

# Intella Connect 2.5 Release Notes

Released: **November 29, 2021**

## Highlights

- Added **compound cases**, for instantly bundling two or more cases into a single case.
- Added the ability to **upload Intella case (ICF) files**.
- Various improvements to **indexing stability**.
- Usability improvements in **chat message presentation**.
- Sources can **filter on file type**, reducing the indexing time and disk space used.
- Added indexing of **Volume Shadow Copies (VSS) data**.
- Added indexing of **AFF4-L** logical images.
- Added indexing of **Relativity RSMF files**.
- Added indexing of **HWPX documents**.
- Improved **near-duplicate processing** with faster and improved results.
- Added a **Near-Duplicate tab** in the Previewer.
- Improved rendering of **emojis**.
- Added **sentiment analysis**, for detecting very negatively or positively worded texts.
- Added a **GDPR** Insight info panel, listing privacy-sensitive data found in the case.
- Added support for **nesting phrase and proximity queries**.
- **Exporting to PST** no longer relies on MS Outlook.
- A range of **security enhancements** such as password and account lockout policies.

### General

- Intella Connect 2.5 has been tested for use on Windows 11.
- The Admin UI now shows the dongle ID.
- Resolved an issue with potential stale processes when the Intella Connect server was shut down.
- Resolved an issue with tags and other data missing under certain circumstances when opening a case that was made with 2.2.1 or older in version 2.3.1 or newer.
- Usability improvements in the Case Dashboard.
- Automatic password autocompletion by the web browser is now suppressed in certain places. This solves the issue that certain configuration pages would complain about unapplied changes even when the user had made no changes yet.
- Added documentation on troubleshooting Connect Grid setups.

### Installer

- The Intella Connect/Node installer is now digitally signed.
- Resolved an issue with the User Manual shortcut in the Windows start menu not working.

### Licensing

- Greatly reduced the amount of license sessions, as can be seen on the Sessions page of the Sentinel Admin Control Center. This change reduces the likelihood of license availability issue with dongles that are located remotely or in unsupported dongle servers.

### Security

- Improved SSL setup wizard and related SSL usability improvements.
- Improved handling of root and intermediate certificates. This eases the handling of SSL certificates issues by an internal Certificate Authority (CA) or an unrecognized root CA.



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- Generated self-signed certificates now carry a Subject Alternative Name (SAN). This improves their usability in the Chrome and Edge browsers.
- Added the ability to specify password policies such as minimum password length, maximum age, and the mandatory use of certain classes of characters.
- Added the ability to specify an account lockout policy. This determines what happens after a user account has had a certain number of failed login attempts.
- Added an additional login check when a logged-in user chooses to disable two-factor authentication (2FA) on that user's account.
- Increased the default timeouts of SSO negotiation.
- Several enhancements to strengthen Intella Connect's security, following a penetration test and other security assessments.
- Resolved an issue with the SSO timeout incorrectly being reset when the SSO provider was edited through the Admin UI.
- The Set Password button is now disabled when the user has logged in with an SSO account.

### Case management

- Added support for compound cases. A compound case bundles multiple cases and allows for them to be used as if they were all merged into a single case. Search results from the sub-cases are combined into a single result set and can be sorted, deduplicated, reviewed and exported, just as you would in a regular case. Compound cases do not require the underlying case databases to be physically merged. This makes them quick to create and with low storage requirements. Compound cases supports several advanced workflows, such as:
  - Combine existing cases for cross-case investigations, without having to manually replicate all steps across all cases. Support for past cases goes back to version 1.9. Cases made with older versions will have to be converted to the 2.5 format first.
  - Efficiently distribute indexing across multiple machines, and merge the sub-cases produced on each machine into a single master case.
  - Bring new evidence data into a running case without having to take the case down for the combined duration of the indexing process, its post-processing steps and any quality assurance protocols.
- Added support for uploading cases, for easy migration of cases from the Intella desktop application to Intella Connect. Cases can be uploaded as an Intella case file (ICF file) or straight from Intella's Case Manager window.
- It is now possible to convert a case made with any of the 1.9.x to 2.4.x versions to the 2.5 format. Previously, case conversion was only enabled for cases made with 1.9.x or 2.0.x as they could not be opened directly. The benefit of converting the more recent case formats that can already be opened directly is to enable usage in a compound case. Furthermore, the 2.5 format uses further optimized database indices.

