

XPression Maps

XPression Maps User Guide

VERSION 4.0

ROSS

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Our mission is to:

1. Provide a Superior Customer Experience
 - offer the best product quality and support
2. Make Cool Practical Technology
 - develop great products that customers love

Ross has become well known for the Ross Video Code of Ethics. It guides our interactions and empowers our employees. I hope you enjoy reading it below.

If anything at all with your Ross experience does not live up to your expectations be sure to reach out to us at solutions@rossvideo.com.



David Ross

CEO, Ross Video

dross@rossvideo.com

Ross Video Code of Ethics

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1. We will always act in our customers' best interest.
2. We will do our best to understand our customers' requirements.
3. We will not ship crap.
4. We will be great to work with.
5. We will do something extra for our customers, as an apology, when something big goes wrong and it's our fault.
6. We will keep our promises.
7. We will treat the competition with respect.
8. We will cooperate with and help other friendly companies.
9. We will go above and beyond in times of crisis. *If there's no one to authorize the required action in times of company or customer crisis - do what you know in your heart is right. (You may rent helicopters if necessary.)*

XPression Maps User Guide

- Ross Part Number: 3500DR-021-4.0
- Version: 4.0
- Date/Time: 10/1/2025 12:42 PM

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Patents

Patent numbers US 7,034,886; US 7,508,455; US 7,602,446; US 7,802,802 B2; US 7,834,886; US 7,914,332; US 8,307,284; US 8,407,374 B2; US 8,499,019 B2; US 8,519,949 B2; US 8,743,292 B2; GB 2,419,119 B; GB 2,447,380 B; and other patents pending.

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2. **DEFINITIONS.** In this Agreement, in addition to the terms defined elsewhere in this Agreement, the following terms have the meanings set out below:

"**Affiliate**" means, with respect to any Person, any other Person who directly or indirectly controls, is controlled by, or is under direct or indirect common control with, such Person. A Person shall be deemed to control a Person if such Person possesses, directly or indirectly, the power to direct or cause the direction of the management and policies of such Person, whether through the ownership of voting securities, by contract or otherwise; and the term "controlled" and "controlling" shall have a similar meaning.

"**Agreement**" means this End User Software License Agreement including the recitals hereto, as the same may be amended from time to time in accordance with the provisions hereof.

"**Backup System**" means the secondary piece of Designated Equipment upon which the Software is installed and mirrored for the sole purpose of replacing a Primary System in the event such Primary System is not available or functioning properly for any reason.

"**Change of Control**" means (a) the direct or indirect sale, transfer or exchange by the shareholders of a Party of more than fifty percent (50%) of the voting securities of such Party, (b) a merger or amalgamation or reorganization or other transaction to which a Party is party after which the shareholders of such Party immediately prior to such transaction hold less than fifty percent (50%) of the voting securities of the surviving entity, (c) the sale, exchange, or transfer of all or substantially all of the assets of a Party.

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"Designated Equipment" shall mean (a) the hardware products sold by Ross Video to Licensee on which the Software is installed and licensed for use, as the same may be replaced from time to time by Ross Video; or (b) in the case of Software licensed on a stand-alone basis, the equipment of Licensee on which the Software is to be installed and meets the minimum specifications set out in the Documentation.

"Documentation" shall mean manuals, instruction guides, user documentation and other related materials of any kind pertaining to the Software (whether in electronic, hard-copy or other media format) that are furnished to Licensee by or on behalf of Ross Video in relation to the Software.

"Freeware" means Software that is available free of charge from Ross Video, and includes, without limitation the master control system software known as "DashBoard".

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"Released Parties" has the meaning ascribed to it in Section 9(b).

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Either party may disclose certain Confidential Information if it is expressly required to do so pursuant to legal, judicial, or administrative proceedings, or otherwise required by law, provided that (i) such Party provides the other Party with reasonable written notice prior to such disclosure; (ii) such Party seeks confidential treatment for such Confidential Information; (iii) the extent of such disclosure is only to the extent expressly required by law or under the applicable court order; and (iv) such Party complies with any applicable protective or equivalent order.

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The Parties acknowledge and agree that any breach of the confidentiality provisions of this Agreement by one Party may cause significant and irreparable injury to the other Party that is not compensable monetarily, as well as damages that may be difficult to ascertain, and agrees that, in addition to such other remedies that may be available at law or in equity, the other Party shall be entitled to seek injunctive relief (including temporary restraining orders, interim injunctions and permanent injunctions) in a court of competent jurisdiction in the event of the breach or threatened breach by such party of any of the confidentiality provisions of this Agreement. The relief contemplated in this Section shall be available to each Party without the necessity of having to prove actual damages and without the necessity of having to post any bond or other security. Each Party further agrees to notify the other Party in the event that it learns of or has reason to believe that any Person has breached the confidentiality provisions of this Agreement.

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Updated: November 1, 2023

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Ross Video Limited (Ross) warrants its XPression Maps systems to be free from defects under normal use and service for the following time periods from the date of shipment:

- XPression Maps Server — 12 months
- XPression Maps Software Upgrades — 12 months free of charge
- System and Media hard drives — 12 months

If an item becomes defective within the warranty period Ross will repair or replace the defective item, as determined solely by Ross.

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The crossed-out wheeled bin symbol invites you to use these systems.



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You can also contact Ross Video for more information on the environmental performances of our products.

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Contents

Introduction	1
About This Guide	2
Documentation Conventions	3
Getting Help	4
XPression Maps Workflows	5
About the XPression Maps Designer Workflow	6
About the XPression Maps MOS Workflow	9
About the Interactive Workflow	10
Launching XPression Maps	11
XPression Maps User Interface	12
Overview of the User Interface	13
Menus	14
Toolbars	15
Editors and Panels	17
Animation Editor	18
Area Line Edit Options Panel	18
Bookmark Editor	18
Download Information Panel	19
Drawing Editor	20
Drawing Management Editor	21
Drawings Overview Panel	21
Drawing Toolbox	22
Flight Points Editor	22
Log Information Panel	23
Map Styles Panel	23
OSM Overview Panel	24
OSM Style Editor	24
Scene Comment Panel	25
Search Editor	25
Shape Editor	26
User Predefined Objects Panel	27
The Canvas	28
Selecting the Camera View	29
Configuring the Safe Title and Safe Area	30
Reloading the Active Map	32
Entering and Exiting Full Screen Mode	32

Changing the UI Style - Classic or Dark	33
Managing User Interface Layouts	34
Setting Up XPression Maps	36
Output Preferences	37
Map Preferences	40
Web Interface Preferences	42
Connection Preferences	45
Proxy Preferences	50
Data Option Preferences	51
Video I/O Option Preferences	54
Opening a Scene	57
Creating and Assigning Map Styles	59
About Map Types	60
About System Map Styles	65
Adding a New Map Style	66
Editing a Map Style	68
Deleting a Map Style	69
Map Style Properties	70
Main	71
Options	71
Background	72
Overlay	72
Custom Data	73
Light	74
3D	75
Color Map	76
Assigning an Animated Map Style	79
Assigning an Automatic Map Style	81
Editing OSM (OpenStreetMap) Map Styles	83
Overview of Editing OSM Map Styles	84
Editing OpenStreetMap Layers	85
Editing Individual Layer Elements on the Map	99
Showing and Hiding Information Layers	100
Real-Time Language Support	101
Adding OSM Replacement Drawings	106
Displaying Disputed Borders and Adding OSM Data	108
Exporting a Map	110

Importing Custom Maps	113
Creating a Map Data Source	114
Importing Map Data	116
Creating Levels	118
Using Custom Maps	119
Map Location and Positioning	120
Manually Adjusting the Camera View	121
Searching for a Location	122
Adjusting Camera Parameters	124
Zoom Level	125
Longitude	126
Latitude	126
Tilt	126
Roll	127
Lock	128
Bookmark Editor	129
Adding and Deleting Bookmark Folders	130
Adding and Deleting Bookmarks	131
Recalling and Editing Bookmarks	132
Saving and Loading Bookmarks	132
Managing Drawings	133
Types of Drawings	134
Opening the Drawing Management Editor	141
Organizing Drawings into Groups	142
Adding a New Group	142
Renaming a Group	143
Moving a Drawing to Another Group	143
Deleting a Group	144
Adding New Drawings to the Database	145
Creating a Copy of a Drawing	146
Renaming a Drawing	147
Deleting a Drawing	147
Modifying Drawing Properties	148
Area Drawings Properties	149
Background Drawings Properties	150
Container Drawings Properties	151
Dynamic Data Drawings Properties	152
Icon Drawings Properties	154
Inset Drawings Properties	157
Line Drawings Properties	159

Locator Drawings Properties	160
Magnifier Drawings Properties	163
Text and Replacement Drawings Properties	166
Video Input Drawings Properties	181
3D Object Drawings Properties	184
Adding Drawings	189
Adding and Editing Drawings	190
Adding and Editing Area Drawings	193
Adding and Editing Line Drawings	196
Editing Background Drawings	199
Editing Inset Drawings	200
Editing Locator Drawings	201
Editing Text Drawings	202
Creating a Landmark from a 3D Object Drawing	203
Configuring Drawing Parameters	204
Common Parameters	205
Area Drawing Parameters	208
Dynamic Data Drawing Parameters	209
Inset Drawing Parameters	210
Line Drawing Parameters	211
Locator Drawing Parameters	212
Magnifier Drawing Parameters	213
Text and Replacement Drawing Parameters	214
3D Object Drawing Parameters	215
Adding a Default Drawing to a Search Location	216
Adding a Measured Distance Text Drawing	218
Adding Drawings to an Overlay Layer	220
Adding a Copy of a Drawing	221
Replacing a Drawing	222
Setting a Drawing's Layer Order	223
Showing or Hiding Drawings	224
Deleting a Drawing from the Scene	225
Adding Shapes	226
Adding Shapes from Location Search Results	228
Adding Shapes from the Shape Database Viewer	229
Managing and Adding Custom Shapes	230
Organizing Custom Shapes into Groups	231
Importing and Deleting Custom Shapes	233
Searching for a Custom Shape	236
Editing a Custom Shape's Identifying Details	236
Adding a Custom Shape to a Scene	237

Adding and Editing Child Shapes	238
Creating and Editing Shape Styles	239
Creating a New Shape Style	240
Editing a Shape Style	243
Shape Style Properties	244
Deleting a Shape Style	248
Editing Individual Shapes within the Scene	249
Editing Shape Label Properties	253
Setting the Language of Shape Labels	255
Relocating Shapes	256
Deleting a Shape from a Scene	257
Linking Objects to a Data Source	258
Connecting XPression Maps to a DataLinq Server	259
Creating a New Data Source for XPression Maps	261
Configuring Data Sources for XPression Maps	263
Configuring Shape DataLinq Sources in Direct Value Mode	264
Configuring Shape Data Sources in Value Lookup Mode	267
Configuring Drawing Data Sources in Direct Value Mode	271
Configuring Drawing Data Sources in Value Lookup Mode	274
Configuring Data Sources for Container Drawings	279
Linking a Data Source to a Shape, Drawing or Container Drawing	284
Creating User Predefined Objects	285
Managing User Predefined Objects	286
Creating User Predefined Objects	289
Adding a User Predefined Object to a Scene	292
Creating Animations	293
Overview of the Animation Editor	294
Animation Editor - Common Tasks and Actions	296
Adding Camera Parameters Keyframes	301
Changing the Map Style During an Animation	302
Adding a Pause to an Animation	303
Adding Drawing Keyframes	304
Creating a Location and View Animation	306
Creating a Drawing Visibility Animation	307
Creating a Line Progression Animation	308
Creating a Zoom Animation	310
Creating a Shape Animation	311

Saving a Scene	312
Exporting a Scene	313
Creating and Managing Scene Templates	314
Procedural Overview for Creating Scene Templates	315
Adding and Managing Flight Points	317
Adding a Flight Point	318
Editing a Flight Point	319
Deleting a Flight Point	320
Previewing the Flight Points Animation	321
Managing Scene Templates Groups	322
Adding, Renaming, and Deleting Scene Templates Groups	323
Adding a Scene Template to a Group	325
Editing Scene Template Details	328
Deleting a Scene Template	330
Adding Location Labels to a Scene Templates Group	331
Adding Drawings to a Scene Templates Group	333
Adding Shape Styles to a Scene Template Group	335
Adding User Predefined Objects to a Scene Templates Group	337
Loading and Editing a Scene Template	342
Editing Scenes Created in the HTML5 Client	343
Creating and Managing Scenes in the HTML5 Client	345
Launching and Signing In/Out of the HTML5 Client	346
Procedural Overview for Creating or Editing Scenes	349
Opening a Scene Template	351
Opening a Scene	352
Duplicating a Scene	354
Deleting a Scene	355
Changing OpenStreetMap (OSM) Layer Settings	356
Changing the Language of a Scene	357
Modifying the Safe Title Area	358
Adding, Editing or Deleting Flight Points	359
Positioning the Map in the HTML5 Client	362
Adding, Editing and Deleting Shapes	364
Adding, Editing and Deleting Labels	366
Adding, Editing, Deleting and Ordering Drawings	371
Adding User Predefined Objects	377
Saving a Scene	378

Previewing and Downloading an Animated Map Graphic File	379
Previewing and Downloading a Still Map Graphic File	380
User Management in the HTML5 Client	381
Managing Users	382
Managing Web User Groups	385
Managing Attributes	389
Monitoring the Status of XPression Maps Servers	391
Changing your Password	394
Folder Management in the HTML5 Client	395
Managing Folders	396
Folder Access Control	399
Creating a Static Map Image File	401
Creating an Animated Map Video File	402
Recording an Animation as an AVI File	403
Recording an Animation in ffmpeg Format	405
Appendix A: Keyboard Shortcuts	407
Appendix B: Managing Network Security	410
Appendix C: Third Party Licenses	413
Assimp License	414
Earcut License	414
FFmpeg License	415
FreelImage License	418
FreeType License	423
GDAL/OGR License	426
GStreamer License	430
GTS License	436
ImageMagick License	442
Libav License	446
Noto-emoji License	454
Poly2Tri	457
ProtoZero License	458
Vector Tile License	462
Appendix D: Datasets and Map Sources	463
Appendix E: Patent-Licensed Technologies	464

Appendix F: LDAP and XPression Maps 465

Introduction

XPression Maps is available in three configuration packages to enable video content creators to build and deliver engaging and detailed map graphics for their live video productions.

- **XPression Maps Designer:** XPression Maps Designer is a stand-alone application for creating map graphics content using stylized vector-based imagery or aerial satellite imagery from Microsoft Bing Maps for Enterprise, NASA's Blue Marble Project, Microsoft Azure Maps, Mapbox and OpenStreetMap. Using the [XPression Maps Designer Workflow](#)^[6], the design, content, and delivery of map graphics is centralized to the Art department. Graphic designers use the **XPression Maps Software** to create scenes that act as templates for producing still or animated map graphics representing global, national, state, city, or street-level details. When requested, graphic artists modify the content of the templates to produce finalized map graphics and output them as still images or video files for download or integrated XPression MOS workflow tools.
- **XPression Maps Server:** XPression Maps Server centralizes map graphic design and storage, enabling teams to produce and deliver finalized map graphics. For MOS-enabled newsrooms, the [XPression Maps MOS Workflow](#)^[9] uses the **XPression Maps Software** to create scenes that act as templates for still or animated map graphics depicting anything from global views down to street-level detail. These templates are stored centrally on the **XPression Maps Server**. Through the **XPression Maps HTML5 Client**, authorized MOS newsroom users can remotely access and customize template content to quickly generate story-specific map graphics. The resulting graphics can be exported as images or videos, or directly integrated into newsroom rundowns using XPression MOS workflow tools. This MOS-specific workflow ensures that newsrooms can deliver engaging, high-quality map-based story telling while maintaining brand consistency.
- **XPression Maps Touch:** XPression Maps Touch is a licensed extension of the **XPression Maps software** that enables graphic designers to create interactive map presentation projects featuring touch-enabled elements and user-defined macros for real-time control of content and navigation. Each project can include up to ten destination scenes and one home scene, with scene transitions as cuts or animated flight paths. Scenes can be designed as still or animated maps and can incorporate graphical elements such as icons, text, and shaded regions, many of which can be dynamically updated by linking them to external data sources or macros. During a production, presenters can operate the presentation directly using an on-set touchscreen display, or using the **XPression Maps Touch Controller** application on a tablet. Alternatively, a member of the production team can control the presentation remotely using either the **XPression Maps Touch software** or the **Touch Controller** application. See [About the Interactive Workflow](#)^[10] and the **XPression Maps Touch User Guide** for more information.

About This Guide

This user guide was designed to help graphic designers navigate and use the XPression Maps software to create and deliver high-quality, detailed maps graphics for video productions.

- ★ This guide primarily focuses on the features and functionality of the XPression Maps software when using the [XPression Maps Designer](#)^[6] and [XPression Maps MOS](#)^[9] workflows. For information related to the [Interactive](#)^[10] workflow, please consult the **XPression Maps Touch User Guide**.

To get started, we recommend reading the [Introduction](#)^[1] and [XPression Maps workflows](#)^[5] sections to identify which of the three primary workflows aligns best with your creative and business needs. Once you've chosen a workflow, use the workflow's guidelines to [launch XPression Maps](#)^[11] and familiarize yourself with the features and functions of the [XPression Maps user interface](#)^[12].

- ★ XPression Maps offers two user interface themes: **Classic** and **Dark**. This user guide primarily features screenshots and images captured in **Dark** mode.

In the [Setting Up XPression Maps](#)^[36] section, you'll find guidance on configuring and personalizing the software according to your preferences. Note, however, that this guide does not cover installation or integration of XPression Maps hardware and software with the XPression graphics system. For such information, please refer to the **XPression Maps Software Installation Guide**.

Due to the unique demands of different creative and business requirements, the remaining sections of this guide outline the features and tools within XPression Maps, breaking them down into step-by-step instructions. Use these resources to learn how to build, control, and customize map scenes and templates effectively.

For any further operational questions, please contact us at the numbers listed in [Contacting Technical Support](#)^[4]. Our technical team is always available for consultations, training, and support.

Documentation Conventions

Special text formats are used in this guide to identify parts of the user interface, text that a user must enter, or a sequence of menus and sub-menus that must be followed to reach a particular command.

Bold text Bold text identifies a user interface element such as a dialog box, menu item, or button.

For example:

In the **Slug** column, type a slug name for the story.

Italic text Italic text is used to identify the titles of referenced guides, manuals, or documents.

For example:

For more information, refer to the *DashBoard User Guide*.

`Courier text` Courier text identifies text that a user must type.

For example:

In the **Username** box, type `postgres`.

Menu Sequences Menu arrows are used in procedures to identify a sequence of menu items that you must follow.

For example:

If a step reads **Server > Save As**, you would select the **Server** menu and then select **Save As**.

[Hypertext](#) Identifies a hyperlink to a related topic.

Getting Help

XPression Maps documentation is available online at [Product Documentation](#) and is also accessible on the product USB key and by selecting the **Help** icon in the user interface.

Contacting Technical Support

At Ross Video, we take pride in the quality of our products, but if problems occur, help is as close as the nearest telephone.

Our 24-hour Hot Line service ensures you have access to technical expertise around the clock. After-sales service and technical support is provided directly by Ross Video personnel. During business hours (Eastern Time), technical support personnel are available by telephone. After hours and on weekends, a direct emergency technical support phone line is available. If the technical support person who is on call does not answer this line immediately, a voice message can be left and the call will be returned shortly. This team of highly trained staff is available to react to any problem and to do whatever is necessary to ensure customer satisfaction.

Technical Support:

- 1-844-652-0645 (North America)
- +800 3540 3545 (International)
- After Hours Emergency: (+1) 613-349-0006
- E-mail: techsupport@rossvideo.com
- Website: <http://www.rossvideo.com>

XPression Maps Workflows

XPression Maps is available in three package configurations tailored to different production use cases. Each configuration supports unique workflows for creating, storing, and delivering map graphics and presentations.

The following topics are discussed in this section:

[About the XPression Maps Designer Workflow](#) 

[About the XPression Maps MOS Workflow](#) 

[About the Interactive Workflow](#) 

About the XPression Maps Designer Workflow

The **XPression Maps Designer Workflow** centralizes the design, content, and delivery of map graphics. Graphic designers use the **XPression Maps software** to create scenes that act as templates for producing still or animated map graphics representing global, national, state, city, or street-level details. When requested, graphic artists modify the content of the templates to produce finalized map graphics and output them as still images or video files for download or integrated with XPression MOS workflow tools.

Given the versatility of XPression Maps software and the distinct nature of your creative and business requirements, defining a standard usage procedure can be challenging. However, the following topics provide a basic framework for creating and delivering map graphics using the full-service workflow. Use the links for detailed guidance, or contact a Ross Video representative for further support.

[Creating a Still Image Map Scene](#)  6

[Creating an Animated Map Scene](#)  7

Creating a Still Image Map Scene

The following procedure outlines how to create map scenes that can either be output as a finalized still image file, or saved as a reusable still image template.

To create a still map scene as a reusable template or output as a finalized image file:

1. Launch XPression Maps and open a new or existing scene.
 - [Launching XPression Maps](#)  11
 - [Opening a Scene](#)  57
2. Select a map style.

If the current selection of map styles does not meet your needs, edit or create a new map style.

 - [Editing Map Styles](#)  68
3. Position the map on the **Canvas** to display the location and camera view required.
 - [Determining Map Location and Positioning](#)  120
4. (Optional) Add drawings, shapes, and other objects to the scene.
 - [Types of Drawings](#)  134
 - [Adding and Configuring Drawings](#)  189
 - [Adding and Configuring Shapes](#)  226
 - [Adding a Measured Distance Text Drawing](#)  218
5. (Optional) Link a data source to a shape or drawing that has been added to the scene.
 - [Linking Data Sources to Shapes, Drawings and Container Drawings](#)  258
6. (Optional) Add an overlay layer to the scene to display persistent drawings.
 - [Adding Drawings to an Overlay Layer](#)  220

7. Save the changes to the scene.

The saved scene can also be used later as a template for creating customized versions of the scene.

➤ [Saving a Scene](#)^[312]

8. Create an image file (.jpg, .png or .tga) of the map scene.

➤ [Creating a Static Map Image File](#)^[401]

Creating an Animated Map Scene

The following procedure outlines how to create map scene animations that can be saved as a video file or as single-frame still images. Alternatively, the map scene can be designed and saved as a reusable template, allowing for the creation of customized versions with story-specific content and behaviors.

To create an animated map scene as a reusable template or output as a finalized video or still image file:

1. Launch XPression Maps and open a new or existing scene.

➤ [Launching XPression Maps](#)^[11]

➤ [Opening a Scene](#)^[57]

2. In the **Animation Editor**, set the duration for the animation.

➤ [Setting the Animation Duration](#)^[296]

3. Add a first camera Key Frame to establish the initial camera view and map style.

If the current selection of map styles does not meet your needs, edit or create a new map style.

➤ [Adding Camera Parameters Key Frames](#)^[301]

➤ [Assigning an Animated Map Style](#)^[79]

➤ [Editing Map Styles](#)^[68]

4. Add additional camera Key Frames to create flights and effects, or to change the map style during the animation.

➤ [Adding Camera Parameters Key Frames](#)^[301]

➤ [Assigning an Animated Map Style](#)^[79]

5. Add drawings, shapes, and other objects to the scene.

➤ [Types of Drawings](#)^[134]

➤ [Adding and Configuring Drawings](#)^[189]

➤ [Adding and Configuring Shapes](#)^[226]

➤ [Adding a Measured Distance Text Drawing](#)^[218]

6. If you want to animate the object's behavior, like visibility, scale or progress, then add drawing Key Frames that change the object's properties at different frames along the animation timeline.

➤ [Adding Drawing Key Frames](#)^[304]

7. Link a data source to a shape or drawing that has been added to the scene.

➤ [Linking Data Sources to Shapes, Drawings and Container Drawings](#)^[258]

8. Add a pause to the animation.

➤ [Adding a Pause to an Animation](#)^[303]

9. Add an overlay layer to the scene to display persistent drawings.

➤ [Adding Drawings to an Overlay Layer](#)^[220]

10. Save the changes to the scene.

The saved scene can also be used later as a template for creating customized versions of the scene.

➤ [Saving a Scene](#)^[312]

11. Preview the playback of the animation.

➤ [Previewing Animation Playback](#)^[300]

12. Create a video file of the animation or an image file of a specific frame in the animation.

➤ [Creating an Animated Map Video](#)^[402]

➤ [Creating a Static Map Image File](#)^[401]

About the XPression Maps MOS Workflow

The **XPression Maps MOS Workflow** centralizes map graphic design and storage, while allowing multiple users to remotely produce and deliver finalized map graphics for download or integration with XPression MOS workflow tools.

The workflow begins with graphic designers in the Art department using the **XPression Maps software** to create map scene templates. The scene templates lock down design elements by assigning a map style and an initial camera view. If the scene template is intended to be used to create animated map graphics, then it may also include one or more flight points to produce an initial flight animation. The scene templates are then organized into template groups, where designers can again control design standards by adding pre-approved location labels, drawings, shape styles, and user predefined objects for use with the scene templates in the group. The scene templates are centrally stored on an **XPression Maps server** where authorized MOS newsroom users can remotely access them through the **XPression Maps HTML5 Client**.

When newsroom users need to create a story-specific still map graphic, they can load a scene template in the **XPression Maps HTML5 Client** and complete the scene by positioning the map to a specific camera view and adding objects from the template group. Or, they can create a story-specific animated map graphic by editing, adding or removing flight points, as well as adding objects from the template group. The modified scenes are stored in the system and can be output as image or video files that can be downloaded or integrated with XPression MOS workflow tools.

The following sections provide information about creating scene templates and scenes:

- [Creating and Managing Scene Templates](#)^[314] - Discusses how graphic designers use the **XPression Maps software** to create and store scene templates that define the map style, flight points, and pre-approved objects for still or animated map graphics.
- [Creating and Managing Scenes in the HTML5 Client](#)^[345] - Discusses how MOS newsroom users load and edit scene templates in the **XPression Maps HTML5 Client** to create scenes that produce story-specific still or animated map graphics, which can be rendered and downloaded as image files, video files, or transferred for integration with a MOS News graphics system.

About the Interactive Workflow

The **XPression Maps Interactive Workflow** enables graphic designers to create projects to produce interactive map presentations featuring touch-enabled elements, user-defined macros, and dynamic data sourcing for real-time control of content and navigation.

The workflow begins in the Art Department, where graphic designers use the **XPression Maps Touch** software in **Interactive Mode** to build an interactive map project. This involves designing the following scene types:

- **Main Overlay Scene** – A persistent, transparent top-layer scene that includes touch-enabled controls linked to user-defined macros. These controls typically allow presenters to navigate the presentation (e.g., return to the Home Position), adjust visual settings (e.g., zoom level), or toggle tools and features (e.g., telestration). This scene may also include branding graphics that remain visible throughout the presentation.
- **Home Position Scene** – A predefined starting or reset scene that applies an animated flight transition to return the map to a specific reference location. This provides a consistent entry point for the presentation.
- **Destination Scenes** – Up to ten destination scenes can be created with scene transitions animated as cuts or flight paths. These scenes can be designed as still or animated maps and can incorporate graphical elements such as icons, labels, and shaded regions, many of which can be dynamically updated by linking them to external data sources or macros.

During a production, the presentation can be operated directly by the presenter using an on-set touchscreen display or a tablet running the **XPression Maps Touch Controller** application. Alternatively, a member of the production team can manage the presentation remotely using the **Touch Controller** application.

Since the XPression Maps **interactive workflow** introduces specialized tools, concepts, and procedures for creating and controlling interactive map presentations, we recommend referring to the **XPression Maps Touch User Guide** for detailed instructions and best practices.

Launching XPression Maps

To launch XPression Maps, double-click on the XPression Maps desktop icon  or right-click on the XPression Maps desktop icon and select **Open**.

- ★ By default, the last loaded layout appears when you launch XPression Maps.

XPression Maps User Interface

The XPression Maps user interface offers intuitive access to all of the software's features and functions. Key elements include menus, toolbars, and the **Canvas**, along with various dialogs and floating windows for tools and editors that support building and managing map scenes and animations.

★ XPression Maps offers two user interface themes: **Classic** and **Dark**. This user guide primarily features screenshots and images captured in **Dark** mode. For instructions on switching between UI styles, refer to [Changing the UI Style - Classic or Dark](#)^[33].

While XPression Maps provides a default interface layout, you can customize it to fit your workflow by showing, hiding, and rearranging elements as needed. Your personalized layout can then be saved and used as your preferred interface setup.

The following topics describe the main elements of the XPression Maps user interface:

[Overview of the User Interface](#)^[13]

[Menus](#)^[14]

[Toolbars](#)^[15]

[Editors and Panels](#)^[17]

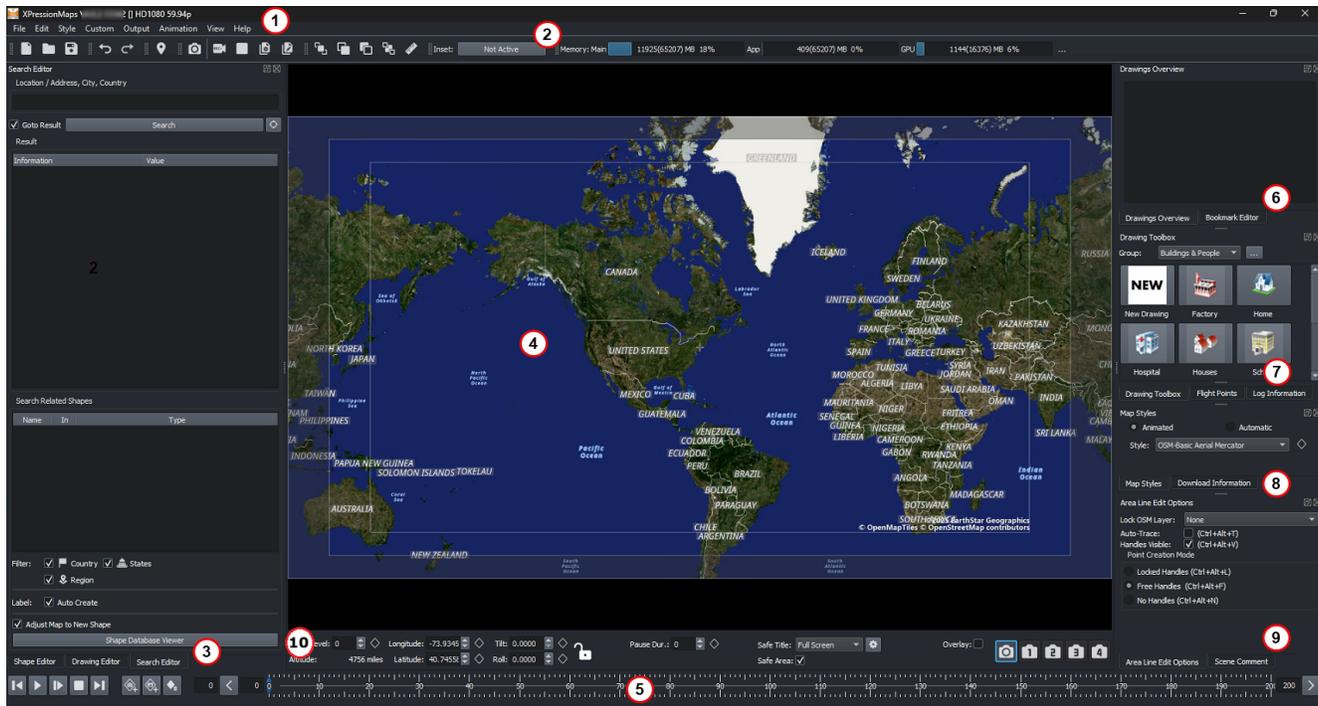
[The Canvas](#)^[28]

[Changing the UI Style - Classic or Dark](#)^[33]

[Managing User Interface Layouts](#)^[34]

Overview of the User Interface

The following screen capture displays the main elements of the XPression Maps user interface. Descriptions of individual elements are contained in the table below the diagram, and elaborated upon in separate topics below.



XPression Maps User Interface

1. Menus: Used to access the File, Edit, Style, Custom, Output, Animation, Interactive, View and Help menus.	2. Toolbar: Used to access XPression Maps tools and some operational functions.
3. Shape Editor, Drawing Editor and Search Editor: Used to create shapes, edit drawings, and search for map locations.	4. Canvas: Acts as the main workspace/canvas and displays the map scene for output. Also includes controls for selecting and configuring the camera view.
5. Animation Editor: Used to build and control map scene animations.	6. Drawings Overview, Bookmark Editor: Used to organize, and edit drawings in a map scene, and create bookmarks.
7. Drawing Toolbox, User Predefined Objects, OSM (OpenStreetMap) Style Editor, Flight Points and Log Information: Used to customize OpenStreetMaps, create, edit and add drawings and flight points and to view log information.	8. Map Styles and Download Information: Used to select map styles and view map download information.
9. Scene Comments and Area Line Edit Options: Used to add a description or usage instructions for the scene. Used to lock OSM Layers to OSM Map Styles.	10. Camera Control Editor: Provides access to camera parameters, overlay parameters, and the Safe Area setting.

Menus

The menus in XPression Maps are organized by function, providing access to a wide range of features and tools within the application. As with many software programs, there are multiple ways to access a particular tool or function in XPression Maps—whether through menu commands, toolbar buttons, or keyboard shortcuts.

The following summarizes the primary functions of each menu:

- **File**

The **File** menu contains options for opening new or existing scenes or interactive project files on the **Canvas**, as well as exporting or saving these files. It also includes the **Preferences** option, which allows you to configure the application's output, data, connectivity, and other operational settings.

- **Edit**

The **Edit** menu gathers many of the standard editing tasks like undo/redo the most recent changes, copy/cut/paste or arranging drawings and editing tasks like adding, deleting and moving from one Key Frame to another. The **DataLinq Setup** option allows you to add data sources and configure how data is displayed on the scene. The **Edit** menu also includes options for reloading the active map and selecting disputed borders.

- **Style**

The **Style** menu provides access to tools used for managing the map styles and shape styles and overwriting scene properties.

- **Custom**

The **Custom** menu provides access to editors that allow you to import and manage a limited set of asset files to be used as a custom area, line shapes, or map data.

- **Output**

The **Output** menu offers several options for creating and managing the output of your map scenes including creating a still image file or an animated clip file. Additionally, the **Export Map** option allows you to export the map scene file to another system. If you are creating scene templates and scenes for the server workflow, the **Manage Templates** and **Edit Saved Templates** options allow you to manage the scenes and templates used in the **XPression Maps HTML5 Client** application.

- **Animation**

The **Animation** menu contains the playback controls for previewing and playing map animations on **Canvas**.

- **Interactive**

The **Interactive** menu only appears when XPression Maps is running in **Interactive Mode**. It contains options to switch to the project's overlay layer, home position scene and destination scenes when designing an interactive project. Other options allow you to edit your projects, manage your interactive scenes, or execute a project for presentation.

When XPression Maps is running in **Interactive Mode**, the **File** menu includes options to create, load, and save Interactive projects.

- **View**

The **View** menu contains options for changing the **Canvas** to fullscreen mode and for showing or hiding the various editors, controls and toolbars. You can also reset the XPression Maps User Interface to its default screen.

- **Help**

The **Help** menu contains the **About** screen which provides version, copyright and licensing information for the XPression Maps application.

Toolbars

The toolbars in XPression Maps are grouped by function, providing quick access to frequently used features and tools for building and controlling map scenes and interactive projects. By default, the toolbars are docked at the top of the interface, but you can also drag them out to create floating toolbars. You can control which toolbars are visible by right-clicking the upper toolbar panel and selecting or deselecting options in the context menu, or by using the **View** menu options. See [Showing or Hiding an Editor, Control, or Toolbar](#)^[34] for more information.

The following list summarizes the primary functions of each toolbar and its buttons:

- **File Toolbar**

The **File** toolbar contains buttons for creating a new scene or loading an existing scene file onto the **Canvas**. The **Save** button allows you to save the latest changes made to the scene currently loaded on the **Canvas**.



File Toolbar - New, Open Scene, Save

- **Edit Toolbar**

The **Edit** toolbar contains buttons for undoing and redoing the most recent changes.



Edit Toolbar - Undo, Redo

- **Map Styles Toolbar**

The **Map Styles** toolbar contains a single button that opens the **Map Style Manager**, which is used for managing the system's map styles, as well as editing the properties of map styles.



Map Styles Toolbar - Map Styles

- **Output Toolbar**

The first three buttons in the **Output** toolbar are used to create an output file of the scene as either a still image or an animated clip file. The last two buttons are used to manage and edit the scenes and templates that are used in the XPression Maps HTML5 Client application.



Output Toolbar - Snapshot, Record Animation, Stop Animation Recording, Manage Templates, Edit Saved Templates

- **Drawing Layer Toolbar**

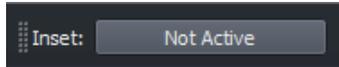
The **Drawing Layer** toolbar contains buttons for arranging drawings on the various layers of the map scene. The last button opens the **Measurement Tool**, which allows you to calculate the distance between two points on the map, as well as add a measurement (text and circumference) drawing.



Drawing Layer Toolbar - Move Drawing To Top, Move Drawing Up, Move Drawing Down, Move Drawing To Bottom, Measurement Tool

- **Inset Toolbar**

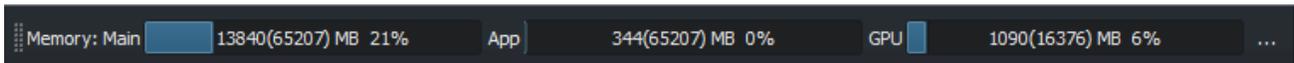
The **Inset** toolbar displays **Not Active** until an inset drawing is selected on the scene's **Canvas**. Once the Inset drawing is selected, the control allows you to toggle between **Enter Full Screen** or **Leave Full Screen** to either display the scene's main map or the inset's map.



Inset Layer Toolbar - Inset > Not Active, Enter Fullscreen, Leave Fullscreen

- **System Status Toolbar**

The **System Status** toolbar displays progress bars for tracking the computer's main, GPU and App memory usage. Selecting the **Browse** button opens the **Memory Information** dialog, which allows you to enable and configure a memory log file.



System Status Toolbar - Memory > Main, App, GPU, Browse

- **Interactive Toolbar**

The **Interactive** toolbar only appears when XPression Maps is running in **Interactive** mode. This toolbar provides you with a quick way to switch to the project's overlay layer, home position scene and destination scenes when designing an interactive project. It also provides a means to manage your interactive scenes and execute a project for presentation.



Interactive Toolbar - Manage Interactive Scenes, Execute, Main Overlay, Home Position, Scenes 1 - 10

Editors and Panels

By default, many of the tools and editors required for building and controlling map scenes and animations are arranged around the **Canvas**. These include dialogs and windows that can be shown or hidden, and can be docked or left floating within the layout to suit your workflow and preferences. See [Managing Layouts](#) ^[34] for more information.

The following sections summarize the location and primary functions of the main editors or panels that normally surround the **Canvas**:

[Animation Editor](#) ^[18]

[Area Line Edit Options Panel](#) ^[18]

[Bookmark Editor](#) ^[18]

[Download Information Panel](#) ^[19]

[Drawing Editor](#) ^[20]

[Drawing Management Editor](#) ^[21]

[Drawings Overview Panel](#) ^[21]

[Drawing Toolbox](#) ^[22]

[Flight Points Editor](#) ^[22]

[Log Information Panel](#) ^[23]

[Map Styles Panel](#) ^[23]

[OSM Overview Panel](#) ^[24]

[OSM Style Editor](#) ^[24]

[Scene Comment Panel](#) ^[25]

[Search Editor](#) ^[25]

[Shape Editor](#) ^[26]

[User Predefined Objects Panel](#) ^[27]

Animation Editor

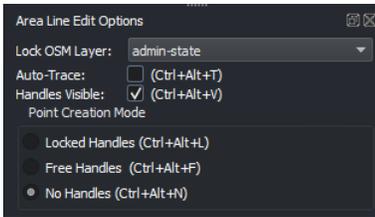
The **Animation Editor** is located below the **Canvas**. It allows you to create and control map animations. Map animations are created by adding camera and drawing Key Frames to the timeline to change the elements and properties of the map. When the animation is played back, the transition between the state of the properties creates the animation effects, like location or zoom flights, transitions from one map style to another, or the appearance and disappearance of drawings. See [Creating Animations](#)^[293] for more information.



Animation Editor

Area Line Edit Options Panel

The **Area Line Edit Options** panel is usually located beside the lower-right corner of the **Canvas**. When adding a drawing to a scene, you adjust its shape by dragging its handles and borders. Before adding a drawing to the scene, use the **Area Line Edit Options** panel to set options that determine how you can manipulate the drawing's shape and position on the map. See [Adding and Editing Area Drawings](#)^[193] and [Adding and Editing Line Drawings](#)^[196] for more information.

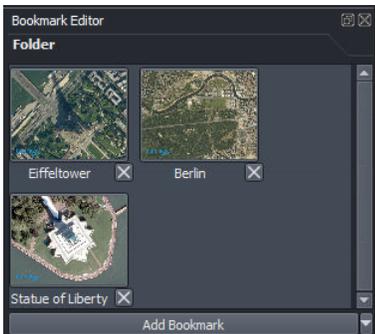


Area Line Edit Options Panel

Bookmark Editor

The **Bookmark Editor** is usually located to the upper-right of the **Canvas**. It allows you to save map positions as presets and organize them in folders for the easy recall of commonly used locations. See [Recalling a Bookmarked Location](#)^[129] for more information.

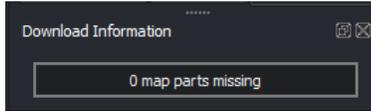
Bookmarks can also be used to add a pause to a flight when creating a scene template animation.



Bookmark Editor

Download Information Panel

The **Download Information** panel is usually located to the right of the **Canvas**. It displays the map download activity.



Download Information Panel

Map requests are scheduled for download and up to 30 map downloads can be active at the same time. The progress bar in the panel displays how many map parts remain to be downloaded. The progress bar can display the following colors:

Green — low load

Orange — all download links in use

Red — high load

Values higher than 100 on the progress bar can result when you play a camera animation for the first time, when the quality of the map has a value greater than 0, or when the globe is tilted to a small viewing angle.

★ Zooming in from the satellite view to the street level view of a city will go through many map zoom levels and all visible map parts need to be downloaded first.

Drawing Editor

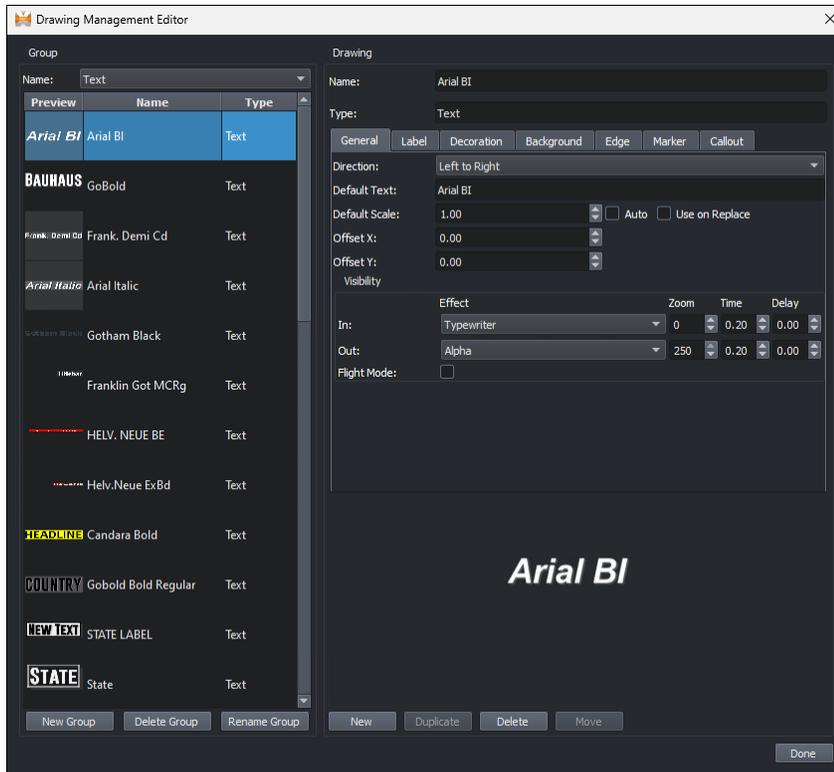
The **Drawing Editor** is usually located to the left of the **Canvas**. It allows you to modify the parameters of a selected drawing that has been added to the scene on the **Canvas**. If a parameter is greyed out, it doesn't apply to the selected drawing. See [Configuring Drawing Parameters](#) for more information.



Drawing Editor

Drawing Management Editor

The **Drawing Management Editor** shown below, is a pop-up menu that is accessed through the **Edit** menu or by selecting the button adjacent to the **Drawing Tools Group** selector pull-down menu. Unlike a docked panel, this editor opens as a separate window when invoked. It is used to select, modify and manage drawings. You can also create new drawing assets and organize them into groups for convenient recall in the **Drawing Toolbox**. See [Managing Drawings](#)^[133] for more information.

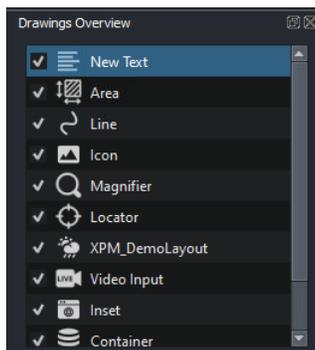


Drawing Management Editor

Drawings Overview Panel

The **Drawings Overview** panel contains any drawings that have been added to a scene. Each drawing is listed with an icon that identifies which group it belongs to. See images below. Using the checkboxes and context menu options in the **Drawings Overview** panel, you can show/hide the drawing in the scene, as well as delete drawings from the scene. See [Showing or Hiding Drawings](#)^[224] and [Deleting a Drawing from the Scene](#)^[225] for more information.

You can also change the name of a drawing that's been added to the scene. See [Renaming a Drawing](#)^[147] for more information.

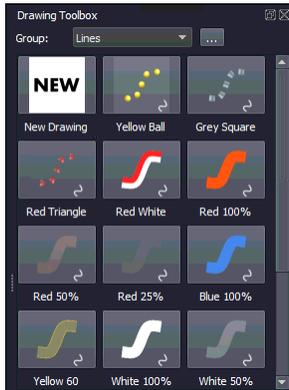


Drawings Overview Panel

Drawing Toolbox

Use the **Drawing Toolbox** located to the right of the **Canvas**, to add drawings from the database to a scene, to create a new drawing or to edit an existing drawing. See [Adding and Configuring Drawings](#)^[188] for information on the setup and management of drawings.

You can also use the **Drawing Toolbox** to designate a drawing as a default drawing, to be used whenever drawings are generated automatically. It also allows you to quickly add that default text, icon or dynamic data drawing to a search location using the Search Editor's Add To Map options. See [Adding a Default Drawing to a Search Location](#)^[216] for more information.

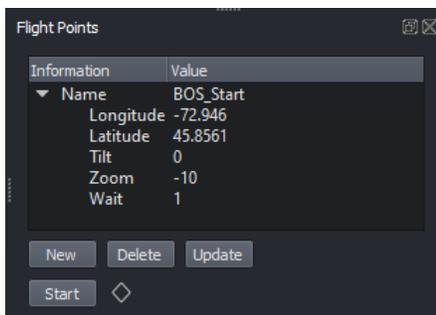


Drawing Toolbox

Flight Points Editor

The **Flight Points Editor** is usually located to the right of the **Canvas** and it is only used as part of the XPression Maps Server workflow. It allows you to create a flight animation in a scene template in which the map moves from one location to another, by adding a starting flight point. When the scene template is opened in the XPression Maps **HTML5 Client**, additional destination flight points can be added according to the story requirements. Refer to the **XPression Maps Server User Guide** for more information.

★ These flight animations are not recorded on the Animation Editor's timeline in a regular scene animation.



Flight Points Editor

Log Information Panel

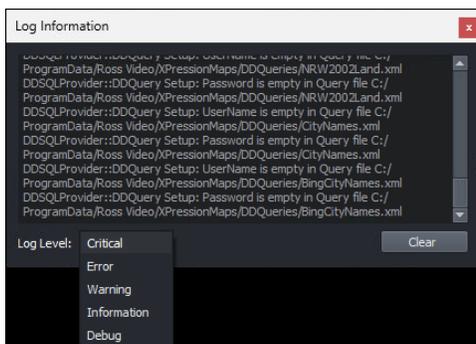
The **Log Information** panel displays information based on the **Log Level** selected in [Preferences > Output](#)³⁷.

To filter the level of information displayed, select from the **Log Level** drop-down the level of information you want to see generated.

The options are:

- **Critical** - Logs activity that could result in unpredictable behavior.
- **Error (Default)** - Logs errors only.
- **Warning** - Logs unsuccessful operations.
- **Information** - For internal use only, for technical support.
- **Debug** - For internal use only, for technical support.

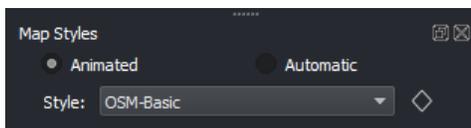
Select the **Clear** button to clear the log information when the information is no longer needed.



Log Information Panel

Map Styles Panel

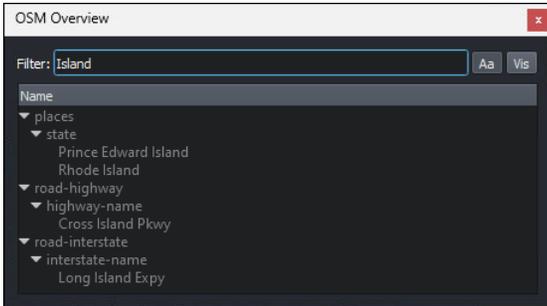
The **Map Styles** panel is usually located in the lower-right of the **Canvas**. It allows you to select and assign a map style to a scene from a list of system or customized map styles. Use the controls in this panel to determine if the scene's map style assignment is either **animated** (changes at specific set points during the map animation's playback), or **automatic** (changes at specific map zoom layers). See [Managing and Assigning Map Styles](#)⁵⁹ for more information.



Map Styles Panel

OSM Overview Panel

The **OSM Overview** panel lists all OSM elements currently visible on the **Canvas**. You can browse the entries using the tree structure or refine your results with the **Filter** field. Use the **Aa** button to toggle case-sensitive filtering, and the **Vis** button to choose whether filtering applies only to elements visible in the current map view or to all OSM data loaded in the scene. Selecting an entry automatically centers the map on that location, and the panel is updated with the corresponding values.



OSM Overview Panel

OSM Style Editor

The **OSM Style Editor** allows you to customize scenes that use OpenStreetMaps as the map style.

Use the **OSM Style Editor** shown below, to change the background color of an OSM map, as well as the visibility, colors, parameters and labels of the layers of the selected map or its overlay. The elements are grouped into categories to make them easier to find. See [Editing OpenStreet Maps](#) for more information.

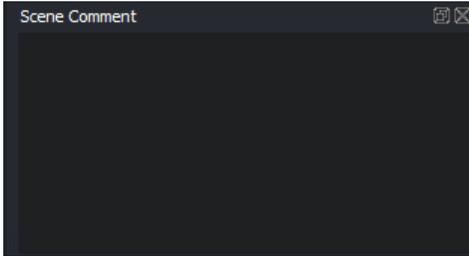
You can also convert the language used for the labels.



OSM Style Editor

Scene Comment Panel

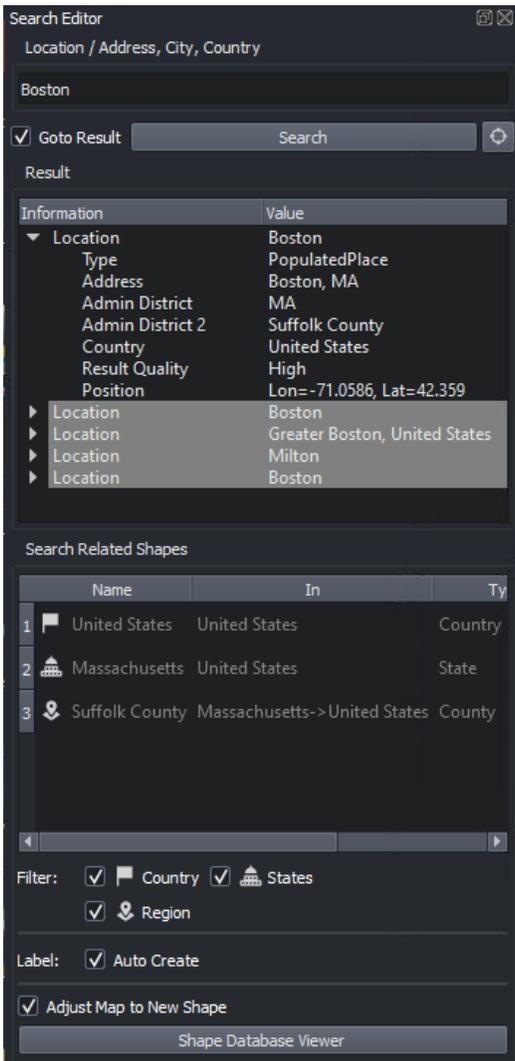
The **Scene Comment** panel allows you to enter a text that is saved with the scene file. This can be used to provide other users with a description of the scene or usage instructions.



Scene Comment Panel

Search Editor

The **Search Editor** allows you to find maps of locations throughout the world by searching for addresses, cities, countries and even prominent buildings. See [Searching for a Location](#)¹²². You can also add default names, addresses, icons or dynamic data drawings to the scene and add a shape layer to the country, state, or region identified in the search results. See [Adding a Default Drawing to a Search Location](#)²¹⁶ and [Adding and Configuring Shapes](#)²²⁶.



Search Editor

Shape Editor

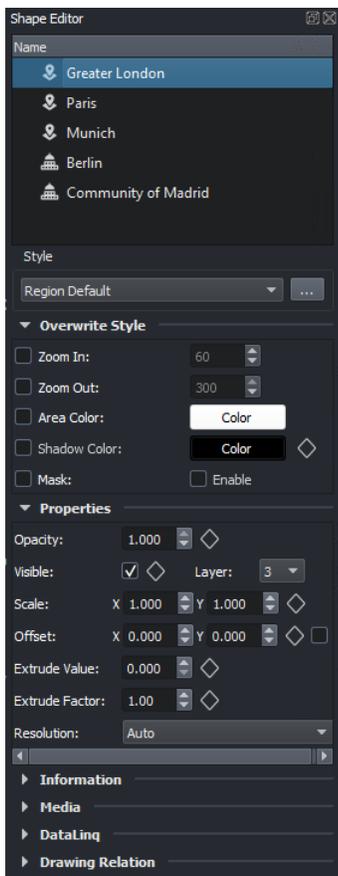
XPression Maps comes with a library of national and interstate borders from around the world, allowing you to fill in one or more countries, states or regions with color for greater emphasis. The **Shape Editor** displays a list of all the shapes that have been added to the current scene. Use the **Shape Editor** to modify the parameters of the shapes. See [Adding and Configuring Shapes](#) ²²⁶ for more information.

The upper portion of the **Shape Editor** displays a list of all the shapes that have been added to the current scene. Icons indicate if the shape is a country (🇺🇸), a state (🏛️), or a region (📍). Each shape is on its own layer and the order of the list corresponds to the order of the layers, where the first line is the back (or bottom) layer and the last line is the front (or top) layer. You can rearrange the list by dragging and dropping shapes from one position to another, however children shapes can not be rearranged.

Right-clicking on a shape in the list displays the following menu options:

- **Go to Shape on Map** — Adjusts the view of the camera so that the shape is centered on the **Canvas**.
- **Load Children** — Loads the children shapes (states or regions) of a country or state shape that has already been added to the map.
- **Delete** — Deletes the selected shape from the current scene.

The fields below the shape list allow you to change the appearance of an individual shape by applying a different predefined style to the shape or overwrite certain parameters, like color, opacity, or visibility. You can also use these fields to change the appearance or behavior of the shape during an animation, link the shape to a dynamic data source, or react to an interactive event.



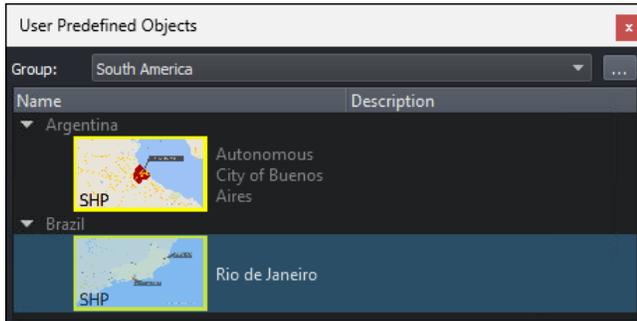
Shape Editor

User Predefined Objects Panel

The **User Predefined Objects** panel is used in the creation, management, and use of user predefined objects — custom, reusable map objects that combine shapes with additional drawings—such as areas, icons, lines, and text into a single object that can easily be added to a scene.

This tool is also used to create Disputed Border alterations, which allows you to represent sensitive or contested boundaries on a map.

For more information, see [Creating User Predefined Objects](#)²⁸⁵.



User Predefined Objects Panel

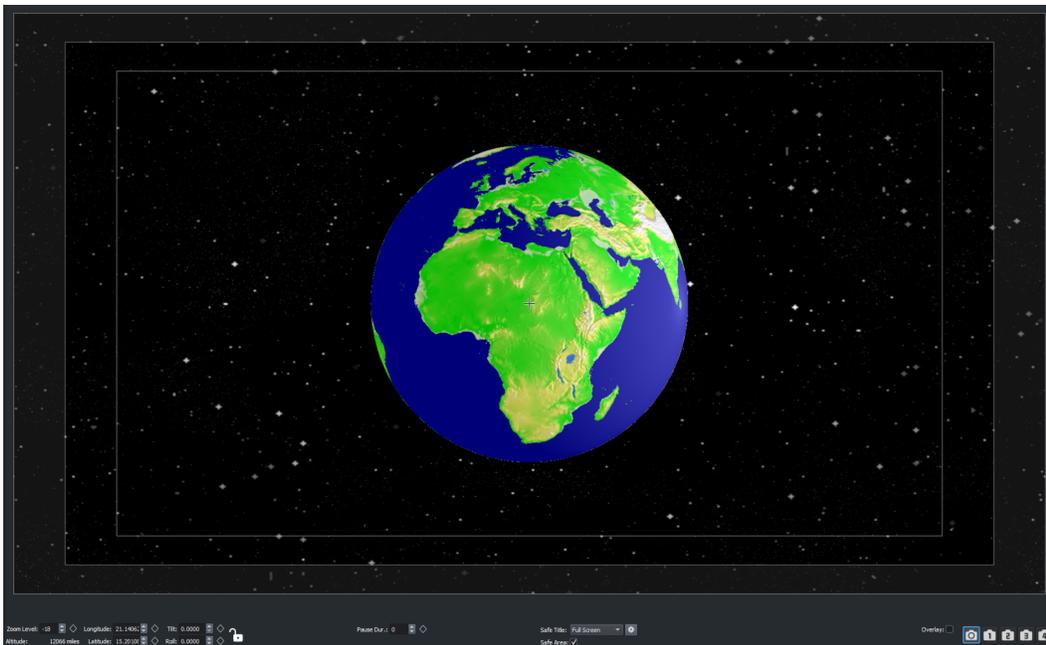
The Canvas

The **Canvas** is located at the center of the XPression Maps user interface and acts as the workspace in which to build and preview the playback of map scenes.

On the **Canvas**, you can:

- move and zoom into any location of the world using the mouse, camera parameters, or by entering a location in the **Search Editor**. See [Determining Map Location and Positioning](#)^[120] for more information.
- add various drawings, shapes, and user predefined objects to the scene.
- preview and control the playback of animated map scenes. See [Creating Animations](#)^[293] for more information.

★ The perspective of what is seen on the **Canvas** is often called the **camera view**, as it represents the point of view of what will be recorded or seen on air. Similarly, the camera parameters (described below) define the geographical location, view angle and depth of the camera view displayed on the **Canvas**.



The Canvas

★ The first time you launch the application, the **Canvas** displays the world globe at a random location. Subsequently, when you launch the application, the map opens and displays the map style and location that was being used when the application was last closed.

The following controls appear below the **Canvas**:



- **Camera Parameters** - Displays and allows you to adjust the current values for the camera parameters (**Zoom Level**, **Longitude**, **Latitude**, **Tilt**, **Roll**, and **Pause Duration**). Also, allows you to add camera Key Frames to the scene's animation timeline based on individual camera parameter settings. The **Lock** button prevents both the parameters and the **Canvas** from being modified or moved. See [Adjusting Camera Parameters](#)^[124] and [Adding Camera Parameters Key Frames](#)^[301] for more information.
- **Safe Title** and **Safe Area** - Configures the **Canvas's** boundary frames which ensure that all the map scene's location, drawings and information remain inside the area that visible on air. See [Configuring the Safe Title and Safe Area](#)^[30] for more information.

- **Camera Selection** and **Overlay** - Selects which of the five available camera views or overlay layer is active and displayed in the **Canvas**. See [Selecting the Camera View](#) ^[29] for more information.

Other tasks related to the **Canvas** are:

[Reloading the Active Map](#) ^[32]

[Entering and Exiting Full Screen Mode](#) ^[32]

Selecting the Camera View

In the camera selection area you can switch between five different camera views: **View Camera**, **Work Camera 1**, **Work Camera 2**, **Work Camera 3** and **Work Camera 4**. The selected camera view is indicated by a red outline.



Camera Selection

View Camera displays what will be recorded. You can enable the **Overlay Layer** only when this camera is selected.

The other four camera views are the working cameras. These camera views can be used to store other views during editing. For example, if you want to extend an animation to cover a wider area than can be seen in the **View Camera**, you can do that in a **Work Camera**. Key Frames used to animate the scene are added in the **View Camera**. The **Camera Key Frame** button is disabled when a **Work Camera** is selected. Only the view in the working camera is copied to the **View Camera**, not objects added in the **Work Camera**.

To set a specific camera view:

1. Select one of the **Work Cameras**.
2. Move the map to the location you want to display in that camera view.
3. Add drawings to the scene if required or extend a line animation.

The scene will be saved in the selected **Work Camera** and can be copied to the **View Camera** when needed.

When you save the scene, any **Work Camera** views are saved as well.

To switch to a different camera view:

- Select the corresponding button.

To copy a camera view:

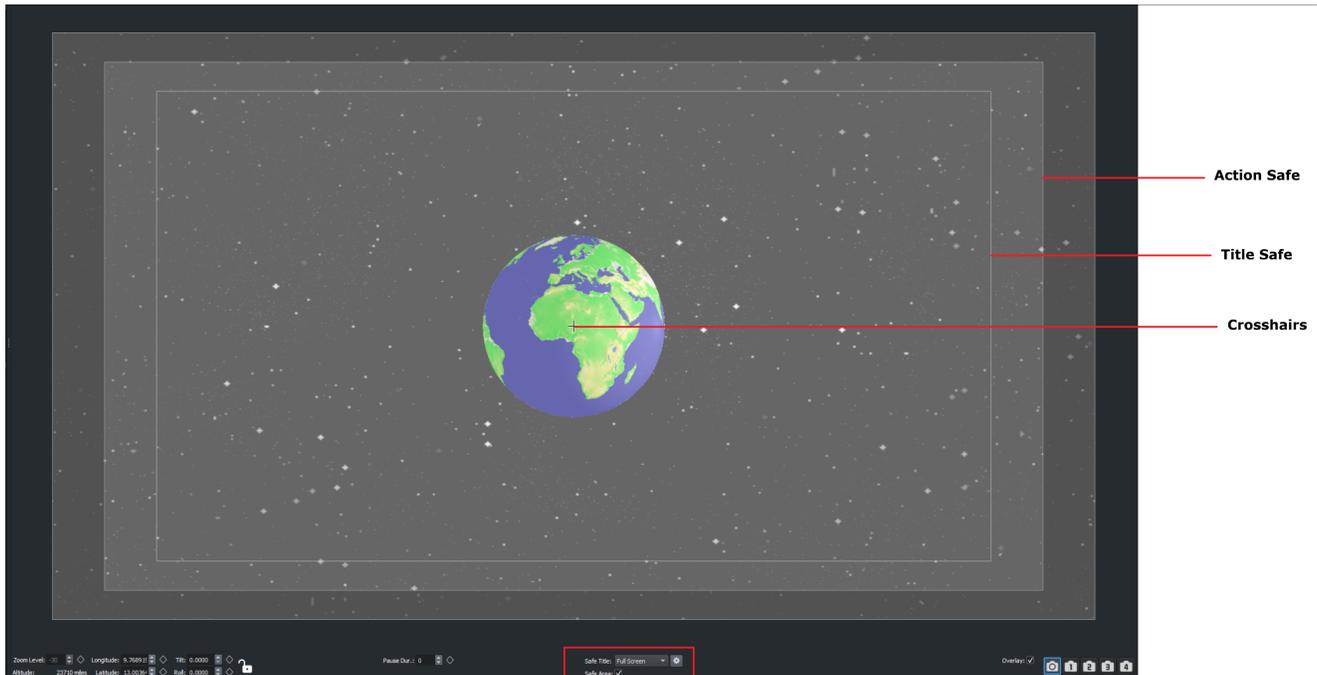
- Drag and drop one camera view button to another camera.

The destination camera becomes the active camera and has the same view as the source camera. This is useful if you want to save the current camera view before making changes.

Configuring the Safe Title and Safe Area

The **Safe Title** settings allow you to configure the position of the safe area, map attribution and logo on **Canvas**.

The **Safe Area** is the area within the **Canvas** borders defined by the white rectangles. Keep all your drawings and information inside this area for full visibility on air. Also, when **Action Safe** is selected, the center of the **Canvas** is marked with crosshairs. This is a useful tool for centering the area of interest in the scene.

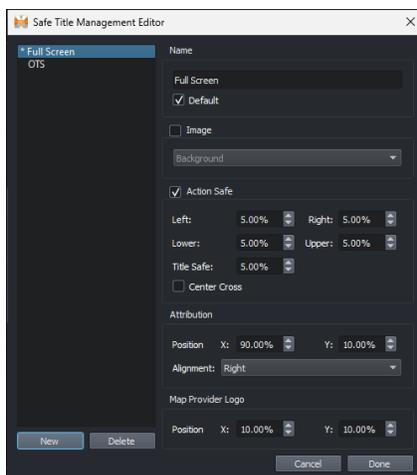


Safe Title / Safe Area

To configure the Safe Title / Safe Area:

1. Select the **Settings** icon  beside the **Safe Title** drop-down.

The **Safe Title Management Editor** opens.



Safe Title Management Editor

2. Select **New** to set up a new configuration.
3. In the **Name** field, enter a name for the new configuration.

The default safe title, *Full Screen* is applied automatically when new scenes are created.
4. Select the **Image** checkbox to choose a saved background image from the **Image** drop down.

For more information on importing images refer to [Managing Drawings](#)¹³³.
5. In the **Action Safe** section, use the arrows or enter a value in the **Left**, **Right**, **Lower** and **Upper** fields to adjust the size of the outer rectangle.

Entering values of 0.00 in all these fields will make the entire **Canvas** a safe area.
6. In the **Title Safe** field, use the arrows or enter a value to adjust the size of the inner rectangle (the inner rectangle in the image above).

The map provider logo and attribution text can only be positioned within the **Title Safe** area.
7. The **Center Cross** checkbox relocates the scene's center to the middle of the **Safe Area**. This ensures that search results appear at this position and aligns interactive actions, such as *Fly to Shape*, so that the shape is centered neatly within the **Safe Area**.
8. In the **Attribution** section, use the arrows or enter values in the **Position X** and **Y** fields to adjust the location of the attribution text within the inner rectangle.

You can also left-click and drag the attribution on the **Canvas** (while the **Safe Title Management Editor** is open) to position it.
9. In the **Map Provider Logo** section, use the arrows or enter values in the **Position X** and **Y** fields to adjust the location of the map provider's logo within the inner rectangle.

You can also left-click and drag the logo on the **Canvas** (while the **Safe Title Management Editor** is open) to position it.

★ Some map providers require their logo to remain visible on air at all times. If the selected Map Style does not use one of these providers, the parameters in this section are disabled.
10. When you have the configuration you want, select **Done** to save it.

You can create as many different **Safe Title / Safe Area** configurations as you need.

Reloading the Active Map

Use the **Reload Active Map** menu option to refresh the current map. This is useful if your scene is missing map tiles or displaying map tiles remaining from a previous map.

To reload the active map:

- From the menu bar select **Edit > Reload Active Map**.

Entering and Exiting Full Screen Mode

In the XPression Maps interface, the **Canvas** typically appears as the central window, surrounded by various editors, menus, and toolbars. However, for tasks such as previewing scene playback or controlling an interactive project, it can be helpful to enter full-screen mode. This mode expands the **Canvas's** preview pane to fill the entire screen, providing an enlarged viewing area and absent of any unnecessary components.

To enter fullscreen mode:

- From the menu bar select **View > FullScreen** or press the **F11** key on the keyboard.

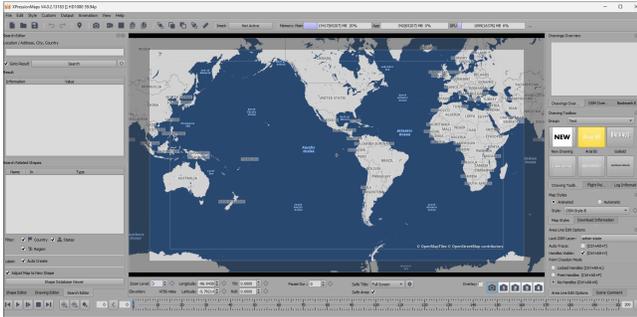
To change to windowed mode:

- Press the **Esc** key.

★ When XPression Maps is running in **Interactive Mode**, entering Full Screen also starts Interactive Execution Mode. Exiting Full Screen does not stop execution. This behavior is useful when building interactive macros.

Changing the UI Style - Classic or Dark

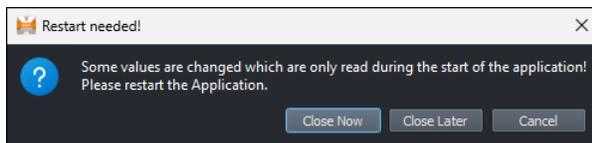
XPression Maps offers two user interface styles—**Classic** and **Dark**. As both styles provide identical functionality and feature sets, the selection is primarily determined by user preference and environmental considerations.



User Interface Styles - Classic and Dark

To immediately change the current UI style:

1. From the **File** menu, select **Preferences**.
2. In the **Preferences** window, select the **Output** tab.
3. In the **UI** section, use the **Style** drop-down to select either **Classic** or **Dark**.
4. Select **Save**, and then select **OK**.
5. In the **Restart needed** dialog, select **Close Now** to immediately exit XPression Maps.



Preferences - Restart Needed

★ You must restart XPression Maps for the style change to take effect.

6. Relaunch **XPression Maps**.

The XPression Maps user interface now appears in the selected style.

Managing User Interface Layouts

To improve productivity and maintain focus, the XPression Maps user interface components (editors, tools, and panels) can be shown/hidden or rearranged to match your preferences and then saved as custom layouts. You can create multiple layouts as needed and load the one that best suits your current workflow. By default, the last loaded layout will automatically appear when you launch XPression Maps.

The following topics are discussed in this section:

[Show or hide an editor, control or toolbar](#)^[34]

[Save a configured layout](#)^[34]

[Load a configured layout](#)^[34]

[Delete a configured layout](#)^[35]

[Reset to the default settings](#)^[35]

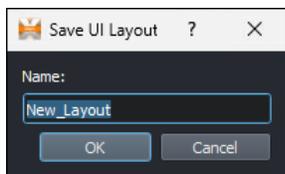
To show or hide an editor, control or toolbar:

1. From the menu bar select **View**.
2. In the menu, check the options you want to show and clear the options you don't require.

To save a configured layout in the XPression Maps user interface:

1. From the menu bar, select **View > UI Setup** and select **Save UI Layout**.

The **Save UI Layout** window opens.



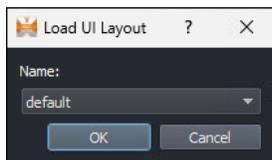
Save UI Layout Window

2. Enter a name for the new layout and select **OK**.

To load a configured layout into the XPression Maps user interface:

1. From the menu bar, select **View > UI Setup** and select **Load UI Layout**.

The **Load UI Layout** window opens.



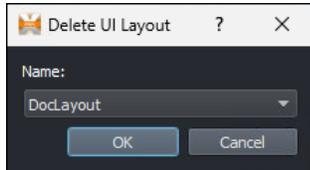
Load UI Layout Window

2. From the **Name** drop-down select the name of the layout you want to load and select **OK**.

To delete a configured layout from the XPression Maps user interface:

1. From the menu bar, select **View > UI Setup** and select **Delete Saved UI Layout**.

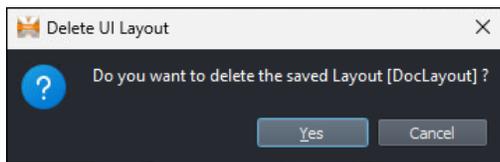
The **Delete UI Layout** window opens.



Delete UI Layout Window

2. From the **Name** drop-down select the workspace you want to delete and select **OK**.

The **Delete UI Layout** confirmation window opens.



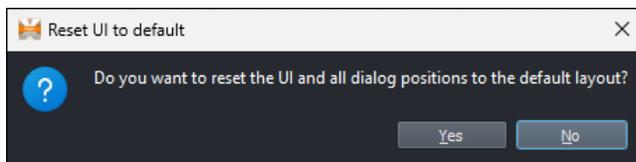
Delete UI Layout Confirmation Window

3. Select **Yes**.

To reset the XPression Maps user interface to the default setting:

1. From the menu bar, select **View > UI Setup** and select **Reset UI to Default**.

The **Reset UI to default** window opens.



Reset UI to Default Window

2. Select **Yes** to reset the layout.

Setting Up XPression Maps

Before using the XPression Maps application, configure its settings in the **Preferences** window to customize key features and functions.

The **Preferences** window contains multiple thematic tabs with different sets of parameters. These parameters determine many of the features and functionality available in the software, so they should be configured according to your creative and business needs.

To configure your preferences:

1. From the menu bar, select **File > Preferences**.
2. Select the tabs to edit the parameters, as described in the following sections:

[Output](#)  37

[Map](#)  40

[Web Interface](#)  42

[Connection](#)  45

[Proxy](#)  50

[Data \(Option\)](#)  51

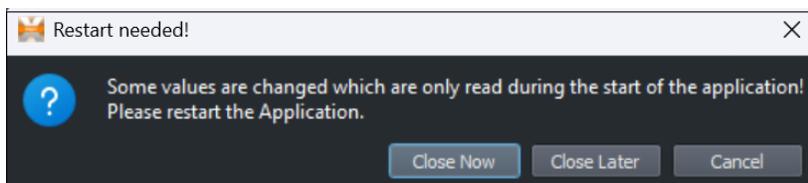
[Video I/O \(Option\)](#)  54

Interactive (Option) For details on using XPression Maps in Interactive Mode please refer to the **XPression Maps Touch User Guide**.

3. Select **Save** to save changes you've made to the parameters.
4. When you are finished editing your preferences, select **OK** to apply the changes and close the **Preferences** dialog.

★ **IMPORTANT** - Some changes require restarting XPression Maps.

- Select **Close Now** to close the application immediately, then reopen it from the desktop icon to apply the changes.
- Alternatively, select **Close Later** to continue working; the changes will not take effect until the application is restarted.

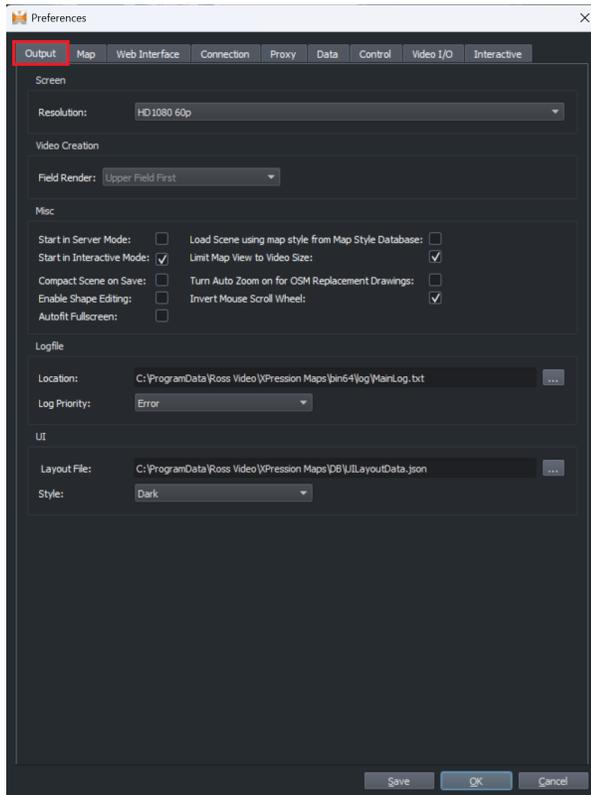


XPression Maps Preferences - Restart Needed

Output Preferences

In the **Output** tab of the **Preferences** window, you can select the screen resolution and recording format, enable or disable various settings, specify the location and level of detail for the log file, and set the **UI Layout Data** file.

★ The **Output Preferences** should only be set once and match your facility's broadcast standard. Do **not** change these settings after it is configured. If you are unsure of your facility's broadcast standard, consult your engineering or operations team before making any changes.



Preferences - Output Tab

To edit the Output parameters:

1. Open XPression Maps and select **File > Preferences**.
2. Select the **Output** tab.
3. In the **Screen** section, from the **Resolution** drop-down, select the video resolution and frame rate used by your facility.
4. In the **Video Creation** section, from the **Field Render** drop-down, select whether to render the **Upper Field First** or **Lower Field First**. The drop-down is available only when the selected screen resolution is an interlaced format.
5. In the **Misc** section, select **Start in Interactive Mode** to use the **XPression Maps Touch** workflow.

For details on using **XPression Maps in Interactive Mode** refer to the **XPression Maps Touch User Guide**.

Also in the **Misc** section, enable the following default behaviors if desired:

- Select **Start in Server Mode** (*Legacy setting — not recommended*) — This option is retained for backward compatibility but should not be used for new configurations. It starts the application directly in server mode for MOS workflows and minimizes it to the Windows systems tray.
- Select the **Compact Scene on Save** checkbox to remove unused map styles from the **Map Styles** list and unused shape styles from the **Shape** style list when the scene is saved or exported.

This is useful for scenes that are exported to the **XPression Maps HTML5 Client** for XPression MOS workflows.
- Select the **Enable Shape Editing** checkbox to enable shape editing.
- Select the **Autofit Fullscreen** checkbox to scale the graphics card output for touchscreens so that you can run HD 1920x1080 on a 1920x1200 monitor. This scales the output to fill the monitor while maintaining the aspect ratio, with some graphics extending beyond the visible area on the left and right. When unchecked, the screen fills horizontally, adding black bars at the top and bottom to preserve the aspect ratio.
- Select the **Load scene using map style from Map Style Database** checkbox to enable loading any map style directly from the Map Style Database rather than from the saved scene. This ensures that the latest map style from the database is always applied, allowing older scenes to appear with the updated look.

In the MOS Scene Template editor, the parameter **Use Scene Styles from Database** can be set to override this behaviour if a scene should use a modified map style saved within the scene.

- Select the **Limit Map View to Video Size** checkbox to match the map view to the video size.

If unchecked, the map view will be as large as possible.
- Select the **Turn Auto Zoom On for OSM Replacement Drawings** checkbox if you generally prefer to have your replacement labels stay the same size, regardless of the zoom level of the map.

You can still disable **Auto Zoom** in the **Drawing Editor** if necessary in individual cases.
- Select the **Invert Mouse Scroll Wheel** checkbox to zoom into the map by scrolling forward on the mouse scroll wheel, and to zoom out of the map by scrolling back on the mouse scroll wheel.

If unchecked, to zoom into the map you must scroll backward on the mouse scroll wheel, and to zoom out of the map you must scroll forward.

★ If you invert the mouse scroll wheel you will need to restart the XPression Maps application for the change to take effect.

6. In the **Logfile** section, select the **Browse** (📁) button beside the **Location** field to navigate to the location where you want to store the logfile.

The default location is **C:\Program Files\XPression Maps\bin64\log\MainLog.txt**.

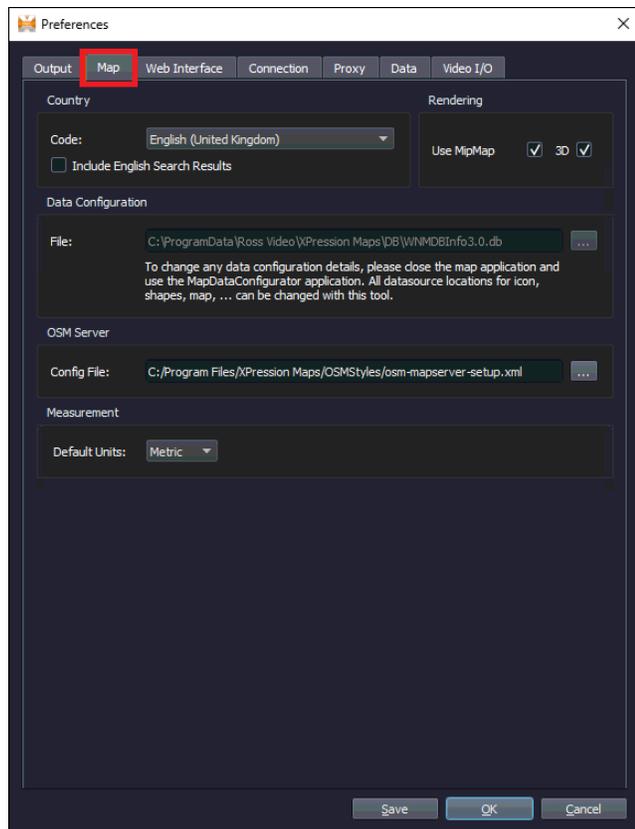
7. From the **Log Priority** drop-down, select the level of detail to be stored to the logfile.
 - Always** - Logs a small set of specific information, such as the start time and version number of the application.
 - Critical** - Logs activity that could result in unpredictable behavior.
 - Error (Default)** - Logs errors only.
 - Warning** - Logs unsuccessful operations.
 - Information** - For internal use only, for technical support.
 - Debug** - For internal use only, for technical support.
 - Debug2** - For internal use only, for technical support.
8. In the **UI Layout** section, select the **Browse** () button beside the **File** field to select the **UI Layout Data** file.

The **UI Layout Data** file contains saved layout configurations, see [Managing Layouts](#)³⁴ for instructions on configuring layouts.

By default, the **File** name field will be populated with **UILayoutData.json**.
9. Select **Save** and then **OK**.
10. In the **Restart Needed** dialog, select **Close Now**.
11. Restart XPression Maps to apply the changes.

Map Preferences

The **Map** tab in the **Preferences** window allows you to configure settings related to map data, including language, default measurement units, and rendering options. It also provides options to set file paths for the map database and OpenStreetMap server configuration.



Preferences - Map Tab

To edit the Map parameters:

1. Open XPression Maps and select **File > Preferences**.
2. Select the **Connection** tab.
3. Select the **Map** tab.
4. In the **Country** section, from the **Code** drop-down, select the language/country to be used to view the maps in.

The maps will be downloaded in the selected language. The map provider search results will be displayed in the selected language and the shape labels will take the translation table of the selected language.

★ Changing the language/country does not impact the user interface language.

5. Select the **Include English Search Results** checkbox when using a language other than English, to get the best results. The English search results are displayed in magenta in the **Search Editor**.

6. In the **Rendering** section, select the **Use MipMap** checkbox to render the map tiles with **MipMapping** and select the **3D** checkbox to enable rendering of maps with the 3D height model.
 - MipMapping reduces aliasing artifacts but decreases rendering speed.
 - The 3D height model renders maps that visually indicate elevation.
7. In the **Data Configuration** section, the **File** field specifies the location where the information database file (**WNMDBInfo.db**) is stored.

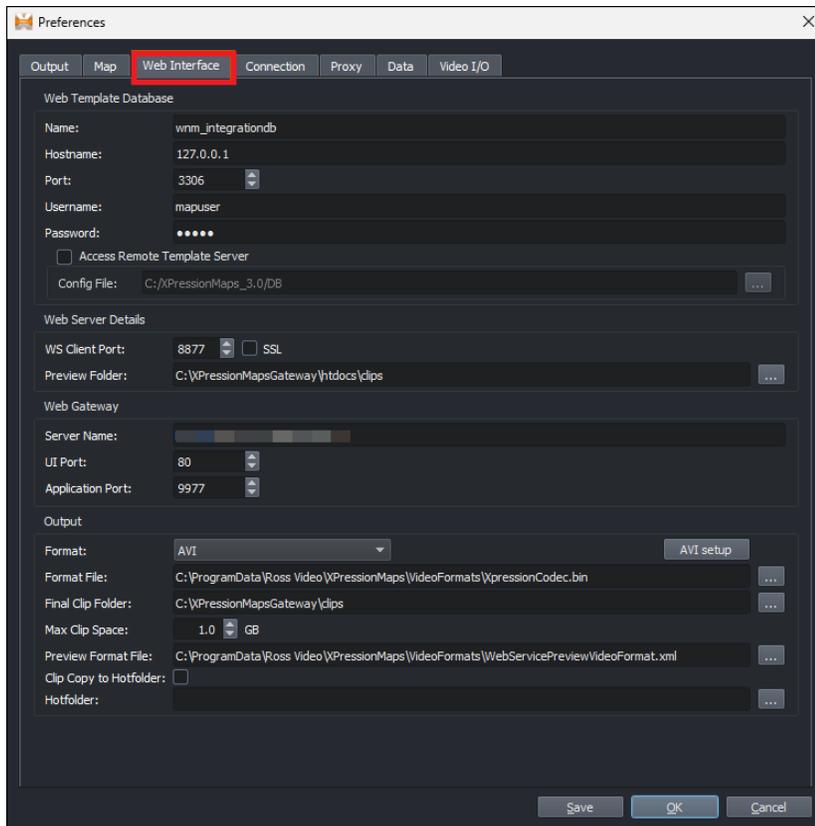
The default location is **C:\ProgramData\Ross Video\XPression Maps\DB\WNMDBInfo3.0.db**.

The information database file is used to resolve all database connections and is configured with the **Map Data Configurator** in the subfolder **C:\Program Files\XPression Maps\MapDataConfigurator**.
8. In the **OSM Server** section, select the **Browse** button () beside the **Config File** field to navigate to the location of the external **OpenStreetMap** tile server configuration file (**osm-mapserver-setup.xml**).

The default location is **C:\Program Files\XPression Maps\OSMStyles\osm-mapserver-setup.xml**.
9. In the **Measurement** section, from the **Default Units** drop-down, select either **Metric** or **Imperial** as the preferred system of measurement for displaying values on the maps.
10. Select **Save**, then select **OK**.
11. In the **Restart Needed** dialog, select **Close Now**.
12. Restart XPression Maps to apply the changes.

Web Interface Preferences

In the **Web Interface** tab of the **Preferences** window, you can set up the XPression Maps web server, which is used for the MOS newsroom HTML5 Client website. This includes configuring the XPression Maps server details and the connection information for the XPression Maps Database and Gateway.



Preferences - Web Interface Tab

To edit the Web Interface parameters:

1. Open XPression Maps and select **File > Preferences**.
2. Select the **Web Interface** tab.
3. In the **Web Template Database** section enter the parameters for connecting to the database server.

Hostname: The IP address or host name of the computer on which the database is stored.

Port: The port used to connect to the database server. The default for **MySQL/mariaDB** is **3306**.

Username: Leave the default username as is.

Password: Leave the default password as is.

The **Username** and **Password** are used to access the database.

4. If you are using a remote template server, select the **Access Remote Template Server** checkbox and then select the **Browse** button to navigate to the location of the **Config File** that identifies the server.

5. In the **Web Server Details** section enter the parameters for communicating with the **XPression Maps Gateway** web server.
 - The **WS Client Port** is the port on which the web server and client communicate.
The default **Client Port** is **8877**.
 - Select the **SSL** checkbox to enable the **Secure Socket Layer** protocol (optional).
If you select the SSL checkbox, you will also need to change the **Application Port** in the **Web Gateway** section to **443**.
See [Appendix B: Managing Network Security](#)^[410] for more information.
 - Select the **Browse** button beside the **Preview Folder** field to navigate to the location where XPression Maps will create the preview video clips and from which the web server will stream the clips to the clients. The default location is **D:\XPression Maps Data\Clips\Preview**.
6. In the **Web Gateway** section, enter the parameters for communicating with the gateway.
 - The **Server Name** field is the same as the **Hostname** in the **Web Template Database** section.
 - The **UI Port** field is the port used by the HTML5 web application (80 = http, 443=https). This is needed if the system runs in SSL mode -> https.
 - The **Application Port** field is the port on which the server and gateway communicate.
The default **Application Port** is **9977**.
7. In the **Output** section enter the parameters for the final clip generation.
 - a. From the **Format** drop-down, select the **AVI** or **ffmpeg** format and use the following guidelines to set the **Format File** field:
 - If **AVI** is already selected and is your preferred format:
 - Set the **Format File** field to an existing file.
 - OR**
 - Select **AVI Setup** to open the **Video Compression** dialog, select a video codec, and save a new format file.
 - ★ For integration with the **XPression MOS workflow**, the recommended option is to use an **AVI file** with the **XPression Video Codec**.
 - If **ffmpeg** is already selected and is your preferred format, set the **Format File** field to an existing file.
 - If switching from **AVI** to **ffmpeg**, the **Update File Format** dialog appears and allows you to select an existing format file from the **Web Service Video Format File** dialog.
 - If switching from **ffmpeg** to **AVI**, the **Update File Format** dialog appears and allows you to:
 - Select **Creating AVI file** to open the **Video Compression** dialog, select a video codec, and save a new AVI format file.
 - OR**
 - Select an existing format file from the **Web Service Video Format File** dialog.

- b. Select the **Browse** button beside the **Final Clip Folder** field to navigate to the folder where the video clips will be stored.

★ By default, the **Final Clip Folder** is set to the location used by the **XPression MOS workflow (D:\XPression Maps Data\Clips\Final)**. This default path allows the workflow to locate final renders and populate templates in the newsroom workflow and playout devices. Changing this location may prevent the MOS workflow from accessing the rendered clips.

- c. In the **Max Clip Space** field, enter or use the arrows to select the amount of system disk space, in GBs, which can be used before the automatic cleanup mechanism starts to free up disk space by erasing the loaded clips.
- d. Select the **Browse** button () beside the **Download Format File** field to navigate to the **Video Format** folder to select the type of video format file you want.
- e. Select the **Clip Copy to Hotfolder** checkbox, if you want to store your clips in a separate folder.
- f. In the **Hotfolder** field, select the **Browse** button () to navigate to the folder in which to store your clips.

