



# Release notes

*[release-notes]* version 4.1

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# Release Note

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## 1 - 04/02/2026: version 4.1.24

### 1.1 - Directory

- Fixed postgres collation warning on systems that were migrated from bookworm to trixie or on docker deployments.
- Added end of license check to status computation.

### 1.2 - General

- Updated third parties.

### 1.3 - Generator

- Fixed an issue where job relative file paths were resolved relatively to job file.
- Added more diagnostics output when log level is set to TRACE.

### 1.4 - Proxy

- Fixed postgres collation warning on systems that were migrated from bookworm to trixie or on docker deployments.
- Fixed an issue where a build restoration was failing when it was containing a large number of configurations.

### 1.5 - PsConverter

- Added job details in log when log level is set to DEBUG.

### 1.6 - Yuzu

- Fixed and improved camera sensitivity setting.
- Fixed issues with boxing and transformations.
- Fixed issues with rendering states.

## 2 - 16/01/2026: version 4.1.23

### 2.1 - $\triangle$ Important notice $\triangle$

- Debian 12 (bookworm) service deployment is now deprecated in favor of Debian 13 (trixie).

### 2.2 - Backend

- Added Debian 13 (trixie) support.
- Updated docker images from Debian 12 (bookworm) to Debian 13 (trixie).
- Fixed bug causing HTTP response compression to be mostly disabled.
- Improved compression of HTTP static resources.
- Added zstd support for HTTP response compression.
- Fixed bug in memory budget estimation when exporting features on 2D and Vectorial export.
- Fixed bug causing  $\infty$ Proxy to be stuck in critical status after a  $\infty$ Directory connection loss.
- Allowed to override configuration file path for  $\infty$ Directory and  $\infty$ Proxy services.

- Fixed bug in raster export where checker background was not visible behind ghosted geometry.

### **2.3 - General**

- Updated third parties.

### **2.4 - Generator**

- Removed invalid ascii char from metadata documents provided by the connector.

### **2.5 - PsConverter**

- Made conversion more forgiven by not rejecting the whole file if a subgeometry ends up being empty after cleanup.

### **2.6 - Yuzu**

- Added cut plane indicator in footer.
- Fixed bug in footer configuration button.

## **3 - 17/12/2025: version 4.1.22**

### **3.1 - General**

- Updated third parties.

### **3.2 - Admin Portal**

- Added build usage basic statistics.

### **3.3 - Generator**

- Increased maximum number of configuration from 1024 to 9999 in build parameters.

### **3.4 - PsConverter**

- Fixed feature type (patch/crease) not properly extracted.

### **3.5 - Yuzu**

- Fixed ignore cut planed state not applied.
- Improved gizmo manipulator.

## **4 - 10/12/2025: version 4.1.21**

### **4.1 - Asset Manager**

- Fixed asset rights when uploading from a file.

### **4.2 - Generator**

- Fixed elasticsearch result parser when JSON object keys are in random order.

### **4.3 - Yuzu**

- Fixed visibility issue in raster export when using quick coloration.
- Fixed initialization issue in tree view.

## 5 - 08/12/2025: version 4.1.20

### 5.1 - General

- Updated third parties.

### 5.2 - PsConverter

- Fixed bug where workers were not starting if Cli was invoked from PATH environment variable.

## 6 - 01/12/2025: version 4.1.19

### 6.1 - **⚠ Important notice ⚠**

This release contains changes in default generator settings to improve generation reliability on malformed inputs (huge parts and flying parts). Default `modelAabbLimit` was reduced and by default instances that lie outside this AABB will be discarded.

### 6.2 - Admin portal

- Improved cluster state display on home page.

### 6.3 - Backend

- Improved HTTP api input validation (JSON & UTF-8).
- Fixed bug in asset api preventing a user to update an asset if he has never created an asset.
- Improved raster and vectorial exporters.

### 6.4 - General

- Updated third parties.

### 6.5 - Generator

- Added an option to reject instances whose AABB or xform are out of `modelAabbLimit`. This option is enabled by default.
- Reduced default size of `modelAabbLimit`.

