Release guide

ERDAS APOLLO 2022 Update 2

Version 16.7.2

February 2023

Contents

About this release

Enhancements for ERDAS APOLLO 2022 are described in this document.

This document is only an overview and does not provide all the details about the product's capabilities. See the product description, the online help and other documents provided with ERDAS APOLLO for more information.

Note that APOLLO Core/Essentials is not included in this release.

ERDAS APOLLO 2022 product tiers

ERDAS APOLLO is a comprehensive data management and delivery server solution that addresses the challenges of identifying, locating, securing and organizing geospatial and business data into a searchable repository and enables simple distribution of that data. Complete with a variety of delivery options, ERDAS APOLLO consistently delivers geospatial data faster and with less hardware than competing server-based products. With an out-of-the-box, service-oriented architecture, ERDAS APOLLO can be customized and extended to satisfy both your geospatial and business process requirements.

New platforms: ERDAS APOLLO 2022 Update 2

ERDAS APOLLO 2022 Update 2 includes sweeping platform changes across the software, removing overlap and updating core technology dependencies throughout. In many cases, security vulnerabilities have been resolved or security footprints minimized by deprecating old application interfaces.

New technology: ERDAS APOLLO 2022 Update 2

New vector style editor in Apollo Studio

ERDAS APOLLO 2022 Update 2 introduces a new vector-based styling interface that can be used to build various styles for your vector services. This capability is based on the same interfaces provided in M.App Enterprise, allowing for more consistency across products.
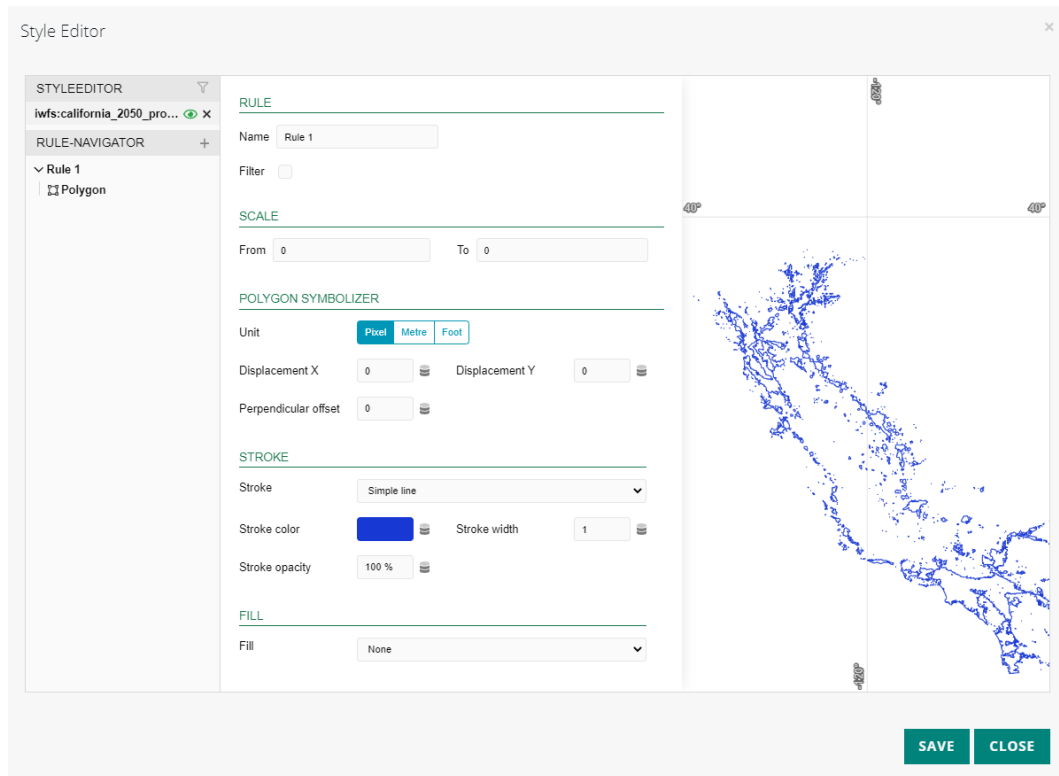
Better handling/editing of queryables in Apollo Studio

ERDAS APOLLO 2022 Update 2 contains a new Apollo Studio with several enhancements to queryables handing.