- Resolved an issue with cases failing to open when evidence files referenced in a Disk Image source were missing.
- Resolved an issue with cases failing to open when one of the image blob stores got corrupt.

### User management

- Improved handling of setups where there is an overlap between the set of local Connect usernames and the sets of usernames obtained from LDAP and/or SSO.

### Indexing - General

- Improved indexing stability in several ways, including but not limited to:
  - Crawler processes are now isolated from any case database operations, preventing a crashing crawler process from corrupting these databases.
  - A new type of Exception Item has been introduced that keeps track of items that experienced a crawler crash.
  - Time-out mechanisms have been inserted or improved, protecting against items that take an unreasonable, possibly infinite, amount of time to process.
  - Retry mechanisms have been inserted or improved, improving the chance of a problematic item to be processed successfully.
  - The crawler time-out value has been made configurable through the Case Details panel.
- 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.
- Added support for indexing HWPX documents, made by the Hangul word processor.
- Updates to the indexing of Cellebrite UFDR and XML reports.
- Updates to the indexing of Oxygen XML reports.
- Several improvements to the indexing of PDF documents.
- Several improvements to the indexing of Apple Mail data.
- Resolved an issue with file type filters not being applied for source types other than File or Folder and Disk Image.
- Resolved an issue with emails from Outlook for Mac OLM files missing certain email headers.
- Resolved an issue with emails embedded in other EML emails sometimes being classified as untyped items.
- Resolved an issue with Notes ID files that contain usernames using special characters.
- Resolved an issue with the calculation of Family Date values not taking the settings for the determination of the top-level parents into account.
- Resolved an issue with iTunes cookie databases being mistakenly reported as Chrome cookie databases.
- Resolved an issue with the Features facet incorrectly resetting data on the opened/previewed/exported items when a subset of the sources was being re-indexed.



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## Indexing – Chat messages

- Added support for indexing Relativity RSMF files. This is a new e-discovery file format for capturing chat data.
- Chat messages are now represented both as individual items and as conversation items that bundle a range of chat messages into a document-like representation. Each conversation item serves as the parent item for the items representing its individual chat messages. One can navigate from a text in the conversation item to the chat message item and vice versa. Benefits of this change in data modeling:
  - Chat messages can now be individually tagged, flagged, and exported. Previously, one would have to annotate the conversation item and resort to workarounds in case that conversation item held excessive or privileged data.
  - Chat data events can be correlated with other events such as browser history items, Windows search actions, application launches, etc. See also the Text Snippet column in this regard.
  - Any chat message-specific metadata now has a logical place to be stored.
  - Conversation items allow for a user-friendly display of chat data in the Previewer, like how one would view it in a chat application.
  - Conversation items let AND/OR and proximity queries produce more effective results.
  - Conversation items can be used more effectively in predictive coding workflows.
- The criteria for bundling chat messages into conversation items have been made configurable:
  - One can now bundle chat messages per day, week, month, or year. This time range used to be hardcoded to a single day of messages. Future versions may expand these options.
  - One can now set a limit on the number of chat messages per conversation item. The default value is 100 messages per conversation item.
- Improvements in handling chat messages with a large volume of recipients or participants (e.g., large Slack channels).
- Various improvements to the presentation of chat participants, channel and conversation titles, reaction items, messages with unusual characters, etc.
- Several improvements to the indexing of PST files holding MS Teams chat data.
- Several improvements to the indexing of Skype database files.
- Several improvements to the indexing of Slack data exports.
- Resolved a reliability issue with indexing Slack data when the case is accessed via an UNC path during indexing.

## Indexing – Disk images

- 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.
- Added support for indexing of AFF4-L files. This is a variant of the AFF4 format used for logical images.

- Reintroduced the folder selection sheet when adding a disk image. This allows for browsing and filtering of the folders in the image. For technical reasons, this sheet is not shown when adding a DMG or AFF4-L image. This may be added in a later release.
- The “File type and locations” sheet in the Disk image source has been removed from the wizard, as it has been replaced by the new type and location filtering options.
- Resolved an issue with indexing E01 disk images larger than 1 TB.
- Improvements to the processing speed of Ex01 disk images.
- A warning is now shown for Lx01 files. Recent EnCase versions may produce Lx01 images with undocumented and unsupported variations. This is being investigated.
- Resolved an issue with indexing disk images that hold both APFS and BitLocker partitions.
- Improved logging of BitLocker decryption attempts.
- Several general stability improvements in the processing of disk images.