### 6.6 - Javascript Web API

- Added `Matrix4.transpose3x3` to transpose the 3x3 matrix inside the given 4x4 matrix.
- Updated the way pose in webXR session is handled. This fixes a lot of trouble when updating camera positions, allowing to make sure the user is correctly oriented as regards the Up vector of the DMU.
- Modified the way `FilterPartInstanceListInterface.fromJSON` is working. In case of using `DataSessionInterface.fromJSON` that contained a `FilterPartInstanceListInterface` on an other build than the one currently using, `DataSessionInterface.fromJSON` and `FilterPartInstanceListInterface.fromJSON` were failing. `DataSessionInterface.fromJSON` now returns successfully, but any `FilterPartInstanceListInterface` will be set on error. It will be the charge of the application to update the content of the `FilterPartInstanceListInterface` accordingly.

FilterPartInstanceListInterface.setPartInstanceList function is left unchanged, triggering an error and being left unchanged if set on a build that is not the current one.

- Updated GeometricInstanceConverterInterface.convert (by adding an optional boolean) to allow getting the correspondence between part instances ids and their respective geometric instances ids. The mapping is given with GeometricInstanceConverterInterface.getGeometricInstanceIdsMapping.
- Added InfiniteEngineInterface.asyncWaitForDataSessionLoaded and slightly updated the way InfiniteEngineInterface.isLoaded works to avoid infinite wait.
- Fixed a regression preventing using popup based authentication.
- Added DataSessionInterface.getSourceModelId to know if two geometric instances have the same geometric representation.
- Fixed a regression preventing retro-compatibility api script from running.
- Fixed a rare edge case crash when a Converter was disposed while running for an empty request (race condition).
- Fixed a regression on retro-compatibility script FontLoaderInterface.getNbRegisteredFonts.
- Added InfiniteEngineInterface.isUsingHardwareInstancing, InfiniteEngineInterface.getDefaultHardwareInstancingUsage, InfiniteEngineInterface.setDefaultHardwareInstancingUsage, InfiniteEngineInterface.isUsingVertexArrayObjects, InfiniteEngineInterface.getDefaultVertexArrayObjectsUsage, InfiniteEngineInterface.setDefaultVertexArrayObjectsUsage to get more information and customization on hardware rendering and vertex array objects usage.
- Fixed a minor glitch when calling DirectorySessionInterface.setTokenValues would not update all the fields leading to some minor differences when calling DirectorySessionInterface.getCurrentTokenHash. Only DirectorySessionInterface.getCurrentTokenHash was impacted.
- Fixed a major bug that prevented WorkingSetInterface and FilterItemInterface from being updated when used inside a secondary DataSessionInterface that was reused after being disposed and reclaimed.
- Renamed the master/slave mechanism onto Primary/Secondary. Master/Slave paradigm should not be called as is any more.  
DirectorySessionInterfaceSlaveInfo is renamed SecondaryDirectorySessionInterfaceInfo.  
DataSessionInterfaceSlaveInfo is renamed SecondaryDataSessionInterfaceInfo.  
DirectorySessionInterface.requestNewSlaveDirectorySession is renamed  
DirectorySessionInterface.requestNewSecondaryDirectorySession.  
DirectorySessionInterface.openSlaveDirectorySession is renamed  
DirectorySessionInterface.openSecondaryDirectorySession.  
DirectorySessionInterface.asyncOpenSlaveDirectorySession is renamed  
DirectorySessionInterface.asyncOpenSecondaryDirectorySession.  
DataSessionInterface.requestNewSlaveDataSession is renamed  
DataSessionInterface.requestNewSecondaryDataSession.  
DataSessionInterface.unregisterSlaveDataSession is renamed  
DataSessionInterface.unregisterSecondaryDataSession.  
DataSessionInterface.openSlaveDataSession is renamed

DataSessionInterface.openSecondaryDataSession.  
 DataSessionInterface.asyncOpenSlaveDataSession is renamed  
 DataSessionInterface.asyncOpenSecondaryDataSession.

