

# Intella 2.4 Release Notes

Released: **October 29, 2020**

## Highlights

- Added support for indexing **AFF4** and **VHDX** files.
- Added support for **Volume Shadow Copies (VSS)** data.
- Considerable improvements in indexing **MS Exchange EDB files**.
- Added support for **Oxygen 12 and 13** reports.
- Added detection of **near-duplicates**.
- Sources can **filter on file type**, reducing indexing time and disk space used.
- Cloud sources can **filter by date range**, reducing the acquisition time needed.
- Added **custodian-based deduplication** and **family-based deduplication**.
- Added highlighting and listing of **Content Analysis entities** in the Previewer.
- **Performance** and **scalability** improvements across the board.

### General

- Intella 2.4 requires a 64-bit OS; a 32-bit variant is no longer available from this release onward.
- Various performance and memory usage optimizations aimed at large (multi-terabyte) cases.
- Resolved an issue with Intella not exiting properly or even crashing when the user would close the main window while the Insight tab was still loading.
- Closing of the main window is now prohibited when blocking database operations are being performed, to protect against database corruptions.
- Resolved an issue with some Asian languages not being displayed properly in some parts of the user interface.
- Creation of minidump files (\*.mdmp) is now disabled, as these files can be very large and are of little use.
- Any Java hs\_err\_PID.log files are now always written to the case folder.

### Licensing

- Starting with Intella 2.4, to ensure compliance with Intella's End User License Agreement, the Intella TEAM Manager 2.4 license will not allow for more than two cases to be shared simultaneously. Please see Intella Connect for a solution to share larger amounts of cases.

- Updated the bundled hasupdate.exe, used for creating and applying C2V and V2C files. This resolves issues with the V2C files not applying successfully on some machines.
- Reliability improvements when checking for a valid license.
- When displaying network dongles, the Dongle Manager no longer recommends the user to generate a C2V file and send it to customer support, as that is no longer a necessity when activating or updating a network dongle.
- It is now possible to create a C2V file of any dongle (also non-network dongles) in the Dongle Manager, by right-clicking on the dongle.
- SL license keys were incorrectly displayed as "HASP Certificate dongle" keys in the License Chooser dialog. They are now displayed as "HASP software-based license" keys.

### Case Management

- The splash screen that is shown when opening a case will show up quicker. This particularly helps when opening cases that reside on slow storage media, where the lack of a splash screen could be interpreted as the case not opening at all.
- The option to show a splash screen is now a system setting rather than a case setting.



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- Improved error logging and reporting when the user tries to open a case located in a shared folder that has already been opened on a different machine. A dialog is shown identifying the machine names and process IDs involved.
- Resolved an issue with failing case merges due to custom column types being configured incorrectly in the merge configuration.

### Indexing - General

- Added the ability to filter items by file type upfront, preventing these items from being indexed at all. This reduces the time needed to index a set of evidence items, the item count in the resulting case, and the disk space needed to store the case. A new "Type Options" tab has been added to the Source Editor. The "File type and locations" sheet has been removed from the New Source wizard, as it is being replaced by this new filtering option.
- Upgraded the W4 case import to support cases made with W4 1.1.
- Several improvements to the processing of MS Exchange databases:
  - Resolved decoding issues for encoded email body texts.
  - Decoding of properties stored in new Exchange property blob formats.
  - Resolved a performance issue that made processing of some EDB files very time consuming.
  - Improved extraction of email-attachment relations.
- Several improvements to the processing of PDF documents, EML files, plain text files, and Slack reports. The improvements address data completeness, the ability to process damaged files, and performance.
- Added support for Oxygen 12 and 13 reports.
- Indexing of Windows Event Log files has been made optional. By default, it is turned off.
- Added support for note attachments in Cellebrite reports.
- Added detection MSI installer packages, IE crash recovery stores and Acrobat Forms Data.
- Several usability improvements to the indexing speed graph. The vertical scale (item count per time segment) has been changed from linear to exponential. The horizontal time axis is now more informative for long-running indexing tasks by using timestamps rather than the number of minutes passed since the beginning of indexing.
- The user interface for downloading the GeoLite2 database has been adjusted to incorporate the use of a license key. Due to changes in MaxMind's policies, one must now register for such a license key to be able to download this database.
- Resolved an issue with missing WeChat message participants in Cellebrite reports.
- Improved file type and character encoding detection for item data, resulting in more complete processing as well as a reduction of false-positive identifications of file types like NSF, MBOX, EXE, XML and more.