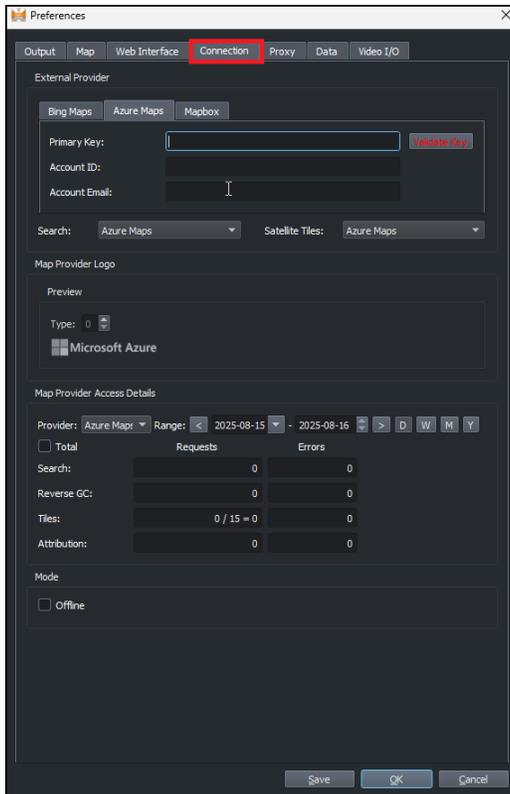
8. Select **Save** to save the changes made to your configuration and then select **OK**.

9. In the **Restart Needed** dialog, select **Close Now**.

10. Restart XPression Maps to apply the changes.

Connection Preferences

The **Connection** tab in the **Preferences** window lets you configure how XPression Maps interacts with external map providers that provide the geolocation search service and base maps imagery services to XPression Maps. You can validate the connection to the map provider accounts, set the style of the map provider's logo, and monitor transaction usage.



Preferences - Connection Tab

★ XPression Maps displays a warning message on startup if the **External Provider** fields are set and XPression Maps cannot validate a connection to the configured maps service provider. If this happens, follow the instructions in the message or refer to [Assigning an External Maps Service Provider](#)^[46] to enter and validate the application access key.

The following topics are described in this section:

[Assigning an External Maps Service Provider](#)^[46]

[Setting the Style of the Map Provider's Logo](#)^[47]

[Monitoring Map Provider Access Details](#)^[48]

Assigning an External Maps Service Provider

To integrate XPression Maps with an external maps service provider, you must configure the **External Provider** settings on the **Preferences > Connection** page.

- ★ Access to external map services depends on customer-supplied API keys for the specific vendor(s). These keys must be obtained from the provider and entered into the configuration to enable the connection.

The procedure below provides general instructions for assigning an external maps service provider. For detailed instructions on creating a specific maps provider account and assigning it to XPression Maps, refer to the additional documentation provided in **C:\Program Files\XPression Maps\doc**:

- **Configuring XPression Maps to Use Bing Map Services**
- **Configuring XPression Maps to Use Azure Maps Services**
- **Configuring XPression Maps to Use Mapbox Services**

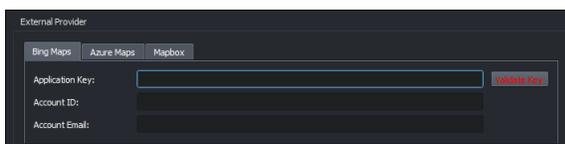
Prerequisite

To use an external maps provider, you must have:

- A valid Bing Maps for Enterprise, Azure Maps, or Mapbox account
- And active payment subscription for that account
- The application access key generated in your provider's account

To configure XPression Maps to use an external maps service provider:

1. Open XPression Maps and select **File > Preferences**.
2. Select the **Connection** tab.
3. In the **External Provider** section, select the corresponding maps service provider's tab (**Bing Maps**, **Azure Maps**, or **Mapbox**).



Preferences - External Provider

4. In the **Application Key** (Bing Maps), **Primary Key** (Azure Maps), or **Access token** (Mapbox) field, enter the application access key code to define the provider's download account.

The **Account ID** and **Account Email** fields are optional and are provided for you to keep track of the account and email address under which the application access key is running.

5. Select the **Validate Key** button.

If the key is valid, the text on the button turns green and says **Key is Valid**.

6. In the **Search** field, select the corresponding provider as the location service provider used by the **Search Editor** tool in XPression Maps.

7. In the **Satellite Tiles** field, select the corresponding provider as a maps tiles provider for certain map styles integrated in XPression Maps.
Or, select **None** to disable the availability of satellite map styles in the **Map Styles** editor in XPression Maps.
8. In the **Map Provider Logo** section, [set the style of the logo](#)  that will be displayed in the **Canvas**.
★ This field is unavailable on the **Azure Maps** tab.
9. Select **Save** and then **OK**.
10. In the **Restart Needed** dialog, select **Close Now**.
11. Restart XPression Maps to apply the changes.

Setting the Style of the Map Provider's Logo

Use the **Map Provider Logo** section in the **Connection** tab to configure the style of the Bing or Mapbox logo that will be displayed in the **Canvas**. A preview of the logo's style is provided as based on the selection in the **Type** drop-down.

★ This feature is not available for Azure Maps.

To set the style of the map provider's logo:

1. Open XPression Maps and select **File > Preferences**.
2. Select the **Connection** tab.
3. In the **Map Provider Logo** section, enter a value or use the arrow controls to select one of the following options:
 - 0** = Displays the standard logo
 - 1** = Displays **Source: <map provider's name>**
4. Select **Save** and then **OK**.

Monitoring Map Provider Access Details

Some external map providers use a metered, pay-as-you-go service model, offering a limited number of free requests or transactions before charges apply. To help you track and manage your usage, the **Map Provider Access Details** section within the **Connection** tab displays detailed information about requests and transactions over a defined time period.

To monitor your map provider access details:

1. Open XPression Maps and select **File > Preferences**.
2. Select the **Connection** tab.
3. In the **Map Provider Access Details** section, in the **Provider** drop-down, select the map service provider: **Bing Maps**, **Azure Maps**, or **Mapbox**.
4. Define the reporting period:
 - a. Select a preset period: **Day**, **Week**, **Month**, or **Year**.
 - b. Use the arrow controls to adjust the **Start Date** and **End Date** for the custom date range.



5. To display cumulative results across all connected systems, select the **Total** checkbox.

★ This option collects and displays the combined results only if the **ProviderRequests** database is configured to store data on the server.

If the database is configured for local storage, clear the **Total** checkbox to view results from only the local system.

6. View the transaction results to see the number of successful transactions (**Requests**) and failed attempts (**Errors**) across the following categories:

- **Search** — Requests to retrieve geographic coordinates and related metadata based on a location string entered in the XPression Maps **Search Editor**.
- **Reverse GC** — Requests to retrieve place names and location details from longitude and latitude coordinates. This is used by the **Dynamic Data** extension to populate icon text fields.
- **Tiles** — Requests to retrieve visual map content (e.g., road, aerial, or hybrid views) as image tiles, allowing dynamic map rendering based on the view and zoom level in XPression Maps. The results are based on the provider's conversion rate of map tile downloads to transactions (e.g., Bing and Azure Maps 15 tiles = 1 transaction, Mapbox 1 tile = 1 transaction).

★ Only newly downloaded tiles are counted; cached tiles are excluded.

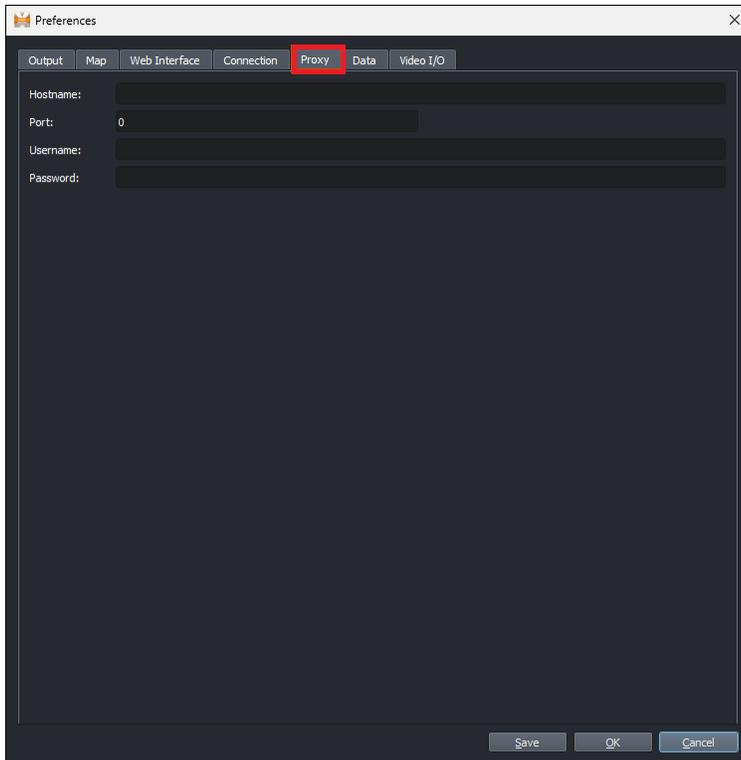
- **Attribution** — Requests to retrieve the provider credit text displayed on the map as required by licensing terms.

7. To refresh the results, simply close and reopen the **Preferences** window.

Proxy Preferences

The **XPression Maps** software requires access to the Internet to function properly. If your organization uses an Internet proxy server, use the parameters in the **Proxy** tab of the **Preferences** window to enter information about your organization's proxy server.

Consult your local IT administrator for the proxy server access information.



Preferences - Proxy Tab

To connect the XPression Maps application to the internet through a proxy server:

1. Open XPression Maps and select **File > Preferences**.
2. Select the **Proxy** tab.
3. In the **Hostname** field, enter the IP address of the proxy server.
4. In the **Port** field, enter the port number over which the application and server will communicate.
5. In the **Username** field, enter a user name for the proxy server.
6. In the **Password** field, enter a password for the proxy server.
7. Select **Save** to save the changes made to your configuration and then select **OK**.
8. In the **Restart Needed** dialog, select **Close Now**.
9. Restart XPression Maps to apply the changes.

Data Option Preferences

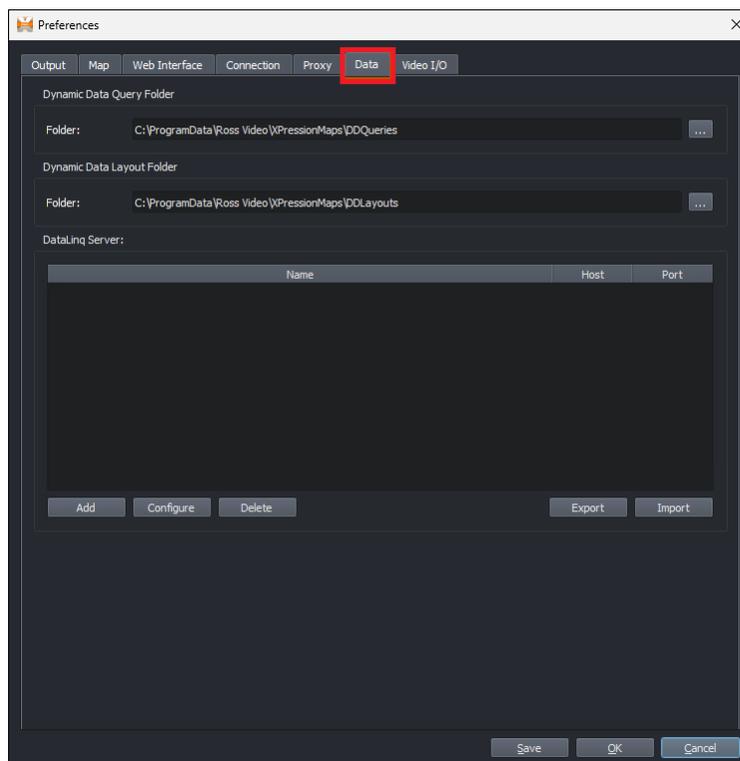
If you purchased the **Data** option, this tab will appear in the **Preferences** window.

To properly use the **Data** option, you must install the **DataLinq Server Software**. The installer should be included in your software delivery package, or you can contact [Ross Video Technical Support](#) for assistance.

Additional information about the **DataLinq Server Software** can be found in the **XPression User Guide**.

In the **Data** tab you can specify the location of the folder where the the following information is stored:

- **Dynamic Data Query Folder:** contains files with the data that will be generated when you add an external **Data** drawing to your scene.
- **Dynamic Data Layout Folder:** contains files that specify the layout of the data that is generated.



Preferences - Data Tab

The following topics are discussed in this section:

[Specifying the Query and Layout Files](#) ⁵²

[Adding a DataLinq Server](#) ⁵²

[Configuring a DataLinq Server](#) ⁵²

[Deleting a DataLinq Server](#) ⁵³

[Exporting DataLinq Server Data](#) ⁵³

[Importing External Data Server Information Files](#) ⁵³

[Saving Changes to the Configuration](#) ⁵³

To specify which query and layout files to use:

1. In the **Query Folder** section, select the **Browse** button () beside the **Folder** field and navigate to the folder from which you want to get the external data information.

The default location is **C:\ProgramData\Ross Video\XPressionMaps\DDQueries**.

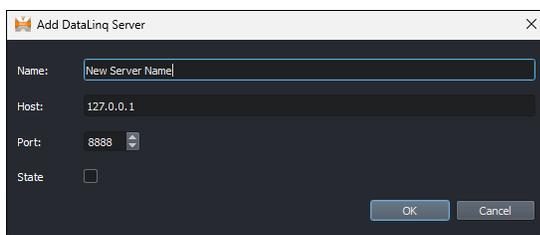
2. In the **Layout Folder** section, select the **Browse** button () beside the **Folder** field and navigate to the folder from which you want to get the external data layouts.

The default location is **C:\ProgramData\Ross Video\XPressionMaps\DDLAYOUTS**.

To add a DataLinq Server:

1. Select the **Add** button.

The **Add DataLinq Server** window opens.



Add DataLinq Server Window

2. In the **Name** field, enter a name for the new **DataLinq Server**.
3. In the **Host** field, enter the host IP address.
4. In the **Port** field, enter the port that connects to the **DataLinq Server**.

The default port number is 8888.

5. Select the **State** checkbox to view the status of the **DataLinq Server Connection**.

If the connection passes the DataLinq Server will be highlighted in green. If the connection fails the DataLinq Server will be highlighted in red.

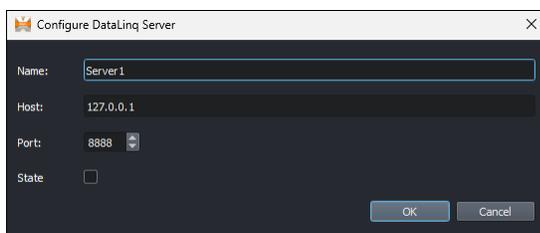
6. Select **OK**.

The **DataLinq Server** has been added.

To configure a DataLinq Server:

1. Select the **DataLinq Server** you want to edit from the list of servers and select **Configure**.

The **Configure DataLinq Server** window opens.



Configure DataLinq Server Window

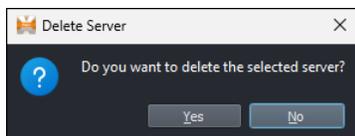
2. Edit the fields that require a change and select **OK**.

The **DataLinq Server** has been configured.

To delete a DataLinq Server:

1. Select the DataLinq Server you want to delete from the list of servers.
2. Select **Delete**.

The **Delete Server** confirmation dialog opens.



Delete DataLinq Server Window

3. Select **Yes** to delete the server.

To export DataLinq Server Data:

1. Select the DataLinq Server data you want to export and select **Export**.

The **Export External Data Server Information File** folder opens.

2. In the **File** name field, enter a name for the exported data file.
3. Save the file to a local drive.

A recommended location is a DataLinq folder within **D:\XPression Maps Data** for storing the **External Data Server Information File (*.edsif)**.

To import External Data Server Information Files:

1. Select the **Import** button.

The **Import External Data Server Information File** window opens.

2. Select the **External Data Server Information File (*.edsif)** or select the **DataLinq** folder you created and then select the file and select **Open**.

The **External Data Server Information File** is added to the list.

To save your configurations:

1. At the bottom of the **Data** tab, select **Save** and then select **OK**.
2. In the **Restart Needed** dialog, select **Close Now**.
3. Restart XPression Maps to apply the changes.

Video I/O Option Preferences

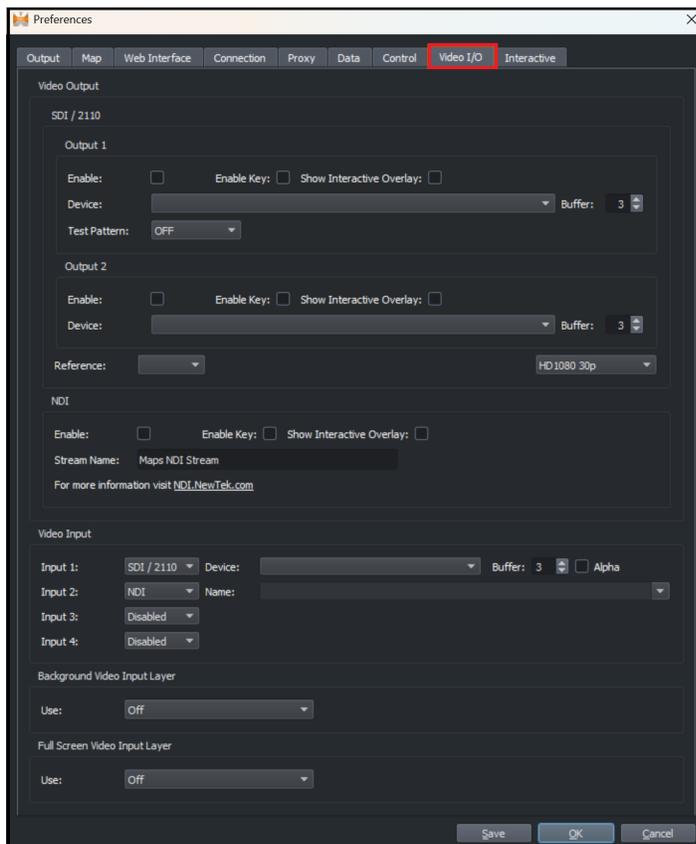
★ **Video I/O** functions enabled by a variety of licensing options and may not be present in your configuration.

If you do have this feature, you can configure the video inputs and outputs as either **SDI/2110** or **NDI**.

- **Inputs:** Up to four total, in any mix of HD-SDI/2110 or NDI sources.
- **Outputs:** Up to two, configurable as **Video and Alpha pair**.

You can also assign any of the four video inputs to the following video input layers:

- The **Background Video Input Layer** is positioned behind all other elements, including maps and drawings. For example, in an election project, this layer could display an animated live video background behind state shapes.
- The **Full Screen Video Input Layer** sits above all other elements, including maps and drawings, except for the **Main Overlay** and Telestrate graphics. In an election project, this layer might display features like the top information bar and the top-left headshot statistics. To ensure XPression Maps graphics remain visible, the video input must include an alpha channel.



Preferences - Video I/O Tab

★ Configuration of video I/O settings requires the installation of the correct drivers for the video I/O card on the host computer. For information on supported video I/O cards and their driver requirements, contact [Ross Video Technical Support](#).

The following topics are discussed in this section:

[Configuring an SDI/2110 Video Output](#) 

[Configuring an NDI Video Output](#) 

[Configuring Video Inputs](#) 

[Configuring Video Input Layers](#) 

[Saving Changes to the Configuration](#) 

To configure an SDI/2110 Video Output:

1. In the **Video Output - SDI/2110** section, select the **Enable** checkbox, if you are using an **SDI/2110** output.
2. Select the **Enable Key** checkbox if you want to see the **Key** image in the output.
The **Key** image is automatically put on the next frame buffer above the one used for the output (i.e. on frame buffer 4 if the output is on frame buffer 3).
3. Select the **Show Interactive Overlay** checkbox to display the interactive overlay in the output. The overlay shows the keys that trigger interactive functions.

★ Only enable this function when you need to visually display the interactive function keys in the output.
4. From the **Device** drop-down, select the video card in your XPression Maps hardware.
5. In the **Buffer** field, enter a value or use the arrows to select which frame buffer to use.
6. From the **Test Pattern** drop-down, select from a number of different patterns if you want to see a test pattern in the output (for testing purposes) or select **OFF** for an on-air viewing.
7. From the **Reference** drop-down, select one of the following options:
 - **Internal** — No reference, free running without using an external reference signal.
 - **BlackBurst** — Uses the reference spigot on SDI framebuffers for timing.
BlackBurst is a standard sync signal that carries no picture information but provides the timing pulses needed to keep all SDI devices in step.
 - **SMPTE2059** — Uses Precision Time Protocol (PTP) for timing for 2110 framebuffers.
SMPTE ST 2059 defines how PTP is used in IP systems to keep devices locked to the same time base across the network.
8. From the **Frame Rate** drop-down, select the format that matches your reference source.
If you are unsure of which format to use, check with your system engineer or technical director.

To configure an NDI Video Output:

1. In the **Video Output - NDI** section, select the **Enable** checkbox, if you are using an **NDI** output.
2. Select the **Enable Key** checkbox if you want to see the **Key** image in the output.
The **Key** image is automatically put on the next frame buffer above the one used for the output (i.e. on frame buffer 4 if the output is on frame buffer 3).

3. Select the **Show Interactive Overlay** checkbox to display the interactive overlay in the output. The overlay shows the keys that trigger interactive functions.

★ Only enable this function when you need to visually display the interactive function keys in the output.

4. In the **Stream Name** field, enter the streaming service being used.

The default service is **Maps NDI Stream**.

To configure video inputs:

1. In the **Video Input** section, for each input, use the drop-down to select whether that input is **Disabled** or is an **SDI/2110** or **NDI** input.

If you select either **SDI/2110** or **NDI**, additional parameters appear for each input.

2. For an **SDI/2110** input:

- From the **Device** drop-down, select the video source for the input.
- In the **Buffer** field, enter a value or use the arrows to select which frame buffer to use.
- Select the **Alpha** checkbox if you want to see the **Alpha** image in the output.

OR

For an **NDI** input:

- Use the drop-down to select the **Name** of the input source.

To configure the video inputs layers:

1. In the **Video Input** section, set the **Input 1** to **Input 4** fields to either **SDI/2110** or **NDI** (**Disabled** is the default.)
2. In the **Background Video Input Layer** section, set the **Use** field to one of the video input sources (**Off** is the default).

The **Background Video Input Layer** will be displayed behind the map.

3. In the **Full Screen Video Input Layer** section, set the **Use** field to one of the video input sources (**Off** is the default).

The **Full Screen Video Input Layer** will be displayed on top of the map.

To save your configuration:

1. At the bottom of the **Video I/O** tab, select **Save** and then select **OK**.
2. In the **Restart Needed** dialog, select **Close Now**.
3. Restart XPression Maps to apply the changes.

Opening a Scene

By default, XPression Maps launches with the scene that was last open, unless no scenes have yet been created. In that case, a new scene is displayed on the **Canvas**. At any time, you can also choose to open a new scene or load an existing one.

- ★ In some cases, an existing scene may have been exported from another system. In this case, a slightly different procedure is used to open the scene. See [Exporting a Scene](#) ^[313] for more information.

The following procedures provide instructions for opening a scene in XPression Maps:

[Opening a New Scene](#) ^[57]

[Opening an Existing Scene](#) ^[57]

[Opening a Recently Opened Scene](#) ^[58]

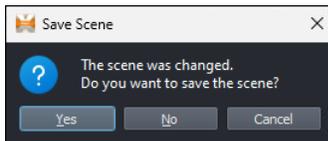
To open a new scene:

1. From the menu bar select **File > New** or select the **New** icon in the toolbar.



XPression Maps Toolbar - New

If the current scene has unsaved changes, a confirmation dialog opens asking if you want to save it.

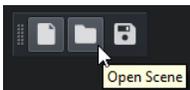


Save Scene Confirmation

2. Select **Yes** to save the current scene or **No** to discard it.

To open an existing scene:

1. From the menu bar select **File > Open** or select the **Open Scene** button in the toolbar.

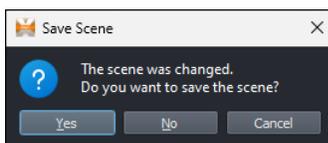


XPression Maps Toolbar - Open Scene

2. Select an existing scene from the **XPression Maps Scenes** folder (or whichever folder you've stored your scenes in) and select **Open**.

- If the current scene has unsaved changes, a confirmation dialog opens asking if you want to save it.

Select **Yes** to save the current scene or **No** to discard it.

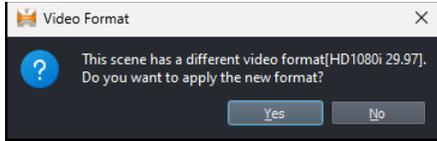


Save Scene Confirmation

- If the selected scene has a different video format, a confirmation dialog opens, asking if you want to set the new format.

Select **Yes** to set the new format or **No** to keep the current format.

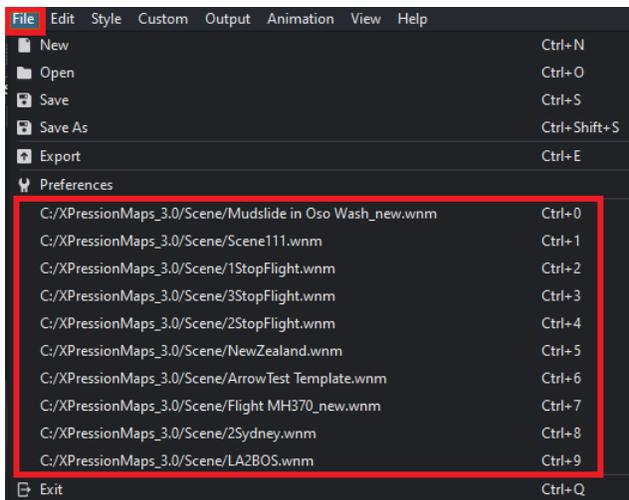
Selecting the **X** in the top-right corner gives the same result as selecting **No**.



Video Format Confirmation

To open a recently opened scene:

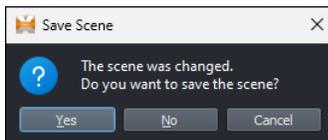
- Select **File** and select a scene from the list of recently opened scenes.



Recently Opened Scenes

- If the current scene has unsaved changes, a confirmation dialog opens asking if you want to save it.

Select **Yes** to save the current scene or **No** to discard it.

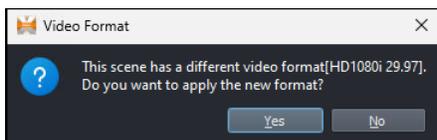


Save Scene Confirmation

- If the selected scene has a different video format, a confirmation dialog opens, asking if you want to set the new format.

Select **Yes** to set the new format or **No** to keep the current format.

Selecting the **X** in the top-right corner gives the same result as selecting **No**.



Video Format Confirmation

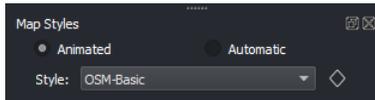
Creating and Assigning Map Styles

Map styles in XPression Maps define the visual appearance of maps, including cartographic elements, colors, fonts, and feature visibility. They set the overall look of map graphics and allow designers to meet specific visual, editorial, or branding needs.

XPression Maps offers a collection of demo-ready [system map styles](#)^[65] for exploring the software's features. Typically however, you will use the **Map Style Manager** to modify existing map styles or build new ones from predefined [map types](#)^[60] based on map imagery from providers, including **Microsoft Azure Maps For Enterprise**, **Mapbox**, **Microsoft Bing Maps For Enterprise**, **NASA's Blue Marble project**, and **OpenStreetMap**. When building or modifying a map style, you can set the projection type, adjust visual properties, and add overlays to control geographic features such as borders, roads, and water bodies.

Once a map style is created, it is available in the **Map Styles panel** within the main XPression Maps interface. When building a map scene or animation, there are 2 ways in which you can use the **Map Styles panel** to assign or change the map style of a scene, without altering other scene elements:

- [Animated](#)^[79] (**change at Key Frames**)
- [Automatic](#)^[81] (**change at specific map layers**)



Map Styles Panel

The following topics are described in this section:

[About Map Types](#)^[60]

[About System Map Styles](#)^[65]

[Adding a New Map Style](#)^[66]

[Editing a Map Style](#)^[68]

[Map Style Properties](#)^[70]

[Assigning an Animated Map Style](#)^[79]

[Assigning an Automatic Map Style](#)^[81]

[Editing OSM \(OpenStreetMap\) Map Styles](#)^[83]

[Displaying Disputed Borders and Adding OSM Data](#)^[108]

[Exporting a Map](#)^[110]

About Map Types

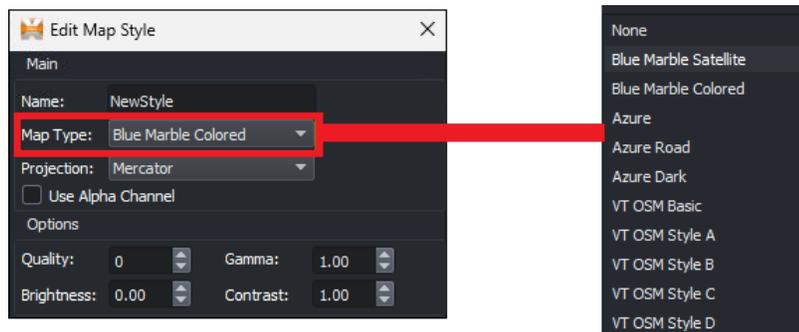
In XPression Maps, a **Map Type** refers to a predefined, non-editable map style that determines the base appearance and behavior of a map. These styles are locked templates designed to deliver consistent, high-quality mapping visuals from third-party map providers, including:

- **Microsoft Bing Maps for Enterprise**
- **Microsoft Azure Maps For Enterprise**
- **Mapbox**
- **NASA's Blue Marble project**
- **OpenStreetMap**

Map Types may define key visual aspects such as:

- Map imagery source
- Zoom capabilities
- Labeling and data overlays
- Color format (e.g., full color, grayscale, dark mode)
- Map type (e.g., satellite, road, topographic)

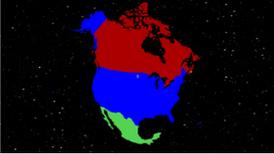
While Map Types themselves cannot be directly edited, they can be assigned to user-created map styles in the **Edit Map Style** editor. Once assigned, users can adjust various properties of their custom map style to modify the appearance and behavior of the map. See [Adding a New Map Style](#) and [Editing a Map Style](#).

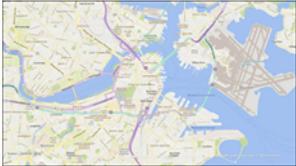


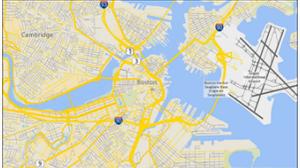
Edit Map Style Editor - Assigning a Map Type to a Map Style

- ★ While the system map types based on **Blue Marble** and **OpenStreetMap** always appear and require no additional configuration, system map types based on **Azure Maps**, **Bing Maps for Enterprise**, and **Mapbox** will only appear once the **External Provider** settings are configured for those providers. See [Assigning an External Maps Service Provider](#) for more information.

The following table lists example MapStyles provided with XPression Maps, along with their availability. These MapStyles can be selected from the **Map Type** drop-down in the **Edit Map Style** window.

Map Type Option	Description	Availability
None	<p>Removes the map from the canvas. It can be used to show freestanding colored country shapes and drawings on a background image.</p> 	Available by default
Blue Marble Satellite	<p>Displays the topographic world image from the NASA Blue Marble image gallery. The resolution of this map is reduced to 500m/px. No logo will be shown on canvas.</p> 	Available by default
Blue Marble Colored	<p>Displays a colored map generated from the Blue Marble height model and a color table. It displays selected elevations in different colors. See Color Map for more information.</p> 	Available by default
Bing Aerial	<p>Displays satellite maps from Bing Maps. You can zoom to street level. The Bing logo appears on the canvas.</p> 	Requires Bing Maps for Enterprise contract from Microsoft
Bing Aerial with Label	<p>Displays satellite or structural maps from Bing Maps with country, city, and road information on top of the maps. You can zoom to street level. The Bing logo appears on the canvas.</p> 	Requires Bing Maps for Enterprise contract from Microsoft

<p>Bing Road</p>	<p>Displays road maps from Bing Maps in color. You can zoom to street level. The Bing logo appears on the canvas.</p> 	<p>Requires Bing Maps for Enterprise contract from Microsoft</p>
<p>Bing Road Dark</p>	<p>Displays road maps from Bing Maps on a dark canvas, useful for highlighting data. You can zoom to street level. The Bing logo appears on the canvas.</p> 	<p>Requires Bing Maps for Enterprise contract from Microsoft</p>
<p>Bing Road Gray</p>	<p>Displays road maps from Bing Maps on a grayscale canvas, useful for highlighting data. You can zoom to street level. The Bing logo appears on the canvas.</p> 	<p>Requires Bing Maps for Enterprise contract from Microsoft</p>
<p>Bing Road Light</p>	<p>Displays road maps from Bing Maps on a light canvas, useful for highlighting data. You can zoom to street level. The Bing logo appears on the canvas.</p> 	<p>Requires Bing Maps for Enterprise contract from Microsoft</p>
<p>Azure</p>	<p>Displays satellite maps from Azure Maps. You can zoom to street level.</p> 	<p>Requires Azure Maps for Enterprise contract from Microsoft</p>
<p>Azure Road</p>	<p>Displays road maps from Azure Maps in color. You can zoom to street level.</p> 	<p>Requires Azure Maps for Enterprise contract from Microsoft</p>

<p>Azure Dark</p>	<p>Displays road maps from Azure Maps on a dark canvas, useful for highlighting data. You can zoom to street level.</p> 	<p>Requires Azure Maps for Enterprise contract from Microsoft</p>
<p>Mapbox</p>	<p>Displays satellite maps from Mapbox. You can zoom to street level. The Mapbox logo appears on the canvas.</p> 	<p>Requires Mapbox license</p>
<p>VT OSM Basic</p>	<p>Displays a colored map that includes OpenStreetMap data.</p> 	<p>Available by default</p>
<p>VT OSM Style A</p>	<p>Displays a colored map that includes OpenStreetMap data.</p> 	<p>Available by default</p>
<p>VT OSM Style B</p>	<p>Displays a colored map that includes OpenStreetMap data.</p> 	<p>Available by default</p>
<p>VT OSM Style C</p>	<p>Displays a colored map that includes OpenStreetMap data.</p> 	<p>Available by default</p>

VT OSM Style D	Displays a colored map that includes OpenStreetMap data. 	Available by default
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About System Map Styles

To help you get started, XPression Maps includes a set of built-in example map styles designed to showcase the software's features and capabilities. Created using the **Edit Map Style** editor, these styles incorporate various [map types](#)^[60], projection types, and other settings to produce realistic map graphics. While primarily intended for demonstration, they can also serve as a starting point for developing [your own custom map styles](#)^[66].



Map Style Manager - System Map Styles

- ★ The availability of some system map styles depends on how the **External Provider** settings are configured in the **Preferences > Connection** page. If a specific system map style does not appear in your **Map Style Manager**, there may be an error in the [External Provider settings](#)^[46] configuration or the map style may have been renamed.
- ★ If **Compact Scene on Save** is selected in the [Output](#)^[37] tab in **File > Preferences**, only the styles used in the scene are saved into the scene.

Adding a New Map Style

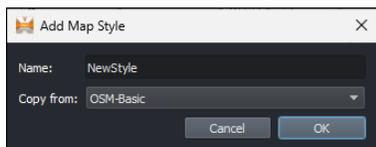
To add a new map style in XPression Maps, use the **Map Style Manager** to customize an existing style and save it under a new name. When creating a new map style, you can choose the map type, projection type, adjust visual properties, and optionally add an OpenStreetMap (OSM) overlay for additional geographic features.

To add a new map style:

1. From the menu bar select **Style > Map Styles** or select the **Map Styles** button  in the toolbar.

The **Map Style Manager** opens.

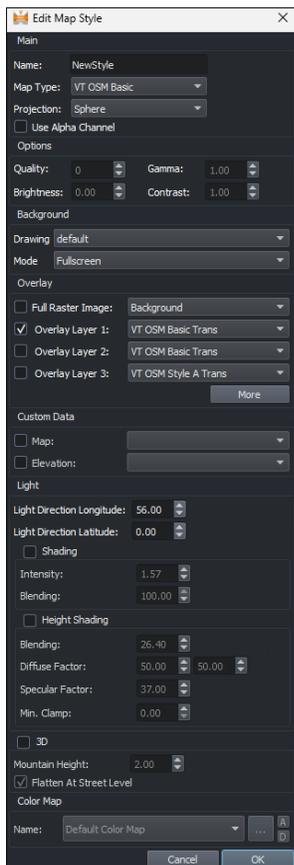
2. Select **Add** to open the **Add Map Style** dialog.



Map Style Manager - Add Map Style

3. In the **Name** field, enter a name for the new map style.
4. From the **Copy from** drop-down, select one of the existing map styles to use as a base for the new map style and select **OK**.

The **Edit Map Style** editor opens.



Edit Map Style Editor

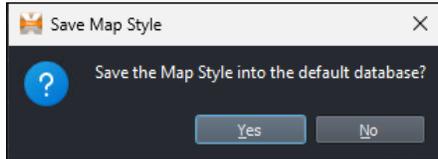
5. Modify the properties of the new map style and select **OK**.

See [Map Style Properties](#) for information about modifying the properties.

The new map style appears in the **Map Style Manager**, marked with the **Save** icon .

6. Select the **Save Style** icon.

The **Save Map Style** confirmation dialog opens.



Save Map Style Confirmation Dialog

7. Select **Yes** to save your new map style into the database.

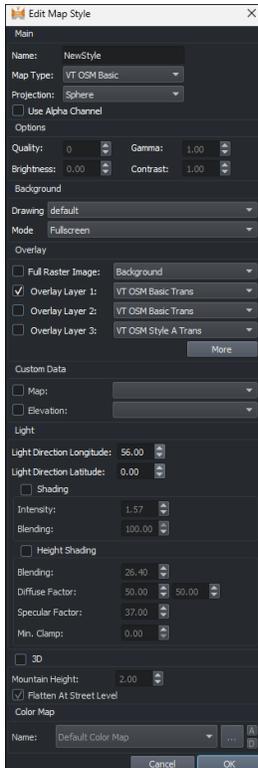
Editing a Map Style

Use the following procedure to customize an existing map style by editing its properties.

To edit an existing map style:

1. From the menu bar select **Style > Map Styles** to open the **Map Style Manager**.
2. Select the map style you want to modify and select **Edit** or double-click the selected map style.

The **Edit Map Style** editor opens.



Edit Map Style Editor

3. Modify the properties of the map style and select **OK**.

See [Map Style Properties](#) for more information.

The **Edit Map Style** editor closes and the **Map Style Manager** reopens. The edited style is highlighted, and the **Save** and **Reset** icons are displayed beside it.

4. Select the **Save** icon if you want to save your changes into the default database or select the **Reset** icon to discard your changes and revert to the last saved version of the style. Then select **Done** to close the **Map Style Manager**.

An exclamation mark at the left of the map style indicates that the style is saved in the scene but not in the database. That style will not be available to be used in other scenes.

The **Save All** button at the bottom of the dialog saves all changes made to all styles in the database.

The **Reset All** button at the bottom of the dialog resets all styles in the database to their last saved version.

Deleting a Map Style

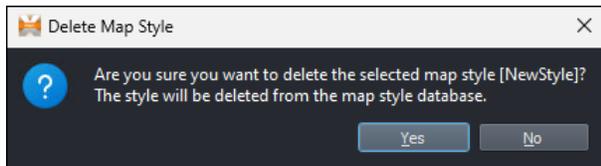
Use the following procedure to delete a custom map style from your XPression Maps system.

★ XPression Maps example map styles cannot be deleted; only **custom map styles** can be removed.

To delete a map style:

1. From the menu bar select **Style > Map Styles** to open the **Map Style Manager**.
2. Select the map style you want to delete and select **Delete**.

The **Delete Map Style** confirmation dialog opens.



Delete Map Style Confirmation Dialog

3. In the **Delete Map Style** confirmation dialog, select **Yes** to delete the map style.

Map Style Properties

Many of the properties of map styles can be customized for a different look. Properties such as map type, projection, brightness, country borders, light direction and mountain height can be edited in the **Edit Map Style** editor. You can even add an OpenStreetMap overlay to display and control geographic features such as borders, roads, and bodies of water.

These properties and others are described in the sections below:

[Main](#) 

[Options](#) 

[Background](#) 

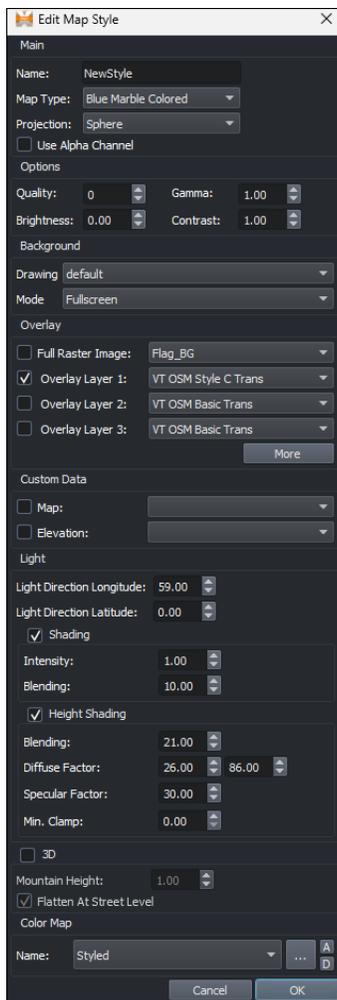
[Overlay](#) 

[Custom Data](#) 

[Light](#) 

[3D](#) 

[Color Map](#) 



Edit Map Style Editor

Main

The following properties appear in the **Main** section of the **Edit Map Style** editor.

Parameter	Description
Name	The name assigned to the map style. System style names cannot be edited. If you've created your own map style, you'll be able to change the name if you want.
Map Type	The style type of the map. System style types cannot be edited. See About Map Types for a list and descriptions of the available map types.
Projection	Defines the projection type of the map. Select one of the following options: Sphere — uses a round shape like a globe Mercator — uses a cylindrical map projection that displays latitude and longitude as a rectangular grid. Linear — uses a map with variables that change proportionally
Alpha Channel	Select the Alpha Channel checkbox if you want to use the Alpha Channel in the final output and see a checkerboard pattern in the preview.

Options

Use the **Options** section to adjust the general appearance of a map style.

Parameter	Description
Quality	Increases or decreases the amount of image content and Zoom Level for a map style. 0 : Normal 1 : Increases the Zoom Level by 1 and downloads 3 times more image content than normal. Labels on Bing Aerial , Bing Road , Azure Road , and Mapbox map styles are displayed at a smaller size. The available quality range is -3 to 3. -1 : Decreases the Zoom Level by 1 and downloads 3 times less image content than normal. Labels on Bing Aerial , Bing Road , Azure Road , and Mapbox map styles are displayed at a larger size. The available quality range is -3 to 3.
Brightness	Increases or decreases the brightness level for the map style.
Gamma	Increases or decreases the gamma level for the map style.
Contrast	Increases or decreases the contrast level for the map style.

Background

Use the **Background** section to adjust the parameters of the background elements in a map/scene.

Parameter	Description
Drawing	From the Drawing drop-down, select a drawing to be displayed as the map/scene background. See Background Drawings ^[135] for more information.
Mode	From the Mode drop-down, select the scaling of the drawing. Fullscreen — shows the background over the whole Canvas . This may distort the drawing. Letterbox — makes the width fit onto the Canvas , while preserving the aspect ratio. Pillarbox — makes the height fit onto the Canvas , while preserving the aspect ratio.

Overlay

These properties control the appearance of geographical elements from the OpenStreetMap layers. A full raster image (a fullscreen image that lies on top of the globe and includes a transparent section) can also be defined.

To configure the overlay parameters:

1. If you want to use a raster image to create a border around the map, in the **Overlay** section of the **Edit Map Style** editor, select the checkbox for **Full Raster Image** and then select a background image from the drop-down.

The background image needs to have a transparent section in the middle for the map to show through.

2. Select the **Overlay Layer(s)** you want to use from the drop-down.

A preset overlay of the layers (each using different colors, icons, etc.) is superimposed on the selected map style.

The options are:

VT OSM Basic Trans

VT OSM Style A Trans

VT OSM Style B Trans

VT OSM Style C Trans

VT OSM Style D Trans

3. Select **More** to open further configurations.

The **Edit Map Style Overlay More** window opens.



Edit Map Style Overlay More Window

★ These overlay functions are legacy features maintained for older scenes. For new map styles, use the OSM Layers instead.

To configure more overlay parameters:

1. Select the checkbox of the geographical element(s) you want to include in the map.
2. For **Country Borders**, **Country Names** and **State Borders** enter or select a value for the line width or font size using the field next to the selected element.
Valid values are 0.10 to 10.00.
3. Select the **Color** button to select a color for the element.
4. From the **Name Style** drop-down, select the style in which you want the names of countries, states and regions to appear.
The location and spelling of the country names can be set through the [Shape Database Viewer](#)^[229].
5. For **Rivers** enter or select a value for the line width or font size using the field next to **Rivers**.
Valid values are 0.10 to 10.00.
6. Select the **Color** button to select a color for the element.
7. For **Rivers** and **Lakes** enter or select a **Max-Rank** and **Out Level** to change the density of the waterways.
Valid values are 10 to 300.
8. For **Ocean Mask**, select the **Color** button to select a color for the element.
If you want to use the **Apply Ocean Mask** feature to hide the parts of a shape that extend into the ocean, the **Ocean Mask** checkbox needs to be selected.

Custom Data

In the **Custom Data** section, satellite and elevation maps that have been imported in the **Custom > Custom Maps** editor can be selected. If enabled, they are drawn on top of the regular (Bing or Blue Marble) maps, ensuring that there are no missing areas. The parameters in the **Custom Data** section are only available when a custom map has been selected.

To configure the custom data parameters:

1. From the menu bar select **Style > Map Styles**, and in the **Map Style Manager**, select the map style for which you want to add a custom map.
OR
Create a new map style with your custom map.
See [To add a new map style](#)^[73] for more information.
2. Select **Edit**.
3. In the **Custom Data** section:
 - To use a custom map, select the **Map** checkbox and from the corresponding drop-down, select the custom satellite map you want to use.
 - To use an elevation map, select the **Elevation** checkbox and from the corresponding drop-down, select the elevation map you want to use.

★ **Elevation** maps provide crisper, better-defined illustrations of height data.

Light

Use this section to edit the parameters for the lighting on the map.

Parameter	Description
Light Direction Longitude	Enter or select the longitudinal direction for the light on the map. This parameter only takes effect if Shading or Height Shading are selected.
Light Direction Latitude	Enter or select the latitudinal direction for the light on the map. This parameter only takes effect if Shading or Height Shading are selected.
Shading	<p>Select this checkbox to enable shading on the map. The Shading function activates a rendering mode that lights the globe with a spotlight from the light direction to simulate the look of sunlight. The Intensity and Blending parameters work together to define the spotlight:</p> <p>Intensity — increases or decreases the intensity of the spotlight. With Blending set to 100, a value of 0.05 will create a small intense spotlight, while a value of 1 or more will create a large, more diffuse spotlight. As you lower the Blending value, the spotlight becomes less noticeable.</p> <p>Range is 0 to 10.</p> <p>Blending — increases or decreases the amount of shading around the spotlight. A value of 0 displays no shading and the globe looks the same as if Shading was disabled. A value of 100 will provide a large amount of shade, making the spotlight more noticeable.</p>
Height Shading	<p>Select this checkbox to enable Height Shading on the map. Height Shading makes the elevated areas of the map more noticeable.</p> <p>The following parameters adjust the height shading appearance:</p> <p>Blending — increases or decreases the amount of relief that is displayed. A value of 0 shows no relief and a value of 100 shows complete relief.</p> <p>Diffuse Factor — enter or select an amount to define how the light will affect the parts of the relief away from the sun. A value of 0 will result in a black color for the affected areas of the map and a value of 100 will result in a shiny white color for the affected areas of the map.</p> <p>The second parameter for the Diffuse Factor defines an offset to the relief as a whole. For a value of 0, some parts of the relief will be totally black. A value of 100 makes the relief totally white.</p> <p>Specular Factor — determines how the light will affect the parts of the relief on which the sun shines directly. A value of 0 will result in a black color for the affected areas of the map and a value of 100 will result in a shiny white color for the affected areas of the map.</p> <p>Min. Clamp — enter or select an amount of shading relief used at locations where the height is equal to or greater than the value of Min. Clamp. The value 0 corresponds to sea level.</p> <p>This parameter only applies to the Blue Marble Colored map type.</p>

3D

The **3D** section allows you to create a real three-dimensional surface of the world generated from the **Blue Marble** map type height data.

Parameter	Description
Mountain Height	Enter or select a scale factor for the height data to make mountains appear higher or lower than normal. A value of 1 corresponds to the correct height. For street level views, the height is interpolated to 0 because the resolution of Blue Marble height data is not sufficient.
Flatten At Street Level	When selected (default), the map flattens and switches to a standard street view at zoom level 120 or above. When disabled, the 3D effect remains, showing elevation details. For better quality, consider loading a higher-resolution height model for the area.

Color Map

This section applies to **Blue Marble Colored** map types only.

Use this section to add, edit, and delete color maps for a style. A color map is a table of height values and colors that will graphically show elevation data in a map.

[Adding a New Color Map](#) 

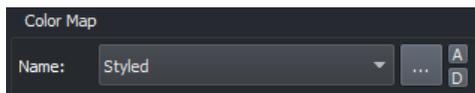
[Saving a New Color Map](#) 

[Editing the Color Map Parameters](#) 

[Deleting a Color Map](#) 

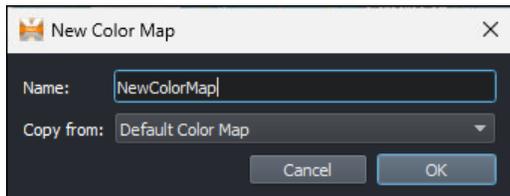
To add a new color map:

1. In the menu bar select **Style > Map Styles** to open the **Map Style Manager**.
2. Select the map style you want to edit (must be a **Blue Marble Colored** map style) and select **Edit**.
3. In the **Edit Map Style** editor, in the **Color Map** section, select the **A** button.



Edit Map Style Editor

4. In the **New Color Map** dialog, enter a name for your new color map.

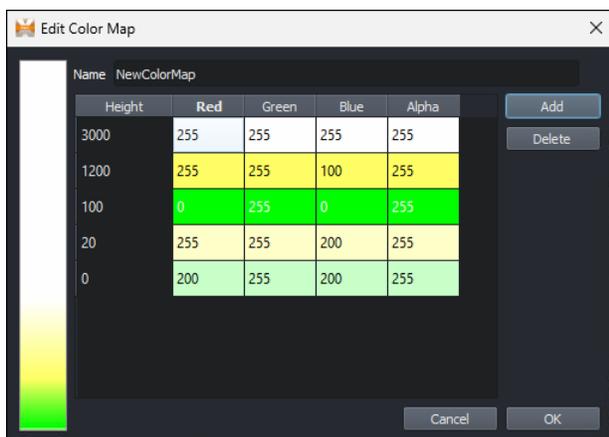


Add Color Map

5. If you want to copy an existing color map to use as a template, from the **Copy from** drop-down, select the color map you want to copy.

There are several default color maps to choose from. As you create new color maps, they will appear in the drop-down.

The **Edit Color Map** dialog opens.



Edit Color Map

6. In the **Edit Color Map** dialog, select a row and do any of the following:
 - Double-click a value in the **Height** column to change the elevation.
 - Double-click within any of the color columns to open the **Select Color** window and change the color of that elevation.
 - Select **Add** to duplicate the row and then edit the duplicate row.
 - Select **Delete** to remove the row.

Any changes will cause a reordering of the table so that the height values are sorted in descending order.
7. When you are satisfied with how your color map looks, select **OK** to close the dialog.

To save a new color map:

1. In the **Edit Map Style** dialog, adjust the properties of the map style as described in [Map Style Properties](#)⁷⁰.
2. Select **OK** to close the dialog.
3. In the **Map Style Manager**, select the **Save** button beside the map style you edited to save the new color map to the database.

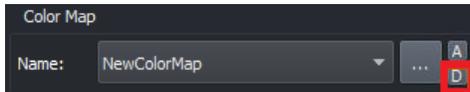
An exclamation mark indicates a color map that hasn't been saved.
4. In the **Save Map Style** confirmation dialog, select **Yes** and then select **Done** to close the **Map Style Manager**.

To edit the color map parameters:

1. From the menu bar select **Style > Map Styles** to open the **Map Style Manager**.
2. Select the map style you want to edit (must be a **Blue Marble Colored** map style) and select **Edit**.
3. In the **Edit Map Style** dialog, in the **Color Map** section, from the **Name** drop-down, select the color map you want to edit.
4. Select the **Edit**  button beside the **Name** drop-down to open the **Edit Color Map** editor and edit the selected color map as described in [To add a new color map](#)⁷⁶.
5. When you have finished editing the color map, select **OK**.
6. In the **Edit Map Style** dialog, select **OK** to close the dialog.
7. In the **Map Style Manager**, select the **Save** button beside the edited map style to save the new color map to the database.
8. In the **Save Style** confirmation dialog, select **Yes** and then select **Done** to close the **Map Style Manager**.

To delete a color map:

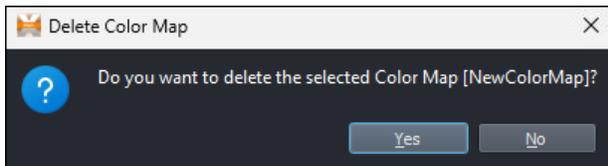
1. From the menu bar select **Style > Map Styles** to open the **Map Style Manager**.
2. Select any **Blue Marble Colored** map style and select **Edit**.
3. In the **Edit Map Style** dialog, in the **Color Map** section, from the **Name** drop-down, select the color map you want to delete.
4. Select the **D** button.



Delete Color Map

★ If the selected color map is a system map, it cannot be deleted; an error message appears.

The **Delete Color Map** confirmation dialog appears.



Delete Color Map

5. Select **Yes** to delete the selected color map.
6. In the **Edit Map Style** dialog, select **OK** to close the dialog.
7. In the **Map Style Manager**, select the **Save All** button to save your change.
8. Select **Done** to close the **Map Style Manager**.

The **Color Map** has been deleted.

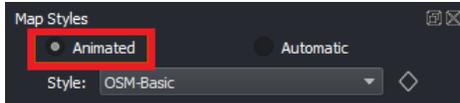
Assigning an Animated Map Style

Use the following procedure to create a map animation that automatically changes styles at specified **Zoom Levels**. For more details, see [Creating Animations](#)^[293].

Assign different map styles to specific **Zoom Levels**. As the map zooms in or out, the style updates automatically according to the table defined in the **Automated Map Style** settings.

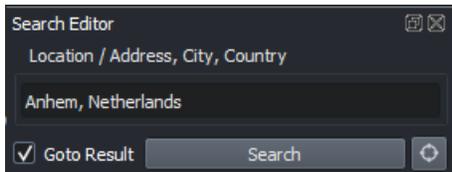
To assign a map style change to a camera Key Frame:

1. In the **Map Styles** panel, select the **Animated** button, if it's not already selected.



Map Styles - Animated Option

2. In the **Search Editor**, enter the location at which you want to animate the map and select **Search** or press the **Enter** key.



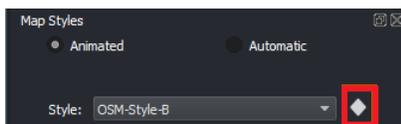
Enter Location

3. In the **Map Styles** section, from the **Style** drop-down, select the map style for the beginning of the animation.
4. From the camera parameters below the **Canvas**, select a starting **Zoom Level**.



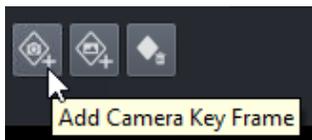
Camera Parameters - Zoom Level

5. With the timeline slider at the beginning of the timeline (frame 0), select the **Key Frame** button to the right of the **Style** drop-down to Key Frame the starting map style.



Map Style Key Frame

6. Select the **Add Camera Key Frame** button to Key Frame the starting zoom level.



Add Camera Key Frame

A blue camera Key Frame is added to the timeline above the scale.

7. Move the timeline slider to the point in the timeline at which you want to change the map style.

Alternatively, select any point in the timeline to move the slider to that point or enter the position in the frame counter to the left of the timeline.



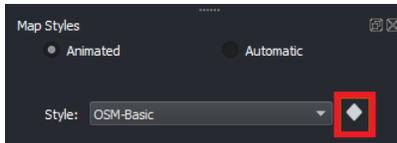
Frame Counter

8. From the **Style** drop-down, select the next map style you want to apply to your scene.
9. From the camera parameters below the **Canvas**, select a **Zoom Level** for the new map style.



Map Style Key Frame

10. In the **Map Styles** section, select the Key Frame button to the right of the **Style** drop-down to key frame the new map style.



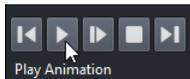
Map Style Key Frame

11. Select the **Add Camera Key Frame** to Key Frame the new zoom level.



Add Camera Key Frame

12. Select the **Play Animation** button in the animation toolbar to play the animation.



Animation Editor - Play Animation

13. Save the changes to the scene.

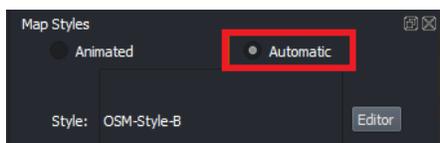
Assigning an Automatic Map Style

Use the following procedure to build a map animation that automatically changes styles at specific zoom levels.

Assign different map styles to individual map layers. As the animation zooms in or out, the map style automatically updates when it reaches a layer with an assigned style. This approach produces dynamic zoom-level changes, such as starting with a satellite view at a distant scale and transitioning to a road map as the animation zooms into a specific location.

To assign an automatic map style change to a map's zoom layer:

1. In the **Map Styles** panel, select the **Automatic** button.



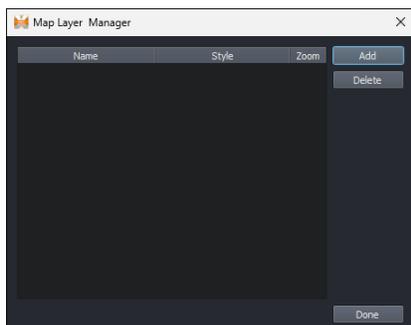
Map Styles Tab - Automatic Option

2. Move the map on the **Canvas** to the location that you want to show.

Alternatively, in the **Search Editor**, enter a location in the **Location / Address, City, Country** field and select **Search**.

3. Select the **Editor** button that appears beside the **Style** selector.

The **Map Layer Manager** opens.

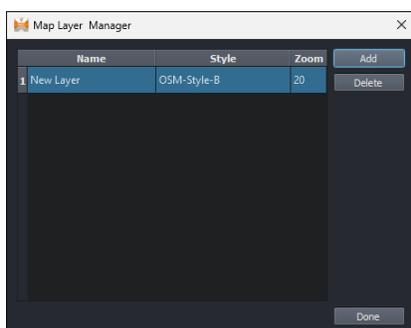


Map Layer Manager

4. Select **Add** to add a new layer.

Each layer represents a point at which the map style will change.

By default, the current map style will be entered for the new layer along with a default zoom level of 20.



Map Layer Manager - Add New Layer

5. In the **Name** column, double-click **New Layer** and give the layer a meaningful name.

This could be the name of the country or the area of the map that you want to display at the selected **Zoom Level**.

6. In the **Style** column, double-click the map style and from the drop-down, select the style of map you want to apply to the layer.

7. In the **Zoom** column, double-click the default **Zoom Level** and enter a value or select the arrows to select the **Zoom Level** to apply to the layer.

★ The table is ordered by ascending **Zoom** levels, so a change in the **Zoom** value can result in a reordering of the layers.

8. Repeat steps 2 to 7 to add additional layers and then select **Done** to close the **Map Layer Manager**.

During animation, as each **Zoom Level** is reached, the map style will change according to the table.

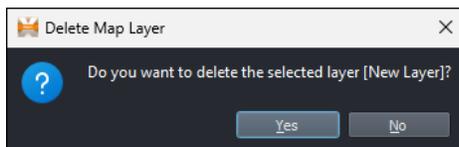
9. Save the changes to the scene.

To delete a map layer:

1. Select the **Editor** button that appears beside the **Style** selector to open the **Map Layer Manager**.

2. In the **Map Layer Manager**, select the layer you want to delete and select **Delete**.

The **Delete Map Layer** confirmation dialog opens.



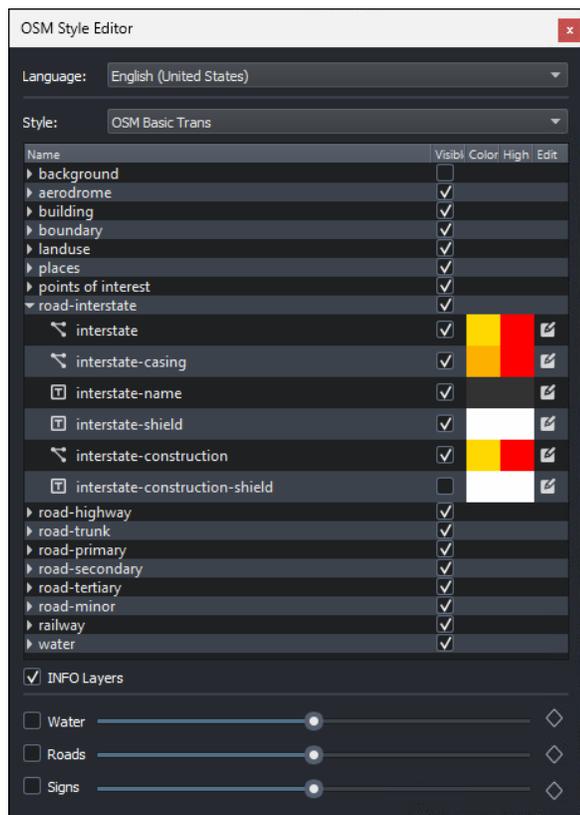
3. In the **Delete Map Layer** confirmation dialog, select **Yes**.

4. When you have finished deleting layers, select **Done** to close the **Map Layer Manager**.

Editing OSM (OpenStreetMap) Map Styles

The **OSM Style Editor** enables customization of scenes that use a map style based on OpenStreetMap as the [map type](#)^[60] or [overlay layer](#)^[72]. With the **OSM Style Editor**, you can adjust the background color, visibility, colors, parameters, and labels of various layers in the selected map or its overlay. Elements are organized into categories for easy navigation.

Additionally, you can change the language of labels in real time by selecting a language from the drop-down menu.



OSM Style Editor

- ★ All street name suffixes in OSM maps are styled the same in XPression Maps. By default, an abbreviated suffix with no punctuation is used (ST, AVE, RD, DR, etc.). It is possible to change the suffix style. If this is something you would like to do, contact techsupport@rossvideo.com.

The following topics are discussed in this section:

[Overview of Editing OSM Map Styles](#)^[84]

[Editing OpenStreetMap Layers](#)^[85]

[Editing Individual Layer Elements on the Map](#)^[99]

[Showing and Hiding Information Layers](#)^[100]

[Real-Time Language Support](#)^[101]

[OSM Replacement Drawings](#)^[106]

Overview of Editing OSM Map Styles

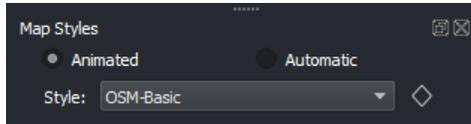
This is an overview of the procedure for editing OpenStreetMap styles. For detailed instructions on using the **OSM Style Editor**, see [Editing OpenStreetMap Layers](#) ⁸⁵.

To edit and save a new OpenStreetMap style:

1. In the **Map Styles** panel, from the **Style** drop-down, select an **OpenStreetMap Style**.

It is preferable to add a new map style copied from an existing style and edit the new one.

For instructions on adding a map style see [Creating and Assigning Map Styles](#) ⁵⁹.

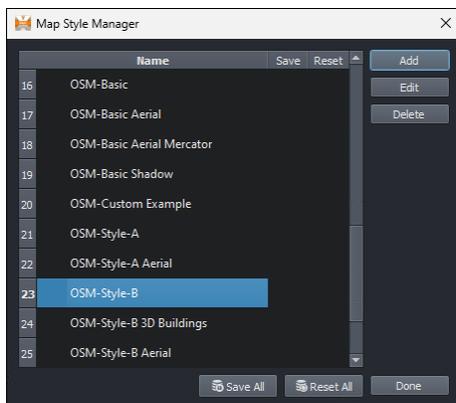


Map Styles Panel - OSM Map Style

2. Use the **OSM Style Editor** to modify the map style's elements.

See [Editing OpenStreetMap Layers](#) ⁸⁵ for instructions.

3. Once you are finished editing the map style's elements, select **Style > Map Styles** from the menu bar to open the **Map Style Manager**.

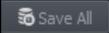


Map Style Manager

4. Select the map style you have modified.

An exclamation mark  at the left of the map style indicates that the style is not saved in the database, or has been changed from the version saved in the database. In this case, the style version is saved in the scene but will not be available for use in other scenes.

5. Select the **Save** icon  to save your changes into the default database or select the **Reset** icon  to discard your changes and revert to the last saved version of the style.

The **Save All** button  at the bottom of the dialog saves all changes made to all styles in the database.

The **Reset All** button  at the bottom of the dialog resets all styles in the database to their last saved version.

6. Select **Done** to close the **Map Style Manager**.

Editing OpenStreetMap Layers

The following topics provide instructions for changing the background color, visibility, layer color, and layer highlight color of an OpenStreet map. Additional guidance is provided for how to edit the layer parameters and individual layer elements.

[Changing the Background Color of an OSM Map](#) 

[Changing the Visibility of a Layer](#) 

[Changing the Color of a Layer](#) 

[Changing the Highlight Color of a Layer](#) 

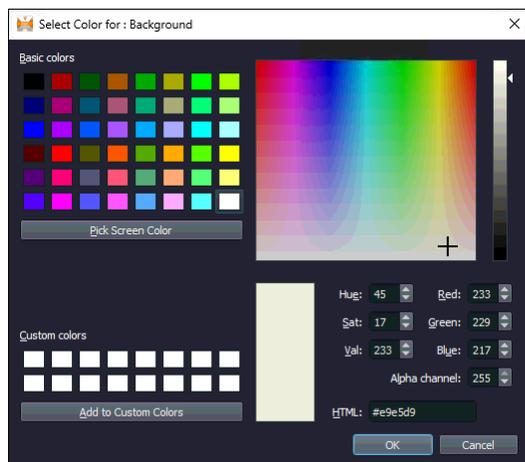
[Switching a Layer from Color to Highlight](#) 

[Editing the Parameters of a Layer](#) 

To change the background color of an OSM map:

1. In the **OSM Style Editor**, from the layer list, expand **Background** and then select the **Background** layer.
2. Select **Color**.

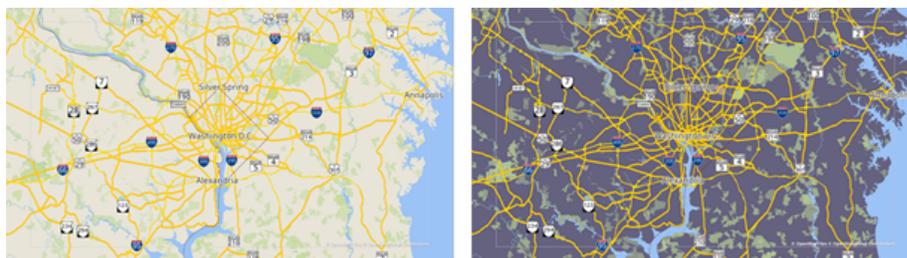
The **Color Selector** opens.



OSM Style Editor Color Selector - Background

3. Select a color swatch from the **Basic** colors or use the slider or **RGB** values to create a custom color. If you create a custom color, select **Add to Custom Colors** so that it's available for subsequent use.
4. Select **OK**.

The background color changes to the new color.



Background Color Change

To change the visibility of a layer:

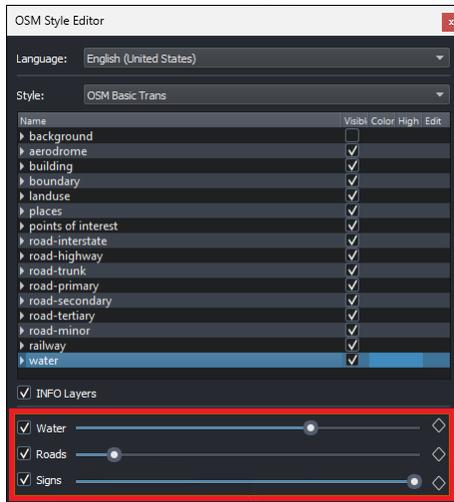
- In the **OSM Style Editor**, in the **Visible** column, clear the checkbox beside a layer to hide it, or select the checkbox to show the layer.



OSM Style Editor Visibility Checkbox

OR

1. In the **OSM Style Editor**, select the checkbox of the **Water, Roads, Signs** layer.



OSM Style Editor - Layer Sliders and Visibility Controls

2. Move the sliders to set the level of detail for the layers:
 - Slide right to display more water, roads, or road signs.

OR

- Slide left to reduce the number of visible features.

3. To control visibility levels for individual frames during animation, select the **Key Frame icon**

When left unselected, the visibility level will apply throughout the animation when the checkbox is selected.

4. Use the layer's checkbox to apply or remove OSM layer setting for the scene's map.

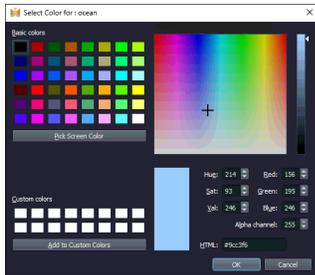
To change the color of a layer:

1. In the **OSM Style Editor**, expand the category containing the layer you want to edit.
2. In the **Color** column, select the color swatch beside the layer.



OSM Style Editor Color Swatch

The **Color Selector** for that layer opens.



OSM Style Editor Color Selector

3. Select a color swatch from the **Basic** colors or use the slider or **RGB** values to create a custom color.
If you create a custom color, select **Add to Custom Colors** so that it's available for subsequent use.
4. Select **OK**.

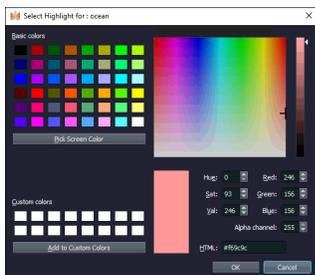
To change the highlight color of a layer:

1. In the **OSM Style Editor**, expand the category containing the layer you want to edit.
2. In the **High** column, select the highlight color swatch beside the layer.



OSM Style Editor Highlight Swatch

The **Highlight Selector** for that layer opens.



OSM Style Editor Highlight Selector

3. Select a color swatch from the **Basic** colors or use the slider or **RGB** values to create a custom color.
If you create a custom color, select **Add to Custom Colors** so that it's available for subsequent use.
4. Select **OK**.

To switch a layer from color to highlight:

- If the layer's **Allow Select**  parameter is selected, do one of the following:

Double-click on the layer on the **Canvas** to toggle between using the configured **Color** or the **Highlight**.

Double-clicking selects all the parts of a layer that have the same reference or same name.



Double-click to Change Color

OR

Right-click on the layer on the **Canvas** and from the context menu, select **Set color > Color** or select **Set color > Highlight**.

Right-clicking selects the part of the layer that at the chosen location. In this mode, only the selected section is highlighted.



Right-click to Change Color

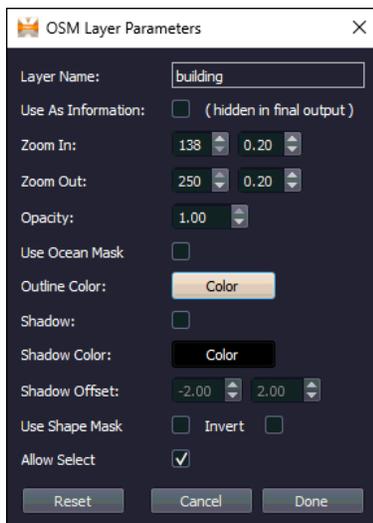
To edit the parameters of a layer:

1. In the **OSM Style Editor**, expand the category containing the layer that you want to edit.
2. In the **Edit** column, select **Edit** for the layer you want to edit.



OSM Style Editor Edit Button

The **OSM Layer Parameters** dialog opens. There are at least 4 editable parameters for each layer, **Use As Information**, **Zoom In**, **Zoom Out** and **Opacity**. The other parameters depend on the type of layer that is selected.



OSM Layer Parameters

3. Select the **Use As Information** checkbox if you don't want the layer to appear in the final output but want it showing while you edit the map.

You can also deselect the **Visible** checkbox for a category of layers if you don't want any of them to appear in the final output. For example, if you don't want any buildings in the final output, deselect the **building** layer checkbox.

4. Enter a value or use the arrows to adjust the **Zoom In** level at which the layer will appear.
The adjacent field determines the amount of time, in seconds, it will take for the layer to dissolve in.
1.00 = The layer is fully visible as soon as the **Zoom In** level is reached.
2.00 = The layer dissolves in gradually over 2 seconds once the **Zoom In** level is reached.
5. Enter a value or use the arrows to adjust the **Zoom Out** level at which the layer will disappear.
The adjacent field determines the amount of time, in seconds, it will take for the layer to dissolve out.
1.00 = The layer disappears immediately after the **Zoom Out** level has been reached.
2.00 = The layer dissolves gradually over 2 seconds, after the **Zoom Out** level has been reached.
6. Enter a value or use the arrows to adjust the **Opacity** of a layer, making it more or less transparent.

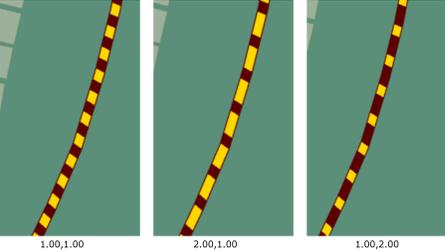
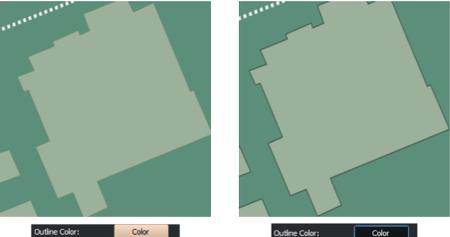
7. Adjust any additional parameters as described in the following table:

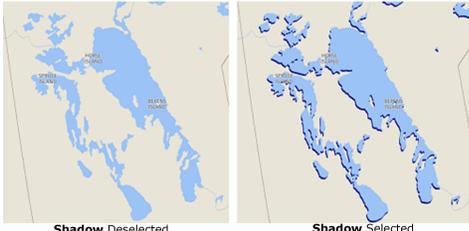
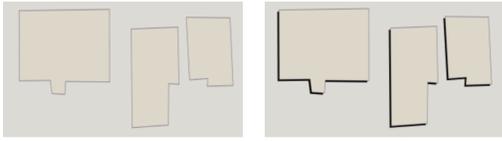
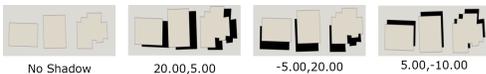
★ The parameters in the table below are listed alphabetically, the order will vary depending on the layer you are editing.

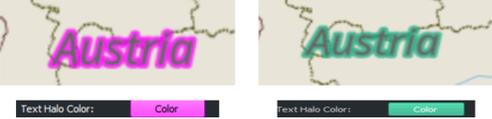
Parameter	Description
<p>Allow Select</p>	<p>OSM layers support both a primary and a highlight color.</p> <p>When the Allow Select checkbox is selected (default, except for the ocean layer), double-clicking the layer switches it from the primary to the highlight color.</p> <p>Clearing the Allow Select checkbox prevents this interaction, ensuring the layer remains in its primary color.</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <div style="display: flex; justify-content: space-around; align-items: center;"> Allow Select Selected Allow Select Deselected </div>
<p>Background Color</p>	<p>Select the Color button to open the Color Selector and select the color for the Text Background.</p> 
<p>Background Opacity</p>	<p>Enter a value or use the arrows to adjust the opacity of the background color for the text.</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <div style="display: flex; justify-content: space-around; align-items: center;"> Background Opacity - 1.00 Background Opacity - 0.60 </div>

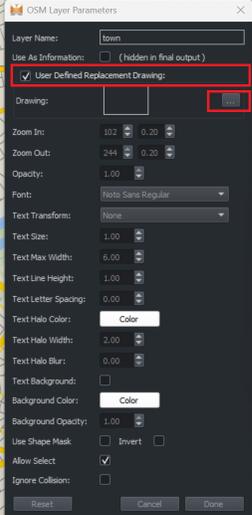
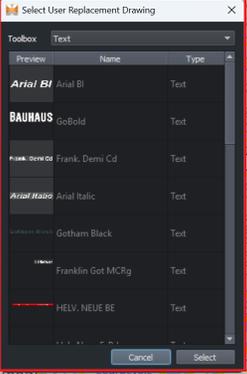
Parameter	Description
Font	<p>Use the drop-down to select a font for the text.</p> <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  <p>PT Sans Bold Italic</p> </div> <div style="text-align: center;">  <p>Roboto Bold</p> </div> <div style="text-align: center;">  <p>Metropolis Extra Bold</p> </div> </div>
Icon Color	<p>Select the Color button to open the Color Selector and select a color for the icon.</p> 
Icon Opacity	<p>Enter a value or use the arrows to adjust the opacity of the icon. The values range from 0.00 to 1.00.</p> <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  <p>1.00</p> </div> <div style="text-align: center;">  <p>0.50</p> </div> </div>
Icon Size	<p>Enter a value or use the arrows to adjust the size of the icon. The values range from 0.00 to 0.99.</p> <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  <p>2.00</p> </div> <div style="text-align: center;">  <p>25.00</p> </div> </div>
Icon Text Fit	<p>Select to link the size of the icon to the text or the size of the text to the icon. Some examples are shown below.</p> <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  <p>Unlinked</p> </div> <div style="text-align: center;">  <p>IconFitsText KeepAspect</p> </div> <div style="text-align: center;">  <p>TextFitsIcon KeepAspect</p> </div> </div>

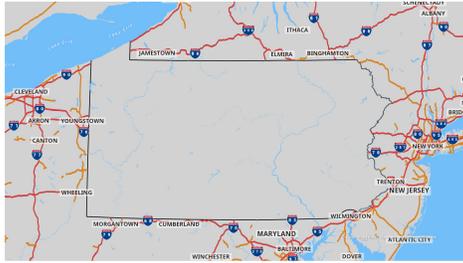
Parameter	Description
<p>Ignore Collision</p>	<p>When checked, all OSM Layers will be displayed, even if they overlap at the current zoom level.</p> <p>When cleared, higher level layers will be displayed until a zoom level is reached that allows room for other level layers to be displayed. Applies to Text layers only.</p> <div style="display: flex; justify-content: space-around;">   </div> <p style="text-align: center;">Deselected Selected</p>
<p>Invert</p>	<p>When both the Use Shape Mask and Invert are selected, the OSM Layers that are inside of the shape mask are hidden. When the Use Shape Mask is selected and Invert is cleared, the OSM Layers that are outside of the shape mask are hidden.</p> <div style="display: flex; justify-content: space-around;">   </div> <p style="text-align: center;">Use Shape Mask and Invert Selected Use Shape Mask Selected and Invert Deselected</p>
<p>Is Mask</p>	<p>When selected, the layer is designated as one that can be used as a mask. Whether or not the mask is applied to the scene is controlled by the Use Shape Mask setting. If selected for Ocean Layer, the ocean masks out water from satellite and OSM backgrounds.</p> <div style="display: flex; justify-content: space-around;">   </div> <p style="text-align: center;">Is Mask Deselected Is Mask Selected</p>
<p>Line Gap Width</p>	<p>Enter a value or use the arrows to adjust the gap between the 2 lines of a casing, such as the bridge_major_casing.</p> <div style="display: flex; justify-content: space-around;">   </div> <p style="text-align: center;">Line Gap Width: 1.00 Line Gap Width: 2.00</p>

Parameter	Description
<p>Line Stipple</p>	<p>Select if you want to give a road a dotted line effect.</p> 
<p>Line Stipple Pattern</p>	<p>Enter a value or use the arrows to adjust the width of the dot (1st field) and the width of the space between the dots (2nd field).</p> 
<p>Line Width</p>	<p>Enter a value or use the arrows to adjust the width of the line.</p> 
<p>Opacity</p>	<p>Enter a value or use the arrows to adjust the opacity of the text.</p> 
<p>Outline Color</p>	<p>Select the Color button to open the Color Selector and select a new color for the outline of buildings (applies to building layer only).</p> 

Parameter	Description
<p>Shadow</p>	<p>Select the checkbox to add a shadow to the layer.</p> 
<p>Shadow Color</p>	<p>If you've chosen to add a shadow, select the Color button to open the Color Selector and select a color for the shadow.</p> 
<p>Shadow Offset</p>	<p>Use the arrows or enter a value in the Offset fields to change the position of the shadow. The first field changes the horizontal position. The second field changes the vertical position.</p> 
<p>Show Maritime</p>	<p>When selected, the boundaries are displayed in the water. When cleared, the boundaries are not displayed in the water. Applies to boundary layers only.</p> 
<p>Text Background</p>	<p>Select the checkbox to insert a rectangle as a background to the text. Select the Color button to open the Color Selector and select a color for the background.</p> 
<p>Text Halo Blur</p>	<p>Enter a value or use the arrows to adjust the amount of blur in the text halo.</p> 

Parameter	Description
Text Halo Color	<p>Select the Color button to open the Color Selector and select a color that will surround the text characters.</p> <p>This parameter only works if the value in Text Halo Width is greater than 0.</p> 
Text Halo Width	<p>Enter a value or use the arrows to adjust the thickness of the text halo.</p> 
Text Letter Spacing	<p>Enter a value or use the arrows to adjust the amount of space between the characters of the text.</p> 
Text Line Height	<p>Enter a value or use the arrows to increase or decrease the space between lines of text.</p> 
Text Max Width	<p>Enter a value or use the arrows to increase or decrease the maximum number of characters allowed in one line of text.</p> <p>Exceeding the Text Max Width will cause a line break, where possible.</p> 
Text Size	<p>Enter a value or use the arrows to adjust the size of the existing label text.</p> 

Parameter	Description
Text Transform	<p>Use the drop-down to select whether the text should be UPPERCASE, lower case or none (mixed case).</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Text Transform UPPERCASE</p> </div> <div style="text-align: center;">  <p>Text Transform lowercase</p> </div> <div style="text-align: center;">  <p>Text Transform None</p> </div> </div>
Use Abbreviation	<p>When the Use Abbreviation checkbox is selected the text layer will display in abbreviated text.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Use Abbreviation Deselected</p> </div> <div style="text-align: center;">  <p>Use Abbreviation Selected</p> </div> </div>
Use Defined Replacement Drawing	<p>Check to add a user-defined replacement drawing for the layer.</p> <p>Then select the Browse button (⋮) to select a replacement drawing from one of the following Drawing Toolboxes, which contain text drawings:</p> <ul style="list-style-type: none"> • Text • Web Examples • OSM Replacement • Your custom group <p>When unchecked, a replacement drawing that is the same as the OSM text will be added. This could be used to add a label at a location where there isn't one or to change the size or the orientation of the text.</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div>

Parameter	Description
<p>Use Ocean Mask</p>	<p>When selected, the OSM Layers that are over the ocean are covered by the water layer instead of being overlayed on top of the water. This can be used to hide Country/State Boundaries. When Use Ocean Mask is cleared, the boundaries are visible in the ocean and boundaries will cut at the shoreline.</p> <div style="display: flex; justify-content: space-around;">   </div> <div style="display: flex; justify-content: space-around; font-size: small;"> Ocean Mask deselected Ocean Mask selected </div>
<p>Use Shape Mask</p>	<p>When selected and Invert is cleared, the OSM Layers that are outside of the shape mask are hidden, which visually emphasizes the form and content of what's inside the shape. When both Use Shape Mask and Invert are selected, the OSM Layers that are inside of the shape mask are hidden.</p> <div style="display: flex; justify-content: space-around;">   </div> <div style="display: flex; justify-content: space-around; font-size: small;"> Use Shape Mask Selected and Invert Deselected Use Shape Mask and Invert Selected </div>
<p>Vignette</p>	<p>Select the checkbox to apply a vignette to the surfaces of road, interstate, or highway shields. Use the arrows to adjust the darkness of the vignette - lower to darken, increase to lighten.</p> <div style="display: grid; grid-template-columns: repeat(2, 1fr); gap: 10px;"> <div style="text-align: center;">  <p>Vignette deselected</p> </div> <div style="text-align: center;">  <p>Vignette: 1.50</p> </div> <div style="text-align: center;">  <p>Vignette: 1.00</p> </div> <div style="text-align: center;">  <p>Vignette: 0.00</p> </div> </div>

★ When editing an **OSM Layer Parameter**, changing the map style while the parameter window is open will prevent updates from displaying. To apply changes correctly, close the parameter window and reopen it after switching map styles.

8. Select **Done** if you are satisfied with your changes.

OR

Select **Reset** to restore the **OSM Layer Parameters** to their original settings.

OR

Select **Cancel** to discard your changes.

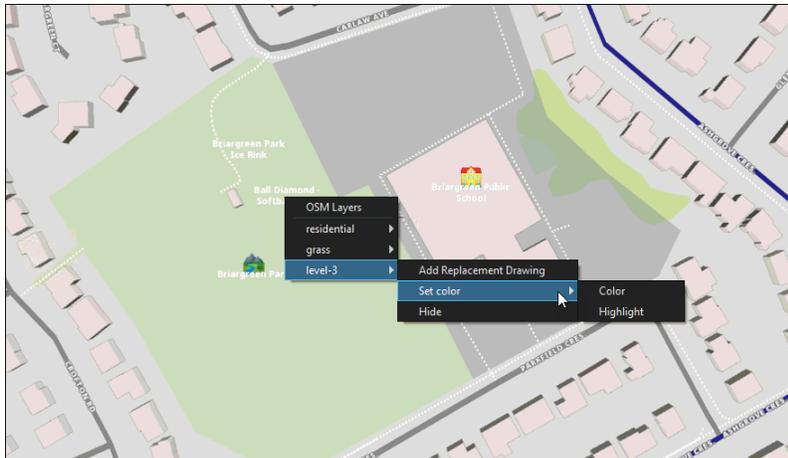
Editing Individual Layer Elements on the Map

While the **OSM Style Editor** allows you to customize and apply changes to map style elements, it can sometimes be quicker to edit individual layer elements directly on the map. For each element, you can toggle between the main and highlight colors or choose to hide it entirely. Additionally, you can overlay a custom drawing on top of a place label.

To edit individual elements:

1. Right-click on the element in the map.

A menu opens, listing each layer that appears in that location.



OSM Editing Menu

2. To change the color of an element, select **Set color** and from the context menu, select either **Color** or **Highlight**.

Alternatively, you can double-click the layer to switch between the **Color** and **Highlight** colors.

The layer changes to the color or highlight that has been selected for that layer in the **OSM Style Editor**.

3. To hide the element, select **Hide**.

- To make the element visible again, press **Alt + Right-click**.

4. To add a replacement drawing on top of a text label, select **Add Replacement Drawing**.

If a user-defined replacement drawing has been set for that layer in the **OSM Style Editor** the text label will be replaced by that replacement drawing. If no user-defined replacement drawing has been set, a drawing that is identical to the text label will be added.

For information on defining a replacement drawing, see [Adding OSM Replacement Drawings](#)¹⁰⁶.

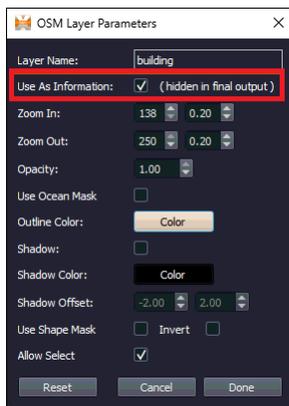
Showing and Hiding Information Layers

You may not want all the layers of a map to be displayed in your final output. Selected layers can be hidden in the **OSM Style Editor**. The exception is that if you've highlighted a particular road, area, building, etc., or created a replacement drawing of a text label by double-clicking, that element will remain visible in the final output, while all other elements in the selected layer will be hidden.

To hide a layer:

1. In the **OSM Style Editor**, expand the category containing the layer that you want to edit.
2. Select the **Edit** button beside the layer you want to hide.

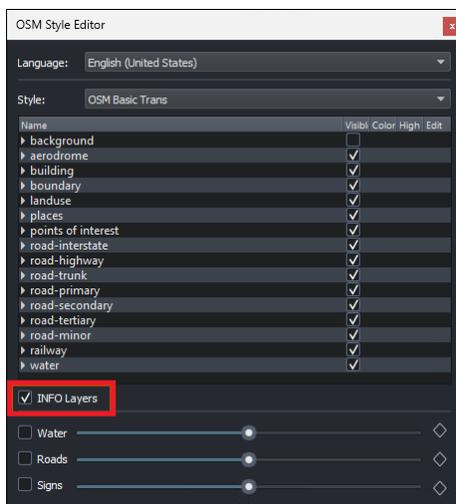
The **OSM Layer Parameters** dialog opens.



OSM Layer Parameter

3. In the **OSM Layer Parameters** dialog, select the **Use As Information** checkbox and select **Done**.
4. In the **OSM Style Editor**, clear the **INFO Layers** checkbox to view the scene with the selected layers hidden.

By default, the **INFO Layers** checkbox is selected, indicating that all layers are visible. When cleared, the layers which have been chosen to be hidden, will not be visible.



OSM Style Editor

5. Select **INFO Layers** again to view your scene with the layers displayed.

When the scene is recorded, those layers will not be visible.

Real-Time Language Support

The **OSM Style Editor** allows you to instantly switch the language of OpenStreetMap labels in real time. This feature is especially useful in multilingual workplaces, where map templates can be saved in one language and exported in others. Language translations are provided by the global OpenStreetMap community where translation for a selected language exists.