- Added InfiniteApiControllerInterface.asyncGetHardwareReport to get hardware information on the running host.
- Added a new check on DataSessionInterface.openDataSession to make it more robust. Specifying duplicates in pRestrictionTags was leading to an open data session failure.

### 6.7 - PsConverter

- Added an option to disable features computation.

### 6.8 - Yuzu

- Fixed minor bugs.

## 7 - 07/11/2025: version 4.1.18

### 7.1 - **⚠ Important notice ⚠**

This release contains backend api changes that requires all `~Directory`, `~Proxy` and `~AsyncJobSolver` to be updated to this version.

### 7.2 - **⚠ Breaking changes ⚠**

- Removed attributes `haserror` `nodeinfo->isAllVersionValid` and `nodeinfo->errorinfo` from `/directory/api/manage/proxies` endpoint, replace by `status` and `statusreasons`.
- Renamed status enum from `green`, `yellow`, `red` to `ok`, `warning`, `critical`. Affects `/directory/api/getversion?status`, `/proxy/api/getversion?status` endpoints.

### 7.3 - Administration Portal

- Fixed bugs.
- Improved cluster status reporting.

### 7.4 - Backend

- Improved 2D and Vectorial export efficiency (time & memory).
- Improved generated SVG compatibility with Inkscape.
- Fixed crash in HTTP api implementation when receiving a malicious JSON.

### 7.5 - Docker

- Replaced use of bitnami/minideb by debian/bookworm-slim. Bitnami is no more free.

### 7.6 - General

- Updated third parties.

### 7.7 - Javascript Web API

- Added different behaviors for the CameraManagerInterface with `CameraManagerInterface.setCameraBehaviorOnDMULoaded`,

CameraManagerInterface.getCameraBehaviorOnDMULoaded and CameraControllerOnStartBehavior.

- Fixed an infinite wait on ExportJobInterface.asyncWaitForFinished(0) when a backend error occurred.
- Added FeatureVisibilityMode.FVM\_DisableExtentPointsHover to disable point hover on geometric features (lines and arc of circle extent points).
- Updated documentation for DataSessionInterface.exportSVG and the SVG export procedure in general (missing sample, etc ...).
- Library is now compatible with `require-trusted-types-for 'script';`.

### 7.8 - Kiwi

- Fixed bugs.

### 7.9 - Native Client

- Added EAR marking on the Hub.

### 7.10 - Yuzu

- Added EAR marking on the login page.
- Improved raster/vectorial export dialog.
- Fixed bugs in color picker.
- Fixed bugs in idcard.
- Fixed bugs in changes tracking.

## 8 - 22/10/2025: version 4.1.17

### 8.1 - Javascript Web API

- Added new function to set an OOBB from an AABB (OOBB.fromAABB).
- Fixed a positioning issue in orthographic projection that made geometries disappear in case of a DMU with flying parts far away from the DMU AABB (near/far calculation error).
- Fixed a near/far calculation error for application AABB features that made some part of the AABB disappear in some rare edge cases.
- Fixed a rendering error on features and primitives in orthographic mode.
- Fixed zoom-in behavior in orthographic mode on DMU with flying parts far away from the DMU AABB (zoom-in is now more progressive).
- Fixed CameraManagerInterface.createExportViewpoint to create export viewpoint that ensure that the area that is contained inside the current viewport (with the given aspect ratio) is exactly the same (before, the CameraManagerInterface.isHorizontalFieldOfViewConstrained was incorrectly used before).
- Added Export2DEdgeDetectType that adds multiple edge detect algorithms for raster exports (Export2DOutputFormatInterfaceItem.edgeDetect).
- Added Export2DOutputFormatInterfaceItem.flatShading to allow exporting rasters with colors not depending on normal vectors.
- Added new export type from the infinite backend : SVG file format. SVG export is triggered through DataSessionInterface.exportSVG.

- Added ExportSVGOutputFormatInterfaceItem.draft to allow exporting svg images faster with a quality loss.

### 8.2 - PsConverter

- Improved geometry cleanup. Degenerated triangles were causing issues during vectorial export.
- Fixed bug in geometry cleanup.

