# Leica Geosystems Release Notes

**Product**  
Leica Cyclone REGISTER 360 version 1.6

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**From**  
HDS Software Product Management

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What’s New

This is a major release including over 15 new features for Cyclone REGISTER 360. This release further improves Leica Geosystems’ HDS Software product offering to promote simple data transfer and easy workflows to take users from data capture through preparation, data management, and delivery to end users.

New Features

Support for BLK360 data capture with Cyclone FIELD 360

With the release of Cyclone FIELD 360 2.0 Users can now operate the BLK360 to automatically capture, pre-align and examine scan and image data, directly within the Leica Cyclone FIELD 360 app from any tablet iOS or Android mobile device. The powerful mobile-device app links the 3D data acquisition in the field with the BLK360 and data registration with Leica Cyclone REGISTER 360, providing the most streamlined service for registering and publishing your captured data.

Cyclone FIELD 360 2.0 can now collect and link BLK360 scan data. See the support documentation for more information on the use of the latest Cyclone FIELD 360 features via myWorld.

1. After Cyclone FIELD 360 data collection, click the info icon in the upper right corner of Cyclone FIELD 360 to open the Sync Server option dialog.
2. Check the Sync Server checkbox to active the server and provide the IP address:
3. Next, open Cyclone REGISTER 360, create a new project and use the new command in the Import area: Import Cyclone FIELD 360 Project:

4. Enter the IP address from step 1 above and click the Test Connect button:
5. After Cyclone REGISTER 360 and Cyclone FIELD 360 are connected, click the **Add to Project** button and the setups will appear in the left side import panel and then in the center view area:

**BLK360 Setups pulled from Cyclone FIELD 360 populated in the import navigator.**
Limit Box Tools

With the release of Cyclone REGISTER 360 1.6, a new Limit Box tool has been added to aid users in cleaning and segmenting the cloud. This tool controls point cloud visualization by isolating a subset of points within the extents of the Limit Box and hiding those outside the box. Use of the Limit Box tool is limited to the Setup Cloud, Bundle Cloud, and TruSlicer view modes. Usage of the Limit Box tool is detailed below.

Create Limit Box

- By clicking Create Limit Box a temporary clipping box is placed and shown that is vertically aligned to the z-axis and fits the setup/bundle extents.
  - If there is an active UCS then the Limit Box comes in aligned to the UCS.
  - The current box can be set to shown/hidden from the command in the Limit Box tools.

Create Quick Limit Box

- Using Create Quick Limit Box (QLB) a temporary clipping box is placed by user selection. The box is aligned to z-axis, centered at the pick point and extends to the size provided by the user. The default QLB size is 10.0 m that can be adjusted by the user. If there is an active UCS then the Limit Box comes in aligned to the UCS.
Resizing Limit Boxes

- To resize a limit box, hover over the box faces to highlight. The highlighted face can be moved using mouse in two directions.
  - Hold SHIFT key for selecting the opposing faces

Rotating Limit Boxes

- To rotate a limit box, hover over an edge line while holding the ALT key to highlight the line. The highlighted edge will become a handle for rotation.
  - Hold ALT + SHIFT keys to select the opposing edges.
Limit Box Manager

- The Limit Box Manager is used to store the created Limited Boxes.
  - The created Limit Boxes are temporary and discarded when user switches to a different view mode, unless stored.

- Using the Limit Box Manager, user can save newly created boxes, delete existing boxes, activate clipping functionality, set the visibility and export to options.
  - Active: if checked, Limit Box affects point display.
  - Visible: if checked, the Limit Box is visually rendered in Cyclone REGISTER 360.
  - Export: If checked, the Limit Box gets published as a clip to JetStream Enterprise projects and LGS files. Appropriate licenses are required for publishing and/or JetStream Enterprise itself.
Limit Boxes visible with Points

Limit Boxes visible without points

Detect Moving Objects Filter

This new tool in Cyclone REGISTER 360 1.6.0 works on a bundle to detect objects that have moved between setups. Moved points are marked in red after the filter has been run on a registration.

The supported and tested formats are:

- BLK360
- RTC360

This filter works optimally when the scan positions surround the data being filtered and the scanner locations are less than 10 meters apart. Data should contain high resolution scans only (and not be mixed with lower resolution scan data) to produce the best results.
Detect Moving Objects works on data imported in REGISTER 360 V 1.6.0 or later.

