Vound

Intella™
Release Notes

Intella™

evidence made visible

Vound
email investigation and eDiscovery software

Covering versions 1.0 to 3.1

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We will be pleased to provide additional information concerning Intella and schedule a demonstration at your convenience.

To become an Intella reseller, please contact us!

For user and technical support please visit our website:
http://www.vound-software.com.

Contents

Intella 3.1

Highlights

- Added **mobile device acquisition** and indexing capabilities, supporting iOS and Android data.
- Added an **Intella device acquisition** source type, allowing processing of cellphone images acquired with Intella.
- Added support for indexing **encrypted iTunes backups**.
- Added support for indexing **WhatsApp** databases on both iOS and Android.
- Added **searchable Intella Assist content**.
- Intella Assist content can be elevated to a **dedicated Previewer tab**, for use cases such as translation and summarization.
- Added prompt-driven **generation of Intella Assist tasks** according to best-practice defaults.

Mobile Device Acquisitions

- The new "Extract mobile device" feature supports the collection and processing of data from mobile devices, such as cellphones and tablets, directly in Intella. Investigators can move efficiently from device access to searchable evidence.
- Mobile device acquisition can be initiated from within the Sources and Welcome tabs, allowing investigators to acquire and process data from supported devices within the broader Intella investigation workflow, without utilizing external tools.
- The acquisition method covers iOS and Android devices, old and recent versions.
- Mobile device acquisition requires the device to be unlocked and authorized for access.
- Acquisition is based on common mobile OS backup protocols, resulting in a non-invasive extraction method with a minimal device footprint. On iOS, the iTunes Backup protocol is used. On Android, the Android Debug Bridge is used.
- Results are gathered in an Intella Device Acquisition file (.ida file extension), which can be processed using the new Intella Device Acquisition source type.
- Collections typically capture user data such as call logs, text messages, browser histories, installed apps, and more.
- The collection also captures WhatsApp chat databases. Future releases will expand this to more third-party apps.
- Note: this extraction captures user-level data available through logical access. Full file system imaging, physical imaging, and recovery of deleted data are not

supported at this time. Results may vary depending on device model, OS version, and user permissions. This functionality is experimental. The original device remains the authoritative source of evidence. Training and practicing acquisition on a test device is strongly recommended.

Case Management

- The case creation UI now prioritizes the manual settings for Optimization Folder, Memory Allocation and Crawler Timeout over those imported from a case template.
- Improved ICF import handling when case folder names contain non-ASCII characters.
- Resolved an issue where Intella could be using an incorrect temp folder after using File > Close Case and opening another case.

Compound Cases

- Added support for importing Intella Assist-generated content into a compound case. Only content promoted to the core item content (i.e., visible as dedicated Previewer tabs) is importable.
- Improved handling of custodian name conflicts in compound cases.
- Improved compound case creation stability in memory-intensive scenarios.
- Resolved an issue with a missing warning when a sub-case location could not be found.

Indexing

- Improved handling of Google Takeout naming variations.
- Improved indexing of broken PDF files.
- Added support for WinRar 7 with dictionary sizes larger than 4 GB.
- Added support for ZSTD archives, and other archive types that use the ZSTD compression method.
- Stability improvements in archive processing.
- Stability improvements in SQLite database processing.
- Improved the Scan Logs functionality so that it recognizes crawler crashes related to an EXCEPTION_IN_PAGE_ERROR.

Indexing - Cellphones

- Added a new Intella Device Acquisition source type. This lets one index IDA files created with Intella's new Mobile Device Acquisition functionality.
- Added support for indexing encrypted iTunes databases.
- Other improvements in the indexing of iTunes databases, resulting in more complete and more accurate artifact extraction, and the ability to process larger iTunes backups.
- Added support for indexing WhatsApp chat databases found on iOS and Android.
- Added support for applying an owner's phone number (through a numbers.txt file) to native iOS chat messages (iMessage) in UFDR files. Previously this was only possible for phone calls, SMS and MMS messages.

Indexing - Disk Images

- Improved processing of BitLocker-protected data in cases involving newer BitLocker metadata variations.
- Improved processing of disk images with mixed volume shadow copy states.

Indexing - Cloud

- Adjusted the logging levels for certain Microsoft Graph errors.
- Improved handling of Microsoft 365 source creation when login or source selection does not complete as expected.

Indexing - Load Files

- Resolved an issue with the importing of a load file containing SHA-1, SHA-256 or SHA-512 hashes.

Indexing - W4 Cases

- Resolved an issue where tags and comments could not be imported from a W4 case.

Crawler Scripts

- Resolved missing item.mediaType properties in the itemFound method when indexing Recycle Bin data.
- Updated the bundled Python to version 3.14.3.

Command-line Support

- Improved the handling of -replaceSourcePaths when source paths contain commas.

Intella Assist

- Added full-text indexing of Intella Assist-generated texts, such as chats in the Previewer and generated content.
- The Intella Assist facet now supports the use of Google Gemini LLM models.
- Improvements to the system prompts, including changes to make them work better with Azure OpenAI's guardrails.
- Improved error handling and logging.
- Minor usability improvements in Intella Assist Chat.

Intella Assist - Tasks

- Added the ability to evaluate a human prompt, e.g. "Tag this item when it includes aggressive language" based on best practices for constructing Intella Assist Tasks, and deriving a concrete Intella Assist Task from this.
- Added the ability to elevate Intella Assist-generated content so that it gets displayed as a regular Previewer tab. This is useful for use cases such as translations and summarization, so reviewers can navigate to that content as they would with any other type of content.
    - Items with elevated content can be found via the Features facet, see Analysis > Intella Assist > Generated Content.
    - The elevated content can be exported to PDF.
- Resolved an issue where an Intella Assist task was duplicated in the task list on every execution.
- Minor usability improvements.

Insight

- The Significant Words cloud no longer shows duplicate terms.

Search

- Resolved an internal error caused by specific Boolean combinations of single terms and nested phrases inside phrase and proximity queries.

- The “Query” and “Query Exclusive” options in the Keywords tab have been renamed to “Search” and “Search Exclusive”, for consistency with the rest of the application.

Facets

- Improved the structure of the Email Messages sub-hierarchy in the Type facet.
- Resolved a stability issue with the handling of hash lists that consist of only a single hash.

Results

- Item comments are now shown in the results table. Previously, they were only shown in a tooltip.

Devices Tab

- Resolved an issue with an incorrect number of participants in certain chat conversations being reported.
- Resolved an issue with the Devices tab failing to load.

Previewer

- The Properties tab now also holds item information related to Content and Image Analysis, Email Threading, Intella Assist and Export Sets.
- Improved the readability of long tag paths in the tag properties panel.
- The tags in the item’s tag properties are now shown in the same order as in the Tags facet.
- Improved the rendering of certain known timestamp standards (e.g. Standard Unix, Windows FileTime) in the Raw Data tab, by appending a human-readable formatting of that timestamp.
- Resolved an issue with the rendering of chat conversations and chat messages when an “info message” without an author was present.

Exporting - PDF

- Improved the PDF rendering of certain HTML emails and chat messages.
- Improved PDF export so that custom fonts are also applied correctly to headers and footers.

Upgrade Notes

Intella versions can be installed side-by-side. There is no requirement to uninstall old versions when installing a new Intella version. Running the new version will automatically pick up cases and settings from a previous installation.

Users are recommended to use the latest product version when creating new cases and when taking advantage of newly added source and analysis capabilities.

Case version 3.0.x – Intella 3.1 can directly open cases made with Intella 3.0 and 3.0.1.

The 3.1 release contains a range of indexing-related improvements. Users upgrading to this release may therefore see differences in indexed results, available device information, and exported output when re-indexing evidence with the 3.1 version.

Case versions 2.1.x to 2.7.x – Intella 3.1 can open cases made with Intella versions 2.1.x to 2.7.x, but these cases first require conversion before they can be opened.

Case conversion can create a copy of the case in which all item data is converted, and all tags, comments and flags are imported. The original case will not be altered in any way and can afterwards still be opened in the older Intella version. Case conversion requires sufficient time and disk space. As a rule of thumb, please reserve twice the amount of the evidence size for your case folder.

Alternatively, for cases made with Intella 2.6 or later, case conversion can directly convert the existing case without creating a copy of the case. This manner of case conversion is considerably faster (usually a matter of seconds) and much less disk intensive. This can be a good alternative when a backup of the case already exists, saving both time and disk space. Having backups of your cases is always highly recommended.

Access to the original evidence files is not required for either manner of case conversion.

Case conversion will make the case openable in 3.1, but re-indexing of cases with cellphone or disk image data is still required to be able to utilize the new Devices tab on that data. For re-indexing, access to the original evidence files is required.

Due to a change in the underlying databases, results in the Image Categories and Detected Objects branches of the Image Analysis facet that were made with version 2.6 will not be

visible when the case is opened with version 2.6.1 and later. This analysis will have to be repeated with a more recent version.

The 2.7.2 release resolved an issue for Saved Searches containing Content Analysis results. These searches would not yield any results. Saved Searches made with earlier versions that contain Content Analysis queries should be discarded and re-created; they cannot be automatically fixed.

To index Notes NSF files, a 64-bit version of Notes is required. 32-bit Notes versions are not supported.

Other case versions – Cases made with Intella 2.0.x or older are not supported.

To open cases made with the 1.9.x and 2.0.x versions, please use Intella 2.5.1. This is the last version to support the 1.9.x and 2.0.x versions.

