

enlighten 5.0

What's New?

Geospatial Engineering Solutions





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What's New in enlighten 5.0

This document includes all functionality for Enlighten versions 5.0, 5.0.1, 5.0.2, 5.0.3 and 5.0.4.

Overview of What's New in Enlighten 5.0

Enlighten 5.0 provides a significant uplift in the underlying technology stack, with new form and function. The User Interface has been refreshed with a clean, modern, and logical layout maximising the use of functions whilst retaining the maximum map area available in the browser. By utilising the latest rendering engine, performance has significantly improved and retains Enlightens unique ability to update vector and attribute data in real-time. The addition of XYZ vector tile set support and improved WMS/WMTS functionality, provides the user with significant flexibility to consume pre-tiled data and third-party tile services.

Access to detailed asset and geographic information has been significantly improved through the advanced form, renamed as the Show Info form, enabling the user to visualise the selected rows on the map. This provides the ability to scroll through the selections and spatially visualise the individual elements. The user is now able to scroll through previous selection sets whilst in the advanced forms. The Basic Form has been redesigned and allows quick access to basic asset and Geographic information.

Enlighten 5.0 now supports the ability to create thematic mapping, providing superior representation of Geographic Information for use in analytics. Tooltips has been improved, providing the user a convenient way to visualise feature attributes, simply by a mouse over event. Tooltips continues the support of images to visualise assets quickly and further supports a direct link to the Show Info form providing a quick and easy way to interrogate associated attribution.

A new Getting Started document and video have been created and added to the Open Spatial online Documentation portal and introduce the enlighten platform functions. These media are extremely useful for first time users of enlighten as well as for existing users to help understand the platform changes and guide you to additional information and support.

Hardening for external users has been enhanced where all tool-tip functionality can be removed for external users. The tool-tip functionality has also been improved to enhance the user experience of displaying tool-tips while navigating around the map by permitting the standard mouse-over display or to allow users to click on map objects to display tool-tips.

Open Spatial have created a new Mapguide Open Source 4.0 instant installer for enlighten 5.0.x to be used in conjunction with the Enlighten Installer document for new installations.

Enhanced code architecture and compliance

- Enlighten 5.0 is compatible with Oracle 12c, 18c, 19c and 21c.
- Enlighten 5.0 sees the transition from an AJAX framework to a modern React framework, which in essence, is a JavaScript library used to build user interfaces by creating individual re-usable components and combining them into a single application.
- Enlighten 5.0 has been migrated across to React Viewer so that the latest functionality in MGOS 4 can be used.
- The React viewer facilitates access to the map window in either Fusion or Ajax styles without the end user having to re-author the map styles.
- The React library is well supported and maintained by the Open-Source community and allows developers to easily compartmentalize different parts of an interface without fear of interfering with other components. React has plenty of longevity and a huge ecosystem which provides stability and staying power.
- Enlighten 5.0 is compatible with Chrome, Edge and Firefox web browsers.
- Browsers must be setup to retain cookies for enlighten web URL to enable SSO to retain access token.

Administration

- A new Instant Setup of MapGuide Open Source (MGOS) 4.0 forms part of the Enlighten 5.0 installation. The steps on how to run and configure MGOS using the instant installer can be found in the **5.0_enlighten_Installer.pdf** document.
- Administrator users can configure the **web.config** using the improved **Enlighten Management Console (EMC)** application eliminating all manual configuration required for enlighten 5.0.
- Administrators can use Enlighten Management Console (**EMC**) to generate encrypted values for username and passwords which can be used by external client applications or integrations to add to their **web.config** files to provide secure access to the enlighten API without compromising the security constraints.
- When users are configured to use Single Sign On (SSO) to open their enlighten sessions, they do not have the option to select a profile to apply when logging onto enlighten via the enlighten Home page, however, once they have opened their enlighten session, the user has the option to change their Layer Profile by selecting the Layer Profile icon on the Enlighten Toolbar.
- When configuring the web layout in MapGuide Maestro, if the map's initial position and scale is not setup, the map will load using the database schema extents.
- Enlighten Administrator issue for screen hanging when assigning permissions to multiple users has been resolved.
- Update all references to Advanced Form in Admin View to new **Show Info**.

- As part of the EMC configuration for Network Trace & Redline configuration pane a new setting to configure the default symbol has been added. This symbol is the default symbol displayed in the event there is a problem reading a symbol defined in any configured layer.
- The EMC Map configuration pane has been updated to cater for React viewer settings.
- Flexible Map Launcher has been removed from the Map Functions in Administrator View when assigning permissions to users. This function is replaced by Add/Manage External and Local layers in Enlighten 5.0.
- New core settings have been added for tooltips. The tool-tip functionality can be configured to remove for all external users to strengthen website security. This includes removing the Show/Hide Tooltips from the Enlighten toolbar, to remove the menu item Options from the right-click context menu and to remove the Manual Feature Tooltip options from the Set User Options pane.
- A further tool-tip option to configure the behaviour of how the tool-tips are displayed on the map has been added as a core system setting.