The following topics are discussed below:

[Converting the Language of an OSM Map](#)^[101]

[Editing the Translation and/or Spelling of Languages](#)^[102]

[Adding Missing Labels to the Map](#)^[103]

[Removing Translations From a Map](#)^[103]

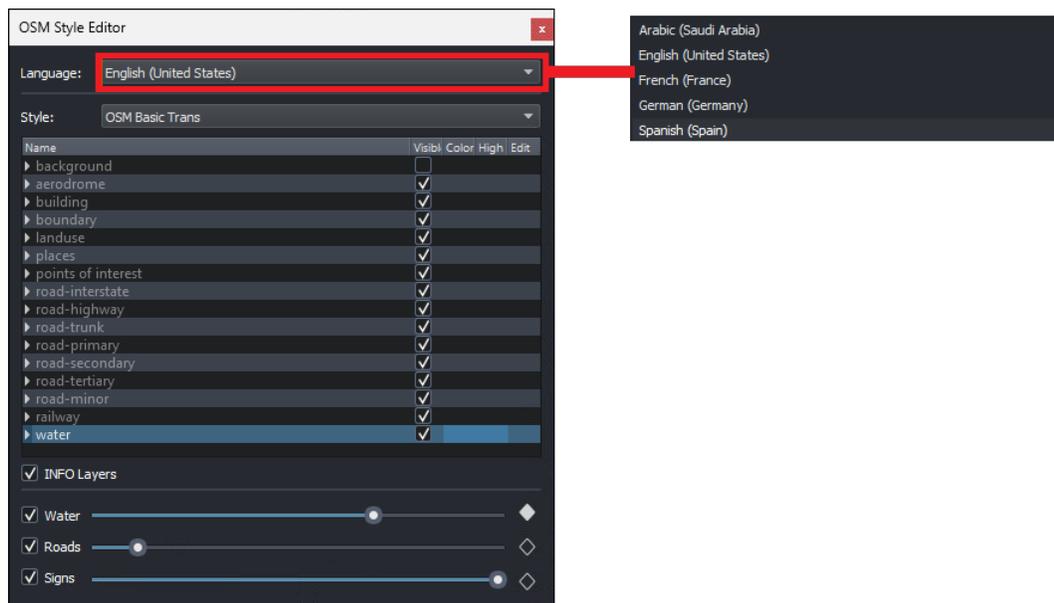
[Configuring Languages](#)^[104]

To convert the language of an OSM Map:

- In the **OSM Style Editor**, select a **Language** from the drop-down.

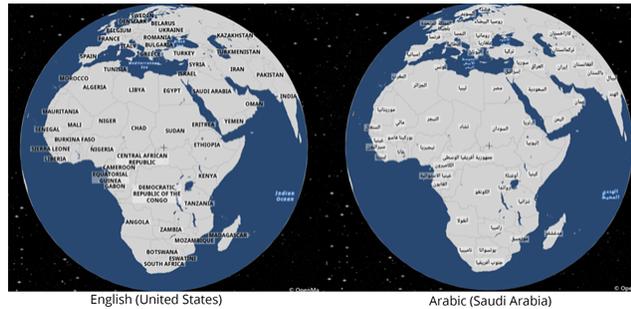
The default options are:

- Arabic
- English
- French
- German
- Spanish



OSM Style Editor - Language

The map will display labels in the selected language.

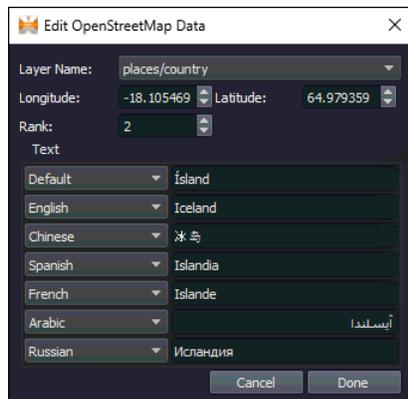


OSM Style Labels With Language Change

Once a language is selected, XPression Maps will continue to populate maps with that language until it is changed.

To edit the translation and/or spelling of languages (optional):

1. Select the text label or drawing you want to edit on the **Canvas**.
2. Press **Shift + right-click** and select whether you want to edit or remove the text label or drawing.
3. Select edit to open the **Edit OpenStreetMap Data** window.



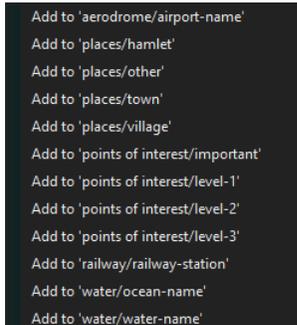
Edit OpenStreetMap Data Window

3. Edit the necessary fields and select **Done**.

★ Updates made to the labels are distributed and applied to every system connected to the shared database regardless of the selected OSM Map Style.

To add a missing label to the map:

1. Determine the longitude and latitude coordinates of the airport, place or body of water you want to add.
2. In the map area where you want to add data, press **Shift + Right-click** to open the **Add Data window**.



Add Data Window

3. Select the data label you want to add.
The **Add OpenStreetMap Data Window** opens.
4. In the **Layer Name** drop-down, select the type of layer.
5. In the **Longitude** and **Latitude** fields, enter the coordinates.
6. In the **Rank** field, use the arrows to determine which ranking the new layer name will take.
The default **Rank** is **1**.
7. In the **Default Text** field, enter the display name.
8. Use the **Text** drop-downs to select the languages in which to display the text.
The default languages are: **English, Chinese, Spanish, French, Arabic** and **Russian**.
9. Select **Done** to save the data.
The data for the selected airport, place or body of water will be displayed on the map.

To remove translations from a map:

1. Select the text label you want to remove on the **Canvas**.
 2. Press **Shift + right-click**, then choose one of the following:
 - **Remove** — Deletes the translation.
 - **Reset** — Restores the translation to its default value
- ★ Labels removed from the map template are distributed and applied to all users that have access to the map.

Configuring Languages

Language translations are supplied from the OpenStreet Maps global community. To configure language options, edit the language codes in the **Country Code Text Document** located in the XPression Maps installation files.

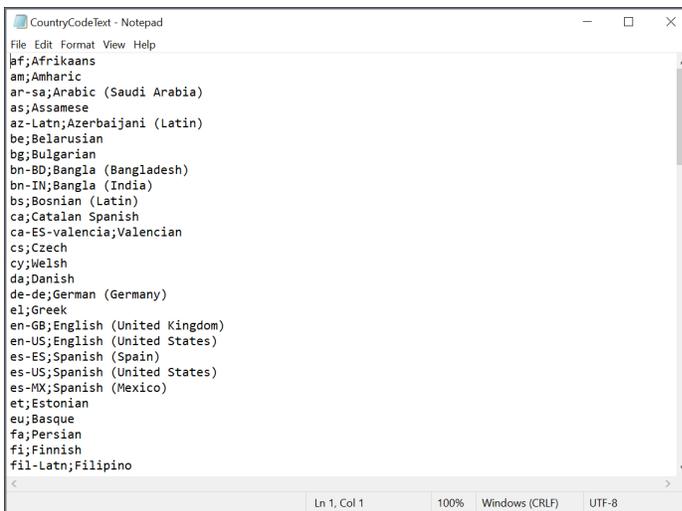
★ **Country Code Text Document** is a master list for all users, do not edit this list.

To configure translation codes for XPression Maps:

1. Navigate to **C:\Program Files\XPression Maps\DB** folder and open the two Text Documents:

- **CountryCodeText** - this master list is supplied by the OpenStreetMaps global community and contains the translation codes for each language provided. Use this list to copy language codes into the **WorkCountryCodeText** document.

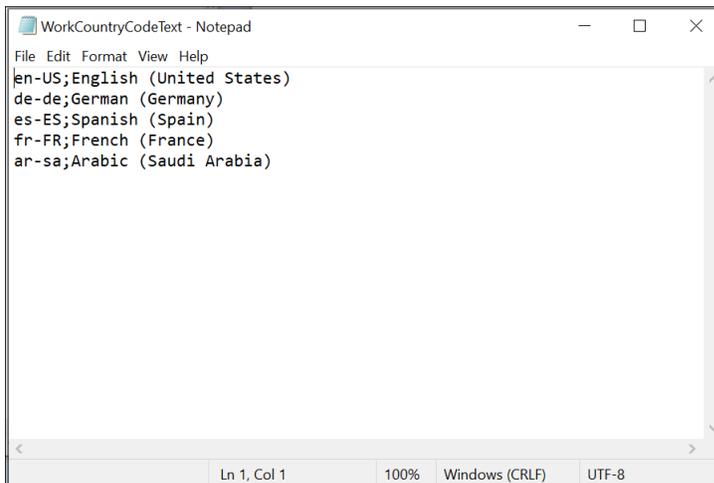
★ Do not make changes in this document.



```
CountryCodeText - Notepad
File Edit Format View Help
af;Afrikaans
am;Amharic
ar-sa;Arabic (Saudi Arabia)
as;Assamese
az-Latn;Azerbaijani (Latin)
be;Belarusian
bg;Bulgarian
bn-BD;Bangla (Bangladesh)
bn-IN;Bangla (India)
bs;Bosnian (Latin)
ca;Catalan Spanish
ca-ES-valencia;Valencian
cs;Czech
cy;Welsh
da;Danish
de-de;German (Germany)
el;Greek
en-GB;English (United Kingdom)
en-US;English (United States)
es-ES;Spanish (Spain)
es-US;Spanish (United States)
es-MX;Spanish (Mexico)
et;Estonian
eu;Basque
fa;Persian
fi;Finnish
fil-Latn;Filipino
Ln 1, Col 1 100% Windows (CRLF) UTF-8
```

CountryCodeText File

- **WorkCountryCodeText** - this is the local working list of language codes that can be modified as needed. Paste codes from the **CountryCodeText** file into the **WorkCountryCodeText** file to add them to the language drop-down in the **OSM Style Editor**.



```
WorkCountryCodeText - Notepad
File Edit Format View Help
en-US;English (United States)
de-de;German (Germany)
es-ES;Spanish (Spain)
fr-FR;French (France)
ar-sa;Arabic (Saudi Arabia)
Ln 1, Col 1 100% Windows (CRLF) UTF-8
```

WorkCountryCodeText File

2. Select **File > Save** to save configurations in the **WorkCountryCodeText** file and close both windows.

3. Restart **XPression Maps**.

The new language appears.

★ When changing languages, it's important to note that fonts for text drawings and labels need to be supported for the selected languages.

Adding OSM Replacement Drawings

Replacement drawings are text drawings that substitute for existing map labels. These replacement labels are positioned approximately where the original labels would appear. During production, all layers set to **Use As Information** are hidden, leaving only the replacement labels and essential visible elements. This reduces clutter and ensures clarity in the production view.



OSM Replacement Drawings (Original and Production)

The following topics provide instructions for adding, editing, and deleting replacement drawings:

[Adding a Replacement Drawing](#) ⁴⁵⁴

[Editing and Deleting Replacement Drawings](#) ¹⁰⁷

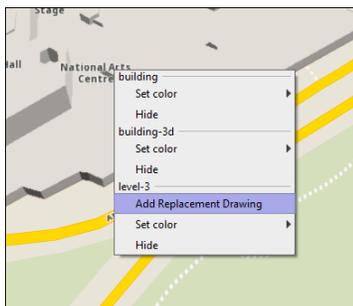
To add a replacement drawing:

There are two ways to add a replacement drawing.

Method 1: Using the context menu

1. Right-click on a label on the map.
2. From the context menu, select **Add Replacement Drawing**.

The replacement drawing that has been defined for the selected layer is added to the scene.



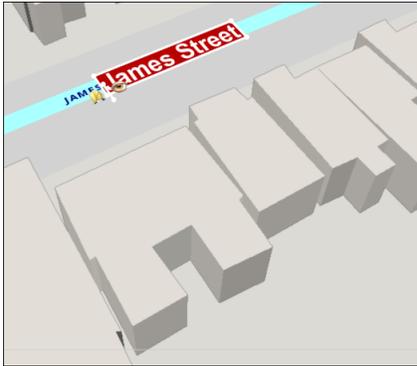
Add Replacement Drawing Context Menus

Method 2: Double-clicking a label

- On the **Canvas**, double-click any text label or road shield.

A new drawing equal to the label in the map style is created.

If a replacement drawing is defined for that layer, the replacement drawing is used.



Replacement Drawing Added

Once added to a scene, a replacement drawing becomes a regular drawing. It can be edited or deleted using the same procedures as other drawings.

To edit and delete replacement drawings:

- See [Edit a Drawing](#) ¹⁹¹ for steps on editing drawings.
- See [Delete a Drawing](#) ¹³³ for steps on deleting drawings.

For information on creating and assigning custom replacement drawings, see [User Predefined Objects Panel](#) ²⁷

Displaying Disputed Borders and Adding OSM Data

The **Disputed Border** option allows you to view disputed borders on any map style selected on the **Canvas** and add OpenStreetMap (OSM) data to the scene.

The following topics are discussed in this section:

[Activating Disputed Borders](#) ¹⁰⁸¹

[Selecting Disputed Borders](#) ¹⁰⁹¹

[Deactivating Disputed Borders](#) ¹⁰⁹¹

When activated, disputed borders are displayed in two colors: **green (included)** and **red (excluded)**.

For information on adding OpenStreetMap (OSM) data and configuring multilingual labels, see [Adding OSM Replacement Drawings](#) ¹⁰⁶¹.

To activate Disputed Borders:

- From the menu bar select **Edit > Select Disputed Borders**.

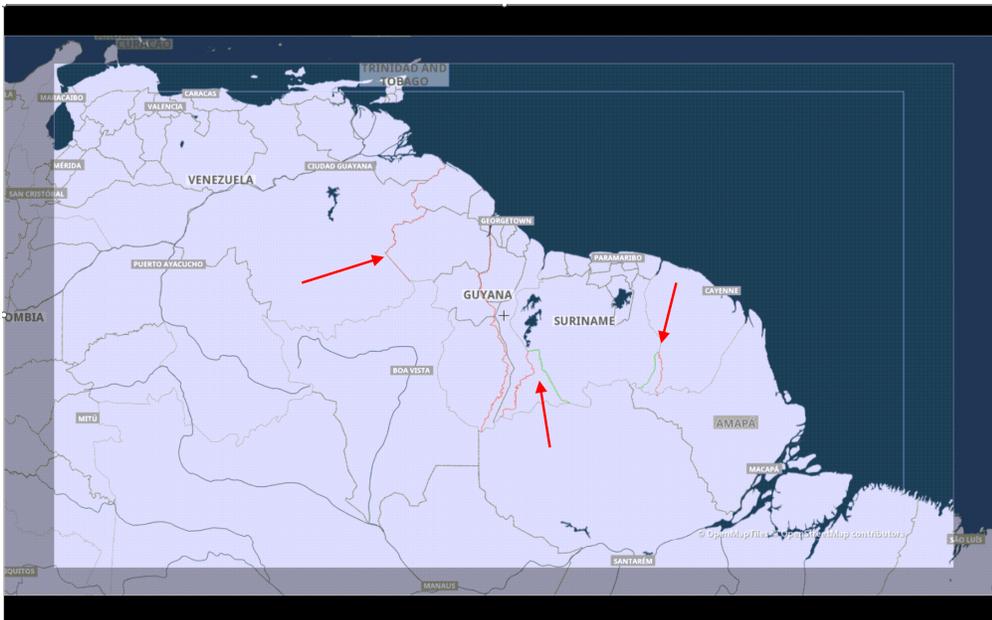
OR

- Press **Alt + D** on the keyboard.

The **Canvas** displays green and red borders in areas of the map that have disputed border lines.

➤ **Green borders** indicate boundaries that will be included in and displayed in the OSM Map Style.

➤ **Red borders** indicate boundaries that will be excluded and hidden from the OSM Map Style.



Disputed Borders

To select Disputed Borders:

- On the **Canvas**, double-click the borders you want to use.
 - Each double-click toggles a disputed border between green and red.
 - Borders marked **green** are applied as the active boundaries in the map style.
 - Borders marked in **red** are hidden and excluded from the map style.

In this way, the selected green borders become the new borders for the Map Style while the red borders are hidden.

All border selections are stored in the shared database, ensuring that changes are synchronized and consistent across all workstations.

To deactivate Disputed Borders:

- From the menu bar select **Edit > Select Disputed Borders**.

OR

- Press **Alt + D** on the keyboard to deactivate disputed borders.

When deactivated, disputed borders are no longer displayed on the **Canvas**, but any selections you previously made remain saved in the database.

Exporting a Map

The **Export Map** feature allows you to write an **.hdr** file of a selected portion of the output. An **.hdr** file is a header file that stores the georeferencing information of an associated raster file.

Four files are created:

- a **.png** image containing the RGB information.
- an **.igb** file containing the elevation data.
- an **.hdr** file containing information about the boundaries of the exported map (minimum and maximum longitude and latitude coordinates), as well as information about the **.igb** file.
- an **_N.png** image that shows the normals that are calculated out of the elevation data.

The following topics describe how to export a newly created map or an existing one that has previously been exported:

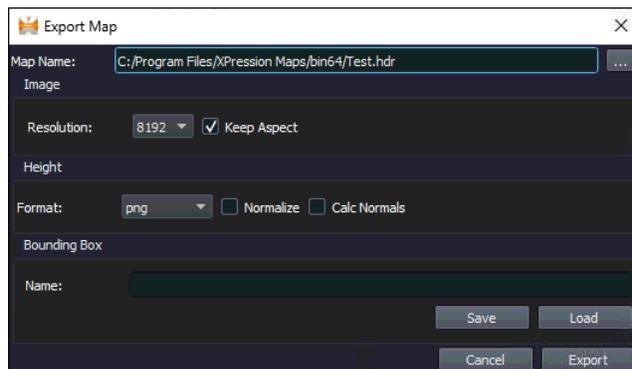
[Exporting a New Map](#)¹¹⁰

[Exporting an Existing Map](#)¹¹²

To export a new map:

1. With a map displayed on the **Canvas**, from the menu bar select **Output > Export Map**.

The **Export Map** dialog opens.



Export Map

2. On the **Canvas**, select and drag the corner points of the bounding box to expand or decrease the portion of the map to be exported.

You can also right-click inside the bounding box and drag it to change the position of the box as a whole.

3. In the **Export Map** dialog, select the **Browse** button () beside the **Map Name** field to navigate to the location to which you want to export the map file.
4. In the **Export Map File** browser, enter a **File** name for the map and select **Save**.

5. In the **Image** section, select the **Resolution** in pixels.

The options are:

- 512
- 1024
- 2048
- 3072
- 4096
- 8192

Keep Aspect is selected by default so that the height of the exported image has the selected resolution, and the width is calculated so that the aspect ratio is preserved.

6. In the **Height** section, select the **Format** from the drop-down.

The options are:

- png
- raw (igb)

7. Select **Save** and navigate to the folder where you want to save the **Bounding Box** file (the .xml file). Enter a name in the **File name** field and select **Save**.

The path to the **Bounding Box** file is entered into the **Name** field.

8. Select **Export** to export the files.

This creates the export files and a bounding box file with the extension **.xml**.

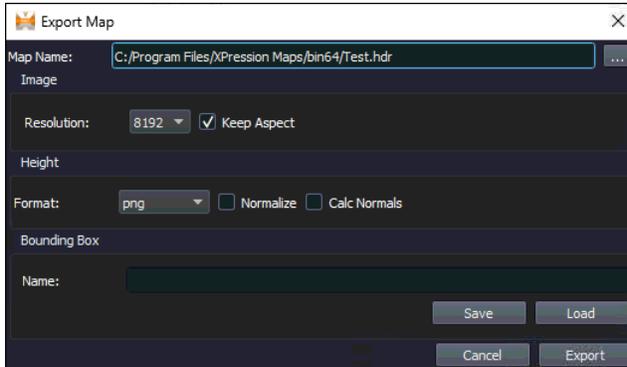
This might take some time. When the export is finished, the **Export Map** dialog closes.

Selecting **Cancel** closes the **Export Map** dialog without creating the files.

To export an existing map:

1. From the menu bar select **Output > Export Map** in the menu bar.

The **Export Map** dialog opens.



Export Map

2. Select **Load** and in the **Bounding File** file explorer, select the file to load and select **Open**.

The associated **.hdr** file name appears in the **Map Name** field and the **.xml** file appears in the **Name** field of the **Bounding Box** section.

3. Select **Export**.

Importing Custom Maps

The Custom Maps workflow is designed for advanced users who need to create and manage **high-resolution** and **geo-referenced maps**. This process is typically used when working with professional-grade satellite imagery or other large map data sets that must align precisely with the globe.

A geo-referenced image contains exact location data, allowing it to be mapped to its correct position on the globe. One of the most common formats for this purpose is GeoTIFF.

Each large image is processed, and its position among the 21 map levels is calculated. It is also cut into small images and stored in the database with exact location reference information. This allows for taking only the visible parts of the image.

For information on map setup, see [Creating and Assigning Map Styles](#) .

The **Custom Maps** editor displays all map data sources that contain imported map data or are ready to import map data.

The following topics are discussed in this section:

[Creating a Map Data Source](#) 

[Importing Map Data](#) 

[Creating Levels](#) 

[Using Custom Maps](#) 

Creating a Map Data Source

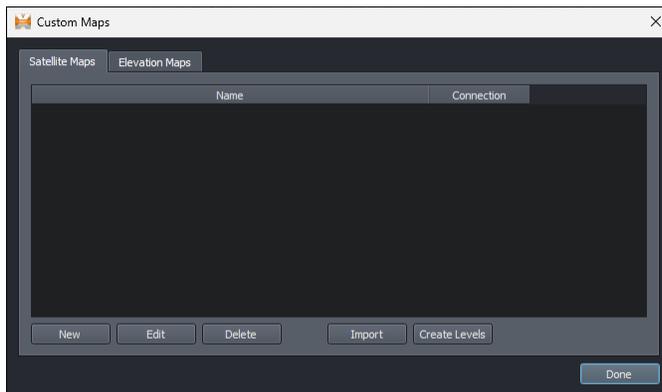
XPression Maps requires a database to store imported map data. By default, an SQLite database is used and requires no additional setup. This database works immediately with XPression Maps.

SQLite is best suited for smaller datasets. However, performance may decrease when reading or writing large amounts of data.

If you plan to import more than 4 GB total of image data, it is recommended that you configure a MariaDB (MySQL) server to handle the larger dataset.

To create a map data source:

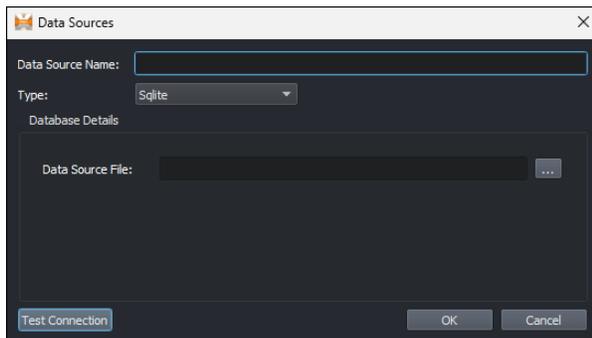
1. From the menu bar select **Custom > Maps** to open the **Custom Maps** editor.



Custom Maps Editor

2. In the **Custom Maps** editor, select **New**.

The **Data Sources** editor opens.

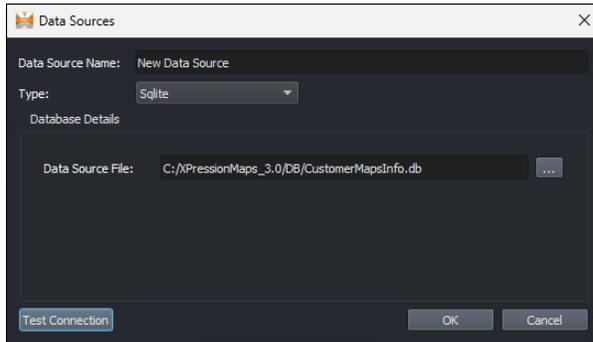


Data Sources Editor

3. In the **Data Source Name** field, enter a unique name.

4. From the **Type** drop-down, select whether the data source will use an **SQLite** file or the **mysql** (MariaDB) connection to the server.
 - If you select **Sqlite**, in the **Database Details** section, select the **Browse** button (⋮) beside the **Data Source File** field to navigate to the **Sqlite** file you want to use and select **Save**. The file will be created if it does not exist.

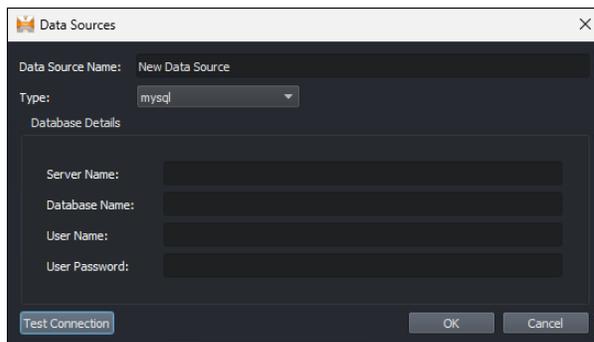
Then select **OK** and continue with Step 5.



Data Sources Editor - SQLite

- If you select **mysql**, in the **Database Details** section, enter the **Server Name**, **Database Name**, **User Name** and **User Password** for the database you want to use, to establish a connection with the server.
 - On this server, a separate database needs to be created and the name of the database entered into the **Database Name** field. Creation of the database on the server can be done using the HeidiSQL program.
 - Consult the database manual for how to create an empty database.

Then continue with **Step 5**.



Datasources Editor - MySQL (MariaDB)

The default Details for the **XPression Maps Database** are:

Server Name: localhost

Database Name: name of the database

User Name: your user name

User Password: your password

5. Select the **Test Connection** button to open a connection to the database and check if read and write access exists.
6. If the connection is successful, select **OK**.

Importing Map Data

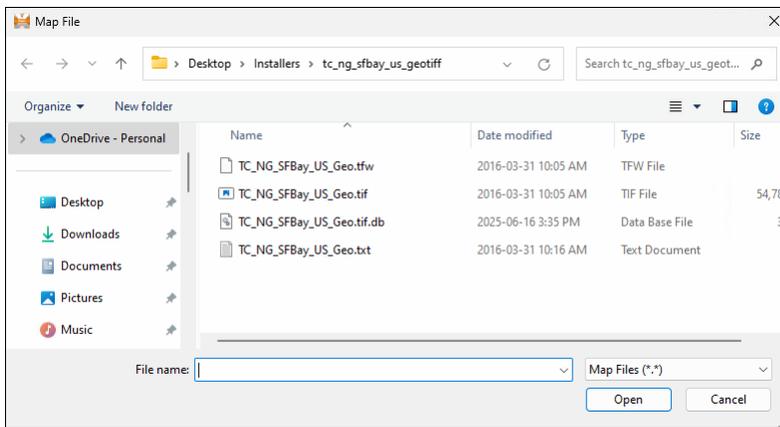
The map import process loads external map datasets into XPression Maps and generates the required map levels for use in projects. The duration of the import depends on the size of the dataset, and the system is dedicated to processing until the operation is complete.

- ★ For best results, perform large data imports outside of live production hours, as the system is unavailable for other tasks during import.

To import map data:

1. From the menu bar select **Custom > Maps** to open the **Custom Maps** editor.
2. In the **Satellite Maps** tab, select the data source for the custom map you want to import.
3. Select **Import**.

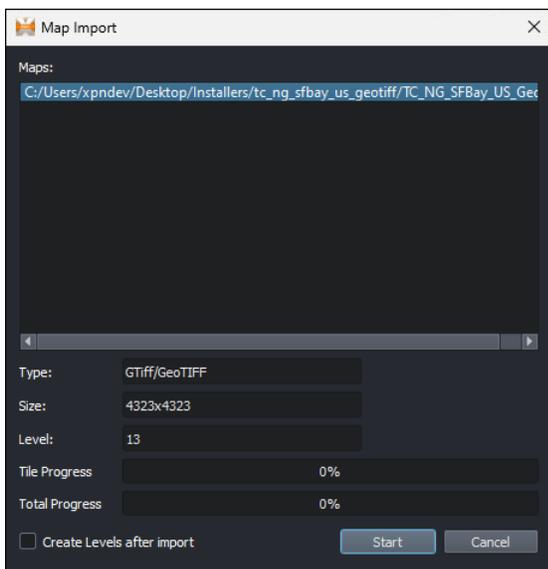
The **Map File** explorer opens.



Map File Explorer

4. Select all geo-referenced image files (.tif) needed for the import and select **Open**.

The **Map Import** editor opens and the selected image files are listed in the **Maps** list.



Map Import Editor

Below the list, you'll see information displayed about the selected image, as follows:

- **Type:** the data type of the image
- **Size:** the image size
- **Level:** the calculated level where the maximal image resolution is reached
- **Tile Progress:** displays the progress of the imported file.
- If you want the level creation to be started automatically at the end of the import, select the **Create Levels** after Import checkbox. See [Creating Levels](#) for details about level creation.
- **Total Progress:** displays the overall progress of the import
- **Create Levels after Import:** select this checkbox to automatically start the level creation at the end of the import.

5. Select **Start** to begin the import process.

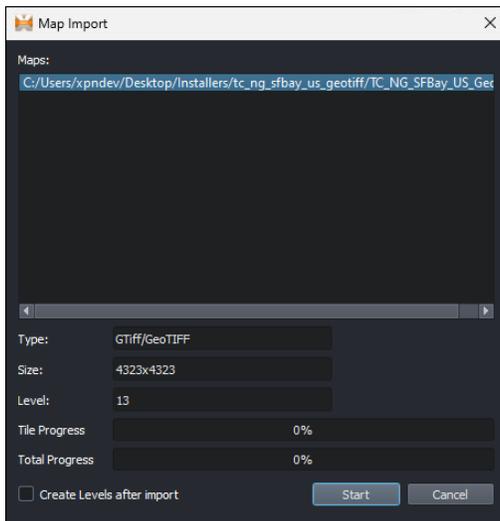
The **Map Import** confirmation dialog appears when the import is successfully completed.

To display a custom map:

1. From the menu bar select **Style > Map Styles** and in the **Map Style Manager**, select **Edit** to open the **Edit Map Style** editor.
2. In the **Custom Data** section, select the **Map** checkbox.
3. From the drop-down, select your custom map.

Creating Levels

In the map data importing procedure, the maps are cut into parts and stored in the database with information about where in the world each map part is located and the resolution (level) of this map part.



Map Import Editor

In the **Map Import** editor image above, we can see that the example data will be imported into level 13. This means that we will see the map once we zoom into the location of the imported map in a height somewhere above street level. Without any level creation, we will only see our imported maps in this level. The level creation process, started by selecting the **Create Levels** button in the **Custom Maps** editor or by selecting the **Create Levels after Import** checkbox in the **Map Import** editor, calculates map tiles for lower levels out of the imported map tiles.

The next level with higher quality provides four tiles with the same resolution for one tile. This makes the resolution two times higher in X and Y. For the creation of a tile in the lower levels, we combine four map tiles to one tile, scale this new tile down to the needed tile size, and write it back into the database for the lower level.

Once the next lower level (in our example, level 12) is created the process continues with the next lower level based on the newly generated level, until the top level is generated. This process reads and writes heavily from and into the database, and the process usually takes longer than the import of the images. If you plan to import several map regions, wait until all maps are imported before creating the levels.

★ If you import more groups of maps, do not select the automatic **Create Levels after Import** checkbox before you start the last import.

Using Custom Maps

Imported custom maps can be activated in an existing Blue Marble Colored or Blue Marble Satellite style. This means that when the style is used, the custom map is drawn on top.

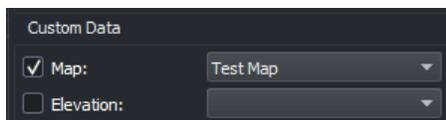
To use a custom map:

1. From the menu bar select **Style > Map Styles** and in the **Map Style Manager**, add a new map style to assign to your custom map.

See [To add a new map style](#) for more information.

Custom maps can only be assigned to map types using the **Sphere** projection.

2. Select the new map style and select **Edit**.
3. In the **Edit Map Style** editor, in the **Custom Data** section, select the **Map** checkbox.
4. From the **Map** drop-down, select which data source to use.



Imported Map Style

5. At the bottom of the **Edit Map Style** editor, select **OK**.

The **Edit Map Style** editor closes and the **Map Style Manager** reopens. The edited style is highlighted and the **Save** icon  is displayed beside it. If you are editing an existing map style, the **Reset** icon  will also be displayed.

6. Select the **Save** icon  to save your changes into the default database or select the **Reset** icon  to discard your changes and revert to the last saved version of the style.

The **Save All** button  at the bottom of the dialog saves all changes made to all styles in the database.

The **Reset All** button  at the bottom of the dialog resets all styles in the database to their last saved version.

7. In the **Save Map Style** confirmation dialog that opens, select **Yes**.
8. Select **Done** to close the **Map Style Manager**.

Map Location and Positioning

When creating map scenes, you'll need to adjust the positioning and perspective of the active map on the **Canvas** to focus on a specific location or area of interest. This perspective, referred to as the **camera view**, represents the vantage point from which the content will be displayed, recorded, or seen on air.

The following sections describe the various methods that allow you to make changes to the elements that make up the camera view, including adjusting the geographic location, positioning and perspective of the active map on the **Canvas**:

[Manually Adjusting the Camera View](#) 

[Searching for a Location](#) 

[Adjusting Camera Parameters](#) 

[Recalling a Bookmarked Location](#) 

★ If the scene uses an OSM (OpenStreetMap) map style, you can use the [OSM Overview panel](#)  to quickly search and reposition the map based on OSM layer elements.

Manually Adjusting the Camera View

To quickly and easily adjust the camera view directly on the **Canvas**, use the mouse (or a combination of mouse and keyboard) to zoom in or out, rotate, tilt, or drag to a new location or area of interest.

To manually adjust the positioning of the globe or map displayed in the Canvas:

- **Left-click** the mouse and drag to **rotate** the globe/map in the desired direction.
 - Press **Ctrl + left-click** the mouse to **spin** the globe/map clockwise and counterclockwise (available only in Sphere projection).
 - Press **Ctrl + right-click** the mouse to **tilt** the globe vertically.
 - Use the **scroll wheel** of the mouse or **right-click and draw a rectangle** around the area of interest to **zoom in or out**.
- ★ By default, to zoom into the map you must scroll backward on the mouse scroll wheel, and to zoom out of the map you must scroll forward. However, you can change this behavior by selecting the **Invert Mouse Scroll Wheel** checkbox in the **Preferences > Output** page. See [Configuring Preferences - Output](#)³⁷ for more information.

Searching for a Location

The **Search Editor** provides two ways to search and center the active map on the **Canvas** on a specific location or area of interest.

- **Search (Location/Address, City, Country)**: Use the **Search** field in the **Search Editor** to generate a list of results.
- **Geo Location**: Use the **Geo Location** button to specify an exact location.

Instructions for using both methods are provided below.

- ★ If the scene uses an OSM (OpenStreetMap) map style, you can use the [OSM Overview panel](#)  to quickly search and reposition the map based on OSM layer elements.

To search for a location using the Search field:

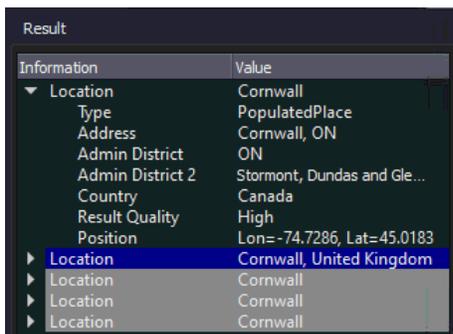
1. In the **Search Editor**, in the **Search (Location/Address, City, Country)** field, enter the location for which you want to find a map.
 - Separate the different parts of the location with a comma, for example, **Ottawa, Ontario, Canada**.
 - Enter more parameters, such as a street address, to narrow the search results.
2. If you want the map to go directly to the location you are searching, select the **Go to Result** checkbox.
3. Select the **Search** button.

The search results show all locations found that match the entered information.

Where multiple results are returned, the first result is shown on **Canvas** and lower quality results will be highlighted in a different color in the **Result** pane in the editor.

In the **Search Related Shapes** section, a list of the available shapes for the searched location appears. This list is dependent on the search filters selected (**Country, States** and/or **Region**).

4. In the **Filter** section, select the appropriate checkbox to display related shapes by country, region, shape, or any combination of these.
5. In the **Result** pane, select the arrow beside the location to see details such as the country and latitude and longitude of the location.



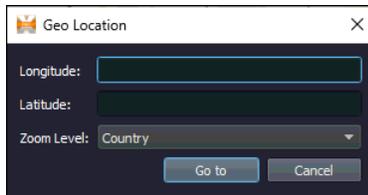
Search Results

If you haven't selected the **Go to Result** checkbox, double-click on any result to switch to that location on the **Canvas**.

To search for a location using Geo Location:

1. Select the **Geo Location** button (📍) located next to the **Search** button.

The **Geo Location** dialog opens.



Geo Location Dialog

2. Enter the **Longitude** and **Latitude** coordinates of the location you want to find.
3. From the **Zoom Level** drop-down, select how broad a view you want.

Options are:

- Country
- State
- City
- Street
- Address

4. Select **Go To**.

Geo Location moves the map to the specified longitude and latitude.

Adjusting Camera Parameters

The perspective of what is seen on the **Canvas** is often called the **camera view**, as it represents the point of view of what will be recorded or seen on air. The camera parameters, located below the **Canvas**, define the geographical location, view angle and depth of the camera view displayed on the **Canvas**.

Camera Parameters

There are five parameters that show the actual values for the camera view:

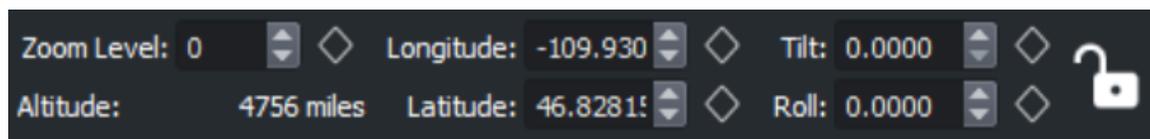
[Zoom Level](#) ¹²⁵

[Longitude](#) ¹²⁶

[Latitude](#) ¹²⁶

[Tilt](#) ¹²⁶

[Roll](#) ¹²⁷



Camera Parameters

★ These parameters are also commonly used when creating camera view animations. See [Adding Camera Parameters Key Frames](#) ³⁰¹ for more information.

Camera Control

There is one control that affects whether the camera view can be adjusted:

[Lock](#) ¹²⁸

Zoom Level

The **Zoom Level** parameter allows you to set the camera distance to the earth landscape, while the **Elevation** field displays the corresponding reference point of altitude above sea level in miles.

A new scene starts with a **Zoom Level** value of 0.

A higher value zooms into the map.

- >30 country level
- >70 region level
- >130 city level
- >180 street level
- 250 is the maximum zoom level. However, satellite maps tend to only appear up to a zoom level of 200.

To adjust the Zoom Level value:

- Enter a value in the **Zoom** field.

OR

- Select and drag the up and down arrows beside the **Zoom** field.

OR

- Select within the **Canvas** and move the scroll button on the mouse.

Longitude

Along with the **Latitude** parameter, the **Longitude** parameter displays the global position, in degrees, of the location at the center of the **Canvas**.

When no drawing is selected, rotating the globe changes this parameter.

To adjust the Longitude value:

- Enter a value in the **Longitude** field.

OR

- Select and drag the up and down arrows beside the **Longitude** field.

★ Animating the **Longitude** and **Latitude** parameters with easing will provide the best results when both parameters have the same settings. See [Setting the Easing Method](#)²⁹⁸ for more information.

Latitude

Along with the **Longitude** parameter, the **Latitude** parameter displays the global position, in degrees, of the location at the center of the **Canvas**.

To adjust the Latitude value:

- Enter a value in the **Latitude** field.

OR

- Select and drag the up and down arrows beside the **Latitude** field.

★ Animating the **Longitude** and **Latitude** parameters with easing will provide the best results when both parameters have the same settings. See [Setting the Easing Method](#)²⁹⁸ for more information.

Tilt

The **Tilt** parameter of the camera rotates the globe around the point of the world that is closest to the camera. The range is 0 to 85 degrees.

- At **0**, the camera looks down vertically onto the map.
- **>0**, the camera faces the direction of the horizon, giving the map a perspective angle.

To adjust the Tilt value:

- Enter a value in the **Tilt** field.

OR

- Select and drag the up and down arrows beside the **Tilt** field.

OR

- Press and hold the **Ctrl** key, then right-click on the **Canvas** and move the mouse up or down.

Roll

The **Roll** parameter spins the globe clockwise and counter-clockwise along the axis visible on the **Canvas**. For example, turning the globe upside down so that the north pole is at the bottom. The range is 0 to 360 degrees.

This option is available only for map styles that use the sphere projection.

To adjust the Roll value:

- Enter a value in the **Roll** field.

OR

- Select and drag the up and down arrows beside the **Roll** field.

OR

- Press and hold the **Ctrl** key, then left-click on the **Canvas** and move the mouse left or right.

Lock

The **Lock** control enables or disables movement of the camera view on the **Canvas**. When enabled, all camera parameters are locked, and the globe cannot be moved.

To enable Lock:

- Select the lock icon  to the right of the camera parameters after setting the camera view as desired. All camera parameters are disabled, and the globe on the **Canvas** cannot be moved.

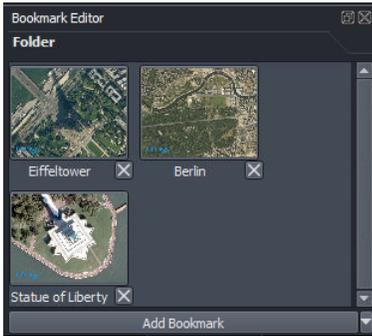
To disable Lock:

- Select the lock icon  to the right of the camera parameters. The camera parameters are active, allowing the globe to be repositioned, zoomed, or rotated.

Bookmark Editor

The **Bookmark Editor** enables you to save map positions as presets for frequently used locations and then organize them into folders for easy access later.

Bookmarks are saved when you exit the application and automatically reloaded upon the next launch. The **Bookmark Editor** saves only the map position, not any drawings added to the scene. Bookmarks always display in the currently selected map style, regardless of the style in which they were created. Additionally, bookmarks can be used to add a pause during a flight path.



Bookmark Editor

The following topics are discussed in this section:

[Adding and Deleting Bookmark Folders](#) ¹³⁰

[Adding and Deleting Bookmarks](#) ¹³¹

[Recalling and Editing Bookmarks](#) ¹³²

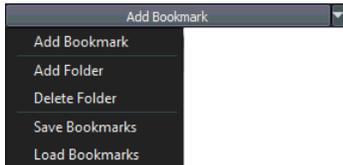
[Saving and Loading Bookmarks](#) ¹³²

Adding and Deleting Bookmark Folders

Organize your bookmarks for easy access by sorting them into folders. The following steps outline how to add a new folder in the **Bookmark Editor** and how to delete an existing folder.

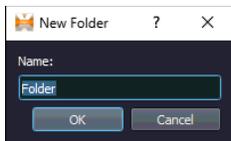
To add a bookmark folder:

- a. In the **Bookmark Editor**, select the arrow beside the **Add Bookmark** button and then select **Add Folder**.



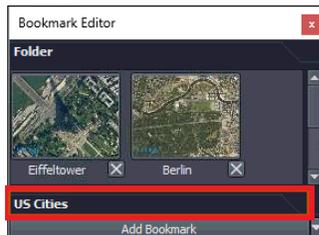
Bookmark Menu

2. In the **New Folder** dialog, shown below, enter a name for the folder and select **OK**.



Add New Bookmark Folder

The new folder is added at the bottom of the **Bookmark** tab.

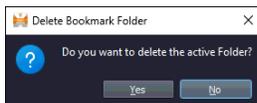


New Bookmark Folder

To delete a folder:

1. In the **Bookmark Editor**, select the folder you want to delete, to make it the active folder.
2. Select the arrow beside the **Add Bookmark** button to open the **Bookmark** menu.
3. From the **Bookmark** menu, select **Delete Folder**.

The **Delete Bookmark Folder** confirmation dialog opens.



Delete Bookmark Folder

4. Select **Yes** to delete the folder.

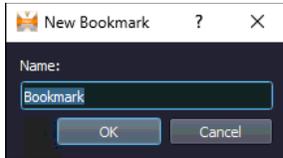
Adding and Deleting Bookmarks

Adding a bookmark lets you quickly return to a specific location with the same camera settings used at the time of creation. The steps below explain how to add a new bookmark in the **Bookmark Editor** and how to delete an existing one.

To add a bookmark:

1. Position the map location on the **Canvas** to the desired location
2. In the **Bookmark Editor**, select **Add Bookmark**.

The **New Bookmark** dialog opens.



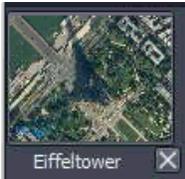
Add New Bookmark

3. In the **Name** field, add an identifying name for the bookmark and select **OK**.

A thumbnail of the map is added to the **Bookmark** folder.

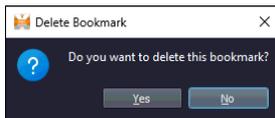
To delete a bookmark:

1. In the **Bookmark Editor**, select the folder containing the bookmark you want to delete.
2. Select the red **X** in the corner of the bookmark.



Bookmark

The **Delete Bookmark** confirmation dialog opens.



Delete Bookmark Confirmation Dialog

3. Select **Yes** to delete the bookmark.

Recalling and Editing Bookmarks

The following procedures describe how to recall a saved bookmark to include it in your production, as well as how to edit the bookmark's name.

To recall a bookmark:

1. In the **Bookmark Editor**, select the folder containing the bookmark you want, to open it.
2. Select the bookmark thumbnail.

To change a bookmark's name:

1. In the **Bookmark Editor**, select the folder containing the bookmark whose name you want to change.
2. Double-click the name of the bookmark.
3. In the **Change Bookmark Name** dialog that opens, type in the new name and select **OK**.

Saving and Loading Bookmarks

Bookmarks are automatically saved in a default folder when you exit XPression Maps and are reloaded upon relaunching the application. Alternatively, you can choose to save them in a folder of your choice for easier organization.

To save your bookmarks:

1. In the **Bookmark Editor**, select the arrow beside the **Add Bookmark** button, to open the **Bookmark** menu.
2. From the **Bookmark** menu, select **Save Bookmarks**.
3. In the **Save File** dialog, navigate to the folder where you want to save your bookmarks and select **Save**.

The bookmarks are saved in an .xml file, which can then be loaded as needed.

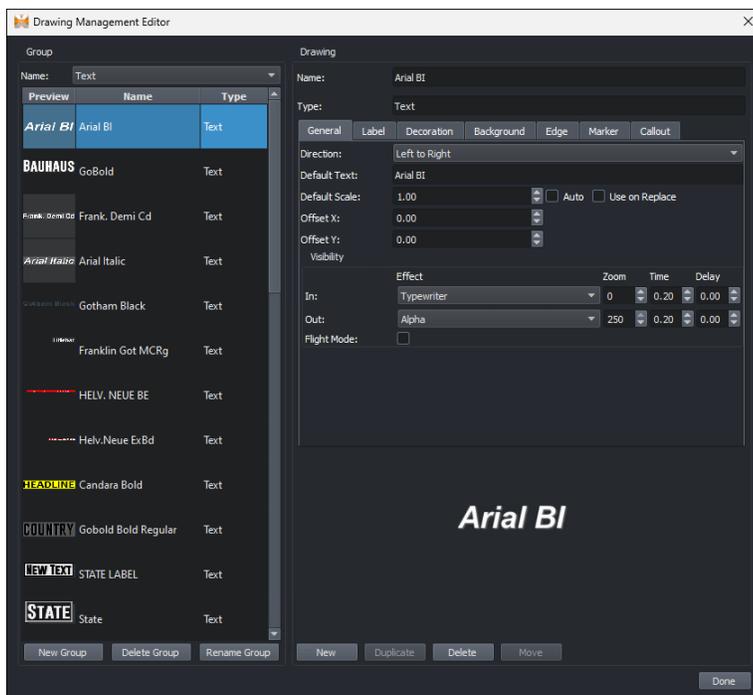
To load your saved bookmarks:

1. In the **Bookmark Editor**, select the arrow beside the **Add Bookmark** button, to open the **Bookmark** menu.
2. From the **Bookmark** menu, select **Load Bookmarks**.
3. In the **Load File** dialog, navigate to the folder containing the .xml file with your saved bookmarks.
4. Select the bookmark file and select **Open**.

Managing Drawings

Over time, you'll likely build a large collection of drawings to meet the diverse needs of your map projects. The **Drawing Management Editor**, shown below, is the tool you'll use to view and manage the drawings in the **Drawings** database. It includes a set of predefined groups where you can add drawings, but you can also create custom groups to organize them as needed. Additionally, the **Drawing Management Editor** allows you to add new drawings to the collection, duplicate existing ones, and modify drawing properties.

- ★ Other drawing related tools, like the **Drawing Toolbox** and **Drawings Overview** panel, are used to add and configure drawings on the scene, while the **Drawing Management Editor** is used to create the design of the drawing and to manage the drawings in the **Drawings** database.



Drawing Management Editor

The following sections provide information and instructions for using the **Drawing Management Editor** to create, modify, organize, and manage drawings:

[Types of Drawings](#) ¹³⁴

[Opening the Drawing Management Editor](#) ¹⁴¹

[Organizing Drawings into Groups](#) ¹⁴²

[Adding New Drawings to the Database](#) ¹⁴⁵

[Creating a Copy of a Drawing](#) ¹⁴⁶

[Renaming a Drawing](#) ¹⁴⁷

[Deleting a Drawing](#) ¹⁴⁷

[Modifying Drawing Properties](#) ¹⁴⁸

Types of Drawings

The following topics provide high-level descriptions of the types of drawings that can be added to scenes in XPression Maps:

[Area Drawings](#) ¹³⁴

[Background Drawings](#) ¹³⁵

[Container Drawings](#) ¹³⁵

[Dynamic Data Drawings](#) ¹³⁶

[Icon Drawings](#) ¹³⁶

[Inset Drawings](#) ¹³⁷

[Line Drawings](#) ¹³⁷

[Locator Drawings](#) ¹³⁸

[Magnifier Drawings](#) ¹³⁸

[Text and Replacement Drawings](#) ¹³⁹

[Video Input Drawings](#) ¹³⁹

[3D Object Drawings](#) ¹⁴⁰

Area Drawings

Use **Area** drawings to call out an area of the map to which you want to draw attention, as shown in the example below. **Area** drawings can be still or animated.

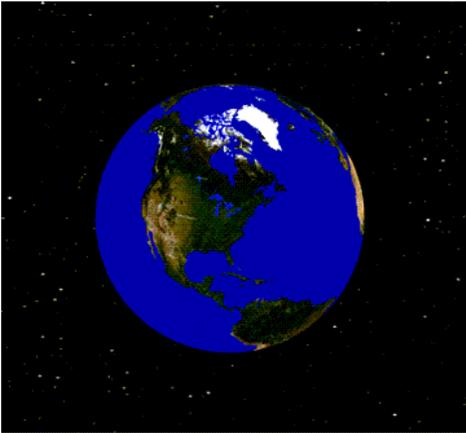


Example - Area Drawing

Background Drawings

Use a **Background** drawing to change the background of a map, as shown in the example below.

Background drawings are also used for **Safe Area** images with transparency and for **Overlay Full Screen** images in map styles.



Default background



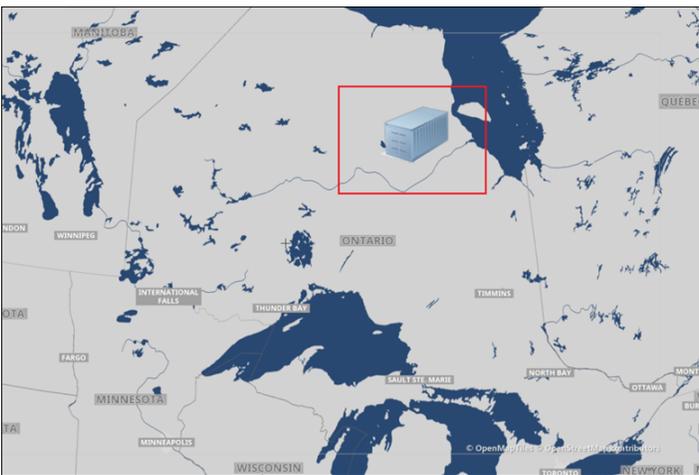
New background

Example - Background Drawing

Container Drawings

Use **Container drawings** to manage the display of a group of [Text drawings](#)¹³⁹⁾ on the map. When linked to a [DataLink data source](#)²⁵⁸⁾, the container drawing coordinates the application of data to certain **Text** drawings' properties, which determine which **Text** drawings are displayed on the map, as well as defining their exact location, content, and appearance.

While the container drawing can be placed anywhere on the map, it primarily serves as a symbolic placeholder and does not appear in the final renderings of the map.



Example - Container Drawing

Dynamic Data Drawings

Use **Dynamic Data** drawings to show information about a particular location, such as weather, population, etc., as shown in the example below. This feature is an option that needs to be selected when ordering your system. It is not included in all systems.

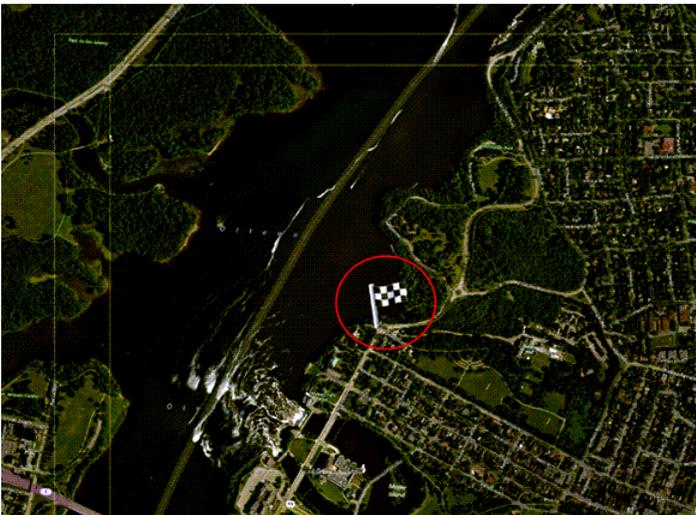
For more information on options available for XPression Maps, please reach out to your Ross Video sales professional.



Example - Dynamic Data Drawings

Icon Drawings

Use **Icon** drawings to mark a specific location, as shown in the example below. **Icon** drawings can be still or animated.



Example - Icon Drawing

Inset Drawings

Inset drawings are used to highlight specific regions while also displaying the larger geographical location.

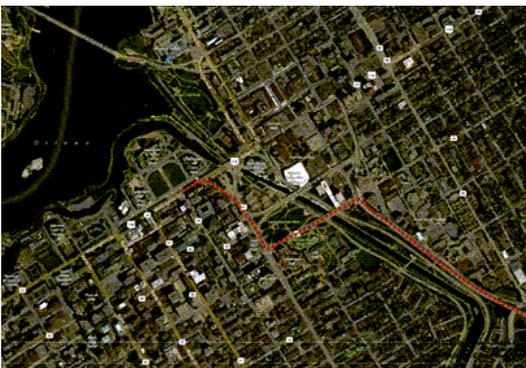
You can place **Inset** drawings on the **Overlay Layer** or directly onto the map.



Example - Inset Drawing

Line Drawings

Use **Line** drawings to show a route on the map, as shown in the example below. **Line** drawings can be still or animated.



Example - Line Drawing

Locator Drawings

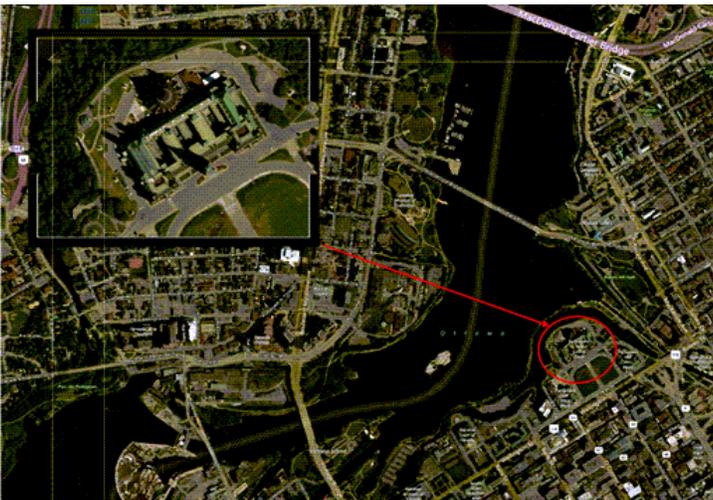
Use **Locator** drawings to show where the location you're looking at is found in the context of a larger map. For example, if you place a locator drawing on a city and enlarge it, as shown in the example below, you'll see in what part of the country that city is found. Locator drawings are typically used in the **Overlay Layer**. See [Adding Drawings to an Overlay](#) ¹²²⁰ for more information.



Example - Locator Drawing

Magnifier Drawings

Use **Magnifier** drawings to zoom in on a section of the map to get a closer look, as shown in the example below.



Example - Magnifier Drawing

Text and Replacement Drawings

Use **Text** drawings to add your own labels to a map, as shown in the example below. Labels can be Key Framed to appear and/or disappear at specific points in the timeline during animation.

In **OSM Layers**, **Text** drawings are also used as replacement drawings to substitute existing labels on a map. With replacement drawings, you can insert labels only for the locations of interest, while all other labels are hidden in the production output.

Text drawings have many editable properties. These properties are divided into tabs and are described in [Text and Replacement Drawings Properties](#) ¹⁶⁶.



Example - Text Drawing

Video Input Drawings

Use **Video Input** drawings to define the look and behavior of video inputs in the scene. You can add a frame around the video input and attach a label, if desired.

You can have up to 4 video inputs in a scene.



Example - Video Input Drawing

3D Object Drawings

A **3D Object drawing** is a visual element that places imported 3D models onto a map scene, either on the globe or an overlay, with optional lighting and shading effects. It is used to represent complex, scalable objects within the scene and can be fixed in place as a **landmark** for consistent positioning and size.



Example - 3D Object Drawing

Opening the Drawing Management Editor

There are two ways to open the **Drawing Management Editor**. Which method you use depends upon whether you want access and manage the drawings in the **Drawings** database, or if you want to view and edit the properties of a specific drawing.

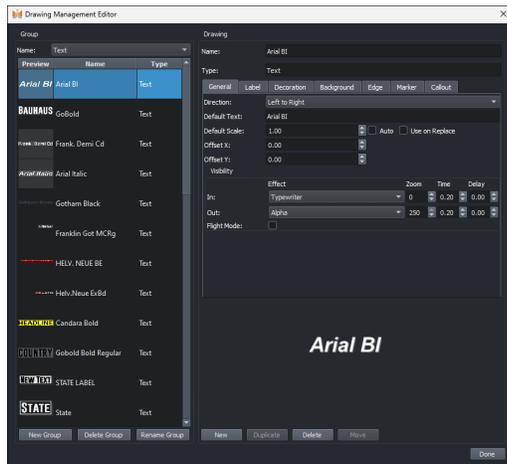
To access and manage the drawings in the Drawings database:

- From the XPression Maps menus, select **Edit > Manage Drawings**.

OR

- In the **Drawing Toolbox**, select the **Browse** button  beside the **Group** drop-down.

The **Drawing Management Editor** opens and displays all of the current groups and drawings.

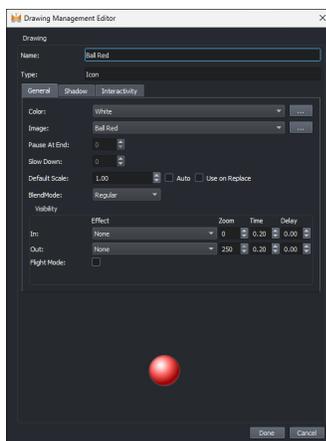


Drawing Management Editor - Access to the Contents of Drawing Database

To view and edit the properties of a specific drawing:

1. In the **Drawing Toolbox**, select the **Group** that contains the desired drawing.
2. Right-click the drawing's tile and select **Edit Drawing**.

The **Drawing Management Editor** opens with the drawing's properties displayed. See [Modifying Drawing Properties](#)¹⁴⁸ for descriptions of each of the properties, which may be different depending on the type of drawing.



Drawing Management Editor - Displays a Single Drawing's Properties

Organizing Drawings into Groups

The **Drawing Management Editor** comes with a predefined set of groups to which you can add and organize drawings.

The following section provides instructions for adding a new group, renaming a group, moving a drawing from one group to another, and deleting a group.

[Adding a New Group](#) ¹⁴²

[Renaming a Group](#) ¹⁴³

[Moving a Drawing to Another Group](#) ¹⁴³

[Deleting a Group](#) ¹⁴⁴

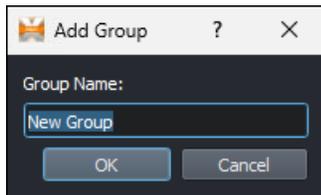
Adding a New Group

While the **Drawing Management Editor** provides a predefined set of groups to which you can add drawings, you can also create your own groups in which to organize your drawings.

To add a new group:

1. From the menu bar select **Edit > Manage Drawings** to open the **Drawing Management Editor**.
2. At the bottom of the **Group** section on the left side, select **New Group**.

The **Add Group** dialog opens.



Add Group

3. In the **Group Name** field, enter a name for the new group and select **OK**.

The new group appears in the **Name** drop-down at the top of the **Group** section.

Because it's a new group there are no drawings in it yet.

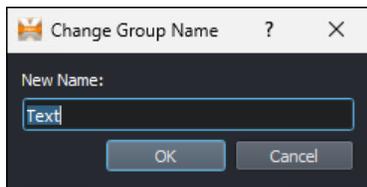
Renaming a Group

If you are not satisfied with the current name of a drawing group, you can rename the group at any time.

To rename a group:

1. From the menu bar select **Edit > Manage Drawings** to open the **Drawing Management Editor**.
2. In the **Group** section on the left side, from the **Name** drop-down, select the group you want to rename.
3. At the bottom of the **Group** section, select **Rename Group**.

The **Change Group Name** dialog opens.



Change Group Name

4. Enter a new name for the **Group** and select **OK**.

The new group name appears in the **Name** drop-down.

The new group will contain any drawings that were in the old group.

Moving a Drawing to Another Group

If a drawing appears in the wrong group, use the following procedure to move the drawing from one group to another group.

To move a drawing:

1. From the menu bar select **Edit > Manage Drawings** to open the **Drawing Management Editor**.
2. On the **Group** side of the editor, from the **Name** drop-down, select the **Group** that contains the drawing you want to move.
3. Select the drawing.
4. From the **Group** drop-down, select the folder into which you want to move the selected drawing.
5. On the **Drawing** side, select **Move**.

The drawing is removed from the original folder and moved to the selected folder.

6. Select **Done** to close the **Drawing Management Editor**.

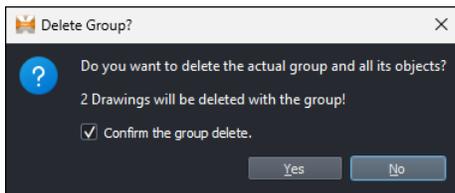
Deleting a Group

If a group, and its drawings, are no longer needed, use the following procedure to permanently delete it from the system.

★ Deleting a group also permanently deletes all of the drawings within that group.

To delete a group:

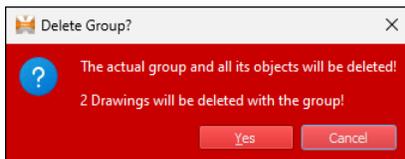
1. From the menu bar select **Edit > Manage Drawings** to open the **Drawing Management Editor**.
2. In the **Group** section on the left side, from the **Name** drop-down, select the group you want to delete.
3. At the bottom of the **Group** section, select **Delete Group**.
4. The **Delete Group** confirmation dialog opens.



Delete Group Confirmation

5. Select the **Confirm the group delete** checkbox and select **Yes**.

The final **Delete Group** dialog opens.



Final Delete Group Dialog

6. Select **Yes** to delete the group.
The **Group** and its **Drawings** are deleted.

Adding New Drawings to the Database

The following procedures outline how to create and add a new drawing to the **Drawings** database using either the **Drawing Management Editor** or the **Drawing Toolbox**. Both methods produce the same results; however, the **Drawing Toolbox** is more convenient when building scenes, while the **Drawing Management Editor** is better suited for creating and managing an inventory of assets.

To create a new drawing using the Drawing Management Editor:

1. From the XPression Maps menus, select **Edit > Manage Drawings**.

OR

In the **Drawing Toolbox**, select the **Browse** button  beside the **Group** drop-down.

The **Drawing Management Editor** opens and displays all of the current groups and drawings.

2. From the **Name** drop-down in the **Group** section, select the folder to which you want to add a new drawing.
3. At the bottom of the **Drawing** section on the right side, select **New**.

4. In the **New Drawing** dialog, select the drawing type from the drop-down and select **OK**.

The drawing's properties appear in the **Drawing** section of the **Drawing Management Editor**.

5. In the **Name** field, type a name for the new drawing.
6. Define the properties of the drawing as described in [Modifying Drawing Properties](#) ¹⁴⁸.
7. When you've finished defining the properties, select **Update** at the bottom of the **Drawing** section to save your changes.

The new drawing is added to the list of drawings in the selected group in the **Drawing Management Editor**.

8. Select **Done** to close the editor and make your drawing available in the **Drawing Toolbox**.

To create a new drawing using the Drawing Toolbox:

1. In the **Drawing Toolbox**, from the **Group** drop-down, select the folder to which you want to add a new drawing.
2. Select the **New Drawing** thumbnail to open the **Drawing Management Editor**.



New Drawing Thumbnail

3. In the **New Drawing** dialog, select the drawing type from the drop-down and select **OK**.

When you select the icon or background drawing type, you will be taken to the **Open Image File** dialog, from which you can select an image. If you prefer to use one of the default images, close this dialog and select the image from the **Image** drop-down in the **Drawing Management Editor**.

The process is similar for **3D Object** drawing types: you can choose a model file from the **Select File** dialog, or select **Cancel** to choose or add a model later in the drawing's properties within the **Drawing Management Editor**.

4. Define the properties of the drawing as described in [Modifying Drawing Properties](#) ¹⁴⁸.
5. When you've finished defining the properties, select **Done**.

The new drawing is added to the list of drawings in the preview pane of the **Drawing Toolbox**.

Creating a Copy of a Drawing

At times, an existing drawing may almost meet your needs but requires slight adjustments. Or, you might need a series of drawings that are nearly identical, differing only in characteristics like color or text. Instead of starting from scratch for each one, you can copy an existing drawing, make the necessary modifications, and save it as a new file.

To make a copy of a drawing:

1. From the menu bar select **Edit > Manage Drawings** to open the **Drawing Management Editor**.
2. On the **Group** side of the editor, from the **Name** drop-down, select the **Group** that contains the drawing you want to copy and then select the drawing.
3. From the **Group** drop-down, select the folder into which you want to copy the selected drawing.
This may be the same folder that the drawing you want to copy is in.
4. On the **Drawing** side, change the name of the drawing and then select **Duplicate**.
The drawing now appears at the bottom of the list for the selected group.
5. Select the drawing from the list and make changes to its properties in the right-side panel. See [Modifying Drawing Properties](#)¹⁴⁶ for more information.
6. Select **Update**.
7. Select **Done** to close the **Drawing Management Editor**.

Renaming a Drawing

If you're not satisfied with a drawing's current name, you can rename it directly within the **Drawing Management Editor**.

- ★ Alternatively, you can rename a drawing that's been added to the scene by double-clicking the drawing's name in the **Drawing Overview** panel and typing a new name.

To rename a drawing:

1. From the menu bar select **Edit > Manage Drawings** to open the **Drawing Management Editor**.
2. On the **Group** side of the editor, from the **Name** drop-down, select the **Group** that contains the drawing you want to rename.
3. Select the drawing you want to rename.
4. On the **Drawing** side of the editor, delete the drawing **Name** and enter a new descriptive name for the drawing.
5. Select **Update**.
6. Select **Done** to close the **Drawing Management Editor**.

The drawing is renamed.

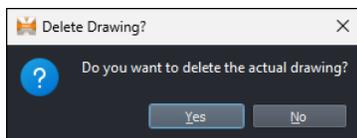
Deleting a Drawing

If a drawing is no longer needed, use the following procedure to permanently delete it from the system.

To delete a drawing:

1. From the menu bar select **Edit > Manage Drawings** to open the **Drawing Management Editor**.
2. On the **Group** side of the editor, from the **Name** drop-down, select the **Group** that contains the drawing you want to delete.
3. Select the drawing you want to delete.
4. On the **Drawing** side of the editor, select **Delete**.

The **Delete Drawing** confirmation dialog opens.



Delete Drawing Confirmation Dialog

5. Select **Yes** to delete the drawing.
6. Select **Done** to close the **Drawing Management Editor**.

Modifying Drawing Properties

Each type of drawing comes with its own set of properties that define its appearance, behavior, and, in some cases, its content. When you add a drawing to the **Drawing** database, you can adjust these properties to tailor the drawing to your specific needs and preferences.

- ★ Later when a drawing is added to a scene, additional parameters can be set to define the drawing's attributes and behavior within the scene. See [Adding and Editing Drawings](#)^[190] for more information.

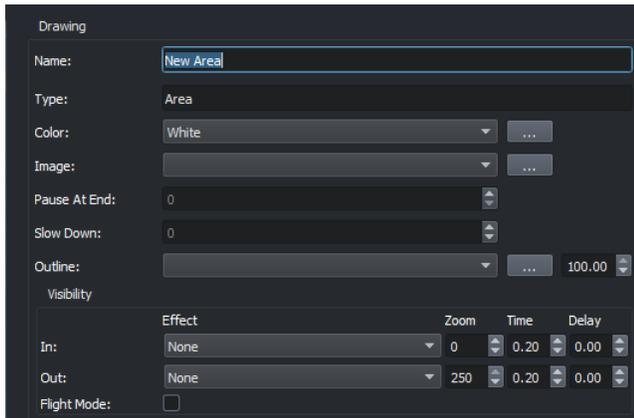
To modify a drawing's properties:

1. From the menu bar select **Edit > Manage Drawings** to open the **Drawing Management Editor**.
 - ★ Alternatively, you can access a specific drawing's properties by right-clicking the drawing in the **Drawing Toolbox** and selecting **Edit Drawing**.
2. In the **Group** section on the left side, from the **Name** drop-down, select the **Group** that contains the drawing you want to modify.
3. From the **Group** list, select the drawing you want to modify.

The properties of the selected drawing are displayed in the **Drawing** section on the right side.
4. Modify the properties of the drawings as described in the section corresponding to the type of drawing.
 - [Area Drawings Properties](#)^[149]
 - [Background Drawings Properties](#)^[150]
 - [Container Drawings Properties](#)^[151]
 - [Dynamic Data Drawings Properties](#)^[152]
 - [Icon Drawings Properties](#)^[154]
 - [Inset Drawings Properties](#)^[157]
 - [Line Drawings Properties](#)^[159]
 - [Locator Drawings Properties](#)^[160]
 - [Magnifier Drawings Properties](#)^[163]
 - [Text and OSM Replacement Drawings Properties](#)^[166]
 - [Video Input Drawings Properties](#)^[181]
 - [3D Object Drawings Properties](#)^[184]
5. Select **Update** at the bottom of the **Drawing** section to save your changes.
6. Select **Done** to close the editor and make your drawing available in the **Drawing Management Editor**.

Area Drawings Properties

The **Area** drawing properties are described in the table below.

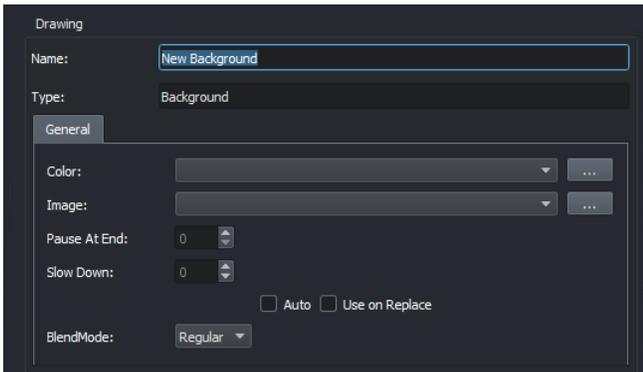


Properties - Area Drawings

Property	Description
Color	Select an existing color using the drop-down or select the Browse button (⋮) to add a new color for the drawing. The selected color will be applied to the image, if an image is selected.
Image	Select an existing image from the drop-down or select the Browse button (⋮) to add a new image. If an image is selected, the area will be textured with this image.
Pause At End	Enter a value or use the arrows to set the number of frames for which an image sequence will pause at the last image before looping.
Slowdown	When an animated image is selected, this is the number of frames, expressed as a percentage, by which the movement of the animated image will be slowed. Accordingly, a negative value will speed up the movement.
Outline	Select an existing color using the drop-down or select Browse to add a new color for the outline. Enter a value or use the arrows to increase or decrease the thickness of the outline. The default is no outline.
Visibility (In and Out)	The transition effect used when an area drawing appears (In) and disappears (Out) during animation. The Effect options are: None — the drawing appears/disappears instantly at the frame to which the Key Frame is set. Use the Delay field to input the number of seconds that the drawing will delay its animation. Dissolve — the drawing blends in and out over the number of seconds selected in the Time field. The drawing animates in and out at the level set in the corresponding Zoom field. Use the Delay field to input the number of seconds that the drawing will delay its animation. Flight Mode — Select the Flight Mode checkbox to control the drawing's visibility at the flight point level during flight map animations. If the checkbox is cleared, visibility is instead managed at the scene level. When enabled, a small airplane icon  appears on the drawing's preview image to indicate Flight Mode is enabled.

Background Drawings Properties

The **Background** drawing properties are described in the table below.

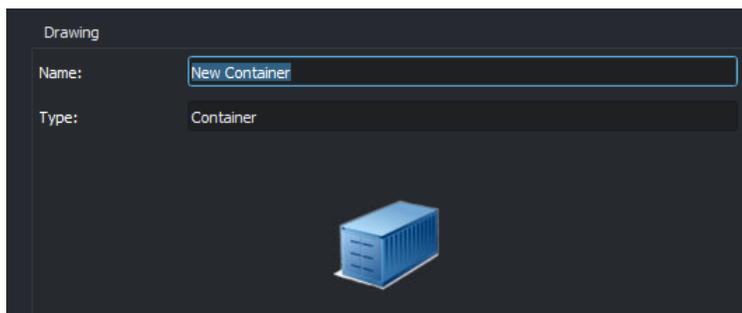


Properties - Background Drawings - General Tab

Property	Description
Color	<p>Defines the fullscreen background color, independent of Background Mode.</p> <p>Select an existing color using the drop-down or select the Browse button (⋮) to add a new color to apply to the background drawing.</p> <p>If no color is selected, the background will be transparent.</p>
Image	<p>Select an existing image using the drop-down or select the Browse button (⋮) to add a new image.</p> <p>If selected, the image is used as the background when this drawing is selected in the Scene Properties editor or from the Drawing Toolbox.</p> <p>Select the Auto checkbox to make the image size scale automatically as the map zooms in and out.</p> <p>Select the Use on Replace checkbox to use the default scale when replacing one drawing with another.</p>
Pause At End	<p>Enter a value or use the arrows to set the number of frames for which an image sequence will pause at the last image before looping.</p>
Slowdown	<p>When an animated image is selected, this is the number of frames, expressed as a percentage, by which the movement of the animated image will be slowed. Accordingly, a negative value will speed up the movement.</p>
Blend Mode	<p>The default mode is Regular.</p> <p>Options are:</p> <ul style="list-style-type: none">Regular — the area is color combined with the underlying map color. This is the most common blend method.Multiply — the area color is multiplied with the underlying map color.Add — the area color is added to the underlying map color.

Container Drawings Properties

The properties found in the **Container** editor are described in the table below.

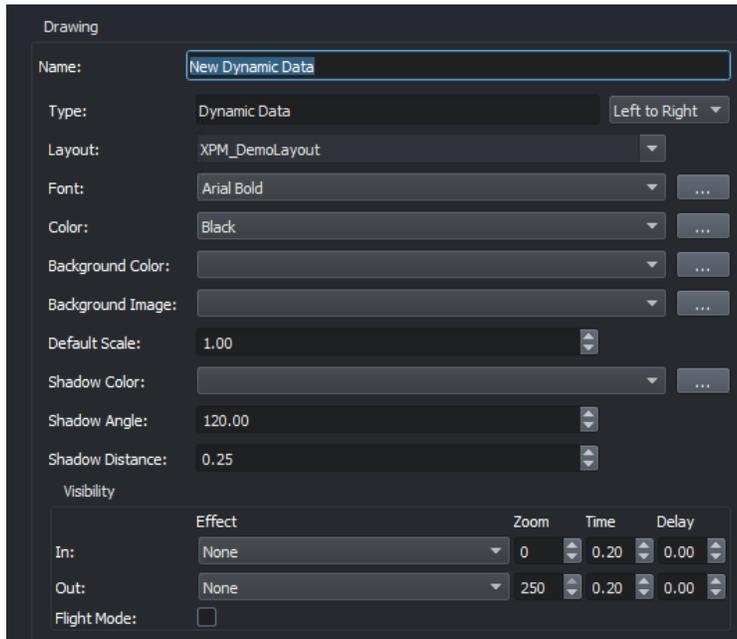


Properties - Container Drawings

Property	Description
Name	Enter a name for the container drawing that relates to the data source.
Type	The type is populated by default and is not editable.

Dynamic Data Drawings Properties

The **Dynamic Data** drawing properties are described in the table below.



Properties - Dynamic Data Drawings

Property	Description
Writing Direction	Select the writing direction for the text that is used in the dynamic data drawing. Options are Left to Right or Right to Left .
Layout	Select the layout file that defines the look of the dynamic data drawing.
Font	Select an existing font using the drop-down or select the Browse button (⋮) to add a new font to apply to the text of the dynamic data drawing.
Color	Select an existing color using the drop-down or select the Browse button (⋮) to add a new color to apply to the text of the dynamic data drawing. If no color is selected, the text will be invisible.
Background Color	This property only takes effect if there is no background image selected. If a background color is selected, a rectangle in this color will be drawn behind the text. The size of the rectangle corresponds to the text size with a small offset.
Background Image	Select an existing image using the drop-down or select the Browse button (⋮) to add a new image. If a background image is selected, the background color (if set) will not be applied. A rectangle textured with the image will be drawn behind the text. The size of the rectangle corresponds to the actual text size with a small offset, so the background image grows as the text grows.
Default Scale	The default value of the Scale property for the drawing.
Shadow Color	Select an existing color using the drop-down or select the Browse button (⋮) to add a new color to apply to the shadow of the text.

Property	Description									
Shadow Angle	<p>This image illustrates how the direction and angle of shadows vary depending on the specified degree.</p> <table border="1"> <tbody> <tr> <td> <p>135° Shadow falls diagonally to the top-left of the Dynamic Data</p> </td> <td> <p>90° Shadow falls above Dynamic Data</p> </td> <td> <p>45° Shadow falls diagonally to the top-right of the Dynamic Data</p> </td> </tr> <tr> <td> <p>180° Shadow falls to the left of the Dynamic Data</p> </td> <td> <p>Dynamic Data</p> </td> <td> <p>0° Shadow falls to the right of the Dynamic Data</p> </td> </tr> <tr> <td> <p>-135° Shadow falls diagonally to the bottom-left of the Dynamic Data</p> </td> <td> <p>-90° Shadow falls below the Dynamic Data</p> </td> <td> <p>-45° Shadow falls diagonally to the bottom-right of the Dynamic Data</p> </td> </tr> </tbody> </table>	<p>135° Shadow falls diagonally to the top-left of the Dynamic Data</p>	<p>90° Shadow falls above Dynamic Data</p>	<p>45° Shadow falls diagonally to the top-right of the Dynamic Data</p>	<p>180° Shadow falls to the left of the Dynamic Data</p>	<p>Dynamic Data</p>	<p>0° Shadow falls to the right of the Dynamic Data</p>	<p>-135° Shadow falls diagonally to the bottom-left of the Dynamic Data</p>	<p>-90° Shadow falls below the Dynamic Data</p>	<p>-45° Shadow falls diagonally to the bottom-right of the Dynamic Data</p>
<p>135° Shadow falls diagonally to the top-left of the Dynamic Data</p>	<p>90° Shadow falls above Dynamic Data</p>	<p>45° Shadow falls diagonally to the top-right of the Dynamic Data</p>								
<p>180° Shadow falls to the left of the Dynamic Data</p>	<p>Dynamic Data</p>	<p>0° Shadow falls to the right of the Dynamic Data</p>								
<p>-135° Shadow falls diagonally to the bottom-left of the Dynamic Data</p>	<p>-90° Shadow falls below the Dynamic Data</p>	<p>-45° Shadow falls diagonally to the bottom-right of the Dynamic Data</p>								
Shadow Distance	The distance that the shadow falls from the text. A larger value moves the shadow further away from the text.									
Visibility (In and Out)	<p>How a dynamic data drawing appears (In) and disappears (Out) during animation. The default effect that plays as the drawing appears during animation. The effect can only be seen when the animation is played.</p> <p>Options are:</p> <p>None — the drawing appears instantly at the frame to which the Key Frame is set.</p> <p>Dissolve — the drawing animates in and out at the level set in the corresponding Zoom fields. The drawing blends in over the number of seconds selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation.</p> <p>Wipe Left — the drawing animates in and out at the level set in the corresponding Zoom field. The drawing enters from the left over the number of seconds selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation.</p> <p>Wipe Right — the drawing animates in at the level set in the corresponding Zoom field. The drawing enters from the right over the number of seconds selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation.</p> <p>Wipe Bottom — the drawing animates in and out at the level set in the corresponding Zoom field. The drawing enters from the bottom over the number of seconds selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation.</p> <p>Wipe Top — the drawing animates in and out at the level set in the corresponding Zoom field. The drawing enters from the top over the number of seconds selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation.</p> <p>Flight Mode — Select the Flight Mode checkbox to control the drawing's visibility at the flight point level during flight map animations. If the checkbox is cleared, visibility is instead managed at the scene level. When enabled, a small airplane icon  appears on the drawing's preview image to indicate Flight Mode is enabled.</p>									

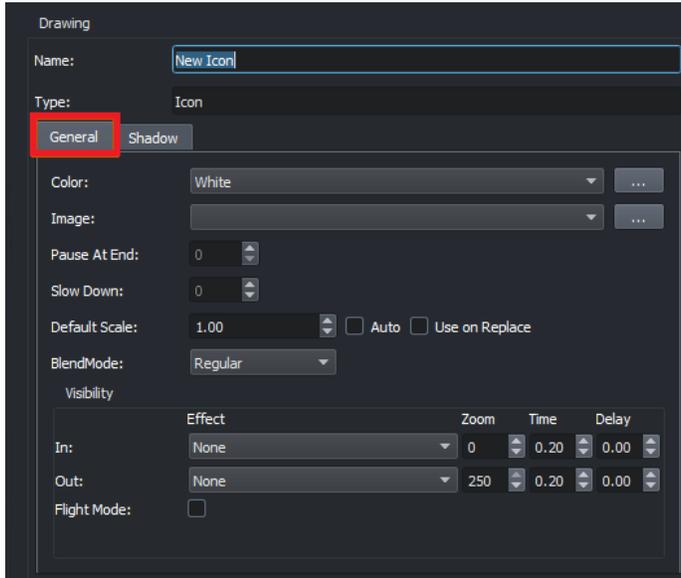
Icon Drawings Properties

The **Icon** drawing properties are described in the following sections:

[General Tab](#)  154

[Shadow Tab](#)  156

General Tab



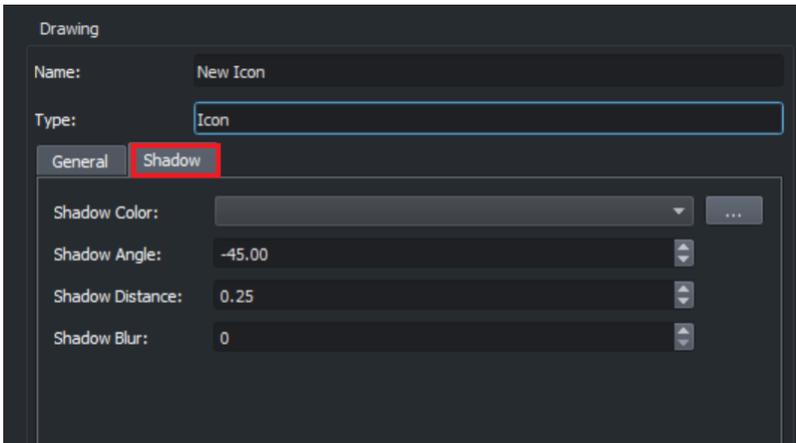
Properties - Icon Drawings - General Tab

The properties in the **General** tab are described in the following table.

Property	Description
Color	Select an existing color using the drop-down or select the Browse button () to add a new color for the icon drawing. The selected color will be applied to the image, if an image is selected. If no color is selected, the drawing will not be visible.
Image	Select an existing image from the drop-down or select the Browse button () to add a new image. If an image is selected, the drawing will be textured with this image. If no image is selected, the drawing will be a rectangle of the selected color.
Pause At End	Enter a value or use the arrows to set the number of frames for which an image sequence will pause at the last image before looping.
Slowdown	When an animated image or flip book animation is selected, the slowdown value controls the playback speed as a percentage. A positive value slows down the animation by increasing the time between frames, while a negative value speeds it up by decreasing the frame duration.

Property	Description
Default Scale	<p>The default value of the Scale property for the drawing.</p> <p>Select the Auto checkbox to make the icon size scale automatically as the map zooms in and out.</p> <p>Select the Use on Replace checkbox to use the default scale when replacing one icon drawing with another.</p> <p>The effect can be changed in the Drawing Editor, when the icon drawing is selected on the Canvas.</p> <p>See Size ²⁰⁵ for more information.</p>
Blend Mode	<p>The default mode is Regular.</p> <p>Options are:</p> <p>Regular — the icon color is combined with the underlying map color. This is the most common blend method.</p> <p>Multiply — the icon color is multiplied with the underlying map color.</p> <p>Add — the icon color is added to the underlying map color.</p>
Visibility (In and Out)	<p>How an icon drawing appears (In) and disappears (Out) during animation.</p> <p>Options are:</p> <p>None — the drawing appears/disappears instantly at the frame to which the Key Frame is set. Use the Delay field to input the number of seconds that the drawing will delay its animation.</p> <p>Dissolve — the drawing animates in and out at the level set in the corresponding Zoom fields. The drawing blends in/out over the number of seconds selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation.</p> <p>Wipe Left — the drawing animates in and out at the level set in the corresponding Zoom fields. The drawing appears/disappears from the left over the number of seconds selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation.</p> <p>Wipe Right — the drawing animates in and out at the level set in the corresponding Zoom fields. The drawing appears/disappears from the right over the number of seconds selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation.</p> <p>Wipe Bottom — the drawing animates in and out at the level set in the corresponding Zoom fields. The drawing appears/disappears from the bottom over the number of seconds selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation.</p> <p>Wipe Top — The drawing animates in and out at the level set in the corresponding Zoom fields. The drawing appears/disappears from the top over the number of seconds selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation.</p> <p>Flight Mode — Select the Flight Mode checkbox to control the drawing's visibility at the flight point level during flight map animations. If the checkbox is cleared, visibility is instead managed at the scene level. When enabled, a small airplane icon  appears on the drawing's preview image to indicate Flight Mode is enabled.</p>

Shadow Tab



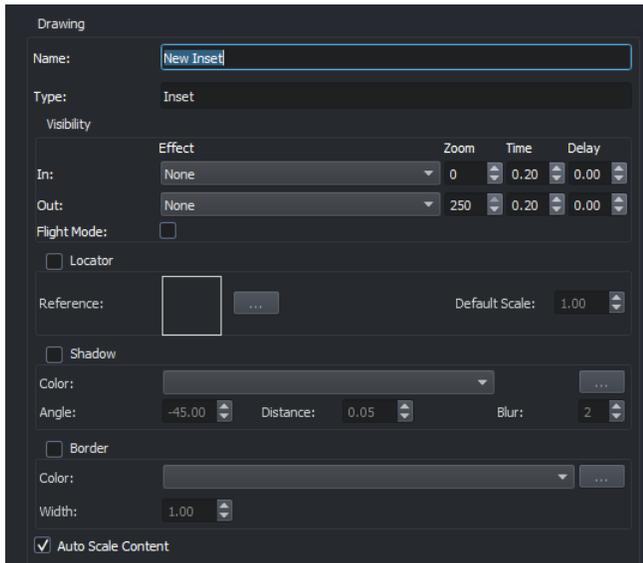
Properties - Icon Drawings - Shadow Tab

The properties in the **Shadow** tab are described in the following table.

Property	Description									
Shadow Color	Select an existing color using the drop-down or select the Browse button () to add a new color to apply to the shadow of the icon.									
Shadow Angle	This image illustrates how the direction and angle of shadows vary depending on the specified degree. <table border="1"> <tbody> <tr> <td>135° Shadow falls diagonally to the top-left of the Icon</td> <td>90° Shadow falls above the Icon</td> <td>45° Shadow falls diagonally to the top-right of the Icon</td> </tr> <tr> <td>180° Shadow falls to the left of the Icon</td> <td>Icon </td> <td>0° Shadow falls to the right of the Icon</td> </tr> <tr> <td>-135° Shadow falls diagonally to the bottom-left of the Icon</td> <td>-90° Shadow falls below the Icon</td> <td>-45° Shadow falls diagonally to the bottom-right of the Icon</td> </tr> </tbody> </table>	135° Shadow falls diagonally to the top-left of the Icon	90° Shadow falls above the Icon	45° Shadow falls diagonally to the top-right of the Icon	180° Shadow falls to the left of the Icon	Icon 	0° Shadow falls to the right of the Icon	-135° Shadow falls diagonally to the bottom-left of the Icon	-90° Shadow falls below the Icon	-45° Shadow falls diagonally to the bottom-right of the Icon
135° Shadow falls diagonally to the top-left of the Icon	90° Shadow falls above the Icon	45° Shadow falls diagonally to the top-right of the Icon								
180° Shadow falls to the left of the Icon	Icon 	0° Shadow falls to the right of the Icon								
-135° Shadow falls diagonally to the bottom-left of the Icon	-90° Shadow falls below the Icon	-45° Shadow falls diagonally to the bottom-right of the Icon								
Shadow Distance	The distance that the shadow falls from the icon. A larger value moves the shadow further away from the icon.									
Shadow Blur	Enter a value or use the arrows set to the degree by which the shadow appears out-of-focus. The maximum value is 20. The minimum value is 0.									

Inset Drawings Properties

The properties found in the **Inset** editor are described in the table below.



