

enlighten 5.1

What's New?

Geospatial Engineering Solutions





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What's New in enlighten 5.1

This document includes all new and improved functionality for Enlighten version 5.1

Overview of What's New in Enlighten 5.1

Enlighten 5.1 has been built on the latest ASP.NET framework, enabling dynamic web page compilation. This enhancement has significantly reduced the initial load time of the Enlighten website, resulting in a faster and more responsive user experience. In addition to performance improvements, the adoption of the updated ASP.NET framework also addresses known security vulnerabilities, ensuring a more secure platform.

For optimal performance and full functionality, enlighten 5.1 requires the latest version of MapGuide Open Source. The enlighten 5.1 release also includes several bug fixes from previous versions. A detailed list of resolved issues can be found in the Release Notes.

■ Improved Redline Tools and Functions

The Redline Toolbar and Redline Task Pane provide access to the following key components:

- Redline Layers
- Redline Collections
- Redline Projects
- Redline Project Stages

■ Redline Project Layers

Redline Layers can be created for specific departments or teams. These layers allow users to:

- Create, view, and manage redline markups relevant to their roles.
- Maintain clear organization of markups by project stage or department.
- Configure Redline Notifications to automatically notify selected users or groups via email when redlines are created or updated.

■ Redline Collections

Enlighten's Redline functionality has been significantly enhanced with the introduction of Redline Collections. This new feature allows redline editors to group multiple redline objects into a single, named collection assigned to a specific Redline layer.

Once redline objects are drawn—either individually or as part of a collection—they are automatically organized into sub-layers within the Layers pane based on the type of redline object. This makes it easier to manage and visualize different markup types. The Manage Redline Objects pane has also been upgraded to support the creation of Redline Collections. Editors can draw redline markups directly on the map using the newly introduced Redline Toolbar catering for the capture of Redline Lines, Polylines, Polygons, Rectangles, Circles, Text and Symbols. This toolbar, in conjunction with the dynamic Redline pane, streamlines the markup process by enabling users to:

- Easily draw various types of redline objects.
- Apply and adjust styling (e.g., color, line thickness) at the time of placement or during post-editing.
- Draw markups on designated redline layers.
- Combine multiple markups into a single Redline Collection with a unique collection name.

These improvements provide a more intuitive and efficient redlining experience for all users.

■ Redline Projects and Stages

Enlighten 5.1 also sees the introduction of Redline Projects and Stages. Projects for utilities, construction and infrastructure typically manage the improvement, modernization and expansion of infrastructure or facilities, and the project extents are defined by Enlighten Map users by drawing a polygon on the map to specify the project boundary when a new project is created. Each project includes a unique name, description, and a status of either Active or Inactive. The project's attributes can be viewed and edited via the Show Info pane.

The Redline markups can now be used to represent the project requirements in terms of improvements, replacement and/or rehabilitation of utility infrastructure as well as the expansion of existing services. The creation and/or assignment of a Redline Projects is optional meaning that Redline markups can be created without selecting a Redline Project.

Project Stages are configurable and represent the current phase within a project's life cycle. Each stage - ranging from preliminary design through to completion - stored as an attribute within individual project records. Assigned Project Managers are responsible for updating and maintaining these stages as the project progresses. To safeguard sensitive information, user permissions can be configured for each Project Stage. This ensures that only authorized users can view or interact with projects at specific stages in the life cycle.

■ Redline Projects

Redline Projects typically support utilities, construction, or infrastructure efforts involving system improvements, replacements, or expansions.

When creating a new project:

- A polygon is drawn on the Enlighten map to define the project boundary.
- A unique project name, description, and status (Active or Inactive) must be assigned.
- Project attributes can be viewed and edited in the Show Info pane.
- Redline markups are used to visually represent project requirements and changes.

Redline Projects are optional. Redline Markups can still be created without associating them with a project.

■ Redline Project Stages

Project stages define the life cycle of a Redline Project and are fully configurable. These stages:

- Reflect the current project phase (e.g., design, construction, completion).
- Are managed by assigned Project Managers.
- Can have user permissions set for access control at different stages.

■ ESRI API Endpoints

ESRI API Endpoints have been added as a Feature Service to allow users to add ESRI Feature Layers to their maps via the Add/Manage External Layers option on the Main toolbar. This option allows users to select online feature data made available by ESRI Feature Services and publish the data as a layer within the Enlighten Map. Enlighten 5.1 now supports Web Feature Services (WFS), Web Map Services (WMS) and ESRI Feature Services.

If there is associated attribute data for the published ESRI Feature Service layer, selecting the feature object in the map will display the attributes as a tool-tip, which is then refreshed with each individual selection of features.

As part of the upgrade to enlighten 5.1, the enlighten web folder structure allows for two different MapGuide Open Source React Viewer versions to be installed on the same server, specifically if hosting different versions [5.0.x and 5.1] on the same hosting server.

Enhanced code architecture and compliance

- Enlighten 5.1 is compatible with Oracle 12c, 18c, 19c and 21c.
- Enlighten 5.1 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.