- Apollo Studio will now present any queryables defined as an enumeration as a picklist, so editing of those values will remain valid for the given property.

- The queryable definition table allows for the specification of both a name and title, with the title usually being the more user-friendly option. The listing of queryables within Apollo Studio has been modified to display the title rather than the name.
- The queryables.xml file allows the user to define queryables in any order desired. Since it is assumed the user has defined these in an order he or she prefers, Apollo Studio now honors that order in the user interface.
- Some overlapping display issues have been resolved.

New and updated metadata parsers

ERDAS APOLLO 2022 Update 2 introduces new custom metadata parsers. These include:

- MAXAR
- GOKTURK1

In addition, several existing metadata parsers have been updated, including:

- ISO 19139
- DIMAP
- DiMAP-v2
- Quickbird
- DGAMP
- IKONOS
- SPOT
- DAT

Upgraded logging

Log4j has been replaced by Logback. See https://logback.qos.ch. Logback is intended as a successor to the popular log4j project, picking up where log4j 1.x leaves off.

Previously, APOLLO users could control log content, such as enabling a more verbose DEBUG mode for specified classes, by modifying the log4j.properties file. Users will now see a similar properties file called logback.xml, where logging can be controlled. The log4j.properties file is still available, so users can refer to previous settings if needed.

NOTE: After modifying properties for logging, you will need to restart APOLLO services for your changes to take effect.

Catalog Explorer enhancements

Catalog Explorer, the modernized ERDAS APOLLO web client, is available in this package, but it must be installed separately. In line with this distribution model, Geospatial Portal is no longer packaged with the v2022 installer but remains available as a separate download. For ERDAS APOLLO v2022, the client choice is up to our users, but the focus on new features only remains in Catalog Explorer. We continue to encourage existing users to explore the updated client.

In addition to being updated to the latest LuciadRIA framework, enabling significantly faster load times and improvements in performance, several new enhancements have been added:

