

GXP Xplorer® and GXP WebView® v2.4.5 release details

Nicholas Rosengarten
GXP™ Product Development



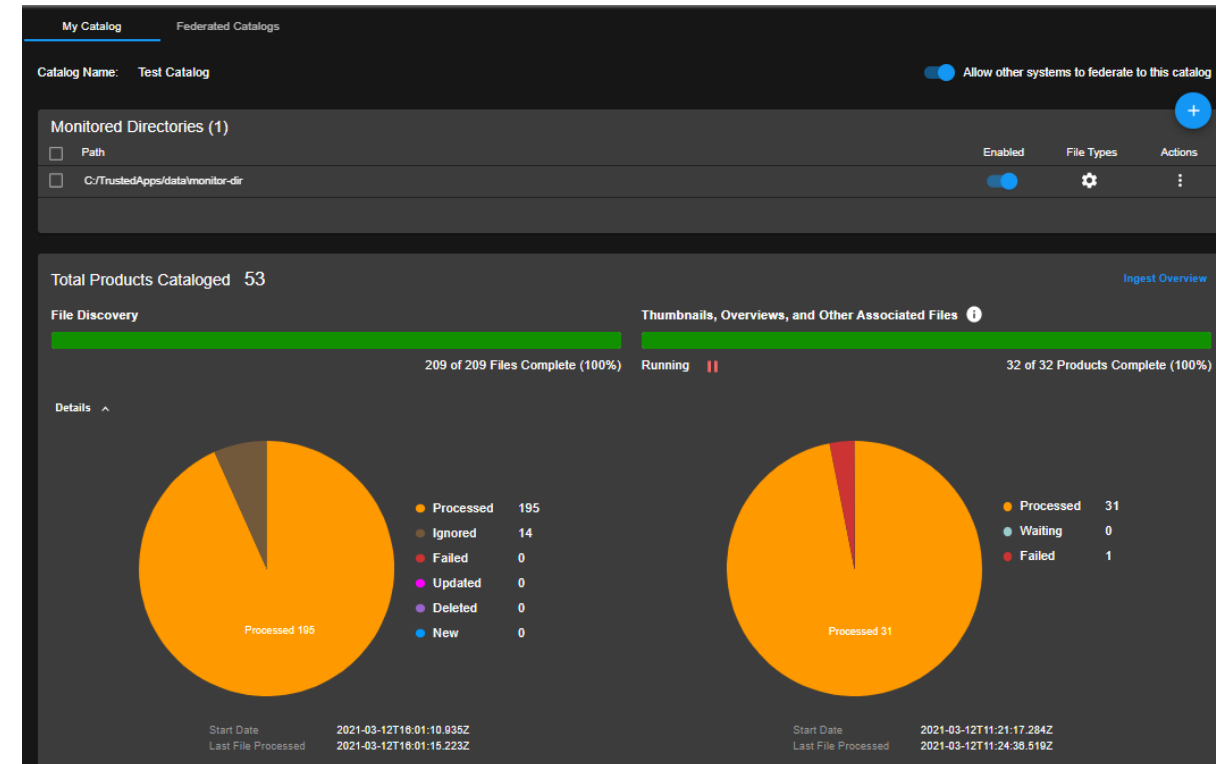


Infrastructure

- MSP has been fully updated to v1.6.3
- CoreSDK has been upgraded to v4.4.1.3.292
- DRS has been upgraded to v5.6.03.R11.12
- Federation is supported from GXP Xplorer® Platform v2.3.6.2 or later.
- Upgrade is supported from GXP Xplorer Platform v2.3.6.2 or later.
- GXP Xplorer can now federate with instances of Enhanced Streaming Service (ESS) with proper configuration.