Cases made with beta versions are not supported and should be recreated.

Memory settings – The 2.7 version changed how case memory settings are stored. Prior to version 2.7, these settings were stored in both the case.xml and case.prefs files, for historical reasons. This is now only stored in the case.prefs file. Consequently, if a 2.7 or later version is used to alter the memory settings of a case made with an older version, the memory setting changes may not be picked up by older versions.

Software versions – Vound will provide technical support for one major past version. For this release that will mean the 3.0.x range of products. Vound always recommends that users upgrade to the latest version.

Intella 3.0.1

Highlights

- Added **Intella Assist Tasks**. This lets users run user prompts on collections of items, producing tags, flags, texts and table columns for those items.
- Added **image analysis** to Intella Assist.
- Added **Windows OS** and **iTunes backup** support to the **Devices** tab.
- Added support for indexing MacOS/iOS **iMessage/SMS databases**.
- Improved **Facet list** structure.
- Improved **Features facet** structure.
- Added support for **SHA-1**, **SHA-256** and **SHA-512** hashing.
- Improved source definitions for handling **very large M365 tenants**.
- Added **Work Report** exporting to Intella Professional and Intella Viewer.
- Added a **Repair Case** option, for repairing a broken case where possible.

Intella Backpack & Portable Cases

- Added Work Report exporting to Intella Professional and Intella Viewer. This allows for the transfer of work product, such as tags, flags and comments, to a copy of the case residing in another place.
- The Intella Backpack User Manual mistakenly contained sections about redacting items. Redaction functionality is only present in the other Intella editions. These sections have been removed from the Backpack user manual. Similarly, the Features facet no longer contains the “Redaction” branch.

General

- Improved resilience against unclean shutdowns for HSQLDB databases inside case folders.
- Performance improvements in the loading and synchronizing of tagging-related data.
- Added a preference for disabling the generation of video thumbnails during thumbnail generation.
- General performance, stability and security improvements from third party dependency updates.
- Replaced third party dependencies that are now in an end-of-life state.

Case Management

- Added a “Repair” option, for repairing broken cases. This operation regenerates the secondary indices that are derived from the data gathered during crawling. This can be used to repair cases that fail to open or that show other forms of erratic behavior, especially in situations where no backup is available. As a precaution, users are still advised to run this operation on a copy of the broken case. This operation was already available as a command-line operation.
- Improved the logging preamble in the case log when a compound case is opened.
- Minor usability improvements and help text improvements in the Edit Case dialog.
- Resolved an issue when compound case creation failed to cancel properly, when requested by the end user.
- Resolved an issue with creating a new case silently failing on a machine with too little RAM. Now, a proper error is displayed.
- Resolve an issue with “Auto” mode displaying incorrect memory allocation settings on machines with a certain amount of RAM.

Indexing – General

- Added support for hashing items using SHA-1, SHA-256 and/or SHA-512.
- Added the ability to stop ongoing indexing tasks, such as OCR-ing.
- Added extraction of RSIDs (Session Revision Save ID) and Document IDs from MS Word documents.
- Improved processing of very large Excel documents, e.g. where the extracted text exceeded 1 GB of characters.
- Improved the performance of the “Rebuild secondary indices” operation.
- The use of comma characters in custodian names is prohibited in the Custodian facet. The Add Source wizard, which has a setting to directly set the custodian on all items of a source, now disallows commas in the custodian name as well.
- Resolved an incorrect number of crawlers being logged when the memory setting is set to Auto or Manual.

Indexing – Disk Images

- Resolved an issue where certain disk images with suspended BitLocker protection failed to index. These errors would be logged as an “unsupported FVE metadata entry version” error.
- Resolved an issue with a multi-segment L01 image produced by Forensic Explorer that failed to index.

- Resolved incorrect timestamps for disk images with FAT32 file systems when the source timezone is different from the current machine's timezone.
- Resolved an issue where certain VHDX disk images with GPT partitions could not be indexed.
- Resolved an issue where Windows 11 disk images were reported as being Windows 10 images.

Indexing – Chat Messages

- Added support for indexing MacOS and iOS iMessage/SMS databases.
- Improved handling of the "account_id" participant parameter in RSMF archives.
- Added support for extracting message texts from the AttributedBody column in iTunes backups.
- Resolved an issue where messages in certain iTunes backups were not properly indexed.
- Resolved an issue in chat message hashing, where non-identical chat messages got the same message hash.
- Resolved silent errors during chat message indexing. These errors are now reported appropriately.
- Resolved an issue with messages in a Slack export failing to index correctly.
- Resolved an issue with certain top-level chat messages in an UFDR file failing to index.

Indexing – Load Files

- Resolved an issue where chats, calls and calendars exported to a load file with the "Export native as PDF" option could not be imported back into a case.

Indexing – Cloud Sources

- Resolved access issues with Microsoft 365 sources due to protocol changes.
- Usability improvements related to account selection when handling Microsoft 365 tenants with lots of accounts. Only a limited number of accounts will be displayed by default. One can filter accounts based on user-entered text, allowing one to quickly identify the matching accounts in a list of thousands or more M365 accounts.

Indexing – Crawler Scripts

- Added an "item.mediaTypeCategories" attribute that holds all the type categories of that item. E.g., for an message/rfc822 item, it contains "Communication", "E-mail", and "Email Message".

Commandline Support

- Added an "-appendText" option. This can be used together with the "-importText" option. It instructs the application to append rather than overwrite the imported item text.
- Resolved the "-log" parameter failing to operate in certain cases.

Devices

- Besides phones, the Devices tab now also shows Windows OS installations found in disk images. This typically reveals:
    - System artifacts such as OS setup, accounts, networks, and USB devices.
    - Installed and launched applications.
    - Common files of interest, such as messages, multimedia files, browser histories, and recently used files.
- Added support for phone and tablet devices found in iTunes backups.
- The item lists can now be sorted, e.g. by date, type or size, just like the item lists in the Search tab.
- The applications list can now be sorted by application name or by item count.
- Resolved a rendering issue in the Emails view.

Intella Assist

- Added the ability to analyze images through Intella Assist. This has a broad range of uses, e.g.,
    - Detecting images containing certain objects, such as guns and other weapons, hate symbols, tattoos, drugs.
    - Describing in natural language what a photo depicts.
    - Performing OCR, from scanned documents to vehicle number plates in photos.
    - Classifying images based on natural language descriptions of the categories.
- Added support for Google Gemini as an LLM provider.
- Made the tests performed by the Test Integration button more robust.

- Items that have been analyzed with Intella Assist can now be located via the "Intella Assist" branch in the Features facet. Separate nodes are used to indicate whether that analysis took place through the Intella Assist chat or via an Intella Assist Task.
- Added the possibility to configure which item fields (text, raw data, headers and/or properties) may be included in the prompt sent to the LLM provider. Also, the maximum allowed data length (in characters) can be configured per field.
- Updates to the supported WatsonX models.
- The collapsed state of the Intella Assist sidebar is now persistent.
- Resolved an issue with the Enter key in the chat text field not working in some circumstances.
- Resolved an issue where a failed Intella Assist Task execution on an item resulted in a "Failure" tag being applied on behalf of the logged in user instead of the dedicated Intella Assist user.

Intella Assist Tasks

- The right-click menu in the Search tab has been extended with an "Intella Assist Analysis…" menu item. This opens a wizard where one can define an Intella Assist task. Such a task can analyze items, e.g., for traces indicating fraud, certain sentiments, or just to create a summary or translation. A task can tag, flag, or enrich an item with additional text, as desired by the user. Instructions formulated entirely in natural language dictate what the task should look for in an item. The task then runs in the background on the selected items, producing the requested tags, flags, texts and columns.
- An example use case could be an investigator tasked with reviewing thousands of messages for evidence of potential insider trading. A manual review could take days or weeks. The investigator can now create a task configured specifically to analyze communications for potential red flags, such as suspicious financial terms, unusual urgency, or sensitive topics that are referenced indirectly. After testing the task on a few sample items and fine-tuning it as needed, the investigator runs it across the selected set of items. The investigator receives a clearly tagged and summarized set of suspicious items, allowing for an immediate focus on the items of the highest relevance. The task's analytical depth, enabled by AI, identifies subtle patterns and contextual clues that might otherwise be overlooked in manual reviews.
- How it works:
    - The user selects a set of items, right-clicks on them to open the popup menu, and chooses Process > Intella Assist Analysis…
    - A wizard guides users through the process of defining the task. This entails providing contextual information about the matter at hand, the

key people involved (if known upfront), instructions on how to flag or tag items, and what text or column data to generate.
    - A library of predefined tasks, e.g. for looking into potential insider trading, harassment, unauthorized data access, or use of foreign languages, provides instruction-by-example and inspiration, and can be built upon.
    - A test run can be done on a few items to review the task output. This allows fine-tuning of the new task prior to running it on the whole collection.
    - The task can then be run on the selected items.
    - Task outputs can be reviewed in the Tags facet and in the Intella Assist sidebar in the Previewer. Results can be reviewed in real time; no need to wait for Intella Assist to finish running the task.
    - Results of different tasks, or different runs of a task, are clearly marked as such and can be reviewed separately.
    - Tasks are executed using the configured Large Language Model (LLM) provider. This allows for the use of local and air-gapped environments (e.g. using the Ollama or vLLM frameworks) as well as several cloud-hosted providers that are supported out-of-the-box.
    - All operations carried out by Intella Assist, including Intella Assist Tasks, can be fully audited.