### 8.3 - Yuzu

- Fixed various bugs.

## 9 - 21/10/2025: version 4.1.16

### 9.1 - Backend

- Fixed a bug causing timeout on long processing http requests.
- Improved error reporting and log.
- Added a new log level traces.
- Added vectorial exporter with svg, svgz and pdf support.
- Deprecated `enablediag` setting, replaced by `LogLevel`.
- Optimized memory usage of export2d solver.
- Changed relative path resolution in configuration file. They are now resolved relatively to the file instead of the current working folder.

### 9.2 - Native client

- Fixed crash in annotation task

### 9.3 - Yuzu

- Added support for vectorial export
- Fixed various bugs.

## 10 - 09/10/2025: version 4.1.15

### 10.1 - Backend

- Fixed 3D data migration, in some case data was corrupted preventing 3D export.
- Added a crash protection in 3D exporter.
- Added the ability to customize Apache run user on Windows.

### 10.2 - General

- Updated third parties.

### 10.3 - Javascript Web API

- Updated webxr requirements to avoid warning messages.
- Fixed some WebGL errors that may happen on ray picks.

- Added `InfiniteEngineInterface.getXRSession` to access the current XR session (if any, in case of WebXR view).
- Fixed a rendering bug that made geometries to flick when the given instances had reflected instances and were transformed.
- Changed the XR camera controller mode, sticks have been swapped, and the XR camera mode has now its own sensibility.
- Updated `CameraManagerInterface` documentation to reflect the changes in the XR camera controller mode.

#### 10.4 - PsConverter

- Added the ability to retrieve CAD file from an HTTP URL.

#### 10.5 - Yuzu

- Fixed bugs in search bar.
- Fixed bug in idcard, disable filter creation for metadata fields that are not indexed.

### 11 - 25/09/2025: version 4.1.14

#### 11.1 - Generator

- Improved error reporting.
- Disable use of a lock file in working folder.

#### 11.2 - Yuzu

- Improved attribute filter user interface.

### 12 - 22/09/2025: version 4.1.13

#### 12.1 - General

- Updated third parties.
- Changes log entry header to add process ID.

#### 12.2 - Generator

- Fixed *Fail to finalize es search result parser*.
- Fixed warning raised when `xformtolerance` values were set to zero.
- Added a subfolder in working folder to prevent errors on concurrent execution on same working folder.

#### 12.3 - Yuzu

- Fixed bug on transformations.
- Fixed bug on asset modification detection.

## 13 - 18/09/2025: version 4.1.12

### 13.1 - **⚠ Important notice ⚠**

Use of Windows 10 is now deprecated and not fully supported as the system reaches end of support from Microsoft.

### 13.2 - **Backend**

- Fixed SQL error on asset update on servers deployed from version 4.1.3 and upper

### 13.3 - **Yuzu**

- Fixed handling of `<a href="...">...</a>` metadata values.

## 14 - 17/09/2025: version 4.1.11

### 14.1 - **General**

- Updated third parties.

### 14.2 - **Javascript Web API**

- Fixed application claims that were not cleared in some rare cases when opening a directory session.
- Fixed FeatureManagerInterface.retrieveOOBB that returned an incorrect OOBB in some rare cases.
- Fonts were loaded multiple times if no webworker are available.
- Fixed a feature retrieval error FeatureManagerInterface.setGeometricInstanceFeaturesVisible when querying multiple OOBB features from different geometries at once.
- Changed FeatureManagerInterface.asyncHasFeature to download the 3d HD data if it was not loaded (it was waiting before for the HD 3D data to be displayed).
- Added FeatureManagerInterfaceSignal.FeaturesInfoReady, FeatureManagerInterface.retrieveFeaturesInfo, FeatureManagerInterface.asyncRetrieveFeaturesInfo to retrieve features information.

### 14.3 - **Kiwi**

- Fixed bugs

### 14.4 - **PsConverter**

- Fixed missing xref in plmxml driver convresult.

### 14.5 - **Yuzu**

- Fixed bugs

## 15 - 10/09/2025: version 4.1.10

### 15.1 - Cli

- Added commands to dump Elasticsearch index and geometry pool content.