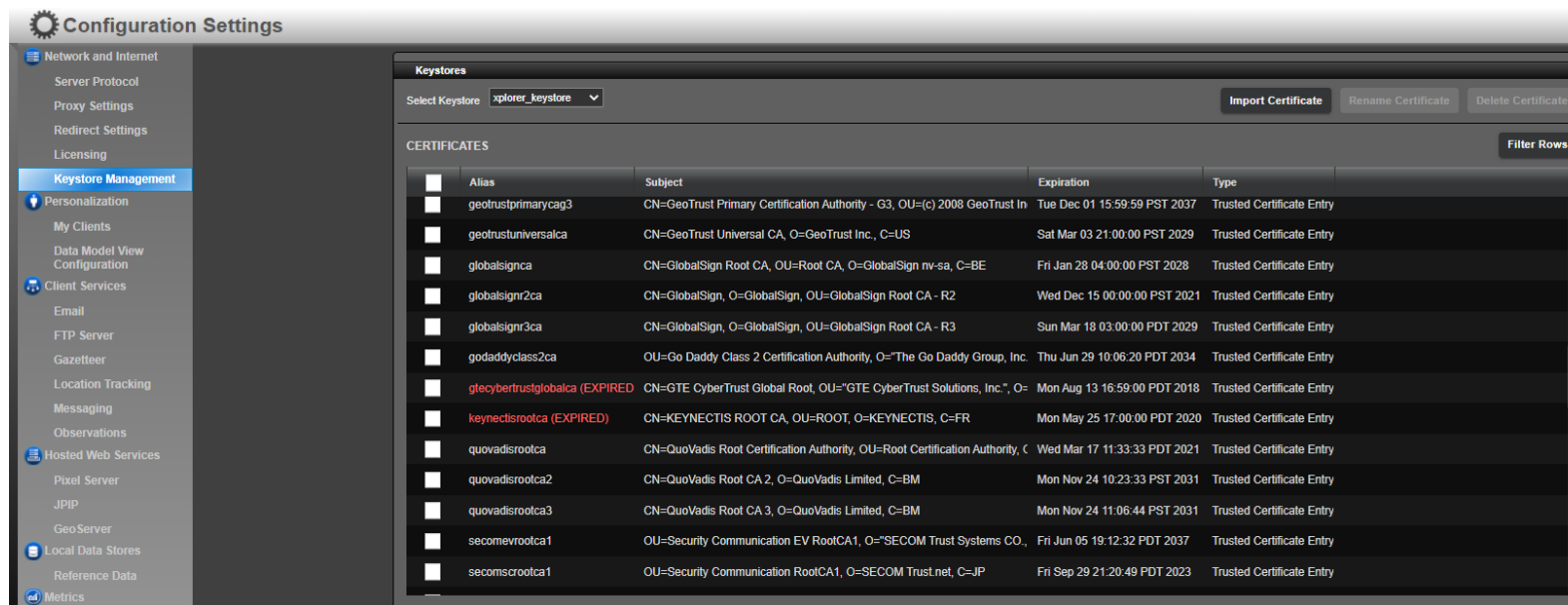
New Catalog Control Panel

- The Catalog Control Panel has been redesigned to provide a better user experience and easier access to information.
- Settings are split into two tabs:
 - My Catalog
 - Federated Catalogs
- When adding a new directory, users can just type or paste a directory instead of having to create a network share like in previous versions.
- Users can click on Ingest Overview to go directly to the Metrics page.
- Catalog progress and additional details can be seen by expanding the Details section.
 - Shows a graphical representation of ingested files as well as browse generation status.
 - Users can click on any failed files directly from the graph and quickly go to information about why they failed.
- In the Federated Catalogs tab, users can easily toggle whether a federated catalog is available without having to delete it.



Configuration Management updates

- A new settings panel has been added to allow users to import certificates into the GXP Xplorer Keystore.
 - Administration Settings ... Configuration Settings ... Keystore Management
 - This previously had to be done with a command line instruction.
- A new settings panel has been added to configure redirect settings in GXP Xplorer.
 - Administration Settings ... Configuration Settings ... Redirect Settings
 - Administrators can turn redirects on/off and determine which sites can be whitelisted.



Users Page updates

- The Users page has been updated to provide a more consistent look and feel with the rest of GXP Xplorer.

GXP Xplorer* Platform

Users

USERS (1) GROUPS (1) IMPORTS (0)

<input type="checkbox"/>	First Name	Last Name	Screen Name	Email	Title	Rank	Phone	Roles	Last Login	Actions
<input type="checkbox"/>	explorer	admin	xploreradmin	xploreradmin@e...				Administrator, "Ca...	2021-03-15 07:32...	

Rows per page: 10 1-1 of 1 < >

CLEAR SEARCH

Create User

General

* First Name

Middle Name

* Last Name

* Screen Name

Title

Rank

Phone

* Email

Roles and Groups

Roles

Select Roles...

Groups

Select Groups...

Authentication

☐ Send Create Password Email to User ?

* Password

Confirm Password

☐ Password Reset

MFA

Generate New Code

☐ Locked

CANCEL CREATE

GeoPackage Support

- This release adds support for cataloging GeoPackage files.
 - GeoPackage is an advanced imagery type that supports both raster and vector content in one file.
- GeoPackage is added as a sub-type under both Imagery and Vectors in the Data Model.
- Users can see the contents of the GeoPackage file in the View Container Contents window.
- Users can also view the raster portion of GeoPackage files.
 - Note:** Vector support is in work, and will be added in a future release.