- **Downloading attachments:** This feature was requested by multiple customers who wish to have access to items like ISO metadata (both original and updated versions) and thumbnails. Catalog Explorer now allows users to download any catalog item attachment returned in search results.
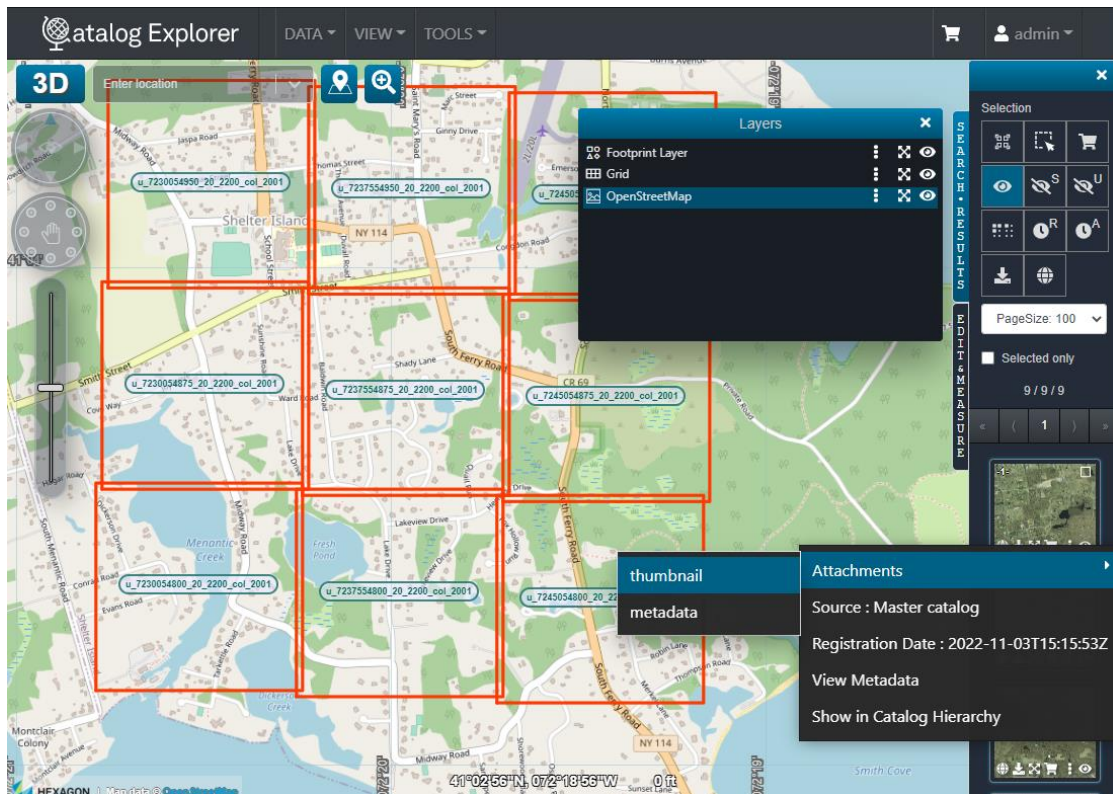
- **Assigning workspaces to users:** Catalog Explorer allows users to define a workspace (or common operational picture) that can be saved and reopened so a user can continue to work daily or share work with a colleague. A workspace can now be assigned to any given user. This is helpful when an administrator wants to define the work environment for a set of users as a starting point without everyone defining their own.
- **Support for IFC data format:** As new functionality is added to the underlying LuciadRIA platform, Catalog Explorer can make use of the capability rather easily. In this case, users can now connect to an International Foundation Classes (IFC) dataset and its associated WFS service for property information using the 3DTiles connector.
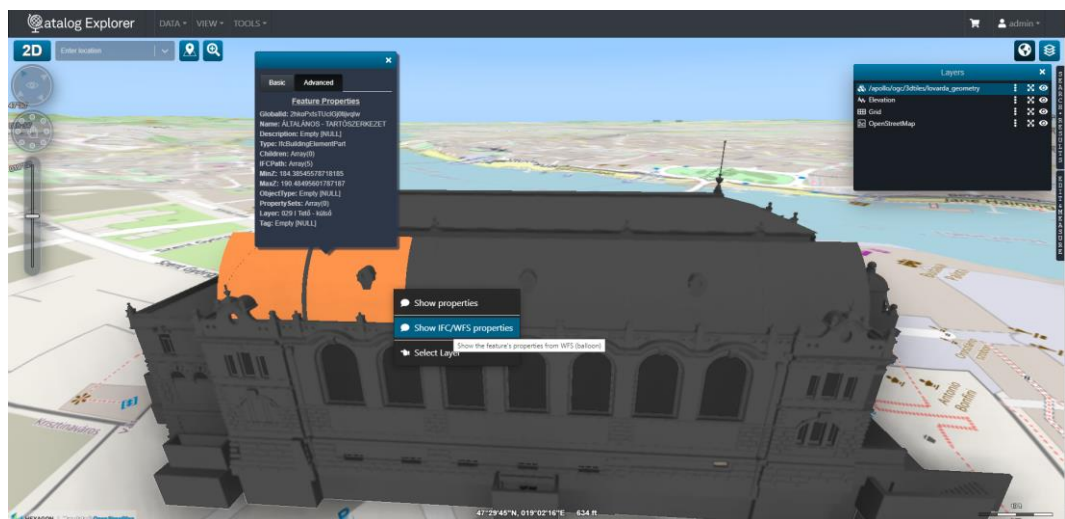
- **Cross-section view panel:** The newly added 3D cross-section view allows a user to see a slice of the view being shown, which often helps to see what is behind other points in the dataset.
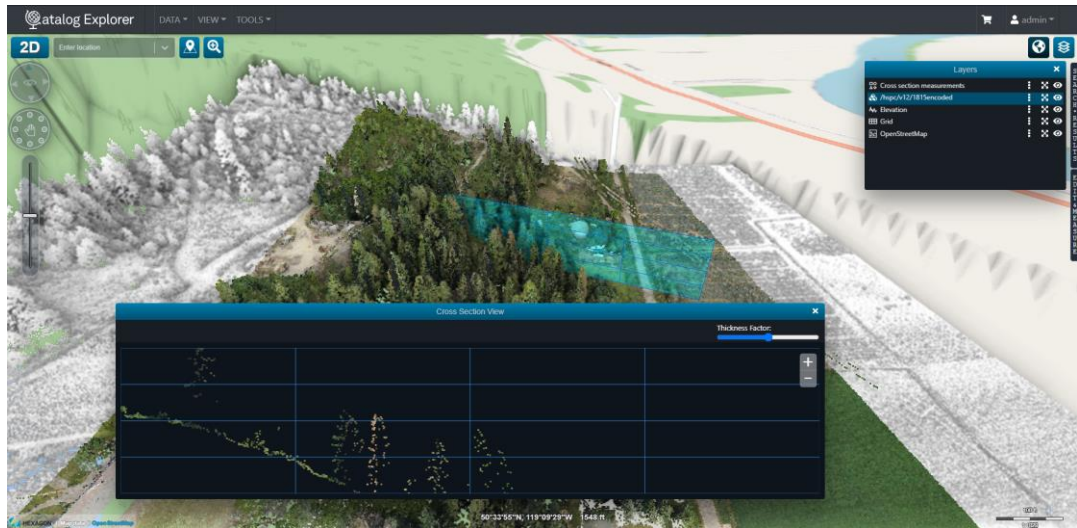
Other improvements