- Improved the speed of indexing Windows Event Log files.
- Resolved a reliability issue when validating Notes ID files.
- Resolved an issue where exceptionally large Windows Event Log files would cause the indexing process to run out of memory.
- Resolved a synchronization issue with the Key Store that caused reliability issues on encrypted items with duplicates.
- Resolved various email header and body decoding issues and font issues, particularly with emails in Asian languages.
- Resolved an issue with incorrect timestamp parsing of iTunes backups due to changes in this storage format.
- Resolved an issue with incorrect GeoLite2 databases (damaged files or incorrect database type) interfering with the correct indexing of certain items.
- Resolved a case database issue when the maximum item ID value in a case exceeded 165,191,047.
- Reduced disk space usage of temporary files.
- Resolved an issue with the indexing progress dialog not updating correctly at the end of a series of post-processing tasks, giving the impression that these tasks had not completed yet.

### Indexing - Disk images

- Added support for indexing AFF4 files.
- Added support for indexing VHDX files.
- Added support for indexing Windows Volume Shadow Copies (VSS) data. User interface components have been added for selecting which snapshot(s) to index, and how differences between the snapshot and the final state of the disk need to be reflected in the case.
- The Find Parts button in the Disk Image source has been removed. Intella will now add all related image parts automatically.
- Resolved an issue with structurally sound L01 images being incorrectly reported as broken files.
- Resolved an issue where an E01 and DMG image of the same physical disk resulted in different item counts when indexed.
- Resolved a memory leak when indexing BitLocker-encrypted disk images that caused the disk image verification process to fail.
- Resolved an issue with items representing folders in the Recycle Bin getting Size and MD5 Hash properties.

### Indexing - Load files

- Added options to specify and detect the encoding of Opticon files and extracted text files.
- Added the possibility to edit the Opticon file for existing load file sources.
- Resolved an issue with load file overlays not importing custodian information properly.
- Resolved an issue where load file verification would validate the text and native path fields, even when the corresponding checkboxes were not selected.



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- Resolved an issue with load files failing to import when they contain relative paths that start with a backslash character.
- Fixed an error message that could appear when browsing to a load file when an incorrect path was saved previously.
- Resolved an issue where loading a load file import template would fail due to the template containing legacy or unsupported fields.
- Removed Custom ID and Custom Family ID columns from both the regular and overlay load file import, as it cannot be guaranteed that such imported data will produce a correct load file on a subsequent export.

### Indexing – Cloud sources

- Added date range filtering to all cloud sources, preventing non-matching entries from being downloaded in the first place.
- When adding a Dropbox source, the names in the user list are now sorted alphabetically. Furthermore, the names can now be filtered based on user-entered text.
- The bundled instructions for adding cloud sources have been moved to the Knowledge Base section on the Vound Support portal. This has been done so that these instructions can be updated as soon as Microsoft, Google or Dropbox change their administrative interface for obtaining authentication tokens.
- When indexing Gmail sources, potentially security-sensitive information such as authentication tokens are no longer being logged.

### Indexing – Error reporting

- Resolved an issue with indexing errors related to missing evidence files not being reported in the Errors tab.
- Resolved an issue where crawler crashes were not reported if a subsequent attempt to index the item took place. The second attempt may fail due to different reasons, thereby obfuscating the cause of the first crash. The second attempt may in fact succeed, in which case the fact that a crawler did crash could remain hidden.
- Resolved an issue with loading of the Errors tab adding too much to the overall case opening time. Data is now loaded on demand where possible.