1. To run the filter, right-click on the bundle and execute the Detect Moving Objects command.

2. The filter automatically detects and marks the points that are associated with the objects that are moved between setups.

3. After the processing has finished, the points associated with moved objects are classified and highlighted in red. To show the moved points click Show Moved Points.
Once Show Moved points is activated, you cannot change views to interact with other panels. Turn off this mode to switch view or work in other areas. The marked points can always be turned back on.

4. Once the marked points are shown, the following options are available:
   1. Delete all marked points:

   ![Delete All Marked]

   Only the red marked points will be deleted

   ![Delete All Marked, Delete Inside, Delete Outside]

   You can restore all the deleted points by using the Restore command for the entire bundle or individual setups

   ![Generate Setup Archives, Re-import Panoramic Images, Export Panoramic Images, Restore Deleted Points, Cloud-to-Cloud, Both]
Export and Re-Import Panoramic Images

With a Cyclone PUBLISHER Pro license, users can now export and then re-import panoramic images.

- **To export panoramic images:**
  
  Exporting Panoramic images can be done for single setups or a bundle.
  
  3. Right click on the setup/bundle and select **Export Panoramic Images**
  4. Set a folder address to export panoramic image(s) to.

- **To export panoramic images:**
  
  5. Cyclone REGISTER 360 will export the panoramic images in both JPG and EXR formats.

- **To export panoramic images:**
  
  6. The exported images can be edited in photo editing software and reimported.
To re-import the panoramic images:

1. Right click on the setup or bundle and select **Re-Import Panoramic Images** then navigate to the folder that contains the panoramic images. The name and aspect ratio of the image must remain the same in order to re-import and map the pano. Only the jpeg image can be re-imported. The EXR file can be edited and re-imported, but only if the EXR file is saved as a jpeg and named the same as the ScanWorld it belongs to. The other JPG must be removed from the folder if using the EXR/JPG version.
Support for Autodesk RCP format

Cyclone REGISTER 360 now supports the RCP format from Autodesk allowing seamless integration with all Autodesk programs such as ReCap and the AutoCAD suite of products.

- **Export RCP file:**
  
The new command is available in the Report area under the Publish tab. Images are not supported as part of RCP export.

- **Import RCP file:**
  
  RCP point clouds, including images, can be imported in the Import area of Cyclone REGISTER 360 by dragging and dropping or by selecting the RCP file from the Browse menu. RCP imports must be structured data, Cyclone REGISTER 360 does not import unstructured data.

Support for Password Protected LGS files and JetStream Projects

With the release of Cyclone REGISTER 360 1.6, users may assign a password to LGS files and JetStream projects upon publishing from Cyclone REGISTER 360 to ensure secure transmission from provider to end user. Passwords must be entered each time the project is viewed in CloudWorx or JetStream Viewer as well as when a password protected file is uploaded to TruView Enterprise or Cloud. Passwords must contain six or more alphanumeric characters. The appropriate PUBLISHER license is required for publishing LGS files or JetStream projects.
Passwords cannot be recovered or changed for either projects or files but may be removed and re-added from projects within JetStream Enterprise or re-published from Cyclone or Cyclone REGISTER 360.

Granular Publishing options for JetStream and LGS

Additional export options have been added for LGS files and JetStream project publishing including:

- List of the number of ScanWorlds, clips and saved UCS’
- Ability to change the project name for clarity in downstream applications (JetStream Enterprise projects only).
- Pano export resolution option including all possible options based on the project’s native image resolution.
- Option to not publish pano images to reduce file size.

Auto Sphere Target Extraction

Sphere targets can now be automatically detected and created during the import process to assist users of third-party hardware. Sphere targets can be fitted in any dataset originating from any supported scanner.

1. In the Import area, select the Auto Sphere option:
2. Once imported the extracted sphere are used for registration. Sphere target thumbnails are also created and can be view in the property panel for a setup. Users should verify the sphere extraction as they would a B&W target.

3. The diameter of the sphere targets can be entered prior to import to help Cyclone REGISTER 360 accurately filter sphere targets from other objects within a scene.

Note: To ignore pre-set sphere target size, the diameter should be set to 0.

Re-Connect Project Storage folder

Cyclone REGISTER 360 now allows users to re-connect the project storage folder to support users who have experienced critical issues with their processing computer.