OCR

- Intella will now better utilize the optimization folder for OCRing. Previously, many temporary files were stored in the case folder, which could cause issues if the case is located on a network drive. Those files will now be stored in the optimization folder, when configured. This is likely to improve performance, and also resolves certain issues with network drives.

Searching

- Restructured the facet list to accommodate the growing number of facets. Facets are now grouped in branches: Evidence, Search, Devices, Review, Analysis. The user can reorder these categories and the facets within each category through drag and drop.
- Improved the usability of the Features facet, by grouping the facet nodes into branches: Evidence, Review, Analysis, Indexing. The order of these branches, as well as their internal order, can be rearranged through drag and drop.
- Improved usability in the Recipient Count facet.

- Resolved the missing default Saved Search for “Possible spam” in compound cases.
- Resolved an error that would occur when a phrase or proximity search used nested phrase searches, with no space character separating them.

Results

- Resolved an issue where sorting by Family Date would not work properly after changing the Top-Level Parent search options.
- Resolved an issue with the Image Analysis columns showing no results.

Previewer

- Added an image loading indicator. This is shown when the loading, and optional conversion, of the selected image file is taking a considerable time.
- Improved the rendering of items whose binary file has not been stored in the case, due to the file exceeding the item size threshold of its source.
- Resolved an issue where some PDFs could not be rendered due to incorrect font substitution.
- Resolved an issue where some of the redaction editor buttons may become invisible.

Review

- Resolved missing hit highlighting in Review tabs.

Exporting – General

- When exporting of a URI list completes, the user is now shown a dialog that reveals the location of the exported CSV file, and allows for opening it in its native application.

Exporting – PDF

- Resolved an issue when exporting an HTML email with an invalid "href" link to PDF format.
- Resolved an issue where some PDFs could not be rendered due to incorrect font substitution.
- Resolved an issue where HEIC images were not rendered in the PDF in some cases.

Exporting – RelativityOne

- Direct export to Relativity can now be done via the new Import Service API. This also simplifies the installation process of Relativity's dependencies.

Exporting – Portable Cases

- The option to export item redactions has been removed, as Intella Backpack does not support redacting items.
- Resolved an issue with the chosen memory settings not being applied to the exported case.
- Resolved an issue with incorrect statistics about tagged items being shown at the end of exporting.

Upgrade Notes

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Case version 3.0 – Intella 3.0.1 can directly open cases made with Intella 3.0.

Case versions 2.1.x to 2.7.x – Intella 3.0.1 can open cases made with Intella versions 2.1.x to 2.7.x, but these cases first require conversion before they can be opened.

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Memory settings – The 2.7 version changed how case memory settings are stored. Prior to version 2.7, these settings were stored in both the case.xml and case.prefs files, for historical reasons. This is now only stored in the case.prefs file. Consequently, if a 2.7 or later version is used to alter the memory settings of a case made with an older version, the memory setting changes may not be picked up by older versions.

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Intella 3.0

Highlights

- Added the **Devices tab**, a new interface for efficient reviewing of **phone data** such as chat messages, photos, geolocation artifacts, and more.
- Added **Devices** and **Applications** facets to the Search tab, locating items of specific devices and applications.
- Redesigned **Insight tab**.
- Added **Intella Backpack Work Reports**.
- Improved **compound case** functionality.
- Added support for **re-indexing selected items**.
- Added support for **replacing item binaries**, e.g. with externally repaired or decrypted variants.
- Improved support for **Google Takeout** exports.
- **Simplified memory management** and **improved memory usage**, particularly for indexing.
- Added support for **RDS Hash Sets v3 (SQLite)** hash lists.

Intella Backpack

- Added Work Reports functionality. This allows an Intella Backpack user to export their review work, including their tags, flags, comments and actions, to a light-weight file for transport to the case manager. The case manager, using Intella Professional, can then open and merge that information into the original case. This facilitates collaboration between remote investigators (e.g. external subject matter experts) and case managers.
- Several filters are available that can be used to further restrict what is exported through the Work Report.
- When exporting items to a portable case, the item IDs in the exported case are now equal to the item IDs in the original case.
- Resolved an issue with the Intella Backpack User Manual failing to open.

Devices tab

- The newly added Devices tab offers a dedicated and streamlined environment tailored to the investigation of digital devices, especially mobile phones. Recognizing the growing significance of mobile devices in digital forensics, this interface consolidates crucial information in a top-down approach.

    - Users can quickly view the list of all phones in a case. Supported phone extraction formats are Cellebrite, XRY and Oxygen phone reports.
    - Other types of devices, e.g. disk images, are planned for addition in a future release.
    - Selecting a device provides immediate visibility into essential details such as make, model, and owner information. Investigators can drill down further, exploring prominent data categories (e.g., images, messages, calls, locations) and installed applications in a near-native presentation. For example, selecting a messaging app like WhatsApp will intuitively reveal chat conversations, as they are typically the most pertinent and sought-after type of information for this app. Other apps may show views such as browser histories, images, and geolocation data, as deemed appropriate for the selected app.
    - The Devices view accelerates the examination process. Faster triaging of devices, easy contextualization of items found on a device, and intuitive navigation are just some of the benefits, making device-specific investigations faster and more intuitive.

Case management

- Enhanced compound case functionality, through a wizard that supports importing the following information from sub-cases:
    - Flags
    - Identities
    - Keyword, MD5 and Item ID lists
    - Redactions
    - Saved searches
    - Content Analysis results
    - Near-Duplicates
    - Email threads
    - Custom IDs
    - Duplicate Custodian field
    - Excluded fragments
    - Export sets
- The above list of artifacts can also be imported into the compound case later, as an on-demand operation.
- Added a “CaseServerIdleTimeout” property, defining after how many minutes of no detected user activity the case becomes inactive. The default is still set to 30 minutes.
- Resolved an issue with compound cases not correctly merging custodian information from its sub-cases.

- Resolved an issue with opening compound cases that contain a W4 source in one of their sub-cases.

Memory management

- When Intella is about to (re)index the case, its main window will close, and a new window will show for the duration of the indexing operation. This change is tied to changes in the underlying indexing engine, to make indexing more robust and decrease the chance of running out of memory. Once indexing completes, the user will be returned to the main window.
- Changes to Memory Allocation settings:
    - When Memory Allocation is set to "Auto", indexing will now consume all available system RAM better. This reduces the chance of an Intella process running out of memory, particularly on systems with > 32 GB RAM.
    - A new "Manual" mode has been introduced, where a single slider can be used to govern how much RAM all Intella processes combined can use. The default value equals to what the "Auto" mode will use. Users can reduce this if the system is meant to be running other heavy-weight processes at the same time.
    - A new "Advanced" mode has been introduced, in which users can individually configure how much memory should be reserved for case review operations, index management operations, and crawlers. The expectation is that users will not have to configure this unless instructed by Vound's Support staff to do so.

Indexing – General

- Added the ability to re-index specific items in the case. This allows for retrying indexing with e.g. improved memory settings, additional passwords in the Keystore, or other changes external to that item that affect its indexing.
    - Before this change, only entire sources or the entire case could be re-indexed. Selective re-indexing will be faster and less intrusive for ongoing cases.
    - All tags, flags and comments of the affected items will be retained.
    - Selective re-indexing may still take considerable time due to the need to remove items from the case indices, as well as recalculation of certain case-wide indices. While it is typically a lighter operation than re-indexing of an entire source or case, it may not be an instant operation due to these factors.

- Added the ability to replace the binary of an item with an alternative binary. This can be used, for example, to replace a damaged binary with a non-damaged or repaired version. Another use case is replacing an encrypted file with an externally decrypted version. The file can then be handled as if it were a regular piece of evidence data, virtually located at the same location as the original item.
- Added a dedicated Google Takeout source. While Google Takeout exports could already be indexed, this version enhanced the processing of Takeout-specific information, improving the ease of reviewing the information found in it.
    - A Google Takeout source configuration allows for selecting specific parts of a Takeout export (e.g., Mail, Drive, Calendar, etc.) and selected folders within Drive.
    - Emails are organized in folders in the Location facet that reflect their Gmail labels.
    - Drive files that are scattered across multiple Takeout ZIP files are shown in a unified folder tree in the Location facet.
    - Improved indexing of chat messages, mirroring how chat data in other evidence types is typically processed.
    - Unified views of vCards, tasks, events and tasks found in the Takeout export.
- Added support for the Reference Data Set (RDS) Hash Sets v3 format, which is in SQLite format.
- When (re-)indexing a source, a warning is now displayed when the case is configured to use an amount of memory that is likely insufficient for the number of items in the case.
- When a source is about to be added to a regular (non-compound) case, and it would bring the total amount of evidence data in the case to be above 1 TB (terabyte), a warning is now shown. While such large non-compound cases may technically work on adequate hardware, the practice of spreading evidence data across multiple sub-cases and combining them into a compound case is generally recommended, for stability and case management reasons.
- Resolved an issue where deselecting a category in the Content Analysis section of a new W4 source would result in an internal error.
- Resolved an issue with a custodian indexing task failing to execute when it specified a custodian name containing a comma.
- Resolved an issue with custom indexing tasks executing out of the specified order.
- Resolved an issue with certain file permissions or missing configuration files causing a source to silently fail to index.
- Resolved an issue where a local firewall could interfere with inter-process communication, affecting indexing and exporting.
- Several unspecified stability improvements.