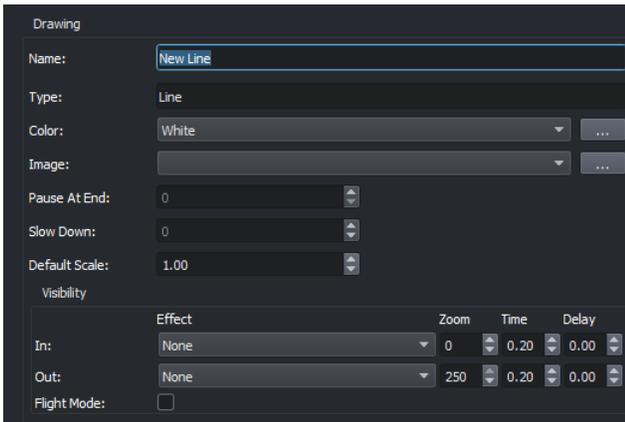
Properties - Inset Drawings

Property	Description
Visibility (In and Out)	<p>How an inset drawing appears (In) and disappears (Out) during animation.</p> <p>Options are:</p> <p>None — the drawing appears/disappears instantly at the frame to which the Key Frame is set.</p> <p>Dissolve — the drawing animates in and out at the level set in the corresponding Zoom fields. The drawing blends in/out over the number of seconds selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation.</p> <p>Wipe Left — the drawing animates in and out at the level set in the corresponding Zoom fields. The drawing appears/disappears from the left over the number of seconds selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation.</p> <p>Wipe Right — the drawing animates in and out at the level set in the corresponding Zoom fields. The drawing appears/disappears from the right over the number of seconds selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation.</p> <p>Wipe Bottom — the drawing animates in and out at the level set in the corresponding Zoom fields. The drawing appears/disappears from the bottom over the number of seconds selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation.</p> <p>Wipe Top — the drawing animates in and out at the level set in the corresponding Zoom fields. The drawing appears/disappears from the top over the number of seconds selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation.</p> <p>Flight Mode — Select the Flight Mode checkbox to control the drawing's visibility at the flight point level during flight map animations. If the checkbox is cleared, visibility is instead managed at the scene level. When enabled, a small airplane icon  appears on the drawing's preview image to indicate Flight Mode is enabled.</p>

Property	Description									
Locator	<p>Select a Locator Reference to display a reference point on the map on the Canvas.</p> <p>Select the browse button to open the Select Locator Reference window and select a tool from the drop-down.</p> <p>Select the icon you want to use, double-click to select it or press Select.</p> <p>Adjust the Default Scale to increase or decrease the size of the reference icon you selected.</p> <p>The Default Scale value is 1.00.</p>									
Shadow Color	Select an existing color using the drop-down or select the Browse button () to add a new color to apply to the shadow of the icon.									
Shadow Angle	<p>This image illustrates how the direction and angle of shadows vary depending on the specified degree.</p> <table border="1"> <tbody> <tr> <td> <p>135°</p> <p>Shadow falls diagonally to the top-left of the Inset</p> </td> <td> <p>90°</p> <p>Shadow falls above the Inset</p> </td> <td> <p>45°</p> <p>Shadow falls diagonally to the top-right of the Inset</p> </td> </tr> <tr> <td> <p>180°</p> <p>Shadow falls to the left of the Inset</p> </td> <td> <p>Inset</p>  </td> <td> <p>0°</p> <p>Shadow falls to the right of the Inset</p> </td> </tr> <tr> <td> <p>-135°</p> <p>Shadow falls diagonally to the bottom-left of the Inset</p> </td> <td> <p>-90°</p> <p>Shadow falls below the Inset</p> </td> <td> <p>-45°</p> <p>Shadow falls diagonally to the bottom-right of the Inset</p> </td> </tr> </tbody> </table>	<p>135°</p> <p>Shadow falls diagonally to the top-left of the Inset</p>	<p>90°</p> <p>Shadow falls above the Inset</p>	<p>45°</p> <p>Shadow falls diagonally to the top-right of the Inset</p>	<p>180°</p> <p>Shadow falls to the left of the Inset</p>	<p>Inset</p> 	<p>0°</p> <p>Shadow falls to the right of the Inset</p>	<p>-135°</p> <p>Shadow falls diagonally to the bottom-left of the Inset</p>	<p>-90°</p> <p>Shadow falls below the Inset</p>	<p>-45°</p> <p>Shadow falls diagonally to the bottom-right of the Inset</p>
<p>135°</p> <p>Shadow falls diagonally to the top-left of the Inset</p>	<p>90°</p> <p>Shadow falls above the Inset</p>	<p>45°</p> <p>Shadow falls diagonally to the top-right of the Inset</p>								
<p>180°</p> <p>Shadow falls to the left of the Inset</p>	<p>Inset</p> 	<p>0°</p> <p>Shadow falls to the right of the Inset</p>								
<p>-135°</p> <p>Shadow falls diagonally to the bottom-left of the Inset</p>	<p>-90°</p> <p>Shadow falls below the Inset</p>	<p>-45°</p> <p>Shadow falls diagonally to the bottom-right of the Inset</p>								
Shadow Distance	The distance that the shadow falls from the icon. A larger value moves the shadow further away from the icon.									
Shadow Blur	<p>Enter a value or use the arrows set to the degree by which the shadow appears out-of-focus.</p> <p>The maximum value is 20. The minimum value is 0.</p>									
Border	<p>Select the Border checkbox to add a border to the Locator drawing.</p> <p>When enabled, the Border will have the properties configured in this section.</p> <p>Color — Select an existing color using the drop-down or select the Browse button () to add a new color to apply to the border.</p> <p>Width — Enter a value or use the arrows to set the thickness of the border.</p>									
Auto Scale Content	When selected, the Text drawings inside of the Inset maintain their size. In other words, zooming in or out does not affect the size of the Text drawings inside the Inset.									

Line Drawings Properties

The **Line** drawing properties are described in the table below.



Properties - Line Drawings

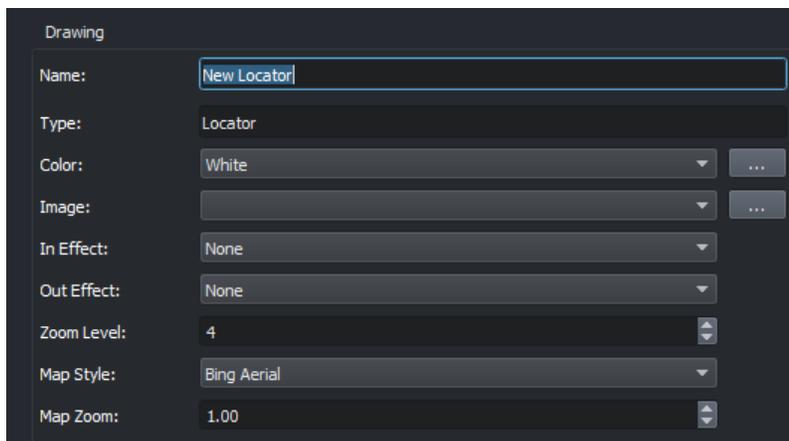
Property	Description
Color	Select an existing color using the drop-down or select the Browse button (⋮) to add a new color for the drawing. The selected color will also be applied to the image, if an image is selected. If no color is selected, the drawing will not be visible.
Image	Select an existing image from the drop-down or select the Browse button (⋮) to add a new image. If an image is selected, the line will be textured with this image.
Pause At End	Enter a value or use the arrows to set the number of frames for which an image sequence will pause at the last image before looping.
Slowdown	When an animated image is selected, this is the number of frames, expressed as a percentage, by which the movement of the animated image will be slowed. Accordingly, a negative value will speed up the movement.
Default Scale	The default value of the Scale property for the drawing. The default scale can be changed in the Drawing Editor . See Size ²⁰⁵ for more information.
Visibility (In and Out)	How a line drawing appears (In) and disappears (Out) during animation. Options are: None — the drawing appears/disappears instantly at the frame to which the Key Frame is set. Use the Delay field to input the number of seconds that the drawing will delay its animation. Dissolve — the drawing blends in and out over the number of seconds selected in the Time field. The drawing animates in and out at the level set in the corresponding Zoom field. Use the Delay field to input the number of seconds that the drawing will delay its animation. Flight Mode — Select the Flight Mode checkbox to control the drawing's visibility at the flight point level during flight map animations. If the checkbox is cleared, visibility is instead managed at the scene level. When enabled, a small airplane icon  appears on the drawing's preview image to indicate Flight Mode is enabled.

Locator Drawings Properties

Use **Locator** drawings to show where the location you're looking at is found in the context of a larger map. For example, if you place a locator drawing on a city and enlarge it, as shown in the example below, you'll see in what part of the country that city is found. Locator drawings are typically used in the **Overlay Layer**. See [Adding Drawings to an Overlay Layer](#) for more information.



Example - Locator Drawing



Properties - Locator Drawings

The **Locator** drawing properties are described in the following table.

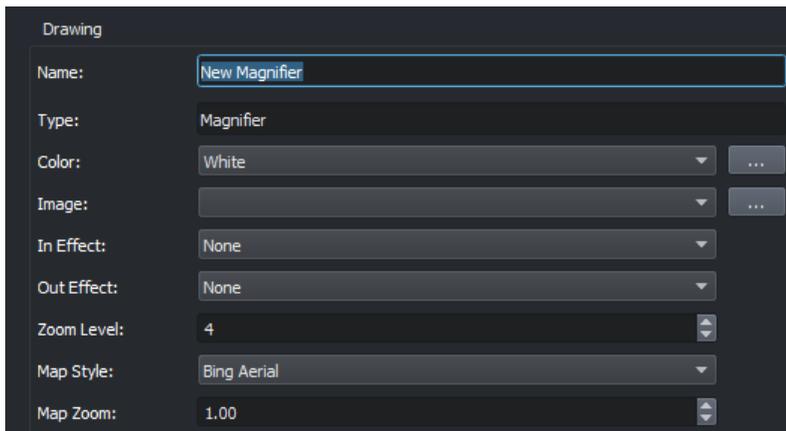
Property	Description
Color	<p>Defines the color of the border image selected in the Image property.</p> <p>Select an existing color using the drop-down or select the Browse button (⋮) to add a new color for the Locator drawing.</p> <p>The selected color will be applied to the border image, if one is selected.</p> <p>If no color is selected, the selected border image will be invisible.</p> <p>If a color is selected but a border image is not, the Locator drawing will be filled with the color. Also, if no color is selected, and a border image is selected, the default color of the border image will be used.</p>
Image	<p>Select an existing image from the drop-down or select the Browse button (⋮) to add a new image. The image provides a border for the map that is highlighted in the drawing.</p> <p>For the locator drawing to work properly, there must be a transparent area in the center of the image that is completely surrounded by graphics. Towards the edges of the image, transparent areas are possible. The image defines the area where the maps (Bing Aerial, Bing Aerial Label, or Bing Road) are shown.</p> <p>The drawing will be enclosed within this image.</p>

Property	Description
	An image must be selected for a Locator drawing.
In Effect	<p>The default effect that plays as the drawing appears during animation. The effect can only be seen when the animation is played.</p> <p>Options are:</p> <p>None — the drawing appears instantly at the frame to which the Key Frame is set.</p> <p>Dissolve — the drawing animates in at the level set in the corresponding Zoom Level field.</p> <p>Wipe Left — the drawing animates from the left at the level set in the corresponding Zoom Level field.</p> <p>Wipe Right — the drawing animates from the right at the level set in the corresponding Zoom Level field.</p> <p>Wipe Bottom — the drawing animates from the bottom at the level set in the corresponding Zoom Level field.</p> <p>Wipe Top — the drawing animates from the top at the level set in the corresponding Zoom Level field.</p> <p>The effect can be changed in the Drawing Editor in the Effect section, when the drawing is selected on the Canvas.</p> <p>See Effect^[205] for more information.</p>
Out Effect	<p>The default effect that plays as the drawing disappears during animation. The effect can only be seen when the animation is played.</p> <p>Options are:</p> <p>None — the drawing disappears instantly at the frame to which the key frame is set.</p> <p>Dissolve — the drawing blends out at the level set in the corresponding Zoom Level field.</p> <p>Wipe Left — the drawing animates out from the left at the level set in the corresponding Zoom Level field.</p> <p>Wipe Right — the drawing animates out from the right at the level set in the corresponding Zoom Level field.</p> <p>Wipe Bottom — the drawing animates out from the bottom at the level set in the corresponding Zoom Level field.</p> <p>Wipe Top — the drawing animates out from the top at the level set in the corresponding Zoom Level field.</p> <p>The effect can be changed in the Drawing Editor in the Effect section, when the drawing is selected on the Canvas.</p> <p>See Effect^[205] for more information.</p>
Zoom Level	<p>The default value of the Zoom Level for this drawing.</p> <p>The effect can be changed in the Drawing Editor, when the drawing is selected on the Canvas.</p> <p>See Locator Drawing Parameters^[212] for more information.</p>

Property	Description
Map Style	<p>Defines the default map style for this drawing.</p> <p>Options are:</p> <ul style="list-style-type: none"> Bing Aerial Bing Aerial Label Bing Road Bing Road Dark Bing Road Gray Bing Road Light <p>The effect can be changed in the Drawing Editor, when the drawing is selected on the Canvas.</p> <p>See Locator Drawing Parameters^[212] for more information.</p>
Map Zoom	<p>Defines the default map zoom value for this drawing.</p> <p>The effect can be changed in the Drawing Editor, when the drawing is selected on the Canvas.</p> <p>See Locator Drawing Parameters^[212] for more information.</p>

Magnifier Drawings Properties

The **Magnifier** drawing properties are described in the following table.



The screenshot shows a dark-themed dialog box titled "Drawing" with the following properties:

- Name: New Magnifier
- Type: Magnifier
- Color: White (with a browse button)
- Image: (with a browse button)
- In Effect: None
- Out Effect: None
- Zoom Level: 4
- Map Style: Bing Aerial
- Map Zoom: 1.00

Properties - Magnifier Drawings

Property	Description
Color	<p>Defines the color of the border of the image selected in the Image property.</p> <p>Select an existing color using the drop-down or select the Browse button to add a new color.</p> <p>The selected color will be applied to the border of the image, if one is selected.</p> <p>If a color is selected but a border image is not, the Locator drawing will be filled with the color. Also, if no color is selected, and a border image is selected, the default color of the border image will be used.</p> <p>If no color is selected, the selected border image will be invisible.</p>
Image	<p>Select an existing image from the drop-down or select the Browse button () to add a new image. The image provides a border for the map that is highlighted in the drawing.</p> <p>For the Magnifier drawing to work properly, there must be a transparent area in the center of the image that is completely surrounded by graphics. Towards the edges of the image, transparent areas are possible. The image defines the area where the maps (Bing Aerial, Bing Aerial Label, or any of the Bing Road maps) are shown.</p> <p>The drawing will be enclosed within this image.</p> <p>An image must be selected for a Magnifier drawing.</p>

Property	Description
In Effect	<p>The default effect that plays as the drawing appears during animation. The effect can only be seen when the animation is played.</p> <p>Options are:</p> <p>None — the drawing appears instantly at the frame to which the Key Frame is set.</p> <p>Dissolve — the drawing animates in at the level set in the corresponding Zoom Level field.</p> <p>Wipe Left — the drawing animates from the left at the level set in the corresponding Zoom Level field.</p> <p>Wipe Right — the drawing animates from the right at the level set in the corresponding Zoom Level field.</p> <p>Wipe Bottom — the drawing animates from the bottom at the level set in the corresponding Zoom Level field.</p> <p>Wipe Top — the drawing animates from the top at the level set in the corresponding Zoom Level field.</p> <p>The effect can be changed in the Drawing Editor in the Effect section, when the drawing is selected on the Canvas.</p> <p>See Effect ^[205] for more information.</p>
Out Effect	<p>The default effect that plays as the drawing disappears during animation. The effect can only be seen when the animation is played.</p> <p>Options are:</p> <p>None — the drawing disappears instantly at the frame to which the key frame is set.</p> <p>Dissolve — the drawing blends out at the level set in the corresponding Zoom Level field.</p> <p>Wipe Left — the drawing animates out from the left at the level set in the corresponding Zoom Level field.</p> <p>Wipe Right — the drawing animates out from the right at the level set in the corresponding Zoom Level field.</p> <p>Wipe Bottom — the drawing animates out from the bottom at the level set in the corresponding Zoom Level field.</p> <p>Wipe Top — the drawing animates out from the top at the level set in the corresponding Zoom Level field.</p> <p>The effect can be changed in the Drawing Editor in the Effect section, when the drawing is selected on the Canvas.</p> <p>See Effect ^[205] for more information.</p>
Zoom Level	<p>The default value of the Zoom Level for this drawing.</p> <p>Valid values are 1 to 21.</p> <p>The effect can be changed in the Drawing Editor, when the drawing is selected on the Canvas.</p> <p>See Magnifier Drawing Parameters ^[213] for more information.</p>

Property	Description
Map Style	<p>Defines the default map style for this drawing.</p> <p>Options are:</p> <ul style="list-style-type: none"> Bing Aerial Bing Aerial Label Bing Road Bing Road Dark Bing Road Gray Bing Road Light <p>The effect can be changed in the Drawing Editor, when the drawing is selected on the Canvas.</p> <p>See Magnifier Drawing Parameters  for more information.</p>
Map Zoom	<p>The zoom value for the area of a map.</p> <p>The effect can be changed in the Drawing Editor, when the drawing is selected on the Canvas.</p> <p>See Magnifier Drawing Parameters  for more information.</p>

Text and Replacement Drawings Properties

Text and **Replacement Drawings** have many editable properties. The properties are divided into tabs and are described in the following sections:

[General Tab](#) ¹⁶⁶

[Label Tab](#) ¹⁶⁹

[Decoration Tab](#) ¹⁷¹

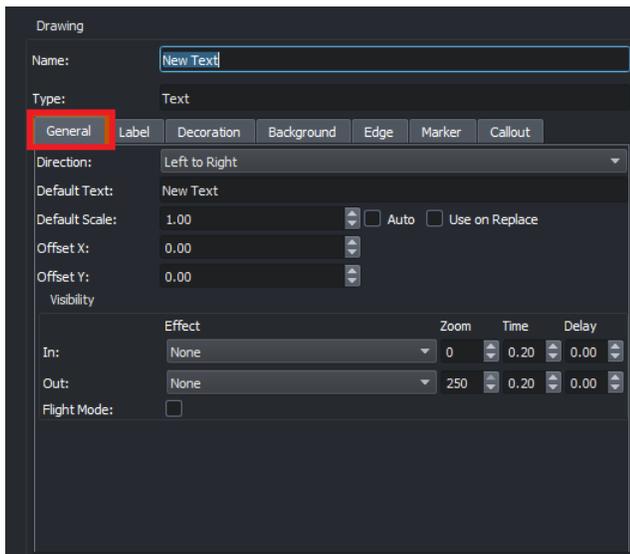
[Background Tab](#) ¹⁷³

[Edge Tab](#) ¹⁷⁶

[Marker Tab](#) ¹⁷⁷

[Callout Tab](#) ¹⁷⁹

General Tab



Drawings Properties - Text Drawings - General Tab

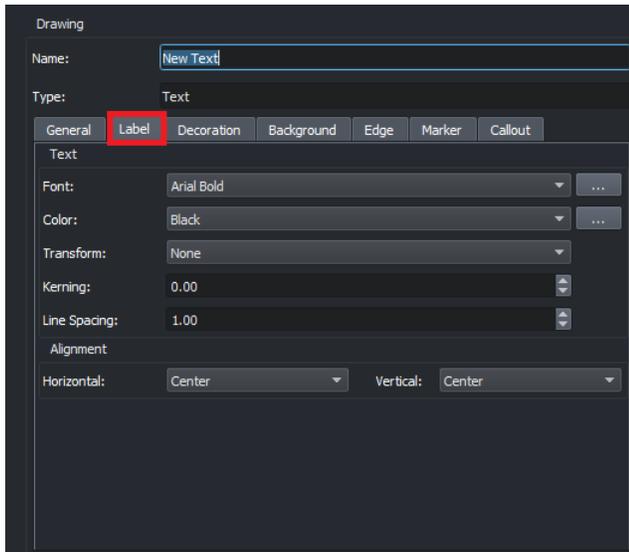
The properties found in the **General** tab are described in the following table.

Property	Description
Direction	Sets the writing direction for the text that is used in the drawing. Options are Left to Right or Right to Left .
Default Text	The example text that appears in the preview. This text also appears as the preview icon in the group of drawings in which it is located.

Property	Description
Default Scale	<p>The default size of the text.</p> <p>Select the Auto checkbox to make the text size scale automatically as the map zooms in and out.</p> <p>This effect can be changed in the Drawing Editor, when the drawing is selected on the Canvas.</p> <p>Select the Use on Replace checkbox to use the default scale when replacing one text drawing with another.</p> <p>See Size  for more information.</p>
Offset X	<p>The distance that the text drawing is offset from the center of the text along the X-axis of the map.</p> <p>Set to something other than 0.0 to make the callout arrow or line visible.</p>
Offset Y	<p>The distance that the text drawing is offset from the center of the text along the Y-axis of the map.</p> <p>Set to something other than 0.0 to make the callout arrow or line visible.</p>
Visibility (In and Out)	<p>How a text and replacement drawing appears (In) and disappears (Out) during animation.</p> <p>Options are:</p> <p>None — the drawing appears/disappears instantly at the frame to which the Key Frame is set. Use the Delay field to input the number of seconds that the drawing will delay its animation.</p> <p>Dissolve — the drawing animates in and out at the level set in the corresponding Zoom fields. The drawing blends in/out over the number of seconds selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation.</p> <p>Typewriter — the drawing animates in and out at the level set in the corresponding Zoom fields. The appears/disappears one character at a time over the number of seconds selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation.</p> <p>Alpha — the drawing animates in and out at the level set in the corresponding Zoom fields. The drawing blends in/out one character at a time over the number of seconds selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation.</p> <p>Wipe — The drawing animates in and out at the level set in the corresponding Zoom fields. The drawing appears from the right over the number of seconds selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation.</p> <p>Wipe Reverse — the drawing animates in and out at the level set in the corresponding Zoom fields. The drawing appears from the left over the number of seconds selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation.</p> <p>Wipe Left — the drawing animates in and out at the level set in the corresponding Zoom fields. The drawing appears/disappears from the left over the number of seconds selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation.</p> <p>Wipe Right — the drawing animates in and out at the level set in the corresponding Zoom fields. The drawing appears/disappears from the left over the number of seconds selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation.</p>

Property	Description
	<p>Wipe Bottom — the drawing animates in and out at the level set in the corresponding Zoom fields. The drawing appears/disappears from the bottom over the number of seconds selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation.</p> <p>Wipe Top — The drawing animates in and out at the level set in the corresponding Zoom fields. The drawing appears/disappears from the top over the number of seconds selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation.</p> <p>Flight Mode — Select the Flight Mode checkbox to control the drawing's visibility at the flight point level during flight map animations. If the checkbox is cleared, visibility is instead managed at the scene level. When enabled, a small airplane icon  appears on the drawing's preview image to indicate Flight Mode is enabled.</p>

Label Tab



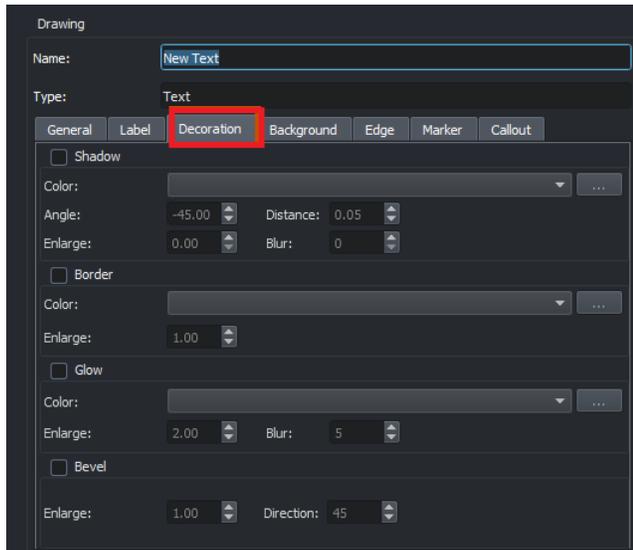
Properties - Text Drawings - Label Tab

The properties found in the **Label** tab are described in the following table.

Property	Description
Text	<p>Font — Select an existing font using the drop-down or select the Browse button () to add a new font to be applied to the text.</p> <p>Color — Select an existing color using the drop-down or select the Browse button () to add a new color.</p> <p>If no color is selected, the text drawing will not be visible.</p> <p>Transform — Select either None, UPPERCASE or lowercase.</p> <p>None: The text will be displayed exactly as entered.</p> <p>UPPERCASE: The text will be displayed as all uppercase, regardless of how it is entered.</p> <p>lowercase: The text will be displayed as all lowercase, regardless of how it is entered.</p> <p>Kerning — Enter a value or use the arrows to set the amount of space between letters.</p> <p>This effect can be changed in the Drawing Editor in the Text section, when the drawing is on the Canvas.</p> <p>Line Spacing — Enter a value or use the arrows to set the amount of space between multiple lines of text.</p> <p>This effect can be changed in the Drawing Editor in the Text section, when the drawing is selected on the Canvas.</p>

Property	Description
Alignment	<p>Horizontal — The longitude coordinate of the text drawing corresponds to the left side of the text if this property is set to Left, to the right side of the text if this property is set to Right and to the center of the text if this property is set to Center.</p> <p>Vertical — If this property is set to Top, the latitude coordinate of the text drawing will correspond to the highest theoretical possible character in the first line. This is to have static baselines. If the latitude coordinate actually corresponded to the top of the text, the baselines (and so the whole text) would change position whenever the text changes.</p> <p>Accordingly, for Center, the latitude coordinate is not really in the center of the text but at a position close to the center where baselines only change when the number of lines changes.</p> <p>For Bottom, the baseline of the last line in the text will correspond to the latitude coordinate.</p> <p>For Baseline, the baseline of the first line of the text will correspond to the latitude coordinate.</p>

Decoration Tab



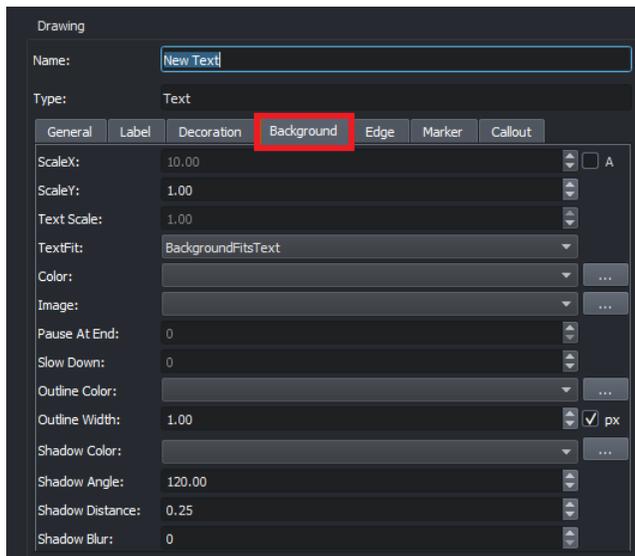
Properties - Text Drawings - Decoration Tab

The properties found in the **Decoration** tab are described in the following table.

Property	Description									
Shadow Color	Select an existing color using the drop-down or select the Browse button () to add a new color.									
Shadow Angle	This image illustrates how the direction and angle of shadows vary depending on the specified degree. <table border="1"> <tbody> <tr> <td style="text-align: center;">135° Shadow falls diagonally to the top-left of the Text</td> <td style="text-align: center;">90° Shadow falls above the Text</td> <td style="text-align: center;">45° Shadow falls diagonally to the top-right of the Text</td> </tr> <tr> <td style="text-align: center;">180° Shadow falls to the left of the Text</td> <td style="text-align: center;">Text </td> <td style="text-align: center;">0° Shadow falls to the right of the Text</td> </tr> <tr> <td style="text-align: center;">-135° Shadow falls diagonally to the bottom-left of the Text</td> <td style="text-align: center;">-90° Shadow falls below the Text</td> <td style="text-align: center;">-45° Shadow falls diagonally to the bottom-right of the Text</td> </tr> </tbody> </table>	135° Shadow falls diagonally to the top-left of the Text	90° Shadow falls above the Text	45° Shadow falls diagonally to the top-right of the Text	180° Shadow falls to the left of the Text	Text 	0° Shadow falls to the right of the Text	-135° Shadow falls diagonally to the bottom-left of the Text	-90° Shadow falls below the Text	-45° Shadow falls diagonally to the bottom-right of the Text
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-135° Shadow falls diagonally to the bottom-left of the Text	-90° Shadow falls below the Text	-45° Shadow falls diagonally to the bottom-right of the Text								
Shadow Distance	The distance that the shadow falls from the text. A larger value moves the shadow further away from the text.									
Shadow Enlarge	Enter a value or use the arrows to set an amount by which to enlarge the shadow.									
Shadow Blur	Enter a value or use the arrows to set the degree by which the shadow appears out-of-focus.									

Property	Description
Border	<p>Select the Border checkbox to add a border around the outside of the text characters.</p> <p>Color — Select an existing color for the border using the drop-down or select the Browse button () to add a new color.</p> <p>Enlarge — Enter a value or use the arrows to set an amount by which to enlarge the border.</p>
Glow	<p>Select the Glow checkbox to add a glow effect around the outside of the text characters.</p> <p>Enlarge — Enter a value or use the arrows to set an amount by which to enlarge the glow.</p> <p>Blur — Enter a value or use the arrows to set the degree by which the glow appears out-of-focus.</p>
Bevel	<p>Select the Bevel checkbox to add a bevel effect around the outside of the text characters, giving them a 3D appearance.</p> <p>Enlarge — Enter a value or use the arrows to set an amount by which to enlarge the bevel.</p> <p>Direction — Enter a value or use the arrows to set the degree at which the bevel will appear on the text characters.</p>

Background Tab



Properties - Text Drawings - Background Tab

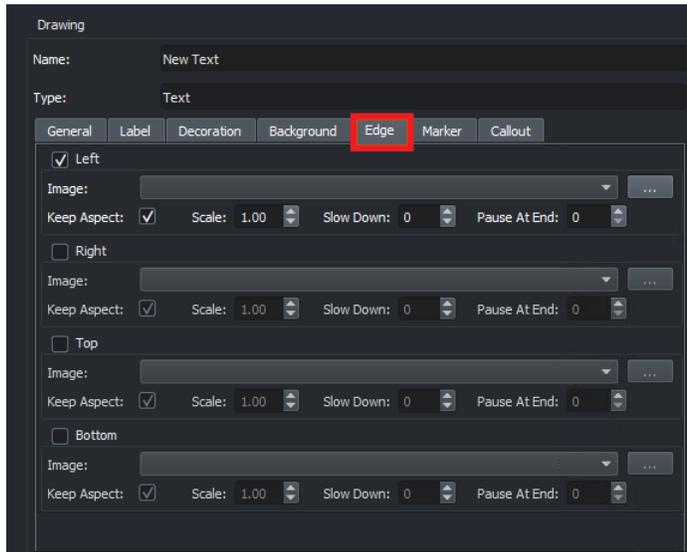
The properties found in the **Background** tab are described in the following table.

Property	Description
Scale X	<p>Enter a value or use the arrows to set the default width of the rectangle that forms the background for the text drawing.</p> <p>1.00 is the minimum size. 2.0 makes the background double the size of the text box.</p> <p>This property is only available if TextFit is set to Unlinked.</p>
Scale Y	<p>Enter a value or use the arrows to set the default height of the rectangle that forms the background for the text drawing.</p> <p>1.00 is the minimum size. 2.0 makes the background double the size of the text box.</p> <p>This property is only available if TextFit is set to BackgroundFitsText or BackgroundFitsTextKeepAspect.</p>
Text Scale	<p>Enter a value or use the arrows to adjust the default size of the text box in proportion to the background image behind the text.</p> <p>0.00 is the minimum size. 1.0 makes the text occupy the width or complete limits of the background's borders.</p> <p>This property is only available if TextFit is TextFitsBackground or TextFitsBackgroundKeepAspect.</p>
TextFit	<p>From the drop-down, select the option that looks best when modifying text within an object:</p> <ul style="list-style-type: none"> Unlinked — the background image adjusts its width only to fit the text. BackgroundFitsText — the background image adjusts its width only to fit the text. BackgroundFitsTextKeepAspect — the background image resizes to fit the text while maintaining its original aspect ratio. TextFitsBackground — the text box adjusts its width only to fit within the background image. TextFitsBackgroundKeepAspect — the text box resizes to fit within the background image while maintaining its aspect ratio.

Property	Description									
Color	<p>Select an existing color for the background using the drop-down or select the Browse button () to add a new color.</p> <p>If only a background color is selected, a rectangle in this color will be drawn behind the text.</p> <p>If both a background color and an image are selected, they will be combined.</p> <p>If no background color, image or outline color are selected, there will be no background.</p>									
Image	<p>Select an existing image using the drop-down or select the Browse button () to add a new image.</p> <p>The image will be drawn behind the text.</p> <p>If both a background color and an image are selected, they will be combined.</p> <p>If no background color, image or outline color are selected, there will be no background.</p>									
Pause At End	Enter or use the arrows to set the number of frames for which an image sequence will pause at the last image before looping.									
Slowdown	When an animated image is selected, this is the number of frames, expressed as a percentage, by which the movement of the animated image will be slowed. Accordingly, a negative value will speed up the movement.									
Outline Color	<p>Adds the selected color to the outline of the background.</p> <p>Select an existing color using the drop-down or select the Browse button () to add a new color.</p> <p>If no background color is selected, only an outline in the color selected will be displayed.</p>									
Outline Width	<p>Enter a value or use the arrows to set a width for the outline (border) of the background.</p> <p>If the px checkbox is selected, the width of the outline will remain the same regardless of the zoom level of the map.</p> <p>If the px checkbox is cleared, the width of the outline will scale relative to the background as the zoom level of the map changes.</p>									
Shadow Color	Select an existing color using the drop-down or select the Browse button () to add a new color to apply to the shadow of the background.									
Shadow Angle	<p>This image illustrates how the direction and angle of shadows vary depending on the specified degree.</p> <table border="1"> <tbody> <tr> <td> <p>135°</p> <p>Shadow falls diagonally to the top-left of the Text</p> </td> <td> <p>90°</p> <p>Shadow falls above the Text</p> </td> <td> <p>45°</p> <p>Shadow falls diagonally to the top-right of the Text</p> </td> </tr> <tr> <td> <p>180°</p> <p>Shadow falls to the left of the Text</p> </td> <td> <p>Text</p>  </td> <td> <p>0°</p> <p>Shadow falls to the right of the Text</p> </td> </tr> <tr> <td> <p>-135°</p> <p>Shadow falls diagonally to the bottom-left of the Text</p> </td> <td> <p>-90°</p> <p>Shadow falls below the Text</p> </td> <td> <p>-45°</p> <p>Shadow falls diagonally to the bottom-right of the Text</p> </td> </tr> </tbody> </table>	<p>135°</p> <p>Shadow falls diagonally to the top-left of the Text</p>	<p>90°</p> <p>Shadow falls above the Text</p>	<p>45°</p> <p>Shadow falls diagonally to the top-right of the Text</p>	<p>180°</p> <p>Shadow falls to the left of the Text</p>	<p>Text</p> 	<p>0°</p> <p>Shadow falls to the right of the Text</p>	<p>-135°</p> <p>Shadow falls diagonally to the bottom-left of the Text</p>	<p>-90°</p> <p>Shadow falls below the Text</p>	<p>-45°</p> <p>Shadow falls diagonally to the bottom-right of the Text</p>
<p>135°</p> <p>Shadow falls diagonally to the top-left of the Text</p>	<p>90°</p> <p>Shadow falls above the Text</p>	<p>45°</p> <p>Shadow falls diagonally to the top-right of the Text</p>								
<p>180°</p> <p>Shadow falls to the left of the Text</p>	<p>Text</p> 	<p>0°</p> <p>Shadow falls to the right of the Text</p>								
<p>-135°</p> <p>Shadow falls diagonally to the bottom-left of the Text</p>	<p>-90°</p> <p>Shadow falls below the Text</p>	<p>-45°</p> <p>Shadow falls diagonally to the bottom-right of the Text</p>								

Property	Description
Shadow Distance	The distance that the shadow falls from the background. A larger value moves the shadow further away from the background.
Shadow Blur	Enter a value or use the arrows to set the degree by which the shadow appears out-of-focus.

Edge Tab

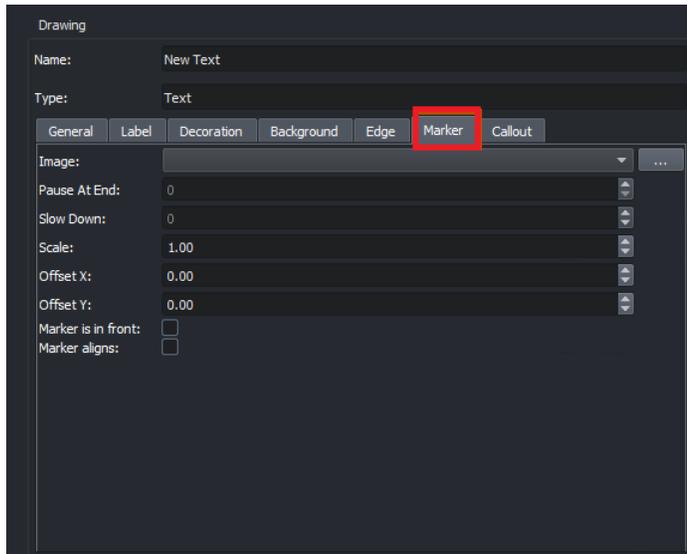


Properties - Text Drawings - Edge Tab

The properties found in the **Edge** tab are described in the following table.

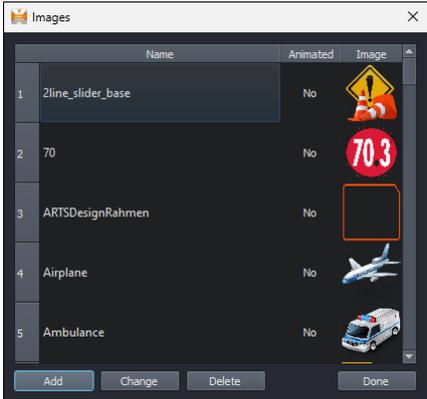
Property	Description
Left Right Top Bottom	Select the checkbox to activate and apply Edge settings to the corresponding side of the Text drawing. Changes to the Edge settings are instantly reflected in the preview at the bottom of the Drawing Management Editor .
Image	Select an existing image from the drop-down to apply it to the edge of the Text drawing. Alternatively, select the Browse button to open the Images window, where you can preview the image collection and add new images to the system.
Keep Aspect or Scale	Select the Keep Aspect checkbox to maintain the image's original width-to-height ratio when scaling. OR Clear the Keep Aspect checkbox and set the Scale value to manually adjust the width and height independently.
Slow Down	When an animated image is selected, this is the number of frames, expressed as a percentage, by which the movement of the animated image will be slowed. Accordingly, a negative value will speed up the movement. ★ This function only applies to edges that have an animated image.
Pause At End	When an animated image is selected, this is the number of frames for which an image sequence will pause at the last image before looping. ★ This function only applies to edge images that have an animated image.

Marker Tab



Properties - Text Drawings - Marker Tab

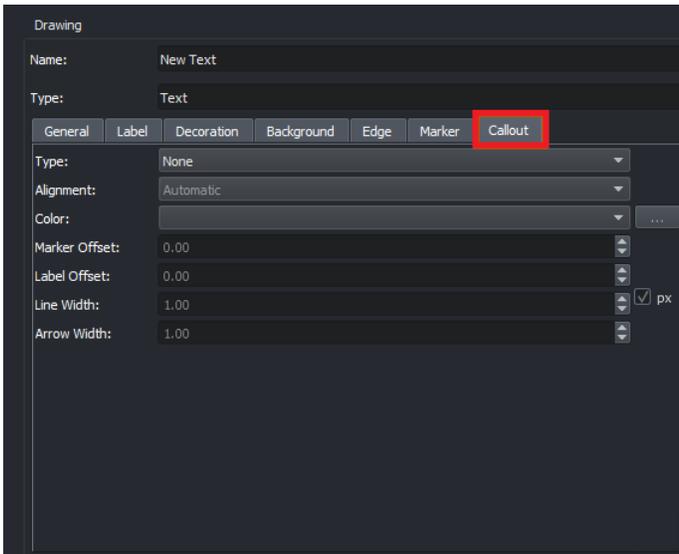
The properties found in the **Marker** tab are described in the following table.

Property	Description
Image	<p>Select an existing image using the drop-down or select the Browse button (...) to add a new image from the Images folder.</p> <p>By default, the image will be drawn behind the text.</p> <p>When the TextFit field in the Background tab is set to BackgroundFitsText or BackgroundFitsTextKeepAspect the size of the image is relative to the text size, so the image grows as the text grows.</p> <p>To remove the image from the drawing, select the drop-down arrow and select the blank area at the top of the drop-down list.</p> <p>To delete an image, select the Browse button (...) beside the image field and in the Images folder, select Delete. You cannot delete an image that is currently being used in a drawing.</p>  <p>The Animated column indicates whether or not the image is part of a sequence, creating an animated drawing.</p>
Pause At End	<p>Enter a value or use the arrows to set the number of frames for which an image sequence will pause at the last image before looping.</p> <p>★ This function only applies to markers that have animation.</p>

Property	Description
Slowdown	When an animated image is selected, this is the number of frames, expressed as a percentage, by which the movement of the animated image will be slowed. Accordingly, a negative value will speed up the movement. ★ This function only applies to markers that have animation.
Scale	Enter a value or use the arrows to increase or decrease the size of the marker image. Default is 1.00 . Selecting 2.00 will make the image twice as large.
Offset X	The distance that the marker image is offset from the center of the text along the X-axis of the map. 0.0 = Center A value higher than 0.00 = Right of center A value lower than 0.00 = Left of center
Offset Y	The distance that the marker image is offset from the center of the text along the Y-axis of the map. 0.0 = Center A value higher than 0.00 = Above the center A value lower than 0.00 = Below the center
Marker is in front	Select this checkbox to place the marker in front of the text.
Marker aligns	Select this checkbox to align the marker to the text.

- ★ In order to see the marker, the **Offset X** and **Offset Y** values in the general tab need to be something other than **0.00**. Otherwise, the marker will be hidden behind the text or background. Changing the offset defines the default offset between the text and the point of interest.

Callout Tab



Text Properties - Callout Tab

The properties found in the **Callout** tab are described in the following table.

Property	Description
Type	<p>Select the type of callout used to draw the connection between the text-background panel and the location of the point of interest.</p> <p>A background color or an outline color must be defined in the Background tab in order to use a callout.</p> <p>Callout options are Arrow and Line.</p> <p>Arrow draws a triangle from the panel to the location on the map in the same style as the background. The Line Width properties are not used in this type.</p> <p>Line draws a line between the text-panel and the location on the map. If Line is chose, the Line Width properties become available.</p> <p>For both arrows and lines, the starting point near the panel is calculated automatically for optimal appearance of the callout.</p>
Alignment	Select whether the arrow or line should be aligned at center or automatically.
Color	Select an existing color using the drop-down or select the Browse button (🗂️) to add a new color for the callout line. Applies only to the Line type.
Marker Offset	<p>Enter a value or use the arrows to adjust the position of the arrow or line relative to the marker. The value defines the distance between the end of the callout and the marker.</p> <ul style="list-style-type: none"> • 0.0 — no offset • >0.0 — moves the callout toward the text • <0.0 — moves the callout away from the text

Property	Description
Label Offset	<p>Enter a value or use the arrows to set an offset that defines the gap between the label and the start of the callout. Adjust the Offset X and Offset Y parameters in the General tab beyond the 0,0 position to view the effect in the example image below the properties. The values describe the distance between the text and the start of the callout.</p> <ul style="list-style-type: none"> • 0.0 no offset • > 0.0 offset toward the end of the callout • < 0.0 offset away from the end of the callout
Line Width	<p>Enter a value or use the arrows to set the width of the callout line.</p> <p>If the px checkbox is selected, the width of the line will remain the same regardless of the zoom level of the map.</p> <p>If the px checkbox is cleared, the width of the line will scale relative to the background as the zoom level of the map changes.</p> <p>★ This property only applies when the Line Type has been selected.</p>
Arrow Width	<p>Enter a value or use the arrows to set the width of the callout arrow.</p> <p>★ This property only applies when the Arrow Type has been selected and the Alignment is set to Center.</p>

To add callout text to a scene:

1. In the **Drawing Toolbox**, select the **Callout** text drawing, then select within the scene at the exact position to which you want the arrow or line of the **Callout** to point.
2. Double-click in the bounding box and enter the new text.
3. Place the cursor inside the bounding box, then left-click and drag the bounding box to adjust the position of the **Callout** arrow or line.
4. To reposition a **Callout**, left-click and drag either the white handle at the end of the callout line or the tip of the arrow.

Video Input Drawings Properties

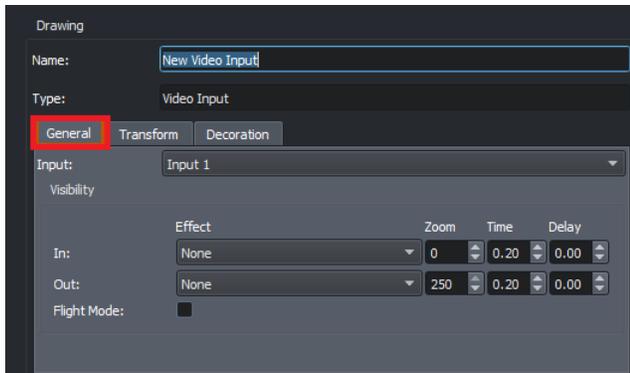
The **Video Input** drawing properties are divided into three tabs and are described below.

[General Tab](#)  181

[Transform Tab](#)  182

[Decoration Tab](#)  183

General Tab



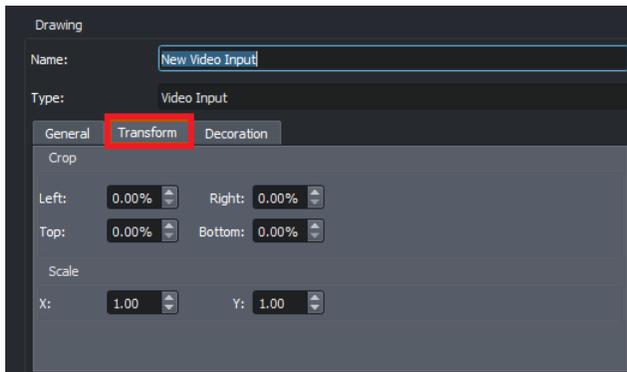
Properties - Video Input Drawings - General Tab

The properties found in the **General** tab are described in the following table.

Property	Description
Input	Select the input source to be displayed in the drawing. There are 8 possible inputs.
Visibility (In and Out)	How a video input drawing appears (In) and disappears (Out) during animation. Options are: None — the drawing appears/disappears instantly at the frame to which the Key Frame is set. Dissolve — the drawing animates in and out at the level set in the corresponding Zoom fields. The drawing blends in/out over the number of seconds selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation. Wipe Left — the drawing animates in and out at the level set in the corresponding Zoom fields. The drawing appears/disappears from the left over the number of seconds selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation. Wipe Right — the drawing animates in and out at the level set in the corresponding Zoom fields. The drawing appears/disappears from the right over the number of seconds selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation. Wipe Bottom — the drawing animates in and out at the level set in the corresponding Zoom fields. The drawing appears/disappears from the bottom over the number of seconds selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation. Wipe Top — the drawing animates in and out at the level set in the corresponding Zoom fields. The drawing appears/disappears from the top over the number of seconds

Property	Description
	<p>selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation.</p> <p>Flight Mode — Select the Flight Mode checkbox to control the drawing's visibility at the flight point level during flight map animations. If the checkbox is cleared, visibility is instead managed at the scene level. When enabled, a small airplane icon  appears on the drawing's preview image to indicate Flight Mode is enabled.</p>

Transform Tab

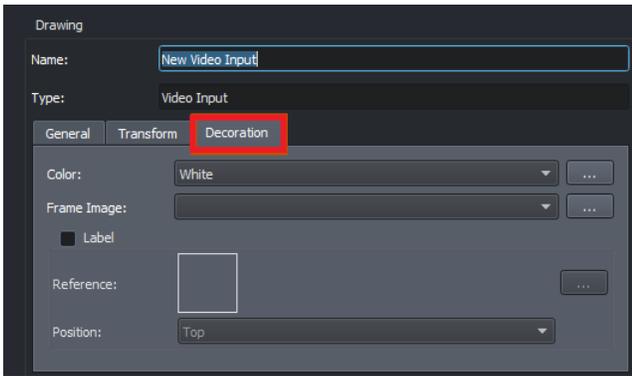


Properties - Video Input Drawings - Transform Tab

The properties found in the **Transform** tab are described in the following table.

Property	Description
Crop	Enter a value or use the arrows to select a percentage by which to crop the video input.
Scale	In the X and Y fields, enter a value or use the arrows to increase or decrease the size of the video input.

Decoration Tab



Properties - Video Input Drawings - Decoration Tab

The properties found in the **Decoration** tab are described in the following table.

Property	Description
Color	Select an existing color using the drop-down or select the Browse button (⋮) to add a new color to apply to the frame image for the video input.
Frame Image	Select an existing image using the drop-down or select the Browse button (⋮) to add a new one. The image must be designed as a frame, with transparent area in the center where the video input will appear.
Label	Select the Label checkbox to add a label to the video input drawing. When enabled, the label will have the properties configured in this section. Use the Browse button (⋮) to open the Select Label Reference editor and select a text drawing for the label. Use the Position drop-down to select the location of the label: Top , Left , Right or Bottom .

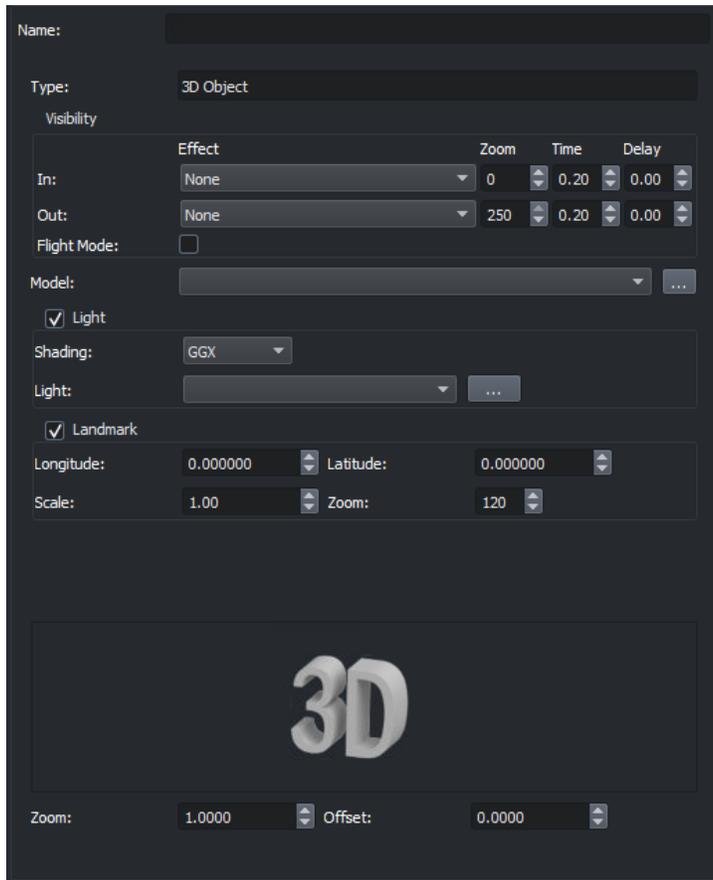
3D Object Drawings Properties

When adding a new **3D Object** drawing to the system, you'll need to configure its properties. You can also edit the properties of existing 3D Object drawings at any time. The following sections provide information and instructions for how to configure a 3D Object drawing's properties.

[3D Object Drawings Properties](#) ¹⁸⁵

[Model Editor](#) ¹⁸⁶

[Lights Editor](#) ¹⁸⁷



Drawings Properties - 3D Object Drawings

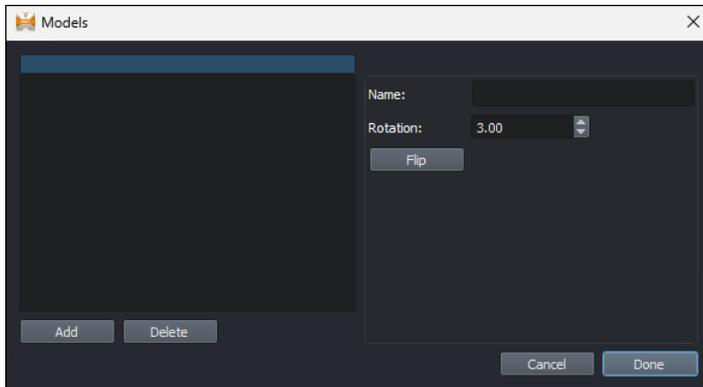
3D Object Drawing Properties

Opening a **3D object** drawing in the **Drawing Management Editor** allows you to configure the following properties.

Property	Description
Visibility (In and Out)	<p>Controls how the 3D Object drawing appears (In) and disappears (Out) during an animation.</p> <p>Options are:</p> <p>None — the drawing instantly appears/disappears at the set Key Frame. Use the Delay field to set a delay, in seconds, its transition.</p> <p>Dissolve — the drawing animates in and out at the level set in the corresponding Zoom fields. The drawing blends in/out over the number of seconds selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation.</p> <p>Flight Mode — Select the Flight Mode checkbox to control the drawing's visibility at the flight point level during flight map animations. If the checkbox is cleared, visibility is instead managed at the scene level. When enabled, a small airplane icon  appears on the drawing's preview image to indicate Flight Mode is enabled.</p>
Model	<p>Models define the object's vertices, materials/colors, and textures. Select an existing model from the drop-down. If the required model is not listed, select the Browse button to use the Models Editor^[186] to import and manage models.</p>
Light	<p>Select the Light checkbox to select and apply a shading profile and/or basic light source settings to the 3D object drawing. An empty checkbox means that no light or shading profiles are added to the 3D Object drawing.</p> <p>Shading — Select the shading profile to be used. Options are GGX (default) or BlinnPhong.</p> <ul style="list-style-type: none"> • GGX — A physically based microfacet shading model that simulates realistic light reflections on rough surfaces. Produces natural-looking highlights with a smooth falloff, making it suitable for metallic, glossy, and rough materials. • BlinnPhong — A traditional shading model that calculates specular highlights using a simplified formula. Faster but less physically accurate, often resulting in sharper, less realistic highlights. <p>Light — From the drop-down, select a light profile that has already been configured. If the required light profile is not listed, use the Lights Editor^[187] (open by using the Browse button next to the Light drop-down) to configure or edit a light profile.</p>
Landmark	<p>Landmarks are 3D objects with a predefined, fixed position and size on the map (not on an overlay). To designate the 3D Object drawing as a landmark, select the checkbox and set the Longitude, Latitude, Scale, and Zoom parameters to determine the exact geographical position and size of the 3D object on the map. See Creating a Landmark from a 3D Object Drawing^[203] for more information.</p> <p>Note: Multiple landmarks at the same location will result in overlapping objects.</p>
Zoom Offset	<p>Use the Zoom and Offset parameters to adjust the appearance of the preview icon generated for the 3D object drawing.</p>

Model Editor

Models determine the 3D Object drawing's vertices, materials/colors, and textures. Use the **Models Editor** to import and manage models. Imported models are stored in the 3DModels database. Supported formats (via assimp) include .glb, .dae, and .obj.



3D Object Drawing Properties - Model Editor

To add a new model to a 3D Object drawing:

1. Open a **3D Object** drawing in the **Drawing Management Editor**.
2. Select the **Browse** button next to the **Model** drop-down.
3. In the **Model Editor**, select the **Add** button.
4. In the **Select File** dialog, select and open the 3D model file.
5. Use the following fields to name and adjust the orientation of the model.

Name — Enter a name for the model. This name will appear in the **Model** drop-down in the **Drawing Management Editor**.

Rotation — Rotates the model around the Z-axis (in degrees).

Flip — Rotates the model 90° around the X-axis (longitude).

6. Select **Done** to close the **Model Editor**.
The new model appears in the **Model** drop-down list.

To delete a model:

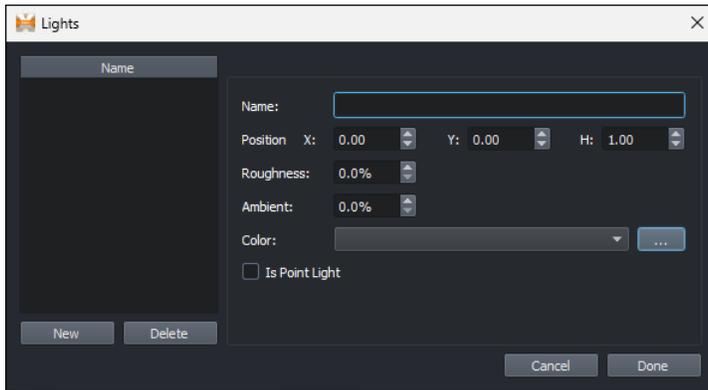
1. Open a **3D Object** drawing in the **Drawing Management Editor**.
2. Select the **Browse** button next to the **Model** drop-down.
3. In the **Models Editor**, select the model from the list in the left-side pane.
4. Select **Delete**.
5. In the **Delete Model** dialog, select **Yes** to confirm that you want to delete the selected model.

★ Deleting a model permanently removes it from the 3D Object Model database. Once deleted, the model is no longer available in any group and cannot be restored unless it is re-imported.

6. Select **Done** to close the **Models Editor**.

Lights Editor

The **Lights** editor manages light profiles, which define how light interacts with the 3D Object drawing using settings like position, color, roughness, and ambient light. Light profiles are stored in the **3DModels** database and are applied when a 3D Object drawing is created or edited. Once a 3D Object drawing is added to a scene, its light parameters can be adjusted directly in the **Drawing Editor**. See [3D Object Drawing Parameters](#) ^[215] for more information.



3D Object Drawing Properties - Lights Editor

To add a new Light profile:

1. Open a **3D Object** drawing in the **Drawing Management Editor**.
2. Select the **Light** checkbox.
3. Select the **Browse** button next to the **Light** drop-down.
4. In the **Lights Editor**, select **New**.
5. In the **Add Light** dialog, enter a name for the new light profile and select **OK**.

The light profile is added and highlighted in the list of light profiles.

6. Set or make adjustments to the following fields:

Position X, Y, H — Positions the light relative to the center of the 3D Object's bounding box.

Roughness — If set to >0%, it overwrites the model's roughness. Normally, roughness should be 0% since different parts a model normally have different roughness values (some parts shiny, others dull).

Ambient — Adjusts the overall brightness, which improves visible areas that are not exposed to light.

Color — Choose the color of the light from the drop-down, or leave blank for **White** (default). Or, select the **Browse** button to use the **Colors** tool to define and add a specific color.

Is Point Light — Select the checkbox to enable distance-based attenuation of the light.

7. Select **Done** to close the **Lights Editor**.

The new **Light** profile is now selected in the **Light** drop-down in the the **Drawing Management Editor**.

To delete a Lights profile:

1. Open a **3D Object** drawing in the **Drawing Management Editor**.
2. Select the **Light** checkbox.
3. Select the **Browse** button next to the **Light** drop-down.
4. In the **Lights Editor**, select the light profile from the list in the left-side pane.
5. Select **Delete**.
6. In the **Delete Light** dialog, select **Yes** to confirm that you want to delete the selected light profile.
 - ★ Deleting a light profile removes it from the 3DModels database.
7. Select **Done** to close the **Lights Editor**.

Adding Drawings

The **Drawing Toolbox**, located on the right side of the **Canvas**, allows you to add drawings from the **Drawings** database to a scene. If the drawing you need isn't available in the toolbox, you can open the **Drawing Management Editor** directly to create a new drawing or edit an existing one.

Once a drawing is added to the scene on the **Canvas**, it becomes a part of the scene, and a reference to the drawing in the database is saved and loaded with it. You can further customize the drawing's properties after adding it. For example, the **Drawing Editor** lets you configure both common and specific parameters to define the drawing's appearance and behavior. Additionally, you can adjust its size, position, appearance, and, visibility using the bounding box and tools surrounding the drawing.

The **Drawing Overview** panel provides a list of all drawings in the scene and includes options to show, hide, rename, or delete selected drawings. When multiple drawings are added, you can use the **Drawing Layer toolbar** to control their stacking order and overlap within the scene.

If you need additional versions of a drawing, you can quickly duplicate it within the scene and adjust its parameters as needed. Unused drawings can be easily removed from the scene without affecting the original drawing in the database.

Here are a few additional tasks you can perform with scene drawings:

- Designate a default drawing to be used whenever drawings are generated automatically.
- Specify that a text or dynamic data drawing should be created precisely at the search location.
- Use the **Measurement Tool** to calculate the distance between two points on the map and add a text drawing to display the result.

The following sections provide instructions for adding and configuring drawings within the active scene:

[Adding and Editing Drawings](#) ¹⁹⁰

[Configuring Drawing Parameters](#) ²⁰⁴

[Adding a Default Drawing to a Search Location](#) ²¹⁶

[Adding a Measured Distance Text Drawing](#) ²¹⁸

[Adding Drawings to an Overlay Layer](#) ²²⁰

[Adding a Copy of a Drawing](#) ²²¹

[Replacing a Drawing](#) ²²²

[Setting a Drawing's Layer Order](#) ²²³

[Showing or Hiding Drawings](#) ²²⁴

[Deleting a Drawing from the Scene](#) ²²⁵

Adding and Editing Drawings

Drawings from the **Drawing Toolbox** are added directly to a scene on the **Canvas**, becoming part of the scene itself. As a result, they will be saved and loaded along with the scene.

The following topics are discussed in this section:

[Adding a Drawing to a Scene](#)^[190]

[Editing a Drawing Within a Scene](#)^[191]

★ For information about creating drawings, see [Managing Drawings](#)^[133].

To add a drawing to a scene:

1. In the **Drawing Toolbox**, from the **Group** drop-down, select the group that contains the drawing you want to add to your scene.
2. Then do one of the following:
 - Select a thumbnail in the preview pane and then select within the scene where you want the drawing to appear.
Left-clicking multiple times in the scene will add additional instances of the drawing.

OR

 - Left-click and drag a thumbnail from the preview pane into the scene.

★ Thumbnails containing an airplane icon  indicate that the drawing's **Visibility > Flight Mode** property is enabled. These drawings are mostly used when creating flight map animations in the [XPression Maps MOS workflow](#)^[9].
3. After adding a drawing, right-click on the mouse to add just one instance of the drawing or continue selecting to add multiple instances.

This method applies to **text**, **icon**, **3D Object**, **magnifier**, **container**, **locator**, **dynamic data**, **background**, **video input** and **inset** drawings. For information about adding and editing **area** and **line** drawings, see the following sections:

[Adding and Editing Area Drawings](#)^[193]

[Adding and Editing Line Drawings](#)^[196]

When you add a drawing to a scene, it is displayed within a white bounding box with a handle attached to the middle, as shown below:



Selected Drawing on the Canvas

The bounding box, the handle and the various icons attached to the bounding box are used to manipulate the drawing. You can move the drawing and modify the size, visibility, orientation, and rotation using these tools. Not all tools apply to every drawing type. Drawings display only those tools that apply to them.

To edit a drawing from within a scene:

1. Select a drawing on the **Canvas**.

The bounding box and its tools are displayed around the selected drawing.

2. Use the tools to change the size, position and appearance of the drawing as described in the table below:

Tool		How to Use the Tool
Center Point		Select and hold, then drag to move the drawing around the scene. You can also select and hold anywhere inside the bounding box to move the drawing.
Corner Points		Select and hold, then drag to scale the drawing.
Handle		Select and hold the end of the handle, then drag to rotate the drawing. For line and area drawings, the handles can also be used to adjust the path of the line or the shape of the area.
Scale		Select to enable Auto Scaling . In the Drawing Editor , you'll see that in the Size section, the Auto checkbox is selected. When selected, the drawing remains the same size as you zoom in and out on the map. When the Auto checkbox is cleared, the drawing will scale larger when you zoom in and smaller when you zoom out on the map.

Tool		How to Use the Tool
Eye Icon	 	<p>Select to toggle the visibility of the drawing at the scene level.</p> <p>Available when the drawing's Visibility > Flight Mode property is not selected.</p>
Airplane Icon	 	<p>Select to toggle the visibility of the drawing at the flight point level of a flight map animation.</p> <p>Available when the drawing's Visibility > Flight Mode property is selected.</p>
Face Icon	 	<p>When the map is tilted, select to toggle the placement of a drawing, either angled to match the map surface or perpendicular to the map surface and facing the camera.</p> <p>For drawings that are created on the Overlay Layer, this icon does not appear.</p>
Double-Ended Arrow		<p>Select the double-ended arrow to flip the drawing horizontally.</p>

In addition to the tools described above, some types of drawings have additional ways to manipulate them, that are specific to the drawing type.

These additional methods are described in the following sections.

[Adding and Editing Area Drawings](#)  193

[Editing Background Drawings](#)  199

[Editing Inset Drawings](#)  200

[Adding and Editing Line Drawings](#)  196

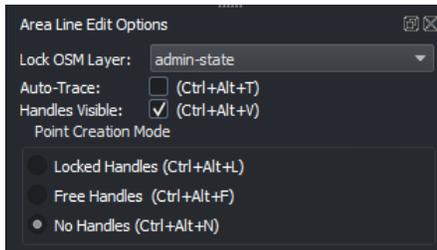
[Editing Locator Drawings](#)  201

[Editing Text Drawings](#)  202

[Creating a Landmark from a 3D Object Drawing](#)  203

Adding and Editing Area Drawings

Area drawings are a type of drawing that represent a flexible, closed shape filled with color and/or texture. When you add an area drawing to a scene, you adjust its shape by dragging its handles and borders. Before adding an area drawing to the scene, use the **Area Line Edit Options** panel to set options that determine how you can manipulate the drawing's shape and position on the map. For example, you can **lock OSM Layers** to OSM Map Styles, or enable **Auto-Trace** mode to draw an area by simply dragging, without needing to select at multiple points.



Area Line Edit Options

Once the area drawing is added to the scene, you can further modify its appearance, position, size, and other attributes to suit your needs.

The following topics provide instructions for adding and editing area drawings:

[Adding an Area Drawing with Auto-Trace Mode Enabled](#) ¹⁹³

[Adding an Area Drawing with Auto-Trace Mode Disabled](#) ¹⁹⁴

[Deleting an Area Drawing](#) ¹⁹⁴

[Editing an Area Drawing](#) ¹⁹⁵

To add an area drawing with Auto-Trace mode enabled:

1. Enable the **Area Line Edit Options** panel in the **View** menu.
2. In the **Area Line Edit Options** panel, select an option from the **Lock OSM Layer** drop-down if you want to have the area drawing locked on to a particular section of the map so that it doesn't waver off to other points. Select **None** to keep the OSM Layer unlocked.
3. Select the **Auto-Trace** checkbox to enable it.
4. Use the **Point Creation Mode** section to select and modify which style of drawing handles you want to use when creating area drawings.

The styles are:

- **Locked Handles:** Select the **Locked Handles** checkbox or press **Ctrl+Alt+L** to enable a 180 degree connection with locked handle points when creating an area drawing.
 - **Free Handles:** Select the **Free Handles** checkbox or press **Ctrl+Alt+F** to enable an unlimited and unlinked connection of points when creating an area drawing.
 - **No Handles:** Select the **No Handles** checkbox or press **Ctrl+Alt+N** to enable zero-length of linear connection points when creating an area drawing.
5. In the **Drawing Toolbox**, left-click on the thumbnail of the area drawing you want to add to your scene.

★ Thumbnails containing an airplane icon  indicate that the drawing's **Visibility > Flight Mode** property is enabled. These drawings are mostly used when creating flight map animations in the [XPression Maps MOS workflow](#) ⁹.

6. On the **Canvas**, left-click on the map where you want the area to start, then along the outline of the area you want to display, ending up at the same point where you started.
7. Release the mouse button when you reach the end of the area, to stop drawing.

To add an area drawing with Auto-Trace mode disabled:

1. Enable the **Area Line Edit Options** panel in the **View** menu.
2. In the **Area Line Edit Options** panel, select an option from the **Lock OSM Layer** drop-down if you want to have the area drawing locked on to a particular section of the map so that it doesn't waver off to other points. Select **None** to keep the OSM Layer unlocked.
3. Clear the **Auto-Trace** checkbox to disable it.
4. Use the **Point Creation Mode** section to select and modify which style of drawing handles you want to use when creating line and area drawings.

The styles are:

- **Locked Handles:** Select the **Locked Handles** checkbox or press **Ctrl+Alt+L** to enable a 180 degree connection with locked handle points when creating a line or area drawing.
 - **Free Handles:** Select the **Free Handles** checkbox or press **Ctrl+Alt+F** to enable an unlimited and unlinked connection of points when creating a line or area drawing.
 - **No Handles:** Select the **No Handles** checkbox or press **Ctrl+Alt+N** to enable zero lengths of linear connection points when creating a line or area drawing.
5. In the **Drawing Toolbox** preview pane, left-click the area drawing you want to add to the scene.
 - ★ Thumbnails containing an airplane icon  indicate that the drawing's **Visibility > Flight Mode** property is enabled. These drawings are mostly used when creating flight map animations in the [XPression Maps MOS workflow](#) .
 6. On the **Canvas**, left-click on the map where you want the area to start.
 7. Move the mouse and left-click at individual points along the outline of the area you want to display ending up at the same point where you started.
 8. Right-click when you reach the end of the area, to stop drawing.

To delete an area drawing:

1. Select the area drawing but don't select on a location point.
2. Press the **Delete** key to remove the drawing.

OR

- In the **Drawings Overview** list, right-click the drawing and select **Delete Drawing**.

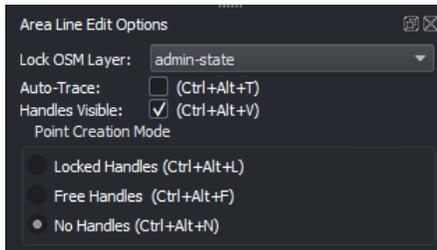
To edit an area drawing:

Use any of the following options:

- **Add New Points:** Double-click along the border of the area drawing to create new location points.
- **Move Points:** Select and hold a location point, then drag it to a new position to adjust the shape of the area drawing.
- **Toggle Corners and Paths:** Press the **CTRL** key and select a location point to toggle between a sharp corner and a smooth path. The selected point will turn blue when active. By default, location points are linked, forming a smooth, rounded path. Unlinking a location point will create a sharp corner.
- **Adjust Shape with Handles:** Select the end of a handle and drag it to fine-tune the shape of the area drawing.
- **Remove Points:** Select a location point, which will turn red, then press the **Delete** key to remove it.

Adding and Editing Line Drawings

Line drawings are a type of drawing that display a predefined textured line. When you add a line drawing to a scene, you adjust its length and direction by dragging its handles. However, before adding a line drawing to the scene, use the **Area Line Edit Options** panel to set options that determine how you can manipulate the drawing's length, shape and position on the map. For example, you can **lock OSM Layers** to OSM Map Styles, or enable **Auto-Trace mode** to draw a line by simply dragging, without needing to select at multiple points.



Area Line Edit Options

Once the line drawing is added to the scene, you can further modify its appearance, position, size, and other attributes to suit your needs.

The following topics provide instructions for adding and editing line drawings:

[Adding a Line Drawing with Auto-Trace Mode Enabled](#) ¹⁹⁶

[Adding a Line Drawing with Auto-Trace Mode Disabled](#) ¹⁹⁶

[Deleting a Line Drawing](#) ¹⁹⁸

[Editing a Line Drawing](#) ¹⁹⁸

[Connecting an Icon or Text Drawing to a Line Drawing](#) ¹⁹⁶

[Disconnecting an Icon or Text Drawing from a Line Drawing](#) ⁴⁵⁴

To add a line drawing with Auto-Trace mode enabled:

1. In the **Area Line Edit Options** window, select an option from the **Lock OSM Layer** drop-down if you want the line drawing locked on to a particular section of the map so that it doesn't waver off to other points. Select **None** to keep the OSM Layer unlocked.
2. Select the **Auto-Trace** checkbox to enable it.
3. Use the **Point Creation Mode** section to select and modify which style of drawing handles you want to use when creating line drawings.

The styles are:

- **Locked Handles:** Select the **Locked Handles** checkbox or press **Ctrl+Alt+L** to enable a 180 degree connection with locked handle points when creating a line drawing.
- **Free Handles:** Select the **Free Handles** checkbox or press **Ctrl+Alt+F** to enable an unlimited and unlinked connection of points when creating a line drawing.
- **No Handles:** Select the **No Handles** checkbox or press **Ctrl+Alt+N** to enable zero-length of linear connection points when creating a line drawing.

4. In the **Drawing Toolbox**, left-click on the line drawing thumbnail you want to add to your scene.
 - ★ Thumbnails containing an airplane icon  indicate that the drawing's **Visibility > Flight Mode** property is enabled. These drawings are mostly used when creating flight map animations in the [XPression Maps MOS workflow](#) .
5. On the **Canvas**, left-click and hold down the mouse button on the map where you want the line to start, then drag the line along the route you want to display.
6. Release the mouse button when you reach the end of the route, to stop drawing.

To add a line drawing with Auto-Trace mode disabled:

1. In the **Area Line Edit Options** window, select an option from the **Lock OSM Layer** drop-down if you want the line drawing locked on to a particular section of the map so that it doesn't waver off to other points. Select **None** to keep the OSM Layer unlocked.
2. Clear the **Auto-Trace** checkbox to disable it.
3. Use the **Point Creation Mode** section to select and modify which style of drawing handles you want to use when creating line drawings.

The styles are:

- **Locked Handles:** Select the **Locked Handles** checkbox or press **Ctrl+Alt+L** to enable a 180 degree connection with locked handle points when creating a line drawing.
 - **Free Handles:** Select the **Free Handles** checkbox or press **Ctrl+Alt+F** to enable an unlimited and unlinked connection of points when creating a line drawing.
 - **No Handles:** Select the **No Handles** checkbox or press **Ctrl+Alt+N** to enable zero lengths of linear connection points when creating a line drawing.
4. In the **Drawing Toolbox**, left-click on the line drawing thumbnail you want to add to your scene.
 - ★ Thumbnails containing an airplane icon  indicate that the drawing's **Visibility > Flight Mode** property is enabled. These drawings are mostly used when creating flight map animations in the [XPression Maps MOS workflow](#) .
 5. On the **Canvas**, left-click on the map where you want the line to start.
 6. Move the mouse and left-click at individual points along the route you want to display.
 7. Right-click when you reach the end of the route, to stop drawing.

To delete a line drawing:

1. Select the line drawing but don't select a location point.
2. Then press the **Delete** key to remove the drawing.

OR

- In the **Drawings Overview** list, right-click the line drawing and select **Delete Drawing**.

To edit a line drawing:

Use any of the following options:

- **Add Location Points:** Double-click on or just ahead of the line's head to add a location point. To extend the line, double-click after the last point to add a new line segment. Continue adding line segments as needed, then right-click to stop adding location points.
- **View and Move Points:** Select the line to display the location points defining it. Select and hold a location point, then drag it to a new location to reshape the line.
- **Remove Points:** Select a location point (it will turn red) and press the **Delete** key or **Ctrl+X** to remove it.
- **De-select Points:** Select the line between points or anywhere outside the drawing to deselect all location points.
- **Toggle Corner Types:** Select a location point to switch between a sharp corner and a smooth path. By default, points are linked to form a smooth path, but unlinking a point creates a sharp corner at that position.
- **Adjust Line Width:** Drag the white points at either end of the line to change its width.
- **Line Progress:** Drag the blue handle point at the line's head to adjust the progress along the path, from 100% (fully drawn) to 0% (hidden). Alternatively, drag the white point at the top corner of the bounding box left or right to achieve the same effect.
- **Reposition the Line:** Use the longitude and latitude parameters in the **Location** section of the **Drawing Editor** to move the line to a new geographic position on the map.

To connect an icon or text drawing to a line drawing:

1. Place an icon or text drawing into the scene.
2. Move the icon or text drawing to the head of the line until a glowing yellow box appears, indicating it's ready to connect. The head of the line is where the Blue point with a handle is.

Once connected, the drawing will move along with the head of the line whenever the line's **Progress** property is adjusted. If the **Use Spline Rotation** parameter is enabled, the connected drawing's rotation angle will automatically adjust as it follows the line.

To disconnect an icon or text drawing from a line drawing:

- Select and then drag a connected drawing away from the head of the line.

Editing Background Drawings

In XPression Maps, **Background** drawings are images that replace the default background behind the globe on the **Canvas**. By default, this background is a black and star-filled scene, creating the impression of outer space.

Background images are automatically scaled to fit entirely within the selected video format. To achieve a fullscreen effect, use an image that matches the video format dimensions. The background image will only be visible when the **Zoom Level** camera setting allows the globe's edges to be visible.

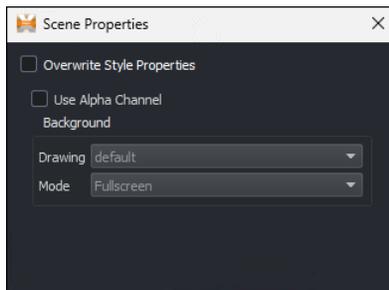
The following topics provide instructions for replacing the default background with a drawing of your choice either using the **Scene Properties** menu, or by selecting a new image from the **Drawing Toolbox**.

[Replacing the Background Drawing Using the Scene Properties Dialog](#) 

[Replacing the Background Drawing Using the Drawing Toolbox](#) 

To replace the background drawing from the Scene Properties dialog:

1. Select **Style > Scene Properties** in the menu bar.



Scene Properties

2. Select the **Overwrite Style Properties** to adjust the parameters.
3. Select the **Use Alpha Channel** checkbox, if you want to use the alpha channel in the final output and see a checkerboard pattern in the preview.
4. In the **Scene Properties** dialog, from the **Drawing** drop-down, select the background drawing you want to use.
5. From the **Mode** drop-down, select the scaling of the drawing.
 - **Fullscreen** — shows the background over the whole **Canvas**. This may distort the drawing.
 - **Letterbox** — makes the width fit onto the **Canvas**, while preserving the aspect ratio.
 - **Pillarbox** — makes the height fit onto the **Canvas**, while preserving the aspect ratio.
6. Close the dialog.

To replace the background drawing from the Drawing Toolbox:

1. In the **Drawing Toolbox**, from the **Group** drop-down, select the group that contains the background drawing you want to use.
2. Left-click and drag the background drawing onto the **Canvas** or select the drawing and then select in the background of the scene.
3. Release the mouse button to replace the current background.

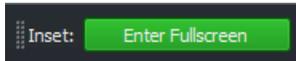
Editing Inset Drawings

Inset drawings like **Locator** drawings display a "map within a map" showing the position of the selected location within the world. Inset drawings can be placed on the **Overlay Layer** or directly onto the normal layer.

The appearance of the inset drawing is defined in the **Drawing Management Editor**. For information about inset drawing properties, see [Inset Drawings Properties](#) ¹⁵⁷.

To edit an inset drawing:

1. Add an **Inset** drawing to the scene or select an **Inset** drawing in the scene. This enables the green **Enter Fullscreen** button above the **Canvas**.



Inset Drawing Fullscreen

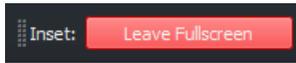
The Inset drawing is now shown in full view on the **Canvas**.

If an Inset drawing has not been added to the scene, the button will show as **Not Active**.

2. Right-click on the mouse button to drag and select a location you want to display with the inset drawing, or open the **Search Editor** and type in a location.

In fullscreen mode you can add drawings and shapes and change the **Map Style** that is displayed with the inset drawing.

3. After creating the inset drawing select the red **Leave Fullscreen** button above the **Canvas** to return back to your main map.



Inset Drawing Leave Fullscreen

The inset drawing will be displayed just as you created it in fullscreen.

To delete an inset drawing:

- With the main map on the **Canvas**, select the inset drawing and press the **Delete** key to delete it. You can also use the keyboard shortcut **Ctrl+X** to delete an inset drawing.

OR

- In the **Drawings Overview** list, right-click the inset drawing and select **Delete Drawing**.

Editing Locator Drawings

Locator drawings create a "map within a map," displaying the position of the searched location relative to the world. Typically, locator drawings are placed on the [Overlay Layer](#)^[220], although they can also be added to the normal layer. By default, the center of the locator drawing aligns with the camera's position unless a **Map Offset** is set in the **Drawing Editor**.

You can customize the appearance of the locator drawing by setting the [Locator drawing's properties](#)^[160] in the **Drawing Management Editor**. Additionally, the locator area can display different map styles—such as Bing Aerial, Bing Aerial with Labels, or Bing Road maps—which can be selected in the [Locator](#)^[212] section of the **Drawing Editor**.

To edit a locator drawing:

- Select the yellow point in the middle of the bounding box and move the mouse.

This changes the **Map Offset** parameters in the **Drawing Editor** accordingly.

For information about **Map Offset** parameters in locator drawings, see [Locator Drawings Parameters](#)^[212].

Editing Text Drawings

Text drawings display a text in a predefined font that has been created in the **Drawing Management Editor**.

See [Text and Replacement Drawings](#)¹³⁹¹ for more information.

To edit a text drawing:

- Double-click the text drawing and enter the new text directly on the **Canvas** or in the **Drawing Editor**, in the **Text** pane, edit the default text.
- When the text drawing has a **Callout** marker:
 - Select and hold inside the bounding box to move the label and its background without moving the marker.
 - Select and hold the white point at the top of the handle inside the bounding box to move the label, background and marker together.

Creating a Landmark from a 3D Object Drawing

Landmarks are **3D Object** drawings with a predefined, fixed position and scale on the map scene (not on an overlay). While you can configure **Landmark** settings when creating or editing a 3D Object drawing in the **Drawing Management Editor**, we recommend the following procedure. It allows you to position and scale the 3D Object directly within the scene, then save it as a landmark using the **Drawing Editor**.

★ Multiple landmarks at the same location will result in overlapping objects.

To create a landmark from a 3D Object drawing:

1. Create and save a 3D Object drawing to the database.

See [Adding New Drawings to the Database](#)^[145] and [3D Object Drawings Properties](#)^[184].

Note that you do not have to enable the **Landmark** option at this stage.

2. Add the 3D Object drawing to the scene.
3. Position the drawing to the desired longitude and latitude and adjust its scale and zoom level settings as needed.

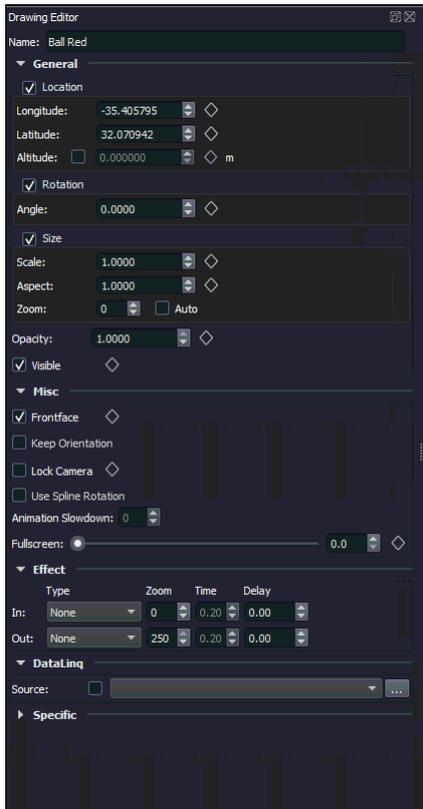
If the map style supports **3D**^[75], you may also want to adjust the drawing's **Altitude** setting.

4. Select the 3D Object drawing on the scene.
5. In the **Drawing Editor**, in the **3D** section, select the **Save** button beneath the **Landmark** heading.

The drawing's current **Longitude**, **Latitude**, **Scale**, and **Zoom** values are saved and will be displayed in the **Drawing Management Editor**.

Configuring Drawing Parameters

Use the **Drawing Editor**, shown below, to modify the parameters of a selected drawing that has been added to the map. If a parameter is greyed out, it doesn't apply to the selected drawing.



Drawing Editor

The following topics are discussed in this section:

[Common Parameters](#) ²⁰⁵

[Area Drawing Parameters](#) ²⁰⁸

[Dynamic Data Drawing Parameters](#) ²⁰⁹

[Inset Drawing Parameters](#) ²¹⁰

[Line Drawing Parameters](#) ²¹¹

[Locator Drawing Parameters](#) ²¹²

[Magnifier Drawing Parameters](#) ²¹³

[Text and Replacement Drawing Parameters](#) ²¹⁴

[3D Object Drawing Parameters](#) ²¹⁵

Common Parameters

The upper part of the **Drawing Editor** contains parameters that are common to most drawings. Select the drawing in the scene to adjust the parameters.

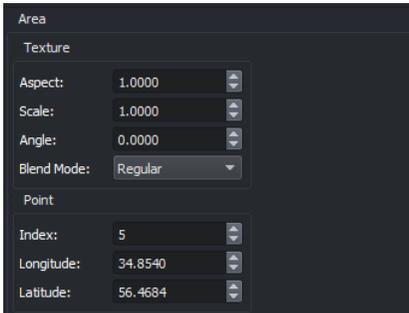
Parameter	Description
Location	<p>The Longitude and Latitude parameters (in degrees) define the position of the selected drawing within the scene. If the drawing is placed on the Overlay layer, these parameters are replaced by Position X and Position Y.</p> <p>To add a Key Frame, select the Key Frame button  next to the Longitude / Position X and Latitude / Position Y fields.</p> <p>Right-click the Key Frame button  to choose an Easing method, which controls how the animation transitions to and from that Key Frame.</p> <p>The Altitude parameter specifies the vertical distance of a drawing from sea level. By default, the Altitude checkbox is deselected and the value is set to 0. When the 3D  setting is enabled in the scene's map style, selecting the Altitude checkbox allows you to define the drawing's altitude. The unit of measurement—Metric (m) or Imperial (ft)—is determined by the Default Unit setting in the Map  tab of the Preferences window.</p>
Rotation	<p>The Angle parameter, in degrees, determines the rotation of the selected drawing.</p> <p>This parameter does not apply to Line and Area drawings.</p>
Size	<p>The Scale, Aspect and Zoom parameters are used to resize a drawing on a scene. New drawings are always created in the same size in pixels. When a drawing is created in the Drawing Management Editor, the default Scale value is 1.</p> <p>Scale - Enter a value or use the arrows to increase or decrease the scale of the drawing on the Canvas.</p> <p>For Line drawings, the Scale parameter adjusts the width of the line.</p> <p>Aspect - The Value parameter increases or decreases the width of the drawing, relative to the height.</p> <ul style="list-style-type: none"> • If the value is less than 1, the width (X) decreases relative to the height (Y). • If the value is greater than 1, the width increases relative to the height. <p>When you make the drawing larger or smaller by selecting and dragging a corner of the bounding box, the set Aspect ratio is maintained.</p> <p>The default is 1.</p> <p>Zoom - Enter a value or use the arrows to increase or decrease the zoom level of the drawing on the scene.</p> <p>Adjust the camera Zoom Level of the map to the level at which you want the drawing to appear before adding it.</p> <p>Auto - when checked, the drawing remains the same size in pixels, while the camera animates through the different zoom levels.</p> <p>When unchecked, the drawing increases or decreases in size as the camera animates through the different zoom levels.</p> <p>Scale (px) X and Y - Displayed only when the drawing is on the Overlay layer, these fields replace Zoom and Auto, and define the drawing's width and height in pixels. Changes to these fields or the Aspect field update each other automatically.</p>

Parameter	Description
Opacity	Enter or select a value between 0 and 1 to define the transparency of the drawing. A value of 1 is opaque and a value of 0 is transparent.
Visible	Select the Visible checkbox to make the drawing visible. It has the same effect as selecting the Eye icon () on the Canvas .
Misc	<p>Frontface - Select to have the front side of the drawing face the camera. You can also toggle this parameter on the Canvas by selecting the Front Face icon () at the bottom of the drawing's bounding box.</p> <p>This parameter only applies when the map is tilted and does not apply to Line and Area drawings.</p> <p>Keep Orientation - Select to align a text drawing to the screen. Clear to align a text drawing to the camera. Applies to Text drawings only.</p> <p>Lock Camera - Select to lock the camera to a drawing. When enabled, the View Camera button in the camera control area changes to indicate that this camera is locked (). Only one drawing at a time can lock the camera. For a Line drawing, the ployout camera looks at the head of the line when locked.</p> <p>Use Spline Rotation - Select to have the rotation angle of the drawing change according to the direction of the line. This parameter is only applicable for drawings that are connected to the head of a line. To connect a drawing to a line, it must be dragged and dropped to the head of the line on the Canvas. A yellow rectangle indicates that the drawing will be connected to the line when the drawing is dropped. To disconnect a drawing, drag it away from the head of the line until the yellow rectangle disappears. See Adding and Editing Line Drawings^[196] for more information.</p> <p>Animation Slowdown - Enter or select the number of frames in which an image is repeated in an image sequence before the next image is shown. The default value is 0. This parameter is only applicable to Icon, Area and Line Drawings. Image sequences loop independently of the timeline animation.</p> <p>Fullscreen - Use the slider or box to scale the selected Icon, Video Input, and Inset drawing from its original size to full screen (0-100%).</p>

Parameter	Description
Effect (In and Out)	<p>These parameters define how a drawing appears (In) and disappears (Out) during animation.</p> <p>Options are:</p> <p>None - the drawing appears instantly at the frame to which the Key Frame is set.</p> <p>Dissolve - the drawing blends in/out over the number of seconds selected in the Time field, starting at the Key Frame at which the drawing is set to appear/disappear.</p> <p>Typewriter - the drawing appears/disappears one character at a time over the number of seconds selected in the Time field.</p> <p>★ Applies to Text drawings only.</p> <p>Alpha - the drawing blends in/out one character at a time over the number of seconds selected in the Time field.</p> <p>★ Applies to Text drawings only.</p> <p>Wipe - the drawing animates in and out at the level set in the corresponding Zoom fields. The drawing appears from the right over the number of seconds selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation.</p> <p>★ Applies to Text drawings only.</p> <p>Wipe Reverse - the drawing animates in and out at the level set in the corresponding Zoom fields. The drawing appears from the left over the number of seconds selected in the Time field. Use the Delay field to input the number of seconds that the drawing will delay its animation.</p> <p>★ Applies to Text drawings only.</p> <p>Wipe Left - the drawing appears/disappears from the left side where the marker is positioned, over the number of seconds selected in the Time field. The drawing also appears or disappears from the opposite side of the marker, over the same time interval.</p> <p>Wipe Right - the drawing appears/disappears from the right side where the marker is positioned, over the number of seconds selecting in the Time field. The drawing also appears or disappears from the opposite side of the marker, over the same time interval.</p> <p>Wipe Bottom - the drawing appears/disappears from the bottom over the number of seconds selected in the Time field. The drawing animates in and out at the level set in the corresponding Zoom levels.</p> <p>Wipe Top - the drawing appears/disappears from the top over the number of seconds selected in the Time field. The drawing animates in and out at the level set in the corresponding Zoom fields.</p>
DataLinq	<p>The DataLinq section links Drawings to DataLinq Sources configured in the DataLinq Setup window. See Configuring DataLinq Sources for XPression Maps ²⁶³ for information.</p> <p>Select a DataLinq source from the drop-down menu, or select the Browse button () to open the DataLinq Setup window.</p> <p>Once you have selected a DataLinq source, select the Source checkbox to view the configured Container drawing data on the Canvas.</p>

Area Drawing Parameters

Parameters specific to a particular drawing type are contained in the **Specific** drop-down. The **Area** section contains parameters that are specific to **Area** drawings. Select the **Area** drawing in the scene to adjust the parameters.