Additional notable updates include:

- Ability to change the OSM background map in Studio
- Support for local date format in Studio
- Ability to preview service layers in Studio
- Ability to swap the axis for a WFS connection with Catalog Explorer
- Several platform upgrades to improve security, bugs and performance

System requirements

ERDAS APOLLO

	ERDAS APOLLO Essentials	ERDAS APOLLO
Computer/processor	Intel® or AMD x86 four-core processor with a clock speed of 2.0 GHz or higher	
Memory (RAM)	8 GB or higher (16 GB recommended)	
Server disk space	4 GB for application footprint	
Spatial data storage	High Speed Disk Storage, >15000 RPM, SSD, RAID Arrays, or External SAN/NAS	
Server operating systems	• Windows Server 2016 (viable) • Windows Server 2019 • Windows Server 2022 • Red Hat Enterprise Linux ® 7.x, 8.x (and compatible systems)	• Windows Server 2016 (viable) • Windows Server 2019 • Windows Server 2022
Cloud environments	Amazon Elastic Cloud Compute (EC2), Microsoft Azure Virtual Machines	
Supplementary operating systems for testing and development	Windows 10 or higher can be used for development purposes, but deployments must be on supported server operating systems listed above. Microsoft SQL Server Express Edition should be used for testing and development purposes only.	
Software	• Microsoft® . • NET Framework 4.7 or higher (Windows) • Latest Java 11 LTS versions	
Licensing	Geospatial Licensing Administrator 2022 with 16.7 feature code versions configured	
Application servers	• Microsoft® IIS 10 or higher (Windows) • Apache 2.4 or higher (Linux)	• Microsoft® IIS 10 or higher (Windows) • Tomcat 9.0.52 (embedded in installer)

Databases	• Oracle Database 19c, Standard or Enterprise Edition
	   o Using Service Name or SID connection
	• Microsoft SQL Server® 2017 or 2019, Express, Standard or Enterprise Edition
	• PostgreSQL version 10.8 or higher
	   o With PostGIS spatial extension 2.4 or 3.0 or higher installed
	• SQLite (Essentials only)	

Admin tools	ERDAS APOLLO Core Console	• ERDAS APOLLO Studio • ERDAS APOLLO Data Manager
Compatible client applications	• Catalog Explorer Version 4.0 • Geospatial Portal 2022 • GeoMedia® 2022 • GeoMedia Viewer 2022 • GeoMedia Professional 2022 • ERDAS IMAGINE® 2022 • GeoCompressor Viewer 2022 • Esri® ArcGIS® for Desktop plugin • ECWP-enabled applications • OGC-compliant WMS, WMTS, WCS, OGC API – Processes client applications	
Admin tools operating systems	• Windows 10 • Windows Server 2016 (viable) • Windows Server 2019 • Windows Server 2022 • Red Hat Enterprise Linux v7.x, v8.x and compatible systems (Essentials only)	

