA 17 .....	4
<b>New technology – M.App Enterprise 2021 Update 4 .....</b>	<b>5</b>
<b>New technology – M.App Enterprise 2021 Update 3 .....</b>	<b>5</b>
New licensing.....	5
HERE Maps with language support.....	5
3D support of vector data in Luciad RIA.....	5
Upgrade Luciad software version .....	5
<b>New technology – M.App Enterprise 2021 Update 2 .....</b>	<b>6</b>
2D Button in RIA Browser App .....	6
3rd Party Identity Providers .....	7
Upload button for Icons within ActionSets .....	7
Upgrade Luciad software version .....	7
<b>New technology – M.App Enterprise 2021 Update 1 .....</b>	<b>8</b>
<b>New technology – M.App Enterprise 2021.....</b>	<b>8</b>
Azure Active Directory .....	8
Branding/Theming .....	9
Browser Apps Creation.....	11
Feature Analyzer .....	13
New Map View Wizard .....	13
Attribute Preview Enhancement.....	14
Functional Attribute Enhancement.....	14
M.App Enterprise Map View Support (LuciadRIA Map Views) .....	15
Motif Colour Synchronization Enhancement.....	16
Multi-Dataset Support .....	17

New Chart: Tabbed Chart Container .....	21
New Chart: Workflow Widget .....	22
New Global Window Style – Modern .....	24
Spatial Filter Enhancements .....	26
Tooltip Definition Enhancement .....	26
Legend Behavior.....	27
New M.App Editor for Browser Apps .....	27
OGC Plugin.....	29
SAP Hana .....	31
Style Editor .....	32
Spatial Workshop.....	35
Two-factor Authentication.....	36
Various Enhancements .....	37
App Type Filter in My Apps Page.....	37
AutoComplete Fields in Lists.....	37
EPSG Code or Name .....	37
Go to Apps Page Button .....	38
New Icons in Desktop Client .....	38
Changing Unit of Measurement (UOM) in the Desktop Client .....	39
Support for Panoramics .....	39
<b>System requirements.....</b>	<b>41</b>
M.App Enterprise 2021 .....	41
<b>Issues resolved – M.App Enterprise 2021 Update 4 .....</b>	<b>43</b>
<b>Issues resolved – M.App Enterprise 2021 Update 3 .....</b>	<b>43</b>
<b>Issues resolved – M.App Enterprise 2021 Update 2 .....</b>	<b>44</b>
<b>Issues resolved – M.App Enterprise 2021 Update 1 .....</b>	<b>46</b>
<b>Issues resolved – M.App Enterprise 2021 .....</b>	<b>47</b>
<b>Contact us.....</b>	<b>51</b>
<b>About Hexagon.....</b>	<b>51</b>

## About this release

This document describes the enhancements for M.App Enterprise. The information in this document is current as of the product release. For the most current version, visit the Hexagon [Geospatial](#) Support Portal.

This release includes fixes and enhancements to M.App Enterprise. For information on product fixes, please review the Issues Resolved section. For information on enhancements, read the New Technology section.

This document is only an overview and does not provide all details about M.App Enterprise's capabilities. For additional information about M.App Enterprise, please read our [online help](#) and other product [documentation](#).

### Important Note

This release of M.App Enterprise is a kind of "hybrid." Despite the introduction of new features (Style Editor, M.App Editor, Feature Analyzer), pre-M.App Enterprise 2021 configurations and components are still there and working.

Some components and frameworks will be deprecated and gone with M.App Enterprise 2022:

- Old Style Editor
- Old M.App Editor
- Browser Apps based on Leaflet
- Feature Analyzer based on Leaflet
- BI Map Wizard

## New platforms – M.App Enterprise 2021

### Windows® Server 2022

Windows® Server 2022 is now also officially supported in M.App Enterprise. Test cycle was successfully completed since the official release of the server OS beginning of October.

### JAVA 17

The LTS version of JAVA is now also officially supported in M.App Enterprise. Test cycle was successfully completed since the official release of the software mid of September.

## New technology – M.App Enterprise 2021 Update 4

No new technology was introduced in this update release.

## New technology – M.App Enterprise 2021 Update 3

### New licensing

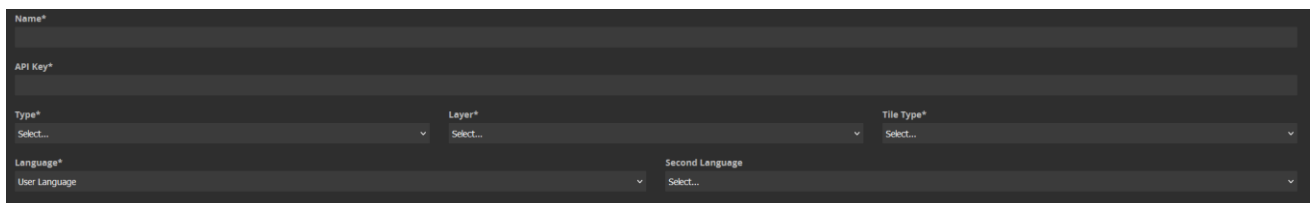
With the release of this service pack, a new licensing system is introduced. Most of the work is happening behind the scenes but if needed the URL for the firewall / proxy exception has changed to:

<https://maelicensing.hexagon.com>

### HERE Maps with language support

M.App Enterprise 2021 Update 3 allows you to switch and define the language of the map tiles in HERE Maps. We are also offering dual labeling, when both languages are set in M.App Enterprise Studio. Default value for the “main” language is the user language of the Apps page, which is defined in **Security – Users**.

**Multiple languages** – This option allows you to display the country names in the default language of the country. Continent, country and water bodies are also shown in the default language.



The screenshot shows a configuration window with the following fields:

- Name\*
- API Key\*
- Type\* (dropdown menu)
- Layer\* (dropdown menu)
- Title Type\* (dropdown menu)
- Language\* (dropdown menu, currently set to User Language)
- Second Language (dropdown menu, currently set to Select...)

### 3D support of vector data in Luciad RIA

If your geometries contains a z-coordinate the **dimension** is set to 3D in M.App Enterprise Studio and if you are using this data in your browser application it will be rendered correctly in the three-dimensional space.

### Upgrade Luciad software version

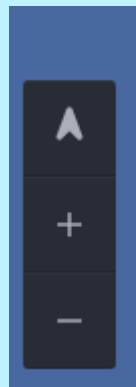
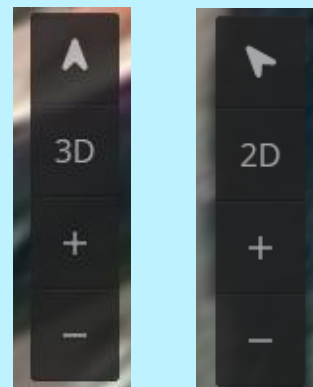
With this release we upgraded Luciad RIA to version 2020.1.24 and Luciad FUSION to 2020.1.35.

# New technology – M.App Enterprise 2021 Update 2

## 2D Button in RIA Browser App

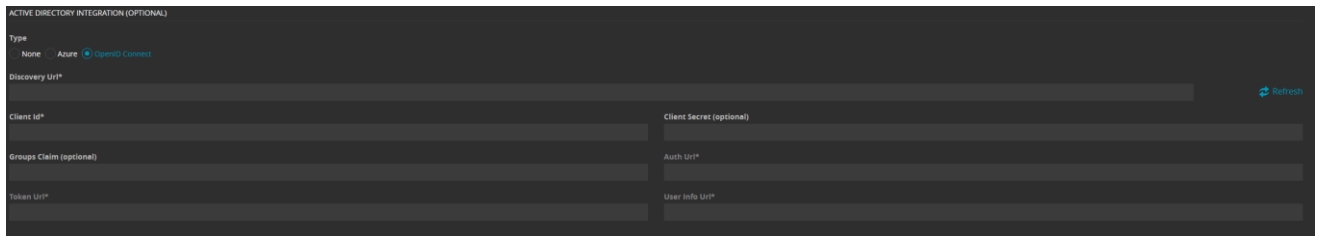
Previously it was possible to switch to a top-down view by clicking two times on the compass needle on the left side but with this release there is a dedicated button to switch it. If you are in the top-down view you can tilt / use the camera as you are used to in order to switch back to the “3D” view.

***Please note: The button only switches the view on the client. If you start up again the app you will get back to the view the Studio Administrator had defined for you.***

**Old****New**

### 3rd Party Identity Providers

With this release we introduced a new Active Directory integration beside of the existing ones (onPremise, Azure) and it is called openID Connect.

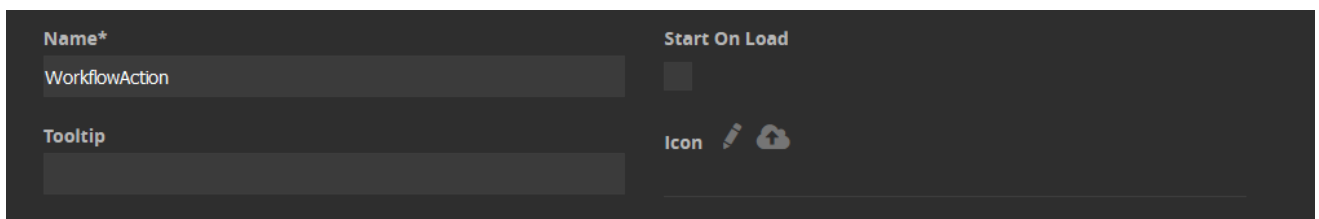



If you set up your openID connect membership you should get the following parameters, which you can / should define:

- Discovery Url (https://server.com/.well-known/openid-configuration)
- Client Id
- Client Secret (optional)
- Groups Claim (optional)
- Auth Url (automatically set with click on the REFRESH button)
- Token Url (automatically set with click on the REFRESH button)
- User Info Url (automatically set with click on the REFRESH button)

### Upload button for Icons within ActionSets

With this release we introduce the possibility to upload icons for your ActionSets directly within the M.App Enterprise Studio.



The storage didn't change, so the icons get stored at **MAEWarehouse\TENANT\AppData\images**.

### Upgrade Luciad software version

With this release we upgraded Luciad RIA to version 2020.1.20 and Luciad FUSION to 2020.1.25.

# New technology – M.App Enterprise 2021 Update 1

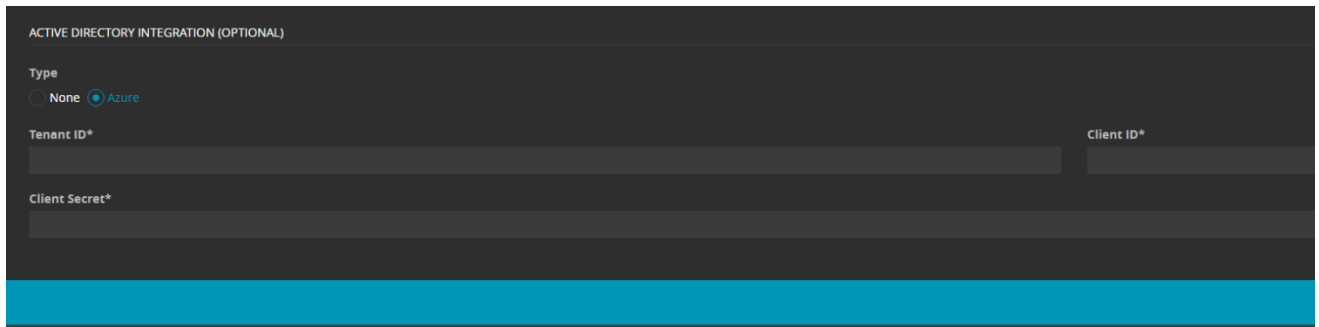
No new technology was introduced in this update release.

## New technology – M.App Enterprise 2021

### Azure Active Directory

Azure Active Directory (Azure AD) is Microsoft's enterprise cloud-based identity and access management (IAM) solution. Azure AD is the backbone of the Office 365 system, and it can sync with on-premise Active Directory and provide authentication to other cloud-based systems via OAuth.

When creating a new tenant, you now have the possibility to use Azure AD for that specific tenant.



ACTIVE DIRECTORY INTEGRATION (OPTIONAL)

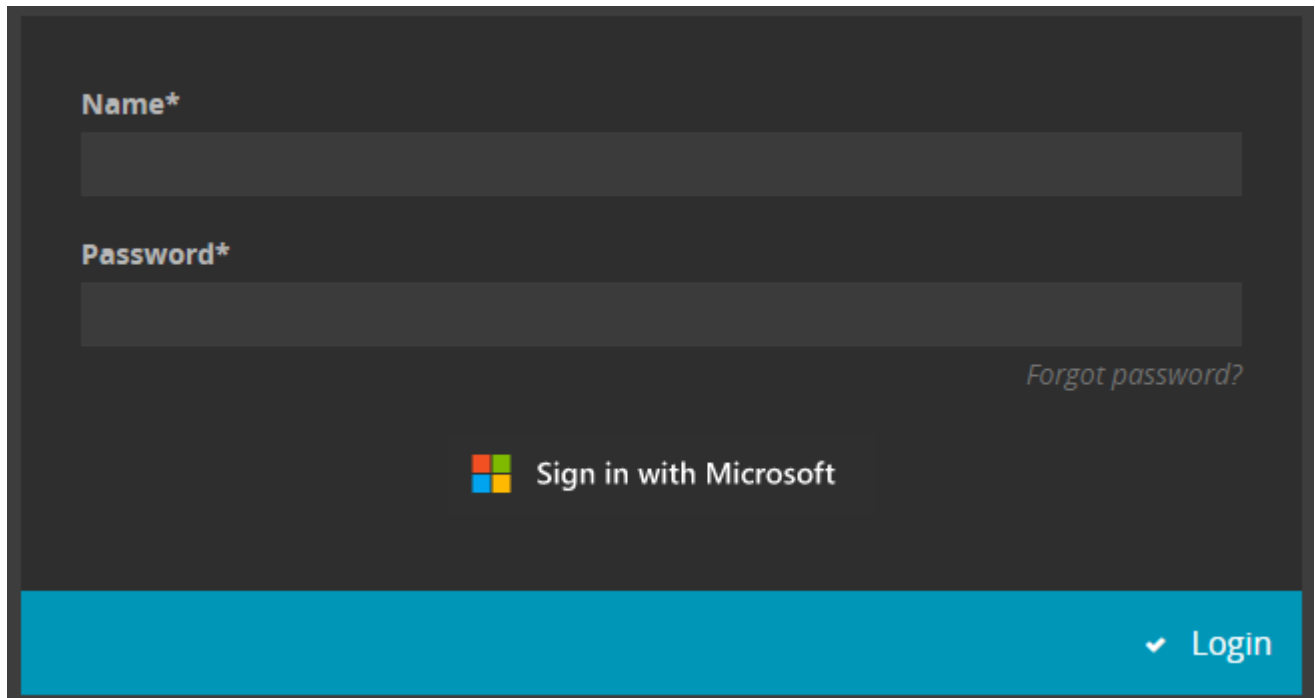
Type

☐ None ☒ Azure

Tenant ID\* Client ID\*

Client Secret\*




A dark-themed login form with a blue bar at the bottom. It contains fields for 'Name\*' and 'Password\*', a 'Forgot password?' link, a 'Sign in with Microsoft' button with the Microsoft logo, and a 'Login' button with a checkmark icon.