Toolbars, Menu Icons and Panes UI

- The toolbars and menu icons follow the Material Design interface creating a uniform experience across the enlighten application based on a well-supported framework.
- The Main toolbar is permanently displayed on the left-hand side of the map; however, the Enlighten Toolbar and Advanced Toolbar can be switched on/off whilst retaining the maximum map area available in the browser.
- The Manage User Options on the Enlighten Task pane controls the user's individual experience in terms of toolbars, panes and layers visible for their enlighten sessions.
- Toolbars can be set to display with either large or small icons, and the level of transparency for toolbars and panes can be set and saved using the transparency slider on the Manage User Options pane.
- Toolbar and Pane Transparency is set using the opacity slider bar in the Set User Options pane and retained for next enlighten session if the "Save Toolbar/Pane state at logout" tick-box is checked.
- The state and position of the toolbars can be saved as part of the Manage User Options.
- Panes can be resized to maximum the map area available in the browser.

Show Info Pane

- Access to detailed asset and geographic information has been significantly improved through the advanced form, renamed as the Show Info form, enabling the user to visualize the selected rows on the map.
- The Show Info pane is dynamically updated based on map feature selections from the map.
- Show Info pane can be opened without any objects being selected first. The Show Info pane will indicate the wording "**Nothing Selected**" and will remain blank.
- Selection icons have been added to the Show Info pane to allow users to make a new selection set, load previous selection sets, lock a selection set, or to load previously saved selections via the Manage Selections option.
- Additional icons added to Show Info pane for managing selections, lock selections, detach Show Info pane from the map and reset form to default settings.
- Users can reset the Show Info pane to the default view.
- Show Info forms can be setup to display image previews for URL based fields.
- The Preview of linked Image on the Show Info pane did not open the image fully when the option "View in full window" was selected from the Show Info pane. This has been fixed for 4.2.3 and 5.0.
- User can select objects in the map and the Show Info pane is immediately updated with the selection.
- Selecting objects on the map updates the selection of the records displayed on the Show Info pane.
- Tooltips can be configured to open the Show Info pane by clicking the hyperlink without selecting the object in the map. If Show Info pane is already open when tooltip hyperlink is selected, the Show Info pane is refreshed with the new data.
- Column Headers in the List View on the Show Info pane can be used to sort data alphabetically, numerically or chronologically depending on the data type stored in the database for the selected column header.
- Sorting on Date columns on the Show Information panes has been improved to be able to sort chronologically on short date formats for both US and International date formats such as dd/mm/yyyy, mm/dd/yyyy, and long date formats MM/dd/yyyy and dd/MM/yyyy.

Basic Info Pane

- Old enlighten basic form layout has been discontinued and now adopts the MapGuide Basic form layout.
- The Basic Info pane is dynamically updated based on map feature selections from the map.
- Basic Info pane displays all fields associated to the selected map features across all layers where the user can navigate through the records one by one or zoom to the selected feature on the map.

Manage User Options

- The default state for users launching enlighten for the first time has been improved to be consistent and optimised allowing the user to set their own preferred environment on subsequent logins.
- Users can save the toolbar/pane state of being displayed or not, as well as the location and transparency of the panes and toolbars.
- User can either save their Layer Profile on logout or restore the last map.
- The map location and scale can be saved so that last location is restored for the next enlighten session.
- The option to **Save Active Reports** saves the last opened form in the Detailed View which is then loaded by default when the Show Info pane is opened.
- UI improvement to align the text and tick boxes on the **Set User Options** dialog box.
- The **Default Selection** colour for selected objects in the map can be set by the user in Set User Options and can be set to be retained for future enlighten sessions if changed.
- The **Manage User Options** pane has been improved to save the state of the user settings for toolbars, panes, selection colours etc. for subsequent enlighten sessions.
- The **Manage User Options** has been improved to include a new setting to retain the External Provider on logout so that when the user re-opens Enlighten, the last used External Provider backdrop is displayed by default.
- Users have the option to override the system settings for how the user selects the tool-tips to display to enhance the way their user experience of navigating around the map.
- External users can be setup to remove the Manual Feature options from the **Manage User Options** pane to ensure website security.