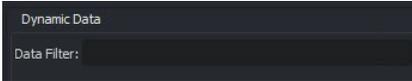
Area Drawing Parameters

Parameter	Description
Texture	<p>Aspect — Enter or select a value to define the appearance of the pattern in the area.</p> <p>Scale — Enter or select a value to define the size of the pattern in the area.</p> <p>Angle — Enter or select a value to define the angle of the pattern in the area.</p> <p>Blend Mode — Use the drop-down to select how the area texture is mixed with the underlying map.</p> <p>The options are:</p> <p>Regular — the area is blended with the map.</p> <p>Multiply — the area color is multiplied with the map color.</p> <p>Add — the area color is added to the map color.</p>  <p style="text-align: center;">Regular Multiply Add</p>
Point	<p>Index - enter or select a value for the active point of the line. A value of 0 means no active point.</p> <p>The active point is red in the output. All other points are green.</p> <p>The active point can also be set by left-clicking the mouse on the point.</p> <p>Longitude - enter or select a longitudinal value for the active point of the area.</p> <p>Latitude - enter or select a latitudinal value for the active point of the area.</p>

Dynamic Data Drawing Parameters

The **Dynamic Data** section contains the **Data Filter** parameter which is specific to **Dynamic Data** drawings. Select the **Dynamic Data** drawing in the scene before adjusting the parameters.

Dynamic Data is an optional feature for XPression Maps and the XPression Maps Server.

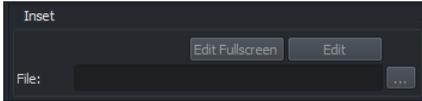


Dynamic Data Drawing Parameter

Parameter	Description
Data Filter	<p>Defines a filter parameter for the dynamic data query.</p> <p>For example, if you place a Dynamic Data drawing on the map which draws information about a city from an SQL database, and you want to move this drawing away from the location of the city on the map, enter the name of the city in the Data Filter parameter and use an SQL statement in the Dynamic Data Query such that the SQL statement is using the `\${Filter}` parameter for the selection of the data.</p> <p>The data will be updated to be specific to that city.</p> <p>Updating requires that you move the drawing slightly on the Canvas.</p>

Inset Drawing Parameters

The **Inset** section contains parameters that are specific to the **Inset** drawings. Select the **Inset** drawing in the scene to adjust the parameters.

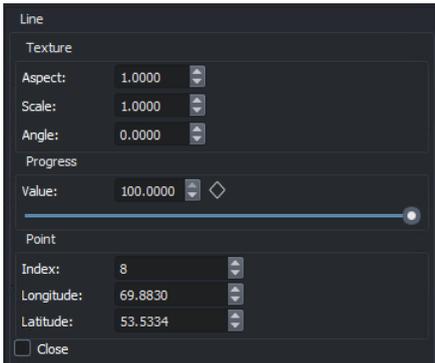


Inset Drawing Parameters

Parameter	Description
Edit Fullscreen	Select the Edit Fullscreen button to edit the Inset drawing in fullscreen mode. See Editing Inset Drawings for information on editing in fullscreen mode.
Edit	Select the Edit button to edit the view of the Inset drawing as it is presented on the Canvas .
File	Select the Browse button () to open the File Explorer window to import an external file for the Inset drawing

Line Drawing Parameters

The **Line** section contains parameters that are specific to **Line** drawings. Select the **Line** drawing in the scene to adjust the parameters.

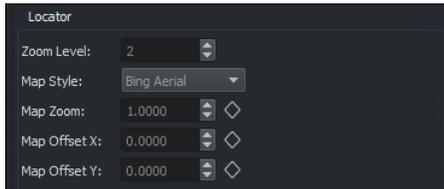


Line Drawing Parameters

Parameter	Description
Texture	Aspect — enter or select an aspect value to define how the image is mapped on the line. Scale — enter or select a scale value to define the size of the texture on the line. Angle — enter or select an angle value to define the angle of the texture on the line.
Progress	Value - enter or use the slider to determine the starting point (typically the beginning or end of the line) for a line animation.
Point	Index — enter or select a value for the active point of the line. A value of 0 means no active point. The active point is red in the output. All other points are green. Longitude — enter or select a longitudinal value for the active point of the line. Latitude — enter or select a latitudinal value for the active point of the line.
Close	Select the Close checkbox to make the Line drawing from the loop back to the starting point.

Locator Drawing Parameters

The **Locator** section contains parameters that are specific to **Locator** drawings. Select the **Locator** drawing in the scene before adjusting the parameters.

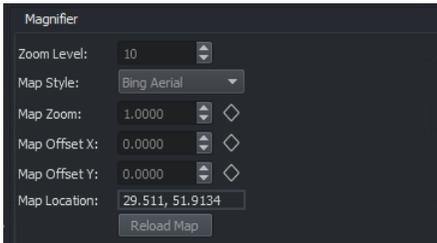


Locator Drawing Parameters

Parameter	Description
Zoom Level	Enter or select a zoom level between 1 and 21 to define how much of the map is displayed in the highlighted area. A higher zoom level value means a smaller map area is shown, but it appears closer to the camera.
Map Style	Use the drop-down to select a map style. The options are: Bing Aerial Bing Aerial Label Bing Road Bing Road Dark Bing Road Gray Bing Road Light
Map Zoom	Enter or select a zoom value for the highlighted area of a map. 0 - 1 : The area appears closer to the camera. >1 : The area appears further from the camera. The resolution of the map is not changed, so it does not show more or fewer details when zoomed in or out.
Map Offset X	Enter or select a value to move the highlighted area within the drawing along the X coordinate.
Map Offset Y	Enter or select a value to move the highlighted area within the drawing along the Y coordinate.

Magnifier Drawing Parameters

The **Magnifier** section contains parameters that are specific to **Magnifier** drawings. Select the **Magnifier** drawing in the scene to adjust the parameters.

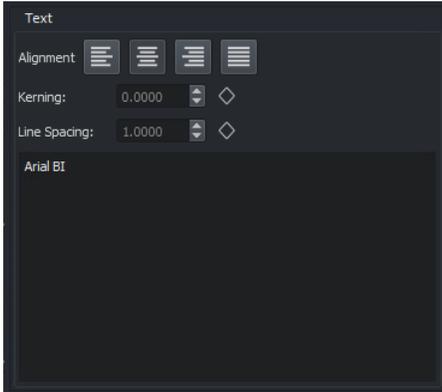


Magnifier Drawing Parameters

Parameter	Description
Zoom Level	Enter or select a zoom level between 1 and 21 to define how much of the map is displayed in the highlighted area. A higher zoom level value means a smaller map area is shown, but it appears closer to the camera.
Map Style	Use the drop-down to select a map style. The options are: Bing Aerial Bing Aerial Label Bing Road Bing Road Dark Bing Road Gray Bing Road Light
Map Zoom	Enter or select a zoom value for the highlighted area of a map. 0 - 1: The area appears closer to the camera. >1: The area appears further from the camera. The resolution of the map is not changed, so it does not show more or fewer details when zoomed in or out.
Map Offset X	Enter or select a value to move the highlighted area within the drawing along the X coordinate.
Map Offset Y	Enter or select a value to move the highlighted area within the drawing along the Y coordinate.
Map Location	Displays the longitude and latitude coordinates of the highlighted area. This is defined by the position of the drawing at creation.
Reload Map	If you move the magnifier drawing within the scene, select Reload Map to set the Map Location coordinates to the actual location of the drawing. This updates the map in the highlighted area.

Text and Replacement Drawing Parameters

The **Text** section contains parameters for modifying the alignment, kerning and spacing of **Text** and **Replacement** drawings. Select the drawing in the scene to adjust the parameters.



Text Drawing Parameters

Parameter	Description
Alignment	 Left - align the text to the left.  Center - center the text.  Right - align the text to the right.  Justified - align the text to the left and right margins.
Kerning	Enter a value or use the arrows to set the amount of space between letters.
Line Spacing	Enter a value or use the arrows to set the amount of space between multiple lines of text.
Text Box	Use the text box to edit the text on one or more lines. Press the Enter key to move text to the next line.

3D Object Drawing Parameters

The **3D** section provides options to enable lighting for the 3D Object drawing in the scene, adjust its position, or remove it entirely. You can also save the 3D Object drawing as a landmark, preserving its current position and scale on the map. To modify these settings, first select the drawing in the scene.



Text Drawing Parameters

Parameter	Description
Light	Select the Light checkbox to apply and adjust the Pos X , Pos Y and Height positioning of lighting relative to the center of the 3D Object drawing's bounding box. Clearing the checkbox remove lighting from the 3D Object drawing. See 3D Object Drawings Properties ^[184] for more information.
Landmark	Once the 3D Object drawing has been placed and sized on the scene's map, it can be designated as a landmark by selecting the Save button. See Creating a Landmark from a 3D Object Drawing ^[203] for more information.

Adding a Default Drawing to a Search Location

You can designate a default drawing, which is used whenever drawings are generated automatically. For example, you can automatically create a text drawing with the name of a country or a state when the corresponding shape is created. In this case, the settings of the default text drawing are used for the label text drawing. You can set a default drawing for text, icon and dynamic data drawings.

Additionally, you can create a Text, Dynamic Data, or Icon drawing exactly at the search location.

This section contains the following topics:

[Designating a Default Drawing](#) ^[216]

[Creating a Drawing from the Search Location](#) ^[216]

[Adding a Search Location's Name or Address, an Icon or Drawing Data to the Map](#) ^[217]

To designate a default drawing:

1. In the **Drawing Toolbox**, in the preview pane, right-click the thumbnail of the drawing that you want to designate as the default drawing.

You can designate a default drawing for **Text**, **Icon** and **Dynamic Data** drawings.

2. From the context menu, select **Set as Default [name of drawing]**.

The background of the default drawing will turn yellow.



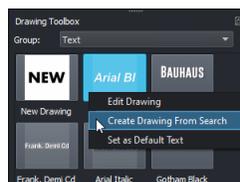
Default Drawing

To create a drawing from the Search location:

1. In the **Search Editor**, enter a location and select the **Search** button.
2. In the **Drawing Toolbox**, in the preview pane, right-click the thumbnail of the drawing that you want to create at the **Search** location.

This feature is only available in **Text** and **Dynamic Data** drawings.

3. From the context menu, select **Create Drawing From Search**.

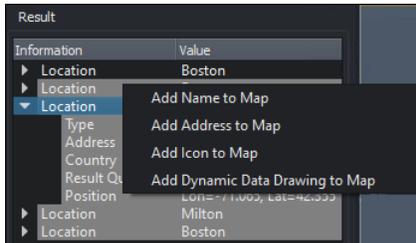


Create Drawing From Search

The selected drawing appears at the exact coordinates of the searched location, with the corresponding content already displayed (location name or weather data, for example).

To add a Search location's name or address, an icon or drawing data to the map:

1. In the **Search Editor**, enter a location and select the **Search** button.
2. Right-click on a search result.
3. From the context menu that opens, select one of the following options.
 - **Add Name to Map:** If you have identified a text drawing as the default, the name of the location will be added to the map using the style of the default text drawing.
 - **Add Address to Map:** If you have identified a text drawing as the default, the address of the location will be added to the map using the style of the default text drawing.
 - **Add Icon to Map:** If you have identified an icon drawing as the default, the default icon will be added to the map at the corresponding location.
 - **Add Dynamic Data Drawing to Map:** If you have identified a dynamic data drawing as the default, the default dynamic data drawing for the corresponding location is added to the map.



Search Editor - Add Default Drawing to Map

Adding a Measured Distance Text Drawing

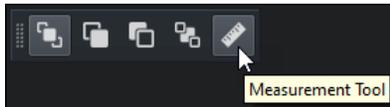
The **Measurement Tool** calculates the distance between two points on the map and adds a text drawing to display the result. You can also use the tool to mark an area of interest with a specific circumference—such as the range of earthquake shock waves.

Distances can be measured in either the **metric** or **imperial** system.

To use the Measurement Tool:

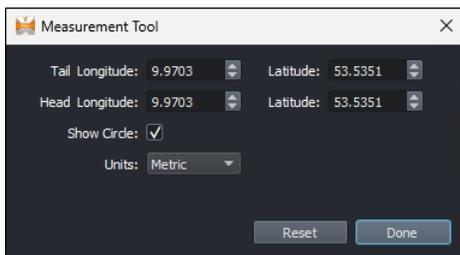
1. From the menu bar select **Edit > Measurement Tool**.

Alternatively, you can select the **Measurement Tool** button in the toolbar.



XPression Maps Toolbar - Measurement Tool

The **Measurement Tool** opens.



Measurement Tool

2. Select the **Show Circle** checkbox to display a circle whose radius is determined by the distance between two locations or by the size of the area of interest (optional).
3. From the **Units** drop-down, select whether to display the distance using the **Metric** or **Imperial** system.
4. Left-click on the starting location (represented in the **Measurement Tool** by the **Tail** coordinates) and drag the cursor to the destination (represented by the **Head** coordinates).

A white circle is drawn on the map if **Show Circle** is selected and the measurement is calculated and indicated along the straight line.



Measurement Tool Illustration - Calculation

To display measurement units:

1. In the **Drawing Toolbox**, in the **Text** group, select a text drawing.
2. Select the white measurement text on the map.

The measurement is automatically displayed in the text drawing, provided the **Zoom Level** of the map is within the drawing **Visibility In** and **Out** parameters.



Measurement Tool Illustrations

3. Adjust the location of the text drawing, if necessary.
4. To finish, select **Done**.

The white circle, line and original measurement text are removed, leaving just the text drawing with the measurement.

The **Measurement Tool** closes.

5. Add an area or custom drawing to illustrate an area if desired.
6. To start over, before selecting **Done**, select **Reset**.

Adding Drawings to an Overlay Layer

The overlay layer is an editing area independent of the camera view. Drawings placed in the overlay layer will not move together with the underlying map; they will stay on an invisible layer in front of the camera. Drawings on the overlay layer can be animated the same way as all other drawings. The overlay layer is useful for placing logos or text that you want to keep in the same spot regardless of the movement of the map or drawings.

To use the Overlay layer:

1. Select the **Overlay** checkbox next to the camera view buttons.

A transparent gray overlay indicates that the overlay layer is activated.

2. Place your drawings on the map.

Drawings placed on the **Overlay Layer** are fixed in place and can only be selected and edited or deleted when the **Overlay Layer** is activated.

In the example below, the title text **U.S. ELECTION 2020** is placed on the **Overlay Layer** and remains stationary while the scene animation is played.



Overlay Layer

3. Deselect the **Overlay** checkbox to return to your main layer and play your animation.

Adding a Copy of a Drawing

When multiple versions of a drawing are needed within a scene, it's more efficient to create copies and adjust their parameters rather than recreating each drawing from new.

The following steps outline how to quickly duplicate a drawing already added to the scene and modify it as needed.

To copy and paste a drawing:

1. On the **Canvas**, select a drawing in the scene.
2. From the menu bar select **Edit > Copy Drawing** or press **Ctrl+C**.
The drawing and its parameter values are stored internally.
3. From the menu bar select **Edit > Paste Drawing** or press **Ctrl+V**.

A copy of the stored drawing is placed in the middle of the **Canvas**.

- ★ Using the **Edit > Cut Drawing** menu option or pressing **Ctrl+X** or pressing the **Delete** key copies the drawing to the clipboard before deleting it, so if you change your mind, you can paste it back in using **Ctrl+V**.

Replacing a Drawing

The following procedure explains how to replace an existing drawing in a scene with another drawing from the **Drawing** database. Note that the position, scale, and any entered text (if applicable) will remain unchanged during the replacement.

To replace a drawing:

1. In the **Drawing Toolbox**, from the **Group** drop-down, select the folder containing the drawing you want to add to a scene.

Thumbnails of the drawings contained in that folder are displayed in the preview pane.

2. Left-click and hold down the mouse button on the thumbnail and drag it on top of the drawing you want to replace.

The position, scale and entered text (if applicable) will remain the same.

Setting a Drawing's Layer Order

In some scenes, you may want to layer multiple drawings on top of one another. For instance, you might have an area drawing with a line and icon drawing above it, accompanied by a text label for the icon. In this situation, you'll want all other drawings to appear above the area drawing, with the text drawing positioned on top of the line drawing.

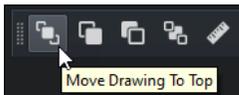
Use the drawing order commands to arrange each drawing in the desired layer for the correct visual hierarchy.

To set a drawing's layer order:

1. Select the drawing on the **Canvas**.
2. Select **Edit** in the menu bar and select one of the following options:

- a. **Move Drawing To Top** - moves the selected drawing to the top-most position in the scene so that it will appear on top of all other drawings.

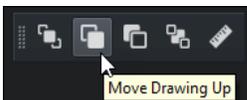
You can also use the keyboard shortcut **Ctrl+PgUp** or select the **Move Drawing To Top** button in the toolbar.



XPression Maps Toolbar - Move Drawing To Top

- b. **Move Drawing Up** - moves the selected drawing up one layer in the scene.

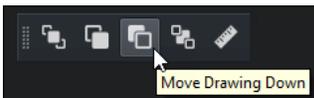
You can also use the keyboard shortcut **Ctrl+Up** or select the **Move Drawing Up** button in the toolbar.



XPression Maps Toolbar - Move Drawing Up

- c. **Move Drawing Down** - moves the selected drawing down one layer in the scene.

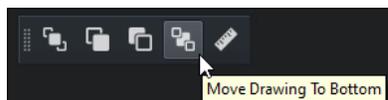
You can also use the keyboard shortcut **Ctrl+Down** or select the **Move Drawing Down** button in the toolbar.



XPression Maps Toolbar - Move Drawing Down

- d. **Move Drawing to Bottom** - moves the selected drawing to the bottom-most layer in the scene, so that it will appear beneath all other drawings.

You can also use the keyboard shortcut **Ctrl+PgDown** or select the **Move Drawing To Bottom** button in the toolbar.



XPression Maps Toolbar - Move Drawing To Bottom

3. Select **Save** to store your changes to the scene.

Showing or Hiding Drawings

The following procedure provides instructions for controlling the visibility (show or hide) of a drawing that has been added to a scene.

To show or hide drawings from the scene:

- Use the checkboxes beside the drawings in the **Drawings Overview Panel** to make a drawing visible or invisible in the scene.

If the boxes are unchecked the drawings will still appear in the drawings overview panel.

OR

- Select the drawing on the **Canvas** and toggle the **Eye Icon**  or **Airplane Icon**  associated with the drawing's bounding box to control the visibility of the drawing.

Deleting a Drawing from the Scene

The following procedures identify two methods for deleting a drawing that has been added to the active scene.

To delete a drawing that is currently visible on the Canvas:

- Select the drawing on the **Canvas** and press the **Delete** key on the keyboard or press **Ctrl+x**.
The drawing is deleted from the **Canvas**, as well as the **Drawings Overview** panel.

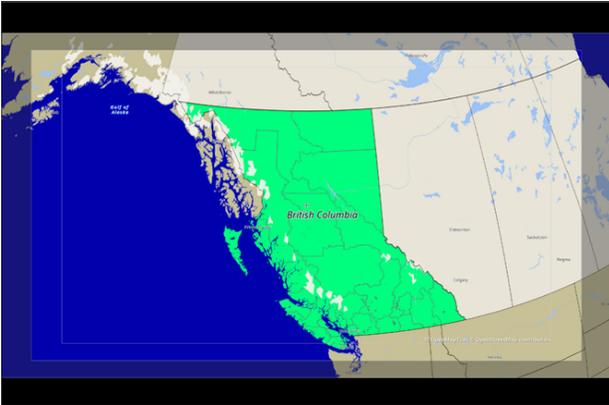
To delete a drawing from the scene that may not be currently visible on the Canvas:

- From the list of drawings in the **Drawings Overview** panel, select the drawing that you want to delete and perform one of the following:
 - Right-click on the drawing's name and select **Delete Drawing**.
OR
 - Press **Ctrl+x**.
OR
 - Press the **Delete** key on the keyboard.

The drawing is deleted from the **Drawings Overview** panel, as well as on the **Canvas**.

Adding Shapes

Using the XPression Maps library of national and interstate borders from around the world, you can add **shape** layers to the map to provide greater emphasis by outlining and filling in the boundaries of countries, states or regions with color.



Example of Shapes in a Scene

Viewing, adding, and editing predefined or custom shapes involves using the following editors and tools:

- **Search Editor** — Use the [Search Editor](#) [171] to find locations throughout the world by searching for addresses, cities, countries and even prominent buildings. Once a location is found, use the **Search Related Shapes** section to add a shape layer, with or without a label, to the country, state, or region identified in the search results.
- **Shape Database Viewer** — The [Shape Database Viewer](#) [229] provides direct access to the shapes of all countries and their states (and regions, where available) and allows you to quickly add a shape to the active scene. It also provides access to the **Shape Label Properties** editor, which displays the label details of each shape in the database. You can change the name of the shape label, the position, the size and the zoom level at which it appears and you can add search terms to the search info.
- **Shape Editor** — The [Shape Editor](#) [171] displays a list of all the shapes that have been added to the current scene. Use the **Shape Editor** to assign an existing shape style to a shape, or open the **Shape Style Manager** to modify or create a new shape style. Select a shape in the **Shape Editor's** list and modify the parameters to change the appearance and behavior of the shape without changing the style itself. You can also use the **Shape Editor** to display the children shapes belonging to the parent shape (Country > States, or States > Regions/Countries) and modify their parameters too.
- **Custom Shapes Editor** — Use the [Custom Shapes Editor](#) [233] to import custom shapes, which can be area or line shapes, into the Shapes database. Once added to the shapes database, you are able to add them to your scenes like other shapes.
- **Animation Editor** — The [Animation Editor](#) [171] allows you to create map animations where by changing certain shape object properties at precise times, you can control the appearance or disappearance of a shape layer or change the size of the shape layer or the shape's associated image. See [Creating Animations](#) [293] for more information.

The following topics provide information and instructions for adding and configuring shapes:

[Adding Shapes from Location Search Results](#)  228

[Adding Shapes from the Shape Database Viewer](#)  229

[Managing and Adding Custom Shapes](#)  230

[Adding and Editing Child Shapes](#)  238

[Creating and Editing Shape Styles](#)  239

[Editing Individual Shapes within the Scene](#)  249

[Editing Shape Label Properties](#)  253

[Setting the Language of Shape Labels](#)  255

[Relocating Shapes](#)  256

[Deleting a Shape from a Scene](#)  257

Adding Shapes from Location Search Results

The following procedure explains how to use the **Search Related Shapes** section in the **Search Editor** to quickly add a country, state, or region shape to a specific map location in the active scene.

To add a shape from the Search Related Shapes to the scene:

1. In the **Search Editor**, enter in the **Location** field the name of the location that you want to display in the scene.

For more accurate results, be specific about the location you want to search. Enter the region, state and country in the **Location** field, separated by commas, as in the example shown below:

Vancouver, British Columbia, Canada

2. If you want the map to go directly to the location you are searching, select the **Go to Result** checkbox.
3. Select **Search**.

The **Result** section lists all of the locations found that match the entered information.

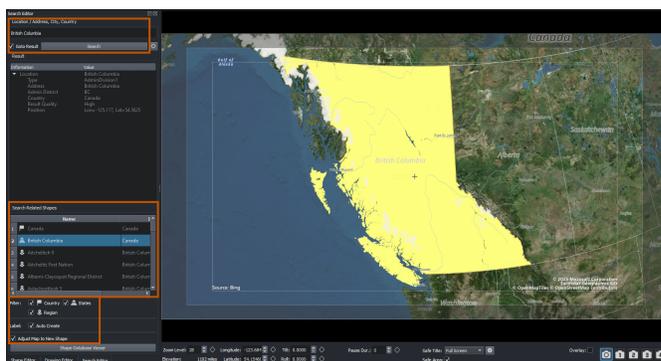
4. If multiple results are listed, select each result until the desired one is found.

The **Search Related Shapes** section lists the available shapes for the searched location.

5. In the **Search Related Shapes** section, in the **Filter** section, select or clear the checkbox for **Country**, **States** and/or **Region** depending on the location for which you are searching.
6. To add a label to the shape, in the **Label** area, select **Auto Create** to enable labeling.
7. Select or clear the **Adjust Map to New Shape** checkbox.
 - When selected, the map on the **Canvas** moves to the location of the shape you're adding and adds the shape at its default zoom level, which is different for each shape.
 - When cleared, you need to manually adjust the map to the area of interest but then each shape is added to the map at the same zoom level.
8. In the **Search Related Shapes** list, double-click the shape you want to add to the scene.

The shape appears on the map on the **Canvas**.

The default shape style is automatically applied to the shape, **Country Default** for a country, **State Default** for a state and **Region Default** for a region. The shape style and the shape's parameters can be changed later in the [Shape Editor](#) [249].



Search Editor - Search Related Shapes Example

9. If the selected shape isn't displayed on the map on the **Canvas**, open the **Shape Editor**, right-click on the shape in the **Name** list and select **Go to Shape on Map**.

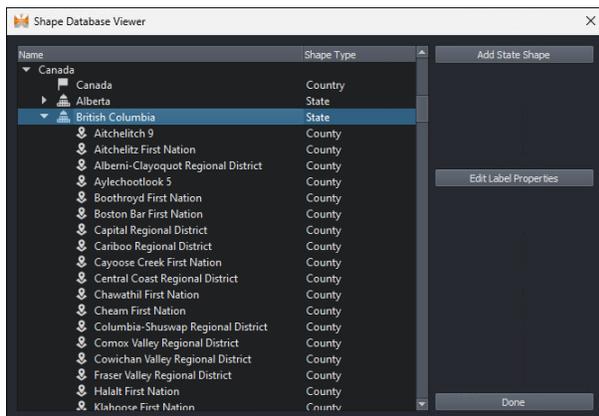
Adding Shapes from the Shape Database Viewer

The following procedure describes how to use the **Shape Database Viewer** to view the entire collection of predefined country, state, or region shapes and how to add these shapes to the map in the active scene.

- ★ The same shape can be created multiple times. This can be useful if you want to swap different views of a single shape. In an election map, for example, you might want a state to change color to show which party controlled the state before and after the election.

To add a shape from the Shape Database Viewer to the scene:

1. In the **Search Editor**, select or clear the **Adjust Map to New Shape** checkbox.
 - When selected, the map on the **Canvas** moves to the location of the shape you're adding and adds the shape at its default zoom level, which is different for each shape.
 - When cleared, you need to manually adjust the map to the area of interest but then each shape is added to the map at the same zoom level.
2. Select **Shape Database Viewer**.
3. Do one of the following:
 - Select a country from the list.
 - Select the arrow beside a country to select a state or province from the list.
 - Select the arrow beside a country and then the arrow beside a state or province to select a region from the list (if regions are available for the selected state).



Shape Database Viewer - Select a Shape

4. Select **Add State Shape** or double-click the selected country, state or region to create a shape for the country.

The shape appears on the map on the **Canvas** and in the **Shape** list in the **Shape Editor**.

The default shape style is automatically applied to the shape, **Country Default** for a country, **State Default** for a state and **Region Default** for a region. The shape style and the shape's parameters can be changed later in the **Shape Editor**.

5. If you want to make changes to the label of a shape, select the shape in the list and select **Edit Label Properties**. See [Editing Shape Label Properties](#) ²⁵³ for details.
6. When you have finished adding shapes and editing shape labels, select **Done** to close the **Shape Database Viewer**.

Managing and Adding Custom Shapes

XPression Maps allows you to enhance your scenes by adding custom shapes that you've either created or obtained from external sources and saved locally. These custom shapes can be either area shapes (such as country or state borders) or line shapes (such as streets, rivers, or train tracks), and they support most common projection formats.

- Area shapes can be filled with color and outlined with customizable borders.
- Line shapes can be styled with various colors to match your design needs.

To ensure your custom shapes are preserved during software updates, we recommend storing them in a dedicated folder outside the XPression Maps installation directory.

After importing a custom shape, you should also create a corresponding custom shape style to define its visual appearance. See [Shape Styles](#)^[239] for more information.

The following topics are discussed in this section:

[Organizing Custom Shapes into Groups](#)^[231]

[Importing and Deleting Custom Shapes](#)^[233]

[Searching for a Custom Shape](#)^[236]

[Editing a Custom Shape's Identifying Details](#)^[236]

[Adding a Custom Shape to a Scene](#)^[237]

Organizing Custom Shapes into Groups

Organizing custom shapes into groups makes it easier to manage and retrieve them when building scenes. The following topics show how to add, rename, and delete groups in the **Custom Shapes** editor.

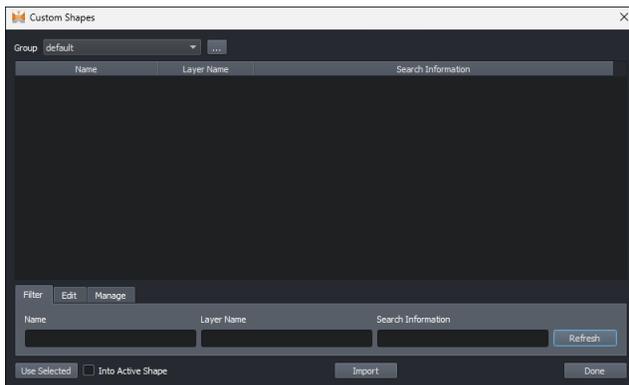
[Adding a New Custom Shapes Group](#) ²³¹

[Renaming a Custom Shapes Group](#) ²³²

[Deleting a Custom Shapes Group](#) ²³²

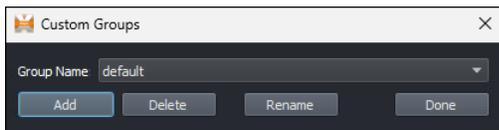
To add a custom shapes group:

1. From the menu bar select **Custom > Shapes** to open the **Custom Shapes** editor.



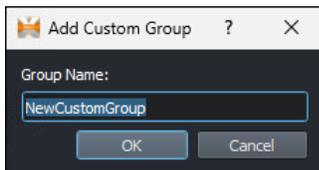
Custom Shapes Editor

2. In the **Custom Shapes** editor, select the **Browse** button beside the **Group** drop-down. The **Custom Groups** dialog opens.



Custom Groups Dialog

3. Select the **Add** button to open the **Add Custom Group** dialog.



Add Custom Group

4. In the **Group Name** field, enter a name for the new custom group and select **OK**.
5. In the **Custom Groups** dialog, select **Done** to close the dialog.
6. Select **Done** to close the **Custom Shapes** editor.

The new group will appear in the **Group** drop-down.

To rename a custom shapes group:

1. From the menu bar select **Custom > Shapes** to open the **Custom Shapes** editor.
2. Select the **Browse** button beside the **Group** drop-down to open the **Custom Groups** dialog.
3. In the **Custom Groups** dialog, from the **Group Name** drop-down, select the **Group** you want to rename.
4. Select **Rename**.
5. In the **Change Custom Group Name** dialog that opens, enter a new name in the **Group Name** field and select **OK**.

The group's name is immediately updated in the **Group Name** drop-down list.

6. In the **Custom Groups** dialog, select **Done** to close the dialog.
7. Select **Done** to close the **Custom Shapes** editor.

To delete a custom shapes group:

1. From the menu bar select **Custom > Shapes** to open the **Custom Shapes** editor.
2. Select the **Browse** button beside the **Group** drop-down to open the **Custom Groups** dialog.
3. In the **Custom Groups** dialog, from the **Group Name** drop-down, select the **Group** you want to delete.
4. Select **Delete**.
5. In the **Delete Custom Group** confirmation dialog that opens, select **Yes** to delete the group and all its contents.
6. In the **Custom Groups** dialog, select **Done** to close the dialog.
7. Select **Done** to close the **Custom Shapes** editor.

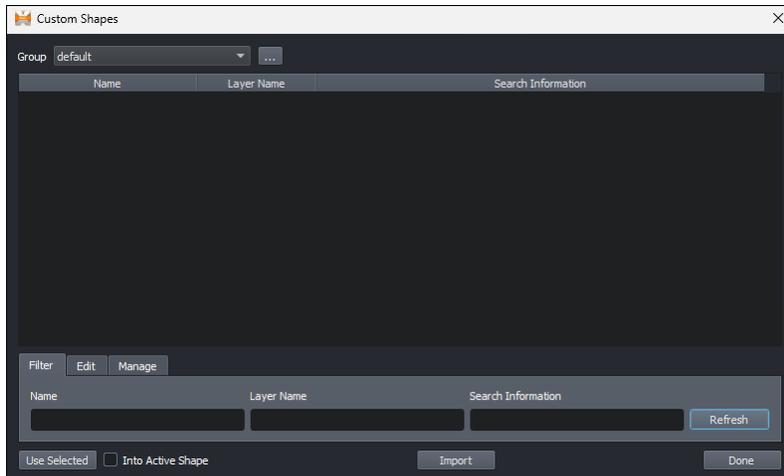
Importing and Deleting Custom Shapes

XPression Maps allows you to import custom shapes from local files. These shapes can be organized into groups for easier access. When no longer needed, shapes can also be deleted. The following procedures explain how to [import](#) and [delete](#) custom shapes in the **Custom Shapes** editor.

To import a custom shape:

1. From the menu bar select **Custom > Shapes** to open the **Custom Shapes** editor.

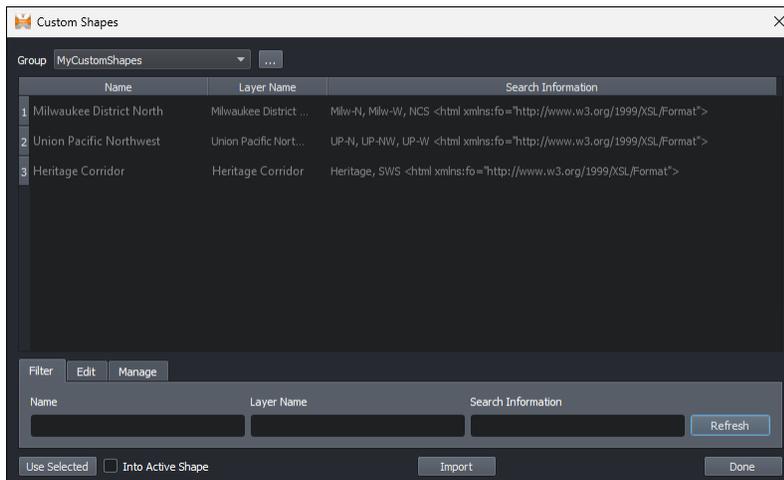
The **Custom Shapes** editor opens.



Custom Shapes Editor - Blank

2. From the **Group** drop-down, select the **Group** to which you want to add the imported custom shape.

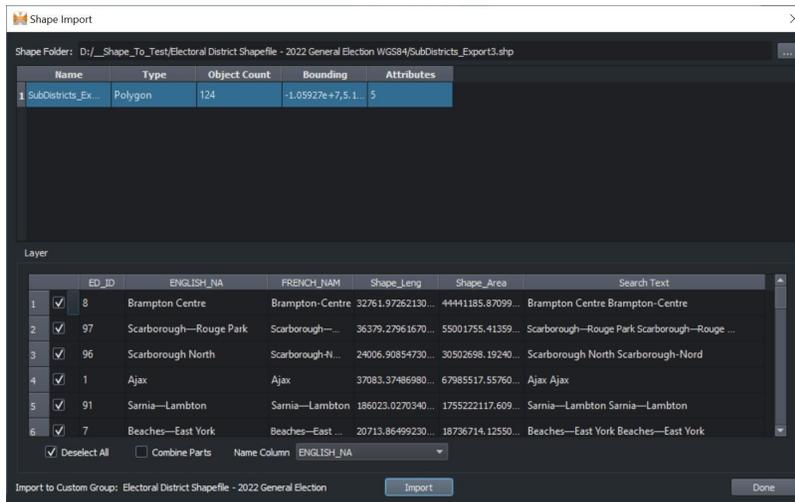
If the **Group** already contains shapes, the table in the center of the **Custom Shapes** editor displays the data for the shapes in the **Group**.



Custom Shapes Editor - Populated

3. Select **Import**.

The **Shape Import** editor opens.



Shape Import Editor

If you've previously imported custom shapes, the **Shape Folder** field will display the last shape folder that was opened.

- To open a different folder, select the **Browse** button () beside the **Shape Folder** field, navigate to the folder containing the custom shape you want to import and select **Open**.

All shape archives in the selected folder are listed in the upper table of the editor. Information for each archive is displayed as follows:

- **Name:** The name of the shape archive.
- **Type:** The type can be 2D or 3D for **Polygon** (a closed shape where the beginning of each line is connected to its end), **Line String** (which is simply a line), or **Point** (a location reference).
- **Object Count:** The number of shape objects in the archive.
- **Bounding:** The area in which the shapes are contained, expressed in longitude and latitude coordinates.
- **Attributes:** The number of attribute columns with additional data for the shape, that are stored in the archive.

- Select the archive containing the shape you want to import.

The layers of the selected archive appear in the bottom-half of the **Shape Import** editor.

- Select the layer(s) you want to import.

Use the following controls to help you filter and select the layer(s):

- Select the **Select All** or **Deselect All** checkbox to toggle the selection of all the layers.
- Select a column heading to sort the contents in ascending/descending based on that column.

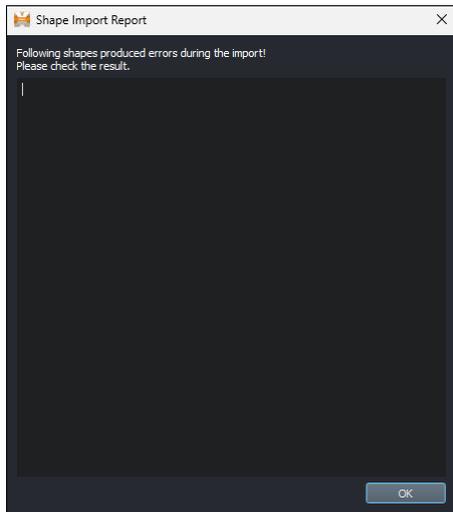
- To combine multiple layers into one shape, select the **Combine Parts** checkbox.

- From the **Name Column** drop-down, choose which attribute column will be used as the name for imported shapes.

The selected column's values are saved as shape names in the database. These names are displayed in the **Shape Editor** when the custom shapes are added to a map.

9. Select **Import**.

The **Shape Import Report** dialog opens indicating if there were any errors during the import.



Shape Import Report Dialog

10. If there were no errors, select **OK** to close the dialog and then select **Done**.

The shapes from the selected archive appear in the table in the **Custom Shapes** editor.

11. Select **Done** to close the **Custom Shapes** editor or continue to add the custom shape to a scene.

To delete custom shapes:

1. From the menu bar select **Custom > Shapes** to open the **Custom Shapes** editor.
2. In the **Custom Shapes** editor, from the **Group** drop-down, select the group containing the custom shape(s) you want to delete.
3. Select the shape you want to delete or press **Ctrl** and select several shapes if you want to delete multiple shapes.
4. Go to the **Manage** tab and select **Delete**.
5. In the **Delete Shapes** confirmation dialog, select **Yes** to delete the selected shape(s).
6. Select **Done** to close the **Custom Shapes** editor.

Searching for a Custom Shape

Quickly recall custom shapes by searching using shape name, layer name, or associated search information to generate a filtered list of results.

To search for custom shapes:

1. From the menu bar select **Custom > Shapes** to open the **Custom Shapes** editor.
2. In the **Custom Shapes** editor, in the **Filter** tab, enter one or more of the **Name**, **Layer Name** or **Search Information** parameters to narrow down the number of custom shapes displayed in the table.
3. Select **Refresh** to display the new search results.

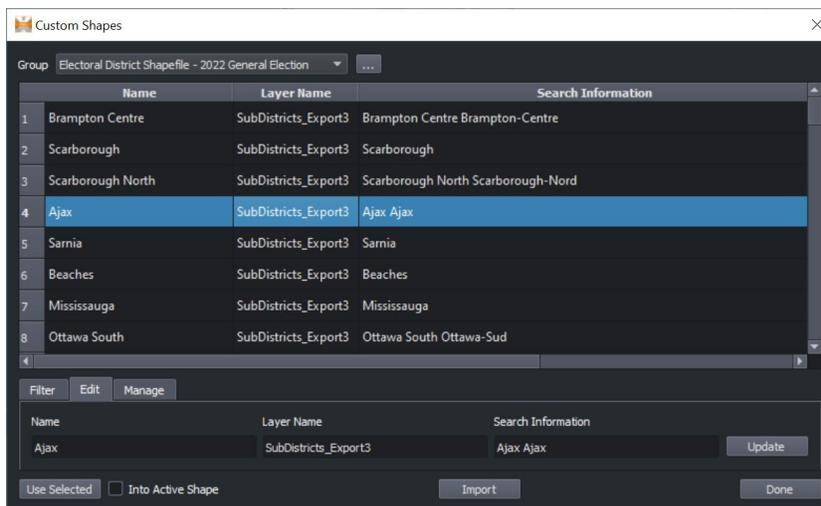
Editing a Custom Shape's Identifying Details

You can edit a custom shape's identifying details—such as its **name**, **layer name**, or **search information**—directly within the **Custom Shapes** editor. This helps ensure your shapes are clearly labeled and easy to locate when building scenes.

To edit a custom shape's identifying details:

1. From the menu bar select **Custom > Shapes** to open the **Custom Shapes** editor.
2. From the **Group** drop-down, select the **Group** to which contains the custom shape.

The table in the center of the **Custom Shapes** editor displays the data for the shapes in the **Group**.



Custom Shapes Editor

3. Select the row of the custom shape whose identifying details you want to edit.
4. Select the **Edit** tab.
5. Edit the **Name**, **Layer Name**, and/or **Search Information** values.
6. Select **Refresh** to update the table with the new values.

Adding a Custom Shape to a Scene

The following procedure describes how to add a custom shape to the active scene on the **Canvas**.

To add a custom shape to a scene:

1. Open the scene to which you want to add a custom shape.
2. From the menu bar select **Custom > Shapes** to open the **Custom Shapes** editor, if it is not already open.
3. From the **Group** drop-down, select the group containing the custom shape you want to add to the scene.

The selected group opens, displaying the custom shapes in that group.

4. Double-click the shape you want to add to your scene and select **Done**.

The shape is added to the **Shape Editor** on the left.

5. Double-click the shape in the **Shape Editor** to display it on the **Canvas**.

6. If the map on the **Canvas** isn't displaying the selected shape, in the **Shape Editor**, right-click on the shape and select **Go to Shape on Map**.

Custom shapes can be assigned as nested shapes within another shape. This allows hierarchial structures, such as voting districts within a state. The Into Active Shape option must be used to create this relationship.



To add a custom shape as a nested shape:

1. In the **Shape Editor**, select the shape in which the new shape will be nested.
2. In the **Custom Shapes** editor, select the shape to be nested.
3. Next to the **Use Selected** button, select the **Into Active Shape** checkbox.
4. Select **Done**.

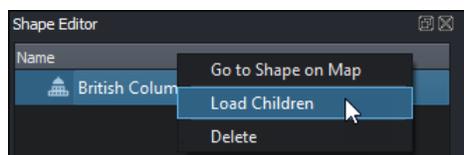
The selected shape is added as a nested shape within the active shape in the **Shape Editor**.

Adding and Editing Child Shapes

The following procedure describes how to load/add the child shapes (states or regions) of a country or state shape that has already been added to the map.

To add child shapes:

1. In the **Shape Editor**, once a country or state shape has been added, select the shape for which you'd like to add the states or regions.
2. Right-click the selected shape and from the context menu, select **Load Children**.



Add Child Shapes

- If a country shape has been selected, all the states of that country are loaded and displayed alphabetically below the country.
 - If a state shape has been selected, all the regions of that state are loaded and displayed alphabetically below the state.
 - It is possible that no children exist for a shape (for example, no regions are available for a state or the shape is already a region).
3. In the **Name** list, expand the parent and double-click the child to add a shape to the map.
The shape appears on the map on the **Canvas**.
The default shape style is automatically applied to the shape, **State Default** for a state and **Region Default** for a region.
 4. To edit the child shape's style or parameters, select the name of the child in the **Name** list and modify the settings in the **Shape Editor** as described in [Editing Individual Shapes within the Scene](#)^[249].

Creating and Editing Shape Styles

XPression Maps comes with a set of predefined shape styles that can be applied to the shapes you add to your scene. The styles are available through the **Shape Editor**, in the **Style** section. You can also create your own custom shape style in the **Shape Style Manager**.

The following topics are discussed in this section:

[Creating a New Shape Style](#)  240

[Editing a Shape Style](#)  243

[Shape Style Properties](#)  244

[Deleting a Shape Style](#)  248

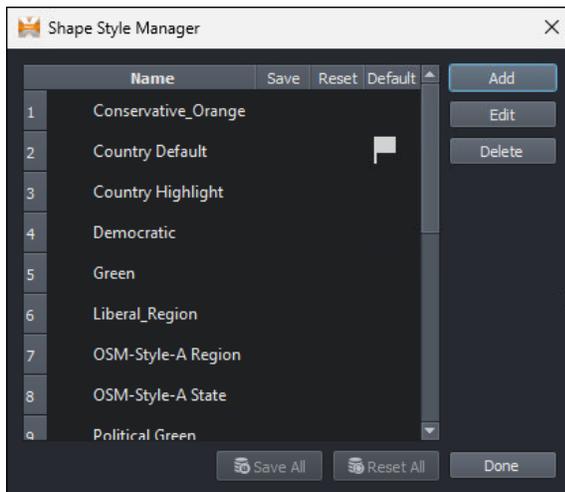
Creating a New Shape Style

The following procedure describes how to create a new shape style whose properties can be copied in from an existing style and then modified to meet your requirements and preferences. The new shape style can then be saved to the shape style database for future use.

To create a new shape style:

1. Use the [Search Editor](#)  to locate and select the country, state, or region for which you want to create a new shape style.
2. In the **Shape Editor**, in the **Style** section, select the **Browse** button () beside the **Style** drop-down.

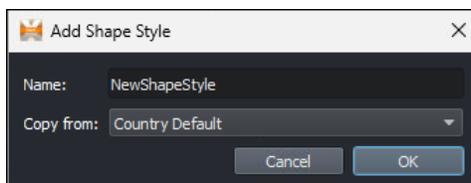
The **Shape Style Manager** opens, displaying a list of predefined styles.



Shape Style Manager

3. Select **Add**.

The **Add Shape Style** dialog opens.



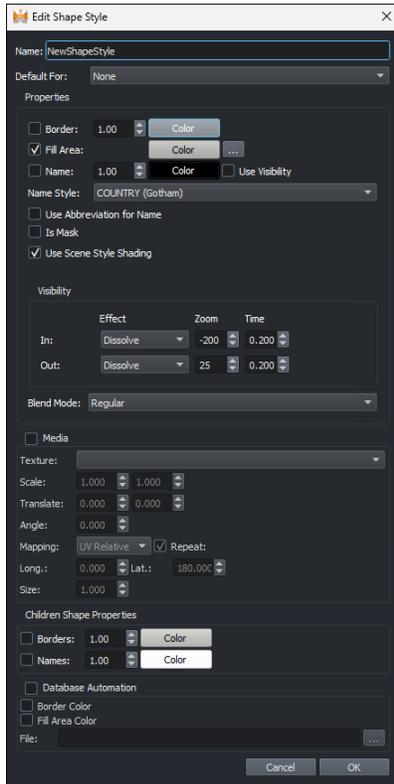
Shape Style Manager - Add Shape Style

4. In the **Name** field, enter a name for the new shape style.

- If you want to copy the properties of one of the existing styles, from the **Copy** from drop-down, select the style you want to copy and select **OK**.

The **Edit Shape Style** dialog opens.

- ★ If no other selection is made, the properties of shape style appearing in the **Copy from** field, will be copied.



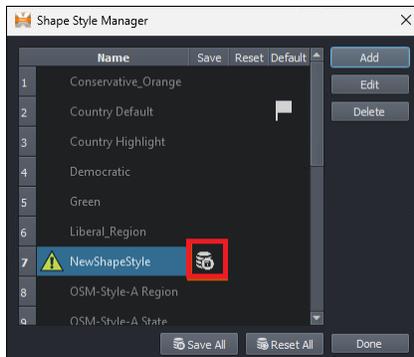
Edit Shape Style Dialog

- Edit the shape style as necessary.

See [Shape Style Properties](#) ²⁴⁴ for information on editing shape style properties.

- When you have finished editing the shape style properties, select **OK**

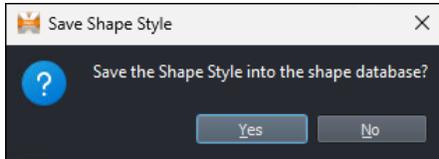
In the **Shape Style Manager**, your new style is added to the list and the **Save** icon appears beside it.



Shape Style Manager

8. Select the **Save** icon and in the **Save Shape Style** confirmation dialog, select **Yes** to save the new shape style into the shape style database.

If you don't save the shape style, it will only be applied in the current scene and will not be available to use again.



Save Shape Style Confirmation Dialog

9. Select **Done** to close the **Shape Style Manager**.

Editing a Shape Style

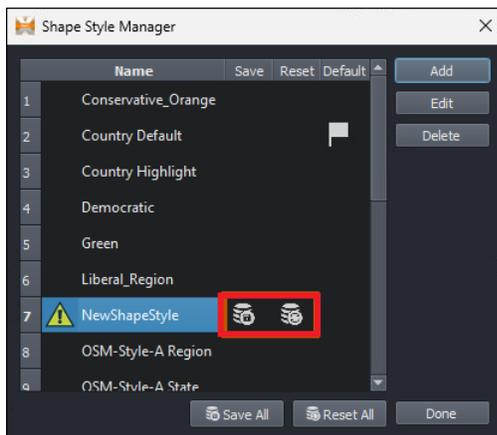
The following procedure describes how to edit the properties of an existing shape style using the **Shape Style Manager**.

To edit a shape style:

1. In the **Shape Editor**, in the **Style** section, select the **Browse** button (⋮) beside the **Style** drop-down. The **Shape Style Manager** opens, displaying a list of predefined styles.
2. Select the shape style you want to change and select **Edit** or double-click the shape style. The **Edit Shape Style** dialog opens.
3. Edit the properties of the new style and select **OK**.

See [Shape Style Properties](#)²⁴⁴ for information on editing shape style properties. .

The **Edit Shape Style** dialog closes and the **Shape Style Manager** reopens. The edited style is highlighted and the **Save** icon  and **Reset** icon  are displayed beside it.



Shape Style Manager

4. Select the **Save** icon and in the **Save Shape Style** confirmation dialog, select **Yes** to save the shape style into the shape style database.

An exclamation mark at the left of the shape style indicates that the style is saved in the scene but not in the database. That style will not be available to be used in other scenes.

OR

Select the **Reset** icon and in the **Reset Shape Style** confirmation dialog, select **Yes** to reset the shape style to its previously saved state.

5. Select **Done** to close the **Shape Style Manager**.

Shape Style Properties

Many of the properties of shape styles can be customized for a different appearance. Properties such as border and fill area color, name visibility and style and the zoom level at which the shape style becomes visible can be edited in the **Edit Shape Style** dialog. Changes in these properties are visible on the **Canvas** but not saved into the **Shape Style** until you select **OK**.

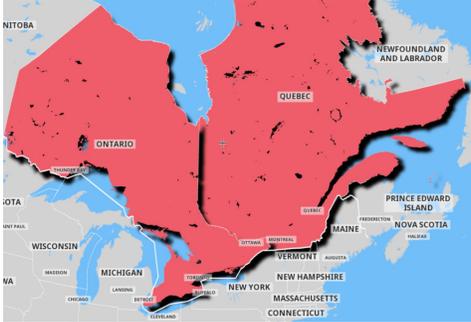
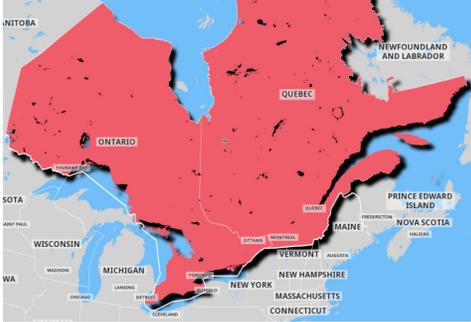
If the shape is a state rather than a country, the corresponding regions are shown, if available. Names and borders of regions are available only for states that have region shapes defined. Check the **Shape Database Viewer** to see whether region shapes are available for a state.

See [Adding Shapes from the Shape Database Viewer](#) ²²⁹ for information about the **Shape Database**.

If the shape is a region, the settings in the **Children Shape Properties** section do not have any effect.

These properties and others are described in the table below.

Properties	Description
Name	Enter a name for the new style
Default For	Use the drop-down to select whether you want to make this style the default style for countries, states, or select None if you do not want to make this style a default style. Only one default style exists for each country, state or region. Setting a style to default will over-ride any previously defined default style.
Border	When enabled, the outline of the shapes using this style will be displayed in the color that is set in the corresponding Color Selection editor to the right of the checkbox. Borders are drawn on top of the selected map style and therefore take precedence over the borders of the map style. The border width can be adjusted by entering a value or using the arrows to increase or decrease the value in the field beside the checkbox. Maximum is 10 pixels.
Fill Area	When enabled, the shapes using this style will be filled with the color that is set in the corresponding Color Selection editor to the right of the checkbox.
Shadow Options	Access the Shadow Options by selecting the Browse button beside the Fill Area Color editor button. When enabled, a shadow will surround the shape fill area. The parameters are: Shadow — select the Shadow checkbox to enable a shadow color to surround the shape area. Shadow Color — select the Color button to open the Select Color window. Select a basic color, use the color gradient or input a custom color for the Shadow Color . Shadow Offset — use the arrows to adjust the Shadow Offset . ➤ The first entry field adjusts the shadow's placement from left to right, a higher number places the shadow more on the right side of the shape. A lower number places the shadow on the left side of the shape. ➤ The second entry field adjusts the shadow's placement from top to bottom. A higher number places the shadow more on top of the shape. A lower number places the shadow more on the bottom of the shape.

Properties	Description
	<p>Blur — use the arrows to adjust the level of blur added to the shadow. A higher number will increase the blur level, a lower number will decrease the blur.</p> <p>Enter 0 for no blur.</p> <p>Standalone — select the Standalone checkbox to display a shadow for each shape individually on the map. Deselect the Standalone checkbox to display a combined shadow, where all shapes that share the same shape style cast a single shadow.</p> <div style="display: flex; justify-content: space-around;">   </div>
Name	<p>When enabled, the name associated with the shape will be visible in the output and will be the color that is set in the corresponding Color Selection editor to the right of the checkbox.</p> <p>The size of the name can be scaled by entering a value or using the arrows to increase or decrease the value in the field beside the checkbox.</p> <p>When not enabled, no name is displayed. This can be useful if you are using a map style that includes names.</p>
Name Style	<p>Use the drop-down to select a text drawing style to apply to the names.</p> <p>When you select a Name Style, you can preview it on the Canvas, but it is not saved into the Shape Style until you select OK.</p>
Use Abbreviation for Name	<p>When enabled, abbreviations are used for the names of the top level shapes. Children shapes must be configured separately.</p>
Is Mask	<p>When selected, the shape is designated as one that can be used as a mask for OSM layers. Whether or not the mask is applied to the scene is controlled by the Use Shape Mask setting in the OSM Layer Parameters dialog. See Editing OpenStreet Maps⁸⁵ for more information.</p>
Use Scene Style Shading	<p>When selected, the height shading in the scene will be displayed. In order for this to work, the Height Shading parameter in the Edit Map Style editor must also be enabled.</p> <p>See Height Shading⁷⁰ for more information.</p>

Properties	Description
Visibility	<p>These two parameters define how a shape appears and disappears during its visible animation. This effect can be seen when the animation is played or when the zoom level is changed.</p> <p>Effect In — When set to Dissolve, the shape will blend in for the number of seconds selected in the corresponding field, starting at the Key Frame at which the shape is set to appear. When set to None, the shape appears at the frame to which the Key Frame is set.</p> <p>Effect Out — When set to Dissolve, the shape will blend out for the number of seconds selected in the corresponding field, starting at the Key Frame at which the shape is set to disappear. When set to None, the shape disappears at the frame to which the Key Frame is set.</p> <p>Zoom In — Enter or use the arrows to select the camera Zoom Level value at which the shape will be visible. If the camera Zoom Level value is smaller than the Zoom In value, the shape will not be visible.</p> <p>Zoom Out — Enter or use the arrows to select a camera Zoom Level value at which the shape will no longer be visible. If the camera Zoom Level value is larger than the Zoom Out value, the shape will not be visible.</p> <p>Time — Enter or use the arrows to set the duration (in seconds) for the selected Effect. The value determines how long the shape takes to appear (Effect In) or disappear (Effect Out) during the animation.</p>
Blend Mode	<p>Use the drop-down to select how the Fill Area color of the shape is combined with the underlying map. The options are:</p> <p>Regular — the area color is combined with the underlying map color. This is the most common blend method.</p> <p>Multiply — the area color is multiplied with the underlying map color.</p> <p>Add — the area color is added to the underlying map color.</p> <p>Hue From Map — the hue (dominant color) of the shape style is discarded and the hue of the underlying map is used instead.</p> <p>Saturation From Map — the saturation (intensity) of the shape style is discarded and the saturation of the underlying map is used instead.</p> <p>Value From Map — the value (lightness or darkness) of the shape style is discarded and the value of the underlying map is used instead.</p> <p>Saturation and Value From Map — the hue (dominant color) of the shape style is combined with the saturation (intensity) and value (lightness or darkness) from the underlying map.</p>  <p>The Height Shading and 3D of the scene style is also applied to the shapes.</p>
Child Shape Properties	Description

Properties	Description
Borders	<p>When enabled, state or region borders will be visible in the output.</p> <p>Enter or use the arrows to select a width for the child borders.</p> <p>Select the Color button to open the Color Selection editor and set a color for the child borders.</p>
Names	<p>When enabled, the names of the states or regions will be visible in the output. Enter or use the arrows to select a size for the name of the child.</p> <p>Select the Color button to open the Color Selection editor and set a color for the child names.</p> <p>The name style is determined by the Name Style selected in the Properties section.</p>
Database Automation	
Border Color	<p>When Database Automation is enabled and Border Color is selected, the border color queried from the SQL database that is defined in the file selected in the File field is applied to the shape.</p>
Fill Area Color	<p>When Database Automation is enabled and Fill Area Color is selected, the fill area color queried from the SQL database that is defined in the file selected in the File field is applied to the shape.</p>
File	<p>Select the Browse button (⋮) beside the File field to navigate to the .xml configuration file which contains the pointer to the Shape Color Database in which the Border and Fill Area colors are defined.</p>

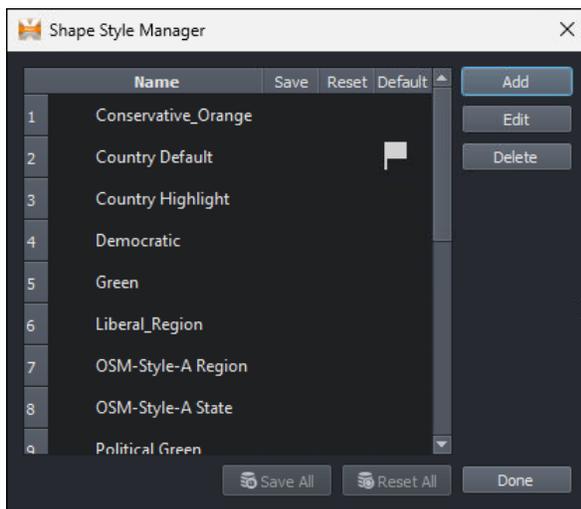
Deleting a Shape Style

The following procedure describes how to permanently delete a shape style from the shape style database.

To delete a shape style:

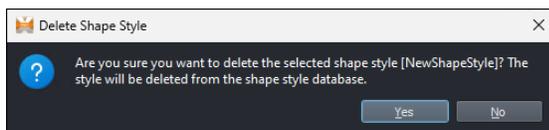
1. In the **Shape Editor**, in the **Style** section, select the **Browse** button () button beside the **Style** drop-down.

The **Shape Style Manager** opens, displaying the list of styles.



Shape Style Manager

2. Select the shape style you want to delete and select **Delete**.
3. In the **Delete Shape Style** confirmation dialog, select **Yes** to delete the style.



Delete Shape Style Confirmation

4. Select **Done** to close the **Shape Style Manager**.

Editing Individual Shapes within the Scene

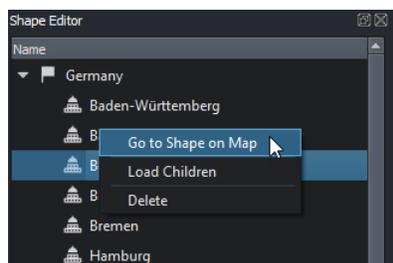
In the **Shape Editor**, you can apply a predefined style to a shape that has been added to the scene and overwrite certain parameters, allowing you to change the appearance of an individual shape without changing the style itself. This is useful if you have applied the same style to multiple shapes and don't want to change all of them.

You can also change the opacity and visibility of the shape, add an image to the shape and edit the shape boundaries.

Finally, you can create new **Shape Styles** to suit your production. See [Creating and Editing Shape Styles](#) for more information.

To edit a shape:

1. In the **Shape Editor**, select the shape you want to edit.
 - Press **Ctrl** and select another shape in the list to select multiple shapes.
 - Select a shape in the list, then press **Shift** and select another shape to select all the shapes between the first and last selected shape to edit.
 - A shape can also be selected by selecting it on the **Canvas**.
2. In the shape list, double-click the shape or right-click the shape and select **Go to Shape on Map** from the context menu to adjust the view of the camera so that the shape is centered on the **Canvas**.



Go to Shape

3. From the **Style** drop-down, select a predefined shape style to apply to the shape.

When a shape is selected, the **Style** drop-down indicates which shape style is currently applied to that shape.

4. In the **Overwrite Style** section, you can adjust the following default parameters of the selected shape style:
 - **Zoom In** — enable this checkbox, then enter or select a value to define at which camera **Zoom Level** the shape will be visible.
 - **Zoom Out** — enable this checkbox, then enter or select a value to define at which camera **Zoom Level** the shape will be visible.
 - **Border Color** — enable this checkbox, then select a the **Color** button to open the **Color Selection** editor and select a color to use as the border.
 - **Fill Area Color** — enable this checkbox, then select the **Color** button to open the **Color Selection** editor and select a color to overwrite the color of the selected shape style.
 - **Shadow Color** — enable this checkbox, then select the **Color** button to open the **Color Selection** editor and select a shadow color for the shape style. If creating a map animation, select the **Key Frame** button to add a [camera Key Frame](#) on the timeline.

The color style overwrite can also be applied in tandem with the **Zoom In** and **Zoom Out** overwrite parameters when they are enabled.

★ The **Border**, **Fill Area**, and **Shadow** options can only be overwritten if their corresponding parameters are enabled in the shape style.

5. In the **Properties** section of the editor:

- a. Enter a value or use the arrows to adjust the **Opacity**.
 - A value of 1 makes the shape completely opaque (a solid color).
 - A value between .99 and .01 makes the shape increasingly transparent.
 - A value of 0 makes the shape invisible.
 - Select the Key Frame button to place a [camera Key Frame](#)^[301] on the timeline.

★ Opacity does not affect children associated with the shape.

- b. Select the **Visible** checkbox to display the selected shape and its children.

If the **Visible** checkbox is cleared, only the parent shape will be displayed.

- Select the Key Frame button to place a [camera Key Frame](#)^[301] on the timeline.

Shapes will blend in or out for the number of seconds set in the **Effect In** and **Effect Out** parameters set in the **Edit Shape Style** editor when animated, starting at the Key Frame that makes the drawing visible or invisible. See [Shape Style Properties](#)^[244] for more information.

- c. In the **Scale** fields, enter a value or use the arrows to adjust the **Scale** of the shape.
 - Select the Key Frame button to place a [camera Key Frame](#)^[301] on the timeline.
- d. In the **Offset** fields, enter a value or use the arrows to increase or decrease the value by which the shape will be offset from the actual boundaries.
 - The **X** field offsets the shape horizontally.
 - The **Y** field offsets the shape vertically.
 - Select the Key Frame button to place a [camera Key Frame](#)^[301] on the timeline.
- e. Select the checkbox beside the **Offset** fields to be able to move the shape to a different location.

For details about using this feature, see [Relocating Shapes](#)^[256].

- f. In the **Extrude** fields, enter a value or use the arrows to increase or decrease the height of the extruded shape.

This setting becomes more visible if the map is tilted.

- g. In the **Resolution** drop-down, select one of the following options to define how the shape is displayed:
 - **Auto**
 - **Low** (with coastline)
 - **High** (with coastline cut by the water layer)

6. In the **Information** section, you'll see information about the currently selected shape. While you cannot edit any of the fields, this section offers a convenient way to confirm which shape is selected and being edited.

7. In the **Media** section:

- a. Select the **Use** checkbox, if you want to use an image file in the scene.

When the **Use** checkbox is selected, the settings in this section become available.

- b. From the **Type** drop-down, select the type of media file to use.

Currently, only the **File** type is supported.

- c. Select the **Browse** button () beside the **File** field to navigate to the media file you want to use in the scene.

The supported media file formats are **.jpg** and **.png**.

- d. In the **Scale** fields, enter a value or use the arrows to increase or decrease the size of the image.

- The **X** field adjusts the size of the image horizontally.
- The **Y** field adjusts the size of the image vertically.
- Select the Key Frame button to place a [camera Key Frame](#) on the timeline.

- e. In the **Translate** fields, enter a value or use the arrows to move the image within the shape.

- A positive value in the **X** field moves the image to the right horizontally.
- A negative value in the **X** field moves the image to the left horizontally.
- A positive value in the **Y** field moves the image up vertically.
- A negative value in the **Y** field moves the image down vertically.
- Select the Key Frame button to place a [camera Key Frame](#) on the timeline.

- f. In the **Angle** field, enter a value or use the arrows to tilt the image.

- A positive value tilts the image towards the right.
- A negative value tilts the image towards the left.
- Select the Key Frame button to place a [camera Key Frame](#) on the timeline.

- g. From the **Mapping** drop-down, select one of the following options to define how an image is displayed in the selected shape:

UV Relative: The image is locked to the shape and moves with the shape. When this option is selected, the image is placed at a pre-calculated position relative to the shape center and cannot be moved.

UV Absolute: The image is locked to the shape and moves with the shape. When this option is selected, you can adjust the **Long.** and **Lat.** values to position the image where you want it within the shape. You can also adjust the **Size** of the image.

UV Static: The image is locked to the background, so when you move the shape, you see different parts of the image.

- h. Select the **Repeat** checkbox, if you want the image file to repeat to fill the selected shape or leave it blank if you want only one instance of the image.

- i. In the **Long.** and **Lat.** fields, enter a value or use the arrows to adjust the values to position the image within the selected shape (available for the **UV Absolute** option only).

- j. In the **Size** field, enter a value or use the arrows to increase or decrease the size of the image (available for the **UV Absolute** option only).

If the color of the shape style that has been applied to the shape conflicts with the colors in the image, you can overwrite the color in the **Overwrite Style** section of the **Shape Editor**. Refer to [step 4](#) ^[249] for further information.

8. In the **DataLinq** section:

- a. From the **Source** drop-down, select the **DataLinq Source**. For information on adding **DataLinq Servers** see [Linking Data Sources to Scene Drawings and Shapes](#) ^[258].
- b. Select the **Source** checkbox and view the DataLinq data displayed on the **Canvas**.
- c. For information on configuring the **DataLinq Shape Data** see [Configuring DataLinq Sources for XPression Maps](#) ^[263].

9. In the **Drawing Relation** section, group together different drawing tools from within a selected shape designated on the **Canvas**. These groupings can be added to the **User Predefined Objects** window and saved as one object.

See [Creating User Predefined Objects](#) ^[289] for information on creating groups.

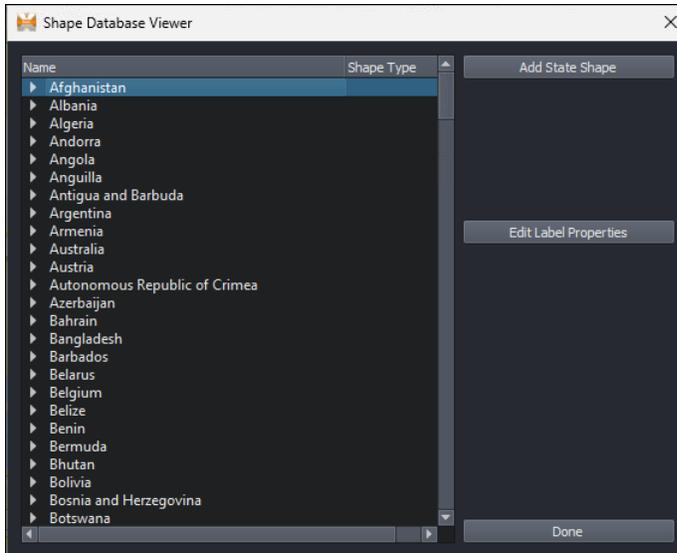
Editing Shape Label Properties

The **Shape Label Properties** editor provides access to the label details of a shape and is accessed from the **Shape Database Viewer**. You can change the name of the shape label, the position, the size and the zoom level at which it appears and you can add search terms to the search info.

To edit the shape label properties:

1. In the **Search Editor**, select **Shape Database Viewer** at the bottom of the editor.

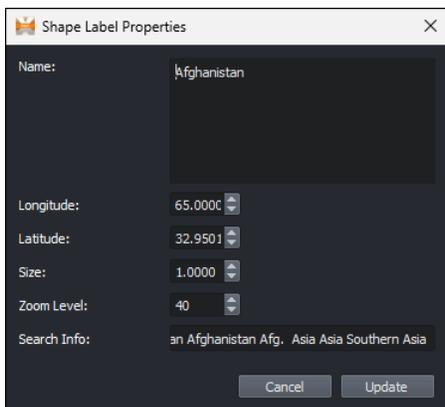
The **Shape Database Viewer** opens.



Shape Database Viewer

2. From the list, select the shape whose label you want to edit.
3. Select **Edit Label Properties**.

The **Shape Label Properties** editor opens.



Shape Label Properties Editor

4. Edit the parameters in the **Shape Label Properties** editor, as described in the table below, to configure the shape label.

Parameter	Description
Name	<p>The name of the label.</p> <p>You might want to change the name that's displayed if you are translating it into a language that isn't configurable in the Preferences, i.e. English (en-US), Canadian French (fr-CA) or German (de-de).</p> <p>See Shape Label Translation <small>255</small> for more information.</p>
Longitude	<p>Enter or use the arrows to select a longitudinal coordinate for the label to reposition it within the shape boundaries.</p> <p>On the Canvas, the labels for all the shapes associated with your selection appear, so that you can judge how far and in what direction to move the label. Only the label you've selected will be changed.</p>
Latitude	<p>Enter or use the arrows to select a latitudinal coordinate for the label to reposition it within the shape boundaries.</p> <p>On the Canvas, the labels for all the shapes associated with your selection appear, so that you can judge how far and in what direction to move the label. Only the label you've selected will be changed.</p>
Size	<p>Enter or use the arrows to select a size for the label.</p> <p>The value of the size parameter is equal to the zoom parameter of a drawing.</p> <p>A value of 20 will make the label readable at a zoom level of 20.</p> <p>A larger value will make the label smaller, so that it is readable at a larger zoom value.</p> <p>Valid range is 0.00 to 100.</p>
Zoom Level	<p>Enter or select the zoom level of the map on which the shape will be created.</p> <p>The shape will become visible at this zoom level.</p>
Search Info	<p>Enter a group of search terms which can be used to find the shape in the database when searching for a location.</p>

5. Select **Update** to save your changes.
6. Select **Done** to close the **Shape Database Viewer**.
The new labels will not yet be updated in the scene.
7. Select **Save**.
8. Select **File** and select the scene from the **Recent Scenes** list to re-open the same scene and apply the label changes.

Setting the Language of Shape Labels

The shape labels are stored by language (Country code) in the shape database. The default language is English (en-US) but many other languages are now supported. If the language you want is not supported, you need to change the labels manually in the **Shape Label Properties** editor.

See [Shape Label Properties](#)^[253] for more information.

The language can be changed in **File > Preferences** in the [Map](#)^[40] tab.

Relocating Shapes

There are cases where you want to see all states, territories, districts, etc. of a country in your scene, but some are far from the mainland. For example, in the United States, Alaska and Hawaii are not visible when the camera is centered on the mainland. Fortunately, you can move the shapes of the areas that are out of view.

You may also need to resize the shapes to make them fit in the scene and be properly visible.

★ For instructions on moving the labels, see [Editing Shape Label Properties](#)^[253].

To move the state shapes:

1. In the [Search Editor](#)^[122], in the **Location** field, enter the name of the state, territory, district, etc. that you want to move.
Ensure that the **Go to Result** is selected and then select **Search**.
2. From the **Search Related Shapes** section, double-click the shape that is to be moved.
3. In the **Shape** editor, select the shape you want to move.
4. In the **Properties** section, select the checkbox beside the **Offset** parameters.
5. Left-click at the edge of the shape and drag the shape close to the mainland of the country.
6. If necessary, use the **Scale** parameters to resize the shape.
7. When the shape is positioned and sized as necessary, deselect the checkbox beside the **Offset** parameters.
8. From the menu bar, select **File > Save**.

The image below is an example of how you might relocate Alaska and Hawaii.



Relocating Shapes

Deleting a Shape from a Scene

The following procedure describes how to delete an individual shape from the map in the active scene.

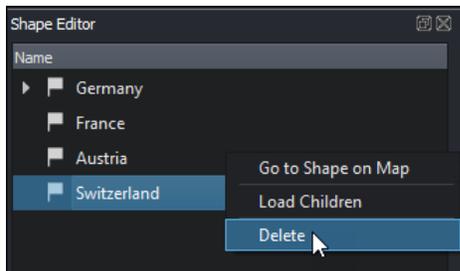
To delete a shape:

- Use the **Delete** key:
 - Select the shape on the map on the **Canvas** and press the **Delete** key.

OR

- Use the **Shape Editor's Delete** or **Delete Children** options.
 - a. In the **Shape Editor**, from the list of shapes, select the shape(s) you want to delete.
 - Select an individual shape.
 - Press **Ctrl** and select another shape name in the list to select multiple shapes to delete.
 - Select a shape in the list, then press **Shift** and select another shape to select all the shapes between the first and last selected shape to delete.
 - b. Right-click on the selected shape and from the context menu, select **Delete**.

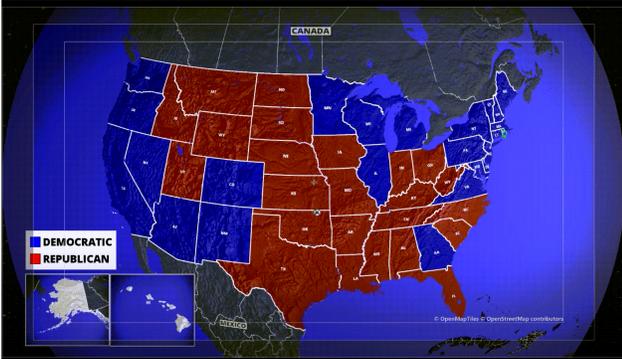
If children have been loaded, select and right-click the parent shape and from the context menu, select **Delete Children** to remove all the child shapes.



Delete Shape

Linking Objects to a Data Source

The XPression Maps **Data option** enables seamless integration of data sources managed by an **XPression DataLinq Server** to dynamically populate and control shapes, drawings, and container drawing objects within a map scene. This configuration allows map elements to automatically update in real time based on external data feeds, such as weather conditions, traffic patterns, election results, or other live information.



Example of a Map Using a DataLinq Data Source with Shapes

Procedural Overview

1. Add external data sources to the XPression DataLinq Server

- Install and run the XPression DataLinq Server software on either the XPression system itself, or on one or more other computer systems.
- Open the **XPression DataLinq Server** window and add external data sources.

See the **DataLinq** section of the **XPression User Guide** for more information.

2. Connect XPression Maps to a DataLinq Server

- In XPression Maps, open the **Data** tab in the **Preferences** window. Add the required DataLinq Server(s) and confirm that the connection is established.

See [Connecting XPression Maps to a DataLinq Server](#) ²⁵⁹ for more information.

3. Create and configure Sources in XPression Maps

- In the **DataLinq Setup** window, create source configurations that will later be linked to shape, drawing, or container drawing objects on the map scene.

See [Creating a New Data Source for XPression Maps](#) ²⁶¹ for more information.

- Configure the sources to specify how data from the DataLinq Server will be used to populate and control the properties of shapes, drawings, or container drawings within the map scene.

See [Configuring Data Sources for XPression Maps](#) ²⁶³ for more information.

4. Link Data Sources to Shapes, Drawings, or Container Drawings in the Map Scene

- Link a data source to the shapes, drawings, or container drawings in the map scene, enabling them to dynamically reflect or respond to the incoming data from the DataLinq Server.

See [Linking a Data Source to a Shape, Drawing or Container Drawing](#) ²⁸⁴ for more information.

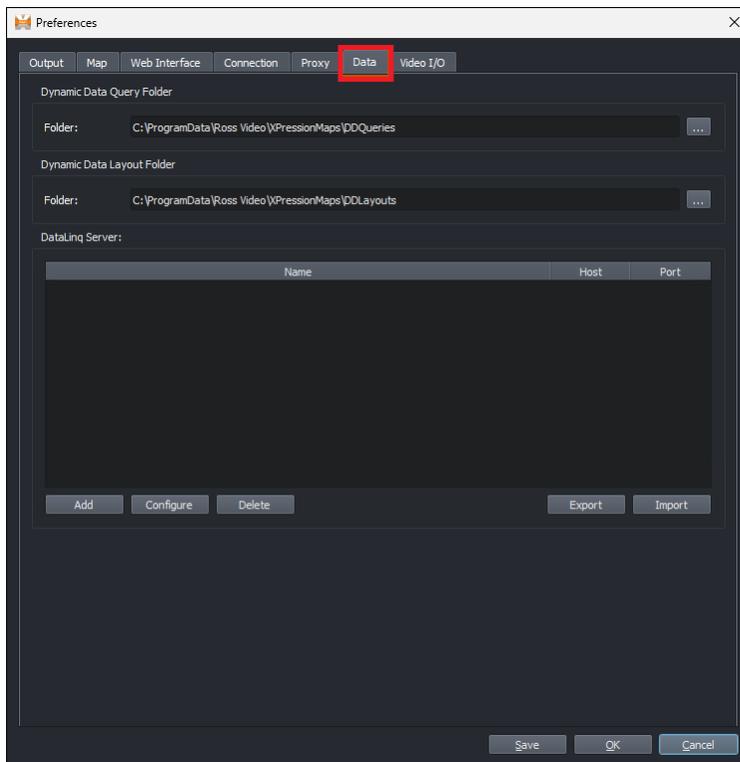
Connecting XPression Maps to a DataLinq Server

To enable XPression Maps to access external data sources, it must be configured to connect to the XPression DataLinq Server(s) in your system. The following procedure describes how to add DataLinq Servers to the **DataLinq Server** section of the **Data** page in the **XPression Maps Preferences** window and verify a successful connection.

★ See [Configuring Preferences > Data](#) for more information about importing, exporting, editing or deleting **DataLinq Server** profiles from the XPression Maps **Preferences** window.

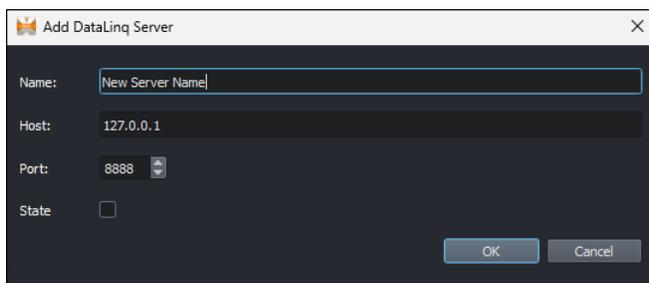
To add a DataLinq Server:

1. From the XPression Maps menu bar, select **File > Preferences**.
2. Select the **Data** tab.



3. In the **DataLinq Servers** section, select the **Add** button.

The **Add DataLinq Server** window opens.



Add DataLinq Server Window

4. In the **Name** field, enter a name for the new **DataLinq Server**.

5. In the **Host** field, enter the IP address of the computer hosting the XPression DataLinq Server.
6. In the **Port** field, enter the port that connects to the **DataLinq Server**.

The default port number is 8888.

7. Select the **State** checkbox to later view the status of the **DataLinq Server** connection.
8. Select **OK**.

The **DataLinq Server** is added to the **DataLinq Servers** table, but it is highlighted in red to indicate that the connection to the DataLinq Server has not yet been initialized. Selecting it again changes it to blue.

9. Select **Save** and then **OK** to close the **Preferences** window.

To check the DataLinq Server connection:

1. Reopen the **Preferences** window to the **Data** page (**File > Preferences > Data**).

The **DataLinq Server** should now be highlighted in green to indicate that a connection has been established.

2. Select **OK** to close the **Preferences** window.

Creating a New Data Source for XPression Maps

After connecting XPression Maps to a DataLinq Server, create and add a new **data source** to XPression Maps DataLinq Server. A data source serves as a configuration profile that previews incoming data from the DataLinq Server and includes one or more data queries to define how specific data fields can be applied to the properties of shapes, drawings, and container drawing objects.

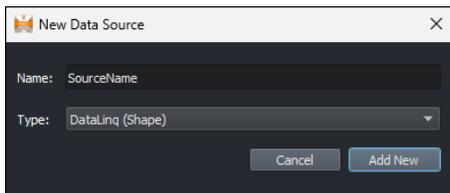
To add a new XPression Maps DataLinq Source:

1. Select **Edit > DataLinq Setup**.

The **DataLinq Setup** window opens.

2. Select **Add New**.

The **New Data Source** window opens.



New Data Source

3. In the **Name** field, enter a source name for the new data source.
4. From the **Type** drop-down, select a **DataLinq Type**.

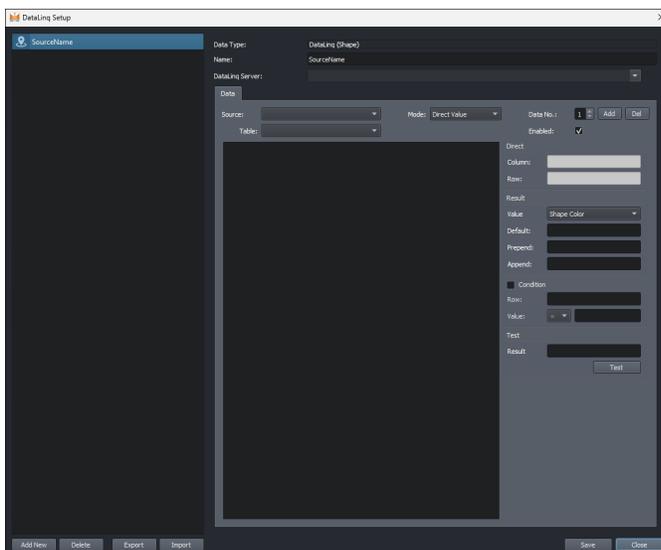
The types are:

DataLinq Shape 

DataLinq Drawing 

DataLinq Container Drawing 

The source is added to the **DataLinq Setup** window.



DataLinq Setup Window - New Data Source Added

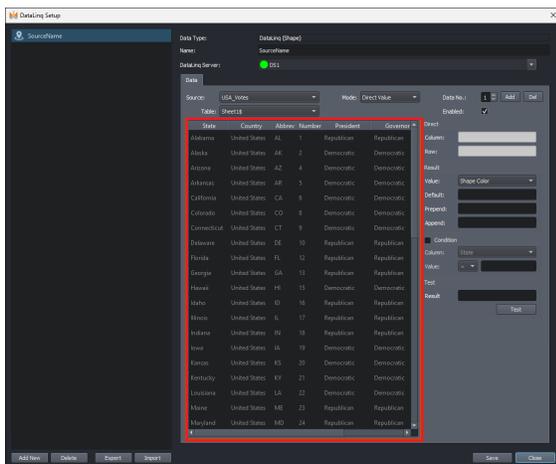
5. Select **Add New**.

- From the left panel of the **DataLinq Setup** window, select the data source.
- From the **DataLinq Server** drop-down select the name of the server connected to the data source.
A green icon indicates the **DataLinq Server** connection has been established.
A red icon indicates the **DataLinq Server** is not connected or is unavailable.
- In the **Data** tab, from the **Source** drop-down, select the source.

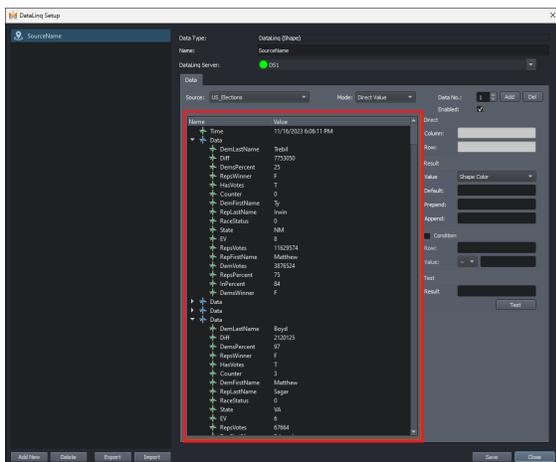
★ These sources are brought in directly from the **DataLinq Server**. See the *XPresson User Guide* for information on installing and using the **DataLinq Server**.

The data imported from the **DataLinq Server Source** will populate in the preview screen.

The preview screen displays data as either a table or a tree view. This will depend on the style of data being imported from the DataLinq Server.



DataLinq Setup - Table View



DataLinq Setup - Tree View

- In instances where there is more than one sheet of data in the source, select the correct table of data to be shown in the **Table** drop-down.
- Configure the data source's **Data** parameters that appear on the right-side of the **DataLinq Setup** window. Since these are data type dependent, refer to [Configuring Data Sources for XPresson Maps](#) ²⁶³ for specific instructions.

Configuring Data Sources for XPression Maps

Use the **DataLinq Setup** window to configure data sources with data queries that define how specific data fields can be applied to the shapes, drawings, and text drawing objects associated with a container drawing.

Configuring Data Sources for Shapes and Drawings

There are two methods for configuring data sources for **shape** or **drawing** objects:

- **Direct Value** mode allows you to create one or more data queries within a data source configuration. Each query is designed to select a single data item from the data source and apply it to a specific property of a shape or drawing. When a shape or drawing object in a scene is linked to the data source, its linked properties are automatically updated whenever the data source is refreshed.

[Configuring Shape Data in Direct Value Mode](#)^[264]

[Configuring Drawing Data in Direct Value Mode](#)^[271]

- **Value Lookup** mode allows you to create one or more data queries for a DataLinq source configuration. Each query is designed to search a range of data associated with the shape or drawing object's attributes and retrieve a corresponding value that can be applied to a property of the object. When a shape or drawing object in a scene is linked to the DataLinq source, its linked properties are automatically updated whenever the data source is refreshed.

[Configuring Shape Data in Value Lookup Mode](#)^[267]

[Configuring Drawing Data in Value Lookup Mode](#)^[274]

Configuring Data Sources for Container Drawings

To configure a DataLinq data source for container drawings, you must map the data source categories in the data source to the appropriate text drawing properties. Then, you add a container drawing to the scene and ensure that the names of the relevant Text drawings match those specified in the data source. See [Configuring Data Sources for Container Drawings](#)^[279] for more information.

Configuring Shape DataLinq Sources in Direct Value Mode

Direct Value mode allows you to create data queries within a source, each configured to select a single data item from the source and apply it to the corresponding shape property. A data source can support multiple queries, which can be individually enabled or disabled, providing the flexibility to activate only the queries relevant at any given time. When a shape object in a scene is linked to the data source, its linked properties are automatically updated whenever the data source is refreshed.

The following table lists the shape properties (Result Values) that can be assigned to a data query, along with the required format for the data source category:

Result Values	Function	Source Value
Shape Color	Sets the Fill Area color by Hex code.	#FFFFFF
Shape Outline Color	Sets the Border color by Hex code.	#FFFFFF
Shape Style Name	Sets the Shape Style by Shape Style Name .	Shape Style Name
Shape Extrude	Sets the Shape Extrude value.	0-10
Shape Visibility	Toggles the visibility of the shape.	0.0 = Hidden 1.0 = Visible
Shape Opacity	Sets the shape opacity value.	0.0 (Invisible) to 1.0 (Opaque)
Shape Use Media	Enables/disables the shape media.	0 = Disabled 1 = Enabled
Shape Media File Name	Sets the file path for the shape media	C:\SomeAsset.FileExtension
Shape Overlay Style Name	Sets a Shape Style by name to be layered on top of the configured Shape Style .	Shape Style Name
Shape Opacity On White	Sets the shape opacity value with a white background.	0.0 (Invisible) to 1.0 (Opaque)
Shape Interactive Data	Sets the Interactive Data value of a shape.	String value
Shape Is Mask	Toggles whether or not the shape should be used as a mask.	0 = Disabled 1 = Enabled

To configure a shape data source in Direct Value Mode:

1. Open the **DataLinq Setup** window by selecting **Edit > DataLinq Setup**.
2. From the left column, select your data source.
3. From the **DataLinq Server** drop-down, select the name of the server connected to the data source.
4. In the **Data** tab, select a data source from the **Source** drop-down.

The imported data will appear in the preview screen, displayed as either a table or tree structure, depending on the data format.

- From the **Mode** drop-down, select **Direct Value**.
- Next, create a different **data query** ²⁶⁵ for each shape property that you want to assign a data item to within this data source.

To create a data query:

- In the **Data No** field, select the data query that you want to configure.
 - Use the **Data No** up/down buttons to change between data queries.

OR

- Select **Add** to add and configure a new data query.



- Select the **Enabled** checkbox to activate the query when the data source is linked to a shape. Clear it to keep the query in the configuration without applying its result to the shape.
- Set the **Direct** parameters (**Column** and **Row**) to identify the exact data item from the data source that you want to apply to a shape property.
 - In the **data table**, right-click in the cell containing the data item and select **Use as Direct Parameter**.

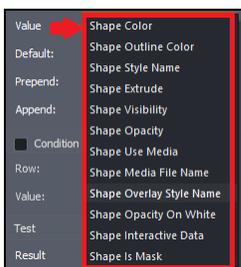
Note: The first row is "0".

OR

- In the **data tree**, right-click in the row containing the data item and select **Use as Direct Parameter**.
- In the **Result** section, identify the shape property that the direct data item will be applied to.

You can also set a default value that will be applied to the shape's property if there is no data value present (blank), as well as add a prefix or suffix to the query's returned value.

- From the **Value** drop-down, select the shape property that the data value will be applied to.