1. Open the **Project & Storage** dialog:

2. Next, go to the Storage tab and click the **Reconnect** button:
3. Browse for the disconnected **Project storage folder** and click the **Select Folder** button:

![Select Project Search Folder]

4. After connecting a dialog will appear confirming that a connection has been made:

![Connect Projects]

**Use and limitations of this feature:**

- This feature supports the reconnection of Project Storage Folders that have been disconnected.
- Reconnecting a Project Storage folder from Cyclone REGISTER 360 Version 1.5.1 or earlier will work, but with limitations:
The name of the project will be lost, and the project will be named Project_1 then, for the next Project, Project_2 and so on.
- To avoid the loss of the project name, open the project in REGISTER 360 Version 1.6.0 or latter.
- The bundle count listed in the Project Explorer, seen upon startup, will show 0 bundles until the project is opened. The Bundle(s) will still be in the project.
- Storage of a Project Storage folder on a NAS drive and using this feature to reconnect with different computers running Cyclone REGISTER 360 is not supported (ie using NAS as a project server for multiple instances of Cyclone REGISTER 360). This feature is designed to restore data in the event of a critical system failure only.
- This feature does not support concurrent connections to Project Storage folders. Only one computer can be connected AND using a Project Storage folder.
- Once the 1st computer running Cyclone REGISTER 360 connects to the Project Storage Folder on a NAS drive the 2nd computer running Cyclone REGISTER 360 will not be able to connect to the same Project Storage folder until the 2nd computer re-connects to the same Project Storage folder. However, the 1st computer will still list the project, but will not be able to connect until the 1st computer reconnects.
- If there is a connection error, please check that the project is not already listed. If it is already listed, remove the drive you are trying to connect from the computer and then delete the entry for the project listed as connected. Then try and re-connect the drive and the re-connect the project.

New Setup naming convention for RTC360 data

Cyclone REGISTER 360 now automatically appends the name of the job to the setup name as shown below to help differentiate setups from different jobs. In Cyclone REGISTER 360 1.5.1 and earlier, there could be setups named Setup-001 and then Setup-001 (2), now they are named, for example, Jobnameone-Setup 001 and Jobnametwo-Setup 001.
Import of individual RTC360 Job folders

Job folders can now be directly imported without the RTC360 storage folder for more nuance in the data import process. Users may drag and drop or browse for individual Job folders.

Direct drag and drop of the job folder is now supported
Batch renaming of Setups

Cyclone REGISTER 360 now supports the batch renaming of Setups in the Import and Review and Optimize area to help users quickly organize project data.

1. Multi-select the setups to rename, then right click and select **Rename Selected Setups**:

2. Next, enter a naming convention and numbering sequence and click **OK** to rename the setups:

Batch Apply Tone Mapping

User can now apply tone map settings to all selected setups or a full project.

- Select setup(s) to Tone map the selected setups by checking the **Apply to Selection** check box.
- Select one setup and then check the **Apply to Project** to apply the tone mapping to entire project.
Tilt Fix “Bad Z direction” in Visual Alignment

Users can now use Visual Alignment on tilted setups. The tool allows the user to correct the tilt of setups manually to enable Visual Alignment. This tool DOES NOT level the setups and can only make the setups level enough to enable Visual Alignment. The corrected tilt is carried through to the coordinate system of both setups.

1. To use this tool, enter Visual Alignment and then enter the Side View, then click the Correct Tilt button. Use the Rotate Cloud option to level each scan. Hold down the shift key to rotate the orange scan.
Report Viewing Enhancement

PDF reports now instantly appear in the Report area. Previously, the report had to be generated every time the project was opened.

Additional Changes/Improvements

Support for the latest BLK360 firmware

Emissivity

There is a new option in the BLK360 settings dialog for emissivity to help users fine-tune the accuracy of the relative temperature gradient displayed downstream. The user can select a setting between 0 and 1.
Note: Settings of 1 and High are the recommended universal settings. If you plan to use an alternate setting please refer to the BLK360EmissivityGuide.pdf document and conduct a test scan prior to executing a large project as the IR display cannot be modified downstream in Cyclone REGISTER 360.