Issues resolved: ERDAS APOLLO 2022 Update 2

ERDAS APOLLO Adv/Pro product tier

Issue/Support ticket	Summary
AP-12180	Catalog Explorer: Missing files selected in shopping cart dialog
AP-12178 00109292 00114618	Studio: Username/password for login
AP-12177 00109291	Additional password encoding
AP-12171 00106817	Catalog Explorer: Changed language settings are not saved
AP-12165	Removed WebProcessingService from ERDAS-APOLLO API Console
AP-12161 000719533	DImap 1 and 2, Quickbird and IKONOS metadata parser improvements
AP-12156 00103775	TIF (Float32) not rendered via legacy WMS
AP-12155 00102736	REST API: Issue with "start" option in /content/catalog/search
AP-12144	Security dialog doesn't come up for datasets.
AP-12138 00096638	DGAMP profile always needs to use EPSG code 4326 to calculate boundary box.
AP-12137	Studio: Provided a mechanism to add/modify legacy RASTER styles
AP-12133	For the Configuration Wizard platform, upgraded log4net
AP-12128	Geoprocessing Server: Upgraded jdbc postresql driver
AP-12123 00093935	Studio: Expired Luciad license

00094578 00094795 00095295	
AP-12121 00092454	Catalog Explorer: Search results are not shown when flag 'Enable View Service' is false
AP-12120 00092256	Changing OGC layer name of an aggregate breaks the link to APOLLO Core
AP-12113 00089127	Discrepancy between XML ISO metadata and information stored in catalog
AP-12112 00089347	APOLLO does not keep order of ISO metadata elements
AP-12103 00084216	Studio: Typo in vector service creation dialog
AP-12102 00083585	"Start" parameter in APOLLO catalog search API produces wrong result
AP-12092 00082530	Catalog Explorer: Not possible to change workspace owner
AP-12090	Studio: Queryables are listed in no particular order.
AP-12086	Studio: Add the ability to use WMS layers for the background map
AP-12089	Studio: Use title rather than name for listing queryables
AP-12085 00080684	Catalog Explorer: Cannot define numeric queryable using "range"
AP-12081	Make datetime formatting user-configurable at the server level
AP-12079	Studio: Folder details page is blank with latest build
AP-12077	Studio: Metadata parsers list is empty using Windows Auth configuration
AP-12076 00078366	Catalog Explorer: Queryable date popup doesn't fit within advanced search interface
AP-12075 00078346	Studio: Unable to select a metadata parser for esp_data_manager role users
AP-12072	Studio: Delete confirmation prompt lists only the OGC unique name and not the Title
AP-12065 00076732	Catalog Explorer: Properties window shows internal properties

AP-12064	Studio: Delete on folder shows different value than expected
AP-12063 00058356	Studio: Queryables section has overlapping texts
AP-12061 00030622	Studio: Title columns in right result view too short and size of columns not changeable
AP-12059 00075906	Spring4Shell patch breaks PATCH /content/catalog/items request
AP-12055 00075042	APOLLO Update 1 Patch 1 introduced a permissions issue with Windows Authentication
AP-12047 00073353	Studio: Failed jobs keep counting duration
AP-12043 00073360	Catalog Explorer: Temporal extent search does not work
AP-12042 00073355	REST API problems with special characters
AP-12041 00073346 00110475	Studio: Geoprocessing tab showing with APOLLO Advantage license
AP-12031 00070929	Studio: Cannot save channel settings in a raster style
AP-12027	When performing a CZS, place original ISO file in package if one exists
AP-12026	Studio: Folder Browser fails to refresh after folders are removed from the catalog
AP-12024 00070193	Studio: New Default Principal not honored in Crawl Data wizard
AP-12023	Studio: Cannot save Java performance parameters for RDS
AP-12020 00068716	Catalog Explorer: Complete catalog folder structure not shown
AP-12013 00067145	Crawling Pleiades data (via XML file) creates .gok format in catalog
AP-12004	Studio: Geoprocessing connection is defaulting to pmw5520 server
AP-12002 00064091	Studio: Missing Acquisition date
AP-11999 00061964	Missing Temporal Extent from shp file

AP-11997 00063399	Studio: No preview for services
AP-11996 00063397	Studio: "Empty directory" when creating legacy raster services
AP-11995 00063394	Studio: Missing index data for legacy services
AP-11991	Create new Maxar metadata parser
AP-11986 00061414	No freemetadata via Quickbird metadata parser
AP-11985 00060759	Tags missing from Dimap-v2 metadata parser.
AP-11983 00073362	Studio: Catalog tree view displays ERDASAPOLLO_Title instead of ROOT
AP-11977	Studio: Folder Browser showing no tree view
AP-11968	Crawling fails due to an OGC Name Collision
AP-11966 00059097	Studio: Images are not rendered in Studio using core WMS
AP-11962 00032268	Studio: Change SRS value
AP-11952 00057658	Image representation from a WMS at the datum line displays incorrectly
AP-11935 00055670	Studio: Next Execution Time is set for "ONCE" recurring jobs
AP-11934	Studio: Impossible to change time in Firefox browser
AP-11922	Studio: Button styles on the catalog item properties page are inconsistent
AP-11921	Enhance the ability to edit queryables with enumerations
AP-11871	Studio: CZS SMTP passwords are not stored correctly
AP-11844 00059472 00073343	Studio: ISO Metadata will not show if a translation doesn't exist
AP-11837 00032914 00073345	Studio: Not possible to change OSM background map