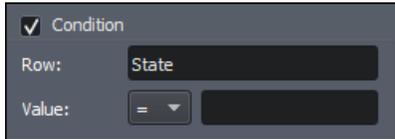
- (Optional) In the **Default** field, enter a fallback value to display if the resulting data source value is blank (e.g., **"Undecided"** or **"Not Available"**).
- (Optional) Use the **Prepend** field to add a prefix (text or numbers) to the beginning of the result value.

This is required when a shape's property value has been customized to include a distinctive prefix, but the data source values are generic and do not include the prefix. Leave this field blank if you just want the value chosen in the **Value** drop-down.

- d. (Optional) In the **Append** field, enter a string (text or numbers) to be added to the end of the result value.

This is required when a shape's property value has been customized to include a distinctive suffix, but the data source values are generic and do not include the suffix. Leave this field blank if you just want the value chosen in the **Value** drop-down.

5. (Optional) Set conditional logic to ensure the resulting data value is used only when a specified dependency condition is met.



- Select the **Condition** checkbox.
- Set the column or row in the data source containing the data items to be evaluated.
 - If the data in the preview screen is shown in a **table**, select from the **Column** drop-down the column heading containing the data items to be evaluated.

OR

- If the data in the preview screen is shown in a **tree**, right-click in the row containing the data items to be evaluated and select **Use as Condition Row**.

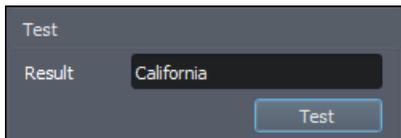
- In the **Value** field, select a comparison operator (**=**, **!=**, **<**, **>**) and specify the operand.

6. Test the logic of your configuration.

- In the **Test** section, leave the Result field blank and select **Test**.

The **Result** field shows the direct value parameter you identified from the data source.

This will be the data source value passed to the shape's property when linked to a shape object.



7. Select **Save** and close the **DataLinq Setup** window.

★ You may need to exit and relaunch XPression Maps to view the updated data on the **Canvas**.

Configuring Shape Data Sources in Value Lookup Mode

Value Lookup mode allows you to create one or more data queries for a data source configuration. Each query is designed to search a range of data associated with the shape or drawing object's attributes and retrieve a corresponding value that can be applied to a property of the object. A single data source can contain multiple data queries, which can be individually enabled or disabled, giving you the flexibility to activate only the profiles relevant to your current needs. When a shape object in a scene is linked to the data source, its linked properties are automatically updated whenever the data source is refreshed.

The following table lists the shape properties (Result Values) that can be assigned to a data query, along with the required format for the data source category:

Result Values	Function	Source Value
Shape Color	Sets the Fill Area color by Hex code.	#FFFFFF
Shape Outline Color	Sets the Border color by Hex code.	#FFFFFF
Shape Style Name	Sets the Shape Style by Shape Style Name .	Shape Style Name
Shape Extrude	Sets the Shape Extrude value.	0-10
Shape Visibility	Toggles the visibility of the shape.	0.0 = Hidden 1.0 = Visible
Shape Opacity	Sets the shape opacity value.	0.0 (Invisible) to 1.0 (Opaque)
Shape Use Media	Enables/disables the shape media.	0=Disabled 1=Enabled
Shape Media File Name	Sets the filepath for the shape media	C:\SomeAsset.FileExtension
Shape Overlay Style Name	Sets a Shape Style by name to be layered on top of the configured Shape Style .	Shape Style Name
Shape Opacity On White	Sets the shape opacity value with a white background.	0.0 (Invisible) to 1.0 (Opaque)
Shape Interactive Data	Sets the Interactive Data value of a shape.	String value
Shape Is Mask	Toggles whether or not the shape should be used as a mask.	0=Disabled 1=Enabled

To configure a shape data source in Value Lookup mode:

1. Open the **DataLinq Setup** window by selecting **Edit > DataLinq Setup**.
2. From the left column, select your data source.
3. From the **DataLinq Server** drop-down, select the name of the server connected to the data source.

4. In the **Data** tab, select a data source from the **Source** drop-down.

The imported data will appear in the preview screen, displayed as either a table or tree structure, depending on the data format.

5. From the **Mode** drop-down, select **Value Lookup**.

6. Next, create a [data query](#) for each shape property that you want to assign a data item to within this data source.

To create a data query:

1. In the **Data No** field, select the data query that you want to configure.

- Use the **Data No** up/down buttons to change between data queries.

OR

- Select **Add** to add and configure a new data query.



2. Select the **Enabled** checkbox to activate the query when the data source is linked to a shape. Clear it to keep the query in the configuration without applying its result to the shape.

3. Configure the **Lookup** parameters to specify the data source's lookup range and define the object attribute category represented by the data.

a. Set the data source lookup range.

- In the **data table**, right-click anywhere in the column you want to use to look up data from and select **Use as Lookup Parameter**.

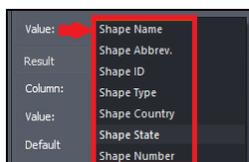
The **Column** field is filled in with the selected column's heading.

OR

- In the **data tree**, right-click in the row containing the data item and select **Use as Lookup Parameter**.

The **Column** and **Row** fields are filled in with the selected row headings.

b. From the **Value** drop-down, select the shape attribute category represented that applies to the data in the selected lookup range.



★ The data and value chosen must match with the attributes listed in the shape object's **Shape Editor > Information** section.



Shape Editor - Information

4. Configure the **Results** parameters to identify the column/row in the data source that contains the data that will be applied to the shape's property.

Also, identify the shape property that the result data will be applied to. You can also set a default value that will be applied to the shape's property if there is no data value present (blank), as well as add a prefix or suffix to the query's returned value.

- a. Set the results data source range.
 - In the **data table** in the preview screen, right-click in the column containing the data item that you want applied to the shape's property and select **Use as Result Column**.

The **Column** field is filled in with the selected column's heading.

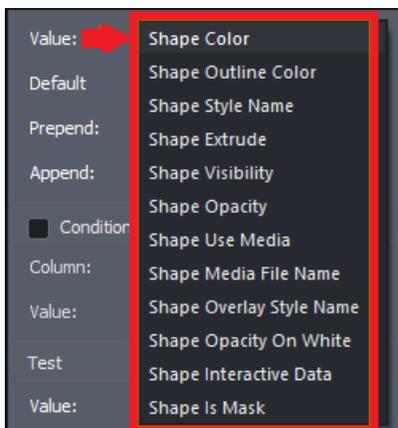
OR

- In the **data tree** in the preview screen, right-click in the row containing the data item that you want applied to the shape's property and select **Use as Result Column**.

The **Row** field is filled in with the selected row heading.

- b. From the **Value** drop-down, select the shape property that the result value will be applied to.

★ The option you select must correspond with data that can be found in the data source.



- c. (Optional) In the **Default** field, enter a fallback value to display if the result data source value is blank (e.g., "**Undecided**" or "**Not Available**".)
- d. (Optional) Use the **Prepend** field to add a prefix (text or numbers) to the beginning of the result value.

This is required when a shape's property value has been customized to include a distinctive prefix, but the data source values are generic and do not include the prefix. Leave this field blank if you just want the value chosen in the **Value** drop-down.
- e. (Optional) In the **Append** field, enter a string (text or numbers) to be added to the end of the result value.

This is required when a shape's property value has been customized to include a distinctive suffix, but the data source values are generic and do not include the suffix. Leave this field blank if you just want the value chosen in the **Value** drop-down.

5. (Optional) Set conditional logic to ensure the resulting data value is used only when a specified dependency condition is met.



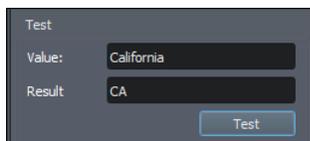
- a. Select the **Condition** checkbox.
- b. Set the column or row in the data source containing the data items to be evaluated.
 - If the data in the preview screen is shown in a **table**, select from the **Column** drop-down the column heading containing the data items to be evaluated.

OR

- If the data in the preview screen is shown in a **tree**, right-click in the row containing the data items to be evaluated and select **Use as Condition Row**.
- c. In the **Value** field, select a comparison operator (**=**, **!=**, **<**, **>**) and specify the operand.
6. Test the logic of your configuration.
- a. In the **Test** section, in the **Value** field, enter the value from the data source's **Lookup** column/row.
 - b. Leave the **Result** field empty.
 - c. Select **Test**.

The **Result** field shows the value from the data source that matches the data query defined by the Lookup and Results parameters.

This value is passed to the shape's property when linked to a shape object.



7. Select **Save** and close the **DataLinq Setup** window.

★ You may need to exit and relaunch XPression Maps to view the updated data on the **Canvas**.

Configuring Drawing Data Sources in Direct Value Mode

Direct Value mode allows you to create data queries within a data source, each configured to select a single data item from the source and apply it to a specific drawing property. A source can support multiple queries, which can be individually enabled or disabled, providing the flexibility to activate only the queries relevant at any given time. When a drawing object in a scene is linked to the data source, its linked properties are automatically updated whenever the data source is refreshed.

The following table lists the drawing properties (Result Values) that can be assigned to a data query, along with the required format for the data source category:

Result Values	Function	Source Value
Drawing Longitude	Sets the drawing Longitude .	WGS84, -180.0 to 180.0
Drawing Latitude	Sets the drawing Latitude .	WGS84, -90.0 to 90.0
Drawing Visibility	Toggles the visibility of the drawing.	0.0 = Hidden 1.0 = Visible
Drawing Color	Sets the Font Color of the drawing.	#000000
Drawing Text	Sets the Text value of the drawing.	Custom text string value
Drawing Interactive Data	Sets the Interactive Data value of the drawing.	String value
Drawing Icon	Sets the drawing Style by drawing style name.	Name of another drawing in the Drawing Toolbox
Drawing Opacity	Sets the drawing Opacity .	0.0 (Invisible) to 1.0 (Opaque)

To configure a drawing data source in Direct Value Mode:

1. Open the **DataLinq Setup** window by selecting **Edit > DataLinq Setup**.
2. From the left column, select your data source.
3. From the **DataLinq Server** drop-down, select the name of the server connected to the data source.
4. In the **Data** tab, select a data source from the **Source** drop-down.

The imported data will appear in the preview screen, displayed as either a table or tree structure, depending on the data format.

5. From the **Mode** drop-down, select **Direct Value**.
6. Next, create a [data query](#) ²⁷² for each drawing property that you want to assign a data item to within this data source.

To create a data query:

1. In the **Data No** field, select the data query that you want to configure.

- Use the **Data No** up/down buttons to change between data queries.

OR

- Select **Add** to add and configure a new data query.



2. Select the **Enabled** checkbox to activate the query when the data source is linked to a drawing.

Clear it to keep the query in the configuration without applying its result to the drawing.

3. Set the **Direct** parameters (**Column** and **Row**) to identify the exact data item from the data source that you want to apply to a drawing property.

- In the **data table**, right-click in the cell containing the data item and select **Use as Direct Parameter**.

Note: The first row is "0".

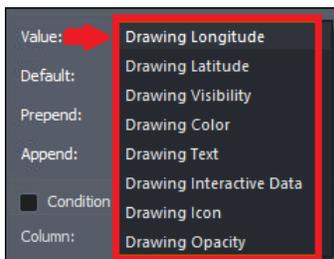
OR

- In the **data tree**, right-click in the row containing the data item and select **Use as Direct Parameter**.

4. In the **Result** section, identify the drawing property that the direct data item will be applied to.

You can also set a default value that will be applied to the drawing's property if there is no data value present (blank), as well as add a prefix or suffix to the query's returned value.

a. From the **Value** drop-down, select the drawing property that the data value will be applied to.



b. (Optional) In the **Default** field, enter a fallback value to display if the result data source value is blank (e.g., **Undecided** or **Not Available**.)

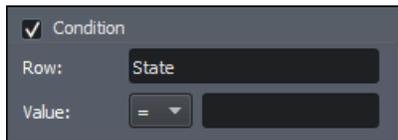
c. (Optional) Use the **Prepend** field to add a prefix (text or numbers) to the beginning of the result value.

This is required when a drawing's property value has been customized to include a distinctive prefix, but the data source values are generic and do not include the prefix. Leave this field blank if you just want the value chosen in the **Value** drop-down.

d. (Optional) In the **Append** field, enter a string (text or numbers) to be added to the end of the result value.

This is required when a drawing's property value has been customized to include a distinctive suffix, but the data source values are generic and do not include the suffix. Leave this field blank if you just want the value chosen in the **Value** drop-down.

5. (Optional) Set conditional logic to ensure the resulting data value is used only when a specified dependency condition is met.



- a. Select the **Condition** checkbox.
- b. Set the column or row in the data source containing the data items to be evaluated.
 - If the data in the preview screen is shown in a **table**, select from the **Column** drop-down the column heading containing the data items to be evaluated.

OR

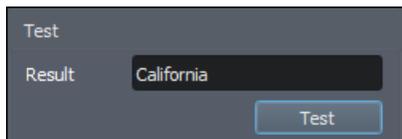
- If the data in the preview screen is shown in a **tree**, right-click in the row containing the data items to be evaluated and select **Use as Condition Row**.
- c. In the **Value** field, select a comparison operator (**=**, **!=**, **<**, **>**) and specify the operand.

6. Test the logic of your configuration.

- In the **Test** section, leave the **Result** field blank and select **Test**.

The **Result** field shows the direct value parameter you identified from the data source.

This will be the data source value passed to the drawing's property when linked to a drawing object.



7. Select **Save** and close the **DataLinq Setup** window.

- ★ You may need to exit and relaunch XPression Maps to view the updated data on the **Canvas**.

Configuring Drawing Data Sources in Value Lookup Mode

Value Lookup mode allows you to create one or more data queries for a data source configuration. Each query is designed to search a range of data associated with the drawing or drawing object's attributes and retrieve a corresponding value that can be applied to a property of the object. A single data source can contain multiple data queries, which can be individually enabled or disabled, giving you the flexibility to activate only the profiles relevant to your current needs. When a drawing object in a scene is linked to the data source, its linked properties are automatically updated whenever the data source is refreshed.

The following table lists the drawing properties (Result Values) that can be assigned to a data query, along with the required format for the data source category:

Result Values	Function	Source Value
Drawing Longitude	Sets the drawing Longitude .	WGS84, -180.0 to 180.0
Drawing Latitude	Sets the drawing Latitude .	WGS84, -90.0 to 90.0
Drawing Visibility	Toggles the visibility of the drawing.	0.0 = Hidden 1.0 = Visible
Drawing Color	Sets the Font Color of the drawing.	#000000
Drawing Text	Sets the Text value of the drawing.	Custom text string value
Drawing Interactive Data	Sets the Interactive Data value of the drawing.	String value
Drawing Icon	Sets the drawing Style by drawing style name.	Name of another drawing in the Drawing Toolbox
Drawing Opacity	Sets the drawing Opacity .	0.0 (Invisible) to 1.0 (Opaque)

To configure a drawing data source in Value Lookup mode:

1. Open the **DataLinq Setup** window by selecting **Edit > DataLinq Setup**.
2. From the left column, select your data source.
3. From the **DataLinq Server** drop-down, select the name of the server connected to the data source.
4. In the **Data** tab, select a data source from the **Source** drop-down.

The imported data will appear in the preview screen, displayed as either a table or tree structure, depending on the data format.

5. From the **Mode** drop-down, select **Value Lookup**.
6. Next, create a [data query](#) ²⁷⁵¹ for each drawing property that you want to assign a data item to within this data source.

To create a data query:

1. In the **Data No** field, select the data query that you want to configure.

- Use the **Data No** up/down buttons to change between data queries.

OR

- Select **Add** to add and configure a new data query.



2. Select the **Enabled** checkbox to activate the query when the data source is linked to a drawing.

Clear it to keep the query in the configuration without applying its result to the drawing.

3. Configure the **Lookup** parameters to specify the data source's lookup range and define the object attribute category represented by the data.

a. Set the data source lookup range.

- In the **data table**, right-click anywhere in the column you want to use to look up data from and select **Use as Lookup Parameter**.

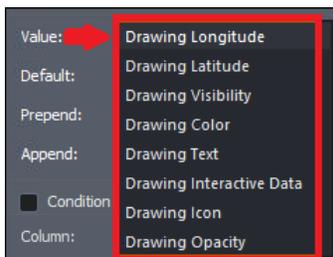
The **Column** field is filled in with the selected column's heading.

OR

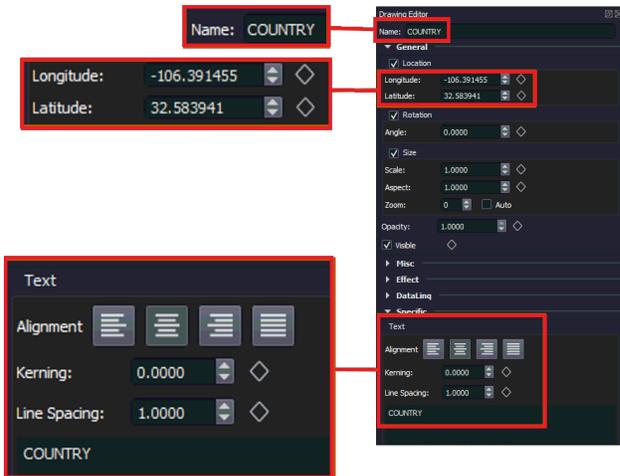
- In the **data tree**, right-click in the row containing the data item and select **Use as Lookup Parameter**.

The **Column and Row** fields are filled in with the selected row headings.

b. From the **Value** drop-down, select the drawing attribute category that applies to the data in the selected lookup range.



- ★ The data and value chosen must match with the attributes listed in the **Drawing Editor**.



4. Configure the **Results** parameters to identify the column/row in the data source that contains the data that will be applied to the drawing's property.

Also, identify the drawing property that the result data will be applied to. You can also set a default value that will be applied to the drawing's property if there is no data value present (blank), as well as add a prefix or suffix to the query's returned value.

- a. Set the results data source range.

- In the **data table** in the preview screen, right-click in the column containing the data item that you want applied to the drawing's property and select **Use as Result Column**.

The **Column** field is filled in with the selected column's heading.

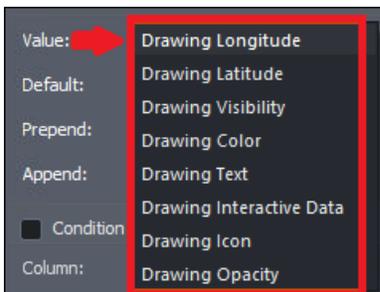
OR

- In the **data tree** in the preview screen, right-click in the row containing the data item that you want applied to the drawing's property and select **Use as Result Column**.

The **Row** field is filled in with the selected row heading.

- b. From the **Value** drop-down, select the drawing property that the result value will be applied to.

- ★ The option you select must correspond with data that can be found in the data source.



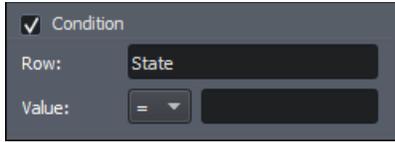
- c. (Optional) In the **Default** field, enter a fallback value to display if the result data source value is blank (e.g., "**Undecided**" or "**Not Available**".)
- d. (Optional) Use the **Prepend** field to add a prefix (text or numbers) to the beginning of the result value.

This is required when a drawing's property value has been customized to include a distinctive prefix, but the data source values are generic and do not include the prefix. Leave this field blank if you just want the value chosen in the **Value** drop-down.

- e. (Optional) In the **Append** field, enter a string (text or numbers) to be added to the end of the result value.

This is required when a drawing's property value has been customized to include a distinctive suffix, but the data source values are generic and do not include the suffix. Leave this field blank if you just want the value chosen in the **Value** drop-down.

5. (Optional) Set conditional logic to ensure the resulting data value is used only when a specified dependency condition is met.



Condition

Row: State

Value: =

- a. Select the **Condition** checkbox.



- b. Set the column or row in the data source containing the data items to be evaluated.
 - If the data in the preview screen is shown in a **table**, select from the **Column** drop-down the column heading containing the data items to be evaluated.

OR

- If the data in the preview screen is shown in a **tree**, right-click in the row containing the data items to be evaluated and select **Use as Condition Row**.

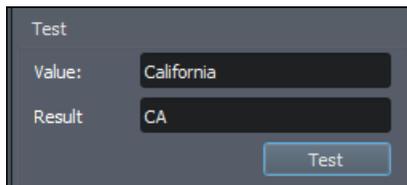
- c. In the **Value** field, select a comparison operator (**=**, **!=**, **<**, **>**) and specify the operand.

6. Test the logic of your configuration.

- a. In the **Test** section, in the **Value** field, enter the value from the data source's Lookup column/row.
- b. Leave the **Result** field empty.
- c. Select **Test**.

The **Result** field shows the value from the data source that matches the data query defined by the **Lookup** and **Results** parameters.

This value is passed to the drawing's property when linked to a drawing object.



The screenshot shows a 'Test' dialog box with a dark background. It has two input fields: 'Value' with the text 'California' and 'Result' with the text 'CA'. A 'Test' button is located at the bottom right of the dialog.

7. Select **Save** and close the **DataLinq Setup** window.

- ★ You may need to exit and relaunch XPression Maps to view the updated data on the **Canvas**.

Configuring Data Sources for Container Drawings

Container drawings are used to collectively manage the display of a group of [text drawings](#)²⁷⁹ on the map. When linked to a data source, the container drawing object coordinates the application of data to certain text drawings' properties, which determine exactly which text drawings are displayed on the map, as well as defining their exact location, content, and appearance. Use the following procedure to configure a data source for Container drawings in the **DataLinq Setup** window.

Procedural Overview

1. Open the **DataLinq Setup** window by selecting **Edit > DataLinq Setup**.
2. From the left column, select your data source.
3. From the **DataLinq Server** drop-down, select the name of the server connected to the data source.
4. In the **Data** tab, select a data source from the **Source** drop-down.
5. Set the **Data** source as a **Container**.

This defines the data source for Container drawings and enables mapping of result values (longitude, latitude, name etc.)

The imported data will appear in the preview screen, displayed as either a table or tree structure, depending on the data format.

6. Use the appropriate method to map the drawing parameters to the data source:

- [Configuring the Container Drawing Data from a Tree](#)²⁷⁹
- [Configuring the Container Drawing Data from a Table](#)²⁸¹

Result Values	Function	Source Value
Longitude	Sets the drawing Longitude .	WGS84, -180.0 to 180.0
Latitude	Sets the drawing Latitude .	WGS84, -90.0 to 90.0
Drawing Name	Toggles the visibility of the drawing.	0.0 = Hidden 1.0 = Visible
Text	Sets the Text value of the drawing.	Custom text string value
Scale	Sets the Scale of the drawing.	0-999.99
Angle	Sets the Angle of the drawing.	0-999.99
Drawing Color	Sets the Font Color of the drawing.	#000000

7. Add a container drawing object to the scene. See [Adding a Container Drawing to the Scene](#)²⁸².
8. In the **Drawing Management Editor**, ensure that the names of the relevant text drawings match with those specified in the data source. See [Configuring the Text Drawings for the Container Drawing](#)²⁸³.

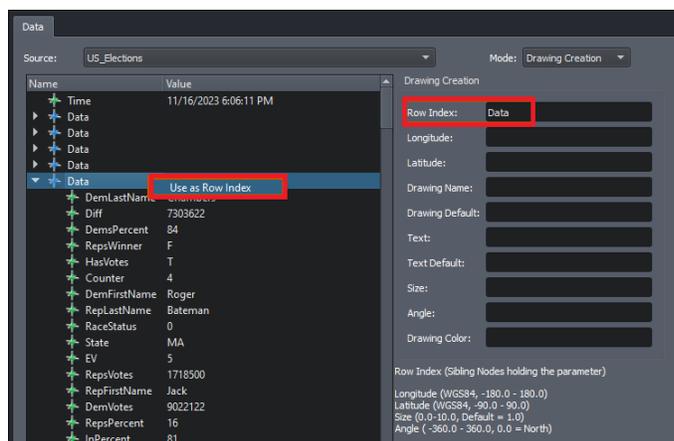
Configuring the Container Drawing Data

To configure the Container Drawing data from a tree:

1. In the **Data** table, select a row, right-click and select **Use as Row Index**.

The selected row is added in the **Row Index** field in the **Drawing Creation** section.

- ★ A **Row Index** can only be selected from the top level (**Name**) column. The **Value** column represents the remaining parameters.



Selecting a Row Index

2. In the data tree's **Value** column, select the following **Index Nodes**, which will then be recorded in the **Drawing Creation** fields.
 - **Longitude** - Right-click and select **Use as Longitude in the Index Node**.
 - **Latitude** - Right-click and select **Use as Latitude in the Index Node**.
 - **Drawing Name** - Right-click and select **Use as Drawing Name in the Index Node**.
 - **Drawing Default** - If the data source doesn't have a **Drawing Name** value, in the **Drawing Default** field, enter the name of the text drawing you will be using to configure the data output.
 - **Text** - Right-click and select **Use as Text in the Index Node**.
 - **Text Default** - If you select a **Text Drawing** tool as an **Index Node**, you must input the **Text** in the **Text Default** field. For example, if you choose a **Callout Marker** you must identify that as your **Text Default** for the result to display on the **Canvas**.
 - **Size** - Right-click and select **Use as Scale in the Index Node**.
 - **Angle** - Right-click and select **Use as Angle in the Index Node**.
 - **Drawing Color** - Right-click and select **Use as Drawing Color in the Index Node**.
3. Select **Save** and close the **DataLinq Setup** window.

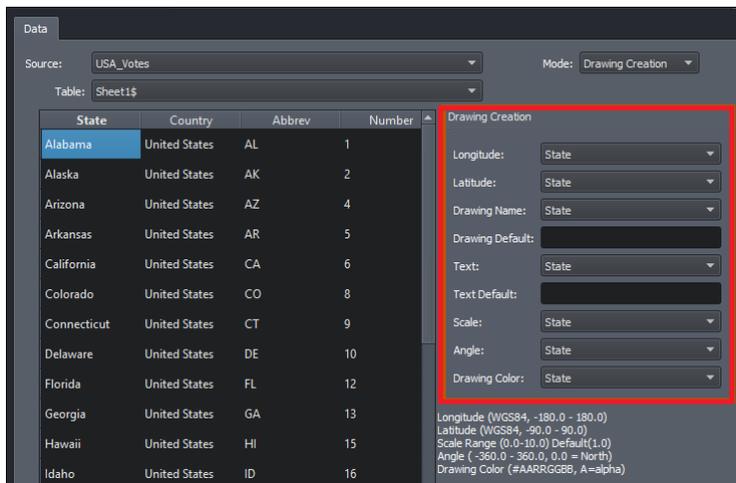
To configure the DataLinq Container Drawing Data from a table:

1. In the **Data** tab, select a data source from the **Source** drop-down.

The imported data will appear in the preview screen, displayed as a table structure.

2. In the **Drawing Creation** fields, set the following fields:

- **Longitude** - Select a column heading from the drop-down, or right-click in the column in the data table and select **Use Column as Longitude Parameter**.
- **Latitude** - Select a column heading from the drop-down, or right-click in the column in the data table and select **Use Column as Latitude Parameter**.
- **Drawing Name** - Select a column heading from the drop-down, or right-click in the column in the data table and select **Use Column as Drawing Name Parameter**.
 - **Drawing Default** - If the data source doesn't have a column for the **Drawing Name** values, in the **Drawing Default** field, enter the name of the text drawing you will be using to configure the data output.
- **Text** - Select a column heading from the drop-down, or right-click in the column in the data table and select **Use Column as Text Parameter**.
 - **Text Default** - If you select a **Text Drawing** tool as an **Index Node**, you must input the Text tool in the **Text Default** field. For example, if you choose a **Callout Marker** you must identify that as your **Text Default** for the result to display on the **Canvas**.
- **Scale** - Select a column heading from the drop-down, or right-click in the column in the data table and select **Use Column as Scale Parameter**.
- **Angle** - Select a column heading from the drop-down, or right-click in the column in the data table and select **Use Column as Angle Parameter**.
- **Drawing Color** - Select a column heading from the drop-down, or right-click in the column in the data table and select **Use Column as Drawing Color Parameter**.
- **Text Color** - Select a column heading from the drop-down, or right-click in the column in the data table and select **Use Column as Text Color Parameter**.



Drawing Creation Parameters

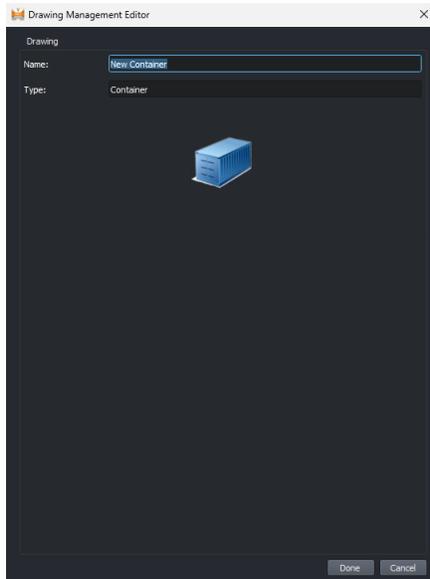
3. Select **Save** and close the **DataLinq Setup** window.

Adding a Container Drawing to the Scene

To add a Container drawing to the scene:

1. In the **Drawing Toolbox**, select **New Drawing**.
2. In the **New Drawing** dialog, from the **Select Drawing Type** drop-down, select **Container**.

The **Container Drawing** properties sheet opens.



New Container Drawing Properties

3. In the **Name** field, enter the name for the container drawing and select **Done**.
 - ★ The container drawing name must match the data source selected in the **Source** field in the **DataLinq Setup** window.
4. Place the new container drawing anywhere on the **Canvas**.
 - ★ The container drawing acts as a holder for the DataLinq data set up in the **DataLinq Setup** window. The container drawings placement on the map is not important. The image of the container drawing will not be shown in the final render.

Configuring the Text Drawings for the Container Drawing

To configure the text drawing(s) that will display the data:

1. From the menu bar select **Edit > Manage Drawings**.
2. In the **Drawing Management Editor**, from the **Name** drop-down, select **Text**.
3. From the list of text drawings, select the drawing you want to use to display the data in your map.
4. In the **Drawing** panel, in the **Name** field, enter the name that appears in the **Drawing** column of your data source.

If there is no **Drawing Name** value in your data source, enter any name and in the **DataLinq Setup** window, enter the same name in the **Drawing Default** field.
5. Select a group in which to save the newly named text drawing and select **Duplicate**.
6. If you want to change any of the properties in the text drawing, you can do so now or you can select the text drawing in the **Drawing Toolbox** later and edit the properties.
7. Select **Done** to close the **Drawing Management Editor**.

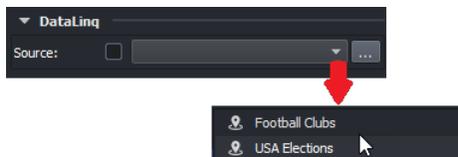
Linking a Data Source to a Shape, Drawing or Container Drawing

After defining the data sources in the **DataLinq Setup** window, you can link them to specific shapes, drawings, or container elements within your map scene. This enables these objects to dynamically update and respond to the data supplied by the connected DataLinq Servers.

To link a data source to a shape in the map scene:

1. In the **Shape Editor**, select the shapes you want to display with the DataLinq configuration.
Press **Shift** and left-click on the first and last shapes in the list to select all shapes at once.
2. Expand the **DataLinq** section, select a **DataLinq Data Source** from the drop-down and select the **Source** checkbox.

If the desired DataLinq source is not available in the drop-down options or if you need to edit a DataLinq source's settings, select the browse button to open the **DataLinq Setup** window.



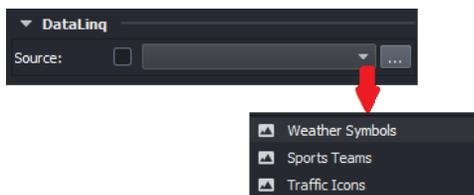
Shape Editor - DataLinq

The map on the **Canvas** reflects the results of the DataLinq data source configuration.

To link a data source to a drawing or container drawing in the map scene:

1. In the **Drawing Overview** panel or directly on the **Canvas**, select the drawing you want to display with the DataLinq configuration.
2. In the **Drawing Editor**, expand the **DataLinq** section, select the corresponding **DataLinq Data Source** from the drop-down and select the **Source** checkbox.

If the desired DataLinq source is not available in the drop-down options or if you need to edit a DataLinq source's settings, select the browse button to open the **DataLinq Setup** window.



Drawing Editor - DataLinq

The map on the **Canvas** reflects the results of the DataLinq data source configuration.

Creating User Predefined Objects

A **User Predefined Object** is a custom, reusable map object that combines a shape with other individual drawings—such as areas, icons, lines, and text—into a single object that can easily be added to a scene. This is especially useful for creating complex or frequently used map elements like custom country borders, disputed territories, or specialized region graphics to depict current war zones, pandemic data, or wildfire activity. User predefined objects ensure consistency and improve efficiency by reducing the need to manually recreate complex map components for each use.

While tools such as the [Search Editor](#)^[25], [Shape Editor](#)^[26], and [Drawing Toolbox](#)^[22] are used to create and modify the shapes and drawings that make up a User Predefined Object, the [User Predefined Objects panel](#)^[27] is used to save, manage, and apply these objects within a scene.



User Predefined Object Panel - Adds Shapes and Drawings to the Scene as a Single Object

The following topics are discussed in this section:

[Managing User Predefined Objects](#)^[286]

[Creating User Predefined Objects](#)^[289]

[Adding a User Predefined Object to a Scene](#)^[292]

Managing User Predefined Objects

To ensure quick and easy identification and retrieval, user predefined objects are organized in the **User Predefined Objects** panel using a group-and-folder system. To save a User Predefined Object, you must first create a group, then add a folder within that group.

Later if a User Predefined Object is no longer needed, you can delete it from its folder in the **User Predefined Objects** panel.

The following topic described how to manage User Predefined Objects using the **User Predefined Objects** panel:

[Adding a Group to the User Predefined Objects Panel](#) 

[Adding a Folder to a Group](#) 

[Deleting a Group](#) 

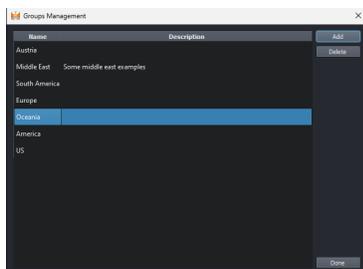
[Deleting a Folder](#) 

[Deleting a User Predefined Object from a folder](#) 

To add a new group:

1. Enable the **User Predefined Objects** panel in the **View** menu.
2. In the **User Predefined Objects** panel, select the **Browse** button  beside the **Group** drop-down.

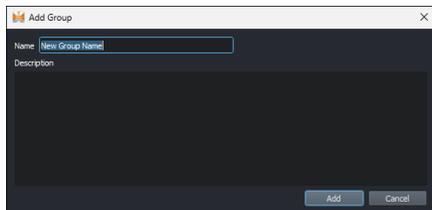
The **Groups Management** window opens.



Groups Management Window

3. Select **Add**.

The **Add Group** window opens.



Add Group Window

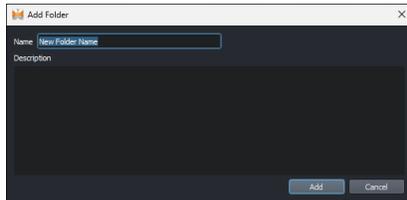
4. In the **Name** field, enter a name for the new group.
5. In the **Description** field, enter a description for the new group.
6. Select **Add** and the group is immediately added to the list.

★ You can rearrange groups in the **Groups Management** window by dragging them into position.

To add a folder to a group:

1. In the **User Predefined Objects** panel, from the **Group** drop-down, select the group to which you want to add a folder.
2. Right-click in a blank area of the **Name** or **Description** box and select **Add Folder**.

The **Add Folder** window opens.



Add Folder Window

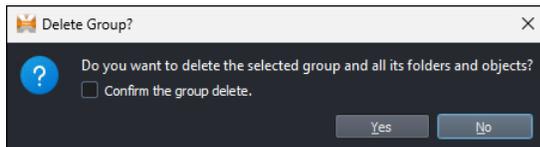
3. In the **Name** field, enter a name for the folder.
4. In the **Description** field, enter a description for the folder.
5. Select **Add**.

The folder is added to the group.

To delete a group:

1. Enable the **User Predefined Objects** panel in the **View** menu.
2. From the **User Predefined Objects** panel, select the **Browse** button (⋮) beside the **Group** drop-down.
3. Select the group you want to delete and select **Delete**.

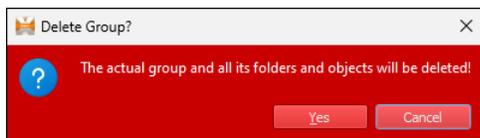
The **Delete Group** window opens.



Delete Group Window

4. Select the checkbox to confirm the group delete and select **Yes**.

The red highlighted **Delete Group** confirmation dialog opens.



Highlighted Delete Group Window

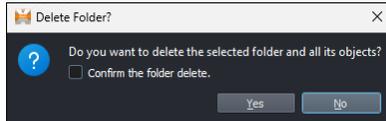
5. Select **Yes** to delete the group.

The group and its containing folders are now deleted.

To delete a folder from a group:

1. From the **User Predefined Objects** panel select the group containing the folder you want to delete from the **Group** drop-down.
2. Right-click on the folder and select **Delete**.

The **Delete Folder** window opens.



Delete Folder Window

3. Select the checkbox to confirm the folder delete and select **Yes**.

The red highlighted **Delete Folder** window opens.



Highlighted Delete Folder Window

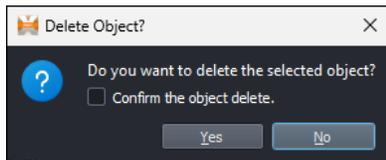
4. Select **Yes** to delete the folder.

★ Deleting a folder will delete the objects as well.

To delete User Predefined Objects from a folder:

1. In the **User Predefined Objects** panel, select the group containing the object(s) you want to delete from the **Group** drop-down.
2. Expand the folder and right-click the object you want to delete.
3. Select **Delete**.

The **Delete Object** window opens.



Delete Object Window

3. Select the checkbox to confirm and select **Yes** to delete the object.

Creating User Predefined Objects

User Predefined Objects are created by building a map scene that includes shapes and other individual drawings—such as areas, icons, lines, and text. Once the scene is complete, it is added to a group and folder in the **User Predefined Objects** panel, where all of the scene's elements are combined and saved to the database as a single, reusable object that can easily be added to other scenes.

This tool is also used to create **Disputed Border** alterations, allowing contested boundaries to be represented directly on a map.

This section discusses the following topics:

[Building a Scene for a User Predefined Object](#) ²⁸⁹

[Adding a User Predefined Object](#) ²⁹⁰

To build a scene for a User Predefined Object:

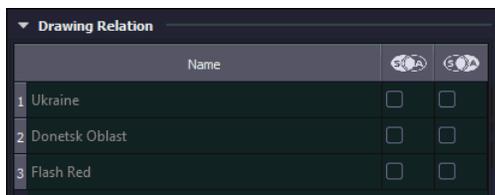
1. Open a new scene on the **Canvas**.
2. In the [Search Editor](#) ¹²², in the **Location** field, enter the name of the state, territory, district, etc. that you want to display on the map on the **Canvas**.

Ensure that the **Go to Result** is selected and then select **Search**.

3. In the **Search Related Shapes** section, double-click the shape that you want to add to the scene.
4. Adjust the camera view on the **Canvas**, as needed.
5. Add drawings to the map, as needed.

These drawings are automatically added to the **Drawings Overview** panel.

6. In the **Shape Editor**, select the shape's name from the upper panel and then expand the **Drawing Relation** section.
7. Drag each drawing from the **Drawings Overview** panel into the **Drawing Relation** panel to link them to the selected shape.



Shape Editor - Drawing Relation

8. If you added any **Area** drawings to the **Drawing Relation** panel, use the checkboxes in the **Shape Masked by Area**  or **Area masked by Shape**  columns to apply a mask.

Instructions are provided in the following topics:

[Masking a shape by the area](#) ²⁹¹

[Masking an area with a shape](#) ²⁹¹

Masking is also the method used to represent Disputed Borders. By applying masks, you can control which regions of a map are displayed or hidden to reflect contested boundaries.

9. Save the scene.

★ If in the future you want create a similar **User Predefined Object**, you can open the scene and make edits without having to recreate everything.

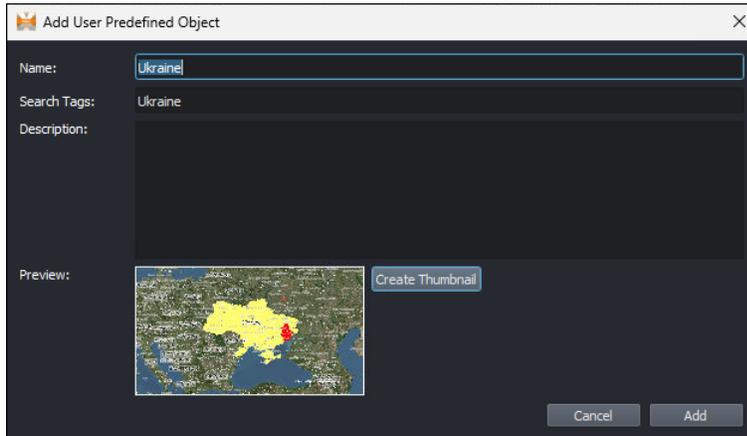
10. Use the completed scene to add a new **User Predefined Object** to the database.

See [Adding a User Predefined Object](#) ²⁹⁰.

To add a User Predefined Object:

1. Select the shape from the top of the **Shape Editor** panel and drag it into the selected group folder created in the **User Predefined Objects** panel.

The **Add User Predefined Objects** window opens.



Add User Predefined Objects Window

★ To add a completed scene to the User Predefined Objects panel, you must first create a group and folder within the group.

2. In the **Name** field, enter a name for the object.
3. In the **Search Tags** field, enter any identifying terms for the object.
4. In the **Description** field, enter a description of the scene and its intended purposes.
5. Select the **Create Thumbnail** button beside the **Preview** image to snap thumbnail of the **User Predefined Object**.

To adjust the thumbnail image, move the map or zoom in or out to your preferred position. Double-click the **User Predefined Object** to open the **Edit User Predefined Object** window and select **Create Thumbnail** to preview a new thumbnail image.

6. Select **Add** to add the **User Predefined Object** to your folder.
7. From the menu bar select **File > Save** to save your project.

To mask an area with a shape:

1. Add an **Area** drawing to the map.
2. Drag and drop the **Area** drawing from the **Drawings Overview** panel to the **Drawing Relation** panel.
3. In the **Drawing Relation** panel, select the checkbox in the **Area masked by Shape**  column to the right of the **Area** drawing to apply a mask to the part of the **Area** drawing that falls outside of the shape.

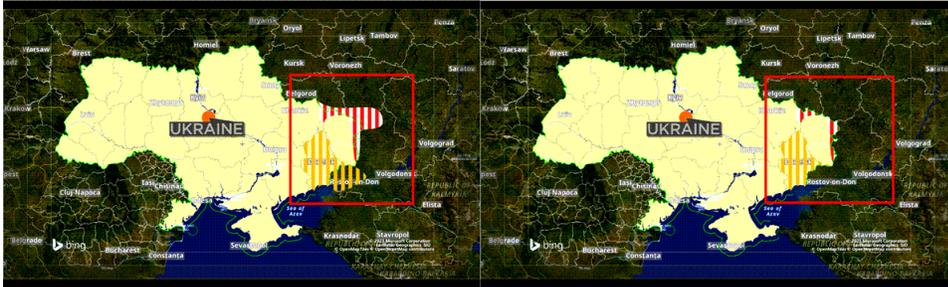


Image Displays The Difference Between Drawing Tools Unmasked And Masking By An Area

★ This method can also be used to define disputed borders, where part of a region is selectively hidden or revealed.

To mask a shape by the area:

- Select the checkbox in the **Shape Masked by Area**  beside the shape that you want to have the area masked by.

Notice the background and borders of the area showing through the drawing tools.

The shape is masked by the area.

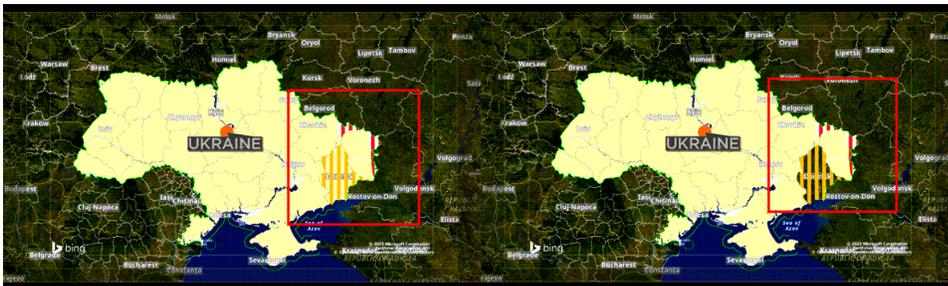


Image Displays The Difference Between Drawing Tools Being Masked And Unmasked By An Area

★ This technique is commonly applied to disputed borders, ensuring that only the defined portion of the map is visible.

Adding a User Predefined Object to a Scene

User Predefined Objects are stored and accessed in a user-defined group-folder structure in the **User Predefined Objects** panel. Use the following procedure to add a User Predefined Object to a map scene on the **Canvas**.

To add a User Predefined Object to a scene:

1. On the **Canvas**, position the map to the general location where the User Predefined Object is to be added.
2. From the **View** menu, enable the **User Predefined Objects** panel.
3. In the **User Predefined Objects** panel, navigate to the desired user predefined object:
 - In the **Group** drop-down, select the group in which the User Predefined Object is stored.
 - Expand the folder in which the user predefined object is stored.
4. Select and drag the User Predefined Object's thumbnail from the **User Predefined Objects** panel to the map on the **Canvas**.

The selected User Predefined Object—along with its associated shapes and drawings—will appear on the map and be listed in the **Drawing Overview** panel.

Creating Animations

Use the **Animation Editor** in XPression Maps to create dynamic map animations by setting camera and drawing Key Frames along the animation timeline. **Camera Key Frames** control the animation of camera view properties and can also define pause durations, map style transitions, and lock camera settings. Meanwhile, **drawing Key Frames** animate the properties of shapes and drawing objects within the scene, allowing for intricate and engaging visual effects.

In most cases, Key Frames mark the start and end of changes to camera views or the properties of drawing and shape objects. When the animation plays, smooth transitions enhance your maps with dynamic camera effects like panning between locations, zooming in and out, or changing map styles. Additionally, drawing and shape objects can be animated to appear, disappear, resize, change color, or move seamlessly across the map with precise timing and control.



Animation Editor

The following topics provide information about how to use the Animation Editor:

[Overview of the Animation Editor](#) ²⁹⁴

[Animation Editor - Common Tasks and Actions](#) ²⁹⁶

[Adding Camera Parameters Key Frames](#) ³⁰¹

[Changing the Map Style During an Animation](#) ³⁰²

[Adding a Pause to an Animation](#) ³⁰³

[Adding Drawing Key Frames](#) ³⁰⁴

The following topics provide examples of how to create various types of map animations:

[Creating a Location and View Animation](#) ³⁰⁶

[Creating a Drawing Visibility Animation](#) ³⁰⁷

[Creating a Line Progression Animation](#) ³⁰⁸

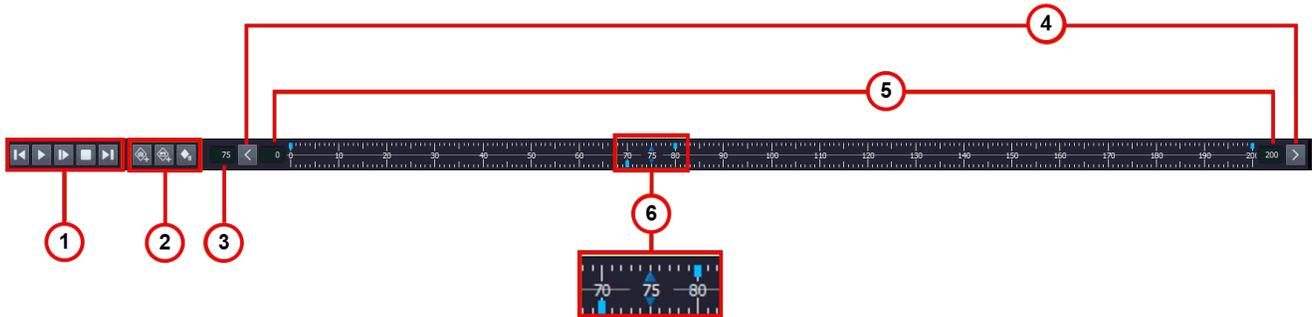
[Creating a Zoom Animation](#) ³¹⁰

[Creating a Shape Animation](#) ³¹¹

Overview of the Animation Editor

The **Animation Editor**, located below the **Canvas**, lets you create map animations by adding camera and drawing Key Frames to the timeline, marking the start and end of changes to camera views and object properties.

Use the following diagram and table to familiarize yourself with the main components of the Animation Editor.



#	Description
1	<p>Animation Playback Controls</p> <ul style="list-style-type: none"> • Rewind Animation - rewind the animation to the beginning. Alternatively, you can select the Animation > Rewind menu option or press Ctrl+B. • Play Animation - play the animation from the beginning. Alternatively, you can select the Animation > Play menu option or you can press Ctrl+Space. • Continue Animation - continue playing the animation from the position on the timeline. Alternatively, you can select the Animation > Continue menu option or you can press Ctrl+G. • Stop Animation - stop playing the animation. Alternatively, you can select the Animation > Stop menu option or you can press Ctrl+H. • Forward Animation - fast-forward the animation to the end. Alternatively, you can select the Animation > Forward menu option or you can press Ctrl+M.
2	<ul style="list-style-type: none"> • Add Camera Key Frame - creates and adds a camera Key Frame to the animation timeline at the current location of the animation position slider. • Add Drawing Key Frame - creates and adds a drawing Key Frame to the animation timeline at the current location of the animation position slider. • Delete Selected Key Frames - deletes the Key Frame(s) that are currently selected on the animation timeline.
3	<ul style="list-style-type: none"> • Frame Counter - displays the current position of the animation position slider on the animation timeline. Use this field to immediately move the animated scene displayed on the Canvas and the position slider to a precise location on the animation timeline.
4	<ul style="list-style-type: none"> • Animation Step Back - moves the current animation position one frame towards the beginning of the animation. Also, holding the Ctrl key while selecting Animation Step Back moves the current animation position to the previous Key Frame position. • Animation Step Forward - moves the current animation position one frame towards the end of the animation. Also, holding the Ctrl key while selecting Animation Step Forward moves the current animation position to the next Key Frame position.

#	Description
5	<ul style="list-style-type: none"> • Minimum Frame - displays and lets you set the starting frame number for the animation. The animation's duration is determined by the difference between the maximum frame number and the minimum frame number. The timeline scale adjusts automatically whenever either of these values changes. The starting frame cannot be set below zero. • Maximum Frame - displays and lets you set the ending frame number for the animation. The animation's duration is determined by the difference between this value and the minimum frame number. The timeline scale adjusts automatically whenever either of these values changes.
6	<ul style="list-style-type: none"> • Drawing Key Frame - indicates the frame at which a drawing Key Frame is applied. Drawing Key Frames are represented by blue rectangles (or green when selected) on the scale below the timeline. If no drawing or shape is selected on the Canvas, then all drawing Key Frames are displayed below the timeline. However, if a drawing or shape is selected on the Canvas, only the Key Frames associated with the drawing or shape are shown. • Animation Position Slider - indicates the current frame position within the animation. Select and drag the handle of the slider to move the position of the animation within the displayed range. • Camera Key Frame - indicates the frame at which a camera Key Frame is applied. Camera Key Frames (for camera parameters, map style, and camera lock) are represented by blue rectangles (or red when selected) on the scale above the timeline. Interactive Event Key Frames are shown as white circles on the scale above the timeline.

Animation Editor - Common Tasks and Actions

The following topics describe tasks and actions that are typically performed when using the **Animation Editor** to create map animations:

[Setting the Animation Duration](#) 

[Identifying and Moving the Current Position to Specific Frames](#) 

[Adding Key Frames to the Timeline](#) 

[Setting the Easing Method](#) 

[Selecting Key Frames on the Timeline](#) 

[Repositioning Key Frames](#) 

[Navigating Between Key Frames](#) 

[Deleting Key Frames From the Timeline](#) 

[Scrubbing Through the Animation](#) 

[Previewing Animation Playback](#) 

Setting the Animation Duration

The total duration of the map animation is determined by assigning a **frame range** using the **Minimum Frame** and **Maximum Frame** fields.

★ The scale of the timeline adjusts automatically with changes to these fields.

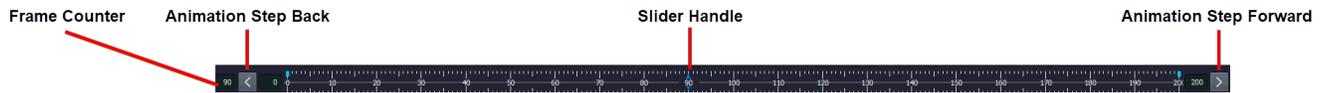


To set the duration of an animation:

1. In the **Minimum Frame** field, enter the frame value for the starting frame in the animation.
2. In the **Maximum Frame** field, enter the frame value for the ending frame in the animation.

Identifying and Moving the Current Position to Specific Frames

The **Frame Counter** on the left of the timeline shows the current frame of the map animation that is being displayed on the **Canvas**.



To move the current position in the animation to a specific frame:

- Enter a frame number in the **Frame Counter** field.

OR

- Left-click your mouse on a point on the timeline to immediately move to that frame.

OR

- Drag the slider handle to navigate within the range.

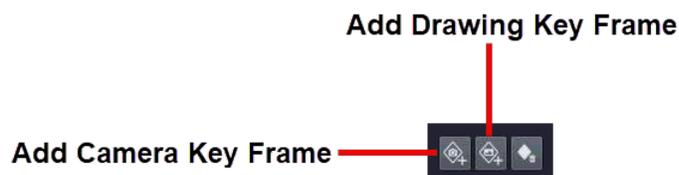
OR

- Use **Animation Step Back** or **Animation Step Forward** buttons to shift one frame backward or forward.

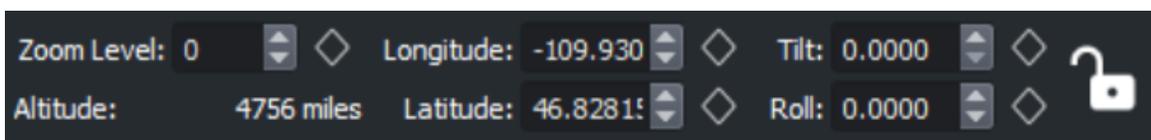
Adding Camera Key Frames or Drawing Key Frames to the Timeline

There are two methods for adding a camera Key Frame or drawing Key Frame to the **Animation Editor's** timeline:

- **Collective Parameters Settings** — The **Add Camera Key Frame** and **Drawing Key Frame** buttons in the **Animation Editor** captures all the current settings for the camera parameters (**Zoom Level, Longitude, Latitude, Tilt and Roll**), or the drawing or shape parameters (**Location, Rotation, and Size** parameters) and adds a Key Frame to the current location of the animation position slider on the animation timeline.



- **Selected Parameters Only:** Selecting the Key Frame button  beside an individual camera, drawing, shape, or map style parameter, adds a Key Frame for the selected settings (but keep all other non-selected Key Frame settings unaffected). An easing method can be assigned to each individual Key Frame, which may change the look of the Key Frame button (see [Setting the Easing Method](#))^[298].



Camera Parameters - Key Frame Buttons to the Right of Each Parameter

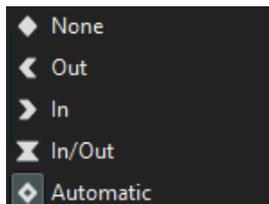
Full instructions and information for adding Key Frames to an animation are provided in [Adding Camera Parameters Key Frames](#)^[301] and [Adding Drawing Key Frames](#)^[304].

Setting the Easing Method

The easing method of a Key Frame defines the progressive movement or transition over time, creating natural-looking motion by controlling the speed at which it moves between Key Frames. Using these easing methods gives a sense of realistic weight and timing to animations, which enhances the viewer's perception of the motion.

To set the easing method of a parameter Key Frame:

1. Right-click the Key Frame button  beside the parameter.
2. From the context menu, select **Easing**.
3. Select one of the following easing methods:



- **None:** the animation from one Key Frame to the next is linear and the animation maintains the same speed from beginning to end.
- **Out:** the animation from the previous Key Frame is linear but the animation from this Key Frame to the next Key Frame is accelerated.
- **In:** the animation from the previous Key Frame to this one is decelerated, but the animation to the next Key Frame is linear or constant.
- **In/Out:** the animation from the previous Key Frame to this one is decelerated and the starting animation of this Key Frame is accelerated.
- **Automatic:** the animation from one Key Frame to the next starts slow, then gets faster, and slows again before reaching its final position.

Selecting Key Frames on the Timeline

To select an individual Key Frame on the timeline:

- Left-click on the Key Frame to select it.
Selected camera Key Frames appear red; drawing Key Frames appear green.

To select multiple Key Frames on the timeline:

- Hold **Ctrl** and click multiple Key Frames.
Selected camera Key Frames appear red; drawing Key Frames appear green.

OR

- Left-click and drag to draw a box around the desired Key Frames.
Selected camera Key Frames appear red; drawing Key Frames appear green.

Repositioning Key Frames

Key Frames are added to the timeline at the frame where the current position slider is located. You can move a Key Frame to a different point on the timeline at any time.

To move a Key Frame to another position on the timeline:

1. Select the Key Frame on the timeline. See [Selecting Key Frames on the Timeline](#) .

Selected camera Key Frames appear red; drawing Key Frames appear green.

2. Drag the Key Frame to a new point on the timeline.

To help you reposition it accurately, the Key Frame's frame number is displayed as you drag it along the timeline.



Navigating Between Key Frames

When editing Key Frame settings, it's helpful to quickly jump between Key Frames by moving the current position slider along the timeline.

To move to the current position slider to an adjacent Key Frame on the timeline:

- Press the **Ctrl** key while selecting the **Right Arrow** button () or the **Left Arrow** button () located beside the timeline.

OR

- Press the **Ctrl + right arrow** key or the **Ctrl + left arrow** key.

OR

- Select **Edit > Jump to Next Key Frame** or **Jump to Previous Key Frame**.

Deleting Key Frames From the Timeline

To prevent Key Frames from being accidentally deleted from the timeline, only the **Delete Selected Key Frames** button can be used to delete a Key Frame.

To delete Key Frames from the timeline:

1. On the timeline, select the Key Frame(s) you want to delete (see [Selecting Key Frames on the Timeline](#)) .

The selected Key Frames change from blue to green (drawing Key Frames) or red (camera Key Frames).

2. In the **Animation Editor**, select the **Delete Selected Key Frames** button.



Delete Selected Key Frames

Scrubbing Through the Animation

You can scrub through the animation, frame-by-frame, to see the resulting changes in the map at each frame of the animation on the **Canvas**.

To scrub through the animation:

- Drag the position slider to scrub through frames in the displayed range to see the animation on the **Canvas**.

OR

- Use the arrow buttons (◀, ▶) next to the minimum and maximum fields to shift one frame forward or backward.

Previewing Animation Playback

Use the playback controls in the **Animation Editor** to preview the playback of the current animation, from start to finish, on the **Canvas**.

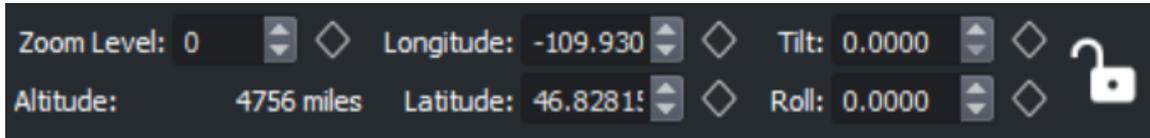
To view the complete playback of the animation:

- Select **Play Animation** in the **Animation Editor**'s playback controls to preview the animation on the **Canvas**.



Adding Camera Parameters Keyframes

XPression Maps uses camera Key Frames to control how the scene's camera view behaves over time, allowing for dynamic perspectives, pans, zooms, rotations, and more. The **camera parameters** below the **Canvas** define the camera's perspective within the scene.



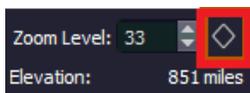
Camera Parameters

When creating an animation, adjusting individual or multiple camera parameters allows you to set a specific location, position, or orientation for the camera at a given frame. By interpolating between two Key Frames, XPression Maps generates smooth transitions that seamlessly shift the camera view from one perspective to another. When a camera Key Frame is added to the timeline, it is represented by a blue rectangle (or red when selected) on the scale **above** the timeline.



Animation Editor

Using the Key Frame buttons beside each parameter, you can add a Key Frame for the individual parameter to the current position on the timeline.



Alternatively, you can select the Animation Editor's **Add Camera Key Frame** button to collectively capture all the current values of the camera parameters (**Zoom Level**, **Longitude**, **Latitude**, **Tilt** and **Roll**) in a single action.

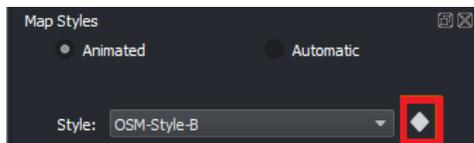


Setting different values for the camera parameters at two different Key Frames creates the following animations:

- **Location change:** Setting different **Longitude** and **Latitude** values at two camera Key Frames along the timeline produces a flight that moves the camera view from one geographic location to another geographic location. See [Creating a Location and View Animation](#)^[306] for more information.
- **Zoom Level:** Setting different **Zoom Level** values at two camera Key Frames along the timeline produces an animation where the camera zooms in or zooms out of the map. See [Creating a Zoom Animation](#)^[310] for more information.
- **Viewing Angle:** Setting different **Tilt** and **Roll** values at two camera Key Frames along the timeline produces an animation that rotates the camera view around the map's horizontal axis or spins the map clockwise or counterclockwise. See [Creating a Location and View Animation](#)^[306] for more information.

Changing the Map Style During an Animation

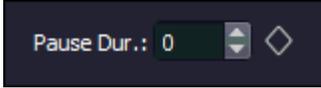
When building an animation, the [Map Style](#) panel allows you to add a camera Key Frame to the timeline, enabling a smooth transition to a new map style at a precise frame. This is particularly useful in zoom-level animations, where you can transition between map styles to reveal more or less detail at a specific zoom level. See [Assigning an Animated Map Style](#) for more information.



Map Style Panel - Camera Key Frame

Adding a Pause to an Animation

The **Pause Dur.** field, found to the right of the camera parameters below the **Canvas**, includes a Key Frame button. This field allows you to insert a pause in the animation, holding the camera view steady for a specified number of frames. When this Key Frame is encountered during playback, the camera view remains static until the set frame count elapses, after which the animation continues.



Pause Duration

Alternatively, you can use a **bookmark** to create a pause during a flight animation, allowing you to provide additional information at a specific point in the sequence.

The following topics are discussed in this section:

[Adding a Pause Duration to an Animation](#) ³⁰³

[Adding a Bookmark Pause to a Flight Animation](#) ⁴⁵⁴

To add a pause duration camera Key Frame:

1. Move the timeline slider to the point in the animation where you want to pause.
2. In the **Pause Dur.** field, enter the number of frames for which you want the pause to last.
3. Select the Key Frame button beside the field to add a camera Key Frame at this point.

The **Pause Dur.** Key Frame button changes to solid grey and the camera Key Frame is added to the current position on the timeline.

To use a bookmark to add a pause to a flight animation:

1. Select **File > Open** to open a flight animation scene in which the flight goes from point **A** to **B** to **C** without stopping.

Alternatively, you can create a new flight animation.

For information on creating a flight animation, see [Flight Points](#) ³¹⁸.

2. If necessary, move the Key Frames following flight point **B** towards the end of the timeline to leave space for the pause.
3. Move the timeline handle to point B and in the **Bookmark Editor**, select **Add Bookmark**.
4. Now move the timeline handle to a position after flight point **B**, where you want the pause to end and select the bookmark you created in the previous step.
5. Add a camera Key Frame at that position.
6. Select the green **Play** button in the animation toolbar to play the animation.

Adding Drawing Keyframes

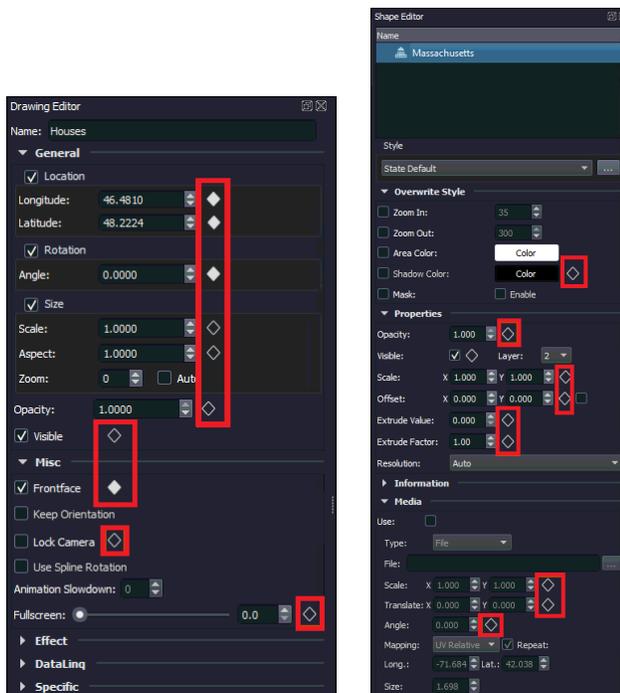
XPression Maps uses drawing Key Frames in the **Animation Editor** to control drawing and shape objects within map animations. In most cases, these drawing Key Frames identify the start or end points of changes to the position, rotation, size, visibility and other parameters of the drawing and shape objects within the scene. For example, setting the **visibility** parameter at specific Key Frames on the timeline allows you to manage and synchronize a drawing or shape's appearance or disappearance with other objects or events. Changes to a drawing's **Location** parameters can enable objects to travel seamlessly across the scene, and in the case of line drawings, changes to the object's **Progress** parameter creates a smooth effect where the line progressively moves from one point to another.

★ Which properties can be animated may differ depending on whether the object is a shape or drawing, as well as the type of drawing.

To add a drawing Key Frame to the timeline in Animation Editor:

1. Move the slider to the frame on the timeline where the changes to the parameter(s) are to be begin or end. See [Repositioning Key Frames](#) ²⁹⁹.
2. On the **Canvas**, select the drawing or shape in the scene.
3. Use the **Drawing Editor** or **Shape Editor** to adjust and set the object's parameters.

If the parameters have a Key Frame button beside it, you can add a Key Frame for the individual parameter with that setting to the current position on the timeline.



Drawing Editor & Shape Editor - Drawing Key Frames

- When the Key Frame button is solid grey, it indicates that a Key Frame exists in the timeline for this parameter.
- When the Key Frame button is cleared, no Key Frame exists in the timeline for this parameter.

When a drawing Key Frame is added to the timeline, it is represented by a blue rectangle (or green when selected) on the scale below the timeline.



- ★ Alternatively for drawing objects, you can select the Animation Editor's **Add Drawing Key Frame** button to capture the drawing's current **Location**, **Rotation**, and **Size** parameters in a single action and add them to a drawing Key Frame on the timeline.



The following topics provide examples of the types of animation that can be created using drawing Key Frames for drawing and shape objects:

[Creating a Drawing Visibility Animation](#) ³⁰⁷

[Creating a Line Progression Animation](#) ³⁰⁶

[Creating a Shape Animation](#) ³¹¹

Creating a Location and View Animation

Use a location and view animation to draw attention to multiple locations and different map views. This type of animation involves setting different **Longitude** and **Latitude** values at two or more camera Key Frames along the timeline to produce flights that move the camera view from one geographic location to another geographic location. Additionally, setting different **Tilt** and **Roll** values at the camera Key Frames adds a rotation of the camera view around the map's horizontal axis and spins the map clockwise or counterclockwise during the animation's playback.

To create a location and view angle animation:

1. Create the starting point for the animation by moving the slider to the beginning of the animation timeline.
2. In the **Search Editor**, enter the location at which you want to begin your animation.
The location you enter is immediately displayed in the center of the map.
Alternatively, you can left-click on the map and move it to the location you want.
3. Adjust the **Zoom Level**, **Tilt** and **Roll** values to change the viewpoint of the map, if desired.
4. Select the **Add Camera Key Frame** button.



Add Camera Key Frame

A camera Key Frame is added to the timeline.

5. Drag the slider in the timeline to a different position that will be the next location in the animation.
Alternatively, you can select any point in the timeline to move the slider to that point or enter the position in the frame counter to the left of the timeline.



Frame Counter

6. Repeat steps 2 to 4 for each location you want to show.
7. Select the green **Play Animation** button in the **Animation Control** toolbar to view your animation.



Play Animation

8. When you are satisfied with the animation, save it with the scene (**File > Save**).

Creating a Drawing Visibility Animation

You can make drawings appear and/or disappear at specific points in an animation. Some of the common applications for this type of animation are to coordinate the appearance or disappearance of a drawing with other objects or events. For example, a drawing might appear or disappear when a specific zoom level or location is reached in an animation.

To create a drawing visibility animation:

1. With the map positioned where you want to start your animation and the timeline slider at **0**, select the **Add Camera Key Frame** button to add a starting camera Key Frame.
2. Drag the timeline slider to the point in the timeline where you want a drawing to appear.

Alternatively, you can select any point in the timeline to move the slider to that point or enter the position in the frame counter to the left of the timeline.



Frame Counter

3. Add a drawing to your scene and keep it selected.
4. In the **Drawing Editor**, in the **General** section, select the **Visible** checkbox (or clear the checkbox if you want the drawing to disappear) and select the Key Frame button beside the checkbox to Key Frame the visibility.
5. Select the **Add Drawing Key Frame** button.
6. Repeat steps 2 to 5 for each additional drawing you want to include in your scene.
7. Select the green **Play Animation** button in the **Animation Control** toolbar to view your animation.



Play Animation

8. When you are satisfied with the animation, save it with the scene (**File > Save**).

Creating a Line Progression Animation

You can use a line animation to show the progression of a route across a map, for example the route to take to get from point A to point B, or the route that will be followed for a race.

To animate a line:

1. Add a line drawing to your scene to mark a route. See [Adding and Editing Line Drawings](#)¹⁹⁶ for instructions on adding a line drawing.
2. On the **Canvas**, select the line drawing you want to animate.
3. In the **Maximum Frame** field to the right of the timeline slider enter the number of frames you want to have in your animation.

The timeline will display up to 9999 frames. The speed of the animation playback depends on the screen resolution selected in **File > Preferences > Output**. For example, HD 1080 50i will play 25 frames per second and HD 1080 60p will play 60 frames per second.

4. Move the timeline slider to the last frame.

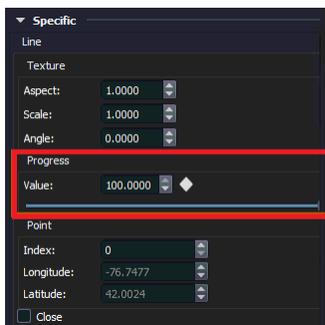
Alternatively, you can select any point in the timeline to move the slider to that point or enter the position in the frame counter to the left of the timeline.



Frame Counter

5. In the **Drawing Editor**, in the **Progress** section, select the Key Frame button beside the **Value** field. This creates a Key Frame on the timeline at the slider position.
6. Select the **Close** checkbox to connect and close both ends of the **Line** animation.

Leave unchecked if you want to have an open ended Line animation.



Drawing Editor - Progress Section

7. Move the timeline slider to the left to the **0** position. This marks the point on the timeline as the ending Key Frame (100.0000) of the animation.
8. In the **Drawing Editor**, in the **Progress** section, move the **Value** slider all the way to the left to the **0** position and select the Key Frame button beside the **Value** field.

This creates the starting Key Frame of the animation.

If your animation covers a large area of the map and you want the map to move with the line, in the **Drawing Editor**, in the **Misc** section, select the **Lock Camera** checkbox.

9. Select the green **Play Animation** button in the **Animation Control** toolbar to view your animation.



Play Animation

10. When you are satisfied with the animation, save it with the scene (**File > Save**).

Creating a Zoom Animation

You can use a zoom animation to draw the viewer's attention to a specific location, beginning from a distant camera view and zooming in to a close-up view or starting close-up and zooming out.

To animate a zoom into a location:

1. In the **Maximum Frame** field to the right of the timeline slider enter the number of frames you want to have in your animation.

The timeline will display up to 9999 frames. The speed of the animation playback depends on the video format and on the screen resolution selected in **File > Preferences > Output**. For example, HD 1080 50i will play 25 frames per second and HD 1080 60p will play 60 frames per second.

2. In the **Search Editor**, in the **Location** field, enter the name of the city, the area of the city or the landmark that you want to zoom into and select **Search**.

The map on the **Canvas** will move to the specified location.

3. In the camera parameters beneath the **Canvas**, adjust the **Zoom Level** parameter to a level that gives you the desired starting view of the country or area of your location.

Alternatively, you can scroll with your mouse to the desired zoom level.

4. With the timeline slider at the beginning of the timeline, select the **Add Camera Key Frame** button.



Add Camera Key Frame

5. Drag the timeline slider to the right as many frames as you want the animation to take to zoom into or out of the location.

Alternatively, you can select any point in the timeline to move the slider to that point or enter the position in the frame counter to the left of the timeline.



Frame Counter

6. Select the **Add Camera Key Frame** button.
7. Adjust the **Zoom Level** parameter to a level that gives you the desired final view of the target location and add another camera Key Frame at this position.

The animation will automatically move through the levels to the final zoom level.

7. Select the green **Play Animation** button in the **Animation Control** toolbar to view your animation.



Play Animation

8. When you are satisfied with the animation, save it with the scene (**File > Save**).

Creating a Shape Animation

Use a shape animation to draw the viewer's attention to specific related locations, by having each location appear in the scene individually. An example would be a map showing election results. Each location is represented by a shape that appears at a specific point in the animation.

To animate a shape:

1. In the **Maximum Frame** field to the right of the timeline slider, enter the number of frames you want to have in your animation.

The timeline will display up to 9999 frames. The speed of the animation playback depends on the screen resolution selected in **File > Preferences > Output**. For example, HD 1080 50i will play 25 frames per second and HD 1080 60p will play 60 frames per second.

2. With the map positioned where you want to create your animation and the timeline slider at the beginning of the timeline, select the **Add Camera Key Frame** button.
3. Drag the timeline slider to the point on the timeline where you want to display the shape.

Alternatively, you can select any point on the timeline to move the slider to that point or enter the position in the frame counter to the left of the timeline.



Frame Counter

4. In the [Search Editor](#), in the **Location** field, enter the name of the geographic location where the shape is to be added.

Ensure that the **Go to Result** is selected and then select **Search**.

5. In the **Search Related Shapes** section, double-click the shape that is to be moved.

The shape appears on the map, using the default shape style defined in the **Shape Editor**.

6. In the [Shape Editor](#), select the new shape you just added from the list and in the **Properties** section, make sure the **Visible** checkbox is selected and select the Key Frame button beside the **Visible** checkbox to add a Key Frame.

This will make the shape become visible at this point in the timeline.

7. Select the **Add Camera Key Frame** button.

To add additional shapes to the scene:

- Repeat steps 3 to 7 to add additional shapes to the scene.

To view animation playback and save:

1. Select the green **Play Animation** button in the **Animation Control** toolbar to view your animation.



Play Animation

2. When you are satisfied with the animation, save it with the scene (**File > Save**).

Saving a Scene

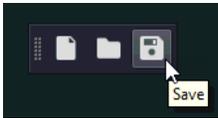
Saving a scene preserves all details, including camera movements and drawings, along with their references in the database. Saved files are stored with the *.wnm extension.

Scenes can be reopened in XPression Maps. When a scene is loaded, it uses references from the drawing database to recreate the drawings. Any changes made to the drawings in the database will automatically update all scenes that use them—unless the scene has been exported. See [Exporting a Scene](#)^[313] for more information.

- ★ If **Compact Scene on Save** is selected in [Preferences > Output](#)^[37], all unused styles in the map style list and in the shape style list are removed.

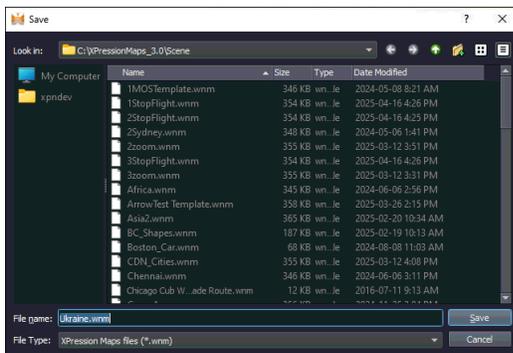
To save a new scene:

1. Select **File > Save** in the menu bar or select the **Save** button in the toolbar.



XPression Maps Toolbar - Save

The file browser opens.

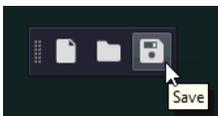


Save File

2. Select a folder or destination where the scene is to be saved.
3. In the **File name** field, enter a name for the scene.
4. Select **Save**.

To save an existing scene with a new name:

1. Select **File > Save As** in the menu bar or select the **Save** button in the toolbar.



XPression Maps Toolbar - Save

2. In the **Save As** window, in the **File** name field, enter a new name for the scene and select **Save**.

Exporting a Scene

Exporting a scene saves both the scene itself and all associated drawings, ensuring it can be opened in any XPression Maps application—regardless of changes made to the original drawings in the database. When an exported scene is opened, the included drawings appear in the **Drawing Toolbox** under the **Imported Scene Drawings** section, where they can be reused within the scene. Exported scenes are saved with the **.wnm_exp** file extension. If the scene is edited and saved again, it will automatically retain this exported format.

- ★ If **Compact Scene** on save is selected in [Preferences > Output](#)³⁷, all unused styles in the map style list and in the shape style list are removed.

The following topics are discussed in this section:

[Exporting a Scene](#)³¹³

[Opening an Exported Scene](#)³¹³

[Using an Imported Scene Drawing](#)³¹³

To export a scene:

1. Select **File > Export** in the menu bar.
The file browser opens.
2. Select a folder or destination where the scene is to be exported.
3. Select **Save**.

The file browser closes and the scene is exported to the selected location, with the extension **.wnm_exp**.

- ★ Export the scene for use in different XPression Maps applications and for archiving a scene. This ensures that changes in the drawing database will not affect the scene.

To open an exported scene:

1. Select **File > Open**.
2. In the file browser, from the **File Type** drop-down, select **XPression Maps export files (*.wnm_exp)**.

The browser will be populated with a list of exported files.

3. From the list of files, select the exported file you want and select **Open**.

To use imported scene drawings:

1. Open an exported scene.
2. In the **Drawing Toolbox** in the **Imported Scene Drawings** section, select a drawing and then select the scene on the **Canvas** to add the drawing to the scene.

The **Imported Scene Drawings** section is hidden, unless there is an exported scene open on the **Canvas**.

Creating and Managing Scene Templates

As part of the [XPression Maps MOS workflow](#)³¹⁵, graphic designers create **scenes** that define key design elements by assigning a map style and an initial camera view. If the scene template is intended to be used to create animated map graphics, then they may also include one or more flight points to produce an initial flight animation. These scenes become **scene templates** when they are added to a **template group** in the **Scene Templates** editor, where designers also include pre-approved location labels, drawings, shape styles, and user predefined objects. All scene templates and associated objects are centrally stored on the **XPression Maps server** so that MOS newsroom users can remotely access them to create customized scenes using the **XPression Maps HTML5 Client**.

The following topics are discussed in this section:

[Procedural Overview for Creating Scene Templates](#)³¹⁵

[Adding and Managing Flights Points](#)³¹⁷

[Managing Scene Templates Groups](#)³²²

[Loading and Editing a Scene Template](#)³⁴²

[Editing Scenes Created in the HTML5 Client](#)³⁴³

Procedural Overview for Creating Scene Templates

Given the versatility of XPression Maps software and the distinct nature of your creative and business requirements, defining a standard usage procedure can be challenging. However, the following procedures provide basic guidance for how to create scene templates for still or animated map graphics.

[Creating a Scene Template for a Still Map Graphic](#) ³¹⁵

[Creating a Scene Template for an Animated Flight Map Graphic](#) ³¹⁶

To create a scene template for a still map graphic:

1. Launch **XPression Maps** from the desktop icon and select **File > New** to open a new scene.
2. In the **Map Styles** panel, from the **Styles** drop-down, select a map style.
If the selection of map styles does not meet your needs, edit or create a new map style.
3. Position the map on the **Canvas** to display the required location and camera view.
4. (Optional) Add drawings, shapes, and other objects to the scene.
5. Select **File > Save** to save the scene to your scenes folder.
6. Select **Output > Manage Templates** to open the **Scene Templates** editor and add the scene to a group to create a scene template.
7. Configure the template's details (the **Still As Default** checkbox must be selected) and select **Update**.
8. Add the drawings, shapes, labels, and user predefined objects that you want to have accessible in the **HTML5 Client** to the corresponding tabs.

See the following topics for complete instructions:

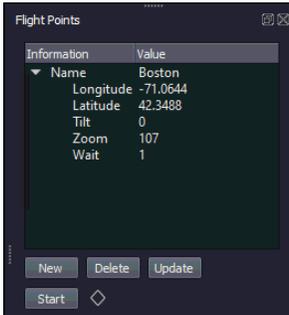
- [Adding Locations Labels to a Scene Templates Group](#) ³³¹
 - [Adding Drawings to a Scene Templates Group](#) ³³³
 - [Adding Shape Styles to a Scene Templates Group](#) ³³⁵
 - [Adding User Predefined Objects to a Scene Templates Group](#) ³³⁷
9. When you are satisfied with your template, select **Done** to close the **Scene Templates** editor.

To create a scene template for a flight animation map graphic:

1. Launch **XPression Maps** from the desktop icon and select **File > New** to open a new scene.
2. In the **Map Styles** panel, from the **Styles** drop-down, select a map style.
If the selection of map styles does not meet your needs, edit or create a new map style.
3. Create Key Frames for the animation by adding flight points to the **Flight Points** editor in the desired playback order (e.g., starting, next, ending).
 - a. Position the map on the **Canvas** to display the required location and camera view for the starting flight point.
Alternatively, in the Search Editor, in the Location field, enter the location for the first flight point.
 - b. (Optional) Add drawings, shapes, and other objects to the map.
 - c. In the **Flight Points** editor, select **New** and enter a name for the flight point.
 - d. Repeat steps **a** to **c** above for each flight point.Each new flight point is appended to the end of the list in the **Flight Points** editor.
4. Preview the playback of the animation on the **Canvas** by selecting the **Start** button in the **Flight Points** editor.
5. Select **File > Save** to save the scene to your scenes folder.
6. Select **Output > Manage Templates** to open the **Scene Templates** editor and add the scene to a group to create a scene template.
7. Configure the template's details (the **Still As Default** checkbox must be cleared) and select **Update**.
8. Add the drawings, shapes, labels, and user predefined objects that you want to have accessible in the **HTML5 Client** to the corresponding tabs.
See the following topics for complete instructions:
 - [Adding Location Labels to a Scene Templates Group](#)^[331]
 - [Adding Drawings to a Scene Templates Group](#)^[333]
 - [Adding Shape Styles to a Scene Templates Group](#)^[335]
 - [Adding User Predefined Objects to a Scene Templates Group](#)^[337]
9. When you are satisfied with your template, select **Done** to close the **Scene Templates** editor.

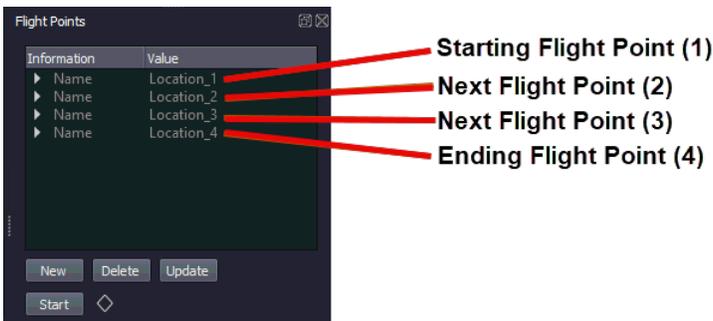
Adding and Managing Flight Points

Flight points are animation Key Frames that use the **Longitude**, **Latitude**, **Tilt**, **Zoom**, and **Wait** values to define a location and camera view. Typically, graphic designers build a scene template by adding a starting flight point to the **Flight Points** editor, which defines the initial map location and camera view. Additional flight points are then added to **Flight Points** editor to define the number of transitions and destinations in the flight animation. When newsroom users want to create story-specific map animations, they use the **HTML5 Client** to access the scene template and are permitted to add, change, or remove the flight points defined in the scene template.



Flight Points Editor - Starting Flight Point

When multiple flight points are added to the **Flight Points** editor, the first flight point in the list is automatically assigned as the starting flight point and the remaining flight points are assigned to the scene template and played back in the order in which they appear in this list.



Example - Order of Flight Points in the Flight Points Editor

The following topics are discussed in this section:

[Adding a Flight Point](#) ³¹⁸

[Editing a Flight Point](#) ³¹⁹

[Deleting a Flight Point](#) ³²⁰

[Previewing the Flight Points Animation](#) ³²¹

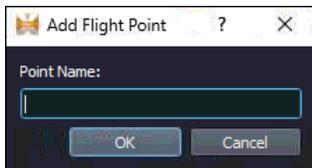
Adding a Flight Point

A new flight point captures the current map location and camera view parameters values from the **Canvas**. Once you provide a name for the flight point, it is appended to the bottom of the list in the **Flight Point** editor. Expanding the flight point's name displays the flight point's camera parameters. These parameters are read-only, except for the **Wait** parameter. See [Editing a Flight Point](#)^[319] for instructions on how to change a flight point's parameters.

★ The order of the flight points listed in the **Flight Point** editor determines the order of execution during playback (e.g., start, next, end). See [Managing Flight Points](#)^[317] for more information.

To add a new flight point:

1. Position the map on the **Canvas** to the location where you want the flight point to begin and adjust the camera view parameters (**Zoom Level**, **Tilt** and **Roll**), if necessary.
2. In the **Flight Points** editor, select **New** to create a flight point with the displayed camera values.
3. In the **Add Flight Point** dialog, enter the name of the flight point and select **OK**.



Add Flight Point

The flight point is appended to the list in the **Flight Points** editor.

4. Expand the flight point name to see the camera parameters for the point.

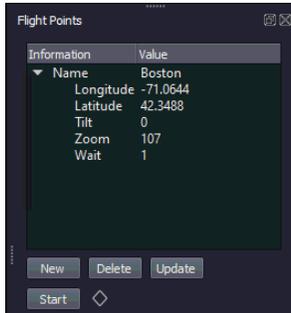


Flight Points editor - Starting Flight Point Added

5. If you want the animation to pause for a duration at the start flight point before continuing to the next flight point, double-click the **Wait** value and enter a new time in seconds.

Editing a Flight Point

When you select a flight point in the **Flight Point** editor, the map on the **Canvas** immediately updates to its set location and camera view. Expanding the flight point's name in the **Flight Points** editor reveals its current values. These parameters are read-only, except for the **Wait** parameter, which can be directly edited to change the duration of the pause at the start of a flight point before continuing to the next flight point.



Flight Points Editor - Flight Point Parameters

To edit a flight point's location and camera view:

1. In the **Flight Points** editor, select the flight point you want to edit.
2. On the **Canvas**, reposition the map and/or edit the camera view parameters to the desired location and perspective.
3. Press **Update** to save the new flight point values to the **Flight Point** editor.

To edit a flight point's Wait value:

1. In the **Flight Points** editor, expand the name of the flight point to reveal its parameters.
2. Double-click the value for the **Wait** parameter.
3. Type a new time in seconds that the animation will pause at the start of the flight point.
4. Press **Enter**.

Deleting a Flight Point

A flight point that is no longer needed can be deleted from the **Flight Points** editor.

★ Since the order of the flight points in the **Flight Point** editor determines the order of execution during playback (e.g. start, next, end) and flight points cannot be reordered directly, we recommend deleting flight points from the **Flight Point** editor and then adding new flight points in the required order. See [Managing Flight Points](#) for more information.

To delete a flight point:

1. In the **Flight Points** editor, select the flight point.
2. Press **Delete**.

Previewing the Flight Points Animation

Once flight points have been added to the **Flight Points** editor, a preview of the animation's playback can be viewed on the **Canvas**.

To preview the playback of the flight animation:

1. In the **Flight Points** editor, select the first flight point.

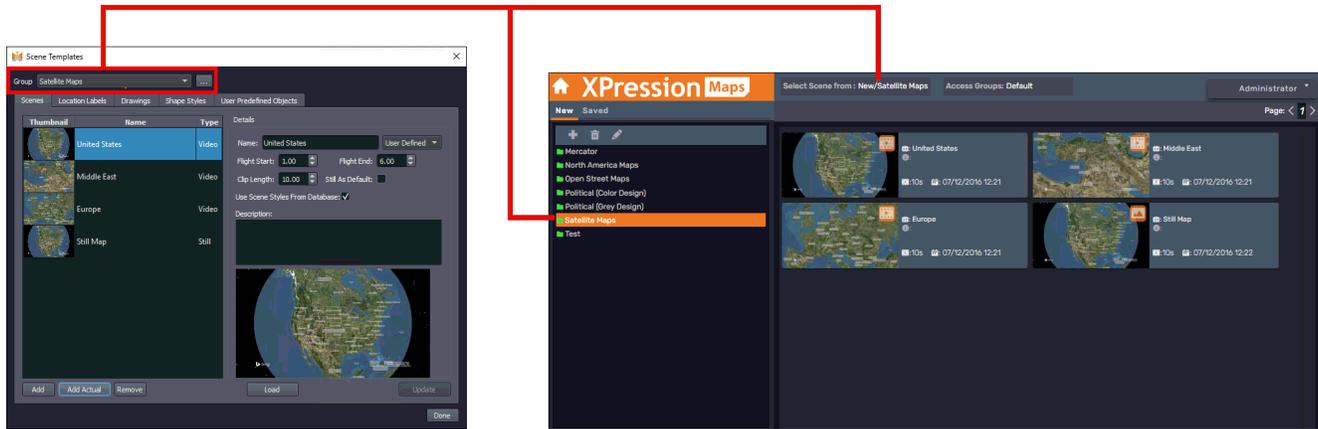
The map on the **Canvas** immediately updates to its set location and camera view.

2. Select **Start**.

The map on the **Canvas** transitions from one flight point to another using to the list order and applying any **Wait** durations.

Managing Scene Templates Groups

Graphic designers use the **Scene Templates** editor to create **templates groups**, which are folders that store scene templates and their associated objects in an organized file structure. While this file structure is built and used in the XPression Maps software, it is also replicated and used to provide easy access to scene templates in the **HTML5 Client**.