### 15.2 - General

- Fixed asset filtering on web applications for asset admin roles.
- Updated third parties.

### 15.3 - Kiwi

- Added table component.
- Added ability to upload a local presentation to the cloud.
- Improved UX.

### 15.4 - Yuzu

- Fixed bugs (color picker, measure tools, favorites in IdCard).
- Added ability to save annotation (FTA/PMI) into Yuzu context.

## 16 - 12/08/2025: version 4.1.9

### 16.1 - Backend

- Improved std::exception and Windows SEH error reporting.

### 16.2 - Docker

- Enforced user limits (core dump, file handle, process count) in minideb images.

### 16.3 - PsConverter

- Improved error reporting on worker crash.
- Added failed job convresult upload to avoid retry on each run. Retry will be attempted on settings changes or software update.

## 17 - 06/08/2025: version 4.1.8

### 17.1 - **⚠ Important notice ⚠**

*psconverter:xrefmetadata* field is no more generated by the PsConverter. Its content was irrelevant in case of multiple instances of the same XRef. XRef metadata are available in linkmetadata documents.

### 17.2 - Generator

- Added an endpoint to request docindexer shutdown [\*/docindexer/api/shutdown\*](#).
- Removed duplicates children constraint.
- Removed *psconverter:xrefmetadata*.

## 18 - 30/07/2025: version 4.1.7

### 18.1 - Evojuump migration

- Added feature computation.
- Added a worker count limitation.
- Improved cancel support.

### 18.2 - General

- Updated third parties.

### 18.3 - Generator

- Reduced memory required by feature computation.

### 18.4 - Javascript Web API

- Updated code to account for features migrated from older versions.

### 18.5 - PsConverter

- Fixed extractmetadata behavior. CAD metadata is not extracted, but a partmetadatadocument is generated with the node name and type.
- Added a limitation to final geometry size (16M vertices and indices)

## 19 - 25/07/2025: version 4.1.6

### 19.1 - Important notice

For PsConverter and Generator usage it is required to update the `∞CLI` alongside the `∞Directory`.

### 19.2 - General

- Updated third parties.

### 19.3 - Generator

- Added a memory watch dog setting.

### 19.4 - Javascript Web API

- Added `DirectorySessionInterfaceSignal.TokenUpdated` and `DataSessionInterfaceSignal.TokenUpdated` signals that are fired when the content of the bearers has been updated.
- Added master/slave mechanism in authentication interfaces (namely `DirectorySessionInterface` and `DataSessionInterface`). The master slave mechanism allows to share the same directory session and data session across multiple tabs. Added `DirectorySessionInterface.requestNewSlaveDirectorySession`, `DirectorySessionInterface.openSlaveDirectorySession`, `DirectorySessionInterface.setTokenValues`, `DataSessionInterface.requestNewSlaveDataSession`, `DataSessionInterface.unregisterSlaveDataSession`,

DataSessionInterface.openSlaveDataSession and DataSessionInterface.setTokenValues to allow using a master/slave mechanism.

- Patch rendering. The patch rendering system has been fixed. In some rare cases on very small DMU, the patch rendering system was off even if InfiniteEngineInterface.enablePatchBorders(true) was called.

#### **19.5 - Kiwi player**

- Fixed crash on login.

#### **19.6 - OpenId Connect**

- Allowed multiple iss values.

#### **19.7 - PsConverter**

- Added feature extraction for non-CAD file formats.

### **20 - 22/07/2025: version 4.1.5**

#### **20.1 - General**

- Updated third parties.

#### **20.2 - Javascript Web API**

- Fixed a loading error that occurred when there was no simplified low definition 3d data in the DMU. A warning is simply outputted now.

### **21 - 18/07/2025: version 4.1.4**

#### **21.1 - Security note**

Windows deployment should be updated as soon as possible as this release fixes several CVEs on Apache 2.4.63.

#### **21.2 - General**

- Updated third parties.

#### **21.3 - Generator**

- Fixed false positive 'metadata field is empty' warning when using Elasticsearch as JsonDocumentProvider.