Toolbar Functionality Improvements

- The **Nearest Neighbour** functionality on the Advanced Toolbar has been improved to use the setting defined in the NEIGHBOUR_ORIGINAL which is managed by the GIS Administrator.
- The **Select Radius** and **Select Polygon** functions on the Advanced Toolbar prompt the user to create a selection set of objects displayed on the map.
- The **Measure** command displays the unit of measurement as defined in the UNITS setting for the Map Projection file for the enlighten base map.
- **Bookmarks** created in all previous versions of enlighten are available for selection.
- **Themed Layer** functionality enables users to dynamically theme a layer based on conditions applied to attributes values and the display the results in different styles.

- **Custom Query Builder** found on the Advanced Toolbar, facilitates the user building SQL conditions on attributes associated to the specified layer to filter results that can be created as a selection set to be viewed in the Basic Info or the more detailed Show Info panes.
- Results of a **Search** creates a selection set which can be viewed in the Show Info pane.
- **Hide/Show** toolbars and panes, found on the Main toolbar, is saved in the **Set User Options** as to which toolbars are displayed/hidden on startup.
- Improve the **Manage Selections** pane UI and functionality where Selection options are collapsed by default and enlighten task pane options are available to the top of the pane.
- The right-click **context menu** includes the option to **Download KML** file using the objects in the selection set to generate a KML File to be opened in an application such as Google Maps™.
- The KML Download stored procedure has been enhanced to better handle issues with KML downloads in the event of there being an error printing problematic objects that cause KML download failure.
- The **Viewer Options** on the right-click context menu allows the user to set the tool-tip behaviour, to set Layer transparency for External Provider base layers, Basemap layers and for selections, as well as setting the display units on the map status bar.

Layers Pane, External/Internal Layers and Layer Profiles

- Ability to add an External Provider backdrop for the map window, such as:
 - Open Street Map
 - Bing Maps Street
 - Bing Maps Aerials
 - Bing Maps Aerials (with Labels)
 - Mapbox Satellite
 - Mapbox Streets
 - Generic Layer XYZ Layer – World Imagery
- Locally added layers such as WMF and WFS have been setup to automatically display on top of the External Provider layer.
- Support for GIS formats, WMS/WFS and Vector XYZ tiles. Configuration of External and Internal layers included in the enlighten installer documentation, and steps to load External and Internal layers included in the enlighten User Guide.
- There may be some additional licensing requirements to consider before the external provider XYZ tile images can be configured for display within enlighten.
- The Geo-scan layer is inserted just above the topmost raster or tile set layer for display purposes so that utility layers can be viewed on top of Geo-scan layer. Previously this layer was displayed on top of utility layers, and users could not see or select utility objects without switching off the Geo-scan layer.

- In the event the Layers pane is not fully opened, scroll bars are displayed at the bottom of the pane to scroll left and right, and to the right of the pane to scroll up and down allowing maximum space on the map where the user does not have to manually resize the pane to navigate the layer groups and layers displayed in the pane.
- User can either save their Layer Profile on logout or restore the last map.
- The layer groups no longer display the folder icon on the Layers pane.

Network Trace and Shut Offs

- Water Network trace allowed the user to trace to first selected valve, where if the user selected a second valve to trace through, the trace reverts to the first trace. The user cannot trace through to the next valve/s.
- The network trace has been amended to allow the user to add or remove parcels from the trace whereafter the trace results are redrawn correctly.
- The updated **Network Trace** icon on the Advanced Toolbar correctly displays as being Active when the function is opened.
- A new column called **LAST_UPDATED_DATE** has been added to the Shutoff table **EN_SHUTOFF_PROPERTY** and is updated when the table rows are updated using the Shut Off jobs.

Redline

- The Redline layers have been improved to use the configured default redline symbol if the default symbol library fails to load as enlighten starts. Previously the Redline point layers would not load if the default symbol library failed to load. The setting for the default symbol is managed in the Enlighten Management Console configuration tool for Network Trace and Redline.
- Error fixed for when using the redline functions to copy objects with mixed geometry types including redline circles.
- Redline markup functionality permits redline markups to be exported to WKT or KML formats.
- Users must now double-click to close redline polygon objects, or to complete drawing redline polyline objects. The double-click to complete replaces the Ctrl Click to close due to the .NET

Geo-scan Functionality

- It is recommended that for Customers who will be implementing numerous Geo-Scan images, additional processing power, memory and hard drive space on the Hosting Server might be required depending on the quantity and file size of these images.
- Geo-scan images are displayed on a separate layer when loaded from the selected geo-scan boundary, where the layer can be turned on/off as required.

- Improved the error message when the selected geo-scan boundary cannot find associated image file to load. Improved on the checks that are done when loading an image.
- Full stop characters in Geo-Scan image file name should be replaced with an underscore character to be able to load correctly in enlighten.
- Pound # characters in Geo-Scan image file name should be removed to be able to load correctly in enlighten.
- A new document titled *5.0_enlighten_Geo-scan.pdf* has been added to the enlighten Administrator Documentation. This document details how to generate GeoTIFF images from geo-scan boundary images to use as underlaying as constructed image on the map.
- The configuration specific to getting the Geo-scan images/plans to display as backdrop images in the enlighten map webpage have been added to a new section in the Enlighten installation documentation.