**Name\***

**Password\***

*Forgot password?*

 Sign in with Microsoft

✓ Login

## Branding/Theming


With the release of M.App Enterprise 2021, it is possible to change the theming within the platform and also change the header and icon colors to your liking.

You can change the theme in the user settings (Management, Studio, Apps).

There are 3 possible options:

- Automatic - uses the same setting as your OS
- Dark - forces the dark theme
- Light - forces the light theme

In the desktop client there is a dedicated button , which allows you to overwrite the OS settings.




Welcome M.App Enterprise S...  
Licensed to M.App Enterprise P...  
[LOGOUT](#) / [SETTINGS](#)


**User**

Admin

**Email**

stefan.schuettenkopf@hexagon.com 

**Language**

English 

[Change password](#)

[Enable two factor authentication](#)









**Theming**

Dark

Automatic

Light

Dark

USERS

ROLES

PASSWORDS

API KEYS

LOGS

BRANDING









Overwrite default colors

☒

BRANDING COLORS

Primary\* #17794c Secondary #00a228 Color presets Default Preview

COLOR PALETTE

USERS

ROLES

PASSWORDS

API KEYS

LOGS

BRANDING

Overwrite default colors

☒

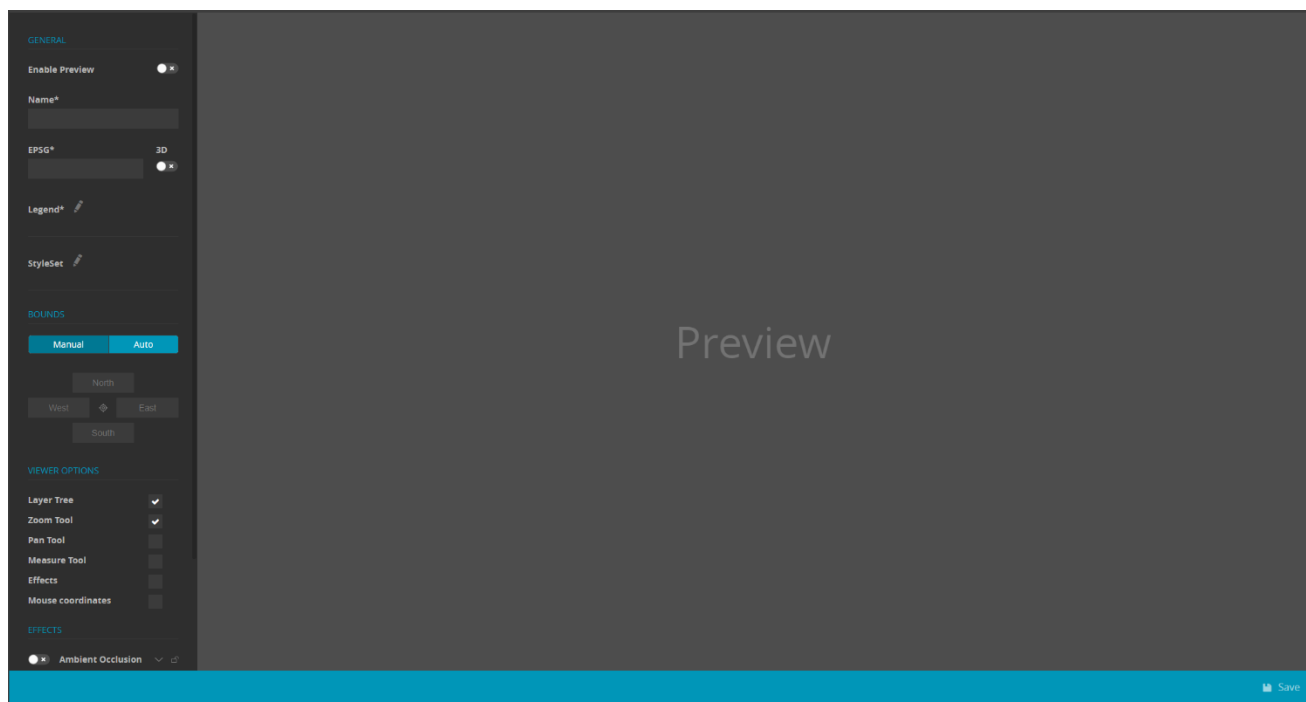
BRANDING COLORS

Primary\* #811f17 Secondary #f8f8f8 Color presets Custom Preview

COLOR PALETTE

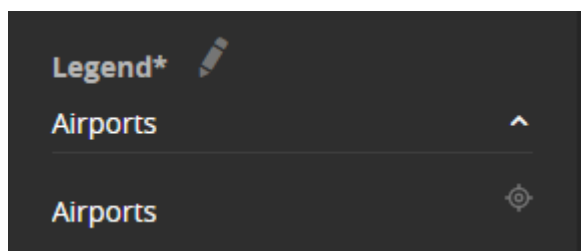
## Browser Apps Creation

M.App Enterprise 2021 changes the browser app configuration. Beside of the live preview of your configuration (available only if **Enable Preview** is activated) the legend and EPSG are defined. In addition, standard configuration (Styleset, Bounds) and additional **Viewer Options** and **Effects** (which come in from LuciadRIA) are displayed.

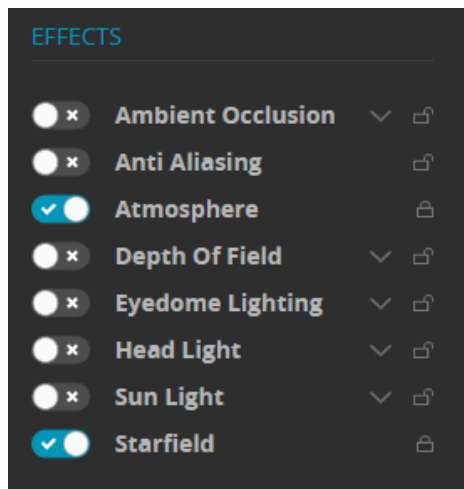


Note: Tilting is not possible when 3D is activated and manual bounds are chosen.

If you click on the icon beside of any of the available datasets within the legend, the map automatically zooms in to the bounds of the dataset.



With the new release it is possible to add effects to your browser application. This can be done by an administrator, or it be made available to the end customer by clicking on the lock icon on the right side of the effects panel.

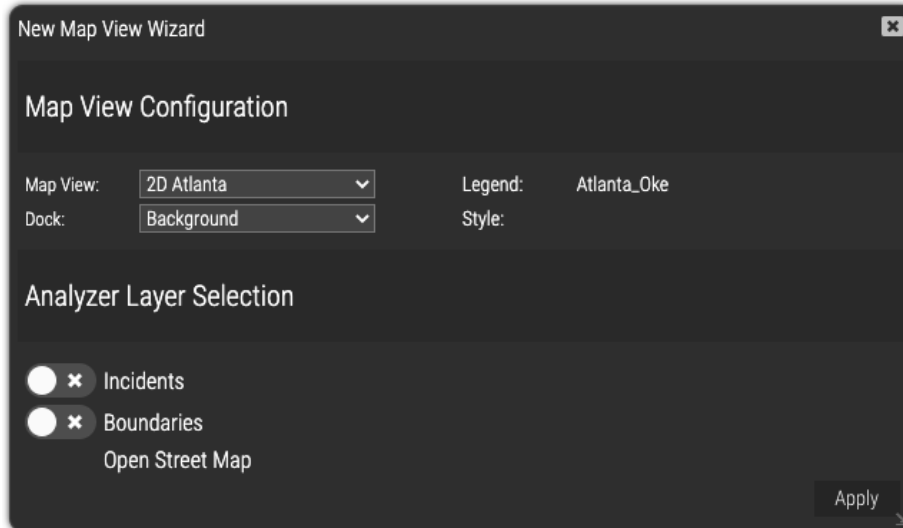


Here is a comparison of a browser app without and with effects:



## Feature Analyzer

### New Map View Wizard




The image shows a 'New Map View Wizard' dialog box with a dark theme. It has a title bar with a close button. The main content is divided into two sections. The first section, 'Map View Configuration', contains four labels with corresponding dropdown menus: 'Map View:' set to '2D Atlanta', 'Dock:' set to 'Background', 'Legend:' set to 'Atlanta\_Oke', and 'Style:' (empty). The second section, 'Analyzer Layer Selection', contains three items: 'Incidents' with a radio button and a close button, 'Boundaries' with a radio button and a close button, and 'Open Street Map' without a radio button. An 'Apply' button with a right arrow is in the bottom right corner.

The New Map View Wizard is the landing widget when first starting a new Analyzer view. A major change has been introduced in this release: a map view must be defined first in M.App Enterprise Studio before using a LuciadRIA widget or the New Map View Wizard. Once a map view is selected, the legend and style will be loaded. Analyzer will give you the option in the Analyzer Layer Selection section to pick datasets you want to use as Analyzer datasets. When clicking OK, Analyzer will:

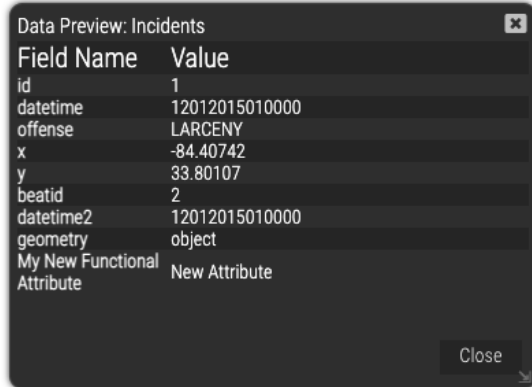
- Create a new Map View with the associated legend and styleset
- Automatically create dataset references to layers selected in the Analyzer Layer selection section
- Add anything not selected or not selectable as a background layer
- Automatically generate a theme widget if a classification is defined as part of a styleset
  - Any theme widget automatically generated will remain in sync with the styleset classification/categorization

You can run this wizard more than once if you want to use multiple Map Views in your Analyzer View. To

launch the New Map View Wizard, click the new Map View Wizard button, , in the Dataset Configuration tab.

## Attribute Preview Enhancement

Attribute preview has moved. To activate attribute preview, click the i icon on the dataset header.

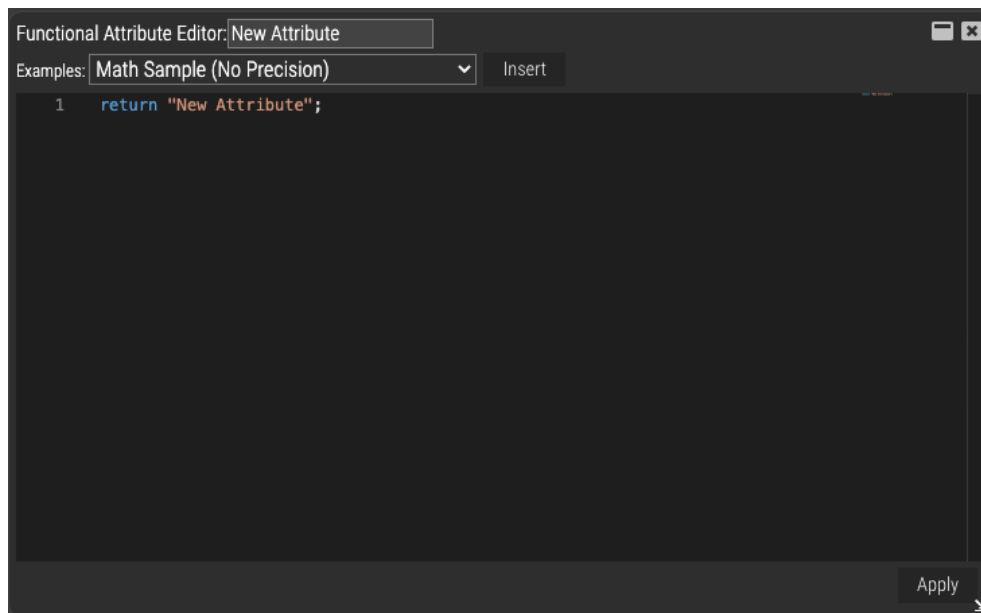


A screenshot of a 'Data Preview: Incidents' window. It displays a table with two columns: 'Field Name' and 'Value'. The data rows are as follows:

Field Name	Value
id	1
datetime	12012015010000
offense	LARCENY
x	-84.40742
y	33.80107
beatid	2
datetime2	12012015010000
geometry	object
My New Functional Attribute	New Attribute

The window has a 'Close' button at the bottom right.

## Functional Attribute Enhancement



Functional Attributes have been moved in this release. You can now create/edit functional attributes from the Dataset Configuration screen. To create a new functional attribute, click the + icon on the dataset header. To delete a functional attribute, click the x beside the functional attribute you want to delete. To modify an existing functional attribute, click the pen icon to the right of the functional attribute name.

Note that the new Attribute Preview Widget allows you to see results of your functional attribute immediately if the preview window is open for the dataset that contains the functional attribute.



## M.App Enterprise Map View Support (LuciadRIA Map Views)

M.App Enterprise Map Views are now completely supported in Feature Analyzer. M.App Enterprise Map Views allow you to define complex styles, legends, map view projections, tools, and options.

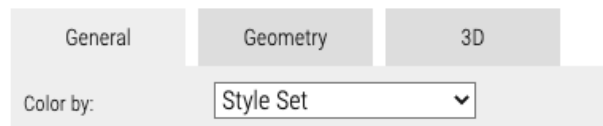
Setting a Map View configuration is mandatory in this release of Feature Analyzer. A Map View configuration can be set in the General Tab of a LuciadRIA widget.

### CONFIGURATION



Once a Map View configuration is set, an additional **Style Set** color option will be available for each feature docked in the LuciadRIA Map View widget.

### FEATURE CONFIGURATION

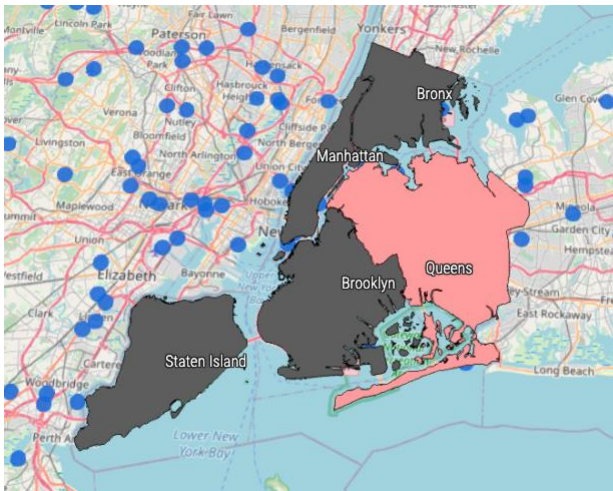


Note that when Color by: Style Set is selected, line, point styles from within Analyzer are now unavailable as this is completely driven by the M.App Enterprise Style Set.