Enlighten Home Page

- With the introduction of the password visibility toggle on the enlighten home page, users can preview their passwords before logging into their enlighten session. This option to login via the home page is bypassed if SSO is enabled.

Redline Pane and Toolbar

- The Manage Redline Objects pane has been vastly improved to cater for Collections, Layers, Projects and Stages described in the Overview of What's New in enlighten 5.1.

- A new Redline Toolbar provides the tools to draw and manage redline markups. The state of the some of the Redline Toolbar functions will be greyed out if the functionality does not apply to the selection of objects on the map.

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.
- On the Show Info form, when a DATE field has a null value and is set to being editable, the issue where the system date automatically overrides the null value has been corrected. The value remains null until a valid date has been entered.
- The hyperlink functionality on the Show Info forms has been expanded to accept hash keys allowing the linking to individual pages in a multi-page document, i.e. *Albert Rd.pdf#page=23*
- The layer naming conventions regarding non-permissible characters can prevent the Show Info form from loading the selection attribute data. Enlighten has been improved to allow a hyphen character in the layer label as set up in MapGuide Maestro.
- Permissible characters in the form column name headers is very short and has been extended to permit ' ' , ' ' , '\\ ' , ' ' , including spaces, underscores and alphanumeric values to permit the successful export to CSV from the Show Info form.

Geo-scan Functionality

- Tooltips can be configured in MapGuide Maestro to contain URL hyperlinks which will open the Geo-scan images linked to the Geo-scan boundaries setup on the Geo-scan layer/s.

Plot Applications

- When setting up Plot Applications for enPlot via the Enlighten Admin enPlot functionality, the Field for any DATE tag uses the date format configured in the EN_SETTINGS Core DATEFORMAT setting. This ensures the Plot Applications use the either the International date format of dd/mm/yyyy or the US date format of mm/dd/yyyy, depending on what is configured as part of the EN_SETTINGS.

Layers

- New functionality to add ESRI Feature Service layers to the map, and to be able to modify basic style formatting. The configured REST endpoint (URL) is unique per customer and is configured as part of enlighten's site settings.

- Corrected an issue identified when assigning a new layer to either a user group or individual users in Enlighten User Administration. Code fix added as a patch for version 5.0.6 and forms part of standard build for version 5.1.

ESRI Feature Service

- Enlighten 5.1 introduces support for adding an **ESRI Feature Service** layer to the map as a remote, URL-based layer. This functionality is limited to adding a single Feature Service layer at a time per enlighten user. The feature is accessible via the Add/Manage Layers pane.
- Once added, the layer can be configured by the user to load automatically on subsequent logins by enabling the Restore Added Layers option within their User Options. The Manage User Options pane also allows users to retain any style settings applied to the Feature Service layer. This ensures that visual customizations - such as color changes - are preserved and restored when the layer is reloaded.
- Although the ESRI Feature Service layer is added by users within the Enlighten Map environment, the Administrator is responsible for configuring the default **ESRI URL** for the service as part of the **ESRI_DEFAULT_URL** setting found within the **Site Administration > Configure Settings**. All ESRI Feature Services require a paid subscription or license, so please contact ESRI for your organization's plan details.

What's New in enlighten 5.1 for Administrators

- Redline Layers, Projects and Stages

The Redline functionality has been expanded to allow for the creation and management of Redline Projects, and their various Project Stages. Redline Layers are managed independently of Redline Projects and their associated Stages. Organizations can opt to implement the Projects method of Redline markups or continue with the standard Redline markup method.

- Redline Layers

Redline Layers are map layers used to draw various markup objects such as lines, polygons, and text. Notifications can be configured for each Redline Layer to alert members of a designated Notification Group whenever new markup is added. This ensures timely action based on the type of markup. For example, when new water assets are marked up on the Asset Creation Redline Layer, a notification is sent to the GIS team so they can promptly add the asset details and connect them to the network.

- Redline Projects and Stages

Redline Projects are created in the Enlighten Map, with project extents defined using polygon boundaries. Users are granted specific permissions for various Redline Projects and their respective Project Stages, ensuring the integrity and confidentiality of sensitive information throughout each stage of the project lifecycle.

Redline Projects are defined on the Enlighten map using a spatial polygon that represents the project's boundary. Each project includes:

- A unique Project Name
- A Project Description
- A Project Status (either Active or Inactive)
- Project Stage

When a new project is created, users are prompted to define its spatial extent by drawing a polygon on the map. This polygon is stored as a spatial object in the *SP_PROJECT* table within the Enlighten database. The project boundary is displayed on the Basemap's Project layer, and its properties can be viewed using the **Show Info** form.

Each project can also be promoted through a series of configured **Project Stages** that indicate the project's progress - from Preliminary Design through to Completion. Redline markups associated with a project are managed through these stages, typically including:

- Preliminary Design
- Feasibility
- Detailed Design
- Review Completed
- Construction
- Completed

■ Redline database settings

Further enhancements for Enlighten 5.1 sees the Redline settings being moved from the *web.config* to the *EN_SETTINGS* table so that they can be edited using Enlighten's Site Administration > Configure Settings functionality without having to restart the website when parameters are updated. This functionality reduces any down-time and users benefit from fewer disruptions and interruptions to their web sessions when configuration changes are made for Enlighten settings.