## Indexing – Load files

- Improved compatibility with load files created by Office 365 Advanced eDiscovery.
- Resolved an issue with the Attached column being cleared when a load file overlay was imported, for those items that are covered in the overlay.

## Indexing – Cloud sources

- Updates in the Microsoft 365 source type to stay current with the Microsoft 365 API.
- Updates in the Dropbox source type to stay current with the Dropbox API.
- Updates in the iCloud source type to address changes that Apple made to their two-factor authentication (2FA) protocol.

## IntellaCmd.exe

- Resolved an issue with the “Last opened” date of a case not being updated when the case was opened by IntellaCmd.exe.
- When no time zone is specified on the command-line, the default time zone is now assumed and applied. This resolves an issue with previewing of items in the generated case.

## Analytics

- Added sentiment analysis to the Content Analysis facet. This allows for detecting texts that are phrased in particularly positive or negative terms. For the time being, sentiment analysis is restricted to only English texts, results on other language are undefined. Sentiment analysis is to be considered an experimental feature that may change in future versions.
- When processing items for near-duplicates, one can now choose between two algorithms:
  - A new word-based algorithm that has better computational performance and produces more intuitive similarity scores.



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- The old character-based algorithm, which still is to be preferred when processing Chinese, Japanese, Korean, and Vietnamese texts.
- The shingle size thresholds used for near-duplicate processing can now be configured through the Preferences.
- Scalability improvements in email threading.
- Scalability improvements in OCR processing by preventing certain unnecessary document format conversions.
- The OCR and Content Analysis operations deduplicate items prior to processing, to optimize their processing times. This deduplication step used to make use of both MD5 hashes and message hashes, for maximum deduplication results. This has been changed to use only MD5 hashes, as the configurability of the message hashes could result in equal hashes for items with, from the perspective of these analytics operations, very different content.

### Insight

- Added a GDPR panel. This panel lists categories of information in the evidence data that are of interest from a GDPR compliancy point of view. Examples are person names, phone numbers, email addresses, etc. For each category, the number of values is listed, as well as the number of items holding one or more of these values, further split into Documents/Emails/Other categories. The values can be exported to a CSV file.
- Resolved a rendering issue when the Timeline chart was set to show Months.

### Searching

- Added support for combing phrase and proximity queries. This allows for searching for one phrase within a maximum distance of another phrase.
- Added support for selecting item text fields (text, headers, raw data, ...) in the Keyword List facet.
- Added support for using Paragraph Exclusion in the Keyword List facet.
- The Keywords tab now shows warnings when the Hits column is selected and one or more queries use a syntax for which hit counting is not supported.

### Results

- See the Indexing section for how chat messages are now represented differently.
- Added a Text Snippet column, showing the first part of the item text. Although this column was intended to improve the review of chat data, it will show the (initial) text of all items.
- Improved the sorting of textual values that contain digits, to make the sort order more natural.
  - The strict alphabetical order of [file-1, file-11, file-2, file-3] now becomes [file-1, file-2, file-3, file-11].
  - This affects several places in the user interface, e.g., the results table and the facets.
- When sorting the table by descending Family Date, the child items are now listed below their parent item instead of above their parent item.

- Added a Near-Duplicates column to the Details table, showing how many near-duplicates an item has.
- Resolved an issue with the Cluster Map and the Searches list not updating when the underlying facets are updated.
- Resolved an issue with the Cluster Map not switching back from an enforced Sets mode to Clusters mode, once the graph complexity was reduced to a level where a cluster graph could be rendered again.

### Previewer

- Several improvements in the display of chat data:
  - Support for threading in chat channels.
  - Improved display of attached files, e.g., images are now shown as thumbnails.
  - Added a Show Parent Conversation action.
  - Styling improvements.
  - Resolved an issue with displaying long Sametime chats.
- Added a Near-Duplicate tab, highlighting the textual differences between an item from a near-duplicate group and the master item of that group.
- Added support for displaying emojis.
- Improved usability of the Words tab.
- Resolved an issue with hit highlighting failing to highlight hits that use a certain mixture of hyphens and hexadecimal digits.
- Resolved an issue where the native Preview tab would trigger an error with certain forms of user permission setups.

