



HEXAGON

Release Guide
2021.0

Release Guide

LuciadLightspeed 2021.0

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About this release

The 2021.0 release of LuciadLightspeed brings additional support for integration into JavaFX applications. Furthermore, we updated our support for some formats and references.

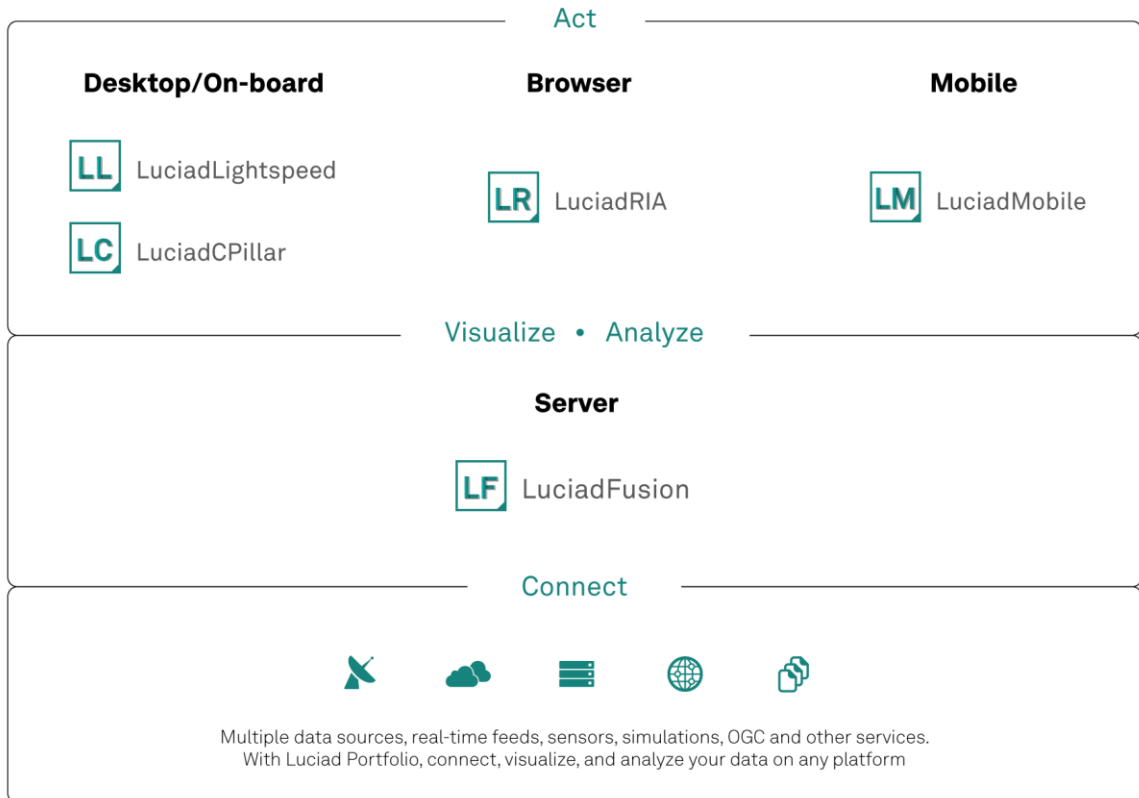


Figure 1: The Luciad Product Portfolio.

Benefits of the new features

JavaFX

JavaFX is a library for creating rich desktop client applications. It is intended to be the successor of Swing. LuciadLightspeed 2020.0 introduced a dedicated LuciadLightspeed view implementation for JavaFX¹.

In the 2021.0 release, we build upon this capability by adding some UI components and support for printing the content of the JavaFX view component. This reflects our intention to further support developers that are integrating LuciadLightspeed into a JavaFX-based application.

- Navigation control: LuciadLightspeed provides implementations for on-map pan and zoom controllers, a compass, and an altitude exaggeration controller.
- Layer control: A sample layer control component has been added, like the one that is available for Swing.
- Printing: A sample has been added illustrating multi-page printing of the JavaFX view.

Sample code to get you started

The JavaFX decoder sample has been extended with layer control, on-map navigation controls, and integrated support for printing.