Scene Templates Editor and HTML5 Client

To create a scene template, add the scene to a group's **Scene** page and configure its identity and attributes in the **Details** section. The **Scene Templates** editor also contains tabbed pages for adding location labels, drawings, shapes and user predefined objects to a template group. These objects are also made available to MOS newsroom users in the **HTML5 Client**.

Finally, the **Scene Templates** editor provides a way to load a scene template back onto the **XPression Maps** application's **Canvas**, where the scene's flight point parameters, map style, and included objects can be edited.

The following topics are discussed in this section:

[Adding, Renaming, and Deleting Scene Templates Groups](#) ³²³

[Adding a Scene Template to a Group](#) ³²⁵

[Editing Scene Template Details](#) ³²⁸

[Deleting a Scene Template](#) ³³⁰

[Adding Location Labels to a Scene Templates Group](#) ³³¹

[Adding Drawings to a Scene Templates Group](#) ³³³

[Adding Shape Styles to a Scene Templates Group](#) ³³⁵

[Adding User Predefined Objects to a Scene Templates Group](#) ³³⁷

Adding, Renaming, and Deleting Scene Templates Groups

A template group is a user-defined folder that allows graphic designers to organize scene templates and their associated object files into a logical file structure. Use the **Scene Templates** editor to add, rename and delete template groups.

The following topics are discussed in this section:

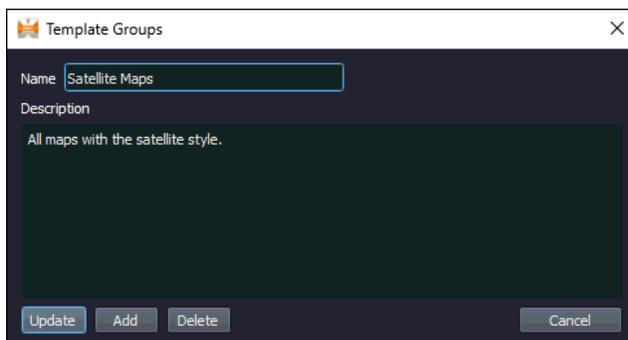
[Adding a New Group](#) ³²³

[Renaming a Group](#) ³²³

[Deleting a Group](#) ³²⁴

To add a scene template group:

1. From the menu bar, select **Output > Manage Templates** to open the **Scene Templates** editor.
2. In the **Scene Templates** editor, select the **Browse** button (⋮) beside the **Group** drop-down.
The **Template Groups** dialog opens.
3. In the **Template Groups** dialog, in the **Name** field, enter a name for the new template group.
4. In the **Description** field, enter a description of the type of maps that will be saved in this group.
5. Select **Add**.



Template Groups Dialog

6. Select **Done** to close the **Scene Templates** editor.

To rename a scene template group:

1. From the menu bar, select **Output > Manage Templates** to open the **Scene Templates** editor.
2. From the **Group** drop-down, select the group you want to edit.
3. Select the **Browse** button (⋮) beside the **Group** drop-down to open the **Template Groups** dialog.
4. In the **Template Groups** dialog, enter a new name for the group.
5. Select **Update**.
6. Select **Done** to close the **Scene Templates** editor.

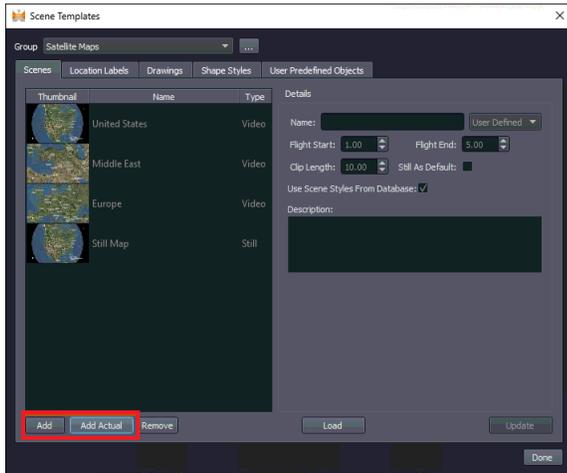
To delete a scene template group:

1. From the menu bar, select **Output > Manage Templates** to open the **Scene Templates** editor.
2. In the **Scene Templates** editor, from the **Group** drop-down, select the scene template group you want to delete.
3. Select the **Browse** button () beside the **Group** drop-down to open the **Template Groups** dialog.
4. In the **Template Groups** dialog, select **Delete**.
5. In the **Delete Group** confirmation dialog, select **Yes** to delete the group and all templates in it.
6. Select **Done** to close the **Scene Templates** editor.

Adding a Scene Template to a Group

The **Scene Templates** editor provides two ways to add a new scene template to a group:

- **Add** ³²⁵ - Uses a scene file (.wmn) that was previously saved to the database to create and add a new scene template to the selected group.
- **Add Actual** ³²⁷ - Uses the active scene from the **Canvas** to create and add a new scene template to the selected group.



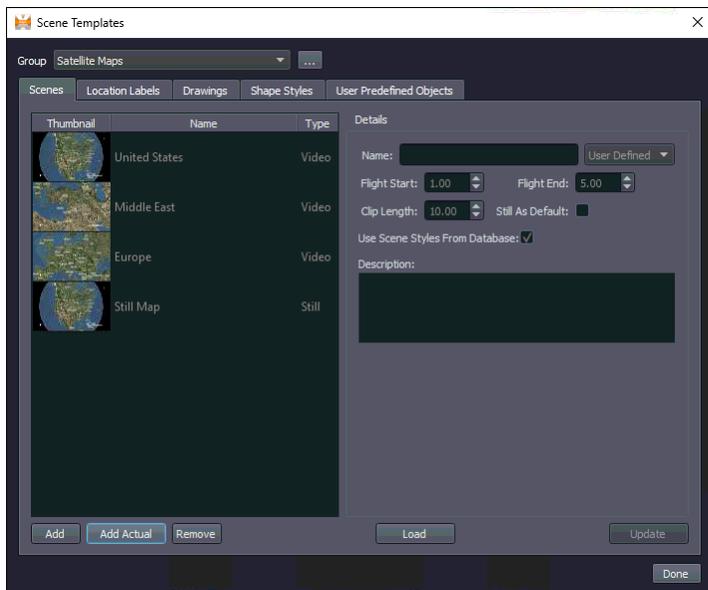
Scene Templates Editor - Adding a Scene

To create and add a scene template to a group based on a previously saved scene file:

1. Build a scene that includes the required elements and characteristics of a scene template (map style, camera view parameters, and flight points, etc.) and save the scene as a .wmn file.

See [Saving a Scene](#) ³¹².

2. From the menu bar, select **Output > Manage Templates** to open the **Scene Templates** editor.

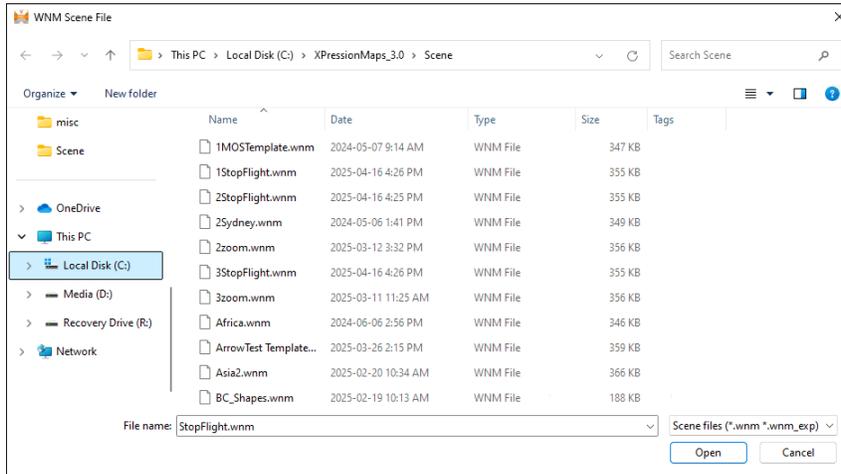


Scene Templates Editor

3. In the **Scene Templates** editor, from the **Group** drop-down, select the group to which you want to add a new scene template.

4. Select the **Scene** tab, and then select the **Add** button to navigate to a saved scene.

The **WNM Scene File** browser opens.



WNM Scene File Selection Dialog

5. In the **WNM Scene File** browser, navigate to the folder where you have saved your scenes.

By default, the **WNM Scene File** window opens to the **C:\XPression Maps\Scene** folder, where scenes are saved. If you are saving your scenes to a different folder, navigate to that location.

6. Select the scene from which you want to create a template and select **Open**.

The scene is added to the top of the list in the **Scenes** tab and a thumbnail is displayed, along with the name and the **Type**.

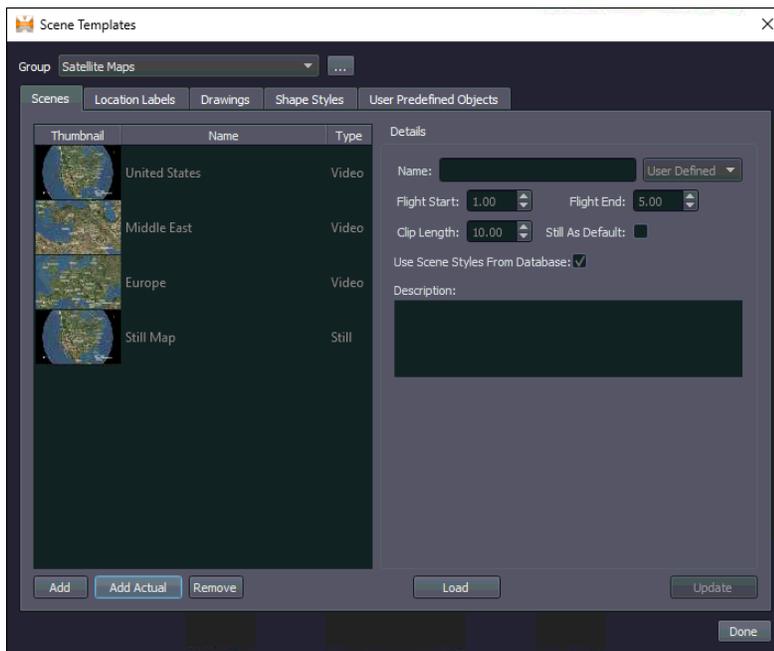
By default, the scene is added as a **Video** type. To switch to a **Still** type, in the **Details** section to the right of the **Scenes** list, select the **Still As Default** checkbox and select **Update**.

You can reorder the list by selecting and dragging an item to another spot in the list.

7. Now you can edit the scene template details, add location labels, drawings, shapes styles, or user predefined objects to the template group or select **Done** to close the **Scene Templates** editor.

To create and add a scene template to a group based on the scene that is currently open on the Canvas:

1. Build a scene that includes the required elements and characteristics of a scene template (map style, camera view parameters, drawings, flight points, etc.).
2. From the menu bar, select **Output > Manage Templates** to open the **Scene Templates** editor.

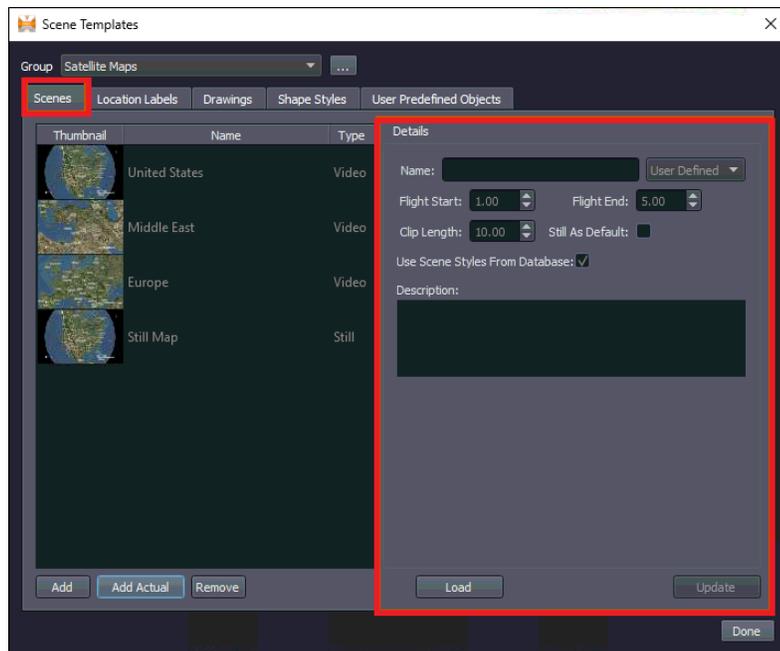


Scene Templates Editor

3. In the **Scene Templates** editor, from the **Group** drop-down, select the group to which you want to add a new scene template.
4. Select the **Scene** tab, and then select the **Add Actual** button to add the currently displayed scene.
The scene is added to the top of the list in the **Scenes** tab and a thumbnail is displayed, along with a default name and the default **Type**.
You can reorder the list by selecting and dragging an item to another spot in the list.
5. In the **Details** section, enter a name for the scene template and configure the other parameters.
By default, the scene is added as a **Video** type. To switch to a **Still** type, in the **Details** section to the right of the **Scenes** list, select the **Still As Default** checkbox and select **Update**.
6. Now you can add location labels, drawings, shapes styles, or user predefined objects to the template group or select **Done** to close the **Scene Templates** editor.

Editing Scene Template Details

A scene template is created by adding a scene to the **Scene Templates** editor and configuring its parameters, which appear in the **Details** section of the **Scene** tab. These details, which define the template's identity and attributes, can be edited anytime.



Scene Templates Editor - Details

To edit the scene template details:

1. From the menu bar, select **Output > Manage Templates** to open the **Scene Templates** editor.
2. On the **Scenes** tab, select the scene template you want to edit.
3. In the **Details** section, edit the information as necessary:
 - In the **Name** field, enter a new name for the scene.
 - From the drop-down beside the **Name** field, select one of the following flight types:
 - **User Defined** - The template is animated. It must have a starting flight point. A flight point is automatically created if one does not exist. The duration of the flight is determined by the **Flight End** parameter and played out accordingly in the **HTML5 Client** application, when this template is used.
 - **Automatic** - The template is animated. It must have a starting flight point. A flight point is automatically created if one does not exist. The duration of the flight is the shortest possible time that the application can reasonably complete the flight during playback. The **Flight Start** and **Clip Length** parameters are respected, allowing for a set time for a static image to be displayed before and after the flight.
 - In the **Flight Start** field, enter a value or use the arrows to select a time, in seconds that the clip will wait before the flight starts. By default this value is set to 1.00.
 - In the **Max Flight End** field, enter a value or use the arrows to select the point in the clip by which the flight needs to end.
 - In the **Clip Length** field, enter a value or use the arrows to select the length of the clip, in seconds. The **Clip Length** value needs to be the same as or greater than the **Flight End** value.

- Select the **Still As Default** checkbox to create a still image in the XPression Maps **HTML5 Client** application.

OR

Deselect the **Still As Default** checkbox, to create a video (clip) in the XPression Maps **HTML5 Client** application.

In **Automatic** videos, the animation will have the duration set in the **Clip Length** parameter. The flight to the location defined in the **Client** app will start after the number of seconds set in the **Flight Start** parameter and will end at latest after the number of seconds set in the **Max. Flight End** parameter. If the distance between the start and end flight points is short, the flight may finish earlier. The flight end location will be displayed for the duration set in the **Clip Length** parameter.

In **User Defined** videos, the animation will have the duration set in the **Clip Length** parameter. The flight to the location defined in the **Client** app will start after the number of seconds set in the **Flight Start** parameter and will end after the number of seconds set in the **Flight End** parameter. The flight end location will be displayed for the duration set in the **Clip Length** parameter.

4. Select the **Use Scene Styles from Database** checkbox, if you want the map style that's currently saved in the database to be used, instead of the map style in the selected scene.

This parameter is only available if you have selected the **Load Scene** using map style from **Map Style Database** checkbox in **File > Preferences > Output**.

5. In the **Description** field, enter a description of the template.
6. Select **Update** to save the changes.
7. Select **Done** to close the **Scene Templates** editor.

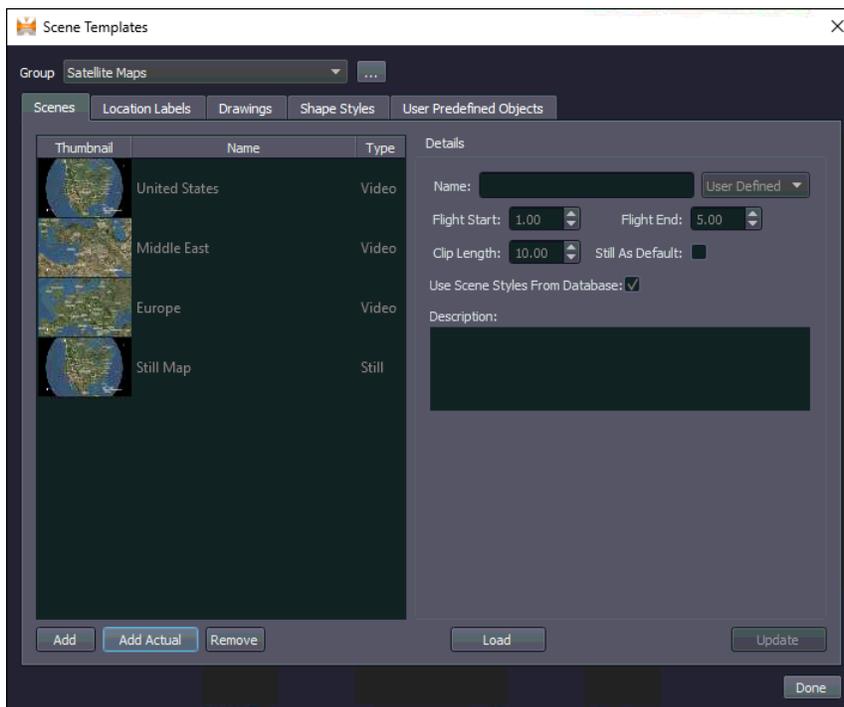
Deleting a Scene Template

As part of good resource management, you may want to delete a scene template that is no longer required. This removes the scene template from both the group in the **Scene Templates** editor, as well as the **HTML5 Client**.

★ Deleting a scene template does not delete the scene file (.wmn) from which the scene template originated.

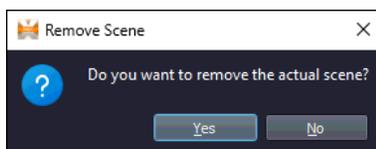
To delete a scene:

1. From the menu bar, select **Output > Manage Templates** to open the **Scene Templates** editor.
2. From the **Group** drop-down, select the group that contains the scene template you want to delete.
3. In the **Scenes** tab of the selected group, select the scene template you want to delete.



Scene Templates - Scenes Tab

4. Select **Remove** and in the **Remove Scene** confirmation dialog, select **Yes**.

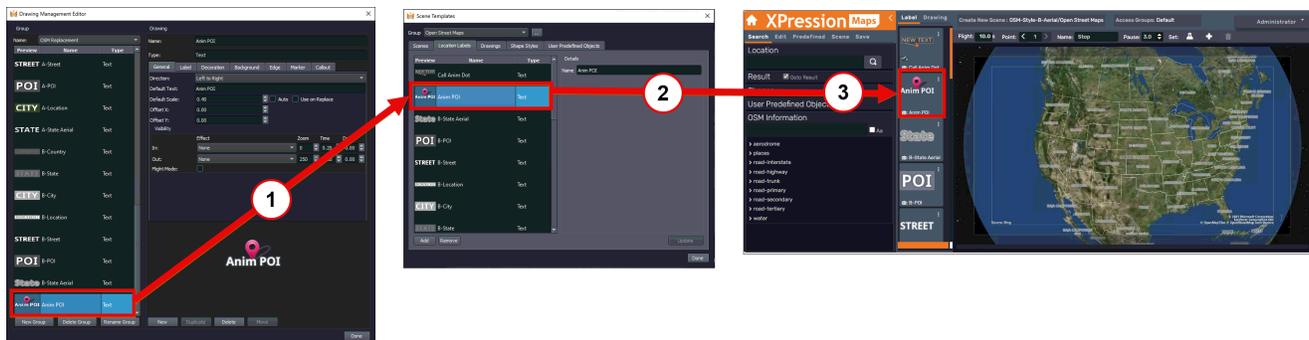


Remove Scene Confirmation Dialog

5. Select **Done** to close the **Scene Templates** editor.

Adding Location Labels to a Scene Templates Group

A **Location Label** is a text drawing—optionally accompanied by a marker image—that already exists in the **Drawing Management Editor** (1). It can be added to a scene template group in the **Scene Templates** editor (2), enabling newsroom users to access it through the **HTML5 Client** (3) and include it in story-specific map scenes to identify or label a location.



Scene Templates Editor - Adding Location Labels to a Scene Templates Group

Text drawings are added to the **Location Labels** tab in the **Scene Templates** editor, where they are listed by preview image, name, and type. If a drawing's preview image includes an airplane icon , it indicates that the drawing's **Flight Mode** property is enabled, which allows the drawing's visibility to be controlled at the flight point level when creating flight map animations (see [Adding, Editing or Deleting Flight Points](#))³⁶⁶.

The following topics are discussed in this section:

[Adding a New Location Label to a Scene Template Group](#)³³¹

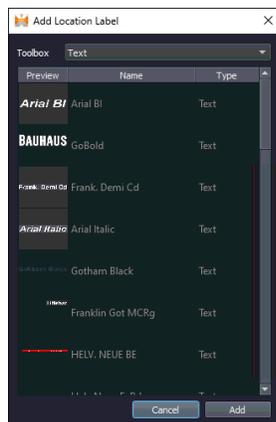
[Renaming a Location Label](#)³³²

[Deleting a Location Label from a Scene Template Group](#)³³²

To add a new location label to a scene templates group:

1. From the menu bar, select **Output > Manage Templates** to open the **Scene Templates** editor.
2. From the **Group** drop-down, select the group to which you want to add a location label.
3. In the **Location Labels** tab, select the **Add** button.

The **Add Location Label** editor opens.



Add Location Label Editor

4. In the **Add Location Label** editor, select the **Toolbox** drop-down and select the group that contains the drawing you want to use as a location label.

Typically, text, icon and dynamic data drawings are used for location labels.

5. From the **Location Label** list, select the label (or hold **Shift** and select multiple labels) that you want to add to the group and select **Add**.

The new location label drawing is added to the list in the **Location Labels** tab and a thumbnail is displayed, along with the **name** and **Type**. This label will now be available for all scene templates in the current group.

You can reorder the list by selecting and dragging an item to another spot in the list.

6. Select **Done** to close the **Scene Templates** editor.

To rename the location label in a scene templates group:

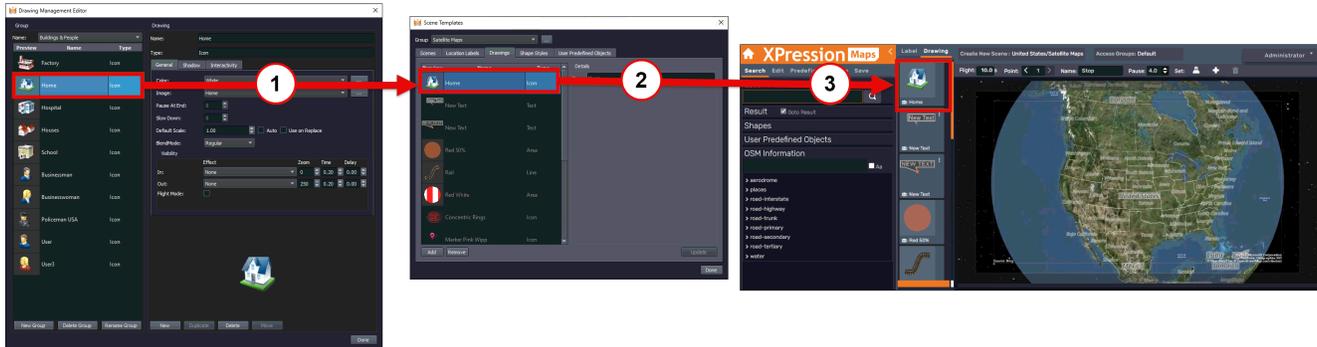
1. From the menu bar, select **Output > Manage Templates** to open the **Scene Templates** editor.
2. In the **Scene Templates** editor, from the **Group** drop-down, select the group that contains the location label you want to edit.
3. In the **Location Labels** tab, select the location label you want to edit.
4. In the **Details** section, edit the name or enter a new name for the location label.
5. Select **Update** to save the changes.
6. Select **Done** to close the **Scene Templates** editor.

To delete a location label from a scene template group:

1. From the menu bar, select **Output > Manage Templates** to open the **Scene Templates** editor.
2. From the **Group** drop-down, select the group that contains the location label you want to delete.
3. In the **Location Labels** tab, select the location label you want to delete.
4. Select **Remove** and in the **Remove Location Label** confirmation dialog, select **Yes**.
5. Select **Done** to close the **Scene Templates** editor.

Adding Drawings to a Scene Templates Group

A drawing that already exists in the **Drawing Management Editor** (1) can be added to a scene template group in the **Scene Templates** editor (2). This allows newsroom users to access it through the **HTML5 Client** (3) and include it in story-specific map scenes.



Scene Templates Editor - Adding Drawings to a Scene Templates Group

Drawings are added to the **Drawings** tab in the **Scene Templates** editor, where they are listed by preview image, name, and type. If a drawing's preview image includes an airplane icon , it indicates that the drawing's **Flight Mode** property is enabled, which allows the drawing's visibility to be controlled at the flight point level when creating flight map animations (see [Adding, Editing or Deleting Flight Points](#)) ³⁶⁶.

The topics discussed in this section are:

[Adding a Drawing to a Scene Template Group](#) ³³³

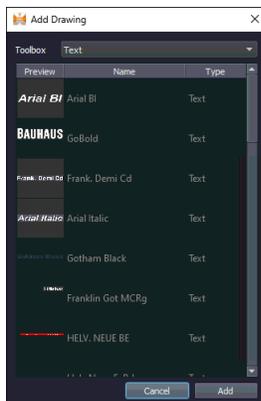
[Renaming a Drawing](#) ³³⁴

[Deleting a Drawing from a Scene Template Group](#) ³³⁴

To add a new drawing to a scene templates group:

1. From the menu bar, select **Output > Manage Templates** to open the **Scene Templates** editor.
2. From the **Group** drop-down, select the group to which you want to add a drawing.
3. In the **Drawings** tab, select the **Add** button.

The **Add Drawing** editor opens.



Add Drawing Editor

4. Select the **Toolbox** drop-down and select a drawing group.

- From the **Drawing** list, select the drawing (or hold **Shift** and select multiple drawings) that you want to add to the group and select **Add**.

The new drawing is added to the list in the **Drawings** tab and a thumbnail is displayed, along with the **name** and **Type**. This drawing will now be available for all scene templates in the current group.

You can reorder the list by selecting and dragging an item to another spot in the list.

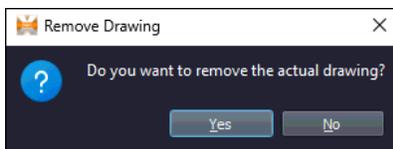
- Select **Done** to close the **Scene Templates** editor.

To rename a drawing in a scene templates group:

- From the menu bar, select **Output > Manage Templates** to open the **Scene Templates** editor.
- From the **Group** drop-down, select the group that contains the drawing you want to edit.
- In the **Drawings** tab, select the drawing you want to edit.
- In the **Details** section, in the **Name** field, edit the name or enter a new name for the drawing.
- Select **Update** to save the changes.
- Select **Done** to close the **Scene Templates** editor.

To delete a drawing from a scene templates group:

- From the menu bar, select **Output > Manage Templates** to open the **Scene Templates** editor.
- From the **Group** drop-down, select the group that contains the drawing you want to delete.
- In the **Drawings** tab, select the drawing you want to delete.
- Select **Remove** and in the **Remove Drawing** confirmation dialog, select **Yes**.

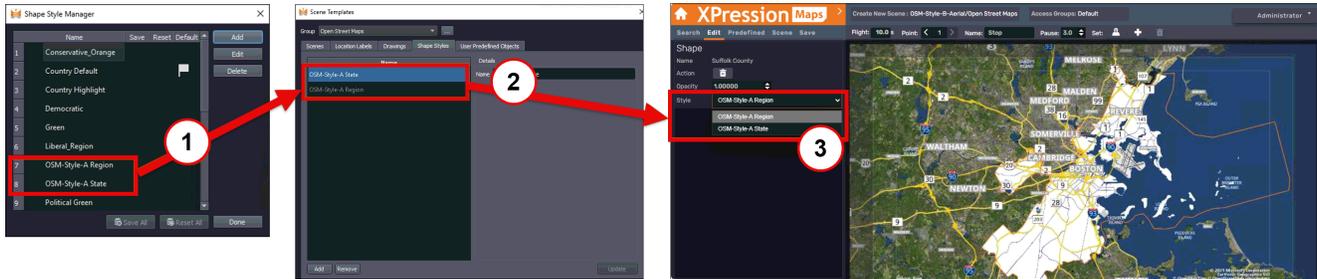


Remove Drawing Confirmation Dialog

- Select **Done** to close the **Scene Templates** editor.

Adding Shape Styles to a Scene Template Group

A shape style that already exists in the **Shape Styles Manager** (1) can be added to a scene template group in the **Scene Templates** editor (2). This allows newsroom users to access it through the **HTML5 Client** (3) and include it in story-specific map scenes.



Scene Templates Editor - Adding Shape Styles to a Scene Templates Group

The following topics are discussed in this section:

[Adding a Shape Style to a Scene Template Group](#) ³³⁵

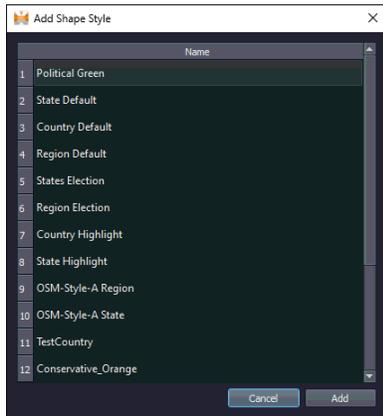
[Renaming a Shape Style](#) ³³⁶

[Deleting a Shape Styles from a Scene Template Group](#) ³³⁶

To add a new shape style to a Scene Template Group:

1. From the menu bar, select **Output > Manage Templates** to open the **Scene Templates** editor.
2. From the **Group** drop-down, select the group to which you want to add a shape style.
3. In the **Shape Styles** tab, select the **Add** button.

The **Add Shape Style** editor opens.



Add Shape Style Editor

4. In the **Add Shape Style** editor, select the shape style (or hold **Shift** and select multiple shape styles) you want to add and select **Add**.

The new shape style is added to the list in the **Shape Styles** tab. This shape will now be available for all scene templates in the current group.

You can reorder the list by selecting and dragging an item to another spot in the list.

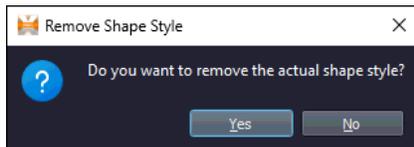
5. Select **Update** to save the changes.
6. Select **Done** to close the **Scene Templates** editor.

To rename a shape style in a Scene Template Group:

1. From the menu bar, select **Output > Manage Templates** to open the **Scene Templates** editor.
2. From the **Group** drop-down, select the group that contains the shape style you want to edit.
3. In the **Shape Styles** tab, select the shape style you want to edit.
4. In the **Details** section, in the **Name** field, edit the name or enter a new name for the shape style.
5. Select **Update** to save the changes.
6. Select **Done** to close the **Scene Templates** editor.

To delete a shape style from a Scene Template Group:

1. From the menu bar, select **Output > Manage Templates** to open the **Scene Templates** editor.
2. From the **Group** drop-down, select the group that contains the shape style you want to delete.
3. In the **Scene Templates** editor, in the **Shape Styles** tab, select the shape style you want to delete.
4. Select **Remove** and in the **Remove Shape Style** confirmation dialog, select **Yes**.

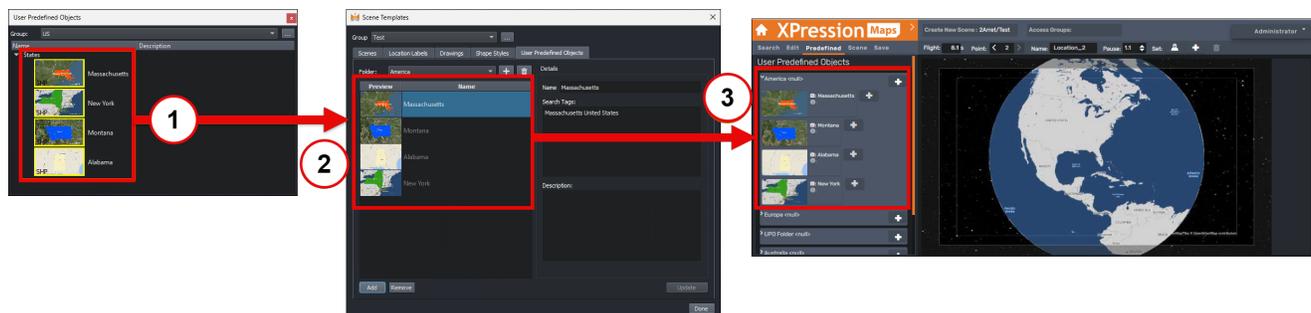


Remove Shape Style Confirmation Dialog

5. Select **Done** to close the **Scene Templates** editor.

Adding User Predefined Objects to a Scene Templates Group

User Predefined Objects that already exists in the **User Predefined Objects** panel (1) can be added to a scene template group in the **Scene Templates** editor (2). This allows newsroom users to access them through the **HTML5 Client** (3) and include them in story-specific map scenes.



Scene Templates Editor - User Predefined Objects are Made Available to the HTML5 Client

★ For information on creating **User Predefined Object Groups** and **Folders**, see [Creating User Predefined Objects](#) ²⁸⁵.

The following topics are discussed in this section:

[Adding a new folder](#) ³³⁸

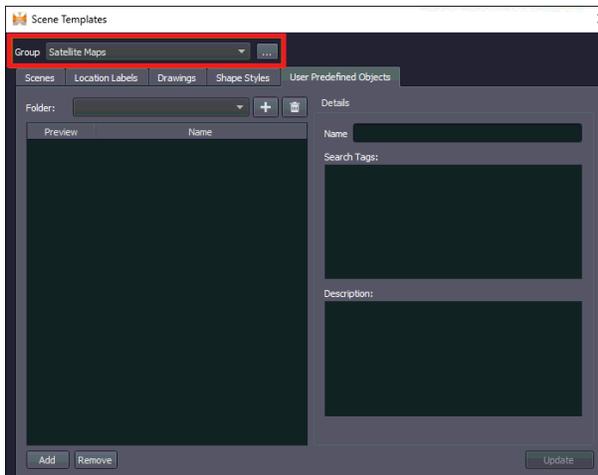
[Adding User Predefined Objects to a folder](#) ³³⁹

[Removing User Predefined Objects from a folder](#) ³⁴¹

[Deleting a Folder from a Scene Templates Group](#) ³⁴¹

To create a new folder of User Predefined Objects for a scene templates group:

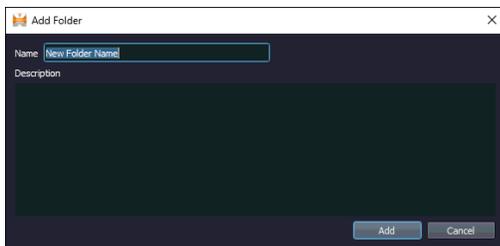
1. From the menu bar, select **Output > Manage Templates** to open the **Scene Templates** editor.
2. From the **Group** drop-down, select the templates group to which you want to add the new folder.



Scene Templates - Select the Group

3. Select the **User Predefined Objects** tab.
4. Select the **Add** button  beside the **Folder** drop-down to add a new folder.

The **Add Folder** window opens.

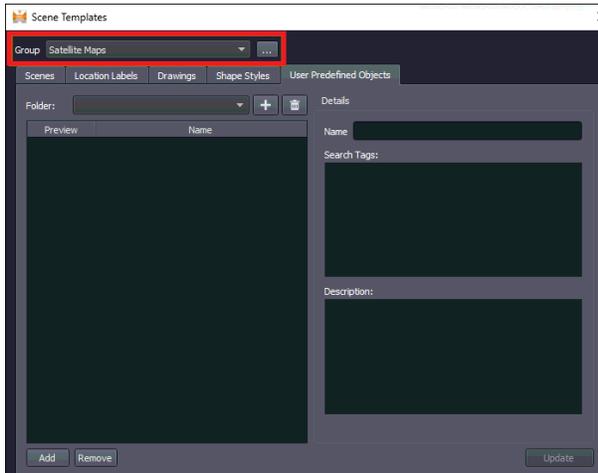


Scene Templates - User Predefined Objects - Add Folder

5. In the **Name** field, enter a name for the **User Predefined Object** folder.
6. In the **Description** field, enter a description for the **User Predefined Object** folder.
7. Select **Add** to add the folder to the template group.
8. Next, add user predefined objects to the folder.

To add user predefined objects to a folder:

1. From the menu bar, select **Output > Manage Templates** to open the **Scene Templates** editor.
2. From the **Group** drop-down, select the templates group to which you want to add the user predefined objects.



Scene Templates - User Predefined Objects Tab

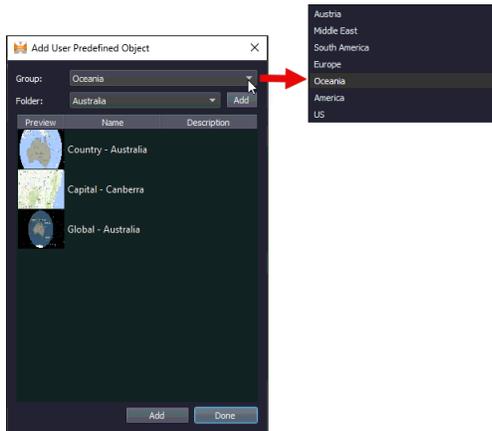
3. Select the **User Predefined Objects** tab.
4. From the **Folder** drop-down, select the folder to which you want to add the user predefined objects.
5. Select the **Add** button to open the **Add User Predefined Object** window.

The **Add User Predefined Object** window is populated with the groups, folders, and user predefined objects that were created using the **User Predefined Objects Panel**. For more information, see [Creating User Predefined Objects](#) [285].



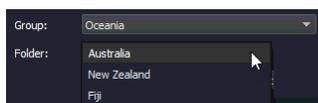
Scene Templates - Add User Predefined Object

- From the **Group** drop-down, select the group (originating from the **User Predefined Object** panel) that contains the folder that contains the user predefined object you want to add.



Add User Predefined Object - Select a Group

- If the group (originating from the **User Predefined Object** panel) has multiple folders, from the **Folder** drop-down, select the folder that contains the user predefined objects that you want to add.



Add User Predefined Object - Select a Folder

- Add one or more user predefined objects by performing one of the following tasks:

- To add a single user predefined object, select the object from the list and select **Add** at the bottom of the window.

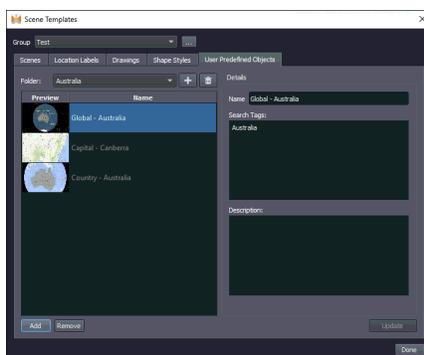
OR

- To add multiple user predefined objects, hold **CTRL** and select the user predefined objects from the list and select **Add** at the bottom of the window.

OR

- To add the folder and all of its user predefined objects, select **Add** to the right of the **Folder** drop-down.

Then, select **OK** in the **Folder Added** dialog and then select **Done**.

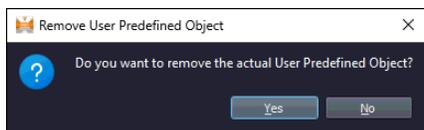


Scene Templates - User Predefined Objects Added

- For each user predefined object, select the object from the list and use the **Details** section to view, edit or update the **Name**, **Search Tags** and **Description**.
- When finished, select **Done** to close the **Scene Templates** editor.

To remove User Predefined Objects from a User Predefined Object folder:

1. From the menu bar, select **Output > Manage Templates** to open the **Scene Templates** editor.
2. From the **Group** drop-down, select the scene template group containing the user predefined objects you want to remove.
3. Select the **User Predefined Objects** tab.
4. From the **Folder** drop-down, select the folder containing the user predefined objects that you want to remove from the scene template group.
5. Select a single object from the list, or hold **CTRL** and select multiple objects from the list.
6. Select **Remove**.
7. In the **Remove User Predefined Object** dialog, select **Yes**.



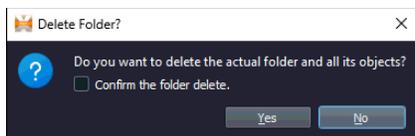
Scene Templates Editor - Remove User Predefined Object

8. When finished, select **Done** to close the **Scene Templates** editor.

To delete a User Predefined Object folder and its contents from a scene templates group:

1. In the **Scene Templates** editor, from the **Group** drop-down, select the template group containing the folder you want to delete.
2. Select the **User Predefined Objects** tab.
3. In the **User Predefined Objects** tab, from the **Folder** drop-down, select the folder you want to remove and select the **Delete** button .

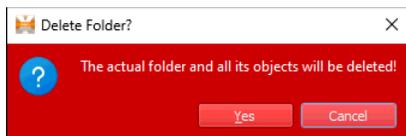
The **Delete Folder** window dialog opens.



Scene Templates - User Predefined Objects - Delete Folder Dialog

4. Check the **Confirm the folder delete** checkbox and select **Yes** to delete the folder and its objects.

The final red **Delete Folder** dialog opens.



Scene Templates - User Predefined Objects - Final Delete Folder Dialog

5. Select **Yes** to delete the folder and its objects.
6. When finished, select **Done** to close the **Scene Templates** editor.

Loading and Editing a Scene Template

Use the **Scene Templates** editor to load an existing scene template back onto the **Canvas** and edit the scene's camera view parameters, flight points, and map style.

To load a template:

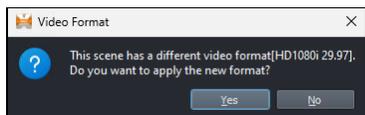
1. From the menu bar, select **Output > Manage Templates** to open the **Scene Templates** editor.
2. From the **Group** drop-down, select the group containing the scene template you want to load.
3. In the **Scenes** tab of the selected group, select the scene template you want to load.
4. Select **Load**.

The scene template is retrieved from the database, the **Scene Templates** editor closes and the scene is visible on the **Canvas**. The icon in the menu bar is highlighted, indicating that the template can be edited.



Manage Templates Icon Highlighted

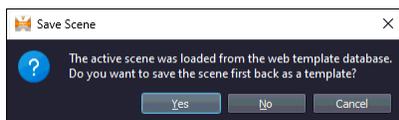
- If the selected scene has a different video format, a confirmation dialog opens, asking if you want to set the new format.
 - Select **Yes** to set the new format or **No** to keep the current format.
 - Selecting the **X** in the top-right corner gives the same result as selecting **No**.



Video Format Confirmation

5. Make edits to the scene.
6. Save the changes made to the scene by selecting the **Save** icon from the menu bar.

A confirmation dialog opens asking if you want to save the edited scene back into the database as a template.



Save Scene Back as Template Confirmation Dialog

7. Select **Yes** to save it.
8. In the **Save** window, navigate to the folder where you want to save the template and enter a name for the template.
 - Entering the original name will automatically overwrite the template in the **Scene Templates** editor.
 - Entering a different name will save it as a new scene, but you will then have to add it to the **Scene Templates** editor if you want it available for use in the **HTML5 Client**. See [To add a new scene template](#)³²⁵ for more information.
9. Select **Save**.

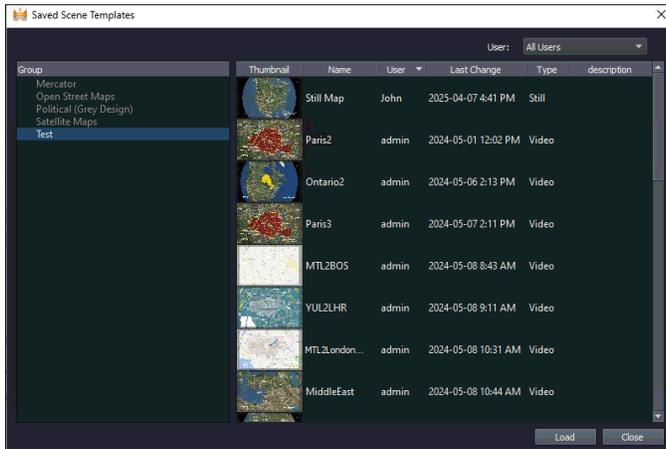
The scene is added to the database as a template. The icon in the menu bar is no longer highlighted, as the scene can no longer be edited.

Editing Scenes Created in the HTML5 Client

Scenes created from templates in the XPression Maps **HTML5 Client** can be opened in the **Saved Scene Templates** editor for editing and then saved back to the XPression Maps Server database.

To load and edit a saved scene in XPression Maps:

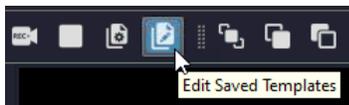
1. From the menu bar, select **Output > Edit Saved Templates** to open the **Saved Scene Templates** editor.



Saved Scene Templates Editor

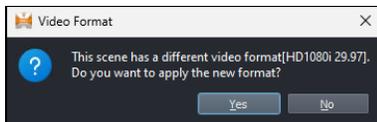
2. Select the group containing the scene you want to edit, then select the scene and select **Load**.

When the template is loaded, the **Edit Saved Templates** button turns blue, indicating that it can be edited.



XPression Maps Toolbar - Edit Saved Templates Active

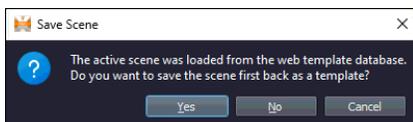
- If the selected scene has a different video format, a confirmation dialog opens, asking if you want to set the new format.
 - Select **Yes** to set the new format or **No** to keep the current format.
 - Selecting the **X** in the top-right corner gives the same result as selecting **No**.



Video Format Confirmation

3. Make any necessary changes to the template.
4. Select the **Save** button in the menu bar.

A confirmation dialog opens asking if you want to save the scene back to the **HTML5 Client**.



Save Scene in HTML5 Client

5. If you want to make the edited template available in the the **HTML5 Client**, select **Yes**.

OR

Select **No** to only save the template into your **Scenes** folder.

Creating and Managing Scenes in the HTML5 Client

The XPression Maps **HTML5 Client** is a web-based application that allows authorized MOS newsroom users to remotely access and edit **scene templates** stored on the XPression Maps Server. These templates are designed to enforce branding and style guidelines, so that newsroom users can focus on content when creating story-specific still or animated map graphics. The modified scene templates are stored on the XPression Maps Server as **scenes** that can be rendered as image or video files, or integrated directly into the XPression MOS workflow.

The following topics are discussed in this section:

[Launching and Signing In/Out of the HTML5 Client](#)

[Procedural Overview for Creating or Editing Scenes](#)

[Opening a Scene Template](#)

[Opening a Scene](#)

[Duplicating a Scene](#)

[Deleting a Scene](#)

[Changing OpenStreetMap \(OSM\) Layer Settings](#)

[Changing the Language of a Scene](#)

[Modifying the Safe Title Area](#)

[Adding, Editing or Deleting Flight Points](#)

[Positioning the Map in the HTML5 Client](#)

[Adding, Editing and Deleting Shapes](#)

[Adding, Editing, and Deleting Labels](#)

[Adding, Editing, Deleting and Ordering Drawings](#)

[Adding User Predefined Objects](#)

[Saving a Scene](#)

[Previewing and Downloading an Animated Map Graphic File](#)

[Previewing and Downloading a Still Map Graphic File](#)

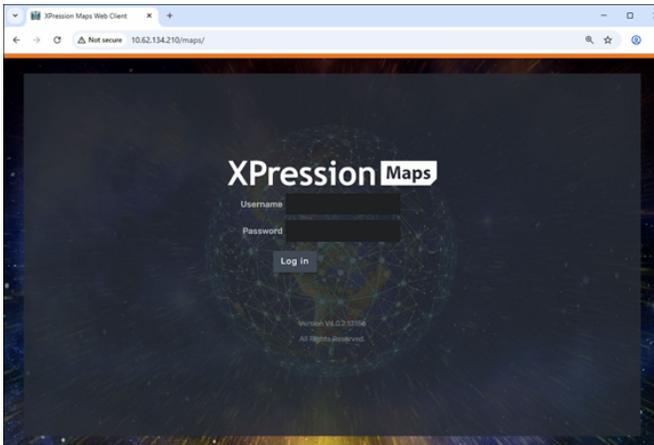
[User Management in the HTML5 Client](#)

[Folder Management in the HTML5 Client](#)

Launching and Signing In/Out of the HTML5 Client

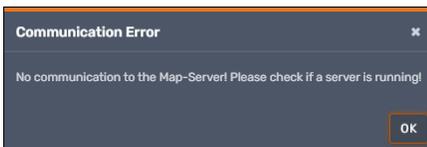
The XPression Maps **HTML5 Client** is a web-based application that can be opened in a web browser on a workstation that's connected to the same network as the computer hosting the main XPression Maps software and XPression Maps Server. Once opened, the **HTML5 Client** enables authorized MOS newsroom users to remotely access, edit, and manage scene templates and scenes stored in the XPression Maps Server database.

- ★ To use the **HTML5 Client**, XPression Maps must be running in **Server** mode on the host computer, with the **Preferences > Web Interface** settings properly configured.



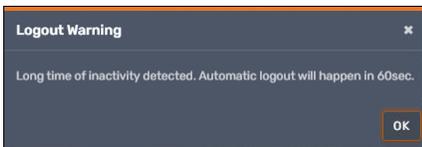
XPression Maps HTML5 Client - Log In

If communication with the XPression Maps Server is interrupted during an HTML5 Client session, a **Communication Error** dialog appears, prompting you to verify that the server is running. Select **OK** to close the dialog. Once communication is restored, the HTML5 Client automatically resumes operation—no need to log in again or refresh your browser.



HTML5 Client - Communication Error

If the HTML5 Client is idle for an extended period, a **Logout Warning** dialog appears. To stay logged in, select **OK** within 60 seconds. If no action is taken, the HTML5 Client will automatically log the current user out and return to the **Log In** page.



HTML5 Client - Logout Warning

The following topics are discussed in this section:

[Launching the HTML5 Client](#) ³⁴⁷

[Logging in to the HTML5 Client](#) ³⁴⁷

[Logging out of the HTML5 Client](#) ³⁴⁸

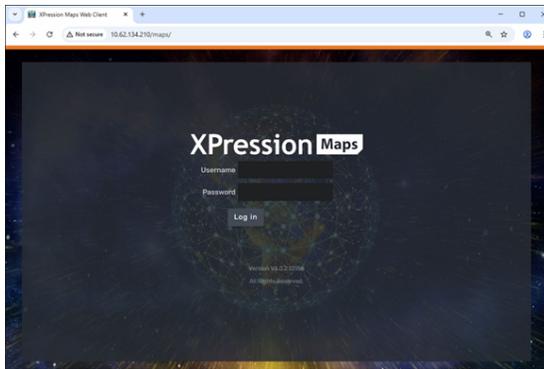
To launch the HTML5 Client:

1. Open your web browser and in the address field, enter "computername/maps/" (without the quotation marks).

Instead of "computername" you can also enter the IP address of the computer on which you want to run the HTML5 Client.

2. Press **Enter**.

The XPression Maps **HTML5 Client** opens to the **Login** page.

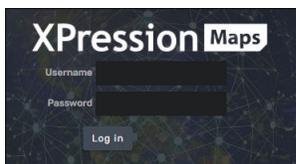


XPression Maps HTML5 Client Application - Login

- ★ If the **HTML5 Client** does not open, check your network connection or contact your XPression Maps administrator to verify that XPression Maps software is currently running in **Server** mode on your network and that its [Web Interface](#) settings are properly configured.

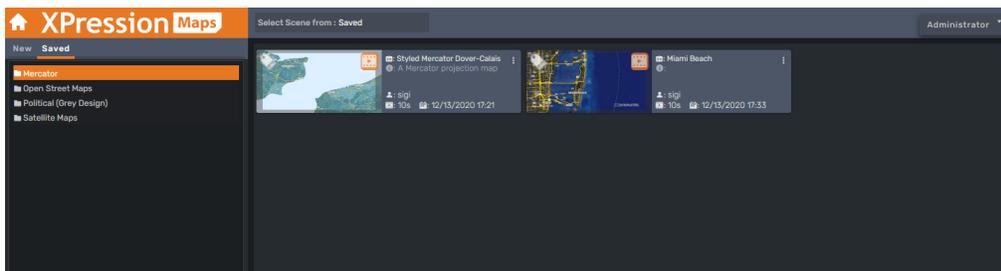
To log in to the HTML5 Client:

1. In the HTML5 Client **Login** page, enter your **Username** and **Password**.



2. Select **Log in**.

The **HTML5 Client Home** page is displayed.



XPression Maps HTML5 Client - Home Page

- ★ If you are unable to log in to the **HTML5 Client**, contact your XPression Maps administrator to ensure that your user account is activated in the user management system.

To log out of the HTML5 Client:

- From the **User Management Menu** located at the top-right corner of the window, select **Log Out**.



Procedural Overview for Creating or Editing Scenes

Given the versatility of XPression Maps software and the unique nature of your creative and business needs, establishing a standard usage procedure can be challenging. However, the following procedures provide basic guidance for how to use a scene template to create a scene for a still or animated map graphic, as well as how to create a new scene from an existing scene.

[Creating a scene for a still map graphic](#)^[454]

[Creating a scene for an animated flight map graphic](#)^[350]

[Creating a new scene from an existing scene](#)^[350]

- ★ Scenes can be edited in both the **HTML5 Client** and the main XPression Maps application, but scene templates can only be created and edited in the main application. See [Loading and Editing a Scene Template](#)^[342] and [Editing Scenes Created in the HTML5 Client](#)^[343] for more information about editing template or scenes in the main XPression Maps application.

To create a scene for a still map graphic:

1. With the **XPression Maps** application in **Server** mode, open the **XPression Maps HTML5 Client** in a web browser and sign in to the application.
2. From the **New** tab, select a template group folder.
3. From the **Results** panel, select the tile of the scene template from which you want to build a still map graphic.

- ★ Scene templates for creating still map graphics are marked with the **Still** icon .

The scene template opens on the **Canvas**.

4. Position the map on the **Canvas** to display the required location and camera view.
5. (Optional) Modify the content or characteristics of the scene:
 - Add or edit the labels, drawings, shapes or user predefined objects in the scene.
 - Change the language of the scene's map layers.
 - Change the level of detail of the map's OSM layers.
 - Change the size of the scene **Safe Title Area**.
6. Save the changes to the scene.
7. (Optional) Preview an image of the still map scene in the **HTML5 Client**.
8. (Optional) Download an image file of the map scene.
9. (Optional) Transfer the scene to your host graphics system.

To create a scene for an animated flight map graphic:

1. With the **XPression Maps** application in **Server** mode, open the **XPression Maps HTML5 Client** in a web browser and sign in to the application.
2. From the **New** tab, select a template group folder.
3. From the **Results** panel, select the tile of the scene template from which you want to build an animated flight map graphic.

★ Scene templates for creating animated flight map graphics are marked with the **Clip** icon .

The scene template opens on the **Canvas**.

4. Modify, if necessary, characteristics of the map.
 - Change the language of the scene's map layers.
 - Change the level of detail of the map's OSM layers.
 - Change the size of the scene **Safe Title Area**.
5. View and, if necessary, edit the starting flight point (Point 1).
6. View and, if necessary, edit the second flight point (Point 2).
7. Add and configure additional flight points (Point 3+).
8. Save the changes to the scene.
9. (Optional) Preview the playback of the animated map scene in the **HTML5 Client**.
10. (Optional) Download a video file of the animated map scene.
11. (Optional) Transfer the scene to your host graphics system.

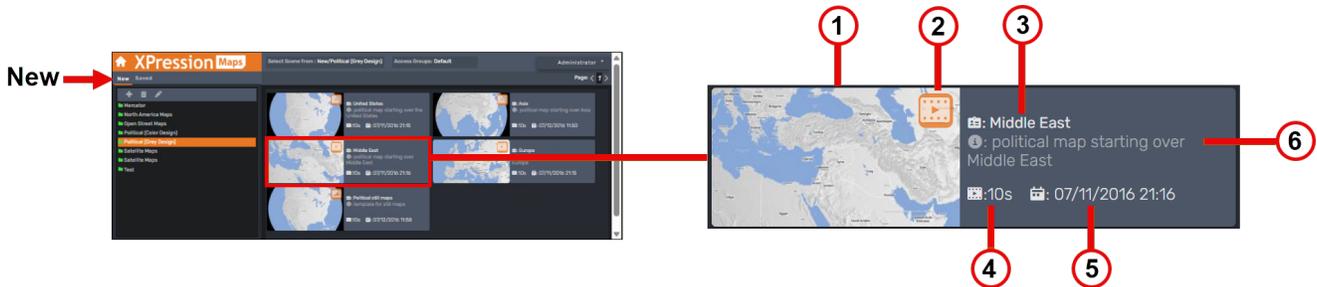
To create a new scene from an existing saved scene:

1. With the **XPression Maps** application in **Server** mode, open the **XPression Maps HTML5 Client** in a web browser and sign in to the application.
2. From the **Saved** tab, select the folder containing the scene that you want to create the new scene from.
3. In the **Results** panel, locate the tile of the scene that you want to create the new scene from.
4. On the scene's tile, hover over the 3 dots and select **Duplicate Scene** to create a new copy of the scene.
5. Make changes to the scene, as needed.
6. (Optional) Preview the rendered map scene in the **HTML5 Client**.
7. Save the new scene by entering a new name and description, choosing a folder, and selecting **Save**  icon.
8. (Optional) Download a video or image file of the map scene.
9. (Optional) Transfer the scene to your host graphics system.

Opening a Scene Template

When the **HTML5 Client** is open to the **Home** page, selecting the **New** tab displays a list of **template group folders**. Selecting a folder reveals its templates in the **Results** pane on the right. Each template appears as a tile with fields and icons that indicate its type and key characteristics. Selecting a tile opens the template, allowing you to view and edit it to create a customized map scene.

- ★ The **HTML5 Client** supports role-based folder access, so only the folders associated with the current user's profile permissions are displayed. If you do not see the required folder listed, contact your XPression Maps administrator to verify that your user account is part of the proper user group based on the folder's attributes.



#	Description
1	Preview — A thumbnail image of the map scene to help visually identify the template.
2	Type — Identifies the type of scene template:  Still for creating static image map scenes  Clip for creating animated flight map scenes
3	 Name — The name of the scene template.
4	 Duration — The amount of time (in seconds) of the scene's playback from the first frame to the last frame.
5	 Timestamp — The date and time at which the scene template was last saved in the XPression Maps Server database.
6	 Description — An optional note from the scene template creator that often explains its content or purpose.

To open a scene template in the HTML5 Client:

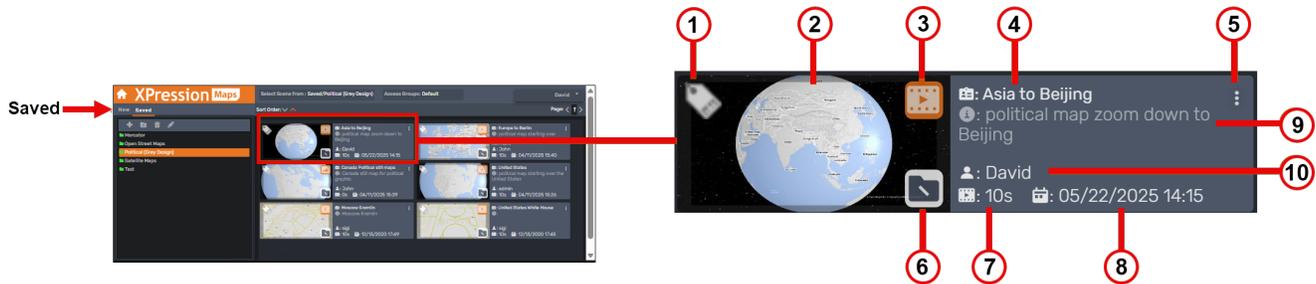
- From the **Home** page, select the **New** tab.
- Select the folder containing the template you want to open.
 - ★ If you do not see the required folder listed, contact your XPression Maps administrator to verify that your user account is part of the proper user group based on the folder's attributes.
- In the **Results** window, select the template you want to open.

The **Results** pane is replaced on the **Canvas**, which now displays the template, which can be edited, saved and rendered.

Opening a Scene

When the **HTML5 Client** is open to the **Home** page, selecting the **Saved** tab displays a list of scene folders. Selecting a folder reveals its scenes in the **Results** pane on the right. Each scene appears as a tile with fields and icons that indicate its type and key characteristics. Selecting a tile opens the scene, allowing you to view, edit or render it into a map graphic.

- ★ The **HTML5 Client** supports role-based folder access, so only the folders associated with the current user's profile permissions are displayed. If you do not see the required folder listed, contact your XPression Maps administrator to verify that your user account is part of the proper user group based on the folder's attributes.



#	Description
1	 Media ID — Drag the Media ID icon directly into an XPression scene to import the saved scene into an XPression project.
2	Preview — A thumbnail image of the map scene to help visually identify it.
3	Type — Identifies the type of scene:  Still for static image map scenes  Clip for animated flight map scenes
4	 Name — The name of the scene.
5	 Menu Options — Exposes the following commands that can be performed to the scene: <ul style="list-style-type: none"> • Duplicate Scene — Creates a copy of the scene and opens it for editing and saving as a new scene without affecting the original scene. • Delete Scene — Permanently deletes the scene from the XPression Maps Server database.
6	Scene Icon — Indicates the rendering status of the scene. The following icons show the current state: <ul style="list-style-type: none">  Folder Add — A final rendering is in progress.  Folder Check — A final rendering exists.  Folder Close — The final rendering was removed; a new rendering is required.  Folder Empty — No final rendering exists; a rendering is required.
7	 Duration — The amount of time (in seconds) of the scene's playback from the first frame to the last frame.

#	Description
8	 Timestamp — The date and time at which the scene was last saved in the XPression Maps Server database.
9	 Description — An optional note from the scene's creator that often explains its content or purpose.
10	 User — The user profile name of the last person to save changes to the scene.

To open a scene:

1. From the **Home** page, select the **Saved** tab.
2. Select the folder containing the scene you want to open.
 - ★ If you do not see the required folder listed, contact your XPression Maps administrator to verify that your user account is part of the proper user group based on the folder's attributes.
3. In the **Results** window, select the scene you want to open.

The **Results** pane is replaced on the **Canvas**, which now displays the scene, which can be edited, saved, and rendered.

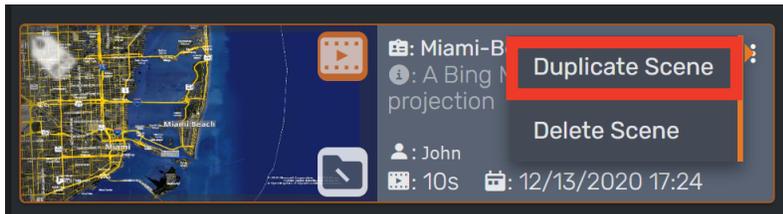
Duplicating a Scene

Duplicating a scene allows you to make a copy of an existing scene, make edits and then save it under a different name. This creates a new scene, while keeping the original unchanged. It is an effective way to quickly make variations of a scene map graphic without having to invest the time to create from new each time.

Duplicating a scene is also required when changing the OSM Language of a map. If you modify the original scene instead of duplicating it first, the changes will affect the original drawing and may impact MOS workflow publishing.

To duplicate a scene and save it as a new scene:

1. From the **Home** page, select the **Saved** tab.
2. Select the folder containing the scene you want to duplicate.
3. In the **Results** pane, locate the tile of the scene and hover over the **3 Dots** menu to expose the menu options.
4. Select **Duplicate Scene**.



5. Make changes to the scene, as needed.
6. Save the new scene with a new name.
 - a. Select the **Save** tab.
 - b. In the **Name** field, enter a new name for the scene.
 - c. In the **Description** field, enter a description of the scene (optional).
 - d. In the **Folder** field, select the folder icon at the right of the field and select the folder to which you want to save the scene.
 - e. Select the **Save**  icon.

Deleting a Scene

When the **HTML5 Client** is on the **Home** page, selecting the **Saved** tab displays a list of **Scene** folders along with the scenes they contain. If the current user has the **Delete Saved Scenes** privilege, they can remove scenes from the XPression Maps Server database.

To delete a scene:

1. From the **Home** page, select the **Saved** tab.
2. Select the folder containing the scene you want to delete.
3. In the **Results** pane, locate the tile of the scene and hover over the **3 Dots** menu to expose the menu options.
4. Select **Delete Scene**.



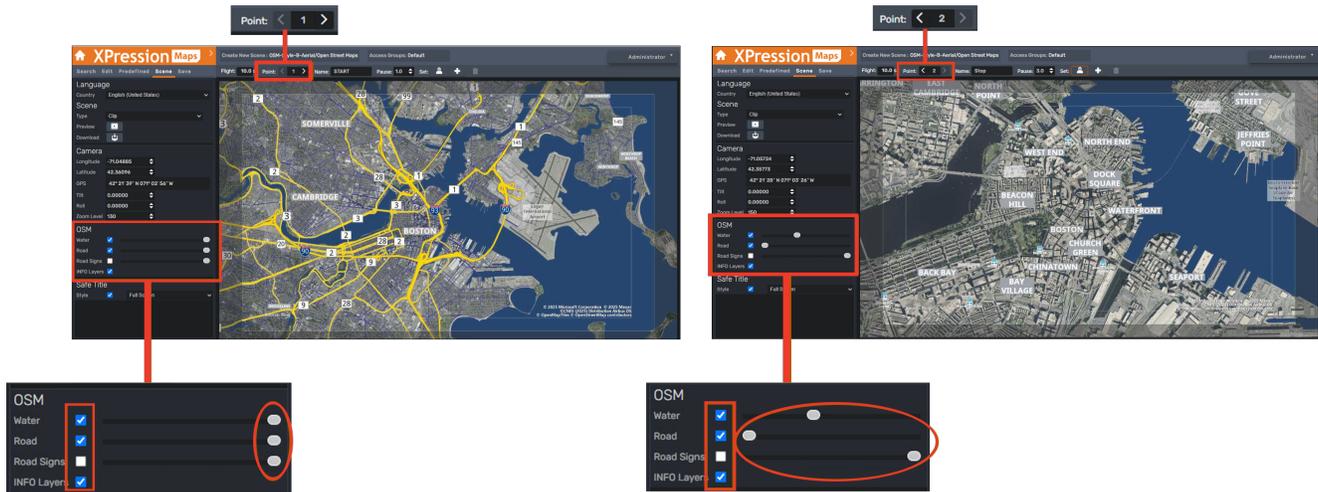
HTML5 Client - Delete Scene

3. In the confirmation dialog that opens, select **Yes** to delete the scene.

Changing OpenStreetMap (OSM) Layer Settings

When a scene template or scene uses an OSM map style, the **OSM** section in the **Scene** tab allows you to control the level of detail for OSM layer elements, like **Information**, **Water**, **Roads**, and **Road Signs**. These settings help simplify the map by adjusting the visibility of specific features.

- ★ OSM settings activation is managed at the scene level using checkboxes. For animated flight map graphics, the level of detail (slider position) for each enabled layer can be adjusted individually for each flight point.



HTML5 Client - OSM Layer Settings

To adjust and control the OSM layer settings:

1. Open a template or scene that uses an OSM-styled map.
2. For an animated flight graphic, select the desired flight point from the **Flight Point** toolbar.
3. Select the **Scene** tab.
4. In the **OSM** section, select the checkbox of the layer for which you want to adjust the level of detail.
5. Move the sliders to set the level of detail for the layers:
 - Slide **right** to display more water, roads, or road signs.
- OR**
 - Slide **left** to reduce the number of visible features.
- ★ The **INFO Layers** option does not include a slider. Its checkbox simply toggles the visibility of the map's Information layer.
6. For animated flights, select a different flight point from the **Flight Point** toolbar and repeat step 5 to customize detail levels as needed.
- ★ As shown in the image above, the activation of the OSM settings (checkboxes) must remain consistent across all flight points. However, slider positions (level of detail) can vary per flight point.
7. After adjusting the sliders, use the checkboxes to apply or remove OSM layer setting for the scene's map.

Changing the Language of a Scene

In the XPression Maps **HTML5 Client**, you can change the language of OpenStreetMap labels in a scene by selecting a language from a predefined list of country code translations. See [Configuring Languages](#)^[101] for information on translation codes.

★ The language setting is applied to the map at the scene level. When building an animated flight map, the language setting will be identical at all flight points.

Important: Duplicate the saved map **before** changing its language. If you edit the original scene, it will be overwritten with the new language setting. See [Duplicating a Scene](#)^[354] for more information.

To change the language of a scene:

1. Open the template or scene on the **Canvas**.
2. In the **Scene** tab, in the **Language** section, select a language from the **Country** drop-down.
The language on the **Canvas** is updated.
3. In the **Save** tab, save the new language setting to the scene.

Modifying the Safe Title Area

The **Safe Title Area** is the area inside of the **Canvas** defined by the white rectangles. Content inside this area will be fully visible on air. The **Safe Title Area** is defined in the main application but you can decide whether or not to use it in the HTML5 Client. You can also select the style of the safe title area.

★ The Safe Title Area settings are applied at the scene level. When building an animated flight map, these settings will be the same at each flight point.

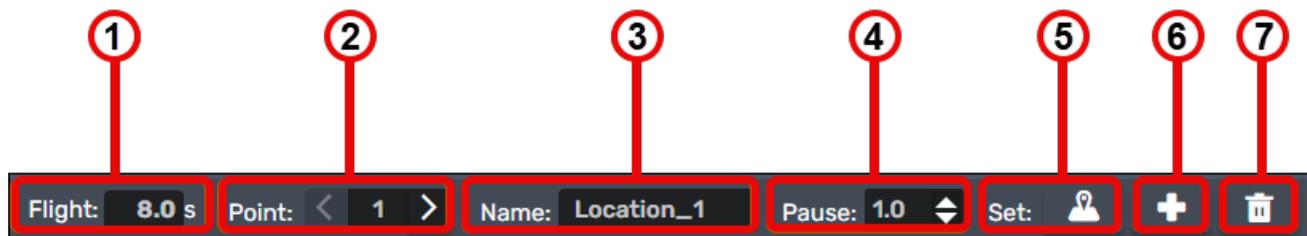
To modify the Safe Title Area:

1. Open the template or scene onto the **Canvas**.
2. In the **Scene** tab, in the **Safe Title** area, do one of the following:
Select the checkbox to use the configured safe title area.
OR
Deselect the checkbox to use the entire **Canvas**.
3. From the **Style** drop-down, select how the safe title area should be displayed.
The options are:
 - **Fullscreen** — the map credits appear in the bottom corners of the scene
 - **OTS (Over the shoulder)** — the map credits appear centered in the scene
4. In the **Save** tab, save the changes made to the scene.

Adding, Editing or Deleting Flight Points

XPression Maps generates multi-flight point animations by moving the map from one flight point to the next. In the HTML5 Client, authorized newsroom users can create story-specific animated flight map scenes by loading a Clip scene template and editing, adding, or deleting flight points as needed.

When a Clip scene template  is loaded in the HTML5 Client, the **Flight Point toolbar** appears above the **Canvas**, which contains the following controls and settings for editing, adding and deleting flight points from the current animated map scene.



#	Description
1	Flight — This read-only value shows the total duration (in seconds) of the flight map animation. By default, it's based on the scene template's Clip Length plus the total Pause time for all flight points. Adding or deleting flight points or making changes to a flight point's Pause value automatically updates this duration without altering the original template.
2	Point — This read-only value indicates the index of the currently selected flight point in the animation, where the starting point is 1, the second is 2, etc.). Use the arrow buttons to step forward or backward between flight points on the Canvas and Flight Point toolbar settings.
3	Name — This field lets you assign a descriptive name to the flight point, making it easier to identify or distinguish from others in the animation.
4	Pause — This value shows the duration (in seconds) of the pause at the start of a flight point before continuing to the next flight point. Enter a value directly or use the arrows to increment/decrement the value. Changes to a flight point's Pause value automatically updates this Flight duration without altering the original template.
5	Set — Selecting the Set button  applies the current flight point's settings to the scene, including updates to the Name , Pause duration, and any adjustments made on the Canvas (e.g., map position, camera view, or flight mode drawings). Note that all changes to a flight point must also be saved to the scene.
6	Add — Selecting the Add button  appends a new flight point to the end of the animation. Flight points cannot be directly inserted or reordered; instead, you must delete and re-add them in the desired sequence. Adding a flight point automatically updates the Flight duration without affecting the original template.
7	Delete — Selecting the Delete button  deletes the currently selected flight point from the animation. Since flight points cannot be directly inserted or reordered; you must delete and re-add them in the desired sequence. Deleting a flight point automatically updates the Flight duration without affecting the original template.

The following topics are discussed in this section:

[Editing an existing flight point](#)^[360]

[Adding a new flight point](#)^[360]

[Deleting a flight point](#)^[361]

★ See [Creating a scene for an animated flight map graphic](#)^[350] for an overview of how to use multiple flight points to build an animated flight map graphic.

To edit an existing flight point:

1. Open the clip template or scene onto the **Canvas**.
2. In the **Flight Point toolbar**, use the **Point** field to select the index number of the flight point to be edited.
3. Make changes, if necessary, to the selected flight point.

Possible edits may include:

- changing the flight point's name
- adjusting the flight point's **Pause** duration
- repositioning the map location or changing the camera view settings
- adding or removing **Flight Mode** labels or drawings

4. Select the **Set** button  to apply the changes to the flight point.
5. When you've finished editing the scene, go to the **Save** tab and save your changes.

To add a new flight point:

1. Open the clip template or scene onto the **Canvas**.
2. In the **Flight Point toolbar**, select the **Add** button  to append a new flight point to the end of the animation.

The **Point** field indicates the number of the new flight point, with the first flight point being **0**.

3. Make changes to the new flight point.

Possible edits may include:

- changing the flight point's name
- adjusting the flight point's **Pause** duration
- repositioning the map location or changing the camera view settings
- adding or removing **Flight Mode** labels or drawings

4. Select the **Set** button  to apply the changes to the flight point.
5. When you've finished editing the scene, go to the **Save** tab and save your changes.

To delete a flight point:

1. Open the clip template or scene onto the **Canvas**.
2. In the **Flight Point toolbar**, use the **Point** field to select the index number of the flight point to be deleted.
3. Select the **Delete** button .

The flight point is immediately deleted from the scene and the number of flight points in the **Point** field is updated.

4. When you've finished editing the scene, go to the **Save** tab and save your changes.

Positioning the Map in the HTML5 Client

When creating a still map graphic or flight points for an animated map graphic, you'll want to adjust the position and perspective of the active map on the **Canvas** to focus on a specific location or area of interest.

The following topics describe the various methods for adjusting the geographic location, positioning and perspective of the active map on the **Canvas**:

[Manually adjusting the positioning of the map](#) ³⁶²

[Repositioning to a Searched location](#) ³⁶²

[Repositioning using OSM Elements](#) ³⁶³

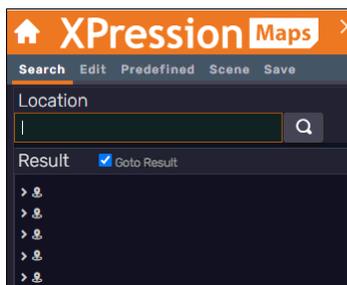
[Repositioning using the Camera settings](#) ³⁶³

To manually adjust the positioning of the map:

- With the template or scene loaded onto the **Canvas**, use your mouse to reposition the map:
 - **Rotate**: Left-click and drag to rotate the globe or map in the desired direction.
 - **Zoom**: Use the mouse scroll wheel, or right-click and drag a rectangle around the area of interest.
 - **Tilt**: Hold **Ctrl** and drag left or right with the mouse to tilt the map.
 - **Roll** (sphere projection only): Hold **Ctrl** and drag left or right with the mouse to roll the globe. **Roll** is not available when using Mercator or Linear projections.

To use Search to position the map to a specific location:

1. With the template or scene loaded onto the **Canvas**, select the **Search** tab.



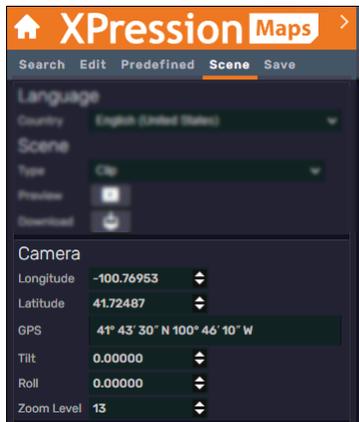
2. In the **Location** section, enter the name of the geographic location (e.g., address, city, state, or country) or a landmark.
3. If you want the map to go directly to the location you are searching, select the **Go to Result** checkbox.
4. Select the **Search** button  to run the search query.
The search results are displayed in an expandable list in the **Results** section.
5. From the **Results** section, select the desired location.

To position the map using an OSM element:

1. With an OpenStreetMap (OSM) style map open on the **Canvas**, select the **Search** tab.
2. In the **OSM Information** section, use the tree structure—populated with OSM elements currently visible on the **Canvas**—to locate the desired element.
3. To narrow down the results, type the name of the OSM element in the filter box.
Use the **Aa** checkbox to toggle case-sensitive filtering.
4. Select the desired OSM element from the tree.
The map will immediately center on the selected location.

To use the Camera settings to position the map:

1. With the template or scene loaded onto the **Canvas**, select the **Scene** tab.



2. In the **Camera** section, edit one or more of the following fields to reposition the map to the desired geographic location and camera perspective.

★ The map on the **Canvas** updates instantly with any changes to the **Camera** settings.

Longitude	The geographic longitudinal value, in degrees, of the location at the center of the Canvas .
Latitude	The geographic latitudinal value, in degrees, of the location at the center of the Canvas .
GPS	The precise GPS latitude and longitude coordinates (DMS format) of the map's center location on the Canvas .
Tilt	Rotates the globe around the point of the world that is closest to the camera.
Roll	Spins the globe clockwise and counter-clockwise along the axis visible on the Canvas .
Zoom Level	Sets the camera distance to the earth landscape. The furthest (zoom out) value is 0 and the closest (zoom in) value is 240 .

Adding, Editing and Deleting Shapes

In the XPression Maps HTML5 Client, you can add a shape to any location that exists in the shape database. You can also edit the shape by changing the shape's opacity level or applying a different shape style from among the styles included in the template group.

The following topics are discussed in this section:

[Adding a shape to a scene](#) 

[Editing a shape that has been added to a scene](#) 

[Deleting a shape from a scene](#) 

To add a shape to a scene:

1. Open the template or scene to which you want to add a shape.
2. In the **Search** tab, enter the location for which you want to add a shape and select the **Search** button  or press **Enter**.
3. In the **Shapes** section, select the location for which you want to add a shape and then select the **+** sign to the right of the location to add the default shape to the scene.

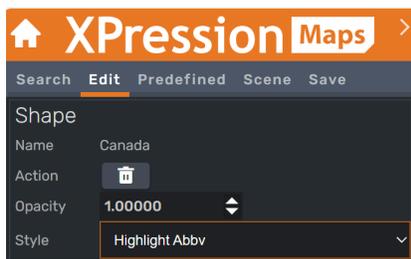
The new shape appears on the map. The shape appears at the **Zoom** level set in the shape style, so you may have to zoom in or out (using the scroll wheel on your mouse) in order to see the new shape.

4. In the **Save** tab, save the changes made to the scene.

To edit a shape that has been added to a scene:

1. Open the template or scene you want to edit.
2. On the **Canvas**, select the shape.
3. In the **Edit** tab, from the **Style** drop-down, select a different shape style.

★ Only shape styles that were added to the template group appear in the drop-down list.

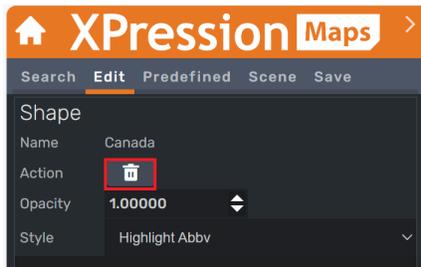


HTML5 Client - Edit Shape

4. In the **Opacity** field, enter a value or use the up and down arrows to change the transparency of the shape.
5. In the **Save** tab, save the changes made to the scene.

To delete a shape from a scene:

1. Open the template or scene you want to edit.
2. On the **Canvas**, select the shape you want to delete.
3. In the **Edit** tab, in the **Action** parameter, select the **Delete Shape** button .

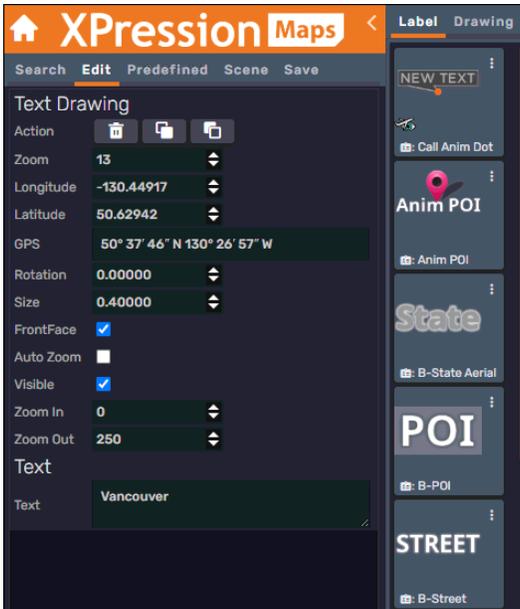


HTML5 Client - Delete Shape Button

Alternatively, with the shape selected, press the **Delete** key.

Adding, Editing and Deleting Labels

In the XPression Maps HTML5 Client, newsroom users can add labels within a scene to identify or highlight specific locations or landmarks. These labels are text drawings that include an editable text element, and some may also feature a graphical marker such as a pin or dot.



HTML5 Client - Label Menu and Edit Label Properties

The available label styles are determined by those added to the template group and can be accessed within the **Label** menu when a template or scene is loaded in the **HTML5 Client**. While a label's style cannot be changed, its text, position, size, and visibility can be modified. You can also set a default label for the current scene, which overrides the template's default label.

Thumbnails in the **Label** menu that display an airplane icon  indicate that the **Flight Mode** property is enabled. These labels are intended for use in flight map animations and allow visibility to be toggled at the individual flight point level. Labels without the airplane icon are controlled at the scene level.

The following topics are discussed in this section:

[Adding a label to a scene](#) ³⁶⁷

[Adding a default label to a scene](#) ³⁶⁷

[Overriding a default label on the scene](#) ³⁶⁸

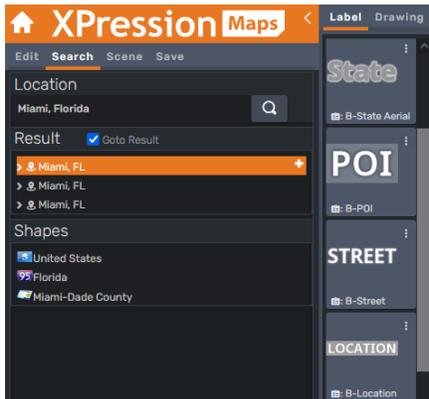
[Editing a label's text, position and visibility properties](#) ³⁶⁸

[Adjusting a label's position, size or visibility from within the scene](#) ³⁶⁹

[Deleting a label from a scene](#) ³⁷⁰

To add a label to a scene:

1. Open the template or scene to which you want to add a label.
2. Reposition the map on the **Canvas** to the location where you want to add a label.
3. Select the arrow beside the XPression Maps title to open the **Label** and **Drawing** menus.



HTML5 Client - Labels and Drawings Menus

4. From the **Labels** list, select the label style you want to use and drag it to the desired location.

Thumbnails containing an airplane icon  indicate that the label's **Flight Mode** property is enabled. These labels should only be added to flight points when creating scenes for flight map animations.

The label appears at the **Zoom** level set in the label style, so you may have to zoom in or out (using the scroll wheel on your mouse) in order to see the new label.

Alternatively, you can set a default label style to use in any scene in the current folder. See [To add a default label](#) ³⁶⁶ for more information.

5. After adding a label to the map on the **Canvas**, you can adjust its properties—such as text content, position, size, and visibility—to suit your needs. See [Editing a label's text, position and visibility properties](#) ³⁶⁸ and [Adjusting a label's position, size or visibility from within the scene](#) ³⁶⁹.

To add a default label to a scene:

1. Open the template or scene to which you want to add a label.
2. In the **Search** tab, in the **Location** field, enter the location to which you want to add a label and select the **Search** icon to generate results.
3. Select the arrow beside the XPression Maps title to open the **Label** and **Drawing** menus.
4. Select the **Label** tab and locate the label that you want to use.
5. Select the three dots in the top-right corner of the label and select **Set Default**.



HTML5 Client - Set Default Drawing

6. In the **Result** section, select the + sign beside the location for which you want to add a label.

To override a default label on the scene:

- Select a different label style and drag it on top of the default label, to change only that instance of the label.

To edit a label's text, position and visibility properties:

1. Open the template or scene you want to edit.
2. On the **Canvas**, select the label you want to edit.
3. In the **Edit** tab, in the **Drawing** section, adjust the following properties as necessary.

Property	Description
Action	Place the label on top of or behind other text in the scene or delete the label.
Zoom	Enter a value or use the arrows to adjust the size of the label in relation to the map.
Longitude, Latitude and Rotation	Enter a value or use the arrows to adjust the position of the label.
GPS	The GPS coordinates of the label.
Size	Enter a value or use the arrows to adjust the absolute size of the label.
Frontface	Select to have the front side of the label face the camera.
Auto Zoom	Select to have the label stay the same size, regardless of the Zoom Level .
Visible	Select if you want the label to be visible or deselect to hide the label.
Zoom In Zoom Out	Enter or use the arrows to select a camera Zoom value at which the label will be visible or hidden. If the camera Zoom value is larger than the Zoom Out value, the label will not be visible. If the camera Zoom value is smaller than the Zoom In value, the label will not be visible.
Visible In Delay Visible Out Delay	When the label's Flight Mode property is enabled (indicated by an airplane icon ) , these values determine how long after the start or before the end of the flight point the label will be shown or hidden.

4. In the **Text** section, you can change the text of the label.
5. When you've finished modifying the label, save your new scene.

To adjust a label's position, size or visibility from within the scene:

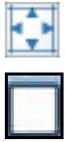
1. Select a label on the **Canvas**.

The bounding box and its tools are displayed around the selected label.



HTML5 Client — Label Examples - Bounding Box and Tools

2. Use the tools to change the size, position and appearance of the label as described in the table below:

Tool		How to Use the Tool
Center Point		Select and hold, then drag to move the label around the scene. You can also select and hold anywhere inside the bounding box to move the label.
Corner Points and Lower Boundary		Select and hold a corner point, then drag to scale the label. If the label includes an image (e.g., a pin), select and hold the lower boundary to adjust the distance between the label's image and its text.
Handle		Select and hold the lower end of the handle, then drag to rotate the label.
Scale		Select to toggle the Auto Zoom property, which is located in the Edit tab's Text Drawing section. When selected, the label remains the same size as you zoom in and out on the map. When the Auto Zoom checkbox is cleared, the label will scale larger when you zoom in and smaller when you zoom out on the map.
Eye Icon		Select to toggle the visibility of the label at the scene level. Shown when the label's Visibility > Flight Mode property is not selected.
Airplane Icon		Select to toggle the visibility of the label at the flight point level of a flight map animation. Available when the label's Visibility > Flight Mode property is selected.

Tool		How to Use the Tool
Face Icon		<p>When the map is tilted, select to toggle the placement of a label, either angled to match the map surface or perpendicular to the map surface and facing the camera.</p> <p>For labels that are created on the Overlay Layer, this icon does not appear.</p>

To delete a label from a scene:

1. Open the template or scene you want to edit.
2. On the **Canvas**, select the label you want to delete.
3. In the **Edit** tab, select the **Delete Drawing** button.



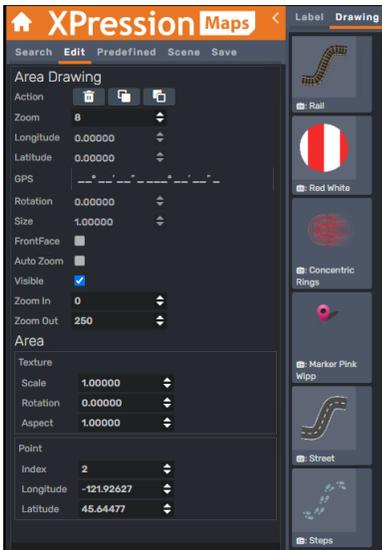
HTML5 Client - Delete Drawing Button

Alternatively, with the label selected, press the **Delete** key.

Adding, Editing, Deleting and Ordering Drawings

In the XPression Maps HTML5 Client, newsroom users can enhance the visual and informational quality of a map graphic by adding drawings anywhere within a scene. The available drawing options are dictated by those included in the template group and appear in the **Drawing** menu when a template or scene is loaded.

Once a drawing is added, users can adjust various properties—such as position, size, and visibility—either through the drawing settings in the **Edit** tab or by using controls directly on the **Canvas**. Additionally, users can specify a default drawing for the current scene, which will override the template’s default drawing.



HTML5 Client - Edit Tab and Drawing Menu

Thumbnails in the **Drawing** menu that display an airplane icon  indicate that the **Flight Mode** property is enabled. These drawings are intended for use in flight map animations and allow visibility to be toggled at the individual flight point level. Drawings without the airplane icon are controlled at the scene level.

The following topics are discussed in this section:

[Adding a drawing to a scene](#) ³⁷²

[Editing a drawing's properties](#) ³⁷²

[Adjusting a drawing's position, size or visibility from within the scene](#) ³⁷⁵

[Replacing a drawing on the scene](#) ³⁷⁶

[Setting a default text drawing](#) ³⁷⁶

[Deleting a drawing from the scene](#) ³⁷⁶

[Changing the order of drawings on the scene](#) ³⁷⁶

To add a drawing to a scene:

1. Open the template or scene to which you want to add a drawing.
2. Select the arrow beside the XPression Maps title to open the **Label** and **Drawing** menus.



HTML5 Client - Drawing List

3. In the **Drawing** list, select the drawing that you want to add to the scene and then select the point on the map where you want to place the drawing.

For **Line** and **Area** drawings, select and drag the mouse on the map until the line or area is complete.

Thumbnails containing an airplane icon  indicate that the drawing's **Flight Mode** property is enabled. These drawings should only be added to flight points when creating scenes for flight map animations.

Alternatively, you can set a default label style to use in any scene in the current folder. See [To add a default label](#)³⁶⁶ for more information.