Indexing – File formats

- Added support for Notes 12 and 14. A 64-bit Notes version is now required.
- Added support for Windows Push Notifications artifacts (wpndatabase.db files).
- Added support for Windows Sticky Notes databases.
- Added support for Start and End dates for call items in MS Teams PST files.
- Resolved an issue with headers and footers only being extracted from the first section of an old MS Word format document (DOC files, not DOCX).
- Improvements to the processing of various office documents due to library upgrades.
- Resolved an issue with inconsistent Apple Mail indexing results when the evidence was placed on a network drive.

Indexing – Cellphones

- Reviewed all supported cellphone formats to ensure complete and appropriate processing of all major artifacts (messages, calls, images, etc.) in phone dumps. This resulted in several small improvements and optimizations.
- Resolved an issue with incomplete raw data in contacts extracted from an iTunes backup.
- Resolved an issue with missing timestamps in Oxygen reports.
- Resolved incomplete (infinite) processing of Cellebrite UFDR reports due to an illegal XML structure occurring in these files.

Indexing – Chats

- Resolved an issue with RSMF archives where the account_id property was not taken into account properly.
- Resolved issues with the indexing of certain Skype chat messages.
- Improvements to the handling of edited and deleted messages in a Slack export.
- Improvements to the handling of participants in Pidgin chats.
- Improved the "Structured Message Hash" calculation of chat messages, improving deduplication on such items.

Indexing – Emails

- Added support for Outlook for Mac 2011 (OLK14) files.
- Resolved an issue with the determination of the Recipient Count on emails with several different display names associated with the same email address.

Indexing – Disk images

- Improved detection of deleted items in FAT16 partitions.
- Resolved an issue with an AFF4 image of an encrypted APFS file system failing to index properly.
- Resolved an issue with very slow or infinite processing of certain Linux disk images.
- Improved stability when indexing ISO disk images with a CDFS file system.
- Several stability improvements related to the handling of corrupt disk images.

Indexing – Load files

- Fixed a rare problem where importing a load file with an excessively large number of images could trigger a crawler timeout error.

Indexing – Cloud

- Updates to the iCloud source, reflecting changes in Apple's iCloud protocols. These protocol changes broke the ability of older product versions to retrieve any items from iCloud accounts.

Indexing – Crawler scripts

- Added the ability to import custom item texts.
- The Top-Level Parent settings for crawler scripts can now be controlled via the "Search - Show Parents Options" preferences.
- Resolved an issue where the Document ID column could not be modified via a crawler script.

IntellaCmd

- IntellaCmd now supports more options for adding sources via the "-addSourcesFromJson" method. Examples are provided in the User Manual.
- Resolved an issue with the "-rebuildIndexes" operation failing due to a time-out on the clearing and backing up of certain files.
- Optimized performance when importing texts via the "-importText" command line option.

Insight tab

- The Insight tab has been redesigned to be more user-friendly.
    - The design has changed from a long scrollable document to a set of tabs.
    - The Timeline now filters out dates like Jan 1, 1970.

- The bars in the Timeline are now clickable, revealing the item set in the Search tab.
- The Devices section has been extended with the Phones listed in the top-level Devices tab.

Intella Assist

- Adjusted Intella Assist's system prompts to make sure that an Intella Assist response uses the same language as the request – unless explicitly requested otherwise by the user.
- Stability improvements in Intella Assist's Azure OpenAI integration.
- When using an LLM hosted on Azure OpenAI, the Intella Assist facet will now be enabled if the Azure OpenAI deployment name matches any of the supported OpenAI models.
- Added support for the Llama 3.3 model on the WatsonX platform.

Searching

- Added the Applications facet, which lists apps found on cellphones and allows for all items associated with these apps to be located. Applications are grouped into categories such as Communications, Social Media, Navigation, Finance, etc.
- Added the Devices facet, which lists detected phones in the case and allows for all items associated with these phones to be located.
- The facet list has been resorted, putting the most-often used facets (Location, Type, Date, etc.) at the top of the list.
- Added support for using fuzzy search syntax within phrase searches, e.g. "driving license~".

Results

- Resolved an issue with the Cluster Map not updating properly when a second Required clause was added and then removed.

Analysis

- Resolved an issue where OCR would fail when an optimization folder was set.
- Resolved an issue where the casing of certain custodian names caused their item sets to be swapped in the Keywords results table.
- Resolved several (sometimes fatal) errors that could occur when running email threading.

Identities

- Resolved an issue with the calculation of identity suggestions.
- Resolved a regression related to the creation of identities.

Previewer

- Usability improvements in the Thumbnails tab.
- Improved native rendering of items due to several library upgrades.

Exporting – Original Format

- Resolved an issue with the "Original Format" export of chat conversations not reflecting the chat message sender correctly.

Exporting – PDF

- General improvements to the native rendering of items due to several library upgrades.
- Resolved an issue with exporting chat messages to PDF, where images could incorrectly overflow to other pages.

Exporting – Relativity

- The minimal supported version is now Relativity 9.7. Direct export to older versions of Relativity is no longer supported.

Exporting – Case

- When exporting items to a new case (e.g. an empty or portable case), the item IDs in the exported case are now equal to the item IDs in the original case. Note that when exporting items to an existing case, the item IDs still need to be different to avoid conflicts.

Upgrade notes

Intella versions can be installed side-by-side. There is no requirement to uninstall old versions when installing an Intella version. Running the new version will automatically pick up cases and settings from a previous installation.

Case versions 2.1.x to 2.7.x – Intella 3.0 can open cases made with Intella versions 2.1.x to 2.7.x, but these cases first require conversion before they can be opened.

Case conversion can create a copy of the case in which all item data is converted, and all tags, comments and flags are imported. The original case will not be altered in any way and can afterwards still be opened in the older Intella version. Case conversion requires sufficient time and disk space. As a rule of thumb, please reserve twice the amount of the evidence size for your case folder.

Alternatively, for cases made with Intella 2.6 or later, case conversion can directly convert the existing case without creating a copy first. This manner of case conversion is considerably faster (usually a matter of seconds) and much less disk intensive. This can be a good alternative for when a backup of the case already exists, saving both time and disk space. Having backups of your cases is always highly recommended.

Access to the original evidence files is not required for either manner of case conversion.

Case conversion will make the case openable in 3.0, but re-indexing of cases with cellphone data is still required to be able to utilize the new Devices tab. For re-indexing, access to the original evidence files is required.

Due to a change in the underlying databases, results in the Image Categories and Detected Objects branches of the Image Analysis facet that were made with version 2.6 will not be visible when the case is opened with version 2.6.1 and later. This analysis will have to be repeated with a more recent version.

The 2.7.2 release resolved an issue for Saved Searches containing Content Analysis results. These searches would always yield no results. Saved Searches made with earlier versions that contain Content Analysis queries should be discarded and re-created; they cannot be automatically fixed.

To index Notes NSF files, a 64-bit version of Notes is now required. 32-bit Notes versions are no longer supported.

Other case versions – Cases made with Intella 2.0.x or older are not supported.

To open cases made with the 1.9.x and 2.0.x versions, please use Intella 2.5.1. This is the last version to support the 1.9.x and 2.0.x versions.

Cases made with beta versions are not supported and should be recreated.

Memory settings – The 2.7 version changed how case memory settings are stored. Prior to version 2.7, these settings were stored in both the case.xml and case.prefs files, for historical reasons. This is now only stored in the case.prefs file. Consequently, if a 2.7 or

later version is used to alter the memory settings of a case made with an older version, the memory setting changes may not be picked up by older versions.

Software versions – Vound will provide technical support for one major past version. For this release that will mean the 2.7.x range of products. Vound always recommends that users upgrade to the latest version.

Intella 2.7.2

Highlights

- **Unlimited portable case exports**.
- **Intella Assist** improvements: **prompt optimizations**, support for **IBM WatsonX**.
- Improved searching for **emojis** and **acronyms**.
- Added full disk image support to **IntellaCmd**.

Indexing – General

- Resolved an issue with missing Raw Data properties in the XMP section of a PDF document.

Indexing – Disk images

- When validating and indexing AFF4 disk images, sub-folders will no longer be scanned. Only the current folder will now be scanned for disk image parts. This improves the time needed to validate disk images when there is a deep folder structure present in the local file system holding the disk image files.
- Improved stability when indexing ISO and DMG disk images.

Indexing – Email

- Resolved an issue where emails inside OLK15 files were not identified as Top-Level Parents.

Indexing – Chat messages

- Resolved an issue with indexing the SubstrateHolds folder in a MS Teams PST file.
- Resolved an issue with messages from RSMF archives not indexing properly when multiple messages in the archive have the exact same timestamp.
- Improved the performance of indexing messages from a Slack export, when that export contains a large amount of edited or deleted messages.

Indexing – Cloud sources

- Updates to the Gmail and Microsoft 365 sources, reflecting server-side changes made by these vendors.
- Improved indexing and rendering of tables in iCloud Notes items.
- Resolved an issue with the selection of Google services not working properly.

IntellaCmd

- Added support for indexing disk images. These could already be indexed as files in a Folder source, but now the full set of disk image source options is supported. For example, disk image validation, volume shadow copy options, file carving, etc. can now be controlled on the command-line.
- Resolved an issue with the -indexChatMessages (-icm) option not working properly.
- Resolved an issue with a password list not being imported into the keystore.
- Resolved an issue with the case's temp folder setting not being picked up.
- Resolved an issue with a case template's optimization folder setting not being picked up.