In addition, there is a tutorial, “Printing a JavaFX view,” and an FAQ document, “How can I navigate in a JavaFX view with UI controls?”

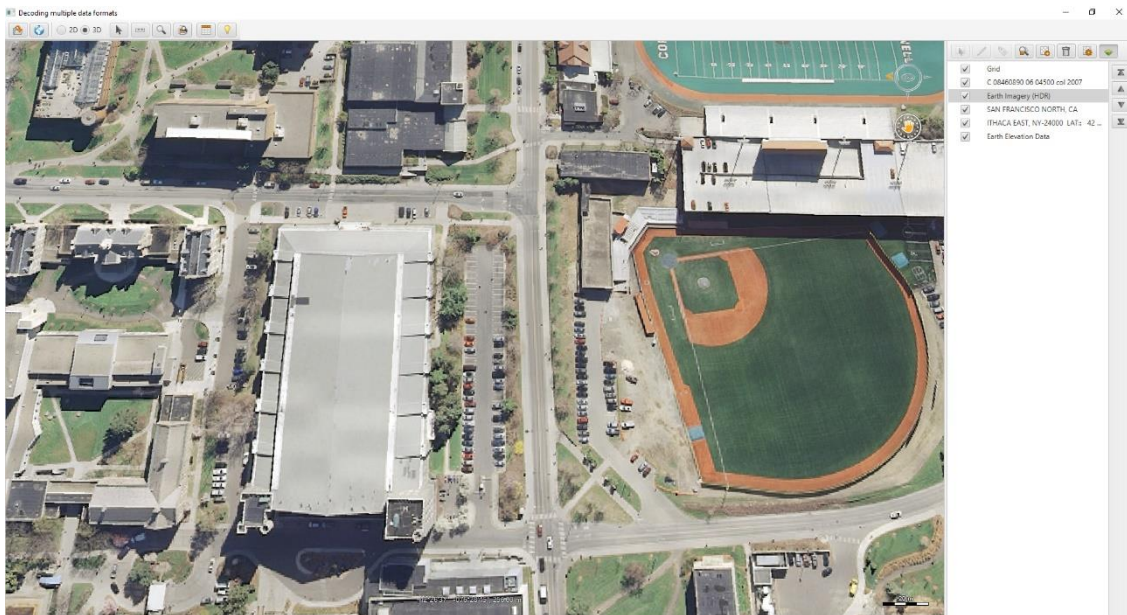


Figure 2: The JavaFX on-map navigation controllers and the layer control are illustrated in the decoding multiple formats data sample for JavaFX.

¹ <https://openjfx.io/>



Figure 3: Printing support for JavaFX as illustrated in the decoding multiple formats data sample for JavaFX tutorial. Multi-page printing is supported.