The emissivity of the surface of a material is its effectiveness in emitting energy as thermal radiation. Thermal radiation is electromagnetic radiation and it may include both visible radiation and infrared radiation, which is not visible to the human eye. The emissivity of a surface affects how accurately the IR sensor in the BLK360 can record a surface temperature. The emissivity setting allows the user to set a value for the emissivity of the surface being scanned. Please refer to the BLK360EmissivityGuide.pdf in the install directory for details on emissivity and a guide for determining the appropriate emissivity setting based on capture conditions.

BLK360EmissivityGuide.pdf in the install directory for details on emissivity and a guide for determining the appropriate emissivity setting based on capture conditions.
Support new tilt compensation without image option
The BLK360 Data Manager now supports capturing data without images.

Note: The option to take an image must not be used if the BLK360 scanner is using Firmware release 1.2.1 or earlier.

Import and Project Management Features/Enhancement

Within the Project Explorer, a pull-down menu is now available for each project which contains all the versions related to the project. The version in bold font is the default, or last version active. To select a different version, simply open the menu, select the version you want from the list and open the project.

Pick Point tool improvement
The Pick Point tool now displays the coordinate of the selection on the point cloud.

1. Click the Pick Point tool and then pick a point on the cloud.
2. To remove the coordinate graphic simply use the space bar.

Support for long file names in Project Explorer window
The Project Explorer now supports the viewing of up to 30+ characters of a Project name:

Image Features and Enhancements

New 5120 import and export option for RTC360 images
The full resolution of the RTC360 HDR camera can now be imported and exported with the addition of the new 5120 pano image resolution option. Export to LGS, JetStream, TruView Enterprise, and TruView Cloud are supported.

- Users should be aware that using the 5120 export option will result in increased file sizes
- 5120 export is only supported when the native image resolution is 5120.

1. To import 5120 images, select this option within the Settings dialog under Import.
2. To export 5120 images, ensure that “Include Pano Images” checkbox is selected then select the 5120 option under resolution.

3. To export to TruView with 5120 resolution, ensure that the appropriate resolution is selected within the TruView export settings.

**RTC360 Panoramic image improvements**

Panoramic images now import with better clarity, smoother edges and increased brightness for a richer HDR experience.
Update to the latest Faro SDK 7.2.0.648

Cyclone REGISTER 360 1.6 will support the latest Faro scanners which have been enabled with the latest available Faro SDK.

Publishing Enhancements

Improved GeoTag support for TruView

GeoTags are now supported for export to TVG and TruView Classic from Cyclone REGISTER 360 1.6.

Change authentication steps for publishing to TruView Cloud.

Cyclone now checks the authentication for TruView Cloud login credentials first and then creates the TruView data to upload if the authentication is successful rather than checking credentials post-upload queuing to prevent delays when incorrect credentials are entered.

Registration Enhancements

Weighting of Applied Control

The weighting of applied control has been modified to equal that of Cloud-to-Cloud and targets when control is applied to a bundle allowing control to be used more effectively for registration.

Support removal of Control File

Users can now delete an imported Control file rather than overwriting one.
1. In the Reivew & Optimize area, open the control tab then right click on the control object and choose **Delete** to remove the control file for the project:

![Delete Control File](image)

**UI/UX Enhancement**

**Support Greyscale Gamma Correction**

Cyclone REGISTER 360 now supports gamma correction of the cloud on a per project basis for improved visualization.

1. To change the Gamma setting open the Rendering tab within the Settings dialog and select the appropriate Gamma level for the project.

![Gamma Setting](image)

**Support for changing default language**

Users can now use a command line shortcut to change the default language of Cyclone REGISTER 360.

To change language:

On the desktop, right click the REGISTER 360 shortcut (create one if there is not a shortcut on the desktop) and go to properties and add “```locale=(short name for country)```” to the end of the register360.exe path as shown in image, so for Germany, it would look like this “```locale=de```”.

![Command Line Shortcut](image)
Support for CLM 1.8

Cyclone REGISTER 360 1.6 is now compatible with CLM 1.8.