### OCR

- Updated the bundled ABBYY FineReader OCR library, addressing issues with several documents reported to us.
- Resolved an issue with paragraphs being reported in an incorrect order on some documents.

### Analysis

- Added support for detecting near-duplicates. This functionality groups documents with similar textual content, e.g. emails with similar bodies, or multiple revisions of the same conceptual document. Near-duplicates can be used to find related information that will not be found by looking for exact duplicates (binary copies) of items of interest, matching message hashes, or email threading. It can also be used to sort items in a large review job, by grouping similar items and focusing on their differences.

- Users can invoke near-duplicate processing by selecting “Near-Duplicates...” in the Process submenu in the right-click menu. Intella will compare the selected items for similarity using a user-configurable similarity threshold.
- The item in a near-duplicate set that has the longest text is assigned the status of “master item”. All items in a near-duplicate set will have a similarity with this item that is larger than or equal to the specified similarity threshold.
- When a non-master item in a near-duplicate set is shown in a Previewer or Review tab, a “Near-Duplicate” tab will show the differences between the master item and that near-duplicate.
- Additional table columns and Features facet categories have been added for listing the items that received near-duplicate processing, what near-duplicate group an item belongs to, and what its master item and similarity score are.
- Near-duplicate sets can be queried via the new Near-Duplicates facet, or by clicking the Show Near-Duplicates link in the Previewer.
- The following columns have been added to the case data model: Duplicate Custodians, All Custodians, Duplicate Locations, All Locations. By default, these columns are empty. A “Generate Duplicate Custodians and Locations” task has been added that populates these fields.
- Added options to clear the existing Content Analysis and Email Threading results prior to re-indexing.
- Improved the accuracy of highlighting credit card numbers, social security numbers (SSNs) and phone numbers found by Content Analysis.
- Resolved an issue with paragraph hashing not storing correct results when over 2 million (221) items contained the same paragraph.
- Resolved an issue with values not being removed from the Content Analysis facet when the corresponding items were removed from the case.

### Searching

- Added a Show > Unique Families search option. This search option performs family-based deduplication: it searches for all top-level parents of the selected items, deduplicates the parents, and then extends that deduplicated parent set with all their children. This can be used in eDiscovery workflows where unique families need to be produced. The deduplication step can optionally perform custodian-based deduplication (see the Results section).
- Added a Near-Duplicates facet, listing the group names of the detected near-duplicate sets, and allowing for them to be queried. See the Analysis section for a full description of near-duplicate processing.
- Added Has Near-Duplicates and Analyzed for Near-Duplicates categories to the Features facet. See the Analysis section for a full description of near-duplicate processing.
- Speed improvements in the initialization time of several facets.
- Resolved an issue with exceptionally large keyword lists that would fail to evaluate, by processing the keyword list in a streaming fashion.



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- Resolved an issue with entire keyword lists failing to evaluate due to one or more invalid queries in the list.
- Phone numbers of SMS and MMS messages in the Chat Account facet are now normalized, like they already were in the Phone Number facet.
- Resolved an issue with wildcards being ignored when used in phrase queries holding only a single term.

## Results

- Added support for custodian-based deduplication. When the case has one or more custodians defined, the Deduplicate button in the Details panel will be extended with a drop-down button, enabling the user to toggle between case-wide deduplication and custodian-based deduplication. When the latter mode is used, each custodian set is deduplicated separately; duplicates that exist across those sets will be retained.
- Added columns for Near-Duplicate Group, Near-Duplicate Master Item and Near-Duplicate Score. See the Analysis section for a full description of near-duplicate processing.
- Added columns for Duplicate Custodians, All Custodians, Duplicate Locations, All Locations. See the "Indexing – Load files" section for a description of these columns.
- Resolved an issue with the Table not being able to show more than approximately 138 million (close to 227) items. Each Display panel view now imposes a maximum on the number of items it will allow to be rendered, and it will display a warning when this amount is exceeded. This prevents the application from getting unstable.
- Resolved an issue with incorrect formatting of values in the Duration column.
- Resolved an issue with the table column chooser not supporting multi-term searches when searching for matching column names.
- Resolved an issue with the table column chooser not clearing the name search filter when closing and reopening the dialog.
- Usability improvements in the Results and Details panel right-click menu.