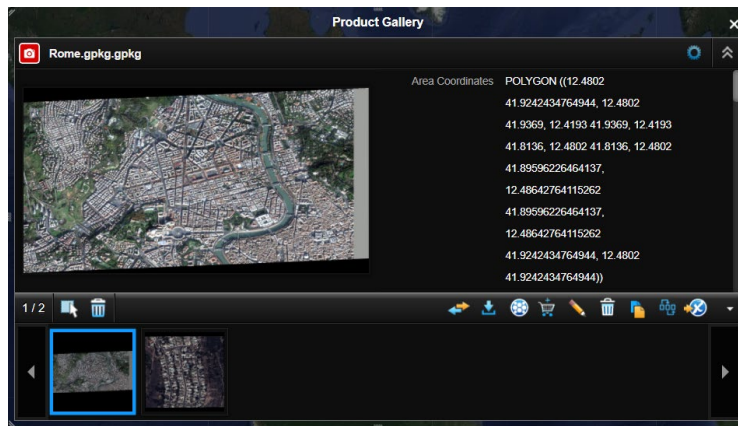
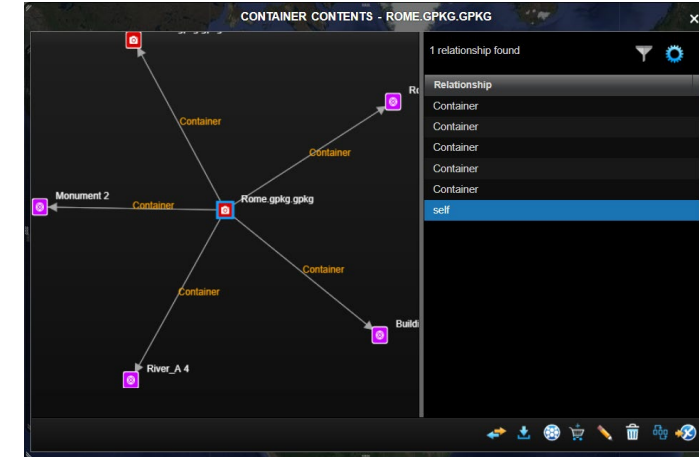
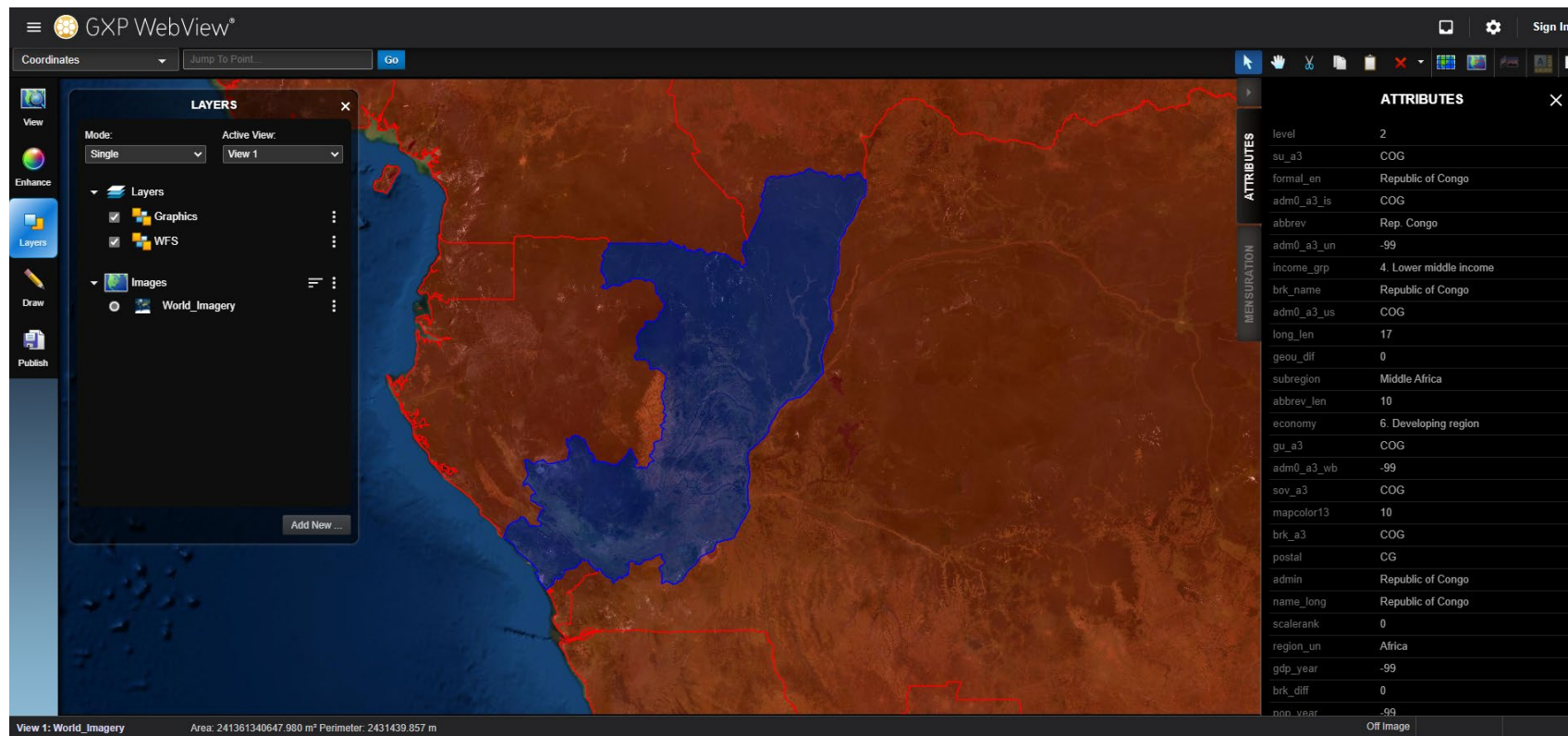


Image © 2021 Maxar Technologies.