#### **21.4 - Javascript Web API**

- Annotation parsing is now performed in a webworker to lower the workload of the main thread.
- Fixed some incorrect signal trigger when annotation parsing is cancelled on some rare occasion {@link AnnotationRendererInterface.removeAnnotationViews}.
- Fixed a random infinite wait on {@link AnnotationRendererInterface.asyncWaitForAnnotationRequests} when annotation parsing is cancelled.

- Updated svg path parser on annotations to be less restrictive (path can now be on the form 'M4-3' when it was required to be 'M 4 -3' before).
- Updated svg color parser on annotations to handle colors in the form '#ABC' when it was required to be '#0A0B0C'.
- Updated svg color parser on annotations to handle named colors ('silver', 'gray', etc ...).
- `AnnotationGetterInterface.fetchAnnotationGroups`,  
`DocumentIdConverterInterface.convert`,  
`DocumentContentGetterInterface.retrieveDocumentContent`,  
`IdCardGetterInterface.retrieveIdCard`,  
`ChildrenIdCardGetterInterface.retrieveChildrenIdCard` and  
`PartInstanceMatrixGetterInterface.fetchMatrices` do not report an error any more in case of an empty request but instead return a valid empty result.

### 21.5 - Kiwi

- Fixed bugs.
- Improved presentation migration.

### 21.6 - Yuzu

- Fixed bugs.

## 22 - 25/06/2025: version 4.1.3

### 22.1 - Backend

- Improved swap size detection on install.
- Enforced `Directory` and `Proxy` hostnames to be lowercased.
- Fixed crash in 3D export job solver.
- Fixed install of application zip package on Linux backends.
- Fixed migration to handle build tags containing spaces.

### 22.2 - General

- Updated third parties.

### 22.3 - Generator

- Added statistics to generation report.
- Added flying part detection.

### 22.4 - Javascript Web API

- Added annotations cache for images and texts to allow faster annotation parsing when the same characters and images have already been parsed before.
- Updated `FeatureManagerInterface.asyncHasFeatures` to know if a geometry has features of a specific type. `FeatureManagerInterface.asyncHasFeatures` could lead to a crash when the `InfiniteEngineInterface` was disposed, this error has been fixed.

### 22.5 - Kiwi

- Improved frame handling.

- Fixed migration issues.
- Fixed various bugs.
- Improved Presentation conflict handling.
- Improved Presentation management (save, duplicate).

### 22.6 - Native Client

- Fixed a bug where multi-layer metadata exports produced no output.
- Fixed a bug where exporting to a geometry file format was sometimes affected by the previous export format, causing incorrect output formats or export failures.

### 22.7 - PsConverter

- Enabled extraction of annotation and metadata by default.
- Fixed handling of prt.\* and asm.\* files

### 22.8 - Yuzu

- Improved Cut Plane user interface (UI/UX).
- Added JSON metadata export support.
- Improved toast UI.
- Improved filter UI.
- Improved Shared Context conflict handling.
- Improved Shared Context management (save, duplicate).

## 23 - 06/05/2025: version 4.1.2

### 23.1 - Backend

- Improved geometry features extraction.
- Fixed conversion error in PsConverter if geometries had different vertex attributes.

### 23.2 - General

- Updated third parties.

### 23.3 - Javascript Web API

- Fixed a bug that prevented sessions from loading in case IndexedDb was not available.
- Fixed a race condition on web-worker loading time that could prevent the HD data from loading.
- Fixed a rendering problem when displaying patch borders that appeared through the geometries.
- Added flat rendering mode (InfiniteEngineInterface.setRenderingMode).
- Fixed FeatureManagerInterface.getApplicationFeatures that was not getting the correct feature application ids (was offsetted by [1](#)).
- Fixed an incorrect test that was sending specific features to be displayed while not being fully ready, generating GL\_INVALID\_OPERATION errors.
- Fixed an inconsistent behavior in the WorkingSetInterface, which when calling dispose was sending an incorrect WorkingSetInterfaceSignal.WorkingSetCancelled event before

the InfiniteObjectDispatcherInterfaceSignal.ObjectDisposed event only if it contained a FilterAttributeInterface. Now only a InfiniteObjectDispatcherInterfaceSignal.ObjectDisposed event is sent.