Intella Assist

- Added support for models shared on the IBM WatsonX platform. Currently supported models are:
  - granite-13b-chat-v2
  - mixtral-8x7b-instruct-v01
  - llama-3-8b-instruct
  - llama-3-70b-instruct
  - llama-3-1-8b-instruct
  - llama-3-1-70b-instruct
- Prompts generated by Intella Assist in the Previewer will now only include and submit those item parts (text, headers and/or raw data) needed to answer the user's question. This reduces API costs due to less tokens being generated, and speeds up processing of the prompt. Furthermore, it reduces the chance of context limits to be reached, especially for smaller models.
- Added a (hidden) option to re-enable the Intella Assist facet when a model is used that is not part of OpenAI's family of gpt-4 models.
- Improved rendering of chatbot output in the Intella Assist facet.

Searching

- Added support for searching for emojis. Previously this was only possible via regular expression search. Now, emojis can be directly entered in the Search field too. For this type of search to work, re-indexing of existing cases made with 2.7.1 or older is required.
- Improved searching for acronyms, such as “U.S. Bank”.
- Added a “Copy to clipboard” right-click option to several facets. This lets one copy values from those facets, e.g. an email address in the Email Address facet.
- When using the Auto-Tag button in the Keywords List facet, the searches would not use the text fields specified in the Keyword Search facet options. This has been changed; the Keyword Search options are now applied when using Auto-Tag.
- Resolved an issue where Saved Searches involving Content Analysis facet categories produced no results. Existing Saved Searches for this type of query should be discarded and re-created; they cannot be automatically fixed.
- Resolved an issue with Cluster Map interaction when an empty search result in the Required section was added or deleted.
- Resolved an issue with the “OCR candidates” case task querying for JPEG files instead of PNG files, or vice versa, when only one of these options was selected.

Previewer

- Improved HEIF image support.
- Resolved an issue where links to the previous and next conversation items in the Previewer could not be rendered for some items.
- Resolved an issue with some PDF documents showing black artifacts in the Preview tab.
- Resolved an issue with previewing calendar items in compound cases.

Exporting – Portable Cases

- Portable case exporting is no longer restricted to a specific number of exports per Intella Professional license. Users of Intella Professional can now export an unrestricted amount of portable cases.
- At the end of exporting, an additional integrity check on the produced IPC file is done.
- Added a dialog at the end of exporting, listing statistics about the exported portable case: location, size, hash, and more.

Exporting – PDF

- Improved rendering of the JPEG2000 (.jpx) image format.
- Resolved an issue with some emails with very wide inline pictures rendering incorrectly in the generated PDF.

Exporting – PST

- Resolved a rare issue where exporting emails to a PST with the “Keep location structure” turned on would produce a "The folder with same name already exists" error.

Exporting – Relativity

- Updates to the functionality for exporting to Relativity(One) instances, ensuring that it supports recent Relativity versions.
- Resolved a harmless “NotSerializableException” error when exporting to Relativity.

Upgrade notes

Intella versions can be installed side-by-side. There is no requirement to uninstall old versions when installing an Intella version.

Case versions 2.6.x and 2.7.x – Intella 2.7.2 can open cases made with Intella 2.6.x and 2.7.x. No case conversion is needed.

Due to a change in the underlying databases, results in the Image Categories and Detected Objects branches of the Image Analysis facet that were made with version 2.6 will not be visible when the case is opened with version 2.6.1 and later. This analysis will have to be repeated with a more recent version.

The 2.7.2 release resolves an issue for Saved Searches containing Content Analysis results. These searches would always yield no results. Existing Saved Searches containing Content Analysis queries should be discarded and re-created; they cannot be automatically fixed.

Case versions 2.1.x to 2.5.x – Intella 2.7.2 can open cases made with Intella versions 2.1.x to 2.5.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 original 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 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 2.0.x or older are not supported.

To open cases made with the 1.9.x and 2.0.x versions, please use Intella 2.5.1. This is the last version to support the 1.9.x and 2.0.x versions.

Cases made with beta versions are not supported and should be recreated.

Memory settings – The 2.7 version changed how case memory settings are stored. Prior to version 2.7, these settings were stored in both the case.xml and case.prefs files, for historical reasons. This is now only stored in the case.prefs file. Consequently, if the 2.7(.x) version is used to alter the memory settings of a case made with an older version, the memory setting changes may not be picked up by older versions.

Microsoft SharePoint – Version 2.7.2 no longer supports local, on-premises SharePoint servers. Version 2.7 was the last version supporting this source type.

Cloud-based SharePoint instances are not affected by this change, as they can be retrieved using the M365 source type. Existing cases with local SharePoint sources can still be opened.

Software versions – Vound will provide technical support for one major past version. For this release that will mean the 2.6.x range of products. Vound always recommends that users upgrade to the latest version.

Intella 2.7.1

Highlights

- Added **Intella Assist**, an AI-powered assistant that helps with formulating search queries and reviewing results. It can use OpenAI's ChatGPT, other OpenAI API-compatible models and local models.
- Added support for **file carving**; recovering deleted items from unallocated space in disk images.
- Added support for acquiring data from **Google Meet**.
- Added support for indexing **MS Visio VSDX** files.
- Added functionality for **repairing broken cases**.

General

- Redesigned Welcome tab.
- Time zones in the Time zone chooser are now sorted by taking the current daylight saving time status into account.

Intella Assist

- An AI-powered assistant called Intella Assist has been added. Based on large language models (LLMs) such as ChatGPT, this assistant lets the user enter and refine queries using natural language and across a range of facets. Examples of searches:
    - "Give me all JPEG images larger than 1 MB"
    - "Search for invoices, using both English and Spanish words related to invoicing"
    - "Find all emails sent by john.doe@gmail.com between January 15, 2019 and September 1, 2019"
- Intella Assist is also integrated in the Previewer, where users can inspect and analyze items using natural language instructions. Examples of instructions:
    - "Summarize this document"
    - "Translate this document"
    - "Do the SMTP headers of this email show any signs of data tampering?"
    - "Who are the key persons named in this document?"
    - "What personally identifiable information does this document contain?"
    - "Where there any negative sentiments expressed in this conversation?"

- To use this functionality, the user needs to specify a LLM provider, and optionally an endpoint and API key for that provider. Currently supported providers are OpenAI (ChatGPT), Azure OpenAI, and OpenAI API-compatible providers. The latter also allows for local models to be used.
- Intella Assist is only available in local cases; Viewers connected to a remote case shared with Intella Connect or Intella Investigator will not see this functionality.
- Admins should take note of several critically important caveats.
    - Depending on the chosen provider, using Intella Assist may involve submitting parts of evidence data (text and metadata) to external services. The sensitivity and confidentiality of the data may make this undesirable or even illegal.
    - All prompts sent to the chosen provider are logged and available for auditing.
    - This functionality is experimental. The provided results may be incorrect and incomplete. Asking the same query again may not yield the same results.
    - Depending on the chosen provider, processing of the data by these services may be subject to billing. All processing costs are for the owner of the API key.
    - End users will be shown warning dialogs expressing these risks. Nevertheless, users need to be educated in the proper handling of sensitive evidence data and the assessment of LLM-generated results.

Indexing – General

- Added support for indexing MS Visio VSDX files.
- Removed support for indexing local, on-prem SharePoint sources. Cloud-based SharePoint instances are not affected by this change, as they can be retrieved using the M365 source type.
- Added logging of the used indexing options.
- Improved indexing performance when processing emails and chat conversations with very large numbers of recipients.

Indexing – Disk images

- Added support for file carving: the process of recovering deleted items from the unallocated space in a disk image. This requires the PhotoRec utility, which can be downloaded automatically. Currently, E01 and DD images are supported. Carving runs in parallel with regular indexing, to optimize speed. File carving requires the use of the Disk Image source; disk images that are indexed as part of a “File or Folder” source will not be carved.

- Improved checksum validation of AFF4 images. For AFF4 physical images, checksum validation is an optional step during disk image validation when using the Disk Image source type. For AFF4-L logical images, failed checksums are reported as exceptions in the Features facet and in the Exceptions report.
- Resolved an issue with disk images containing NTFS file systems that were decrypted by AXIOM. Incorrect NTFS data structures would cause some folders to be regarded as corrupted and subsequently skipped.
- Resolved an issue with incorrect (garbled) partition names on ext4 and FAT16 file systems.

Indexing – Cellphones

- Resolved an issue where chat messages with identical content could mistakenly be responsive to certain keyword queries.
- Resolved an issue with interrupted crawl processes when indexing very large (> 100 GB) UFDR files.
- Improved memory usage when indexing Cellebrite reports with a large number of chat messages.

Indexing – Cloud sources

- Extended the Google source with support for Google Meet.
- Improved error handling in M365 sources when an invalid user ID or tenant ID is specified.
- Improved indexing and rendering of tables in iCloud Notes items.
- Resolved an issue with Find my Phone artifacts in iCloud sources.

IntellaCmd

- Added an option to rebuild the indices in a case. This operation regenerates the secondary indices that are derived from the data gathered during crawling. This can be used to repair cases that fail to open or that show other forms of erratic behavior, especially in cases where no backup is available. As a precaution, users are still advised to run this operation on a copy of the broken case.

Previewer

- Resolved an issue with the Previewer becoming non-responsive when the Raw Data tab was holding a large amount of text.

Tagging

- Commas in tag names are no longer allowed, unless when properly escaped. This prevents issues in other subsystems that process tag data.