AP-11811 00030618	Studio: Date format is not configurable
AP-11809 00030461	Studio: Sort aggregates in Folder Browser
AP-11754 00023583	ERDAS APOLLO 2020 U4 unstable handling of large number of files when crawling files
AP-11601	Catalog Explorer: Workspace doesn't persist ApolloCatalogWMS credentials when assigned to user
AP-11361 00023224	WMS failed after changing Java Keystores with different passwords as "changeit"
AP-11220	Studio: Provide a mechanism to add/modify styles on the data view

ERDAS APOLLO Core product tier

Issue/Support ticket	Summary
IW-7311	Implement advanced projection library resolution order to improve image delivery and registration performance in some cases
IW-7400 00076271 00076278	Enforcing scalehint returns unexpected error when image requested outside set limits
IW-7407 00078005	Fix EPSG resolution from ECW v2 files due to incorrect PcskeyProjDatum.dat location on Linux
IW-7406	Improve installation scripts for Ubuntu Linux customers
IW-7423	Oracle SID Database connectivity is no longer supported. Customers must connect via Oracle Service Names.

Install and configure the update

Understanding the ERDAS APOLLO server update procedure

The following is an explanation of the process and workflow to update your ERDAS APOLLO instance. You will find specific installation instructions later in this document in the section titled **Update instructions**.

The ERDAS APOLLO Update installation is accomplished in four general steps:

1. Stop ERDAS APOLLO services.
2. Install Update.
3. Modify TEMPLATE files delivered with the update to include any customization from your previous configuration.
4. Run ERDAS APOLLO Configuration Wizard.

When the ERDAS APOLLO Update is installed, new configuration TEMPLATE files will be written to [APOLLO_HOME]/storage/config_ap_clean. Any existing TEMPLATE files from previous server patches will be overwritten to ensure you have the latest versions of these files. At this point, you should modify the newly written TEMPLATE files to include any customizations you wish to retain from your current configuration.

IMPORTANT: Only the configuration files listed below in the **Update instructions** section will be impacted. Any other existing configuration files will be untouched. If you have not customized these files there is no action required on your part regarding these specific files.

After you have installed the Update and modified the TEMPLATE files as needed, you must run the Configuration Wizard to complete the Update implementation. The Configuration Wizard will first make a backup of existing product configuration files to [APOLLO_HOME]\config.backup. Next, it will overwrite the existing TEMPLATE files throughout the product with the updated TEMPLATE files from …\config_ap_clean. These TEMPLATE files will in turn be used by the Configuration Wizard to update the product's configuration files.

....

For example, when the Configuration Wizard is run...

* [APOLLO_HOME]/config/erdas-apollo/metadata/metadata.yaml

  is copied to [APOLLO_HOME]/config.backup.

* [APOLLO_HOME]/storage/config_ap_clean/metadata.yaml.TEMPLATE

  overwrites [APOLLO_HOME]/config/erdas-apollo/metadata/metadata.yaml.TEMPLATE.

* [APOLLO_HOME]/config/erdas-apollo/metadata/metadata.yaml.TEMPLATE

  overwrites [APOLLO_HOME]/config/erdas-apollo/metadata/metadata.yaml.

....

When the Configuration Wizard is finished, your APOLLO installation will be updated and will include your custom configurations from previous versions.

Updating ERDAS APOLLO Server

Preparing your server for the Update

Before you install and configure the patch, you should stop the ERDAS APOLLO Application Server and related services.