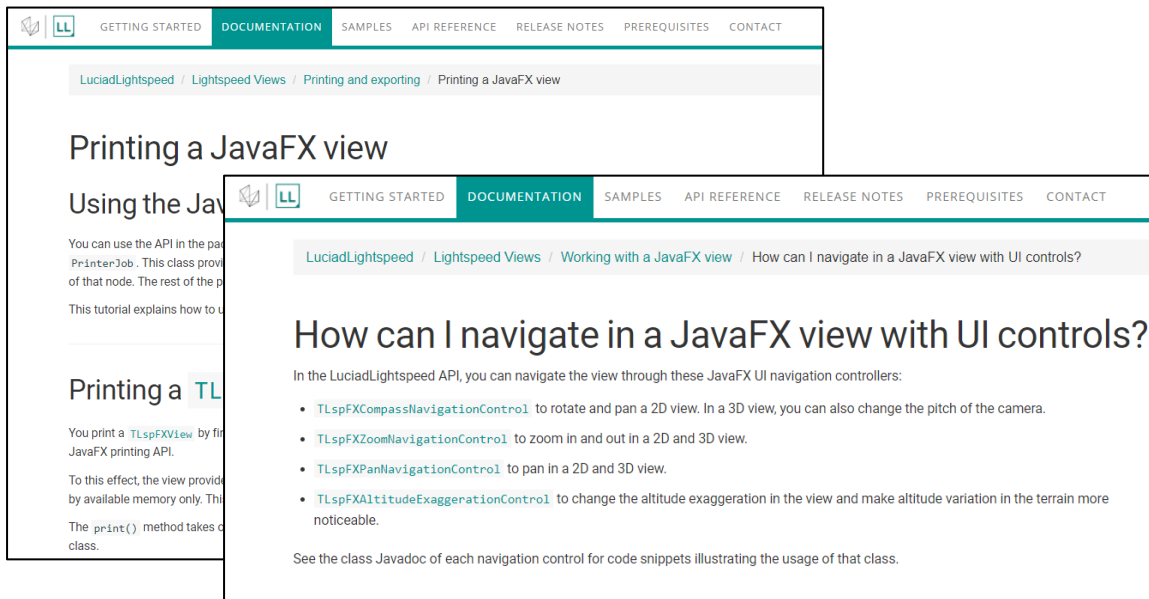


Figure 4: A dedicated tutorial and FAQ list assist you in using the JavaFX navigation controls and printing capability.

Support for the Normaal Amsterdams Peil vertical datum

Amsterdam Ordnance Datum, or Normaal Amsterdams Peil (NAP)², is a vertical datum. It was originally created for use in the Netherlands, but it is now used in large parts of Western Europe.

LuciadLightspeed now supports this vertical datum, as well as the associated EPSG reference: EPSG:74153. As a LuciadLightspeed user, this just works for you. You can open, visualize, and use data in this reference or referring to this vertical datum. See Figure 5 for one of the landmarks used to define this vertical datum.



Figure 5: One of the landmarks used for the NAP vertical datum is the church tower in Amersfoort (building data by 3dbag.nl).

MrSID format update

The LuciadLightspeed support for imagery in the MrSID format has been updated to support generation 4 data files. In addition to the upgrade, the MrSID decoder now also includes support for multispectral imagery.

You can find this capability in the Advanced Raster Connectors component, which is an option within the LuciadLightspeed Advanced Tier and included in the Pro Tier.

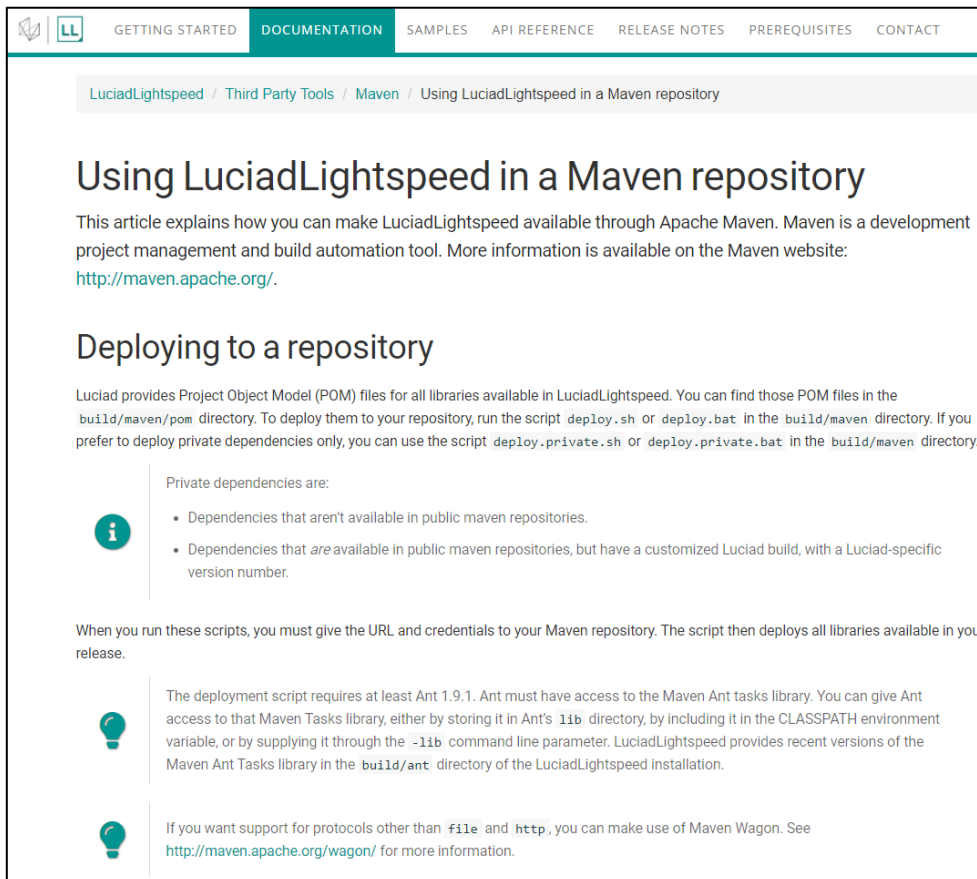
Note that MrSID is a proprietary format, and the third-party software component needed to decode the imagery no longer supports 32-bit Linux. As a result, LuciadLightspeed 2021.0 also no longer supports decoding MrSID data on 32-bit Linux. Please contact us if you are deploying a LuciadLightspeed-based application or service on 32-bit Linux that uses MrSID data.