Bug Fixes

UX Bugs

- Corrected a bug which could cause more points than expected to appear when the mixed pixel filter setting was not in use.
- Corrected a bug which could cause the left and right panes to be only partially visible.
- Improved panel contents layout for screens of varying sizes.
- Corrected a bug which might cause the displayed global errors to be smaller than the original results presented during Cloud-to-Cloud.
- Improved the clarity of error messages relating to project relocation
- Corrected a bug which affected the ability to adjust the map view after capturing an image to use as a project SiteMap.
- Improved the responsiveness of the project explorer.
- Improved automatic balancing of images.
- Improved a bug which could cause a blue hue to appear in projects created from a P-series scanner and imported as an E57.
- Corrected a bug which could cause scanner information to appear incorrect or missing for P-series scanners.
- Corrected a bug with version management which could cause the last used version not to appear as the default resulting in the appearance of a loss of data when in fact it was only a different saved version.
- Corrected a bug which caused an installation dependency on third-party SDKs.
- Improved targeted registration.
- Corrected a bug which could prevent Visual Alignment results being displayed after using TruSlice.
- Improved stability of target extraction.
- Corrected a bug which prevented re-named setups from displaying new names via the hoover tag.
- Improved stability and responsiveness of "check license" tool.
- Corrected a bug which could prevent links made with P-series data to show the optimization error.
- Improved clarity of Setup labels within the Registration report.
- Corrected a bug which caused an original search radius not to be obeyed once the units of measure were changed.
- Improved clarity of error messages and reduced number of messages displayed when events were successful.
- Corrected a bug which allowed locked links to be edited.
- Corrected a bug which caused TruSlicer to obey control coordinates rather than UCS.
- Corrected a bug which caused GeoTags from one SiteMap to be visible on an unpopulated second SiteMap.
- Corrected a bug which caused the "show targets" button to be removed when setup locations were turned off.
- Corrected a bug which caused unexpected behavior in navigating links via arrow keys in the navigation panel.
- Corrected a bug with the "Lock All" and "Unlock All" buttons under bundle properties not working as expected.
- Corrected a bug which prevented the user from activating the "Re-Apply Control" button.
- Corrected a bug which did not honor the 'Report options' and 'Publish options' if the deliverable name was changed.
- Corrected a bug which prevented the UCS from updating on the SiteMap button after being changed.
- Corrected a bug which caused unexpected behavior when moving setups or bundles between SiteMaps.
- Corrected a bug which resulted in the "Accept" button not appearing for the master SiteMap in the finalize area.
- Corrected a bug which incorrectly hid tool tips for B&W target extraction.
- Corrected a bug which prevented Cyclone REGISTER 360 from obeying the user’s selection to not optimize bundles upon link creation.
- Corrected a bug which caused the action bar to hide icons when one was active due to space limitations.
- Corrected a bug which produced invalid bundle names for single setup projects within the registration report.
- Corrected a bug which caused bundles to persist after links were deleted.
- Corrected some unexpected behavior when deleting VIS links.
- Corrected a bug which allowed the user to re-name SiteMaps with duplicate names.
- Corrected a bug which caused the tone map editor to continue processing after completion.
- Corrected a bug which caused projects with multiple SiteMaps to not render UCS changes when control was applied.
- Corrected a bug which prevented projects from being published with broken GeoTags, such objects are now ignored and files are published without them.
- Corrected a rendering bug which could cause BLK360 data to have a greenish cast.
- Corrected a bug which cause IR temperature and distance measurement markers to persist after turned off.
- Corrected a bug which caused tool tips to appear offscreen.
- Corrected a bug which would cause right clicking an imported RTC360 setup to incorrectly provide the option to “Remove Setup from SiteMap”
- Improved target matching.

**Import Bugs**

- Corrected a bug which allowed duplicate setups to be imported into the same project for RTC360 data.
- Corrected a bug which could cause issues re-importing a dataset after the original import was canceled.
- Corrected a bug which prevented Cyclone REGISTER 360 from correctly estimating scan size of BLK360 scans imported directly from the scanner. Bug was not present when data came via the BLK360 Data Manager.
- Corrected a bug which could cause Cyclone REGISTER 360 to fail to create a project without notifying the user, when the project directory selected is full.
- Corrected a bug which could cause certain RTC datasets to import with incorrect tilt.
- Corrected a bug which incorrectly estimated the required disk space to import a project.
- Corrected a bug which prevented audio and video assets created in Cyclone FIELD 360 from being imported to Cyclone REGISTER 360.
- Corrected a bug which caused assets to remain after their source data is removed from the import area.
- Corrected a bug which caused a crash with RTC360 data when VIS is applied, and low resolution is selected.
- Corrected a bug which resulted in no message being presented to users when they attempted to add unsupported data types (ie LGS, pts etc.)
- Corrected a bug which cause Smart Align links to be created even when setups were marked for exclusion.
- Corrected a bug which could cause the Import button to become invisible after canceling warnings within the import area.
- Corrected a bug which resulted in P-series and C-series scans being renamed upon import.
- Corrected a bug which caused problem amending additional data to existing projects.
- Corrected a bug which could prevent Cyclone REGISTER 360 from creating VIS links when data was imported in separate events to a single project.