### Tagging

- Resolved an issue with the quick tag buttons in the Previewer not applying their tag when clicked.
- Performance optimizations when using the tagging options "Also tag all attached/nested items" and/or "Also tag all other items nested in the same top-level item".

### Redacting

- Resolved an issue with full page redactions not covering the entire page when applied on pages in landscape orientation.

### Exporting - PDF

- Several improvements to the exporting of chat messages:
  - Improved styling, resulting in a better readable and more efficient display of chat data.
  - Resolved an issue with a custom font placed in the "font" folder not being applied when exporting chat messages.
  - Resolved issues with the rendering of Chinese, Japanese, or Korean chat messages.
  - Resolved an issue with missing attachment data.
- Improved the rendering of emails with deep levels of quotations.
- The "OCR'd text" option has been renamed to "OCR'd text for images".

### Exporting - PST

- Exporting to PST files no longer relies on MS Outlook being installed; all dependencies for creating PST files are now included with the software.



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- Resolved an issue with the determination of an email's top-level parent taking an unreasonable amount of time, slowing down the export considerably.

### Exporting – Load file

- See also the notes for the PDF exporting method, listed above.
- Added “Use current table sort order” as an option for controlling in which order items are to be exported.
- A warning is now shown when the Custom ID sort order is used with a numbering scheme that might not be compatible with it.
- Resolved an error that could occur when exporting to a load file with the “Add to existing set” option selected, when the items were already part of the selected export set.

### Exporting – Item report

- Several improvements to the Item Report configuration options to better facilitate the exporting of chat messages.

### Exporting – Case

- Resolved an issue with items failing to export/merge to another case due to large amounts of Content Analysis values associated with these items.
- Resolved an issue with case merging failing to accurately report on progress and completion when the originating case had items with custom metadata. This was purely a display issue; the actual case merging operation was not affected by this.

## Upgrade Notes

**Case versions 2.1.x to 2.4.x** – Intella Connect 2.5 can directly open cases made with the 2.4.x, 2.3.x, 2.2.x and 2.1.x versions of Intella and Intella Connect.

Upon first startup, Intella Connect 2.5 will migrate all existing coding layouts made with 2.3.x or older to a new format. This process reads each coding layout XML file stored in C:\Users\[USERNAME]\AppData\Roaming\Intella\coding-layouts and creates a new XML file in its place, making sure that there will not be any naming conflicts. A copy of the original coding layout is preserved in the “migrated” subfolder.

When a case made with Intella or Intella Connect 2.3.0 or older is opened in Intella Connect 2.5, adding Custom ID tasks to the case in version 2.5 may render the case unopenable in that older version. Changes have been made in the 2.3.1 version to prevent such forward compatibility issues in future releases.

When a case made with Intella or Intella Connect 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.

When items in cases made with a 2.1.x version 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 Connect 2.2.2, a new method for calculating message hashes was introduced. While this change is transparent, please be aware that when a case that was made with version 2.2.1 or older is re-indexed in 2.2.2 or a later version, the message hashes will change.

**Case versions 1.9.x to 2.0.x** – Cases made with the 1.9.x and 2.0.x versions of Intella and Intella Connect can be opened,

but these cases first require conversion. 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.

Caveats concerning the case contents:

- 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.
- Multi-page TIFFs will be displayed in the converted case as if they were single-page TIFFs. Exporting and printing of the item report does reveal the other pages. Re-indexing of the converted case will make all pages displayable again.

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.

**SSL** – Intella Connect/Node 2.4.2 switched to a new keystore implementation, used for storing its certificates. This keystore uses a different set of default root certificates. The new implementation effectively uses the same set of root certificates as the Firefox browser. Please check after upgrading Intella Connect/Node that your SSL certificate is still verified. If not, please check the “Advanced: Using Self Signed certificates” section in the Intella Connect Administrator Manual for instructions on how to install the certificate.

**Software versions** – Vound will provide technical support for one major past version. For this release that will mean the 2.4.x range of products. Vound will always recommend that users upgrade to the latest version.



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