1. Open Windows Server Services tool.
2. Stop APOLLOTOMCAT service, "ERDAS APOLLO Tomcat Application Server."
3. Stop APOLLOSmartSync service, "ERDAS APOLLO Drop Box."
4. Stop APOLLOActiveMQ service, "ERDAS APOLLO ActiveMQ Broker Service," if it exists.
5. Stop Geospatial Server Administration Console Service, "Geospatial Server Administration Console Service."
6. Stop and restart IISADMIN service, "IIS Admin Service."
7. Stop and restart W3SVC service, "World Wide Web Publishing Service."

RECOMMENDED: Before proceeding with the installation, KILL any remaining w3wp.exe processes via Task Manager.

Install the Server Update

The ERDAS APOLLO Update does NOT require you to uninstall any previous patch version.

WARNING: If ERDAS APOLLO was previously installed in a custom location (anywhere but the default), the patch installation must be run from a command line with administrative privileges, using the command shown below.

The following example assumes APOLLO has previously been installed to D:\ERDAS APOLLO.

```
APOLLO-AdvPro-2022-Update-2.exe /s /v"/qn INSTALLDIR=\"D:\ERDAS APOLLO\""
```

1. Unzip downloaded zip file containing the Update release.
2. Run **APOLLOAdvPro-Update2.exe**. When prompted, select Update button.
3. The install will update all required files.

NOTE: After installing the Update, APOLLO services will not be restarted. This will occur automatically after running the Configuration Wizard described below.

IMPORTANT: If your installation process requires a system reboot, once that reboot is completed you will need to stop the APOLLO Application Server and related services again before continuing with the Configuration Wizard. Follow the steps described earlier to stop APOLLO services.

Modify configuration template files

Configuration files that are overwritten and/or updated by Update 2.

- [APOLLO HOME]\config\erdas-apollo\queryables.xml

- [APOLLO HOME]\config\erdas-apollo\providers\coverage\decoder.yaml

- [APOLLO HOME]\config\erdas-apollo\metadata\metadata.yaml

IMPORTANT: Address the following files AFTER you install the Update, but BEFORE you run the Configuration Wizard.

queryables.xml

If your APOLLO Catalog is configured with queryables, replace the template file at

[APOLLO HOME]\storage\config_ap_clean\erdas-apollo\queryables.xml with your existing

file at [APOLLO HOME]\config\erdas-apollo\queryables.xml. It is also good practice to keep a backup

of the file as well.

decoder.yaml

If you use custom decoders defined in [APOLLO HOME]\config\erdas-apollo\providers\coverage\decoder.yaml, add your customizations to the template file at

[APOLLO HOME]\storage\config_ap_clean\erdas-apollo\providers\coverage\decoder.yaml.TEMPLATE.

metadata.yaml

If you use custom metadata parsers defined in [APOLLO HOME]\config\erdas-apollo\metadata\metadata.yaml, add your customizations to the template file at

[APOLLO HOME]\storage\config_ap_clean\erdas-apollo\metadata\metadata.yaml.TEMPLATE.

Other config files

If you are aware of other customized configuration files, follow the same pattern

as shown in the previous items and simply modify the relative template file(s) found in

[APOLLO HOME]\storage\config_ap_clean\ with your customizations prior to running the Apollo

Configuration Wizard.

IMPORTANT: Check timestamps of the template configuration files listed above. Depending on when you have installed the current ERDAS APOLLO, the timestamps of the configuration files above may be more recent than the timestamps of their equivalent template files in the Update. If the target file is newer than the template file, the Configuration Wizard will NOT update the configuration file. This scenario may happen if you are installing ERDAS APOLLO for the first time, and then you install an Update patch on the same day. Modify the timestamp of a template file or configuration file using a powershell command from an Administrator command prompt as follows:

```
powershell (Get-Item .\<filename>.<ext>).LastWriteTime = (Get-Date)
```

Configuring for Oauth2 Authorization

For customers wishing to use Oauth2 for authentication and authorization, APOLLO now supports OAuth2 using Keycloak as the Authorization Server. The Authorization Server must define the required APOLLO user roles such as 'esp_adminstrator', 'esp_data_manager', 'esp_consumer', and 'esp_clip_zip_ship' as described in the ERDAS APOLLO Administrator Guide.

The following files should be copied before running the ERDAS APOLLO Configuration Wizard. If this is done afterward, you would need to reset IIS services to complete the configuration.