4. After adding a drawing to the map on the **Canvas**, you can adjust its properties—such as text content, position, size, and visibility—to suit your needs. See [Editing a drawing's properties](#)³⁷² and [Adjusting a drawing's position, size or visibility from within the scene](#)³⁷⁵.

To edit a drawing's properties:

1. Open the template or scene you want to edit.
2. On the **Canvas**, select the drawing you want to edit.
3. In the **Edit** tab, in the **Drawing** section, adjust the following properties as required.

Property	Description
Action	Place the drawing on top of or behind other drawings in the scene or delete the drawing.
Zoom	Enter a value or use the arrows to adjust the size of the drawing in relation to the map.
Longitude Latitude	Enter a value or use the arrows to adjust the geographic location of the drawing.
GPS	Enter the GPS coordinates of the drawing.

Property	Description
Rotation	Enter a value or use the arrows to adjust the rotation position of the drawing.
Size	Enter a value or use the arrows to adjust the absolute size of the drawing.
Frontface	Select to have the front side of the drawing face the camera.
Auto Zoom	When checked, the drawing remains the same size in pixels, while the camera animates through the different zoom levels. When unchecked, the drawing increases or decreases in size as the camera animates through the different zoom levels.
Visible	Select if you want the drawing to be visible or deselect to hide the drawing.
Zoom In Zoom Out	Enter or use the arrows to select a camera Zoom value at which the drawing will be visible or hidden. If the camera Zoom value is larger than the Zoom Out value, the drawing will not be visible. If the camera Zoom value is smaller than the Zoom In value, the drawing will not be visible.
Visible In Delay Visible Out Delay	When the drawing's Flight Mode property is enabled (indicated by an airplane icon ) , these values determine how long after the start or before the end of the flight point the drawing will be shown or hidden.
Locator	Applies to Locator drawings only. Zoom Level — Enter or select a zoom level between 1 and 21 to define how much of the map is displayed in the highlighted area. A higher zoom level value means a smaller map area is shown, but it appears closer to the camera. Zoom — Enter or select a zoom value for the highlighted area of a map. 0 - 1 : The area appears closer to the camera. >1 : The area appears further from the camera. The resolution of the map is not changed, so it does not show more or fewer details when zoomed in or out. Offset X — Enter or select a value to move the highlighted area within the drawing along the X coordinate. Offset Y — Enter or select a value move the highlighted area within the drawing along the Y coordinate.
Magnifier	Applies to Magnifier drawings only. Zoom Level — Enter or select a zoom level between 1 and 21 to define how much of the map is displayed in the highlighted area. A higher zoom level value means a smaller map area is shown, but it appears closer to the camera. Zoom — Enter or select a zoom value for the highlighted area of a map. 0 - 1 : The area appears closer to the camera. >1 : The area appears further from the camera. The resolution of the map is not changed, so it does not show more or fewer details when zoomed in or out. Offset X — Enter or select a value to move the highlighted area within the drawing along the X coordinate. Offset Y — Enter or select a value move the highlighted area within the drawing along the Y coordinate.

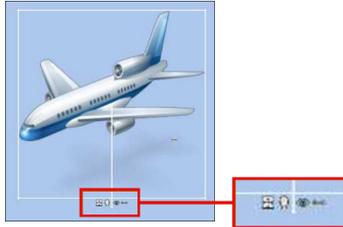
Property	Description
Mirrored	<p>Applies to Icon drawings only.</p> <p>Flips the image horizontally creating a reflection or mirroring effect.</p>
Point	<p>Applies to Area drawings only.</p> <p>Index — identifies each point in the drawing based on the order in which it was added. The selected point turns red.</p> <p>Longitude — Enter a value or use the arrow to adjust the longitudinal position of the selected Index point.</p> <p>Latitude — Enter a value or use the arrow to adjust the latitudinal position of the selected Index point.</p>
Progress	<p>Applies to Line drawings only.</p> <p>Visualizes the progression of the line being drawn on the map. Use the up and down arrows to view the placement of the drawing at different intervals.</p>
Text	<p>Applies to Text drawings only.</p> <p>Use the text box to edit the text on one or more lines. Press the Enter key to move text to the next line.</p>
Texture	<p>Applies to Line and Area drawings that have an image or pattern.</p> <p>Scale — Multiplies the scale of the drawing. For example, a line drawing of a road with a scale of 1, will be a single 2-lane road, while a road with a scale of 2 will be a 4-lane road.</p> <p>Rotation — Increases the rotation of the drawing, making it appear spiraled.</p> <p>Aspect — Increases or decreases the width of the drawing, relative to the height.</p> <ul style="list-style-type: none"> • If the value is less than 1, the width (X) decreases relative to the height (Y). • If the value is greater than 1, the width increases relative to the height.

4. When you've finished modifying the drawing, save your new scene.

To adjust a drawing's position, size or visibility from within the scene:

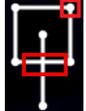
1. Select a drawing on the **Canvas**.

The bounding box and its tools are displayed around the selected label.



HTML5 Client – Drawing Example - Bounding Box and Tools

2. Use the tools to change the size, position and appearance of the drawing as described in the table below:

Tool		How to Use the Tool
Center Point		Select and hold, then drag to move the drawing around the scene. You can also select and hold anywhere inside the bounding box to move the drawing.
Corner Points and Lower Boundary		Select and hold a corner point, then drag to scale the drawing. If the drawing includes text and an image (e.g. a pin), select and hold the lower boundary to adjust the distance between the image and its text.
Handle		Select and hold the lower end of the handle, then drag to rotate the drawing.
Scale		Select to toggle the Auto Zoom property, which is located in the Edit tab's Text Drawing section. When selected, the label remains the same size as you zoom in and out on the map. When the Auto Zoom checkbox is cleared, the label will scale larger when you zoom in and smaller when you zoom out on the map.
Eye Icon		Select to toggle the visibility of the drawing at the scene level. Available when the drawing's Visibility > Flight Mode property is not selected.
Airplane Icon		Select to toggle the visibility of the drawing at the flight point level of a flight map animation. Shown when the drawing's Visibility > Flight Mode property is selected.

Tool		How to Use the Tool
Face Icon		<p>When the map is tilted, select to toggle the placement of a drawing, either angled to match the map surface or perpendicular to the map surface and facing the camera.</p> <p>For drawings that are created on the Overlay Layer, this icon does not appear.</p>
Double-Ended Arrow		<p>Select the double-ended arrow to flip the drawing horizontally.</p>

To replace a drawing that's already in the scene:

1. Open the template or scene you want to edit.
2. From the **Drawings** list, select a different drawing of the same type (line, area, text, etc.) and drag it on top of the drawing you want to replace.

To set a default text drawing:

1. Open the template or scene you want to edit.
2. From the **Drawings** list, select the text drawing you want to set as a default for all scenes in the current folder.
3. Select the three dots in the top-right corner of the text drawing you want to use and select **Set Default**.

To delete a drawing from a scene:

1. Open the template or scene from which you want to delete a drawing.
2. Select the drawing you want to delete.
3. In the **Edit** tab, select the **Delete Drawing** button.



HTML5 Client - Delete Drawing Button

Alternatively, you can select the drawing you want to delete and then press the **Delete** key.

To order drawings on the scene:

1. Open the template or scene in which you want to reorder the drawings.
2. Select the drawing you want to move.
3. In the **Edit** tab, select the **Move Drawing to Front** button to move the drawing to the front.



HTML5 Client - Move Drawing to Front Button

OR

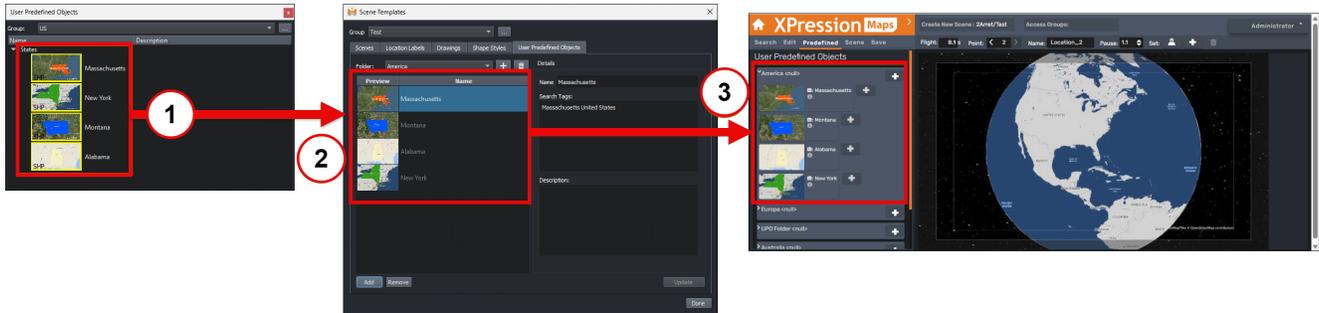
Select the **Move Drawing to Back** button to move the drawing to the back.



HTML5 Client - Move Drawing to Back Button

Adding User Predefined Objects

User Predefined Objects that already exists in the **User Predefined Objects** panel (1) can be added to a scene template group in the **Scene Templates** editor (2). This allows newsroom users to access them through the **HTML5 Client** (3) and include them in story-specific map scenes. For more information about User Predefined Objects, see [Creating User Predefined Objects](#)²⁸⁹ and [Adding User Predefined Objects to a Scene Templates Group](#)³³⁷.



Access User Predefined Objects from the Predefined Tab in HTML5 Client

To add a user predefined object to a scene:

1. Open the template or scene to which you want to add a user predefined object.
2. Select the **Predefined** tab.
3. In the **User Predefined Objects** list, expand the folders to navigate to the desired User Predefined Object.
4. Add one or all of the User Predefined Objects from the folder to the scene:

- Select the folder's **Add** button  to add all of the User Predefined Objects in the folder to the scene.

OR

- Select the **Add** button  beside an individual User Predefined Objects to only add it to the scene.

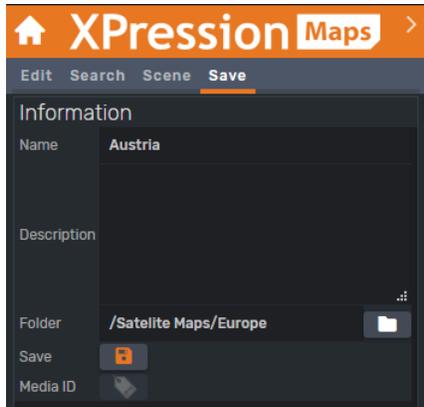
Saving a Scene

Follow the procedure below to save a scene, whether you are saving a new scene based on a template or working with an existing scene that you've edited.

★ For instructions on copying an existing scene, see [Duplicating a Scene](#)³⁵⁴. This process lets you edit the duplicated scene and save it with a new name, while keeping the original unchanged.

To save a scene:

1. In the **Save** tab, in the **Name** field, enter a name for your scene.



HTML5 Client - Save Scene

2. (Optional) In the **Description** field, enter a description of the scene.
3. In the **Folder** field, select the folder icon at the right of the field and select the folder to which you want to save the scene.

You can only save into an existing folder. Creating new folders requires the **Manage Saved Folders** privilege.

Once you've saved a scene, the first time the folder will be selected automatically if you edit the scene and save it again.

4. Select the **Save**  icon.

After a scene has been saved, the **Media ID** icon becomes active and you can drag it into a host project such as XPression, to play.

For more information, see [Transferring Scenes to a Host Application](#).

Previewing and Downloading an Animated Map Graphic File

During the creation process or after saving a scene, newsroom users can preview a rendered version of the animated map graphic directly in a video player within the HTML5 Client. If the download option has been purchased, the scene can also be rendered and the animated map graphic downloaded as a video file.

The following topics are discussed in this section:

[Previewing an Animated Map Graphic File](#)³⁷⁹

[Downloading an Animated Map Graphic File](#)³⁷⁹

To preview an animated map graphic file:

1. Load a clip  scene onto the **Canvas**.
2. Select the **Scene** tab and in the **Scene** section, ensure that **Type** is **Clip**.



HTML5 Client - Scene - Clip Type

3. Select the **Preview** button .
- The preview clip is rendered and a video player window opens.
4. When you are finished, select **Close** to close the video player window.

To download an animated map graphic file:

1. Load a clip  scene onto the **Canvas**.
2. Select the **Scene** tab and in the **Scene** section, ensure that **Type** is **Clip**.



HTML5 Client - Scene - Clip Type

3. Select the **Download** button .
4. In the file browser, navigate to the location where you want to save the video file.
5. Give the video file a name and select **Save**.

Previewing and Downloading a Still Map Graphic File

During the creation process or after saving a scene, newsroom users can preview a rendered version of the still map graphic directly within the HTML5 Client. If the download option has been purchased, the scene can also be rendered and the still map graphic downloaded as an image file.

The following topics are discussed in this section:

[Previewing a Still Map Graphic File](#)³⁸⁰

[Downloading a Still Map Graphic File](#)³⁸⁰

To render and preview a still map graphic:

1. Load a still  scene onto the **Canvas**.
2. Select the **Scene** tab and in the **Scene** section, ensure that **Type** is **Still**.

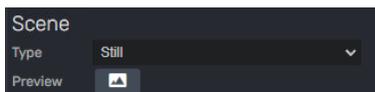


HTML5 Client - Scene - Clip Type

3. Select the **Preview** button .
- The image is rendered and displayed in a preview window.
4. Select **Close** to exit from the **Preview** window.

To render and download an image file of the still map graphic:

1. Load a still  scene onto the **Canvas**.
2. Select the **Scene** tab and in the **Scene** section, ensure that **Type** is **Still**.



HTML5 Client - Scene - Clip Type

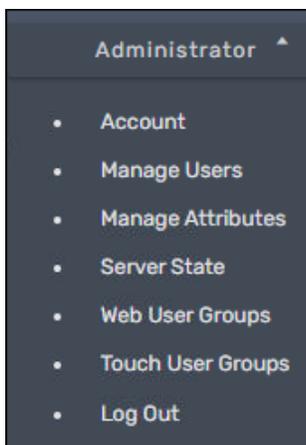
3. Select the **Preview** button .
- The image is rendered and displayed in a **Preview** window.
4. In the Preview window, select **Download**.
5. In the file browser, navigate to the location where you want to save the image file.
6. Give the image file a name and select **Save**.
7. Select **Close** to exit from the **Preview** window.

User Management in the HTML5 Client

The XPression Maps **HTML5 Client** allows administrators to create and manage user accounts by assigning user privileges and controlling scene folder access based on user group profiles and folder attributes.

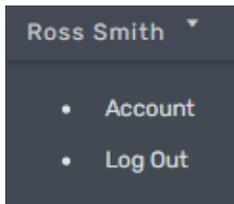
The **User Management Menu** is located in the top-right corner of the **HTML5 Client**. When the current user has administrator privileges, the full menu is displayed and offers options to create and manage user profiles. An administrator can perform the following tasks:

- View and edit their own user account details.
- Add, configure or delete other user profiles.
- View the performance and capacity status of the XPression Maps Servers on the network.
- Create web user groups that can be assigned to user profiles.
- Create folder attributes and use them to control user access to template and scene folders.



User Management Menu (Users with Administrator Privileges)

A different version of the **User Management Menu** is available to other users which limits them to verifying their own user account details, the ability to log out of the HTML5 Client, or to change their user account password.



User Management Menu (All Other Users)

The following topics are discussed in this section:

[Managing Users](#) ³⁸²

[Managing Web User Groups](#) ³⁸⁵

[Managing Attributes](#) ³⁸⁹

[Monitoring XPression Maps Servers](#) ³⁹¹

[Changing your Password](#) ³⁹⁴

Managing Users

The **Manage Users** option in the **User Management Menu** allows users with administrative privileges to:

[Add users and assigning them to a user group](#)^[382]

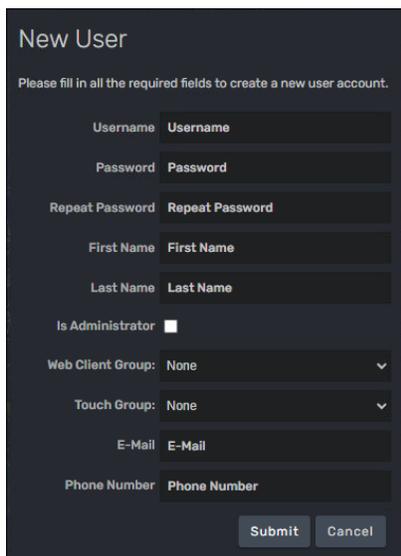
[Delete users](#)^[383]

[Edit user details](#)^[384]

To add a user and assign them to a Web Client Group:

1. From the **User Management Menu**, select **Manage Users**.
2. In the **Manage Users** window, select **Add User**.

The **New User** form opens.



User Management - New User Form

3. Enter the **Username**, **Password**, **Repeat Password**, **First Name** and **Last Name** of the new user.
4. If the user will be an administrator, select the **Is Administrator** checkbox.
5. From the **Web Client Group** drop-down, assign the user to a user group.

By default, a set of **Web User Groups** is already created with the following privileges:

Artist — Delete Saved Scenes

Journalist — None

Producer — Manage Saved Folders / Delete Saved Scenes

Production — None

Superuser — Manage Saved Folders / Delete Saved Scenes

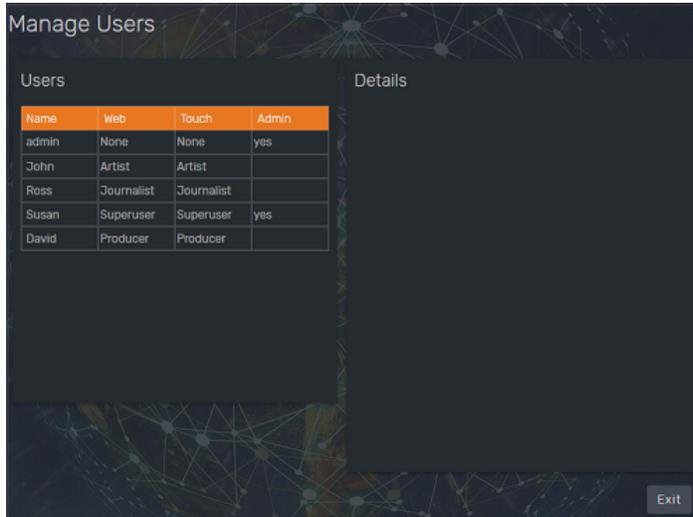
For more information on user privileges, see [Managing Web User Groups](#)^[385].

6. In the **E-Mail** field, enter an e-mail address for the user (required).
7. In the **Phone Number** field, enter a phone number for the user (optional).
8. Select **Submit** to add the user.

To delete a user:

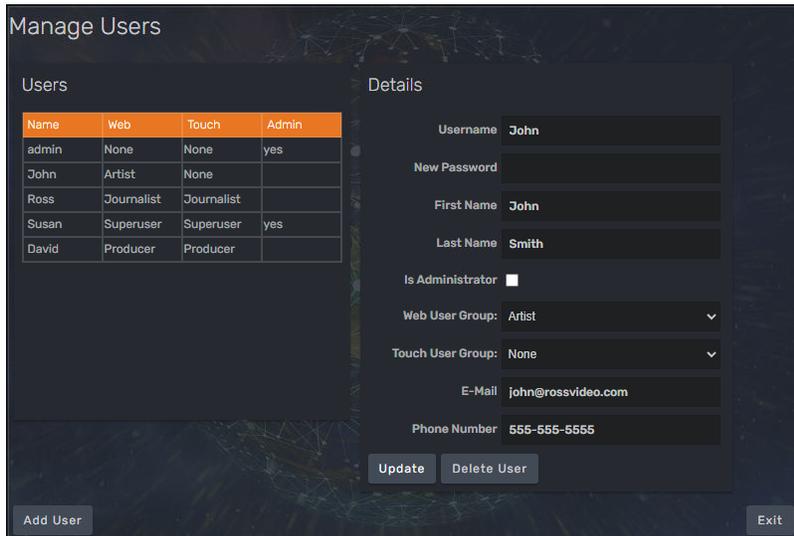
1. From the **User Management Menu**, select **Manage Users**.

The **Manage Users** window is displayed.



User Management - Manage Users

2. In the **Users** list, select the user you want to delete.



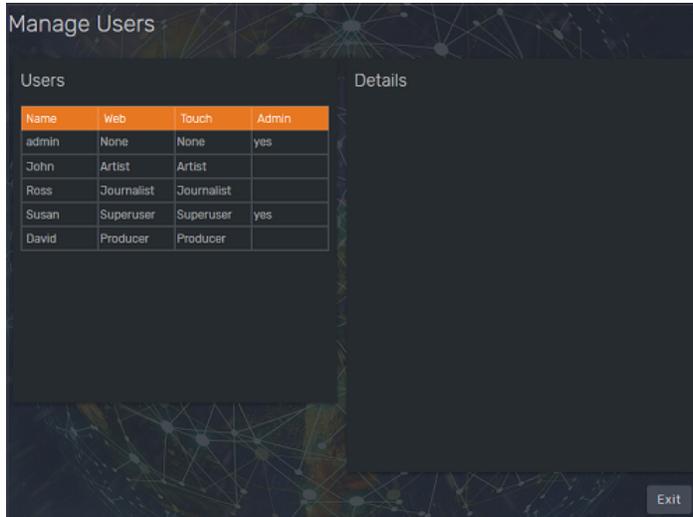
User Management - User Details

3. In the **Details** panel, select **Delete User**.
4. In the confirmation dialog that opens, select **OK** to confirm that you want to delete the user.
5. Select **Exit** to close the **Manage Users** window.

To edit user details:

1. From the **User Management Menu**, select **Manage Users**.

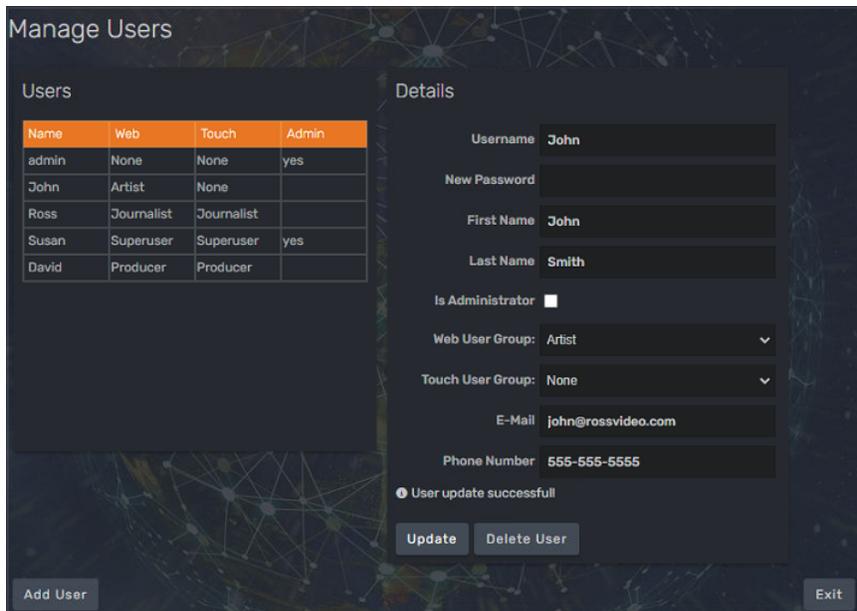
The **Manage Users** window is displayed.



User Management - Manage Users

2. From the **Users** list, select the user whose information you want to edit.

The **Details** panel is populated with the user's information.



User Management - User Details

3. Edit the user details as necessary and select **Update**.

A message appears above the **Update** button, indicating that the update was successful.

4. Select **Exit** to close the **Manage Users** window.

Managing Web User Groups

A **Web User Group** is a thematic, often role-based, classification that uses group membership to determine user privileges and access control.

By default, a set of **Web User Groups** is already created with the following privileges:

- **Artist** — Delete Saved Scenes
- **Journalist** — None
- **Producer** — Manage Saved Folders / Delete Saved Scenes
- **Production** — None
- **Superuser** — Manage Saved Folders / Delete Saved Scenes

Only users with administrator privileges can create, edit or delete **Web User Groups**, as well as enable or disable privileges for a user group.

Once a **Web User Group** is added to the system, users with administrator privileges can also assign a specific user group to the group. See [Managing Users](#)^[382] for more information.

The following topics are discussed in this section:

[Editing a Web User Group's details](#)^[386]

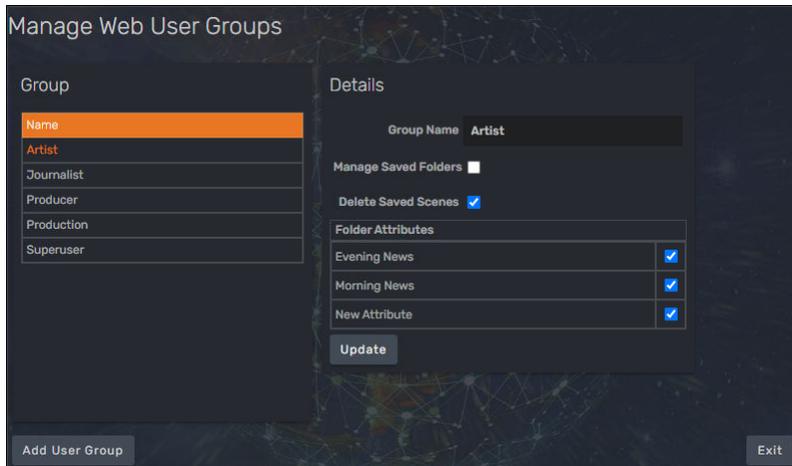
[Adding a new Web User Group](#)^[387]

[Deleting a Web User Group](#)^[388]

To edit an existing Web User Group:

1. From the **User Management Menu**, select **Web User Groups**.

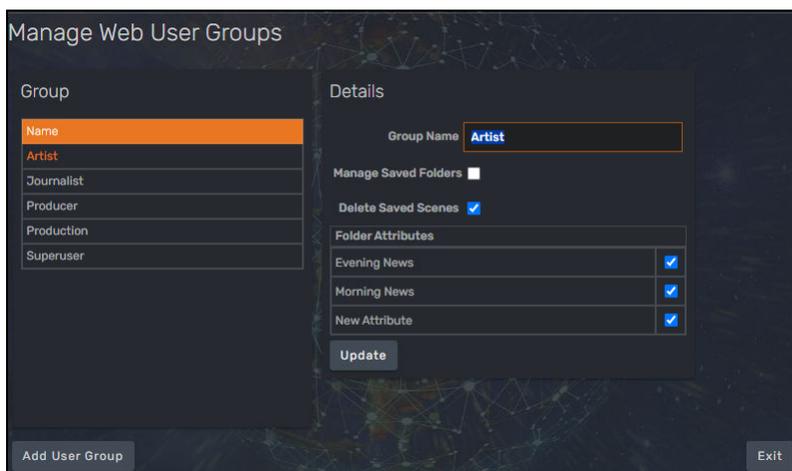
The **Manage Web User Groups** window for that group is displayed.



User Management - Manage Web User Groups

2. In the **Group** section, select the group you want to edit.

The **Details** panel is populated with the group's details.



User Management - Web User Group Details

3. In the **Details** panel, in the **Group Name** field, edit the name of the group or leave it unchanged.
4. Select or deselect the checkboxes to assign privileges to the group.

In the **Web User Groups**, the options are:

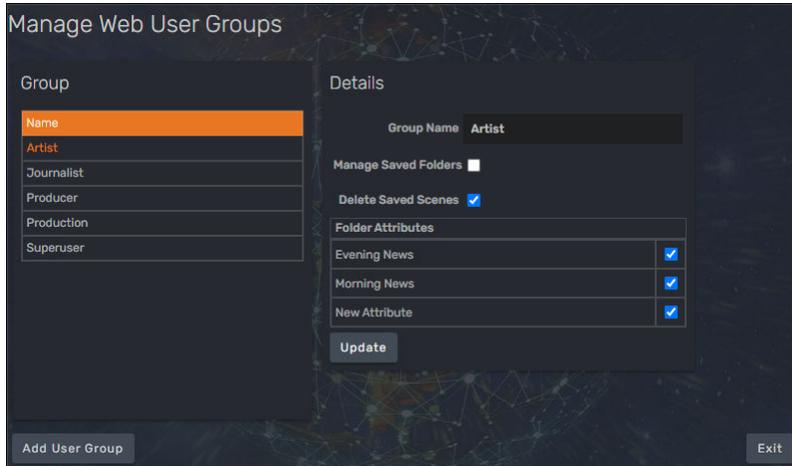
- **Manage Saved Folders** — The user will be able to add and delete **Group** folders and **Sub-folders** and edit the folder names.
- **Delete Saved Scenes** — The user will be able to delete scenes from the **Saved** tab.
- **Folder Attributes** — The user will have access to template and scene folders associated with these folder attributes.

5. Select **Update** to save your changes.
6. Select **Exit** to close the **Manage Web User Groups** screen.

To add a new Web User Group:

1. From the **User Management Menu**, select **Web User Groups**.

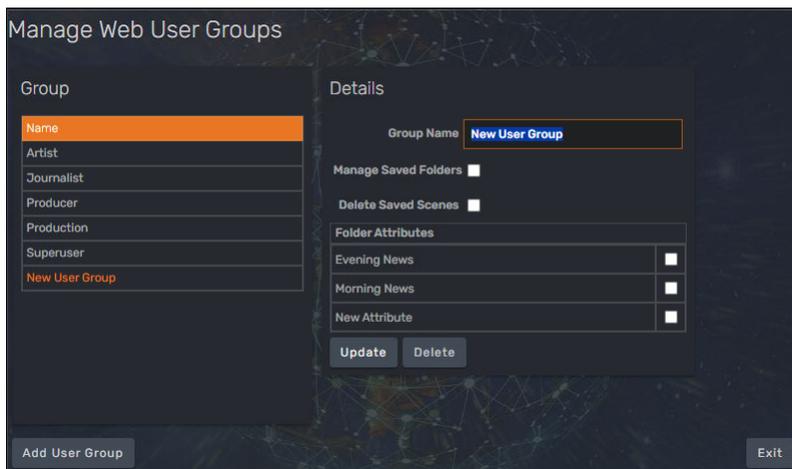
The **Manage Web User Groups** window for that group is displayed.



User Management - Manage Web User Groups

2. Select **Add User Group**.

The **Details** panel is ready to be populated with the group's details.



User Management - Web User Group Details

3. In the **Details** panel, in the **Group Name** field, enter a name for the group.
4. In the **Details** panel, select or deselect the checkboxes to assign privileges to the group.

The options are:

- **Manage Saved Folders** — The user will be able to add and delete **Group** folders and **Sub-folders** and edit the folder names.
- **Delete Saved Scenes** — The user will be able to delete scenes from the Saved tab.
- **Folder Attributes** — The user will have access to template and scene folders associated with these folder attributes.

5. Select **Update** to save your changes.

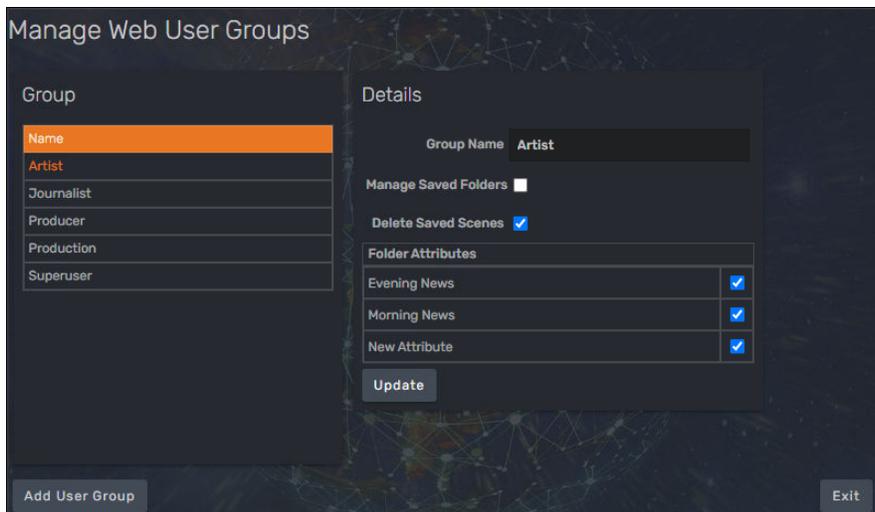
The user group is immediately added to the list in the **Group** section.

6. Select **Exit** to close the **Manage Web User Groups** window.

To delete a user group:

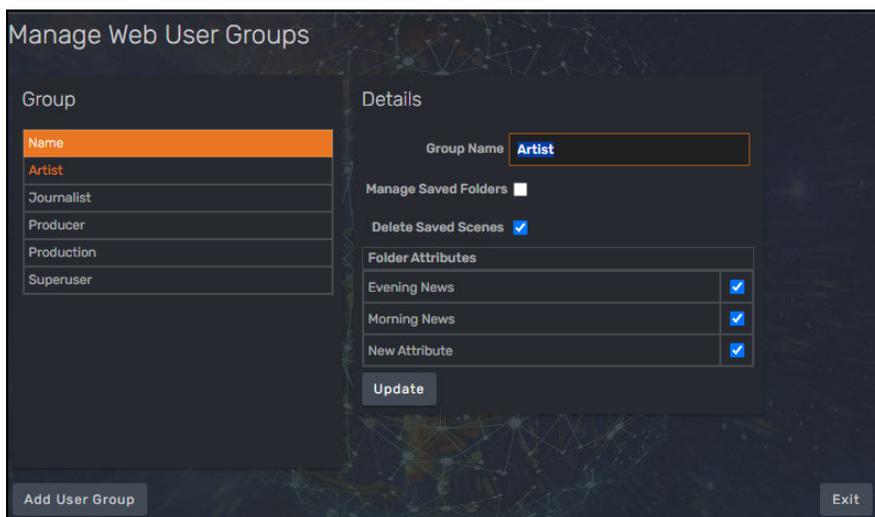
1. From the **User Management Menu**, select **Web User Groups**.

The **Manage User Groups** window for that group is displayed.



User Management - Manage Web User Groups

2. In the **Group** section, select the group you want to delete.



User Management - Web User Group Details

3. Select **Delete**.

The user group is immediately removed from the list.

4. Select **Exit** to close the **Manage Web User Groups** window.

Managing Attributes

An attribute is a user-defined label (e.g., Evening News) that can be assigned to one or more template or scene folders as the condition for whether a user group is granted access to the folder and its contents.

★ Only users who have administrator privileges can add or delete attributes from the system.

The following sections describe how to create, delete and edit folder attributes:

[Adding a new attribute](#) ³⁸⁹

[Deleting an attribute](#) ³⁹⁰

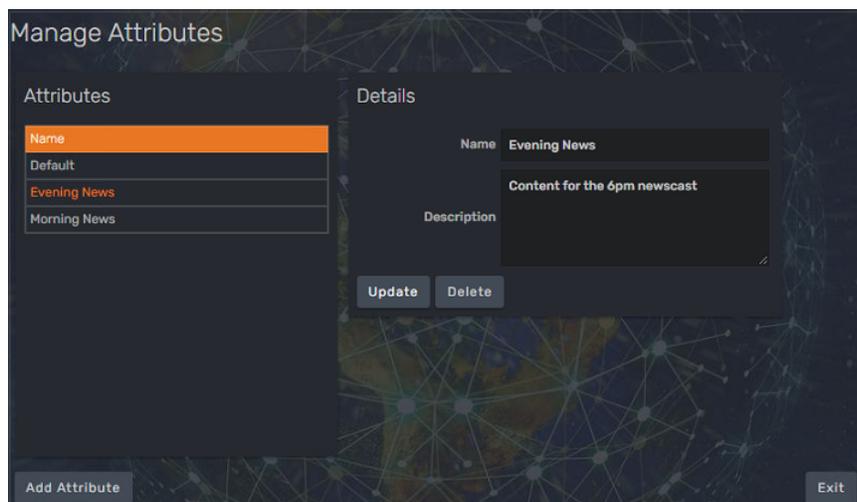
[Editing an attribute](#) ³⁹⁰

Once an attribute is added to the system, see [Folder Management](#) ³⁹⁵ for instructions on how to assign folder attributes to user groups.

To add a new attribute:

1. From the **User Management Menu**, select **Manage Attributes**.

The **Manage Attributes** window is displayed and lists all of the existing attributes, including the **Default** attribute.



User Management - Manage Attributes

2. In the **Manage Attributes** window, select **Add Attribute**.
3. In the **Details** section, enter the **Name** and **Description** for the new attribute.
4. Select **Update** to add the attribute.

A message appears above the **Update** button, indicating that the update was successful.

5. Select **Exit** to close the **Manage Attributes** screen.

The new attribute can now be assigned to various **Web User Groups**, as necessary. See [Managing Web User Groups](#) ³⁸⁵ for more information.

To delete an attribute:

1. From the **User Management Menu**, select **Manage Attributes**.

The **Manage Attributes** window is displayed.

2. In the **Attributes** section, select the name of the attribute to be deleted.
3. In the **Details** section, select **Delete**.
4. In the confirmation dialog that opens, select **OK** to confirm that you want to delete the attribute.

The attribute is immediately removed from the **Attributes** list. It is also no longer available to be assigned to any user groups and is removed from any user profiles where it was already assigned.

5. Select **Exit** to close the **Manage Attributes** screen.

To edit the name and/or description of an attribute:

1. From the **User Management Menu**, select **Manage Attributes**.

The **Manage Attributes** window is displayed.

2. In the **Attributes** section, select the name of attribute that is to be edited.
3. In the **Details** section, edit the **Name** and/or **Description**.
4. Select **Update** to apply the changes to the attribute.

A message appears above the **Update** button, indicating that the update was successful.

5. Select **Exit** to close the **Manage Attributes** screen.

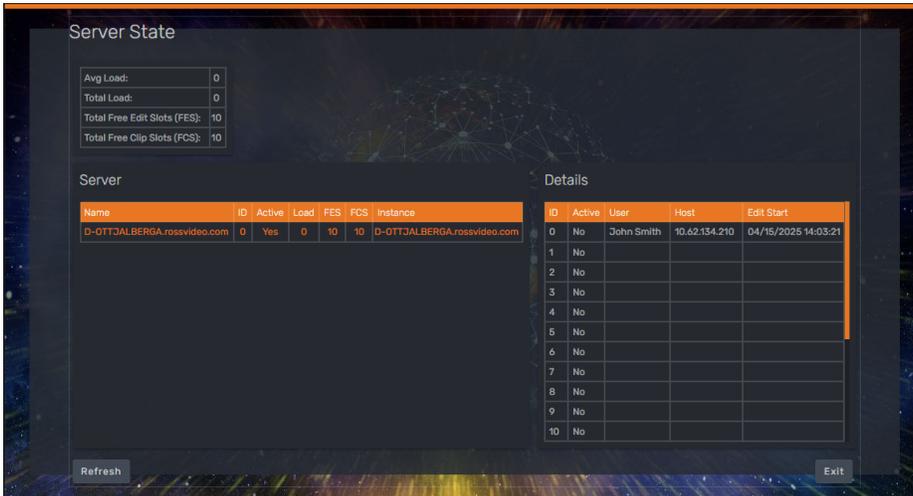
Monitoring the Status of XPression Maps Servers

Users with administrator privileges can access the **Server State** window to view the collective performance statistics of the XPression Maps Servers on the network. Additionally, individual XPression Maps Servers can be monitored to view their current capacity, performance and user activity.

The following topics are described in this section:

[Viewing the collective status of all XPression Maps Servers on the network](#) ³⁹¹

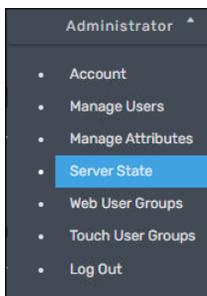
[Viewing the status of a specific XPression Maps Server](#) ³⁹²



HTML5 Client - Server State Window

To view the collective performance and capacity of all active XPression Maps Servers on the network:

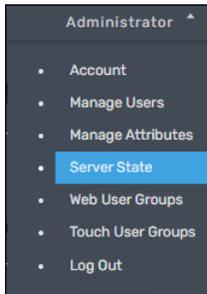
1. From the **User Management Menu**, select **Server State**.



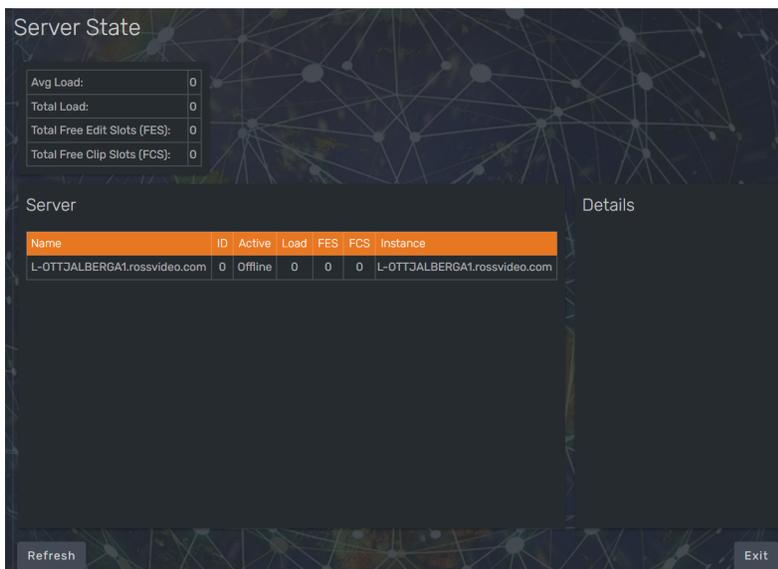
2. In the upper table of the **Server State** window, review the following statistics that represent the overall status of all active XPression Maps Servers on your network.
 - **Avg. Load** — The average processing load across all active servers.
 - **Total Load** — The combined processing load of all active servers.
 - **Total Free Edit Slots (FES)** — The total number of available edit slots across all active servers.
 - **Total Free Clip Slots** — The total number of available clip slots across all active servers.
3. Select **Refresh** (lower-left) to update the table with the latest data.
4. Select **Exit** to close the **Server State** window.

To view the current status of a specific XPression Maps Server on the network:

1. From the **User Management Menu**, select **Server State**.



2. In the **Server** section of the **Server State** window, review the list of XPression Maps Servers (active or inactive) that are on the network.

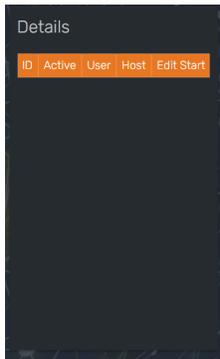


Server State Window

The following information is displayed for each server listed in the table:

- **Name** — The computer name of the XPression Maps Server.
- **ID** — Displays the row number used to reference server data in the **Server** table.
- **Active** — Displays **Yes** if the server is connected/active, or **No** if the server is disconnected/down.
- **Load** — The total load of the server calculated from the **FES** and **FCS**.
- **FES** — (Free Edit Slots) — The number of free slot user can use to edit a map.
- **FCS** — (Free Clip Slots) — The number of slots which can be used by the XPression Maps Gateway to render final clips.
- **Instance** — The name of the specific XPression Maps Server instance, which is useful when multiple instances are running in the same location.

3. In the **Server** section, select an active server to display a list of details.



Server State Details

The following information is displayed in the **Details** table:

- **ID** — Displays the row number used to reference user data in the **Details** table.
 - **Active** — Displays **Yes** if a user is actively logged in on the slot, or **No** if a user is not actively logged in on the slot.
 - **User** — The user name of the user that is currently logged in.
 - **Host** — The IP address of the host computer from where the user is logging in.
 - **Edit Start** — The timestamp (date and time) of when the user logged in.
- ★ All data is visible in the table until a new user logs in to a slot and overwrites the values.

4. Select **Refresh** (lower-left) to update the window the latest data.

5. Select **Exit** to close the **Server State** window.

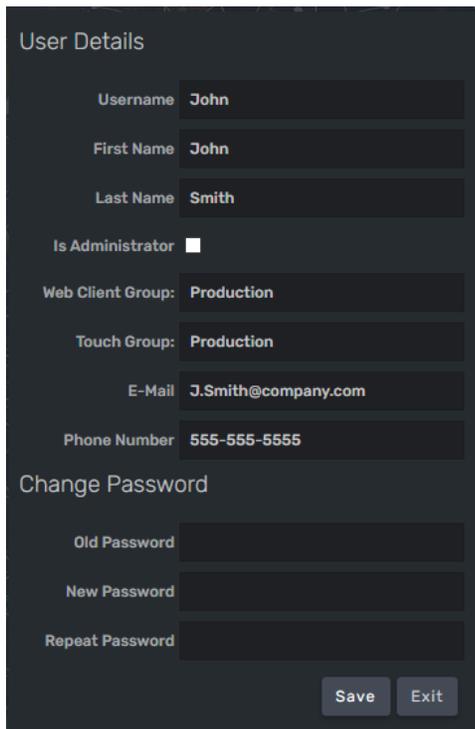
Changing your Password

Any user can change their own password.

To change your password:

1. From the **User Management Menu** in the upper-right corner, select **Account**.

The **User Details** window opens.



The screenshot shows a dark-themed 'User Details' window. It contains several input fields for user information: Username (John), First Name (John), Last Name (Smith), Is Administrator (checkbox), Web Client Group (Production), Touch Group (Production), E-Mail (J.Smith@company.com), and Phone Number (555-555-5555). Below this is a 'Change Password' section with three password input fields: Old Password, New Password, and Repeat Password. At the bottom right are 'Save' and 'Exit' buttons.

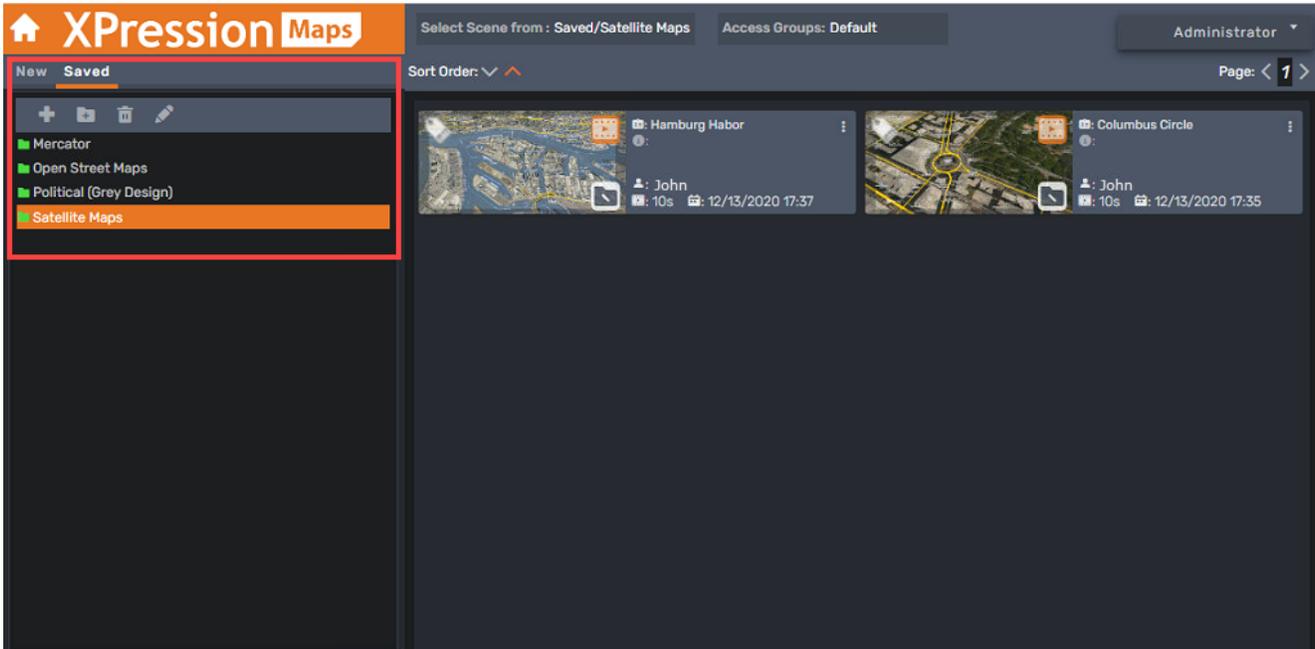
User Management - Change Password

2. In the **Change Password** section, in the **Old Password** field, enter your current password and then enter your new password twice.
3. Select **Save** and then select **Exit** to close the **User Details** window.

Folder Management in the HTML5 Client

In the **HTML5 Client**, scene templates are organized in a folder structure in the **New** tab on the **Home** page, while scenes are organized in folders in the **Saved** tab.

When the logged in user has the **Manage Saved Folders** privilege, the **Folder Management toolbar** appears below the tabs and allows the user to add, edit, delete and rename folders and sub-folders.



HTML5 Client - New and Saved Folder Management

The **HTML5 Client** can also be configured to use a role-based folder access system to control user access to the template and scene folders using folder attributes and user group conditions.

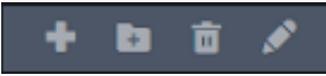
The following topics are discussed in this section:

[Managing Folders](#) ³⁹⁶

[Folder Access Control](#) ³⁹⁹

Managing Folders

Users who have been assigned the privilege of **Manage Saved Folders** can add, edit or delete folders and sub-folders using the **Folder Management** toolbar.



HTML5 Client - Folder Management Toolbar

- **Add New Folder** — Adds a new folder.
- **Add New Sub-Folder** — Adds a sub-folder to the selected folder. This button only appears when the **Saved** tab is selected.
- **Delete Folder** — Deletes the selected folder from the system.
- **Edit Folder** — Allows you to rename the folder, edit its description, and edit the folder's attributes assignment.

★ The **Folder Management** menu options are also accessible by right-clicking on a folder.

The following topics are discussed in this section:

[Adding a new folder](#)  397

[Adding a sub-folder](#)  397

[Deleting a folder](#)  398

[Editing an existing folder](#)  398

To add a folder and assign folder attributes:

1. Select the **New** or **Saved** tab.
2. Select the **Add New Folder** icon.



HTML5 Client - Add New Folder Icon

3. In the **New Folder** dialog, enter a **Name** for the folder and a brief **Description** of the folder.

HTML5 Client - Add New Folder

4. In the **Folder Attributes** section, enable the attributes that will determine whether the folder will be accessible to certain user groups.
5. Select **OK**.

To add a sub-folder to a Saved scene folder:

1. In the **Saved** tab, select the folder to which you want to add a sub-folder.
2. Select the **Add New Sub-Folder** icon.



HTML5 Client - Add New Sub-Folder Icon

3. In the **New Sub-Folder** dialog, enter a **Name** and **Description** for the sub-folder.

HTML5 Client - Add New Sub-Folder

4. Select **OK**.

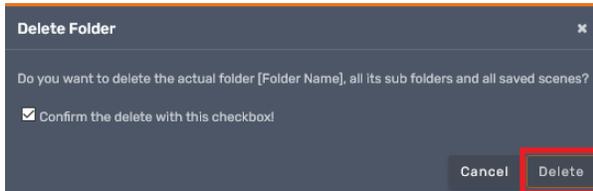
To delete a folder:

1. Select the **New** or **Saved** tab.
2. Select the folder or sub-folder you want to delete and select the **Delete Folder** icon.



HTML5 Client - Delete Folder Icon

3. In the **Delete Folder** dialog, select the checkbox to confirm that you want to delete the folder and all its contents and then select **Delete**.



HTML5 Client - Delete Folder

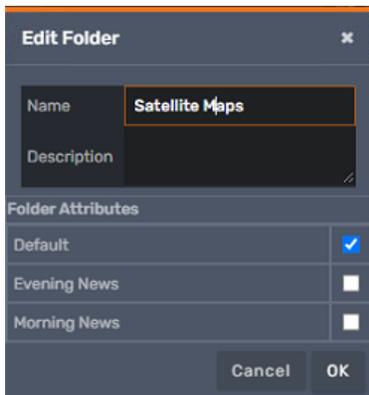
To edit a folder's name, description and/or attribute assignments:

1. Select the **New** or **Saved** tab.
2. Select the folder or sub-folder you want to edit and select the **Edit Folder** icon.



HTML5 Client - Edit Folder icon

3. In the **Edit Folder** dialog, enter a new **Name** and/or **Description** for the folder.



HTML5 Client - Edit Folder

4. In the **Folder Attributes** section, enable or clear the attributes that determine whether the folder will be accessible to certain user groups.
5. Select **OK**.

Folder Access Control

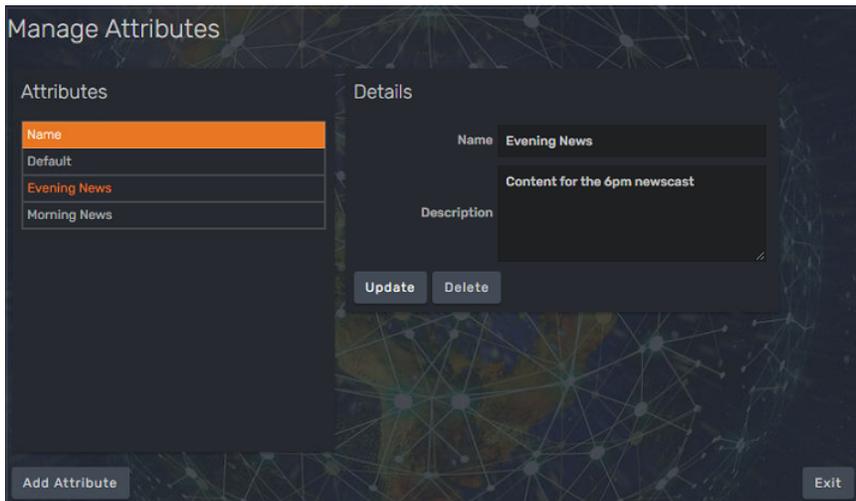
The XPression Maps **HTML5 Client** uses a folder access system to control template and scene folder access to users assigned to particular user groups. More specifically, it's the association of attributes assigned to folders and user group membership that determines which folders are visible or hidden from the logged in user.

For example, you could configure the system so that users associated with the 'Journalist' user group have access to folders with the 'Evening News' attribute, but 'Production' user group members won't have access since their user group doesn't include the 'Evening News' attribute.

Setting up the role-based folder access control system involves:

1. Create a folder attribute.

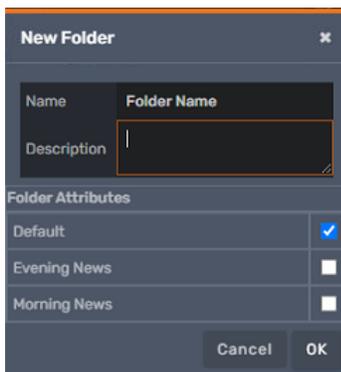
See [Managing Attributes](#) ³⁸⁹ for more information.



Manage Attributes - Attribute Details

2. Assign attributes to the folder.

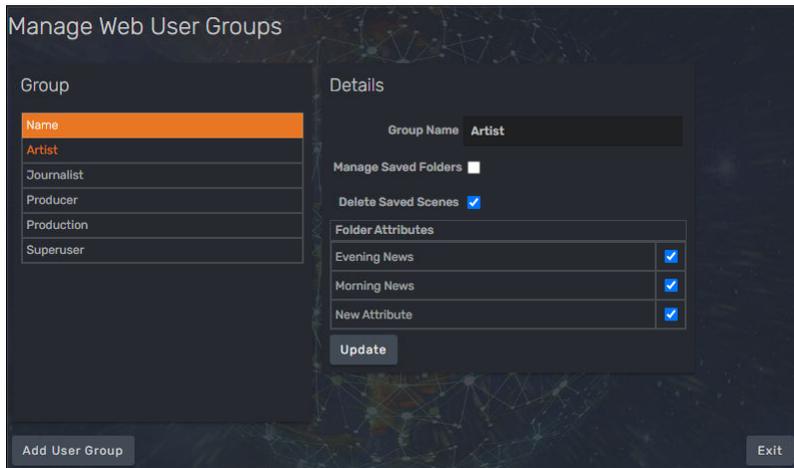
See [Managing Folders](#) ³⁹⁶ for more information.



New Folder - Folder Attributes

3. Assign attributes to the **Web User Groups**.

See [Managing Groups](#) ³⁸⁵ for more information.



Manage User Groups - Folder Attributes

Creating a Static Map Image File

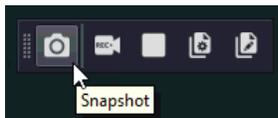
During the creation process or after completing a scene, the **Snapshot** tool allows you to capture and render a static image—either of a still map graphic or a single frame from an animated map graphic. The image can be saved in .jpg, .png, or .tga format.

To render a still map graphic and create an image file:

1. Display the map content on the **Canvas**.

If the active scene contains an animation, use the animation slider in the **Animation Editor** to scrub through the animation until you locate the frame that contains the map content that you want to capture as an image.

2. From the menu bar select **Output > Snapshot** or select the **Snapshot** button in the toolbar.



XPression Maps Toolbar - Snapshot

3. In the **Save** dialog, navigate to the folder in which you want to save the image file.
4. In the **File** name field, enter a name for the image file.
5. From the **File Type** drop-down, select the file format for your image.
The options are **.jpg**, **.png** and **.tga**.
6. Select **Save**.

Creating an Animated Map Video File

During the creation process or after completing a scene, the **Record Animation** function allows you to capture and render the full animation of a scene. The recorded animated map graphic can be saved in either .avi or .ffmpeg format.

The following topics are discussed in this section:

[Recording an Animation as an AVI File](#)⁴⁰³

[Recording an Animation in ffmpeg Format](#)⁴⁰⁵

Recording an Animation as an AVI File

Record the animation of your scene as an AVI (Audio Video Interleaved) file using the **Record Animation** function.

The following topics are discussed in this section:

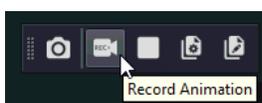
[Recording an Animation as an AVI File](#) ⁴⁰³

[Stopping the Recording of the Animation](#) ⁴⁰⁴

[Playing Back the Recorded Animation File](#) ⁴⁰⁴

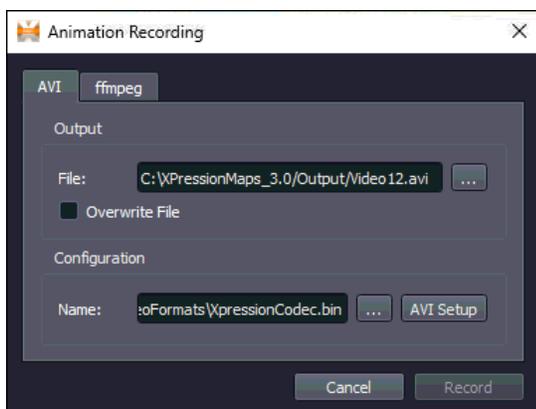
To record an animation as an AVI file:

1. Select **Output > Record Animation** in the menu bar or select **Record Animation** in the toolbar.



XPression Maps Toolbar - Record Animation

The **Animation Recording** dialog opens.



Animation Recording - AVI

2. Select the **AVI** tab if it is not already selected.
3. In the **Output** section, select **Browse** (...) beside the **File** field, to navigate to the location where you want to save the video file.

The **Save Video** dialog opens.

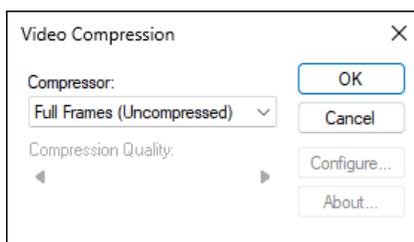
4. In the **Save Video** dialog, in the **File** name field, enter a name for the video file and select **Save**.

In the **Animation Recording** dialog, in the **Output** section, the **File** field is populated with the path to the video file.

5. Select the **Overwrite File** checkbox if you want to overwrite an existing copy of the animation or clear the checkbox if you want to keep existing copies and create a new video file.

If you choose not to overwrite an existing copy, you need to change the file name.

6. In the **Configuration** section, select **AVI Setup** to open the **Video Compression** dialog.



AVI Video Compression

a. Select a video compressor from the drop-down and select **OK**.

Some options will activate the **Compression Quality** slider and/or the **Configure** button and require further configuration.

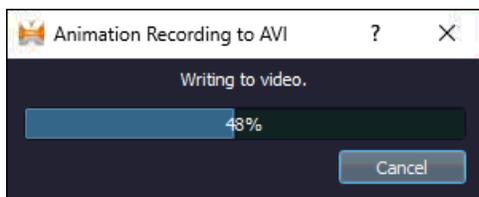
★ Video compression options depend on system capabilities.

b. Select **OK** when you have finished configuring the video compression.

7. In the **Save Format File**, select a video format file and select **Save**.

8. When you have finished configuring the output, select **Record** to record your animation.

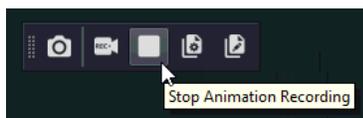
The **Animation Recording** progress dialog opens. When the recording is complete, the dialog closes.



Animation Recording Progress Dialog - AVI

To stop recording an animation:

- In the **Animation Recording** dialog, select **Cancel** or select the **Stop Animation Recording** button in the toolbar.



XPression Maps Toolbar - Stop Animation Recording

To play a recorded animation:

1. Navigate to the folder in which you've saved your recorded animations.
2. Double-click the recording you want to play.

Recording an Animation in ffmpeg Format

Record the animation of your scene into one of several ffmpeg file formats using the **Record Animation** function.

The following topics are discussed in this section:

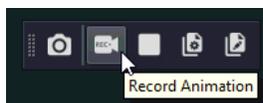
[Recording an Animation as an ffmpeg File](#) ⁴⁰⁵

[Stopping the Recording of the Animation](#) ⁴⁰⁶

[Playing Back the Recorded Animation File](#) ⁴⁰⁶

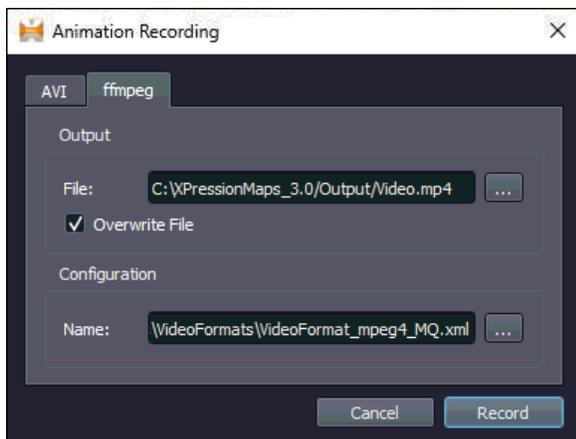
To record an animation in an ffmpeg file format:

1. Select **Output > Record Animation** in the menu bar or select the **Record Animation** button in the toolbar.



Maps Toolbar Record Animation

The **Animation Recording** dialog opens.



Animation Recording - ffmpeg

2. Select the **ffmpeg** tab if it is not already selected.
3. In the **Output** section, select **Browse** (...) beside the **File** field, to navigate to the location where you want to save the video file.

The **Save Video** dialog opens.

4. In the **Save Video** dialog, in the **File** name field, enter a name for the video file and select **Save**.

Include the appropriate file extension in your file name.

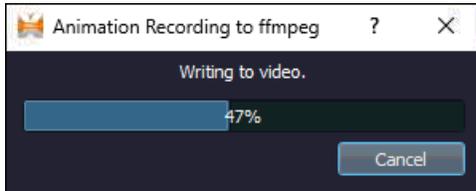
In the **Animation Recording** dialog, in the **Output** section, the **File** field is populated with the path to the video file.

5. Select the **Overwrite File** checkbox if you want to overwrite an existing copy of the animation or clear the checkbox if you want to keep existing copies and create a new video file.

If you choose not to overwrite an existing copy, you need to change the file name.

6. When you have finished configuring the output, select **Record** to record your animation.

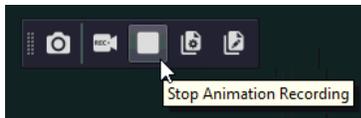
The **Animation Recording to ffmpeg** progress dialog opens. When the recording is complete, the dialog closes.



Animation Recording Progress Dialog - ffmpeg

To stop recording an animation:

- In the **Animation Recording** dialog, select **Cancel** or select the **Stop Animation Recording** button in the toolbar.



XPression Maps Toolbar - Stop Animation Recording

To play a recorded animation:

1. Navigate to the folder in which you've saved your recorded animations.
2. Double-click the recording you want to play.

Appendix A: Keyboard Shortcuts

Shortcuts for the following menus and windows are included in this section:

[File Menu Shortcuts](#) 

[Edit Menu Shortcuts](#) 

[Output Menu Shortcuts](#) 

[Animation Menu Shortcuts](#) 

[Interactive Menu Shortcuts](#) 

[Canvas Shortcuts](#) 

File Menu Shortcuts

Command	Shortcut
New	CTRL+N
Open	CTRL+O
Save	CTRL+S
Save As	CTRL+SHIFT+S
Export	CTRL+E
Open Recent Used	CTRL+0...4
Exit	CTRL+Q

Edit Menu Shortcuts

Command	Shortcut
Undo	CTRL+Z
Redo	CTRL+Y
Copy Drawing	CTRL+C
Cut Drawing	CTRL+X
Paste Drawing	CTRL+V
Move Drawing to Top	CTRL+Page Up
Move Drawing Up	CTRL+Up
Move Drawing Down	CTRL+Down
Move Drawing to Bottom	CTRL+Page Down
Next Animation Key Frame	CTRL+Right Arrow
Previous Animation Key Frame	CTRL+Left Arrow
Add Camera Key Frame	CTRL+,
Add Drawing Key Frame	CTRL+.
Delete Selected Key Frames	CTRL+D

Output Menu Shortcuts

Command	Shortcut
Snapshot	CTRL+P
Record Animation	CTRL+R

Interactive Menu Shortcuts

★ The **Interactive** menu is only available when XPression Maps is running in **Interactive mode**.

Command	Shortcut
Execute	F5

Animation Menu Shortcuts

Command	Shortcut
Rewind Animation	CTRL+B
Play Animation	CTRL+Space Bar
Continue Animation	CTRL+G
Stop Animation	CTRL+H
Forward Animation	CTRL+M

Canvas Shortcuts

Command	Shortcut
Toggle Framerate Display	F
Select Previous Point (shape, area object, or line object)	Left Arrow
Select Next Point (shape, area object, or line object)	Right Arrow
Delete drawing or point (shape, area drawing, line drawing)	Delete
To enter Full Screen Mode	F11
To exit Full Screen Mode	Esc

Appendix B: Managing Network Security

Secure Sockets Layer (SSL) protocol protects sensitive information as it travels across computer networks. It provides privacy, critical security and data integrity.

This section describes how to enable the **SSL** protocol in **XPression Maps**.

An **SSL** certificate must be purchased and used with the **XPression Maps Gateway** and the **XPression Maps Designer** application. Purchase an **SSL** certificate from a trusted root authority (our certificates are purchased from DigiCert, so these instructions will use the steps for DigiCert as an example).

Buying an SSL Certificate

To purchase an **SSL** certificate, a **CSR** file must be generated and sent to the certificate authority. The **CSR** file describes the server machine that will hold the certificate as well as your **Company** and **Organization** details.

The **CSR** can usually be generated using a tool provided by the certificate authority (or they will provide documentation on how to generate the CSR).

Using the SSL Certificate

The certificate authority will provide you with the **SSL** certificate files.

To use the certificates:

Copy the certificate chain file (**.crt**) and the unencrypted private key (**.key**) into the following locations:

- C:\Program Files\XPression Maps\bin64\certs
- C:\Program Files\XPression Maps Gateway\certs

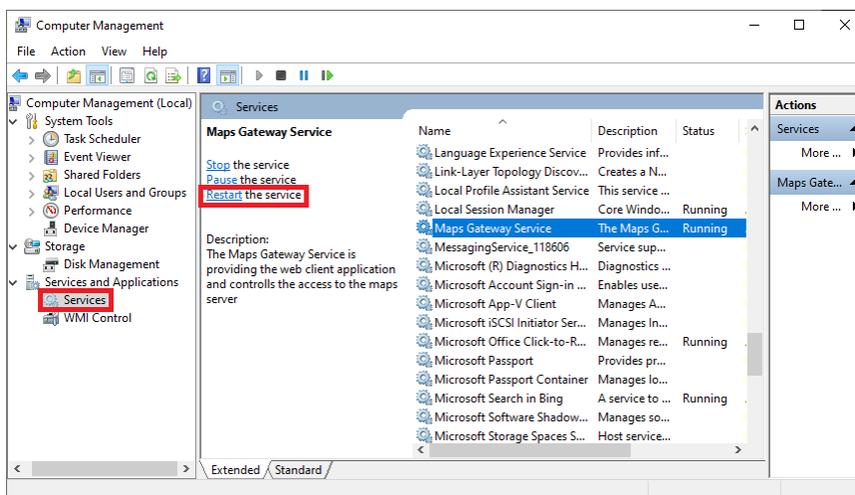
To configure the Maps Gateway:

1. Navigate to **C:\Program Files\Xpression Maps Gateway\bin64\MapsGatewayConfig.xml**.

```
<!-- To enable SSL set SSL to "1" and the <HttpServer Port="80" to Port="443" -->
<Main ApplicationFolder="C:\XpressionMapsGateway" LogFileName="/log/Main.log" LogLevel="Error" SSL="0" />
<HttpServer Port="80" HostName="L-OTTIHUGHES1.rossvideo.com" DocumentFolder="/htdocs"
ResourcePrefix="/clips" PreviewClipShare="Z:/preview" DebugCommunication="false" />
<HttpServer Port="443" HostName="L-OTTIHUGHES1.rossvideo.com" DocumentFolder="/htdocs"
ResourcePrefix="/clips" PreviewClipShare="Z:/preview" DebugCommunication="false" />
<MapController DBHostName="L-OTTIHUGHES1.rossvideo.com" DBPort="3306" DBUser="mapuser"
DBPassword="wmndb" AppWSPort="9977" FullResClipShare="C:\XpressionMapsGateway/clips" />
<Interactive DBHostName="L-OTTIHUGHES1.rossvideo.com" DBPort="3306" DBUser="mapuser"
DBPassword="wmndb" />
</MapController/>
<!-- set AutoLogoutMin to the minutes when auto logout will happen or to "0" to disable auto logout -->
<UserController DBHostName="L-OTTIHUGHES1.rossvideo.com" DBPort="3306" DBUser="mapuser"
DBPassword="wmndb" AutoLogoutMin="9" />
</HttpServer>
</config>
```

MapsGatewayConfig.xml

2. In the editor, change the **SSL** value to **1** and the **HttpServer Port** to **443**.
3. Select **File > Save**.
4. Open the **Windows Computer Management** application and from **Services and Applications**, select **Services > Maps Gateway Service**.

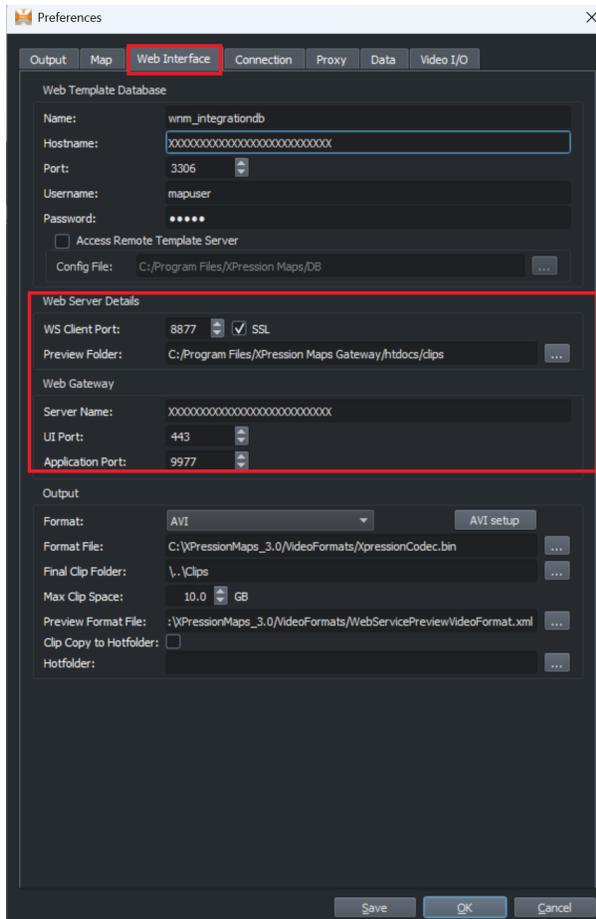


Maps Gateway Service

5. In the **Services** pane, select **Restart** the service.

To configure XPression Maps:

1. Launch the **XPression Maps** application.
2. Go to **File > Preferences > Web Interface**.



Preferences - Web Interface

3. In the **Web Server Details** section, select the **SSL** checkbox.
4. In the **Web Gateway** section, change the **UI Port** from **80** to **443**.
5. Select **OK** and relaunch the application.

Appendix C: Third Party Licenses

XPression Maps uses software covered by one or more of the licenses described below:

As required by the GNU General Public License, and the Lesser GNU Public License (LGPL), source code can be obtained from Ross Video for at least 3 years. Contact [Ross Video Technical Support](#) for more information.

Name	Version	License
Assimp (Open Asset Import Library)		Assimp License ⁴¹⁴
Earcut	0.12.4	ISC License ⁴¹⁴
FFmpeg	3.3.3	FFmpeg License ⁴¹⁵
FreeImage	1.0	FreeImage Public License ⁴¹⁸
FreeType		FreeType Project License ⁴²³ FreeType Font Engine License ⁴²³
GDAL/OGR		GDAL/OGR License ⁴²⁶
GStreamer and Glib	2.0	GNU Library General Public License ⁴³⁰
GTS	2.0	GNU Library General Public License ⁴³⁶
ImageMagick		GNU Library General Public License ⁴⁴²
Libav		GNU Lesser General Public License ⁴⁴⁶
Noto-emoji		Apache License 2.0 ⁴⁵⁴
Poly2Tri		Poly2Tri License ⁴⁵⁷
ProtoZero	1.5.2	Apache License 2.0 ⁴⁵⁸
Vector Tile	1.0.1	Copyright ⁴⁶²

Assimp License

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Exception: Applies to all files in the ./test/models-nonbsd folder. These are 3D models for testing purposes, from various free sources on the internet. They are - unless otherwise stated - copyright of their respective creators, which may impose additional requirements on the use of their work. For any of these models, see <model-name>.source.txt for more legal information. Contact us if you are a copyright holder and believe that we credited you improperly or if you don't want your files to appear in the repository.

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FFmpeg License

FFmpeg is used in this work under the "GNU LESSER GENERAL PUBLIC LICENSE" Version 2.1, February 1999. The files LICENSE.md and COPYING.LGPLv2.1 distributed in Ext_License/FFmpeg contain additional details.

Some optional parts of FFmpeg are licensed under the GNU General Public License version 2 or later (GPL v2+). See the file `COPYING.GPLv2` for details. None of these parts are used by default, you have to explicitly pass `--enable-gpl` to configure to activate them. In this case, FFmpeg's license changes to GPL v2+.

Specifically, the GPL parts of FFmpeg are:

- libpostproc
- optional x86 optimization in the files
 - `libavcodec/x86/flac_dsp_gpl.asm`
 - `libavcodec/x86/idct_mmx.c`
 - `libavfilter/x86/vf_removegrain.asm`
- the following building and testing tools
 - `compat/solaris/make_sunver.pl`
 - `doc/t2h.pm`
 - `doc/txi2pod.pl`
 - `libswresample/swresample-test.c`
 - `tests/checkasm/*`
 - `tests/tiny_ssim.c`
- the following filters in libavfilter:
 - `vf_blackframe.c`
 - `vf_boxblur.c`
 - `vf_colormatrix.c`
 - `vf_cover_rect.c`
 - `vf_cropdetect.c`
 - `vf_delogo.c`
 - `vf_eq.c`
 - `vf_find_rect.c`
 - `vf_fspp.c`
 - `vf_geq.c`
 - `vf_histeq.c`

- `vf_hqdn3d.c`
- `vf_interlace.c`
- `vf_kerndeint.c`
- `vf_mcdeint.c`
- `vf_mpdecimate.c`
- `vf_owdenoise.c`
- `vf_perspective.c`
- `vf_phase.c`
- `vf_pp.c`
- `vf_pp7.c`
- `vf_pullup.c`
- `vf_repeatfields.c`
- `vf_sab.c`
- `vf_smartblur.c`
- `vf_spp.c`
- `vf_stereo3d.c`
- `vf_super2xsai.c`
- `vf_tinterlace.c`
- `vf_uspp.c`
- `vsrc_mptestsrc.c`

Should you, for whatever reason, prefer to use version 3 of the (L)GPL, then the configure parameter `--enable-version3` will activate this licensing option for you. Read the file `COPYING.LGPLv3` or, if you have enabled GPL parts, `COPYING.GPLv3` to learn the exact legal terms that apply in this case.

There are a handful of files under other licensing terms, namely:

- The files `libavcodec/jfdctfst.c`, `libavcodec/jfdctint_template.c` and `libavcodec/jrevdct.c` are taken from libjpeg, see the top of the files for licensing details. Specifically note that you must credit the IJG in the documentation accompanying your program if you only distribute executables.

You must also indicate any changes including additions and deletions to those three files in the documentation.

- `tests/reference.pnm` is under the expat license.

External libraries

FFmpeg can be combined with a number of external libraries, which sometimes affect the licensing of binaries resulting from the combination.

Compatible libraries

The following libraries are under GPL:

- frei0r
- libcdio
- librubberband
- libvidstab
- libx264
- libx265
- libxavs
- libxvid

When combining them with FFmpeg, FFmpeg needs to be licensed as GPL as well by passing `--enable-gpl` to configure.

The OpenCORE and VisualOn libraries are under the Apache License 2.0. That license is incompatible with the LGPL v2.1 and the GPL v2, but not with version 3 of those licenses. So to combine these libraries with FFmpeg, the license version needs to be upgraded by passing `--enable-version3` to configure.

Incompatible libraries

There are certain libraries you can combine with FFmpeg whose licenses are not compatible with the GPL and/or the LGPL. If you wish to enable these libraries, even in circumstances that their license may be incompatible, pass `--enable-nonfree` to configure. But note that if you enable any of these libraries the resulting binary will be under a complex license mix that is more restrictive than the LGPL and that may result in additional obligations.

It is possible that these restrictions cause the resulting binary to be unredistributable.

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The NVENC library, while its header file is licensed under the compatible MIT license, requires a proprietary binary blob at run time, and is deemed to be incompatible with the GPL. We are not certain if it is compatible with the LGPL, but we require `--enable-nonfree` even with LGPL configurations in case it is not.

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gdal/frmts/gtiff/tif_float.c

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gdal/frmts/pcraster/libcsf

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gdal/ogr/ogrsf_frmts/dxf/intronurbs.cpp

This code is derived from the code associated with the book "An Introduction to NURBS" by David F. Rogers. More information on the book and the code is available at:

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gdal/alg/thinplatespline.cpp

IEEE754 log() code derived from: @(#)e_log.c 1.3 95/01/18

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- the X11 grabber in `libavdevice/x11grab.c`
- the `texi2pod.pl` tool
- the following filters in `libavfilter`:
 - `vf_blackframe.c`
 - `vf_boxblur.c`
 - `vf_croptdetect.c`
 - `vf_delogo.c`
 - `vf_hqdn3d.c`
 - `vf_interlace.c`

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- The files `libavcodec/jfdctfst.c`, `libavcodec/jfdctint_template.c` and `libavcodec/jrevdct.c` are taken from `libjpeg`, see the top of the files for licensing details. Specifically note that you must credit the IJG in the documentation accompanying your program if you only distribute executables. You must also indicate any changes including additions and deletions to those three files in the documentation.

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compatible libraries

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Version 2.1, February 1999

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(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

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Appendix D: Datasets and Map Sources

Data layers and external map styles, not libraries.

- **Blue Marble (NASA)** — The Blue Marble map style comes from 'NASA Earth Observatory'. Add the following credit line to your closing credits or web page: "Blue Marble: Next Generation by NASA's Earth Observatory."
- **Natural Earth Data** — The shape database "Natural Earth" used in this software comes out of the public domain. For details visit <http://www.naturalearthdata.com/about/terms-of-use/>.
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Appendix E: Patent-Licensed Technologies

Codec patent pools — these are not open-source software (OSS), but they require notice of license coverage

The encoding of the video media in combination with FFmpeg or libav is licensed under the following patent portfolio licenses from MPEG LA, LLC, 6312 S. Fiddlers Green Circle, Suite 400E, Greenwood Village, Colorado 80111 U.S.A.

- The MPEG-2 PATENT PORTFOLIO
- The MPEG-4 VISUAL PATENT PORTFOLIO
- The VC-1 PATENT PORTFOLIO
- The AVC PATENT PORTFOLIO

Appendix F: LDAP and XPression Maps

Lightweight directory access protocol (LDAP) is an open and cross-platform protocol that will help secure and authenticate the XPression Maps Web Client application's user information (user names, passwords, email addresses, account IDs, etc.)

★ Before you start configuring LDAP, consult with your IT department to get the information designated with the ★ symbol.

To access and enable the Maps LDAP configuration file:

1. Navigate to the **MapsLDAPConfig.exe** file on your computer.

Typically this file is located in **C:\Program Files\XPression Maps Gateway\bin64\MapsLDAPConfig.exe**.

2. Double-click the **MapsLDAPConfig.exe** file to open the configuration dialog.

The screenshot shows the 'MapsLDAPConfig V3.4.2' dialog box. The 'LDAP' checkbox is checked. The 'Server' section has 'Domain' as an empty text box, 'SSL' as an unchecked checkbox, and 'Port' as a numeric spinner set to 0. The 'Bind User' section has 'User DN' and 'Password' as empty text boxes and a 'Connect' button. The 'User Search' section has 'Query' as 'me=%1(sAMAccountName=%1)(displayName=%1)(mail=%1)', 'Attributes' as 'sAMAccountName,displayName,mail,memberOf', 'Membership Attr.' as 'memberOf', and 'Base DN' as an empty text box. There are '...' buttons for 'Query' and 'Attributes', and a 'Reset' button for 'Membership Attr.'. The 'Misc' section has 'Display Name' as 'displayName' and 'Description' as 'description', each with a 'Reset' button. The 'Test Login' section has 'Username' and 'Password' as empty text boxes and a 'Test' button. A 'Save' button is at the bottom right.

MapsLDAP Configuration File

3. Select the **LDAP** checkbox to enable XPression Maps to use LDAP user authentication for user login.

To configure the LDAP server parameters:

1. In the **Server** section, in the **Domain** field, enter the domain name that is appended to all users in your company, e.g., rossvideo.com.



The screenshot shows a dialog box titled "Server" with three fields: "Domain:" with the text "rossvideo.com", "SSL:" with an unchecked checkbox, and "Port:" with a numeric spinner set to "389".

Server Properties

2. If you are using the **Secure Sockets Layer** (SSL) protocol, select the **SSL** checkbox and in the **Port** field, enter **636**.

OR

If you are not using the **SSL** protocol, leave the **SSL** checkbox clear and in the **Port** field, enter **389**.

★ These are the standard LDAP ports. A different port may be used if necessary. Consult with your IT department.

To configure the Bind User parameters:

1. In the **User DN** field, enter the name of the administrative account which will be responsible for retrieving information from the LDAP server.

This is a **Read-Only** account.



The screenshot shows a dialog box titled "Bind User" with two fields: "User DN:" containing "xPNMapsLDAP" and "Password:" with a masked password of seven dots. A "Disconnect" button is located to the right of the password field.

Bind User Properties

2. In the **Password** field, enter the password for this account.

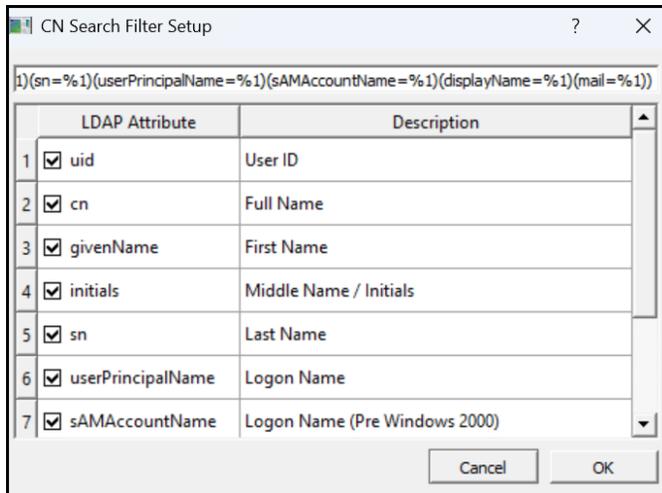
★ Ask your IT department for the name of the administrative account and the password.

3. Then select **Connect**.

If the **Bind User** credentials are correct, you will see a message at the bottom of the window, saying "**BindUser Connected!**"

To configure the User Search parameters:

1. In the **Query** field, select the **Browse (...)** button to open the **CN Search Filter Setup** window.
2. Select the attribute to determine the username for HTML5 plugin users.



CN Search Filter Setup

★ Consult with your IT department to determine which attributes should be used.

3. In the **Attributes** field, select the **Browse (...)** button to open the **Attribute Filter Setup** window.
4. Select the attributes to be retrieved from the LDAP server.

This should only include the **cn**, **displayName**, and **description** fields.

5. In the **Membership Attr.** field, enter the group membership attribute that defines how groups are assigned to a user (e.g., memberOf).

★ Consult with your IT department to determine what attribute to use.

★ This attribute must be one of the attributes selected in the **Attributes** field.

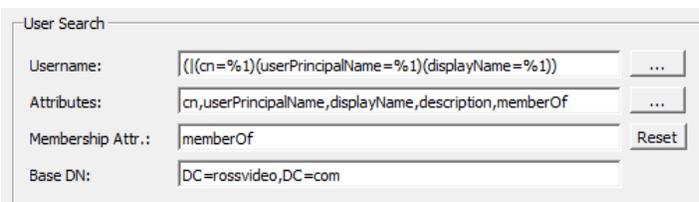
Selecting the **Reset** button restores the field to its default value.

6. In the **Base DN** field, enter the **Base Distinguished Name** of your LDAP directory.

The **Base Distinguished Name** (also known as the search base) identifies the root LDAP node in the directory, from which user searches are initiated.

e.g., DC=companyname, DC=com (where "**DC**" stands for "**Domain Component**") and OU=Canada and OU=IT (where "**OU**" stands for "**Organizational Unit**")

★ Ask your IT department for this information.



Base DN Properties

To configure the Miscellaneous section:

1. In the **Display Name** field, enter the attribute you want to see displayed when the user logs in to the application.

e.g., displayName, givenName, mail

★ This attribute must be one of the attributes selected in the **Attributes** field.

Selecting the **Reset** button restores the field to its default value.



The screenshot shows a 'Misc' configuration panel. It contains two rows. The first row is labeled 'Display Name:' and has a text input field containing 'displayName' and a 'Reset' button to its right. The second row is labeled 'Description:' and has a text input field containing 'description' and a 'Reset' button to its right.

Misc Properties

2. The **Description** field is optional and doesn't impact any function.

Selecting the **Reset** button restores the field to its default value.

To configure the Test Login section:

1. In the **Username** field, enter your username, as defined in the **Username** attributes in the **User Search** section.

e.g., If you selected (**givenName=%1**) in the **Username** attributes, you would enter your full name here.



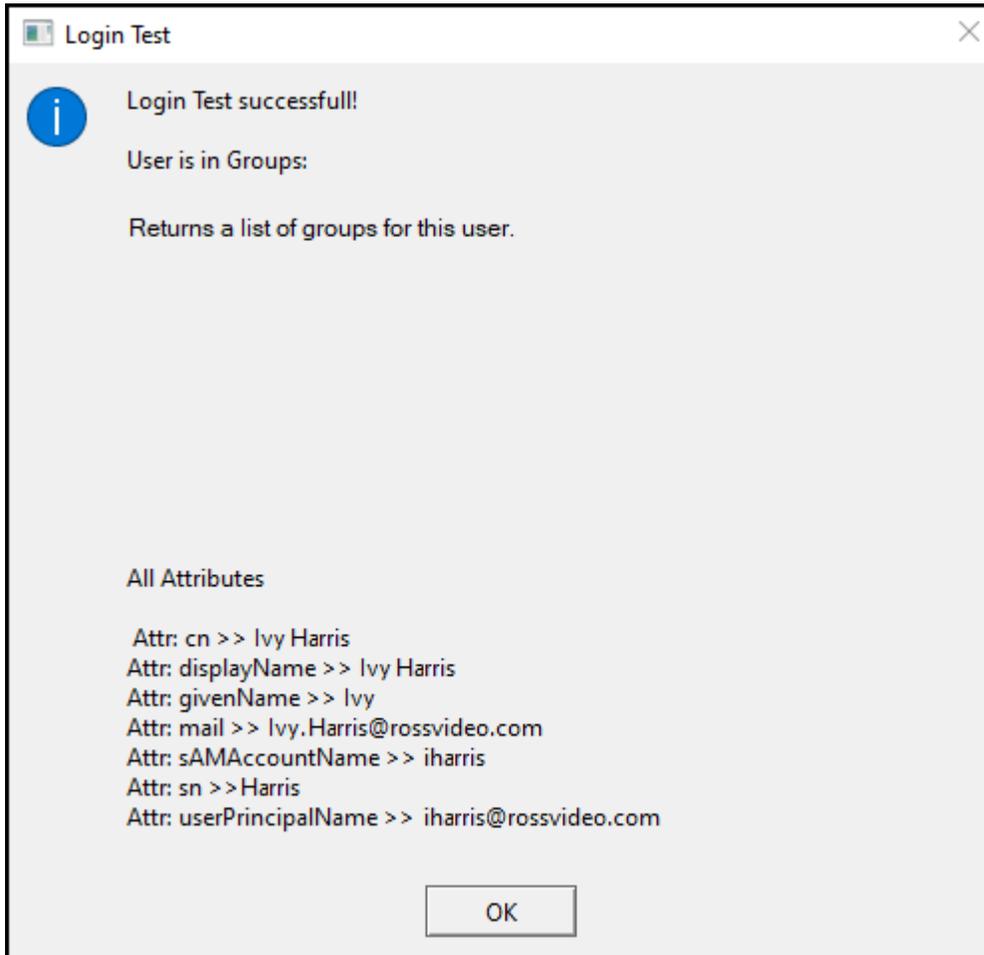
The screenshot shows a 'Test Login' configuration panel. It contains two rows. The first row is labeled 'Username:' and has a text input field containing 'Ivy Harris' and a 'Test' button to its right. The second row is labeled 'Password:' and has a password input field with seven dots and a 'Test' button to its right.

Test Login Properties

2. In the **Password** field, enter your usual company login password.

3. Select the **Test** button to check that the credentials you entered work.

If you have everything configured correctly, you will get a **Results** window indicating that the Login Test was successful and returning all the data you requested in the **Attributes** field.



Successful Login Results

If you have configured something incorrectly, you will get a **Login Test Failed** message. Review your configuration to make sure it is correct and re-test.

4. When you have achieved a successful login test, select **Save** and close the Maps LDAP Configuration dialog.

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