## Style Properties

Feature Analyzer adds two dynamic properties to a feature dataset to allow for dynamic styling. These two properties are `fa_disabled`, and `fa_measureValue`. They can be used from within the M.App Enterprise Style Editor.

**fa\_disabled (optional):** indicates that a feature in the dataset is not part of a selection. This is used when defining a filter for a styleset. For example, in the image below, Queens is selected (`fa_disabled = false`). Staten Island, Brooklyn, Manhattan, and Bronx are not selected (`fa_disabled = true`). If a filter using `fa_disabled` is not used, a default disabled style will be automatically applied by Analyzer.



Sample filters for selected items:

**RULE**

Name

Filter ☒

**RULE**

Name

Filter ☒

## Motif Colour Synchronization Enhancement

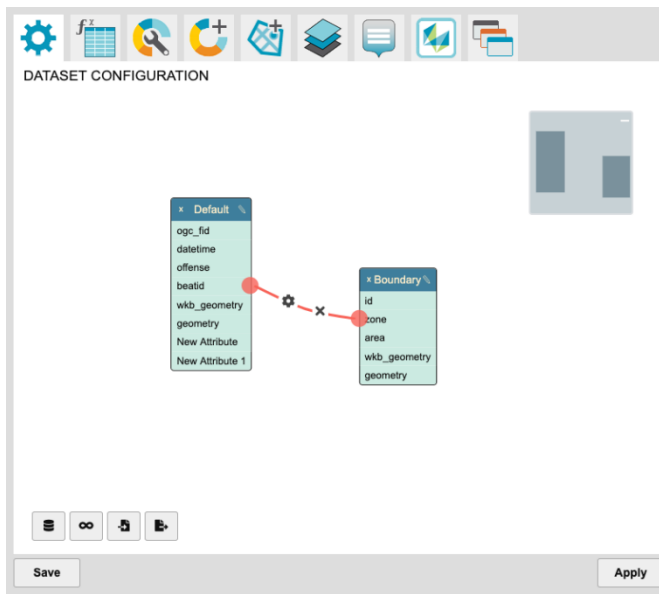
A new option has been added to the Motifs tab to keep your M.App Enterprise branding in sync with your Analyzer views. If you want to use M.App Enterprise branding, enable the “Use M.App Enterprise Branding/Theme” option. This option will also use dark/light theme modes as defined by the user or from default browser settings.

☒ Use M.App Enterprise Branding / Theme



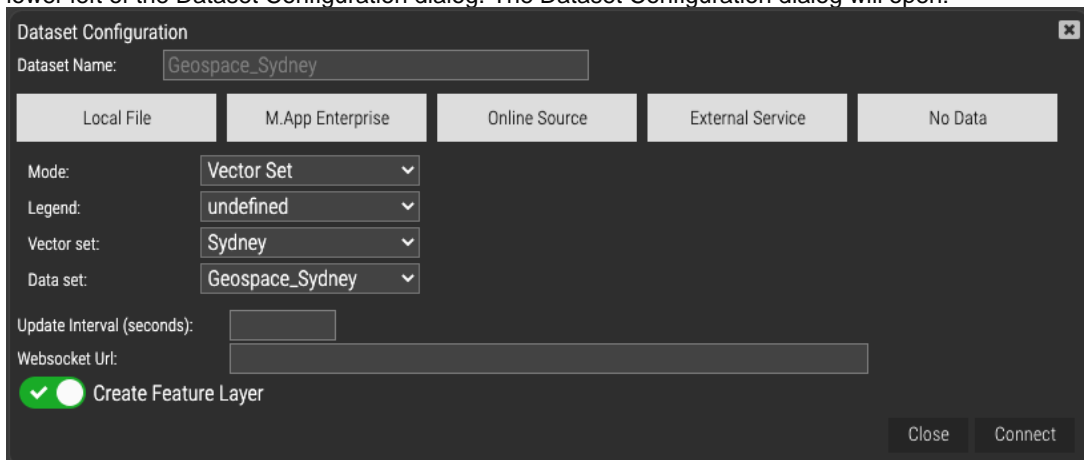
## Multi-Dataset Support

You can now easily add and manage multiple datasets in Feature Analyzer. By default, when you first create an Analyzer view, a default dataset with no data will be created. This dataset is a container for the default map view (referenced in the Additional Charts tab). There are several new functions in the Dataset Configuration dialog. These are Add Dataset, Delete Dataset, Update Dataset, Link Datasets, specify linking options, Import View, and Export View.



## Add Dataset

- You can add a dataset to your view by clicking the “Add Dataset” button. This button, , is located at the lower left of the Dataset Configuration dialog. The Dataset Configuration dialog will open:



This screen replaces the original Dataset Configuration definition screen. There are new options in addition to the previous dataset definition screen. These new items are Local File, No Data, Update Interval (seconds), WebSocket Url, and Create Feature Layer

- Dataset Name**  
This option allows you to specify a unique name for your dataset. This dataset name will be referenced in the Dataset Configuration, Functional Attribute, Additional Charts, Additional Features, and Tooltip configuration tab.

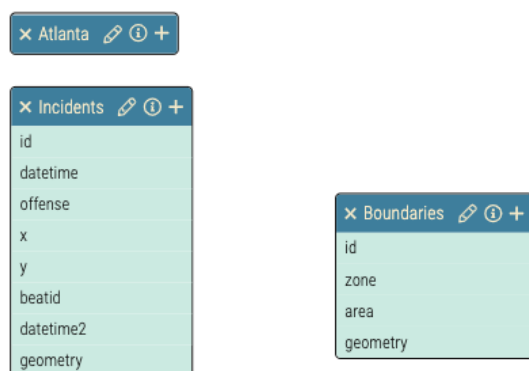
- Local File**  
 The Local File option is now available on the M.App Enterprise platform. This lets you import small datasets (< 15MB) directly from a file on your hard disk. These datasets are stored directly in the view configuration file. Larger datasets need to be imported into the M.App Enterprise content database.
- No Data**  
 The No Data option allows you to specify a dataset with no data. With these types of datasets, you can host widgets that require no Analyzer data like Leaflet Map Views, Luciad RIA Map Views, and HTML Display widgets.
- Update Interval (seconds)**  
 This option has been moved from the Advanced tab in the Field Configuration dialog. You can now specify an independent update interval per dataset.
- Websocket Url**  
 The WebSocket Url specifies a service to provide real-time additions to a dataset. The WebSocket payload to add new records to an existing dataset is as follows:
 

```
{
  type: "new",
  data: [ {<javascript object containing fields for the new row> } ]
}
```

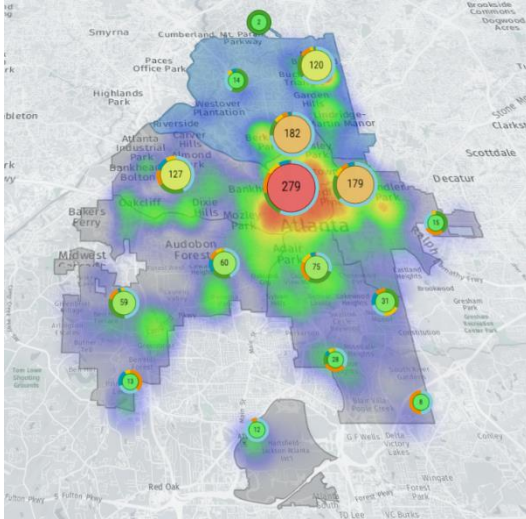
 The schema of the new record must match the dataset the new record is being added to.
- Create Feature Layer**  
 You can now specify attribute-only datasets. If you use an attribute dataset (i.e. no geometry feature information), uncheck this option. If you have geometry features in your dataset and a map view visible, the geometry will be automatically added to the map view when this option is checked.
- Cancel**  
 Closes the Add Feature Data dialog without adding the dataset to the view.
- Connect**  
 Analyzer will attempt to connect to the dataset. If an error occurs while making this connection, an error dialog will appear with the error details. Once the connection has been made, the Add Feature Data dialog will close, and you will see your new dataset in the Dataset Configuration screen.

## Dataset Linking

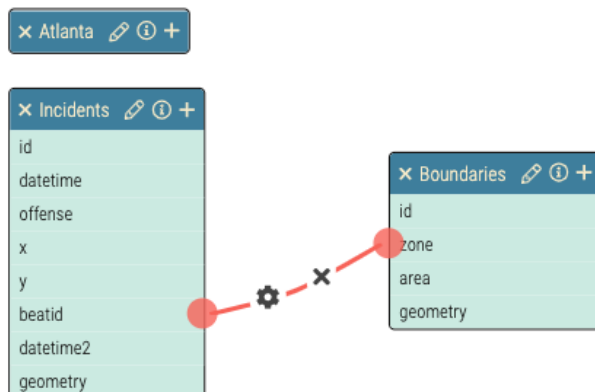
You can now easily manage dataset links. Dataset links can be made by dragging a field in one dataset to a field in another dataset. Once a link has been made, a red line is drawn between the two field names. When two datasets are linked, filtering one dataset in the relationship will affect filters on the linked dataset. Take the following dataset configuration as an example:



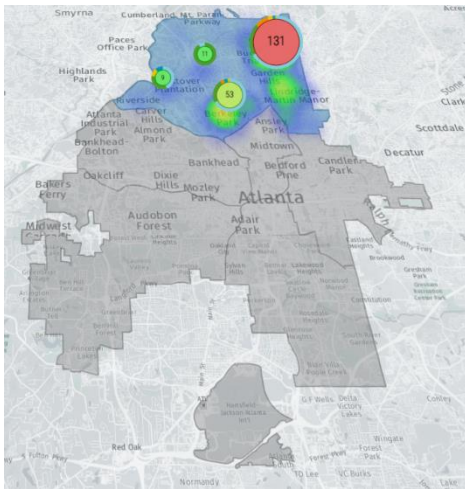
There are three datasets. The Default dataset contains a single widget – a LuciadRIA map view. Atlanta2 contains points, and atlboundaries contains polygon features. With this setup, these datasets will filter independently of each other. When a boundary is clicked (uppermost), the Heatmap and clustered point features remain unfiltered:



Here is the result when a link is established between “BeatId” on the atlanta2 dataset and “ZONE” on atlboundaries.




Now when a geometry is selected on the atlboundaries dataset, the atlanta2 dataset will filter to reflect the geometry selection. Note that when using M.App Enterprise datasets, you may need to click “Apply” for all the necessary attribute data to download.



## Link Configuration




The configuration cog, , lets you specify an inner vs. outer join on the linked datasets. By default, datasets are linked via inner join. If a record does not match, it will be filtered out. (If no points fall within a boundary feature, the system will not display the boundary feature.) In some instances, it is desirable to include unlinked records and features. Uncheck this option if you would like to see all data when no filters are defined in instances where field data from the first dataset does not match any data in the second dataset.

## Enable N-Level Deep Linking

By default, Analyzer preforms a 1-level deep link on datasets. This is done to facilitate simple scenarios and avoid circular linking references. Take, for example, this scenario of Dataset A <-> Dataset B <-> Dataset C. If you filter Dataset A, Dataset B will update to reflect the filter of Dataset A. However, Dataset C will remain unfiltered. If you have a scenario where you need a filter to carry through to all linked datasets, click the



Enable N-Level Deep Linking button, . Be careful with circular references (e.g., *Dataset A <-> Dataset B <-> Dataset C <-> Dataset A*). Analyzer will attempt to resolve these, but you may get undesired filtering results.

## Deleting a Link

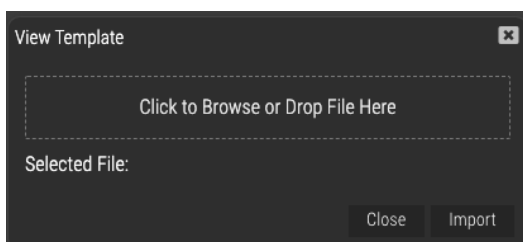
To delete a dataset link, click the X in the middle of the line.

## View Template Import/Export


You can now import/export views as view templates from the Dataset Configuration screen.



To import a dataset, click the import button, . This will open up the view template screen:



Once a view template is specified, click Import to load the view.

To export or save your view templates to your downloads folder, click . This option is still available on the Menu->Export menu item.

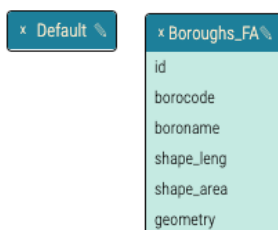
## Error Handling

If a dataset fails to load, Analyzer will continue to load all remaining datasets. You can see which dataset failed to load on the loading dialog and the dataset configuration dialog. The dataset in an error state will be colored red. You have the option of deleting the dataset or editing the dataset to correct the error.

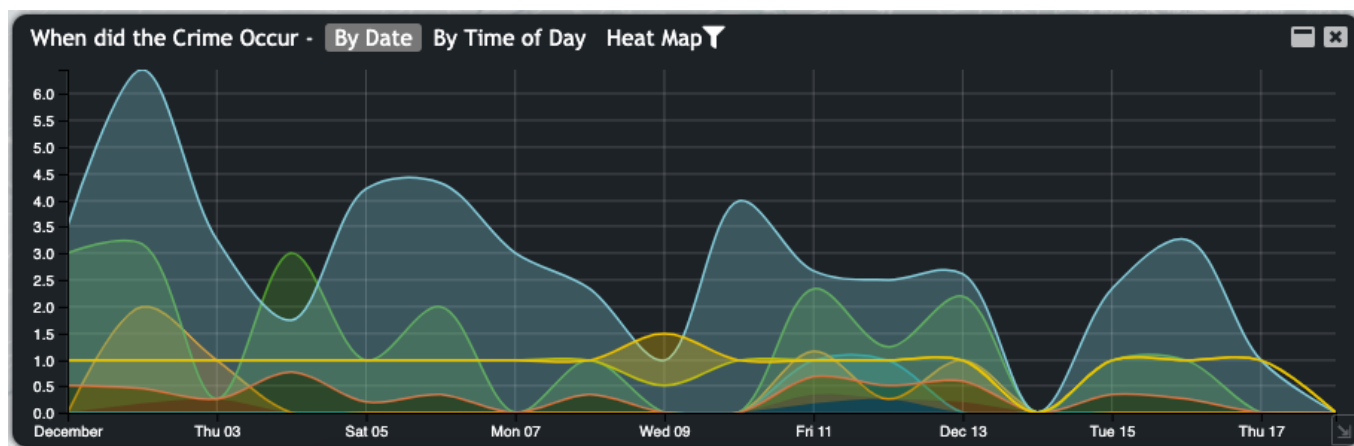
### DATASET CONFIGURATION




Once the error is resolved by editing, the dataset definition will update to show that the error is cleared and also show available attributes.



## New Chart: Tabbed Chart Container



You can now dock your charts into a tabbed container. This allows for a much cleaner dashboard interface in cases where many widgets are required. The tabbed container will show you which docked charts have filters enabled and also quickly clear the filters by clicking the filter icon, . To enable this functionality, create a Tabbed Chart. Set the dock type of your existing charts to the name of your new tabbed chart.