OCR

- The default time-out of OCR workers of the embedded OCR engine has been changed from 30 minutes to 2 hours. The previous time-out value caused too many documents to fail unnecessarily.
- Added a cap on the number of OCR workers for stability reasons.

Exporting – PDF

- Resolved an issue with certain calendar items failing to export.
- Resolved an issue with annotations such as comments in a PDF getting lost when exporting the item to a PDF.
- Resolved an issue with incorrect positioning of headers and footers in landscape-oriented PDF documents.
- Resolved an issue where Intella did not add a numbered suffix to a file name (e.g., “document(1).pdf”) when exporting multiple items with the same file name or subject to PDF.
- Resolved an issue with certain characters not rendering properly in the generated PDF, whereas they would render fine in the Previewer.

Exporting – Load files

- The PDF-related improvements listed above also apply to the exporting of load files using the PDF or TIFF file formats.
- Resolved an issue where the "Also include PDF versions of images" setting was ignored when exporting to a load file. The default “Images” folder was used instead.

Exporting – Portable case

- Resolved UI layout issues in the portable case export wizard.

Retiring functionalities

Intella Viewer – In a future release, Intella Viewer’s ability to connect to a case shared by Intella Connect or Intella Investigator will be removed. Intella Connect and Intella Investigator will be able to deliver those functionalities entirely via the browser.

Upgrade notes

Intella versions can be installed side-by-side. There is no requirement to uninstall old versions when installing an Intella version.

Case versions 2.6.x and 2.7 – Intella 2.7.1 can open cases made with Intella 2.6.x and 2.7. No case conversion is needed.

Due to a change in the underlying databases, results in the Image Categories and Detected Objects branches of the Image Analysis facet that were made with version 2.6 will not be visible when the case is opened with version 2.6.1 and later. This analysis will have to be repeated with the more recent version used.

Case versions 2.1.x to 2.5.x – Intella 2.7.1 can open cases made with Intella versions 2.1.x to 2.5.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 original 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 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 2.0.x or older are not supported.

To open cases made with the 1.9.x and 2.0.x versions, please use Intella 2.5.1. This is the last version to support the 1.9.x and 2.0.x versions.

Cases made with beta versions are not supported and should be recreated.

Memory settings – The 2.7 version changes how case memory settings are stored. Prior to version 2.7, these settings were stored in both the case.xml and case.prefs files, for historical reasons. This is now only stored in the case.prefs file. Consequently, if the 2.7(.1) version is used to alter the memory settings of a case made with an older version, the memory setting changes may not be picked up by older versions.

Microsoft SharePoint – Version 2.7.1 no longer supports local, on-premises SharePoint servers. Version 2.7 was the last version supporting this source type.

Cloud-based SharePoint instances are not affected by this change, as they can be retrieved using the M365 source type. Existing cases with local SharePoint sources can still be opened.

Software versions – Vound will provide technical support for one major past version. For this release that will mean the 2.6.x range of products. Vound always recommends that users upgrade to the latest version.

Intella 2.7

Highlights

- Introducing **Intella Backpack**, a free companion product that can open **portable cases** generated by Intella Professional.
- **Identity improvements**, such as mass importing and exporting of identity data.
- Added exporting to the **AFF4-L logical image** format.
- A variety of indexing improvements related to **chat messages**, e.g. support for **Google Chat**.
- Added support for **EDRM MIH hashes**.
- Added **source filters**, letting one filter items based on file name or size.
- **2 to 5 times faster exporting** to PDF and load file formats.

Intella Backpack & Portable cases

- Intella Professional can now export items to a portable case. This new case format consists of a single encrypted file, holding a complete case consisting of the exported items. The file is password-protected, ensuring that only the intended recipient of the portable case can use it.
- The portable case can be opened in Intella Backpack. This new and free application allows users to review and search the items in the portable case.
- On the technical side, Intella Backpack is constructed as a portable application. This means that it can run without installation, and without requiring administrative rights. Just unzip the ZIP file and double-click IntellaBackpack.exe. For example, it is possible to run it straight from a USB memory stick.
- No license is required to run Intella Backpack. It will run freely and perpetually. Intella Backpack will be available to non-Vound customers as well.
- Exporting portable cases is subject to a usage-based license. Intella Professional 2.7 comes with 5 exports included in the standard license. Contact sales for extending this with additional exports.

Installer

- Resolved blurry desktop and taskbar icons when using high-resolution screens and display scaling.

- Resolved an issue with applications not uninstalling when uninstalled from Windows' Programs and Features / Apps and Features settings panel.
- Removed the "(x64)" suffix from all new firewall rules.

Case management

- When importing a case to the cases list, a check is done to see if a case with that ID (listed inside the case.xml file) already exists. When such a case is present, the user is asked whether the imported case should replace the existing case with the same ID, or whether it should be imported with a newly generated case ID.
- Improved the default memory settings for new cases on machines with 512 GB or more RAM.

Indexing – General

- Added support for generating EDRM Message Identification Hashes (MIH). This is a cross-platform and cross-vendor message hashing standard, making email hashes comparable and exchangeable between forensic and eDiscovery applications.
- Added a source option to skip storing the binary data of items larger than a specific size. This helps reduce the case folder size and the indexing time. By default, items larger than 250 MB are not stored in the case folder anymore.
- Add a source option for skipping items based on their file name. This can be used to suppress files based on a known file extension or on another fragment in their file name.
- Put a limit on the length of the stored and indexed raw data. This increases performance and improves stability, by reducing the risk of memory errors. An example is chat conversations spanning a long time range, where the bundled metadata of all included chat messages can result in very large data streams. When indexing metadata fields, only the first 1 MB of text will be indexed. Only the first 5 MB of raw data will be stored. Warnings are added to the case logs when data is truncated. Items that exceed a limit are marked as Exception items with the type "Truncated".
- Resolved an issue with the exception report failing to be produced.
- Resolved an issue with the temporary folder failing to be cleared.
- Resolved an issue with Hangul HWPX documents showing an incorrect file name.
- Resolved an issue with incorrect creation dates extracted from an Adobe Photoshop PSD file.
- Stability improvements in the post-processing stage.
- Stability improvements when processing lots of small files over a network connection.

- Stability improvements when indexing damaged EDB files. This affects MS Exchange email databases, Windows Mail databases, and non-email EDB files.
- Harmless warnings stating "End of data reached" when processing PNG images and MP4 videos are now suppressed.
- Resolved an issue with incorrect crawler memory settings being reported in the case logs.

Indexing – Disk images

- Resolved an issue with processing of VHDX images created by the Kroll Artifact Parser and Extractor (KAPE).
- Resolved an issue with missing folders when processing Apple DMG images.
- Resolved an issue with processing Japanese folder names in FAT32 images.
- Stability improvements when indexing Apple DMG images.

Indexing – Email

- Improvements to the processing of PST containers:
  - The Conversation ID column is now populated for emails from PST containers.
  - Resolved an issue with missing emails due to incorrect MIME structures. These emails were not represented as an item, nor was anything logged.
- Improvements to the processing of Apple Mail containers:
  - Added support for recent Apple Mail versions.
  - Resolved several cases of missing attachments.
  - Stability improvements.
- Resolved an issue with the parsing of email headers with duplicate recipient headers, e.g. multiple CC headers, rather than a single header with a list of addresses.

Indexing – Chat messages

- The Google source has been extended with support for Google Chat.
- Improvements to the processing of Cellebrite UFDR and UFED XML reports:
  - Resolved an issue with chat messages not being indexed.
  - Resolved an issue with a UFDR file being incorrectly classified and processed as a Slack data dump.
- Improvements to the processing of RSMF files:
  - Added full support for the RSMF 2.0 standard.

    - Performance improvements. Next to the speed improvement, this also significantly reduces the chance of time-outs on very large RSMF containers.
- Improvements to the processing of MS Teams PST files:
    - Resolved an issue with conversations not being split properly by month or year.
    - Resolved an issue with inconsistent participant information between conversations and reply threads nested within that conversation.
    - Resolved an issue with start and end dates being reversed for some messages.
    - Stability improvements.
- Improvements to the processing of Slack data exports:
    - Improvements to the processing of the original and edited message timestamps.
    - Improvements to the processing of Slack participant usernames.
    - Stability improvements.

Indexing – Load files

- Improved the load file integrity check that is performed when the user clicks on "Check for Errors". Additional item type checks are being performed.

Indexing – Cloud sources

- The Google source has been extended with support for Google Chat.
- When selecting an S3 bucket or Google Drive to acquire, one can now indicate which folder(s) need to be acquired.
- Resolved several authorization errors when accessing Google sources.
- Stability improvements for SharePoint acquisitions.
- Improved error logging when indexing Dropbox sources.

Indexing – Crawler scripts

- Resolved an issue with crawler scripts failing to modify items that lack an MD5 hash.
- Resolved an issue with the Visited URL and Size fields not being accessible for crawler scripts.

IntellaCmd

- Added support for the -keyID argument. This lets one specify the dongle or SL key to use.

- Added a -replaceSourcePaths argument. This lets one do a substring replace of all evidence paths of all sources in a case.
- Improved the lookup process for alternative licenses.
    - Intella Node licenses are now always preferred over Intella Professional licenses.
    - When the first applicable license already has all its seats consumed, it will switch to an alternative license with available seats, rather than giving up.
    - Removed a false but misleading "Product license not found" error message. This was a byproduct of IntellaCmd simply trying out several alternative licenses.
- Improved memory usage of the case conversion process.
- Resolved an issue with Notes ID files not validating properly.
- Resolved an issue with case creation, where the main process memory setting of the specified case template was ignored.
- Resolved an issue where the system's temporary files folder was used, rather than the folder specified in the case settings. Also added some stability improvements related to the use of the temporary files folder.
- Resolved an issue with the -exportSourcesList operator failing to produce results when invoked on cases holding Slack data dumps.