² https://en.wikipedia.org/wiki/Amsterdam_Ordnance_Datum

³ <https://www.spatialreference.org/ref/epsg/7415/>

Other improvements

- As a convenience for LuciadLightspeed developers, new Maven POM files are available for each LuciadLightspeed product tier (Essential, Advanced, and Pro). These POM files depend on all non-optional modules available for their respective product tiers. The knowledge base article on this topic, “Using LuciadLightspeed in a Maven repository,” has also been extended. See Figure 6.
- The LuciadLightspeed OGC WMTS client now also supports the GetFeatureInfo operation. As a result, using WMTS, you can benefit both from the fluent streaming of data and the interactivity of selecting items and retrieving attribute information. This works like the same operation for the WMS client and is detailed in a how-to guide: “How to perform a getFeatureInfo request.” This capability has also been integrated into Lucy, where it is automatically enabled. When you are connected to a WMTS service, selection is enabled and integrates with the GetFeatureInfo operation. Note that within this same 2021.0 release, the LuciadFusion WMTS service has also been extended with this capability. The Luciad portfolio now offers you an end-to-end solution for the use of GetFeatureInfo, for both WMS and WMTS.
- Support for data in the NITF format has been improved. Nested elements are better supported in this release. You can find this capability in the Defense Standards component, an option within the LuciadLightspeed Pro Tier.
- LuciadLightspeed now supports PostgreSQL13. You can find this capability in the Database Connectors component, which is an option within the LuciadLightspeed Advanced Tier and included within the Pro Tier.
- LuciadLightspeed now comes with convenient API to work with paper-like map scales (e.g. 1:100,000).



The screenshot shows a web page from the LuciadLightspeed documentation. The navigation bar includes links for GETTING STARTED, DOCUMENTATION (active), SAMPLES, API REFERENCE, RELEASE NOTES, PREREQUISITES, and CONTACT. The breadcrumb trail is LuciadLightspeed / Third Party Tools / Maven / Using LuciadLightspeed in a Maven repository. The main heading is "Using LuciadLightspeed in a Maven repository". The text explains that this article shows how to make LuciadLightspeed available through Apache Maven, a development project management and build automation tool. It provides the URL <http://maven.apache.org/>. A sub-heading "Deploying to a repository" is followed by text stating that Luciad provides Project Object Model (POM) files for all libraries available in LuciadLightspeed, located in the `build/maven/pom` directory. It instructs users to run `deploy.sh` or `deploy.bat` in the `build/maven` directory, or `deploy.private.sh` or `deploy.private.bat` for private dependencies. A callout box with an information icon lists private dependencies: dependencies not available in public Maven repositories, and dependencies available in public repositories but with a customized Luciad build. Below this, it states that when running these scripts, the user must provide the URL and credentials for their Maven repository. Another callout with a lightbulb icon notes that the deployment script requires at least Ant 1.9.1 and access to the Maven Ant tasks library. A final callout with a lightbulb icon mentions that support for protocols other than `file` and `http` can be achieved using Maven Wagon, with a link to <http://maven.apache.org/wagon/>.

Figure 6: The knowledge base article on Maven integration has been extended.



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