## New Chart: Workflow Widget

You can now easily use M.App Enterprise Workflows from within Feature Analyzer. To use a M.App Enterprise Workflow, add a new Chart and set the type to **Workflow**.

You will need to specify the workflow name and the start-up form. If you don't want your workflow widget to automatically start when the view loads, uncheck **Start on Load**. This is useful in cases where you want your workflow to start from another action (e.g., clicking an Edit button from within a tooltip).

### CONFIGURATION



General Style

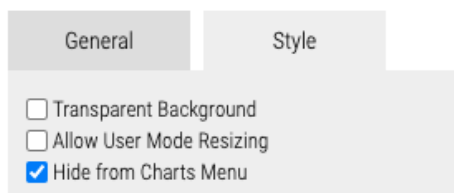
Workflow Name: Atlanta

Startup Form: TestAtlanta

☐ Start on Load

You may wish to set some additional style parameters to control the execution of your workflow. Two common options are **Allow User Mode Resizing** and **Hide from Charts Menu**. Allow user mode resizing allows the user to move/size the workflow window freely, while the Hide from Charts menu gives added control over how your workflow is launched.

### CONFIGURATION



General Style

☐ Transparent Background

☐ Allow User Mode Resizing

☒ Hide from Charts Menu

## Launching a Workflow

There are a few common ways to launch a workflow. The first is via an action on a tooltip. To do this:

1. Create a workflow widget. Take note of the workflow widget name.
2. Create a functional attribute. Insert the **Launch a Workflow** example.
3. Update the functional attribute dataset, if applicable.
4. Update the chartTitle parameter to match your workflow widget name.
5. Note that the default command button text is "Edit". You can change this.
6. Click Apply.
7. On the Tooltip Configuration tab, add the new functional attribute.
8. Click Apply.

The next method is via an HTML chart. To do this:

1. Create a new HTML chart.
2. Insert the **Launch a Workflow** example.
3. Update the workflow title to match your workflow widget title (the default is "Editor").
4. Click Apply.

Workflows can also be launched via API:

```
Analyzer.workflows.getWorkflowByTitle("Editor").launchWorkflow(optional record id);
```

If you launch a workflow in Studio mode, the workflow will launch with a login prompt. This is done because an Apps session ID is needed to launch the workflow. A login prompt will not appear in Apps mode.

## Workflow API

You can access Analyzer API from within a Workflow script. Simplified workflow API has been made available to perform common functions. Most of these functions are in the `Analyzer.workflows` namespace.

**`Analyzer.workflows.getAllWorkflows()`**: Returns an array of all workflow widgets defined in Analyzer

**`Analyzer.workflows.getWorkflowByTitle(title)`**: Returns a specific workflow widget by widget title

**`Analyzer.workflows.closeAllMapPopups()`**: Closes all active popup windows in all map views

**`Analyzer.workflows.updateWorkflowDataset(workflow)`**: Tells Analyzer to reload the dataset tied to the workflow; will reflect any edits immediately in Analyzer

Each workflow object also has a set of functions:

**`Workflow.closeWorkflow()`**: Closes the workflow widget in Analyzer

**`Workflow.launchWorkflow(optional record id)`**: Launches the workflow and makes the workflow widget visible to the user

**Example Workflow script for a simple attribute edit operation:**

```
var Analyzer = window.parent.Analyzer;
var workflow = Analyzer.workflows.getAllWorkflows()[0];

function closeWorkflow() {
  Analyzer.workflows.closeAllMapPopups();
  workflow.closeWorkflow();
}

function saveForm() {
  IG.submit('Form', 'Save').done(function(result) {
    Analyzer.workflows.closeAllMapPopups();
    workflow.closeWorkflow();
    Analyzer.workflows.updateWorkflowDataset(workflow);
  });
}
```

## New Global Window Style – Modern

A new window style has been added that changes the appearance of each widget window. By default, the modern setting is now used. This option is available in the Motifs Configuration tab.

### MOTIFS

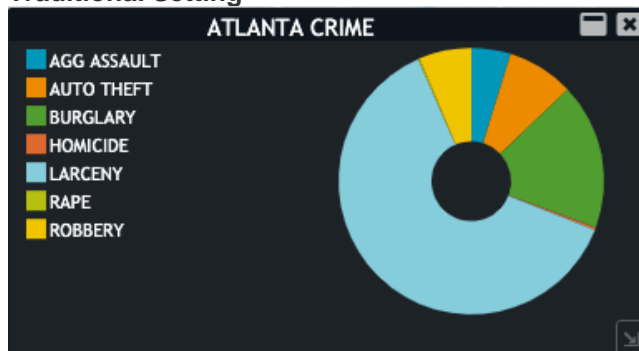
Style:

### CUSTOMIZE

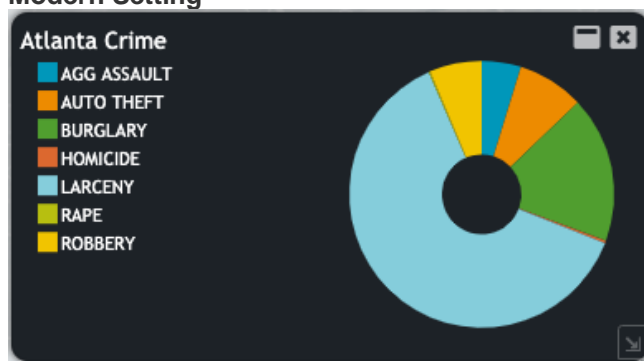
Font:

Window Style:

### Traditional Setting



### Modern Setting

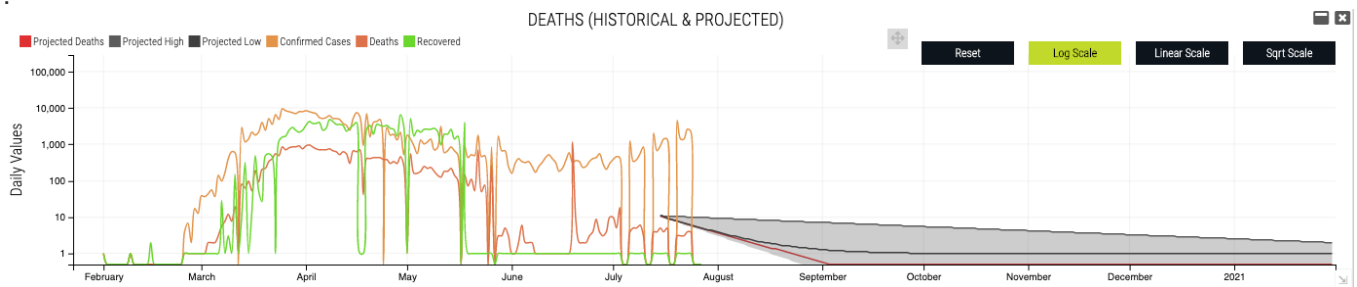




## New Individual Chart Window Styles

### Transparent Background

New options have been added as a style setting for each chart. These can be accessed in the Style tab of the Additional Charts tab. Each chart now has the option of configuring the chart window background as transparent. To enable this, check “Transparent Background.” This is useful if you want to create a widget that extends the functionality of other charts. For example:



A transparent HTML chart has been placed on the Date chart to extend the capability of the date chart.

### Hide from Charts Menu

Active widgets in Analyzer are typically listed in the Charts menu and can be toggled by the user. Check this to remove a widget from this menu.

### Allow User Mode Resizing

Allows a user to resize and move widgets in Apps mode.

### Automatic Width (HTML Widget)


The width of the HTML Widget will be automatically determined by content size.

### Automatic Height (HTML Widget)

The height of the HTML Widget will be automatically determined by content size.

## LuciadRIA View Enhancements


You can now use heatmaps, cluster layers, spatial filter drawing tools, fit all, and zoom tools within a LuciadRIA view. Line and point styles can be defined in meters in addition to pixels.

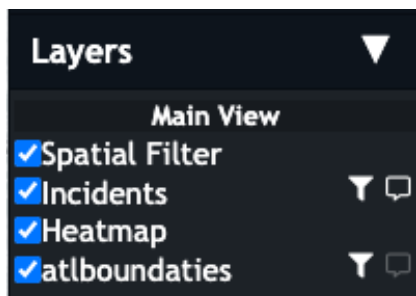
Measurement Tools are now built in. To activate measure, click the Measure Icon in the 3D View: . The following panel will display:



By default, the Distance measure is active.

## Spatial Filter Enhancements

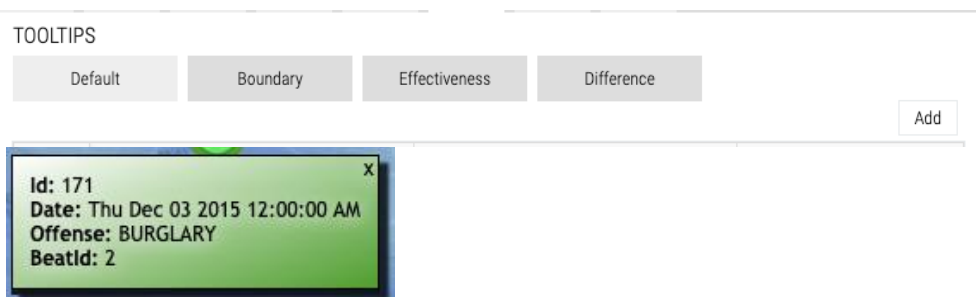
Spatial filters can now be applied per layer in each map view. Once a spatial filter is defined, spatial filter layer toggle options can be accessed via the Layers menu by clicking the filter icon, .



## Tooltip Definition Enhancement

You can now define tooltips for multiple datasets from the user interface. A new command strip has been added to the tooltip configuration tab. To switch between datasets, click the dataset name.

The tooltip window activated from the map view has been redesigned. If a tooltip window is too large, the tooltip window will now scroll.



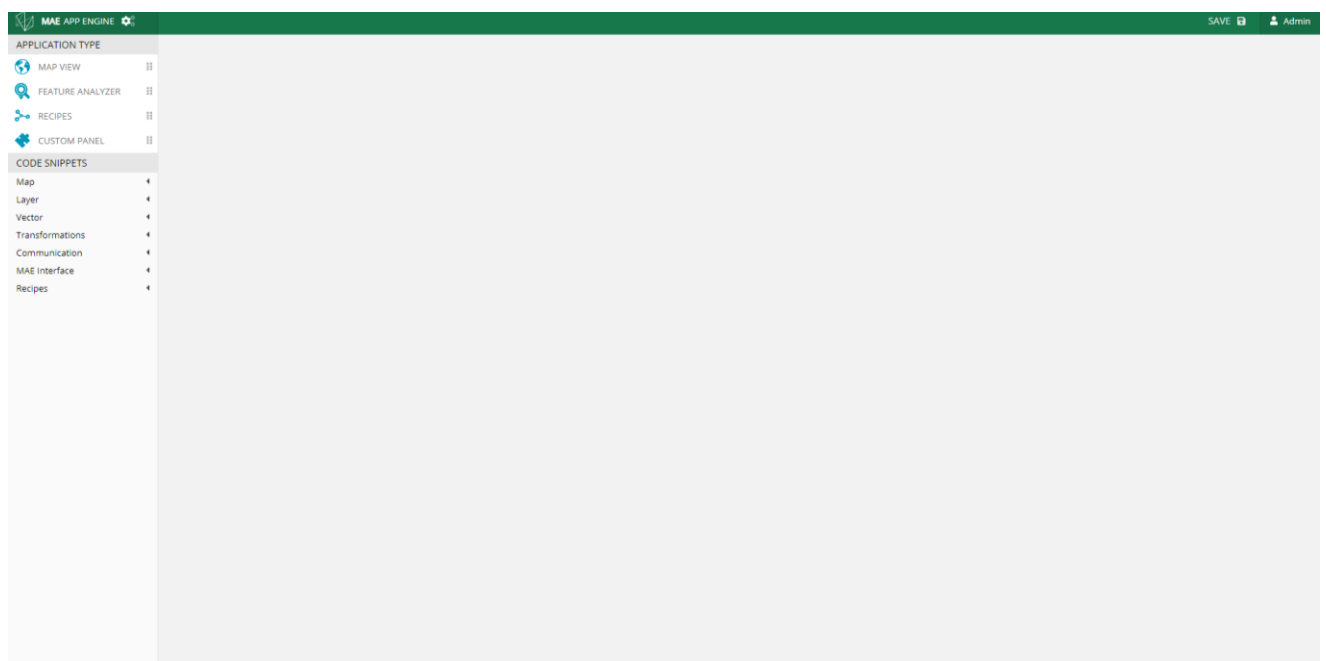
## Legend Behavior

With the M.App Enterprise 2021 release, there is a unified place for legends. You will find them in **Content -> Legends**. With this change, it is possible to use a legend regardless of client. Drag and Drop still works as before with two changes:

- Themes are not required any longer.
- The visualization for VectorSets is different. On the left side you only see the name of the VectorSet, but as soon as you drop it in the legend it gets unraveled, and you can handle the single layers as you knew it from previous releases.

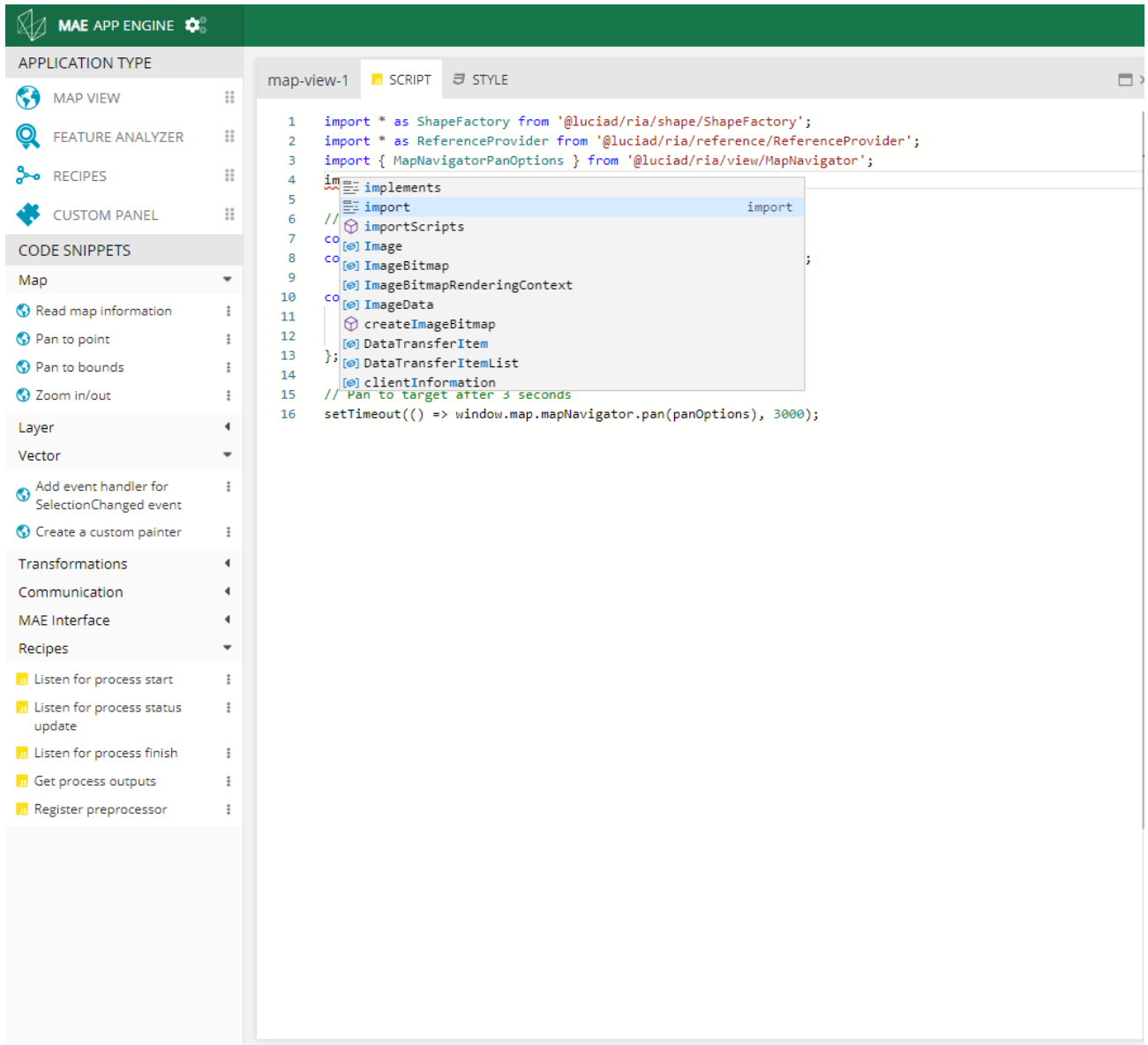
## New M.App Editor for Browser Apps

The M.App Editor, introduced in M.App Enterprise 2021, got a new framework.