Web Feature Service improvements

- Support for multi-point, multi-line, and multi-polygon features in Web Feature Services has been added to GXP WebView®.





Connection to MIDB

- Users can now configure GXP Xplorer to connect to Modernized Intelligence Database (MIDB) and either live query or harvest data for use in the GXP Xplorer catalog.
 - Users can search for entries in GXP Xplorer.
 - Results can be viewed in GXP WebView, GXP Fusion™, and SOCET GXP®.

Other significant enhancements

- MIE4NITF data format is discoverable in GXP Xplorer as a Wide Area Motion Imagery (WAMI) data type.
- Multi-component files maintain the relationships of the sub-components when being uploaded to GXP Xplorer.
- A new setting for generating browse files directly to managed directories has been added:
 - Administration Settings ... GXP Xplorer Application Settings ... Discovery Agent ... Generate Browse Files Directly to Managed
 - This setting should be enabled for all users, unless dealing with a cloud deployment/S3 storage.
- Verify buttons for the Endpoint URLs have been added to the configuration page for the Planet Imagery connector in GXP Xplorer Application Settings.
- A new setting was introduced to handle same-site cookie configurations.
 - This only applies for users who are embedding our webpages within other webpages.
 - Setting is in the following file: C:\YOUR_GXP_DATA_LOCATION\config\web-client\webClient.properties
 - session.cookie.sameSite = lax
 - Options are: none, lax, and strict
- When reformatting products to JPEG, a new configuration is added to set a max value for the uncompressed size limit.
 - Setting is in the following file: \GXP Xplorer Platform Data\config\karaf\etc\com.baesystems.gxp.services.conversion.sgxp.cfg
 - reformat.jpeg.maxUncompressedBytes = 5368709120
- The Postgres logs are now included when running support-zip.bat