Source files are found in C:\Program Files\Common Files\Hexagon\Services\Templates\WMS\Files\bin

Copy these files:

- Intergraph.Geospatial.Server.Apollo.ApolloCatalogConfigurationProvider.dll
- Microsoft.IdentityModel.JsonWebTokens.dll
- Microsoft.IdentityModel.Logging.dll
- Microsoft.IdentityModel.Tokens.dll
- System.IdentityModel.Tokens.Jwt.dll

Paste the files above into these two locations and overwrite any existing files:

- C:\Program Files\Common Files\Hexagon\Services\Instances\ApolloCatalogWMS\bin
- C:\Program Files\Common Files\Hexagon\Services\Instances\ApolloCatalogWMSPublic\bin

Run the Configuration Wizard

Once you have installed the Update and merged any customized files into the TEMPLATE files, you must run the Configuration Wizard to complete the update.

WARNING!!!: Check to be sure the Geospatial Server Administration Console Service is running before proceeding with the Configuration Wizard.

1. Run the ERDAS APOLLO Configuration Wizard
   [APOLLO_HOME]\configwizard\ConfigurationWizard.exe or run from the Start Menu.
2. Once the Configuration Wizard is finished, APOLLO services will restart.

IMPORTANT: Clear the web browser cache

It is common knowledge that periodically clearing your web browser cache helps improve web page loading times and increases your computer's performance. Sometimes, data stored in the cache prohibits loading of up-to-date content. For these and other reasons, it is recommended that you clear your web browser cache to ensure you are using the latest ERDAS APOLLO Studio fixes and enhancements delivered with this Update.

Updating ERDAS APOLLO Data Manager

In the ERDAS APOLLO 2022 Update 2 release, Data Manager is delivered as a full installer.

1. Remove your existing Data Manager.installation.
2. Make a backup copy of [DATA MANAHER HOME]\datamanager.ini if you have customized any of the properties.
3. Remove any remaining files from …\Program Files\Hexagon\ERDAS APOLLO Data Manager.
4. Install updated version of ERDAS APOLLO Data Manager by running **Setup.exe**.
5. Update or replace datamanager.ini with your backup copy if needed.

Updating Catalog Explorer

The Catalog Explorer Update is a full-release build. You have the option to replace your existing Catalog Explorer implementation, or you can start an entirely new instance while keeping your current implementation. For this document, it is assumed you are replacing your current implementation.

Prepare a new war file

1. Begin by making a backup copy of your current *.war file. You can find the deployed copy of it in [APOLLO HOME]\tomcat\webapps\catalogexplorer.war.

2. Stop ERDAS APOLLO Tomcat service using the Windows Services command dialog.

3. Once service is stopped and you have a backup of your war file, you may safely delete or remove the war file and the corresponding folder from the webapps folder.

4. The Catalog Explorer Update was included in the zip file containing your ERDAS APOLLO Update. Open an Administrator command prompt and navigate to that folder, then run launcher.bat.

5. You can refer to the Catalog Explorer documentation for more details about configuring your war file using the launcher.bat utility. Use the launcher.bat tool to point to your existing Catalog Explorer database, or to a new database if you prefer not to retain any information from the previous database.

   NOTE: You should never use the H2 database in a production environment. Postgres, Oracle or MSSQL are recommended for production.

6. Complete your configuration and save your war file.

Deploy the new war file

1. Copy war file to [APOLLO HOME]\tomcat\webapps.

2. Open the file [APOLLO HOME]\tomcat\conf\server.xml using a text editor. Verify that the unpackWARs and autoDeploy properties are set to "true."

```
<Host name="localhost"  appBase="webapps"
            unpackWARs="true" autoDeploy="true" deployXML="false">
```

3. Restart the ERDAS APOLLO Tomcat service. After a moment, verify that the war file is deployed successfully in the [APOLLO HOME]\tomcat\webapps folder.

4. You may now test the updated Catalog Explorer by connecting from your web browser.

NOTE: If you wish to keep your existing Catalog Explorer implementation operating side by side with your new one, you will need to give your war file a unique name and you will need to specify a unique database for your new implementation via the launcher.bat utility.

About Hexagon

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

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

Hexagon's Safety, Infrastructure & Geospatial division improves the resilience and sustainability of the world's critical services and infrastructure. Our solutions turn complex data about people, places and assets into meaningful information and capabilities for better, faster decision-making in public safety, utilities, defense, transportation and government.

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