The way you work with the new M.App Editor is the same as in previous releases. A simple drag-and-drop allows you to insert **Map Views**, **Feature Analyzer Views**, and **Recipes** in the browser app.

The **Custom Panel** gives you the opportunity to access the API in the background. To give you a helping hand, some code snippets are also available to use within the browser app. Because in the background we are using the entire LuciadRIA API, the handling of code is reworked and you get the feeling of working with a visual interpreter of your custom code:



## OGC Plugin

In this release, we offer a new plugin in the desktop client. It is now possible to add various OGC Services directly on the client side.

Note: If you want to use the same OGC service for different located clients, you still have to use the GeoService tab in M.App Enterprise Studio.



The icon of the plugin looks like this:

Import OGC Service

URL:

http://sg.geodatenzentrum.de:80/wms\_vg2500?request=GetCapabilities&service=WMS&VERSION=1.3.0

Legend

▼ Layers

Bundesland

Kreis

Regierungsbezirk

Metadata

Service:

WMS 1.3.0

Selected layer:\*

Bundesland

Feature name:\*

Bundesland

Output type:\*

JPEG


CRS:\*

3857

Max. Tile width:

Max. Tile height:

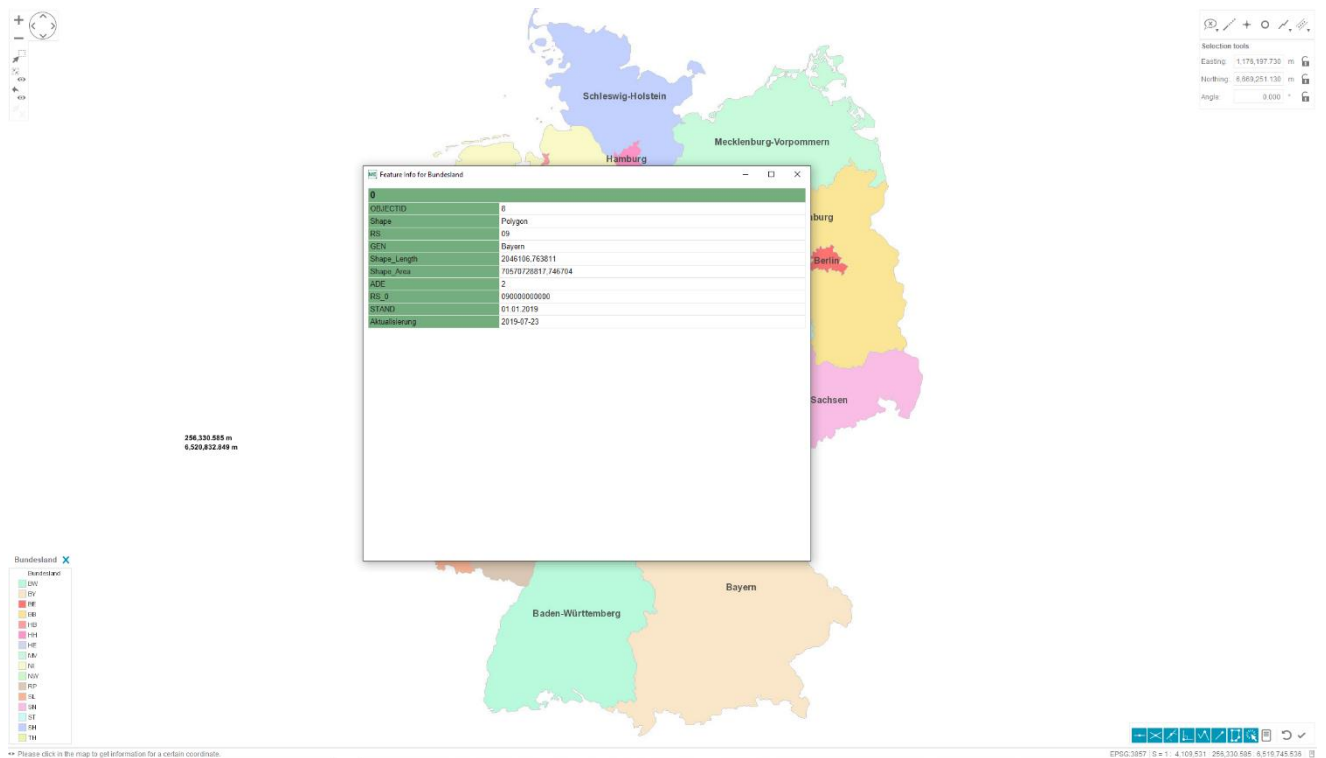
Preview



Update

Import

Close



Service metadata	
Version	1.3.0
Name	WMS
Title	WMS Verwaltungsgebiete 1:2 500 000
Abstract	Darstellungsdienst der Verwaltungsgebiete 1:2 500 000 für das Gebiet der Bundesrepublik Deutschland. Datengrundlage sind die VG2500 mit Stand 01.01. Der Datenbestand umfasst die Verwaltungseinheiten der hierarchischen Verwaltungsebenen vom Staat bis zu den Kreisen.
Keywords	VG2500 INSPIRE:ViewService ViewService WMS INSPIRE infoMapAccessService
Online resource	<a href="http://sq.geodatenzentrum.de/wms_vg2500?text/xml">http://sq.geodatenzentrum.de/wms_vg2500?</a>
Contact information	Technischer Administrator Dienstleistungszentrum des Bundes für Geoinformation und Geodäsie Karl-Rothe-Str. 10 - 14 Leipzig DE-BKG 04105 Deutschland +49 (0) 341 5634 333 +49 (0) 341 5634 415 dlz@bkg.bund.de
Fees	Die Daten sind urheberrechtlich geschützt. Der Datensatz wird entgeltfrei mit der Datenlizenz Deutschland – Namensnennung – Version 2.0 ( <a href="https://www.govdata.de/dl-de/by-2-0">https://www.govdata.de/dl-de/by-2-0</a> ) zur Verfügung gestellt. Der Quellenvermerk ist zu beachten.   Quellenvermerk: &copy; Bundesamt für Kartographie und Geodäsie &lt;Jahr>
Access constraints	Es gelten keine Zugriffsbeschränkungen.
Layer limit	-
Max width	4096
Max height	4096
GetCapabilitiesURL	<a href="http://sq.geodatenzentrum.de/wms_vg2500?text/xml">http://sq.geodatenzentrum.de/wms_vg2500?</a> text/xml application/vnd.ogc.wms_xml
GetMapURL	<a href="http://sq.geodatenzentrum.de/wms_vg2500?image/png">http://sq.geodatenzentrum.de/wms_vg2500?</a> image/png image/jpeg image/png32

## SAP Hana

With this M.App Enterprise release, we introduced the 4<sup>th</sup> fully supported database provider: SAP Hana. Fully supported means that it doesn't matter if your master DB, tenant DB, or data DB is in SAP Hana. The limitation of the database itself is the only limit of SAP Hana in M.App Enterprise.

**Provider\***

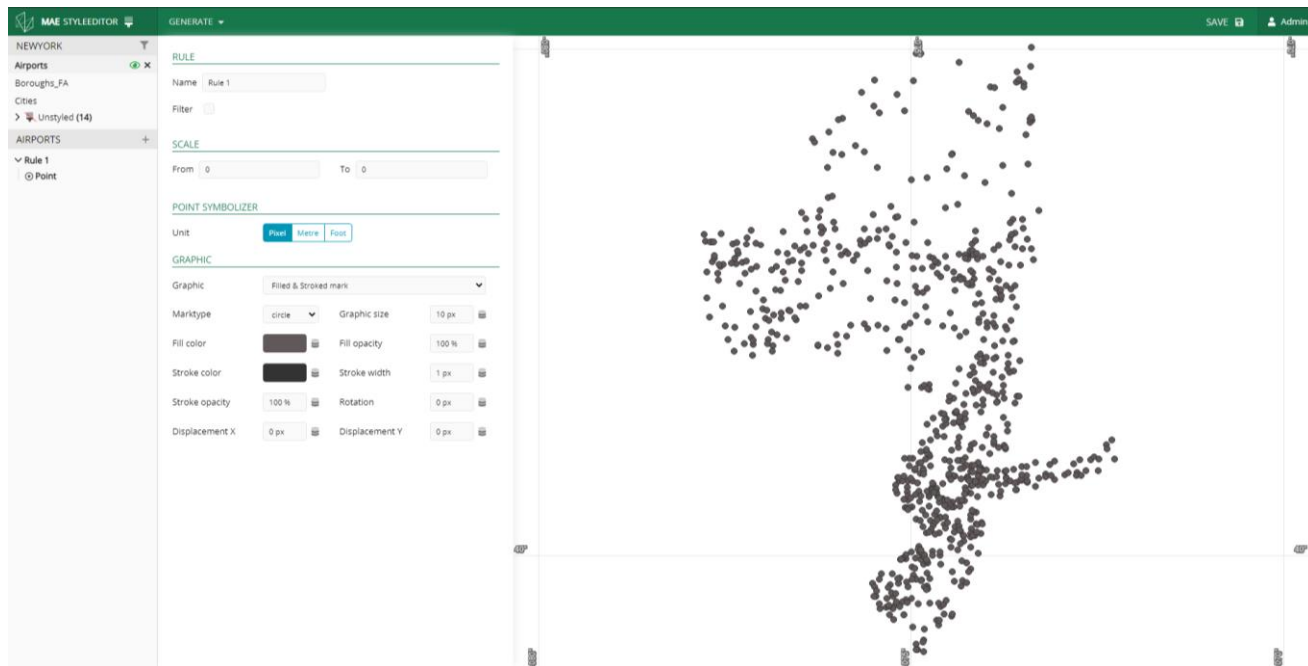
☐ Oracle ☐ Microsoft SQL Server ☐ PostGIS ☒ Hana

**Server\*****User\***

## Style Editor

One big feature in this new release is a completely reworked Style Editor. To describe all new features would be out of the scope of the Release Guide, but the most important and most obvious ones are highlighted here:

- Live preview of the styles in the map on the right side



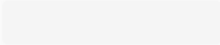








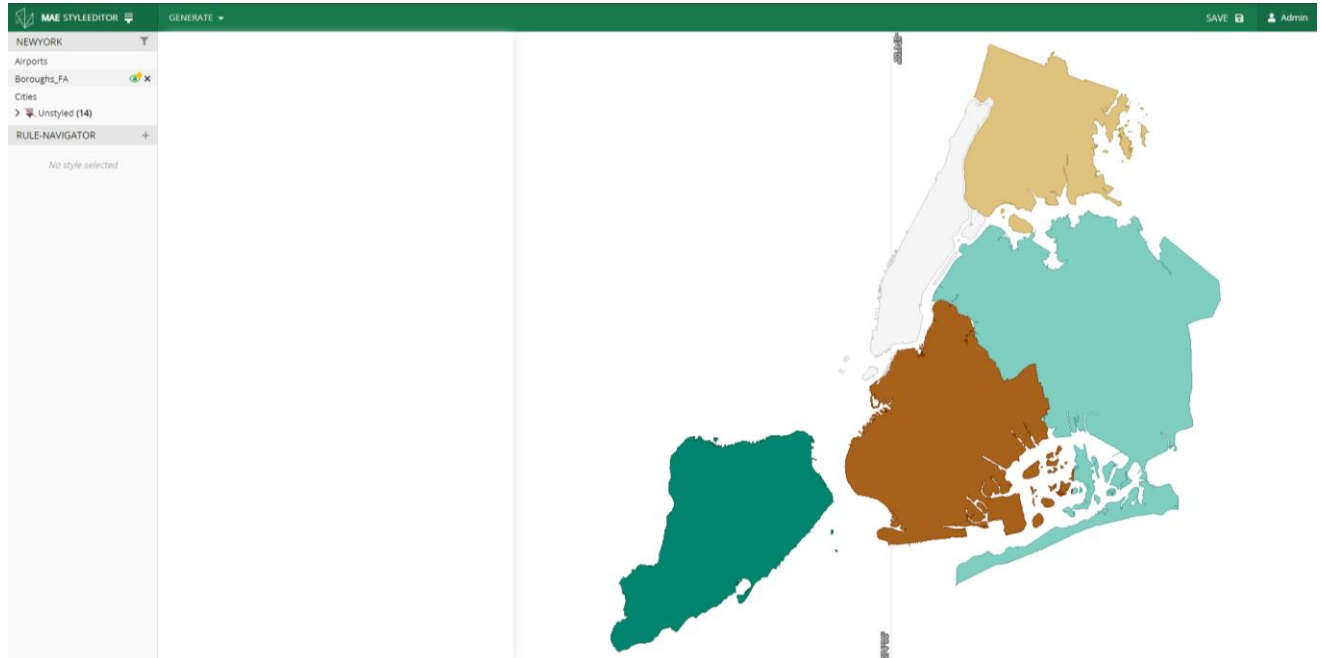
- Classify and Categorize allows you to get simple styles quickly via a wizard. Just select the style for which you want the classification done and the corresponding database field.

Note: Only numeric fields are allowed for **Classify**.