**Publishing Bugs**

- Corrected a bug which caused TVG datasets to be unexpectedly large.
- Corrected a bug which could cause unexpected cleaning results being published to E57 then re-imported into Cyclone REGISTER 360.
- Corrected a bug which could case cubemap images to not be published as part of an LGS file.
- Corrected a bug which could produce irregular imagery within TruView when TVG files were published from Cyclone REGISTER 360.
- Improved general stability of connection between TruView and Cyclone REGISTER 360.
- Corrected a bug which caused Setup icons to be incorrectly located on SiteMaps published to TVG and LGS files.
- Improved stability of publishing for foreign language operating systems.
- Corrected a bug which produced a message stating that publishing to TruView Cloud was successful when in fact the number of setups being published exceeded the number licensed in TruView and the publish actually failed.
- Corrected a bug which could prevent Cyclone REGISTER 360 publishing to JetStream Enterprise when users were present within JetStream Enterprise Admin.
- Corrected a bug which could prevent RTC360 projects containing multiple SiteMaps from successfully publishing.
- Corrected a bug which could prevent old datasets from being successfully published to TVG or LGS format.
- Corrected a bug which could cause SiteMaps that were not selected to be published.
- Corrected a bug which could cause some zfs files to publish with larger than expected file sizes.
- Corrected a bug which prevented publishing immediately following a canceled publish operation.
- Corrected a bug which prevented publishing if certain files are missing. The publish will now be allowed but setups with missing data will not be publish-shown in error message.
- Corrected a bug which could cause E57 projects published from Cyclone REGISTER 360 to appear misaligned when imported into ReCap. Importing into Cyclone was not affected.
- Corrected a bug which could prevent users from publishing to LGS files even with a Cyclone PUBLISHER Pro license if the deliverable was created before a Cyclone PUBLISHER Pro license was activated.

**Installation and Licensing Bugs**

- Corrected a bug which could cause licensing issues when an evaluation copy of Cyclone REGISTER 360 was present in addition to a purchased copy.

**Leica Cyclone REGISTER 360 1.6 Compatibility and Upgrades**

**Compatibility**

Cyclone REGISTER 360 requires corresponding releases of Cyclone, JetStream Enterprise, JetStream Viewer, and TruView for features to function correctly:

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| Import Cyclone REGISTER 360 Projects  
(BASIC, REGISTER, MODEL, or SURVEY) | 9.2 or higher |                          |                      |                  |          |
| Consume published HDR panorama images published as JSV or JetStream Enterprise projects |                         | 1.4 or higher            | 1.4 or higher      |                  |          |
| Publish to JetStream Enterprise | 1.4 or higher | 1.4 or higher |                      |                  |          |
| View Multi SiteMap hyperlinks | 1.5 or higher |                          |                      | 3.0 or higher    |          |
| View projects containing layers | |                          |                      |                  | 3.6 or higher |
| Consume LGS | 1.5 or higher | 1.5 or higher | 1.5 or higher |                  | 3.6 or higher |
| Publish password-protected LGS files | 9.3 or higher | 1.6 or higher | 1.6 or higher | 1.6 or higher | 3.8 or higher |
| Consume password-protected LGS files | 9.3 or higher | 1.6 or higher | 1.6 or higher | 1.6 or higher | 3.8 or higher |