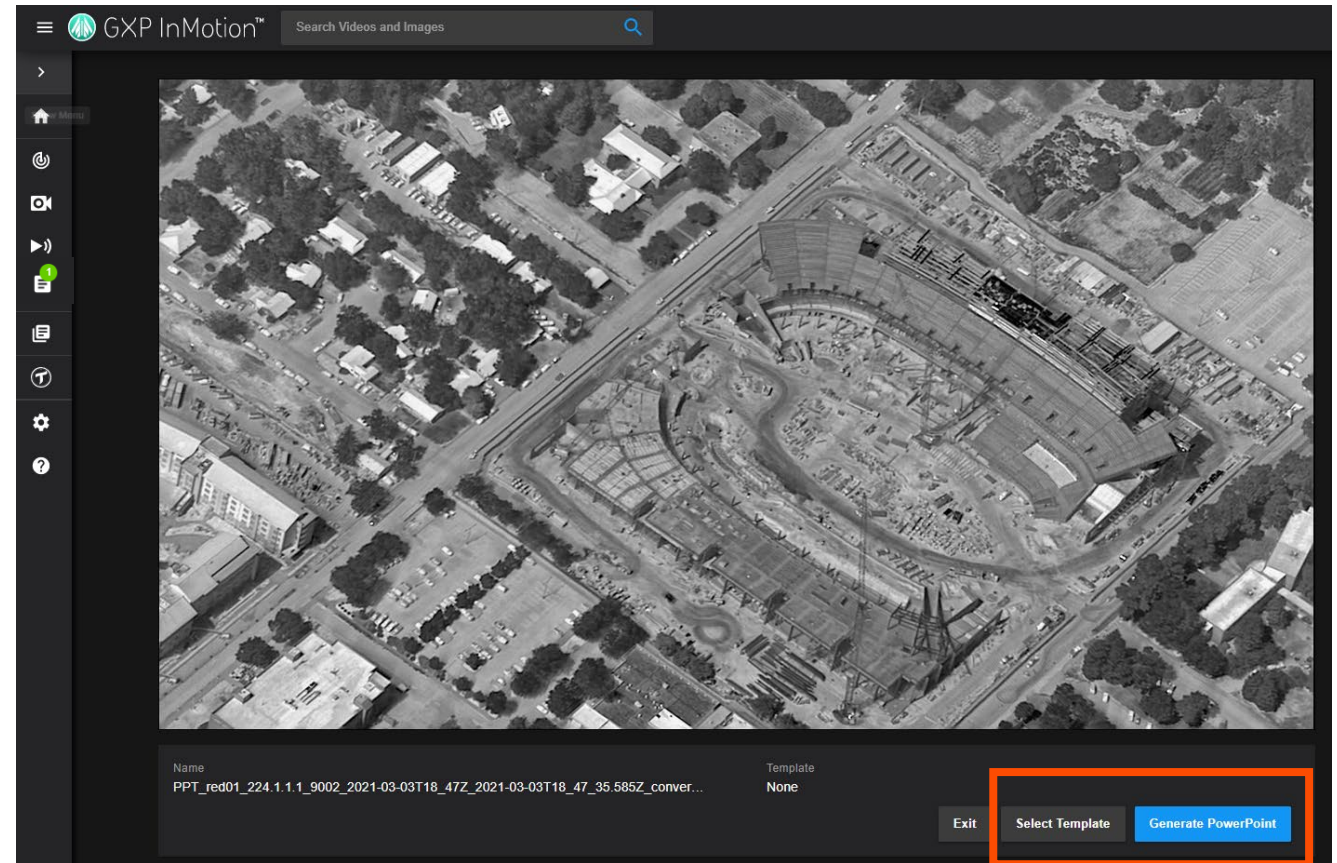
GXP InMotion™ v2.4.5 release details

Chris Mazur
GXP™ Product Development



Chip video frames out to PowerPoint®

- GXP InMotion Web's focus is on enabling forensic Motion-Imagery needs.
 - In addition to the ease of viewing video in the web are basic exploitation capabilities such as chipping and clipping video.
- **New to v2.4.5 is:**
 - The ability to now chip a frame of video directly to a PowerPoint.
 - The ability to choose a Template prior to export.



Imagery of MX-15 videos over Ft. Collins, CO; Courtesy of L-3 Communications, EO/IR Inc.

New Map panel for GXP InMotion Web

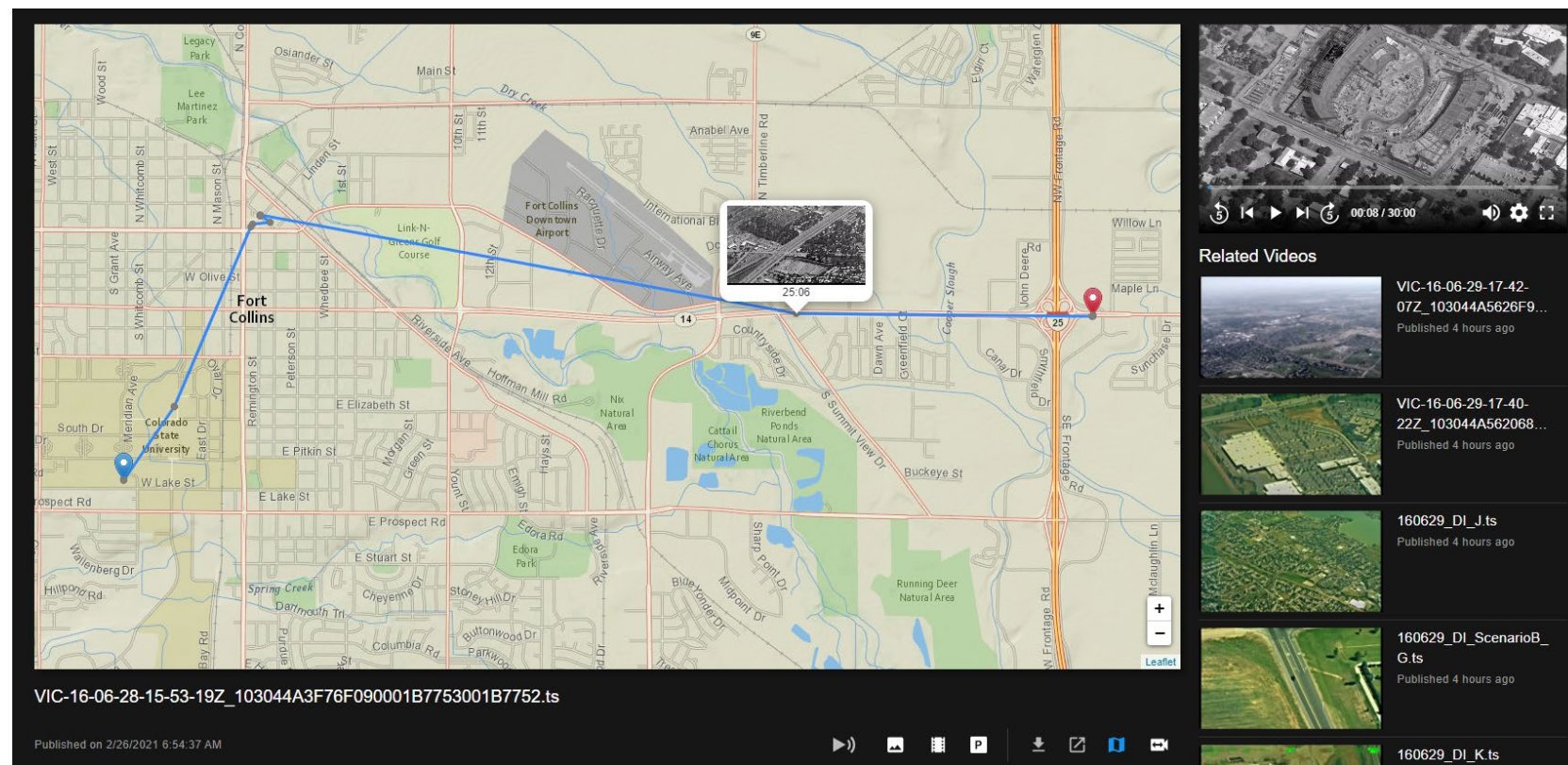
- GXP InMotion now displays a Map panel for forensic videos.
- Users can hover over the footprint path of videos to see a preview of the video.