User Interface

- Main Toolbar and Enlighten Toolbar default display settings for first time login and subsequent login sessions.
- In previous versions of Enlighten, if a point object search is not set up with a buffer distance, the search result does not zoom to resulting record. Enlighten uses the setting **POINT_ZOOM_BUFFER** to determine the zoom buffer radius for Point Objects and was previously left as NULL. A default value has been assigned to this setting so that when the Automatic Zoom tick-box is checked, the point object is zoomed to.
- Searches using point layers zoomed correctly (setting **POINT_ZOOM_BUFFER** was applied) only if automatic zoom was checked. If automatic zoom is unchecked and the selection is initiated via the search results window and the buffer distance was configured as null, then no zooming occurred.
- Map layers can be configured to contain a tooltip with a hyperlink which opens the Show Info pane. The Show Info pane displays the information pertaining to the object over which the tooltip hyperlink was selected. A knowledgebase article has been added to the Support website which details the syntax required to add the Advanced Forms hyperlink on a tooltip.
- Task Pane has been renamed to **Enlighten Task Pane** when enlighten functions open the enlighten task pane, i.e. Manage Selections, enPlot etc. All MGOS functions which open a task pane have the function name as the pane header, i.e. Bookmarks, Search etc.
- The **Getting Started** document has been added to the Enlighten Task Pane to assist new users to navigate Enlighten 5.0 and get familiar with the new toolbars and layout.
- The **Enlighten User Guide** and **Enlighten Admin Guide** have been significantly improved and include all the new UI and functionality available in Enlighten 5.0.
- The resulting search message on **Common Key Searches** has been improved to advise in which spatial table a match was located based on the search criteria entered. The resulting search also

displays a Warning message for entered values which did not find a match and lists the spatial tables used in the search as well as a list of values not matched.

- The **UNITS** setting determines which unit of measurement is displayed on the map. This setting is managed by the GIS administrator in the Enlighten Management Console configuration tool.
- Combination of the **Automatic zoom** check box and the Maximum Number of Objects in the results determines if the resultant objects are zoomed to or not when completing a Search.
- Users can specify the **point selection buffer** size (pixels) on the map so that they can select single point features of various sizes on the map.
- Improved message handling for successful and failed error messages for **Common Key Searches**.
- The Map Window correctly refreshes when resizing the browser window so that a larger map area is displayed.
- Searches using point layers zoomed correctly (setting POINT_ZOOM_BUFFER was applied) only if automatic zoom was checked. If automatic zoom is unchecked and the selection is initiated via the search results window and the buffer distance was configured as null then no zooming occurred.
- With the introduction of the enlighten and advanced toolbars, the right-click context menu stripped down to 6 functions managed by enlighten code.
- The full extents of the right-click context menu remains inside the map window when opened.
- All External Layers added during an enlighten session are temporary and are removed from the Layers pane once the enlighten session is closed.

Plotting

- **QuickPlot**, a component of MapGuide Open Source, allows users to generate a quick plot of a map and publish to PDF. Within the Quick Plot tools users can select the page size, orientation, scale and determine if the map legend, scale bar, north arrow etc. is to be displayed on the map. By default, the Quick Plot uses the current screen map scale and orientation.
- The different Quick Plot paper sizes are pre-configured and can be selected from the drop-down list which is determined by the **UNIT** defined in the **Map Projection** setup for the enlighten base map. If the UNIT parameter in Projection definition is set to Feet, the Page Sizes are displayed in Inches (in), and conversely, if the UNIT parameter in Projection definition is set to Meters, the Page Sizes are displayed Millimetres (mm).
- Default International and United States paper sizes lists have been added to the drop-down list of paper sizes to select from.
- US Quick Plot (Units = Feet) defaults to use Letter (ANSI A 8.5 x 11 Inches; 216 x 279mm) Paper Size at a scale of 1:1200, while the Internal Quick Plot (Units = Meters) defaults to use A4 (210 x 297mm; 8.27 x 11.69 Inches) Paper Size at a scale of 1:5000. The Advanced Options allows the user to change the assigned defaults.

- External Layers and External Provider backdrops, including WMS/WFS Layers, are not available for inclusion when generating plots using the enPlot Plot Engine function, nor are the Layers available for inclusion in the **QuickPlot** function, both of which are available on the enlighten Toolbar.
- When more than one map object is selected in the map and the enPlot function invoked, for pre-defined plots the user can select which object to plot from the Search Results drop-down list which contains all selected objects.