Analysis

- Resolved an issue with selecting the built-in, hardcoded Content Analysis categories (Credit Card Numbers, Social Security Numbers, Phone Numbers) still enabling the Edit button. Clicking this button would yield an error.
- Scalability improvements to the "Generate duplicate custodians and locations" algorithm".

Full-text search

- Improvements to the searching of email addresses containing underscore characters.
- Improvements to the searching of acronyms.

Facets

- The Item ID Lists facet's import functionality has been extended to also support the importing of URI lists. This facilitates the exchange of item lists between one case and another case exported from that first case. The item IDs will differ between those cases, but the URIs are constant and can be relied upon to find those items in the other case.

- The Features > Exported category now also reflects items that were exported to a (portable) case.
- Resolved an issue with custodian information not appearing in a case converted from an earlier version. This affected the custodian information in the converted compound case itself, not the custodian information found in its converted sub-cases.

Identities

- Added importing of identities. Using a CSV file, identity data like names, organizations, email address and other communication aliases, etc. can be imported. This allows data on known identities to be utilized in a case.
- Added exporting of defined identities to a CSV file.
- The identity suggestions algorithm no longer suggests identities that have already been defined by the user.

Results

- UI improvements in the rounding of values such as byte counts.
- Quality improvements in thumbnail generation.
- Resolved an issue with the Hide Non-inclusive button not hiding all non-inclusive items in a compound case.

Previewer

- The rotation data in an image's EXIF data, if present, is now applied to the rendering of the image. This ensures that the image is rendering with the intended rotation.
- Resolved an issue with certain email SMTP headers failing to render in the Headers tab.
- Resolved an issue with flagging inconsistencies between messages in conversations and the underlying, nested items, due to internal parsing errors.
- Resolved an issue with the Previewer failing to render chat message attachments in a converted case.
- Resolved an issue with Slack-internal links not being followed properly when clicked in the Previewer.

Exporting – General

- Added exporting to the AFF4-L image format. This is a logical image format, similar to L01.

- Intella Professional has been extended with an option to export to a portable case. Portable cases are meant to be used by Intella Backpack. See the separate section on this new application for more details.
- Added an option to export item URI lists. These can be imported in the Item ID Lists facet. This facilitates the exchange of item lists between one case and another case exported from that first case. The item IDs will differ between those cases, but the URIs are constant and can be relied upon to find those items in the other case.
- Exporting errors are now reported to an Errors.csv file, separate from the regular export report that covers the successfully exported items. Optionally, this file can be converted to PDF, RTF and/or HTML, depending on the chosen main report format.
- Improvements to the suggested name of a new export set.
- Resolved an issue with inline attachments in Notes rich text emails being reported twice when exporting to EML or PST format.
- Resolved an issue with the "Edit Evidence Paths" hyperlink showing up in the export wizard of a compound case. Editing of evidence paths should be done in the corresponding sub-case. If evidence paths are determined as missing, a warning will now be shown in the compound case.

Exporting – PDF

- Speed improvements through the increased use of multi-threading. The improvement in total duration typically ranges between 2 to 5 times faster than the 2.6.1 version.
- The "For every email include" header in the PDF rendering options screen has been renamed to "For every communication include". This has been done because it applies to all communication types, not only emails.

Exporting – Load files

- The PDF-related improvements listed above also apply to the exporting to load files.
- Resolved an issue with comments being exported from one case to another through load file overlays. All comments would be squashed together, rather than kept as separate comments.
- Resolved a memory issue when using the "Export native chat content as PDF" option in the load file options.

Exporting – PST

- Resolved an issue with emails exported to a PST file lacking a Conversation Index field. This caused issues when attempting to perform email threading when the PST file was ingested in the Logikull platform.
- Resolved an issue with the automatic skipping of very large emails, done for stability and reliability reasons. An issue with the determination of the size of the email caused some emails to be skipped inadvertently.
- Resolved an issue with tasks with inconsistent timestamps failing to export to a PST.
- Resolved an issue with certain types of export errors not being reported in the export report.

Exporting – Relativity

- Adjustments to the firewall rules related to the direct export to Relativity.

Exporting – Case

- Compound cases now also support exporting items to a separate case.
- Case exporting now supports exporting Image Analysis, Email Threading and Near-Duplicates item data.
- Resolved an issue with exporting decrypted items to a separate case. Decrypted items that could be opened in their native format in the original case, would fail to open in the case that it was exported to.
- Resolved an issue with Skin Tone Analysis results not carrying over to the target case.

Intella Viewer

- Resolved items failing to render when opened in a Previewer, in a remote case shared by Intella Connect or Intella Investigator. In one case this affected MS Teams chat messages. In another case this affected tagged items in a compound case.

Retiring functionalities

Intella Viewer – In a future release, Intella Viewer's ability to connect to a case shared by Intella Connect or Intella Investigator will be removed. Intella Connect and Intella Investigator will be able to deliver those functionalities entirely via the browser.

Microsoft SharePoint – The 2.7 version will be the last version to support local, on-premises SharePoint instances. Cloud-based SharePoint instances are not affected by this change, as they can be retrieved using the M365 source type.

Upgrade notes

Intella versions can be installed side-by-side. There is no requirement to uninstall old versions when installing an Intella version.

Case version 2.6.x – Intella 2.7 can open cases made with Intella 2.6.x. No case conversion is needed.

Due to a change in the underlying databases, results in the Image Categories and Detected Objects branches of the Image Analysis facet that were made with version 2.6 will not be visible when the case is opened with version 2.6.1 and later. This analysis will have to be repeated with the more recent version used.

Case versions 2.1.x to 2.5.x – Intella 2.7 can open cases made with Intella versions 2.1.x to 2.5.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 original 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 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 2.0.x or older are not supported.

To open cases made with the 1.9.x and 2.0.x versions, please use Intella 2.5.1. This is the last version to support the 1.9.x and 2.0.x versions.

Cases made with beta versions are not supported and should be recreated.

Memory settings – The 2.7 version changes how case memory settings are stored. Prior to version 2.7, these settings were stored in both the case.xml and case.prefs files, for historical reasons. This is now only stored in the case.prefs file. Consequently, if the 2.7 version is used to alter the memory settings of a case made with an older version, the memory setting changes may not be picked up by older versions.

Software versions – Vound will provide technical support for one major past version. For this release that will mean the 2.6.x range of products. Vound always recommends that users upgrade to the latest version.

Intella 2.6.1

Highlights

- Added support for acquiring and indexing **S3 buckets**.
- Added support for acquiring and indexing various **Google** services.
- Improved the presentation of **contacts, meetings, invites** and **phone calls**.
- Several improvements for **exporting to Relativity(One)**.
- **Command-line support** has been extended with options for case conversion, custodians, type filters, various forms of exporting, and more.
- **Case conversion with IntellaCmd.exe no longer requires a license**, allowing the task of converting large amounts of cases to be spread across several machines.

General

- Extended the Scan Logs for Errors functionality with the ability to scan for crawler timeout issues.
- Windows Server 2022 is now listed as a supported OS.
- Resolved an issue with the temp folder setting sometimes not being used for certain tasks.
- Resolved an issue with file sizes being rounded incorrectly in several places.
- Automated case backups now skip the case folder's tmp folder.

Security

- Resolved a cross-site scripting vulnerability in the Tags facet.
- Resolved a redirection vulnerability in the Login page.
- Several library updates triggered by vulnerability analysis.

Case management

- Suppressed a harmless error on case lock files when converting a case to the 2.6.x format.
- Resolved an error that occurred when importing certain case templates.
- Resolved several errors with case conversion failing to convert the geolocation database.

Compound cases

- A compound case's Custodian facet now shows a unified list of all custodians present in its sub-cases.
- Compound cases can now be converted fully automatically. In the 2.6 version, several manual steps were required to convert the compound case and all its sub-cases.
- Several enhancements in command-line processing involving compound cases. See the "Command-line support" section for more information.
- Resolved an issue with saved searches containing tags not loading properly in a compound case.
- Resolved an issue with the duplicate counts and the results of the Show Duplicates operation being too high in compound cases, due to items not being deduplicated across sub-cases.

Sources

- Resolved an issue where a source's type filter configuration defined in a Connect/Investigator source would show up inverted when viewed in the Intella desktop application.
- Added support for adding W4 cases made with W4 version 1.1.5.

Indexing – General

- Resolved an issue with DestList entries in a jump list not being extracted properly.
- Resolved an issue with all sources being marked as having an error after re-indexing, when only a subset of sources failed to index.

Indexing – Disk images

- The Select Folders sheet now shows volume labels when adding an APFS disk image. These were already extracted and shown in the Location facet; only the folder chooser was not showing them until now.
- Resolved an issue with missing volume labels when indexing ISO images.
- Resolved an issue with certain DMG images failing to process.
- Resolved an issue with certain APFS file systems failing to process.

Indexing – Email

- Added detection of MS Outlook IRM-protected emails (.rpmsg files).
- Resolved stability issues when indexing EDB files.