- Fixed too many webworker creations when loading a DataSessionInterface.
- Added new interface : PartInstanceMatrixGetterInterface to get matrices of part instances.
- Added FeatureManagerInterface.asyncHasFeatures to know if a geometry has features. Added DataSessionInterface.hasFeatures to know if a DMU has features detection algorithm running.

#### 23.4 - Kiwi

- Fixed various bugs

#### 23.5 - Yuzu

- Fixed various bugs.
- Improved measures GUI.
- Optimized tree view performances.

### 24 - 15/04/2025: version 4.1.1

#### 24.1 - Backend

- Updated third parties.
- Fixed crash in 3D export job solver.

#### 24.2 - Javascript Web API

- Updated samples to use webpack and npm, adding a more precise example on the correct usage of the infinite api.
- Updated web-worker loading mechanism to allow using web-workers even in CORS configuration. InfiniteApiControllerInterface.setWebWorkerPath function and [infiniteapi-webworker-Loader.js](#) file have been included to do so.

#### 24.3 - Yuzu

- Fixed minor bugs.

### 25 - 04/04/2025: version 4.1.0

#### 25.1 - What's changes between 4.0 and 4.1

##### 25.1.1 - Architectural changes

- Advanced vhost filtering was refactor to allow filtering per flow type and bearer scopes, requiring to rewrite configuration
- A new component `~AsyncJobSolver` was introduced. By default, one will be spawn on each `~Proxy`. For distributed deployment it might be wise to spawn them separately.

### 25.1.2 - Billing changes

- As Directory session are now allowed to open multiple Data sessions, usage is now the count of Directory session with at least one active Data session. Previously it was the count of Data session.

### 25.1.3 - Connector changes

Connector compatible with version 4.0 will be compatible with version 4.1 except for two settings fields that should now be specified (see bellow). Json documents (structure, partmetadata, ...) remains the same.

- PsConverter now allows to specify a min/max range for tessellation parameters
- breaking change** PsConverter input settings now requires the [Log](#) field to be specified
- breaking change** Generator input job now requires a [connectorinfo](#) field to be specified

### 25.1.4 - Backend configuration changes

Backend changes will be transparent if deployment is made using `install.py/install_form.yamlform_install_info.yaml`. If not list of changes to configuration file are listed bellow.

#### 25.1.4.1 - $\infty$ Directory configuration changes

- `publicvhost` and `backendvhosts` fields needs to be rewritten
- `openidconnect/use_oidc_access_token` field is now required
- `postgres/ssl` field is now required

#### 25.1.4.2 - $\infty$ Proxy configuration changes

- Added a required `asyncjobsolver` field to run an  $\infty$ AsyncJobSolver managed by the  $\infty$ Proxy service
- `publicvhost` and `backendvhost` fields needs to be rewritten
- `postgres/ssl` field is now required

#### 25.1.4.3 - $\infty$ Directory HTTP API breaking changes

- `[GET]/directory/api/manage/apiinfo maxdatasession` field was replaced by `maxdirectorysessionwithdatasession` field
- `[GET]/directory/api/manage/stats nbmaxdatasession` field was replaced by `nbmaxdirectorysessionwithdatasession` field
- `[*]/directory/api/manage/* accessrights` fields changes, `[POST]` requests body changes, ... See Open API definition for details

## 25.2 - Asset Manager

- Improved performance and UI for better asset management and user experience.
- Fixed various bugs to ensure smooth operation.

## 25.3 - Backend

- Reduced memory consuption of generation process.
- Reduced memory consuption of HTTP API implementations while idleing.
- Added options to docindexer (compression, swap, ...).

- Added *AsyncJobSolver* component to handle export services.
- Added ability to restrict api endpoint access based on VHost, flow type and authentication method.