Imagery of MX-15 videos over Ft. Collins, CO; Courtesy of L-3 Communications, EO/IR Inc.

New Map panel for GXP InMotion Web ...2

- The Map panel can be swapped with the Video player for a larger map view.
- If the Map panel is not needed, users can choose to hide the Map.



Imagery of MX-15 videos over Ft. Collins, CO; Courtesy of L-3 Communications, EO/IR Inc.

CSV import for Target Lists

- Target Lists used by users within GXP InMotion desktop flow down from the GXP InMotion server via connection to a Mission.
- Various user groups don't use the same attribution schemes.
 - As such, the default scheme wasn't flexible enough for everyone.
- A new template capability was created to map unique customer attributes of a CSV file to attributes used by the platform for importing Target Lists.

GXP InMotion™ Search Videos and Images

CSV Import Mappings Page

Create new mapping

Select type of map to create Create

Available CSV Mappings (1)

Name	Has Header	Required Columns	Map Type
target list	✓	target_be_number, target_country_code, target_name	Reporting Position

Mapping Information

* Name
target list

Mapped Columns (8)

<input type="checkbox"/>	Column Name	Maps To	Data Type
*	target_be_number	targetBe	string
*	target_country_code	countryCoverage	string
*	target_name	identifier	string
<input type="checkbox"/>	target_category_code	targetCategory ▼	string
<input type="checkbox"/>	target_description	description ▼	string
<input type="checkbox"/>	target_elevation_meters	targetElevation ▼	string
<input type="checkbox"/>	target_latitude_degs	target_latitude_degs ▼	string
<input type="checkbox"/>	target_longitude_degs	target_longitude_degs ▼	string

CSV import for Target Lists ...2

- Once a CSV Template is created (under the Manage Import Templates panel), the template appears under the Import 'Pick a Template' tab of the Mission Targets panel.
- Users can then choose a template to apply when importing CSV file.
- The targets then appear in the Targets tab, where the user can assign them to the mission.

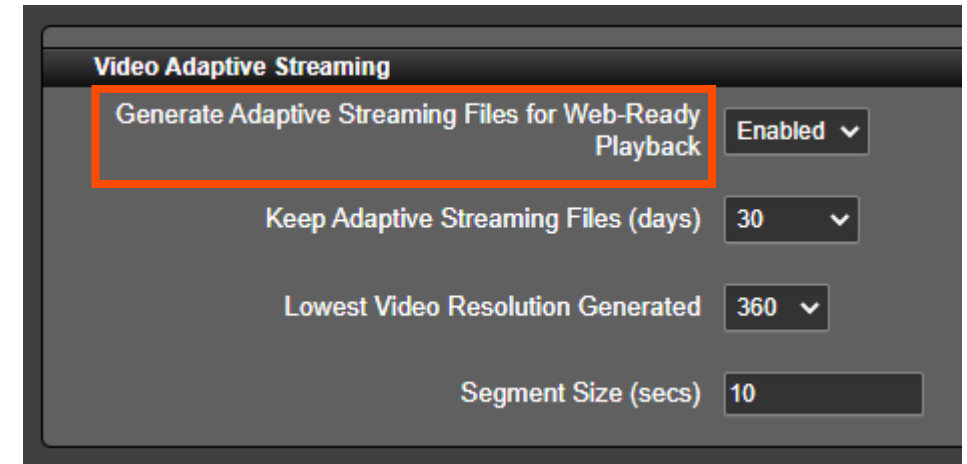
The screenshot displays the 'Assign targets to 20210303 mission02' interface. On the left, a map shows the Fort Collins area with several green location pins. On the right, the 'IMPORT' tab is active, showing a 'Pick a Template' dropdown set to 'Default'. Below this is a dashed box for uploading a CSV file, with a 'BROWSE' link. The 'Targets assigned to this mission' section shows a table with 6 items selected.

	Target Name ↑	Coordinates	Actions
<input checked="" type="checkbox"/>	Bio Research Facility	40° 27' 22.040"N 104° 52' 18.015"W	⋮
<input checked="" type="checkbox"/>	CW Research Facility	40° 27' 09.261"N 104° 52' 18.479"W	⋮
<input checked="" type="checkbox"/>	District Government	40° 35' 25.666"N 105° 04' 39.561"W	⋮
<input checked="" type="checkbox"/>	FNL Airfield	40° 26' 57.676"N 105° 00' 32.709"W	⋮
<input checked="" type="checkbox"/>	State University Ag Research	40° 34' 24.387"N 105° 05' 00.269"W	⋮
<input checked="" type="checkbox"/>	State Universi... Chem Research	40° 34' 12.601"N 105° 05' 01.276"W	⋮