The following Redline settings are categorized as being MAP settings:

- **RL_FEATURE_SOURCE** - Feature source of redline feature
- **RL_LAYER_PREFIX** - Prefix of redline layer
- **RL_SYMBOL_PREFIX** - Prefix of redline symbol
- **RL_SYMBOL_DEFAULT** - Default redline symbol library
- **ENABLE_RL_PROJECT** - Controls whether the Redline Project functionality is enabled for the organization.

Enlighten Settings Changes

- The following Enlighten settings have been moved from the **WEB.config** file to the Site Administration configuration settings to be easily accessible by the Enlighten Administrator user:
 - **MGE_URL** - The URL of the Map Guide web site.
 - **RESOURCE_FOLDER** - The folder to contain all dynamically created MGOS resource.
 - **VIEWR_APP_DEFN** - The name of an MGOS application definition for internal users.
 - **EXT_VIEWR_APP_DEFN** - The name of a MGOS application definition for external users.
 - **MAX_TRACE_SEL_COUNT** - The maximum count of selecting the network trace result.
 - **LOG_FILE_FULL_PATH** - The full path of the log4net log file.
 - **ADMIN_LOGOUT_USERS** - Site Administrator setting to enable the function for an Administrator to terminate active user sessions.

- In Enlighten 5.1, the hosting server can now host different versions of Enlighten React Viewer on the same server. Enlighten 5.0 React Viewer is installed in the folder *C:\Program Files\OSGEO\MapGuide4\Web\www\viewer* by default and Enlighten 5.1 React Viewer is installed in the folder *C:\Program Files\OSGEO\MapGuide4\Web\www\viewer5.1.0* by default.
- This is very useful when transitioning from one version to another where the sign-off on the new version is required before the older version is "switched off".
- With the addition of new configuration settings in version 5.1, external users can be directed to use a different version of Enlighten which could be hosted in the cloud environment, versus a local version for office-based users hosted on local servers within the organization.

- New SRID setting called **GEOSCAN_COORDNAME** for Geo-scan images.
- The recent addition of a Geo-scan coordinate system setting in the Enlighten database introduces a significant enhancement for handling GeoTIFF images with varying coordinate systems. By storing the Spatial Reference Identifier (SRID) code for each GeoTIFF, the system allows these images to be transformed on the fly to align with the coordinate system configured for the Enlighten map. This capability ensures that GeoTIFF images can be accurately displayed beneath utility layers, even when they originate from different coordinate systems.
- The CS-Map library offers robust support for various coordinate systems and projections, ensuring that spatial data, including GeoTIFF images, are accurately transformed and displayed. This integration enhances the flexibility and interoperability of the Enlighten platform, accommodating diverse geo-spatial data sources and coordinate systems. This means that GeoTIFF images can be stored with their original coordinate systems and dynamically transformed to fit the map's coordinate system settings. This feature streamlines the process of integrating and displaying geo-spatial data from multiple sources, improving the overall user experience and data visualization capabilities within the Enlighten platform.

MapGuide Open Source Instant Setup

- An updated Instant Setup of MapGuide Open Source (MGOS) 4.0.0.10146 forms part of the Enlighten 5.1 installation. The steps on how to run and configure MGOS using the instant installer can be found in the 5.1 enlighten Installer document.
- Customers who have previous versions of Enlighten 4.2.x or 5.0.x are required to generate a MapGuide Package backup of their enlighten websites before commencing with the upgrade to Enlighten 5.1 and the Instant Setup of MapGuide Open Source (MGOS) 4.0.0.10146. These steps are included in the Enlighten Installer Guide for 5.1.

Enlighten Management Console

- 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 upgrading your current Enlighten version to 5.1, you can retain the older version using the older React Viewer on the same enlighten server until you are ready to switch over. if you have enlighten 5.0 installed you will have the folder C:\Program Files\OSGeo\MapGuide4\Web\www\viewer. As part of the upgrade process detailed below, a new folder called C:\Program Files\OSGeo\MapGuide4\Web\www\viewer5.1 will be created with the updated MapGuide React Viewer required for enlighten 5.1.

MapGuide Maestro

- Enlighten has been enhanced to support the improved MapGuide-react-layout integration in Fusion editor as part of the MapGuide Maestro v6.0m13 release. MapGuide Maestro is used as the Enlighten Map and Layer authoring and configuration tool.
- For Enlighten v4.0.6, v4.0.7, v4.0.8, v5.0 or enlighten v5.1 you are required to download MapGuide Maestro 6.0m13.
- As a prerequisite to create and configure WMS/WFS and ESRI resources and layers, you are required to have MapGuide Maestro v6.0m13 installed on the MapGuide Server or on your local workstation as the website administrator.
- Before installing MapGuide Maestro v6.0m13, ensure that your server conforms to the Software requirements listed in the Enlighten Installer documentation. IIS and ASP.NET must be installed correctly before MapGuide Maestro can be installed.
- Enlighten has been improved to allow a hyphen character in the layer label as set up in MapGuide Maestro.