## 25.4 - General

- Removed Ubuntu (jammy) systemd deployment support.
- Added *access right collections* concept to manage user/team access rights.
- Added *managed by* concept to tag resources (project, access right collection, team, ...) that are managed by an external service.
- Updated third parties.
- Added geometry/metadata export service (3D, BOM).
- Added screenshot export service (2D raster).
- Added geometry feature extraction support (patch, surface edges and circle detection)

## 25.5 - Javascript Web API

### 25.5.1 - New Functionalities

- 3D lines and circles, patch borders, known as features are now retrieved from the 3D data, and can now be used / drawn. Specific features can be created from scratch, and displayed.
- A measurement module has been created to allow performing distance between features. For example, the minimal distance between 2 geometries can now be performed.
- Export procedures (2D “complete” screenshot and 3D files) are now available.
- “Explosions” are now available as a new type of transformation.
- The 3djump infinite api now uses web-workers, they may allow better frame rates by discharging the main browser thread from decoding 3d data.
- Increased performance on a lot of browsers, that may lead to taking more time to get the correct 3D set to display, but this increases the framerate globally.
- Annotations now use roughly less 25% less VRAM than before.
- New internal behavior from browser were introduced in 2025 when the current tab is hidden, inactive / idle. A specific implementation has been added to avoid premature data session closing due to this new mechanism.
- The PrimitiveManagerInterface can now be dumped with PrimitiveManagerInterface.toJSON and PrimitiveManagerInterface.fromJSON.
- Some WorkingSetInterface can now be excluded from streaming (namely DataSessionInterface.toJSON) with WorkingSetInterface.setExcludedFromJSONStreaming.
- When a DMU is loaded, the camera perspective is automatically reset to the parameters set by the project maintainer. This behavior can now be disabled with CameraManagerInterface.setPerspectiveChangedOnDMULoaded.
- Navigation cube names can now be customized with CameraManagerInterface.setNavigationCubeFacesName.
- With the camera in orbit mode, the Center Of Interest (COI) can now be modified while zooming by hitting the SHIFT key, allowing to go through obstacles.

### 25.5.2 - Behavior changes

- Annotations : a new function has been added to wait for some annotation requests to complete (AnnotationRendererInterface.asyncWaitForAnnotationRequests). Annotation parsing can now be cancelled by calling AnnotationRendererInterface.removeAnnotationViews with request ids. The api was returning -1 when an error occurred upon calling AnnotationRendererInterface.addAnnotationView. AnnotationRendererInterface.addAnnotationView now returns 0 in case of error, and annotation requests ids are now strictly negative numbers.
- InfiniteEngineInterface.projectToScreen has been changed. The previous result was relative to the internal canvas that is used by the library. The result is now relative to the view that was set.
- A new event InfiniteApiControllerInterfaceSignal.AboutToRun has been added, sent before all objects are updated (a while before InfiniteApiControllerInterfaceSignal.Tick is triggered).
- The smooth zooming in orbit mode (used with middle mouse + long right click) may be also performed with middle mouse + CTRL key. If SHIFT is pressed, the Center Of Interest (COI) is also modified. This allows to go through obstacles.

## 25.6 - Kiwi

### 25.6.1 - New Features

- Added a Slide Frame Selector for easier slide navigation.

### 25.6.2 - Enhancements

- Improved overall performance and UI for a more responsive user experience.
- Fixed various bugs to ensure stability and reliability.

## 25.7 - Kiwi-player

- Resolved multiple bugs to enhance the player's functionality and stability.

## 25.8 - Yuzu

### 25.8.1 - New Features

- Introduced Geometric Exporter for enhanced data export capabilities.
- Added Image Exporter to streamline image output processes.
- Implemented a new Documents Panel for better document management.
- Added an Align Tool in the Transformations Panel for precise alignment tasks.
- Introduced support for Features, utilized by Transformations and Measurements.
- Added a Help Section and Discovery Tour to assist users in navigating new features.

### 25.8.2 - Enhancements

- Significantly improved Annotations management in the Information Panel for better usability.
- Major improvements to the Measurements Panel for more accurate and efficient measurements.

- Enhanced the Transformations Panel with major updates for smoother operations.