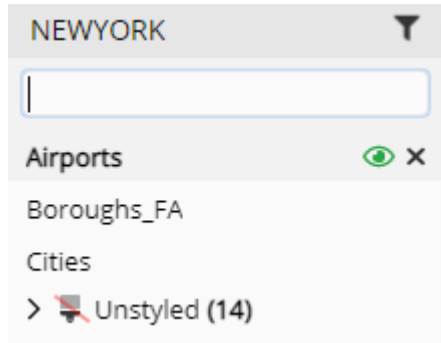
### Generate categorized rules

Style	Boroughs_FA	Brooklyn	
Field	boroname	Bronx	
Categories	5	Manhattan	
Color scheme	 	Queens	
		Staten Island	

Cancel
Generate

















- Filter and rearrange layers within the style editor. You can filter all styled layers to the ones you currently need, and if one or more layers are overlapped, a simple drag-and-drop approach solves this issue.



## Spatial Workshop

You can now find the Spatial Workshop in **Content -> Spatial Recipes** after you've created a new spatial recipe or edited an existing one.

	IMAGERY
	VECTOR DATA
	VECTOR SETS
	GEO SERVICES
	ATTRIBUTE DATA
	3D DATA
	LEGENDS
	STYLESETS
	WORKFLOWS
	MY GEO SERVICES
	CONNECTIONS
	COPYRIGHTS
	CUSTOM CRS
	RECIPES

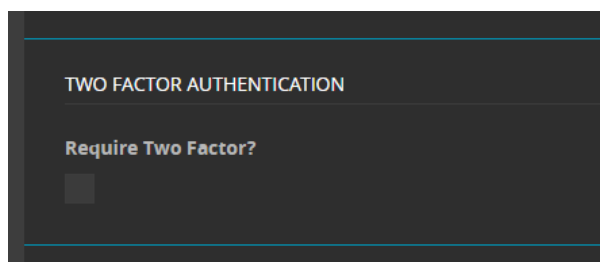
## Two-factor Authentication

**Two-step verification** or **two-step authentication** is a method of confirming a user's claimed identity by using something they know (password) and a second factor *other* than something they have or something they are (Wikipedia, 2 December 2020).

In M.App Enterprise, there are several options where you can enable/disable two-factor authentication.

- Management
- Studio
- Apps

But you can also set it as a requirement when creating a tenant.



This checkbox is inherited by every user (Studio users as well as Apps users).

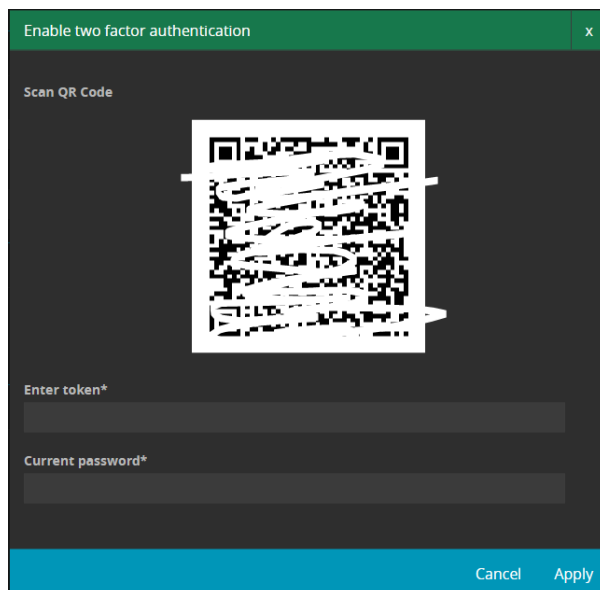
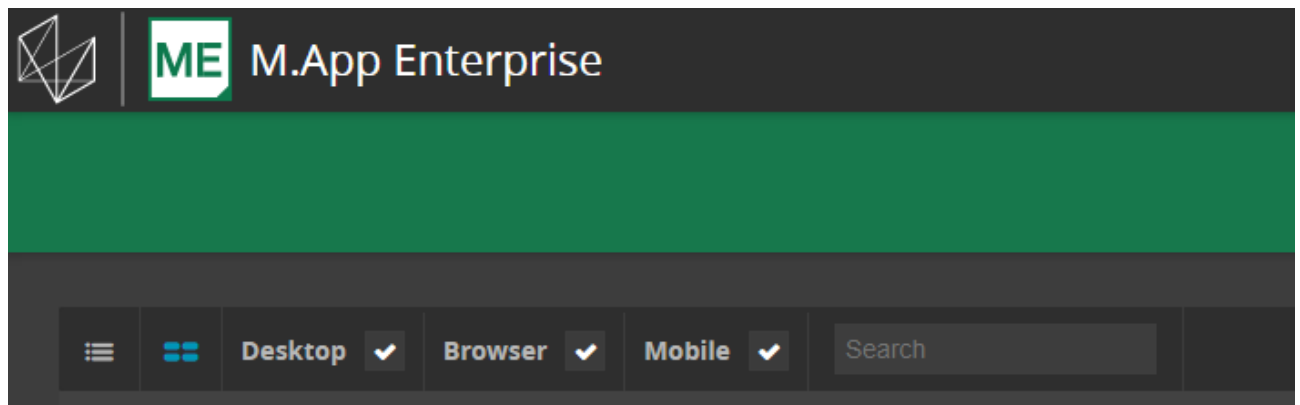


Figure 1: No worries -> your QR code is working and looks like a correct QR code.

## Various Enhancements

### App Type Filter in My Apps Page

Based on the Product Idea <https://community.hexagongeospatial.com/t5/Product-Ideas/Overview-Apps-Page/idi-p/37568>, with M.App Enterprise 2021, it is now possible to filter your created apps based on the type. And with the enhancement [AutoComplete Fields in Lists](#), you can also filter the entire list on the fly.



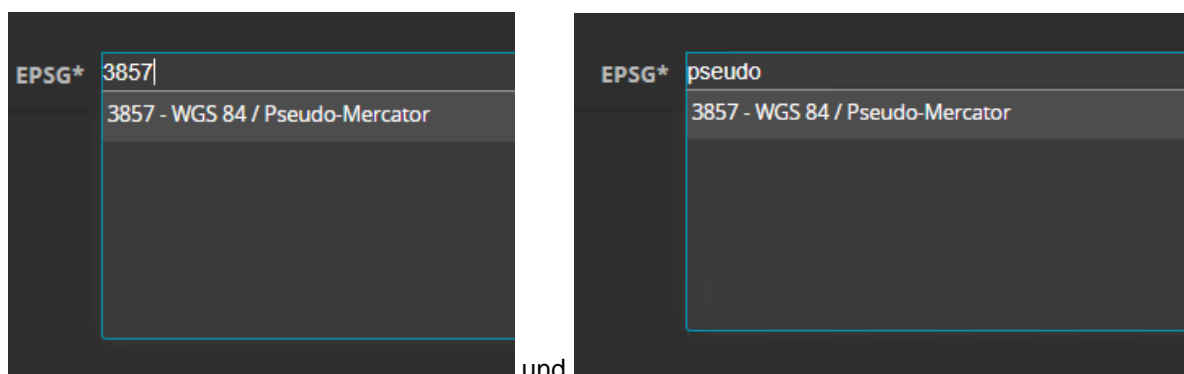
### AutoComplete Fields in Lists

Beside **Filter**, we introduced an AutoComplete Field in lists, which allows you to just type in character(s) and the list gets automatically filtered.



### EPSG Code or Name

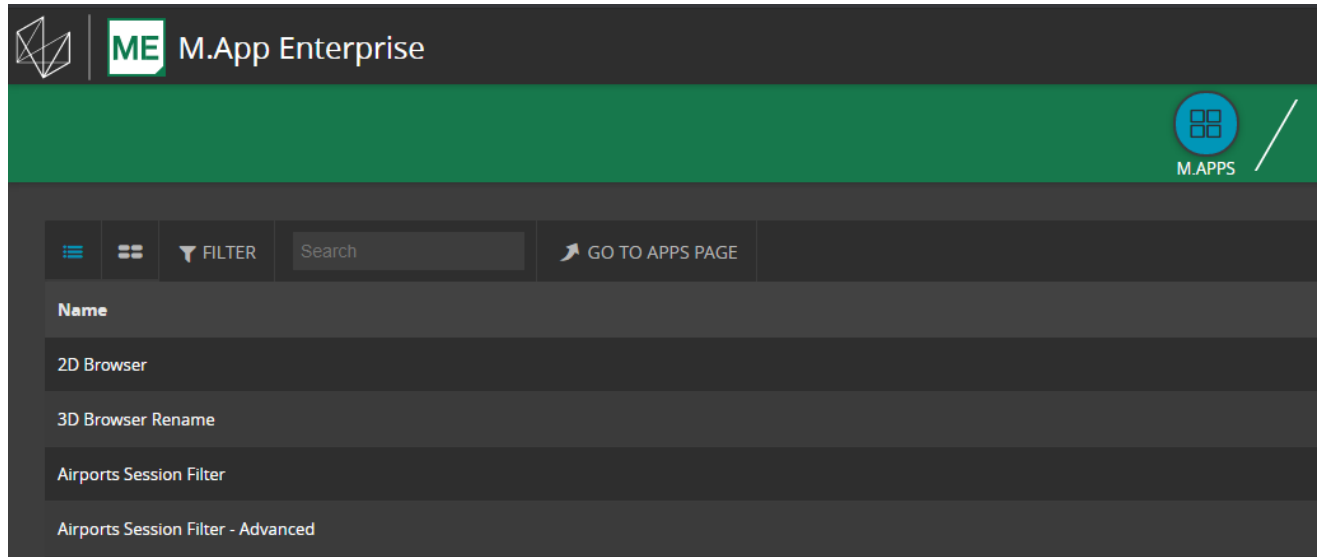
With the M.App Enterprise 2021 release, we introduced a new behavior in using EPSG codes within the apps. Type in the EPSG code or the name and get the result as a dropdown list.



und

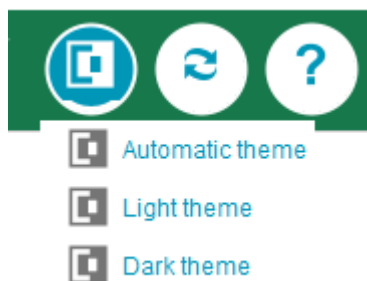
## Go to Apps Page Button

Instead of copying the URL of M.App Enterprise Studio, replacing some URL parameters, and searching out the hashtag in the URL to run the MyApps Page, a new method has been introduced in this release. In the Studio, there is a new button called “Go to Apps Page” that allows you get to the login window with one simple button click.



## New Icons in Desktop Client

In M.App Enterprise 2021 you will find three new icons in the right top corner of your desktop app.



From left to right:

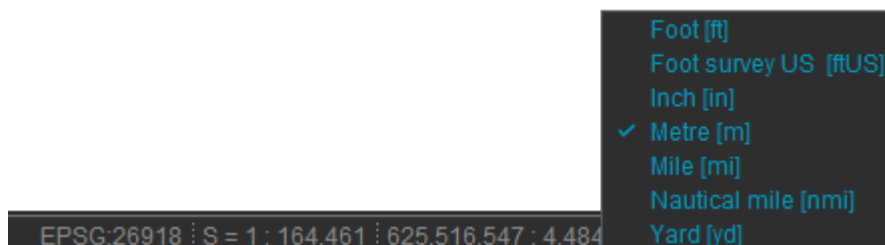
- **Switch themes:** Currently, the desktop client uses the values of your operating system. With this icon, you can overwrite this behavior.

Note: If you switch the theme, the app is restarted.

- **Reload:** The reload of the app is now an icon instead of a plain button with text.
- **Help:** This icon is back in M.App Enterprise and allows you to open up the documentation on FluidTopics.

## Changing Unit of Measurement (UOM) in the Desktop Client

With the release of M.App Enterprise 2021 we introduced a new feature, which allows you to change the UOM on the fly. At the bottom right you find the current UOM (default = meter), and by clicking on it you can change it to the following options:



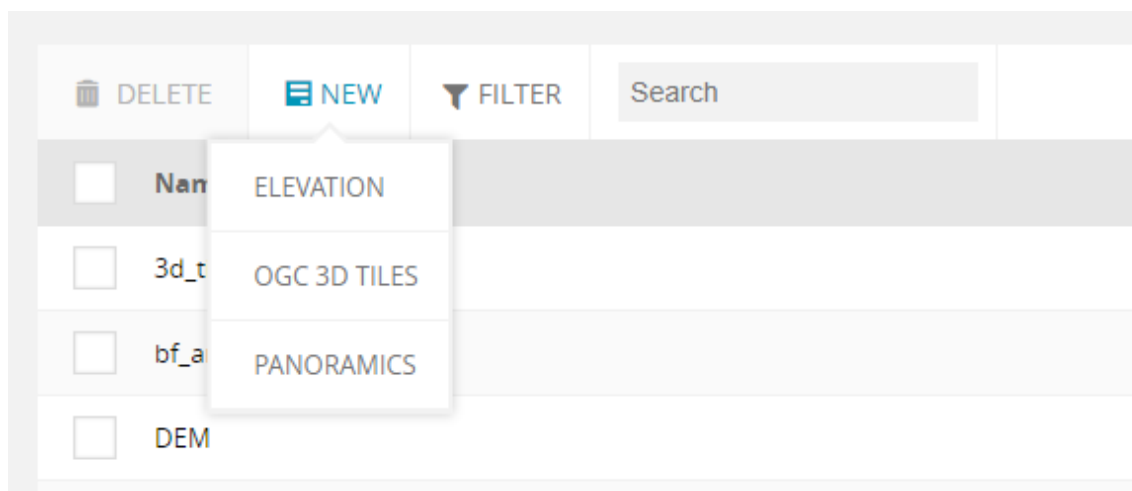
This setting is saved on the client side. Only a manual override will change it.

## Support for Panoramics


Note: Panoramics only work in M.App Enterprise 2021 with a PRO license.

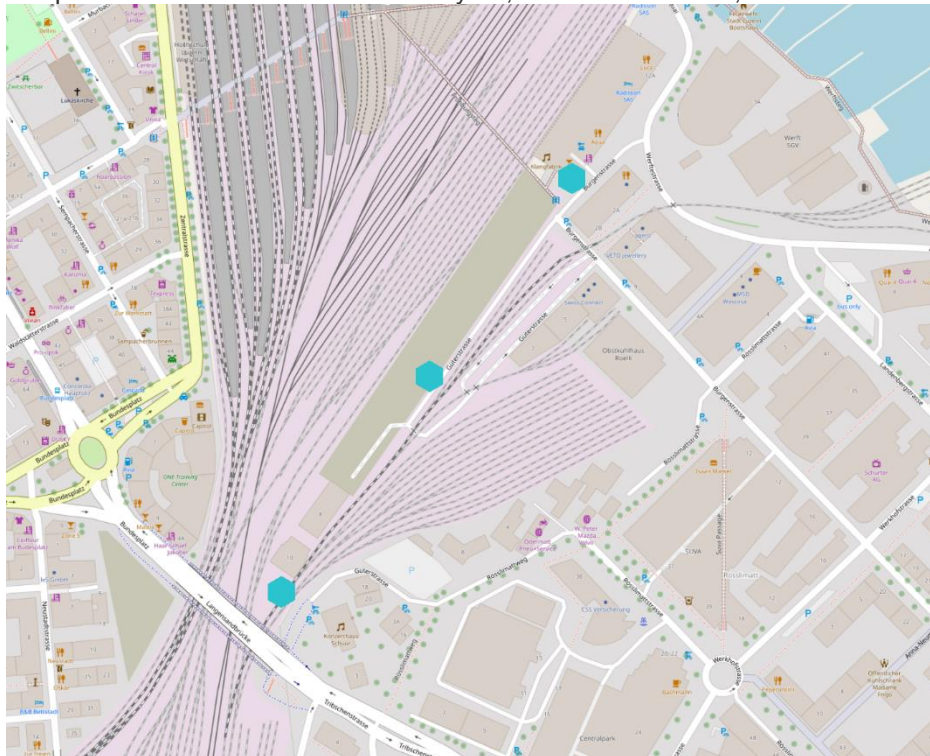
Note: You have to do all the data crawling and creating of the service itself in LuciadFusion for M.App Enterprise.