**Known Issues**

- Virtual Machine (VM) environments are not supported.
- Remote Desktop is only supported if Cyclone REGISTER 360 is opened in the remote computer first. Trying to open Cyclone REGISTER 360 through remote desktop is not supported.
- Cyclone REGISTER 360 will not detect the dedicated graphics card on computers with multiple graphics cards. Users must manually set the dedicated card for use with Cyclone REGISTER 360. This is done with the Nvidia Control Panel for Nvidia graphics cards, or with the Catalyst Control Center for AT\IAMD graphic cards.
- Importing data over a network can cause issues, especially on Windows 10. The workaround is to copy the scan data to a local disk.
- If memory issues arise check and make sure that the virtual memory size is set to the same size as RAM.
- Automatic image matching of imported panoramic images may not always be correct.
- The zoom scale bar will be captured in the image in the import area using the satellite or street map.
- Project thumbnails (the image shown in the project explorer) are not preserved in the *.raf export file.
- F1 contextual help will not work with Microsoft Edge browser as the default browser. The workaround is to use Chrome or Firefox as the default browser.
- The auto extraction of Black & White targets will not extract targets from detail scans. The extractor works on the main scan only. The targets can be manually extracted from the detail scans after import.
- Files written to the temp folder at C:\Users\(user name)\AppData\Local\Temp\Register360, will be deleted after the program closes. These files will NOT be deleted if the program freezes or crashes.
- In rare cases the bundle will show an optimized state, but there is still an unoptimized link in the bundle (not shown with a dotted line). Optimize the bundle to resolve the issue or split the bundle into smaller bundles and look for the suspect dotted line link, delete this link and re-optimize.
- The SiteMap name cannot have non-Latin (Japanese, Chinese, etc) characters for publishing to TruView Enterprise or TruView Cloud. The currently active Project should not be re-named from the Projects & Storage settings. You should close the project before renaming it.
- When a setup has a UCS created from it, the UCS must first be deleted before the setup can be deleted from the project.
- On rare occasions HDR images may appear grey with very little variation. The workaround is to open the image with the Tone Map Editor and re-save the image.
- Some graphic card anomalies can be caused by power management software. Please turn off by setting the power management profile to High performance.

**Modified usage for Japanese OS**

Japanese OS language preference is not selected by default and causes issues with some Cyclone REGISTER 360 imports.

The user can fix this by manually selecting the language within preferences.

1. On the Japanese OS machine, launch Control Panel
2. Select region(地域) and click on the acceptance button indicated
3. Check "Use Unicode UTF-8 for worldwide language support"
4. Reboot

**Blurred images within ReCap**

In some cases, projects published from cyclone REGISTER 360, when imported into ReCap, may display blurred imagery when entering the setup location sphere. This is a known issue with ReCap.
Large Extents Workaround

Point Cloud data with extents large than 15K meters when published to JetStream Viewer it shows no point cloud points. The workaround is to publish part of the point cloud, so the extents are below 15K meters.

Usage file reporting issue for EnterpriseElite Customers

When using the standalone CLM installer, some EnterpriseElite users may find that the usage file (year-month.db) normally located at C:\Leica Geosystems\CLM\LogFiles does not get produced.

Please ensure your LGS.opt file (located here: C:\Program Files (x86)\Common Files\Leica Geosystems\License-Server\lgs.opt) looks like this:

```
DEBUGLOG +"C:\Leica Geosystems\CLM\LogFiles\lgs.log"
NOLOG IN
TIMEOUTALL 240
ENABLE_DB_HISTORY 1
PATH_DB_HISTORY C:\Leica Geosystems\CLM\LogFiles
```

ENABLE_DB_HISTORY should be set to 1 in this file. Please copy the file to a new location, edit it and re-save if the file says it’s read-only.

Installing CLM while JetStream is running

During installation of CLM, users may encounter the following error message. This is commonly due to a service like JetStream running in the background.

To enable the successful installation of CLM, please follow these steps:

- Launch the task manager
- Select the Services tab
- Look up the process with the PID (Process ID) shown in the Close applications dialog
- In this case it is JetStream
- Terminate the process so that CLM can be installed
- After CLM is installed, click on the Services button in the Task Manager and restart the service
**RCP export dialog progress reporting**

When exporting an RCP file, the progress will appear to stall part-way through an export. Though the progress bar does not update, the export is progressing.

**Disk Space Requirement for publishing to TruView Cloud**

When publishing directly to TruView Cloud, disk space equivalent to the file size is consumed which can cause issues during publishing. If the user cannot guarantee the required disk space locally they should modify the Temp location.

**Licensing**

All users with valid CCP for either Cyclone REGISTER 360 or Cyclone REREGISTER, or with CCP valid as late as 1 April 2019, can run this new version with no new license required.