Rows per page: 10 1-6 of 6

Video Adaptive Streaming User Interface changes

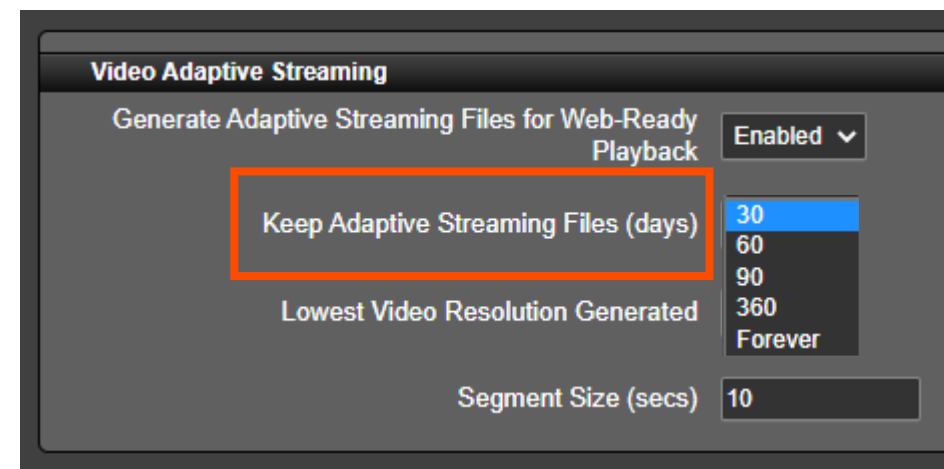
- GXP Xplorer Platform uses HTTP Live Streaming (HLS) to deliver adaptive video streaming.
- Adaptive video streaming is a way to deliver video to the user in the most efficient way possible and in the highest usable quality for each specific user.
 - For example, desktop vs. thin clients vs. mobile clients.
- **In this release**, the User Interface (UI) for adaptive video streaming (for cataloged videos) has been improved to assist administrators to determine how adaptive video should be deployed for their enterprise.



This screenshot displays how the configuration is set up by default with adaptive streaming enabled (using HLS)

Video Adaptive Streaming User Interface changes ...2

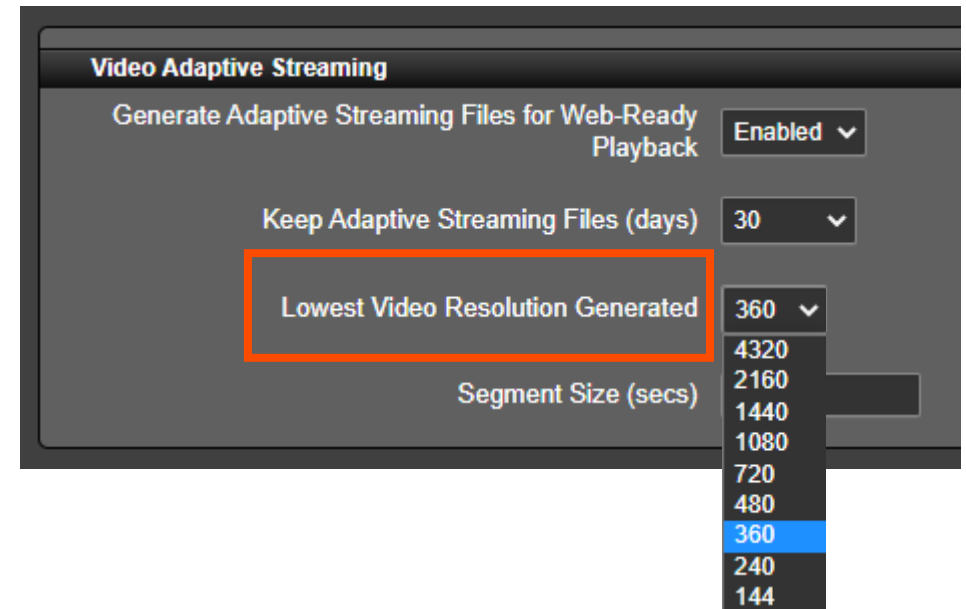
- Starting in v2.4.2, when videos are cataloged in GXP Xplorer, the original file on the disk is left in place, and a web-ready video is generated (using HLS) for browser-based video playback.
- New to v2.4.5** is the ability to set an expiration date for these HLS videos.
 - Since the generation of HLS video alongside the original video content could use additional resources, a tool is provided for administrators to set an expiration time based on their storage needs.
- To keep HLS video forever, simply choose 'Forever'.
 - No matter which expiration time frame is set, the original video files are never touched.



Note: the expiration set here is only for cataloged videos from the monitored directories and does not affect videos captured via the GXP InMotion Capture UI.