## Previewer

- Added a Near-Duplicate tab for items that are part of a near-duplicate set. This tab shows how the current item's text differs from that of the master item in the near-duplicate set. See the Analysis section for a full description of near-duplicate processing.
- Added a Show Near-Duplicates link, for locating the near-duplicates of the displayed item.
- Added a Content Analysis tab, listing entities found in the item text by Content Analysis, such as person names, credit card numbers and location names. The entities are organized by entity type. The user can start a search for all items containing an entity listed here, by selecting an entity and clicking Search, or by double-clicking on the entity. The tab remains hidden when no entities have been found in the current item.

- Added a check box in the Contents tab to toggle the highlighting of Content Analysis entities such as person names, credit card numbers and location names. Each entity type uses its own highlight color. Tool tips displayed on the entity value will show the item type.
- Improvements in the native rendering of MS Office documents.
- Resolved an issue with the Previewer not rendering the Contents, Headers, Raw Data and Comments tabs, when Intella was used over an RDP connection.
- Resolved an issue with subject lines at the top of the Contents panel being hidden from view when their text had to be truncated due to a lack of space.
- Resolved an issue with chat messages failing to render due to incomplete recipient information.
- Improved the rendering of individual chat messages that are not part of a larger conversation.
- Improved for certain item types the determination of the most appropriate title to show at the top of the Contents tab.
- Improved the display of emails with large lists of recipients.

## Tagging

- Tags are now sorted in a case-insensitive manner.
- Tag group columns now also show tag colors. Previously, only the Tags column would use the tag colors.
- Resolved an issue with newly defined child tags not inheriting their parent tag's color.
- Resolved an issue with the Tags facet no longer showing the tag description.
- Resolved an issue with the Tags facet not updating after the first tag had been added to the case.

## Redacting

- Added a "Draw border around white redaction" option to the redaction templates.
- The text search functionality in the Redaction tab has been extended with checkboxes that control whether partial or whole word matches are searched for, and whether to search in a case-sensitive manner.
- The event log now makes a distinction between redaction additions, removals, and changes. In older versions these were all listed as generic redaction events.
- Resolved a timing issue with clicking the Clear Redactions button when it was immediately followed by a click on the Redact button. This could result in the old redactions inadvertently being retained.

## Review tab

- Resolved an issue with the Review tab not initializing properly unless a Previewer window was opened first within the same Intella session.
- Resolved an error with the Review tab not loading items properly due to an initialization error in the Redaction tab.



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- Resolved an error with the Review tab not loading items properly when the user selected another item while a previous item was not fully loaded yet.
- Resolved an issue with the Review tab exporting items to a CSV using the main Table's sort order, rather than the sort order of that Review tab.

### Insight tab

- Resolved an issue with certain Insight tables not opening the correct item when that table used a non-default sort order.
- Resolved an issue with case re-indexing not resetting the state of the Email Threading and Content Analysis checkboxes in the Workflow panel.
- Resolved an issue with the initialization of the Insight panel adding too much to the overall case opening time.

### Keywords tab

- One can now query for the exclusive items of a specific query row. The resulting items will then be shown in the Search tab.
- Performance optimizations when evaluating a keyword list.
- Resolved an issue with incorrect hit counts for certain types of queries.

### Exporting – General

- Improved the rendering of exported chat messages that are not part of a larger conversation.
- The Destination folder field now restores the last used value.
- Performance improvements when exporting items using an export set.
- Resolved an issue with the File Naming sheet not initializing properly when an export template had been chosen.