With the 2020.1 release of the Luciad portfolio, panoramics were introduced with a new service endpoint, which is also available in M.App Enterprise 2021.



As soon as you point to the endpoint of the panoramics service, you should have it available for all browser-based apps. You can use it in a “normal” map view based on LuciadRIA as well as in Feature Analyzer. To

exit panoramics mode in Feature Analyzer, click the door icon, .





# System requirements

## M.App Enterprise 2021

Server:

Computer / Processor	64-bit: Intel® 64 (EM64T), AMD® 64, or equivalent (Multi-core processors are strongly recommended)
Memory (RAM)	8 GB or more strongly recommended
Disk space	<ul style="list-style-type: none"> <li>1.3 GB for software</li> </ul>
Production environment	<p>Two different types of server:</p> <ul style="list-style-type: none"> <li>One application server</li> <li>One tile server (for cache creation)</li> </ul>
SSL certificate	M.App Enterprise comes with a preconfigured self-signed certificate. But like in many cases, an organization should come up with their own certificate from a trusted certificate authority (CA). It can be a domain certificate issued by your organization or a CA signed certificate.
Operating Systems	<ul style="list-style-type: none"> <li>Windows Server® 2012 Standard and Datacenter (64-bit)</li> <li>Windows Server® 2012 R2 Standard and Datacenter (64-bit)</li> <li>Windows Server® 2016 Standard and Datacenter (64-bit)</li> <li>Windows Server® 2019 Standard and Datacenter (64-bit)</li> <li>Windows Server® 2022 Standard and Datacenter (64-bit)</li> </ul> <p>Note: Windows 8, 8.1, 10 are supported for basic testing and not recommended for deployment in a production environment</p>
Software	<ul style="list-style-type: none"> <li>.NET 4.7.2 or higher</li> </ul>
Database engines	<p>Minimum:</p> <ul style="list-style-type: none"> <li>PostgreSQL 9.4 with PostGIS 2.0</li> <li>Oracle® Server 12c 64-bit</li> <li>Microsoft® SQL Server® 2012 64-bit</li> </ul> <p>Tested on our development environment:</p> <ul style="list-style-type: none"> <li>PostgreSQL 12 with PostGIS 3.0</li> <li>Oracle® Server 19c 64-bit</li> <li>Microsoft® SQL Server® 2019 64-bit</li> </ul>

Client:

Computer / Processor	2 GHz minimum, Hyper Threading or multi-core recommended
Memory (RAM)	2 GB or more strongly recommended
Display properties	24-bit color depth
Screen resolution	1024 x 768
Peripherals	Mouse or pen for input For Tablets: Digitizer is recommended
Networking hardware	Simple TCP/IP, Network Card
Disc space	50 MB
Operating systems	<ul style="list-style-type: none"> <li>• Windows 7 SP1</li> <li>• Windows 8.x</li> <li>• Windows 10</li> </ul>
Supported web browsers	<ul style="list-style-type: none"> <li>• Google Chrome</li> <li>• Mozilla Firefox</li> <li>• Microsoft Edge</li> </ul>
Supported mobile platform	<ul style="list-style-type: none"> <li>• Android 5.0 or higher</li> <li>• iOS 8 or higher</li> <li>• Windows 1709 or higher</li> </ul>

## Issues resolved – M.App Enterprise 2021 Update 4

Support ticket	Summary
00032013 00033297 00035130 00045576	Update or creating new tenants in PostgreSQL databases was not possible
00023444 00031934	Imagery added to M.App Enterprise via Apollo Core was not visible and working when added to a Browser Application
00026714	"Help" properties on a Row Action at a List weren't working and therefore the help button was not opening up
00028677	Queries are not available to the users, if there was none theme in the legend of the desktop client
00023472	Connection could not be deleted in M.App Enterprise studio if no data (vector nor attribute) was defined
00045830	WMS with nested layers didn't work as expected

## Issues resolved – M.App Enterprise 2021 Update 3

Support ticket	Summary
00023529	Our client are using MSSQL 2017 for database and M.App Enterprise 16.7. All their data is stored in EPSG 4148. We realized, that when splitting a polygon, then merging the parts together again, the new geometry has changed from the original. This causes "dirty geometry" when doing edits with neighboring areas. We ran SQL queries on original polygon, then again after the final merge. Then we compared the results. Also there are visual indicators in terms of "dirty geometry" visible. This "dirty geometry" are created because the merged polygon has shrunk in size, and now does not share the same boundary with its neighbors anymore.
00027231	Analyzer View - Heatmap not working in Update 2. All points at (0,0) location
00023507 00023504 00023503	After update Chrome to version 92.0.4515.107, the Analyzer styles are broken. The title bar is too tall.
00023506	Apollo WMS with EPSG:25833 doesn't work in Luciad RIA
00023543	Functional attributes are not working any longer if another Functional attributes gets called within the first one
00023558	The following error happens when a very large CSV gets saved in Feature Analyzer: <b>413.1 - Request Entity Too Large for the request PUT /api/v2/featureanalyzer/views/test app/configuration</b>
00023436	Style uploaded in Luciad Fusion was not applied to a Luciad Fusion service

00023452	Rendering of point geometries could get very slow in Luciad RIA as a background map in Feature Analyzer
00023456	When using the German letter ß in a title (e.g. "Zustand Straßen"), ß is automatically changed to ss in the title bar
00023542 00023457	Using code numbers (such as descriptive or zip codes) starting with the number 0 (first character) as attribute data, the starting 0 is omitted in feature analyzer. Diagrams (e.g. data table), tooltips and exported csv data do not include the starting 0, although the database table provides them correctly (nvarchar data type). However, if the code also includes letters, the starting 0 is displayed.
00023458	Legend icons not updating in M.App Desktop application after switching StyleSet.
00023510 00023464	Applying a filter to a style in the New Style Editor is not valid when the value is 'IS NULL' Using the value 'IS NOT NULL' produces well and good results in the Preview and M.App Using the old style editor to input the 'IS NULL' value filter works well.
00023493	When downloading the usage for the tenants, the csv is being downloaded, but inside there is just this entry: [object Response]
00023530	LuciadFusion - 'Request failed with status code 500' error when trying to start a tile service
00024547	Scale bar is limited to "Meters" and two decimal places, which, depending on the map view and configured scale bar size and bars, can result in something like "1cm = 34.166,58 m" below the scale bar and touching or overlapping numbers above the scale bar.
00023538	The scalebar seems to be completely out of sync with a user drawn line measure at the same scale
00024553	Allow limitation of Azure Application Permissions for M.App Enterprise. Disable the syncing process when the permission is not set and only add active directory users to the MAE database on their first login, where current user information can be read without requiring the Users.Read.All permission.
00023560	The tooltip table you get when clicking on a cluster has no word wrapping and the slider is non-functional. Also the table stretches off the browser screen (left and top edges) and the table would disappear when you pan the map to try to make it more visible.
00023557	Luciad Fusion URL gets cutted in M.App Enterprise studio, when accessing geoservices coming from LF, if Luciad Fusion is not on the web server root and a reverse proxy is used.
00025290	Login credentials of a WMTS were not taken in consideration when opening up a desktop client app
00023589	The values displayed in a pie chart are in different orders depending on the browser. In the attached screenshot the 2 charts in the upper left corner are correct in Edge and Chrome, but wrong in Firefox.

## Issues resolved – M.App Enterprise 2021 Update 2

Support ticket	Summary
00065742	Some texts are in english despite german language settings
00077685	MAE 2021 Style Editor - Polygon Graphic Fills preview correctly in the style editor but it is displayed solid grey fill in the resulting FA or Browser maps.

00077774	Cannot select or drag/drop multiple items into legend at one time
00077975	Although tooltips have been defined for the Vector data and in the Feature Analyzer Tooltips tab the respective attribute information is not shown in the tooltip box. The vector layer was added via the Map View wizard to the Feature Analyzer map When using the same dataset outside a Map View in Feature Analyzer, the tooltips work fine.
00078090	Using styling with scale based symbology in the Feature Analyzer (for example 1 to 1500) the feature no longer shows up on the map.
00078105	Feature Analyzer - Live Data does not maintain filter defined for vector data
00078135	The 'red line' link between 2 data sets is deleted automatically every time a Functional Attribute is modified including creation, updating, and deletion.
00076857 00077081 00078155	When adding a 2nd set of administrative data to the Feature Analyzer and linking this to the first using a unique identifier to get a one to many relationship between primary (geography) and secondary (attribute data), the option to save the View doesn't work anymore. Showing the attributes from the 2nd file (data) as tooltip when clicking on a feature or use as theme to color the features is also not working.
00078205	Feature Analyzer - Text Search results design problem (z-index). The text search usually returns with a long list of matched entries. In version 16.6, the listing can be displayed beyond the chart box, but in the latest version 16.7, the listing will be confined within the chart box. Enlarging the chart box size will block the map.
00078226 00078647 00079497	Analyzer - All numbers have digit grouping symbol added automatically
00078288	MAE restricts its desktop maximum scale to fit with the end user screen and the app's full extent definition. In new version of MAE, user is unable to pan in the maximum scale within the full extent of the app
00078304	Camera can't be deactivated without Measurement tools being deactivated
00078438	WMS and WMTS not in the same location for Web Map
00078603 00080826	Two linked vector sets with inner join option disabled. First a filter is applied on the first vector set and then another filter on the second vector set. Subsequently we remove each single filter from each widget and we should see again all the features of both vector sets in the title bar but the application shows only the linked features between the two vector sets as there was an active inner join that actually is disabled
00078649	Workflow Editor - After inactivity the system fails to refresh the token and continue the previous session upon resumption of activity
00078710	DESKTOP - PRINT - Using mixed right-to-left (RTL) and left-to-right (LTR) in custom text box, results in incorrect behavior
00078718	WMS Service Error in Desktop App: <b>"net.opengis.wms.v_1_1_1.OnlineResource"s signer information does not match signer information of other classes in the same package"</b>
00078919	Adding WMTS into the legend causes a browser application not to start
00079013	Multi-line SQL and JavaScript stops saving of Workflow.
00079057	Feature Analyzer - Table Widget - Geometry Locate functionality causes LuciadRIA map to disappear
00079063	When submitting form with a FormFile elements, it can only be saved when a new file is loaded to that field. If the field is blank (even if "required" is false), the server throws an error. The same happens if the field already contains data.

00079207	Analyzer - Theme chart custom labels don't update when using local data
00079274	Feature Analyzer - App not saving when a date time series chart is added over CSV data
00079297	Tenant missing on SQL Query API call
00079443	Desktop application the extend of the application (Bounding Box) is automatically been filled in the old version. When it left empty and the save button is pressed, then the Bounding Box will be filled with zeros (East= 0, West= 0, North=0 South =0).
00079518	At point of intersection of multiple layers the snapping is possible but the double click does not end the feature and drawing continues resulting in undesired geometry with additional vertices.
00079616	Studio - Cannot delete Action Parameter in the Workflow Editor
00079705	Point Features disappear in 3D FA App: Zoom out quite far at the beginning, point features disappear and do not appear again until complete reload of the app.
00079756	Studio - No recipes listed in Content
00080265	Cannot publish Vector Set - Last simplification level has more points than unsimplified level
00080525	In feature analyzer - the colors order on the map are in reverse order than defined and in the Theme widget. color 1 in theme is color 4 on map, color 2 in theme is color 3 on map, color 3 in theme is color 3 on map, color 4 in theme is color 1 on map

## Issues resolved – M.App Enterprise 2021 Update 1

Support ticket	Summary
00065742	Some texts are in english despite german language settings
00069499	Workflow with filter problems with apostrophes
00077347	ME Browser M.Apps: custom Panels empty
00077411	Active Directory setup problems
00077445	WFS with Arabic attribute values are displayed as hieroglyphic characters at Feature Analyzer.
00077540	FA - database [null] values converted to "0"
00077547	Secure WFS services in Feature Analyzer does not work when using MAE legend.
00077624	Updating underlying geodetic data using EPSG dataset v10.011 or higher
00077773	Desktop App: min/max Extent not created by default
00077804	Problem to Delete or Change anything in the Legend or Stylesets
00078134 00078215	Not able to delete the selected Functional Attribute
00078226 00077915	FA - All numbers have digit grouping symbol added automatically

## Issues resolved – M.App Enterprise 2021

Support ticket	Summary
00056102	Feature Analyzer doesn't honor scale set on Dataset
00045490	Is a customized legend (custom_legend.png) visualized in other charts - for example within the Date-Chart - there are three '   ' set in front of the text.
00032807	The WMS service from M.App (MyGeoservices) does not work correctly when REQUEST is not present in the URL.
00043620	Vector data imported as EPSG 2925 shows invalid when set to Caching
00044802	When reviewing usage in the master database the Usage records are tracked accurately to the date the session occurred. However, we have noticed that in Management, the Usage report is showing these same records as though they occurred a day earlier than they actually occurred.
00060468	German Official WFS not running
00069647	Bar graph Widget in MApp Enterprise Browser Application, the numbers in the legend aren't sorting from 1 to 10, but they are doing the following: 1,10,2,3,4,5,6,7,8,9.
00062533	Selection via Map on bigger scale in rich client not working
00063834	There is a problem using attribute based text-styling. Assigning databasefields for "fontfamily", "fontstyle" and "fontweight" takes no effect on the text shown in the application.
00031667	Browser app (Leaflet based) does not support expert point placement: label rotation
00036726	M.App Enterprise: Styleset > different Scales: not shown in GUI -> all additional scales disappear after saving and cannot be displayed.
00067240	WMTS not working on the same WMS data
00056513	Saving of MODIFY when edit feature against Oracle line/polygon with curves brings error: <b>ORA-29877: failed in the execution of the ODCIINDEXUPDATE routine ORA-13347: the coordinates defining an arc are not distinct</b>
00055343	SRID missing for WMS
00069956	Failing to remove a vertex results into a bug
00061708	Geometry won't save on persisted element
00066756	When a datetimepicker FormField which contains override=true, getdate() as a defaultvalue and visible=false gets created, it throws an error: The string was not recognized as a valid DateTime. There is an unknown word starting at index 0
00067168	Edit geometry will not perform a fit action
00067165	Visual Bug when using the move option in edit geometry mode
00058507	Heatmap doesn't honour value order on axis when working with numbers
00059255	Json template import problem
00068601	Functional Attributes to group the counts in the ranges is used but the resulting pie chart doesn't order the legend entries in numerical order
00068777	Feature Analyzer - View Template cannot be saved
00059436	Feature analyzer data are showing perfectly (as cluster ) on 16.5.6 version but on new version data is showing (points).