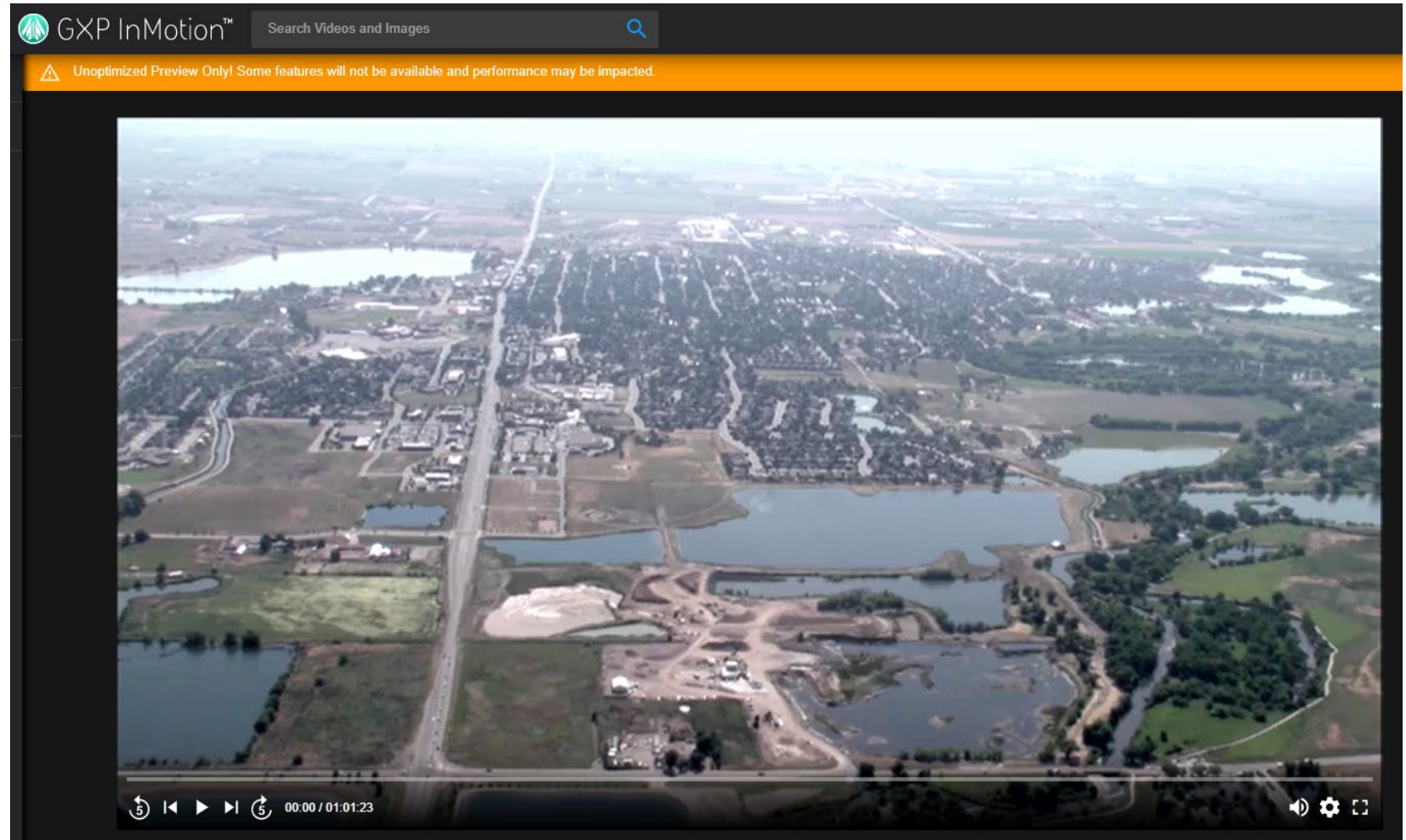
Video Adaptive Streaming User Interface changes ...3

- Every digital video file has certain set dimensions, measured in the number of pixels.
 - For example, 1920x1080 is referred to as 1080p; This is also known as 'Full HD'.
- The various video resolutions available today are chosen for best case performance depending on the platform or devices intended to view the video.
 - Thus, higher resolution videos are best for desktop applications vs. lower resolution videos for mobile devices.
- In **v2.4.5** there is now a new preference for setting the *Lowest Video Resolution Generated*.
 - This allows for creating video resolution 'sets' that can span; Or accommodate, resolutions needed for multiple clients: desktop, browser, and/or mobile clients.



HLS and Video Preview switching

- When HLS video is not available for cataloged videos, the user is unable to play video in the browser.
- As a work-around, an alignment was made to default to the Preview video where HLS is not available.
 - This will load the 'preview' video generated during cataloging.
- The user is notified with a pop-up message that a lower resolution preview video is being used and adaptive streaming is not available.



Imagery of MX-15 videos over Ft. Collins, CO; Courtesy of L-3 Communications, EO/IR Inc.

GXP InMotion miscellaneous features

- Additional details about HLS and Video Preview switching:
 - Some of the benefits of switching Preview Generation vs. Video Adaptive Stream generation is that it's separated from thumbnail, overview, and preview generation, allowing those items/products to appear for users much faster.
 - The separation was done as part of our enterprise scaling and failover initiatives and will specifically lead to the ability to scale video adaptive streaming in the near future.
- Implemented thread limiting for better FFmpeg performance.
 - This provides a better balance for video processing needs of the user and other server operations.
 - Video is still processor intensive, but this will provide some relief.
- Changes to the Capture UI related to Live Tracking.
 - The change is to designate that Tracking Analytics Software Suite (TASS) generates the MPEG-2 Transport Stream (TS) with 0903.4 MISB as output and what the output URL will be.



Thank You

Nicholas Rosengarten
GXP Product Development
571.205.9397
Nicholas.Rosengarten@baesystems.com