### Exporting – PDF

- Improvements in the native rendering of MS Office documents.

### Exporting – PST

- Resolved an issue with calendar items failing to export to a PST file.
- Resolved an issue with calendar items lacking Sent and Received date attributes.
- Improved MS Outlook validation reliability.

### Exporting – Load files

- Added an option to export items to a load file using the Table's current sort order.
- Extensions to the text export options:
  - In the Properties section one can now configure what properties are to be included.
  - Text export options can be specified for emails and documents separately.
- The resolution unit of TIFF images has been changed from 3 (centimeters) to 2 (inches). This resolves an issue with loading these images into the Relativity platform.
- Resolved an issue with tag columns being exported using an incorrect value separator.
- Resolved an issue with file names sometimes getting double file extensions (e.g. "document.pdf.pdf") in certain export configurations.

### Exporting – Report

- When exporting using the Table format, one can now add hyperlinks to the exported native files.

### Printing

- When printing multiple items, they are now printed in their current display order in the Details panel.

### TEAM

- Improved compression of search results sent across the network, resulting in results being delivered faster in remote cases.
- Improved the time needed to update the Tags facet when updates are being made concurrently by other reviewers.
- Resolved an issue with Intella Work Report (IWR) files failing to import due to a tag listed in the work report having been deleted in the importing case.
- Resolved an issue with saved searches imported from an IWR file being assigned to the current (importing) user, rather than the user that created the saved search.
- Resolved an issue where duplicate IWR import runs, or imports of overlapping IWR reports, would result in comments being duplicated.

## Upgrade Notes

**Case versions 2.1.x to 2.3.x** – Intella 2.4 can directly open cases made with Intella 2.3.x, 2.2.x and 2.1.x.

When a case made with Intella 2.3.0 or older is opened in Intella 2.4, adding Custom ID tasks to the case in version 2.4 may render the case unopenable in that older version. Changes have been made in the 2.3.1 release to prevent such forward compatibility issues in future releases.

When a case made with Intella 2.1 or older is opened, all Content Analysis results are automatically migrated to a new data storage format. This migration happens only once. The old store is retained and will still be used when using version 2.1 or older. New results will not be added to the old store though, and new results added to the old store will not be migrated. Cases made with 2.1.1 or later already use the new data store and are therefore not affected.



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When items in cases made with 2.1.x are exported to a separate case, the registered case size of the target case will be incremented with the size of the original case. This may be problematic for users with licenses that have a case size limitation. To resolve the inflated case size, the source case needs to be re-indexed before exporting items from it.

In Intella 2.2.2, a new method for calculating message hashes was introduced. While this change is transparent, please be aware that message hashes will change when re-indexing a case that has been made with an older Intella version.

**Case versions 1.9.x to 2.0.x** – Intella 2.4 can open cases made with Intella 1.9.x and 2.0.x, but these cases first require conversion before they can be opened. Case conversion will create a copy of the case in which all item data is converted, and all tags, comments and flags are imported. The existing case will not be altered in any way and can afterwards still be opened in the older Intella version. Access to the original evidence files is not required for case conversion.

Case conversion will not transfer the geolocation metadata extracted from emails when the “Determine geographic location of emails” option was used. Re-indexing of the converted case is required to restore such metadata.

Case conversion will require sufficient disk space. As a rule of thumb, please reserve twice the amount of the evidence size for your case folder.

**Other case versions** – Cases made with Intella 1.8.x or older are not supported. Cases made with beta versions are not supported and should be recreated.

**Software versions** – Vound will provide technical support for one major past version. For this release that will mean the 2.3.x range of products. Vound will always recommend that users upgrade to the latest version.

**TEAM case sharing** – one can now share maximally two cases simultaneously on a single TEAM Manager license. Please see Intella Connect for a solution to share larger amounts of cases.



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