00060473	Error occurred while importing vector data - EPSG 25833
00069044	Geometry locate not working
00069443	Error while trying to load a live area dataset as a boundary in feature analyzer.
00069774	When you run installation repair from Control Panel it will delete WarehouseLocation value from the master database, ending up in not working environment - M.App Service cannot be started. The installation repair thus cannot be finished and rolls back. Furthermore, MAE configuration must be re-run for adding the WarehouseLocation property back to master database.
00070080	Registration of the M.App Enterprise Usage is not correct
00070174	MAE - STUDIO - STYLESET - Deleting a STYLESET in studio doesn't delete its matching folder in the server
00070586	Queries - on a field with values like "2558/6" defined as text - with input "2558/6" does not work but with 2558_6" it works.
00070960	After creating a new FA view and opening the FA editor, trying to apply a FEATURE DATA source prompts an error: "Error reading the input feature data: Cannot read property 'find' of undefined". This only happens if the tenant doesn't have a registered VECTOR SET in the tenant's DB schema
00071732	Can't use database field for rotated symbology
00052625	Desktop app shuts down on opening
00053028	Language for M.App Enterprise won't be downloaded automatically
00060982	STUDIO > My GeoServices > Dataset list is empty if not making at least one Vector Set in tenant
00063898	Desktop queries raise error when using Hebrew characters in query where clause
00063941	Updating Hebrew language package makes desktop app not work
00064015	Print Layout Editor - Ungroup button missing
00064467	DESKTOP > PRINT LAYOUT EDITOR - How to add MAPCROSSES on top of a map element?
00064469	DESKTOP > PRINT LAYOUT EDITOR - After opening a *.mepl file, the MOVE ELEMENTS tool isn't working
00064525	Feature Analyzer Tooltips on polygon, don't work anymore in latest version of Chrome (Version 83.0.4103.61 (Official build) (64-bits))
00064515	DESKTOP - Count of records in query result don't appear until removing a record
00064568	They work only in Edge browser. On other browser we have always the "open hand" (pan symbol icon)
00064635	DESKTOP > PRINT LAYOUT EDITOR - How to set legend for right-to-left entries?
00064735	DESKTOP > PRINT LAYOUT EDITOR - Text element containing LOWERLEFT placeholder, having wrong X coordinate
00064953	MAE don't read attributes and views data from other than the "public" schema of PostgreSQL – only for <b>Attribute DATA</b>
00065187	DESKTOP - App is crashing when scrolling zoom fast
00065412	DESKTOP > PRINT LAYOUT EDITOR - Having a long layer name in legend, makes column to disappear
00065742	Some texts are in English despite German language settings



00065862	Running feature buffer recipe failed
00066045	DESKTOP > ACTION SET - workflows to be accumulated instead of being replaced when opened more than once
00066183	DESKTOP - Upgrading to 16.6.364.4 from 16.6.265.2 causes errors with app handling geometry create/edit workflows
00034280	Custom polygon styling
00034299	The text rotation works in the preview but will not work when applied to the map.
00053700	Database entries with commas, which are used as tooltips in a Feature Analyzer app, get a csv file where all commas within the cells are replaced by an underscore and the cell content is enclosed in quotation marks.
00054754	1. No option to rotate point feature when creating. 2. The desktop app gets 'stuck' when trying to edit an existing entity (point in this matter). Some background notes: 1. Inspecting our ORACLE DB generated entities in a SQL client (PL/SQL Developer) resulted with some notions: 1a. The before-installation entities have a 6 row 'sdo_ordinates' while the new one haven't got any. 1b. There's some inconsistencies in the 'sdo_elem_info' as well. 2. This is the JavaScript we used for modify geometry action SC.digitize('AMUDIM', {commands: ['MODIFY','MOVE'], startOnLoad: 'MODIFY'},{FORM.ID})
00066951	If they're shared, ME adds [shared] to the export, which causes an error when importing it.
00052733	Dropdown list maximum restriction
00053603	Feature Analyzer date range format doesn't honor localization
00056037	Analyzer View Performance issue
00056047	Some texts are in English despite German language settings
00056247	DESKTOP CLIENT - using the JS below the client allow rotating a point but seems not to save it in the Oracle 12 database
00056598	When using a Hebrew defined user, the table field names aren't aligned to the right.
00043409	Issue in Workflow Editor: Not deleting unneeded Form object from the tree
00043453	Error when changing the password for the admin
00055094	Mobile: Login Timeout ("Could not sync change")
00055340	ZOOMING IN - problem
00044627	Styles with filters and scales not working
00067389	save user id by sql trigger in mobile application
00067498	Problem passing additional WMS parameters in M.App Enterprise 3d View
00057073	how to create a multi-area geometry in MAPP Enterprise
00057162	STUDIO > STYLESET > Unable to see different defined scales when reopening layer style in case of custom style filter
00057242	STUDIO > DESKTOP > LEGEND - Unable to order a sub-theme with layers in the same level
00057324	Geoservice not working in Browser App
00058711	Point Clustering Gone?
00066052	Web based application down

00033364	When referencing a Vector Set in Feature Analyzer that includes a point/poly data set with a 1-to-Many relationship (i.e. polling places and precincts where a single polling place serves multiple precincts) only 1 polygon per point is displayed.
00052260	Issue publishing WMTS service
00054500	Error downloading and/or updating Localization languages
00059174	Sorting columns goes wrong in the FA table widget
00068475	Issues adding WMTS from Apollo to Rich Client
00059466	Clusters and point data
00059825	Unable to see Apps when logged into MAE as an Active Directory User.
00069171	When clicking the "Edit Geometry" button, strange things happen. Steps to replicate: Select one point geometry Edit this geometry All points within an "undefined" bounding box gets selected for the edit and error occurs all_gem_selected.jpg In other instances, RichClient gives "No features are selected" message, when Edit button is clicked
00069493	Out of the box functionality search bar at the bottom right hand side of the screen continues to search when the search box is empty.
00070603	Text search(full) returns 'no value found' in cases when string contain Hebrew characters only
00070681	MAE 16.6 - Desktop App JS API - SC.digitize issue
00070730	MAE tooltips issues
00060708	invalid geometry in ME
00061693	Add login name in the activation email
00063791	Posibilidades de MAE en cuanto poner cartografía de fondo.
00063889	Print layout template don't appear in desktop M.App Enterprise
00065937	Upgrade and Installation of MAE
00065965	Issue with the Workflow Engine regarding translation
00066706	Analyzer View Linestring Bug
00066957	When selecting an action button that creates a new legend entry it duplicates that entry
00056349	BI M.apps not showing geometry when using none WGS84 data in the APPS.
00067754	WMS with EPSG28992 is not showing correctly in desktop app

## Contact us



<https://go.hexagongeospatial.com/contact-us-today>

## About Hexagon

Hexagon is a global leader in digital reality solutions, combining sensor, software and autonomous technology. We are putting data to work to boost efficiency, productivity, quality and safety across industrial, manufacturing, public sector, and mobility applications.

Our technologies are shaping production and people-related ecosystems to become increasingly connected and autonomous — ensuring a scalable, sustainable future.

Hexagon's Safety, Infrastructure & Geospatial division improves the performance, efficiency and resilience of vital services. Its Safety & Infrastructure solutions enable smart and safe cities. Its Geospatial software leverages the power of location intelligence.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 21,000 employees in 50 countries and net sales of approximately 3.8bn EUR. Learn more at [hexagon.com](https://hexagon.com) and follow us [@HexagonAB](https://twitter.com/HexagonAB).

## Copyright

© 2021 Hexagon AB and/or its subsidiaries and affiliates. All rights reserved. Hexagon has registered trademarks in many countries throughout the world. Visit the Trademarks Page <http://www.hexagongeospatial.com/legal/trademarks> for information about the countries in which the trademarks are registered. See Product Page and Acknowledgments for more information.

## Product Documentation Terms of Use

PLEASE READ THESE TERMS CAREFULLY BEFORE USING HEXAGON GEOSPATIAL'S DOCUMENTATION ("DOCUMENT"). USE OF THIS DOCUMENT INDICATES ACCEPTANCE OF THIS AGREEMENT WITHOUT MODIFICATION. IF YOU DO NOT AGREE TO THE TERMS HEREOF ("TERMS"), DO NOT USE THIS DOCUMENT.

## Use Of This Document

All materials in this Document are copyrighted and any unauthorized use may violate worldwide copyright, trademark, and other laws. Subject to the terms of this Agreement, Hexagon Geospatial (a Division of Intergraph Corporation) and Intergraph's subsidiaries ("Intergraph") hereby authorize you to reproduce this Document solely for your personal, non-commercial use. In consideration of this authorization, you agree to retain all copyright and other proprietary notices contained therein. You may not modify the Materials in any way or reproduce or publicly display, perform, or distribute or otherwise use them for any public or commercial purpose, except as specifically authorized in a separate agreement with Hexagon Geospatial.

The foregoing authorization specifically excludes content or material bearing a copyright notice or attribution of rights of a third party. Except as expressly provided above, nothing contained herein shall be construed as conferring by implication, estoppel or otherwise any license or right under any copyright, patent or trademark of Hexagon Geospatial or Intergraph or any third party.

If you breach any of these Terms, your authorization to use this Document automatically terminates. Upon termination, you will immediately destroy any downloaded or printed Materials in your possession or control.

## Disclaimers

ALL MATERIALS SUPPLIED HEREUNDER ARE PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT. Hexagon Geospatial does not warrant that the content of this Document will be error-free, that defects will be corrected, or that any Hexagon Geospatial Website or the services that make Materials available are free of viruses or other harmful components.

Hexagon Geospatial does not warrant the accuracy and completeness of this Document. Hexagon Geospatial may make changes to this Document at any time without notice.

## Limitation Of Liability

IN NO EVENT SHALL HEXAGON GEOSPATIAL BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES, OR DAMAGES FOR LOSS OF PROFITS, REVENUE, DATA OR USE, INCURRED BY YOU OR ANY THIRD PARTY, WHETHER IN AN ACTION IN CONTRACT OR TORT, ARISING FROM YOUR ACCESS TO, OR USE OF, THIS DOCUMENT.

## Indemnification

You agree to defend, indemnify, and hold harmless Hexagon Geospatial, its officers, directors, employees, and agents from and against any and all claims, liabilities, damages, losses or expense, including reasonable attorneys' fees and costs, arising out of or in any way connected with your access to or use of this Document.

## Use Of Software

Use of software described in this Document is subject to the terms of the end user license agreement that accompanies the software, if any. You may not download or install any software that is accompanied by or includes an end user license agreement unless you have read and accepted the terms of such license agreement. Any such software is the copyrighted work of Hexagon Geospatial, Intergraph or its licensors. Portions of the user interface copyright 2012- Telerik AD.

## Links To Third Party Websites

This Document may provide links to third party websites for your convenience and information. Third party websites will be governed by their own terms and conditions. Hexagon Geospatial does not endorse companies or products to which it links.

Third party websites are owned and operated by independent parties over which Hexagon Geospatial has no control. Hexagon Geospatial shall not have any liability resulting from your use of the third party website. Any link you make to or from the third party website will be at your own risk and any information you share with the third party website will be subject to the terms of the third party website, including those relating to confidentiality, data privacy, and security.

## Trademarks

The trademarks, logos and service marks ("Marks") displayed in this Document are the property of Hexagon Geospatial, Intergraph or other third parties. Users are not permitted to use Marks without the prior written consent of Hexagon Geospatial, Intergraph or the third party that owns the Mark. "Intergraph" is a registered trademark of Intergraph Corporation in the United States and in other countries. Other brands and product names are trademarks of their respective owners.

Find additional trademark information <https://www.hexagongeospatial.com/legal/trademarks>.

## Procedure For Making Claims Of Copyright Infringement

Notifications of claimed copyright infringement should be sent to Hexagon Geospatial by mail at the following address: Intergraph Corporation, Attn: Intergraph Legal Department, P.O. Box 240000, Huntsville, Alabama 35824.

## US Government Restricted Right

Materials are provided with "RESTRICTED RIGHTS." Use, duplication, or disclosure of Materials by the U.S. Government is subject to restrictions as set forth in FAR 52.227-14 and DFARS 252.227-7013 et seq. or successor provisions thereto. Use of Materials by the Government constitutes acknowledgment of Hexagon Geospatial or Intergraph's proprietary rights therein.

## International Use

You may not use or export Materials in violation of U.S. export laws and regulations. Hexagon Geospatial makes no representation that Materials are appropriate or available for use in every country, and access to them from territories where their content is illegal is prohibited.

Hexagon Geospatial provides access to Hexagon Geospatial international data and, therefore, may contain references or cross references to Hexagon Geospatial products, programs and services that are not announced in your country. These references do not imply that Hexagon Geospatial intends to announce such products, programs or services in your country.

The Materials are subject to U.S. export control and economic sanctions laws and regulations and you agree to comply strictly with all such laws and regulations. In addition, you represent and warrant that you are not a national of, or otherwise located within, a country subject to U.S. economic sanctions (including without

limitation Iran, Syria, Sudan, Cuba, and North Korea) and that you are not otherwise prohibited from receiving or accessing the Materials under U.S. export control and economic sanctions laws and regulations. Hexagon Geospatial makes no representation that the Materials are appropriate or available for use in every country, and access to them from territories where their content is illegal is prohibited. All rights to use the Materials are granted on condition that such rights are forfeited if you fail to comply with the terms of this agreement.

## Revisions

Hexagon Geospatial reserves the right to revise these Terms at any time. You are responsible for regularly reviewing these Terms. Your continued use of this Document after the effective date of such changes constitutes your acceptance of and agreement to such changes.

## Applicable Law

This Document is created and controlled by Hexagon Geospatial in the State of Alabama. As such, the laws of the State of Alabama will govern these Terms, without giving effect to any principles of conflicts of law. You hereby irrevocably and unconditionally consent to submit to the exclusive jurisdiction of the United States District Court for the Northern District of Alabama, Northeastern Division, or the Circuit Court for Madison County, Alabama for any litigation arising out of or relating to use of this Document (and agree not to commence any litigation relating thereto except in such courts), waive any objection to the laying of venue of any such litigation in such Courts and agree not to plead or claim in any such Courts that such litigation brought therein has been brought in an inconvenient forum. Some jurisdictions do not allow the exclusions or limitations set forth in these Terms. Such exclusions or limitations shall apply in all jurisdictions to the maximum extent allowed by applicable law.

## Questions

[Contact us](#) with any questions regarding these Terms.