Indexing – Chat messages

- Resolved an issue with chat messages without a protocol that would fail to index.
- Resolved an issue with the chronological ordering of edited Slack messages.
- Resolved an issue with the Raw Data of certain chat messages lacking the full list of recipients.
- Resolved an issue with non-existing folders appearing in the Location facet when indexing a Slack Enterprise Grid export.

Indexing – Cloud

- Added support for indexing Amazon AWS S3 buckets.
- Elevated the Gmail source to become a Google source. Currently supported Google (Workspace) services are Gmail, Drive, Calendar, Tasks and Contacts. Future versions will extend this to a broader set of Google services.
- Resolved an issue with iCloud sources producing cookie validation failures.

Indexing – Crawler scripts

- Crawler scripts can now check whether an item passed to the script is a top-level item or a nested item. Examples of top-level items are the files in a file system folder and the emails in an Outlook PST file. Examples of nested items are images embedded in a document and files attached to an email. This family information allows for more fine-grained filtering of items, where the parent role is often crucial. For more information, see the GitHub page on crawler scripting: https://github.com/vound-software/intella-crawler-scripts.
- Resolved an issue when multiple sources with a crawler script were re-indexed. Re-indexing could give a fatal error when the second source was re-indexed.

Indexing – Tasks

- Resolved an issue with the Export Metadata task not letting the user select a target CSV file.
- Resolved an issue with the "Generate duplicate custodians and locations" task running into an error when applied on large cases.

Command-line support

- IntellaCmd.exe is now also installed when installing Intella Investigator/Connect. Previously, this was only installed with Intella and Intella Node.
- IntellaCmd.exe will now revert to looking for a Connect or Investigator license, when a Node or Professional license cannot be found.

- Added support for case conversion to IntellaCmd. Previously this could only be done by Intella.exe or interactively.
- No license is needed to run IntellaCmd.exe for case conversion.
- Added support for creating a compound case.
- Added support for specifying a case template when creating a new case.
- Added the ability to set a crawling script in a source configuration.
- Added the ability to set the custodian when adding evidence items to a case.
- Added the ability to include or exclude a list of item types during indexing. Depending on the filtering mode used, all items with a MIME type on, or not on the list are skipped.
- Added the ability to install a hash list through a command-line call, and to specify its use as part of a source definition.
- Added the ability to add various forms of data in bulk: source paths, BitLocker recovery files, password lists, email certificates and Notes ID files.
- The "-importText" option can now also be used on a compound case.
- Added the ability to export items using an export template. This change allows all export types to be automated through command-line arguments.
- The events.log file, containing a record of all actions taken place in a case, can now be exported to a CSV file through command-line arguments.
- Added a "-listAllTimezones" argument, which list all timezones that can be used in Intella(Cmd).exe invocations.
- Added options for exporting the exception report and a separate "fatal errors" file. These reports reduce the chance of critical errors being overlooked.
- Resolved an issue with the "-exportSourceList" command not exporting all chat-related settings of a source.
- Resolved an issue with paths failing to work due to the presence of a backslash character at the end of a quoted string, which resulted in the backslash being interpreted as the start of a character escape sequence.

Searching

- Improved the Image Analysis facet user interface and underlying database. Thresholds for image and object categories can now be altered directly inside the Image Analysis facet, instead of via the Preferences window. Changing the threshold immediately alters the facet counts, without requiring lengthy database updates.
- Resolved an issue with Boolean queries involving single term phrase queries with leading and trailing wildcards not producing adequate results.

Analysis

- Image Analysis and Object Detection have been extended to support more image formats, e.g. iOS HEIC images. As a rule of thumb, when an image can be displayed in the application, it can now also be subjected to Image Analysis and Object Detection.
- The suggested Identities list can now be sorted by the number of aliases.
- The algorithm for suggesting Identities now ignores accounts named “admin” or “administrator”.

Previewer

- Enhanced the presentation of items representing contacts, meetings, invites and phone calls. The Contents tab now shows the relevant properties of these items in an appropriately formatted list, making the information easier to review.
- Added a slider for the object detection threshold. This allows the user to control whether all detected objects are highlighted or only the highest scoring objects.
- Resolved an issue where hidden slides, speaker notes and comments of a PowerPoint file were not rendered, when viewed in the native rendering.
- Resolved an issue with the quick tag buttons in the Previewer being unable to remove tags.

Exporting – PDF

- The enhancements for rendering contacts, meetings, invites and phone calls listed in the Previewer section also apply to the PDF export of these items.
- Resolved an issue with some PDF items failing to export to PDF.
- Resolved an issue with some JPG images failing to export to PDF.
- Resolved an issue with chat messages and conversations failing to export when they include corrupt embedded images.
- Resolved an issue where hidden slides, speaker notes and comments of a PowerPoint were not rendered, when exported to native rendering.
- The “Prefer HTML over plain text” option for email exporting is now selected by default.

Exporting – PST

- Resolved an issue with emails with LDAP-style addresses failing to export to PST.
- Resolved an issue with emails with tens of thousands of recipients failing to export.

Exporting – Load file

- All PDF-related export changes apply to load files as well.

Exporting – Report

- Resolved an issue with the Next button on the "Report – Title Page" sheet staying disabled.

Exporting – Relativity(One)

- Added a script for downloading the dependencies that are required for enabling exporting to a Relativity instance.
- Added an option to export native chat content as a PDF.
- Improved progress monitoring.
- Improved error reporting:
    - Usage of new Relativity APIs allows for better error detection during export.
    - Improved interactive reporting of errors.
    - Errors are now written to a dedicated CSV file for easier review.
- Resolved issues with user interface elements for configuring a Relativity export.
- Various stability improvements.

Export – Case

- Resolved an issue with tags that are not assigned to any items, but are present in the Tags facet, not being exported to the target case.

Upgrade Notes

Intella versions can be installed side-by-side. There is no requirement to uninstall old versions when installing an Intella version.

Case version 2.6 – Intella 2.6.1 can open cases made with Intella 2.6. No case conversion is needed.

Due to a change in the underlying databases, results in the Image Categories and Detected Objects branches of the Image Analysis facet that were made with version 2.6 will not be visible when the case is opened with version 2.6.1. This analysis will have to be repeated with version 2.6.1.

Case versions 2.1.x to 2.5.x – Intella 2.6.1 can open cases made with Intella versions 2.1.x to 2.5.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 original 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 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 2.0.x or older are not supported.

To open cases made with the 1.9.x and 2.0.x versions, please use Intella 2.5.1. This is the last version to support the 1.9.x and 2.0.x versions.

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 2.5.x range of products. Vound always recommends that users upgrade to the latest version.

Intella 2.6

Highlights

- Introducing a new product: **Intella Investigator**.
- Enhance indexing through **crawler scripts**.
- **Compound case** improvements.
- Added AI-based **image categorization** and **object detection**.
- Added support for changing the **thumbnail size**, **zooming** into a specific thumbnail and other **thumbnail usability** improvements.
- Added support for **video thumbnails**.

Intella Investigator

- The 2.6 release adds a new product to Vound's portfolio: **Intella Investigator**. This product combines the best of Intella TEAM with browser-based access and strong IT management capabilities:
    - Centralized case and user management.
    - Access cases through a web browser or with Intella Viewer.
    - Browse evidence items using the Explore tab, no complex searches required.
    - Manage persons of interest through Identities.
    - Categorize images using AI-based Image Categorization and Object Detection. Review the results in the dedicated Images tab, or in the Explore and Search tabs.
    - Manage server deployments by optionally installing as a Windows service.
    - Handle user management with LDAP, Single Sign-On (SSO), and/or by defining local accounts.
    - Control user permissions using role-based access.
    - Secure communication through SSL, two-factor authentication (2FA) and by enforcing password policies.
- Intella Investigator is ideally suited for teams of investigators, supporting their investigation workflows and case management needs.
- Intella Investigator uses the same case format as the other Intella variants. No case conversion is needed to use an Intella case in Intella Investigator and vice versa.

- Intella TEAM Manager licensees that upgrade to the latest version will migrate to the Intella Investigator product free of charge. Upon running Check for Updates in the Dongle Manager, TEAM Manager licensees with a minimum of 60 days left on their Maintenance Agreement will get the Intella Investigator 2.6.x license on their dongle.

General

- Resolved certain case crashes that could occur when a case was closed.

Installer

- The Desktop and Start menu shortcuts created by the installer now reflect the installed product version in the shortcut name.
- Several additional executables bundled by the installer are now digitally signed. This reduces false positives with security software packages.

Case management

- Improvements to the management of compound cases:
    - When deleting a case, the Case Manager now shows all compound cases in which the selected case is used. Before, it would show only one of the compound cases.
    - Compound cases can refer to cases that are not in the global list of cases (i.e., the cases.xml file). When listing the sub-cases of a compound case, only sub-cases already present in that global list would be shown. Now, all sub-cases are shown, regardless of their presence in the global list.
    - Resolved an issue with the case size of compound cases being calculated incorrectly.
- Improvements to uploading cases to a Connect server:
    - The authentication mechanism now uses Connect accounts, rather than the Connect server's Windows OS account.
    - Added a message upon completion of the case upload.
    - Improved error handling for case uploads.
- Stability improvements when accessing a case through a UNC path.
- Resolved an issue with cases failing to open due to a corrupted Export Set database.
- Resolved an issue where manually correcting incorrect case memory settings of a new case would result in the newly created case becoming unopenable.
- Resolved an issue with the case logs not listing the chosen memory settings correctly.

Compound cases

- Compound cases now fully support items that have been OCRed in their sub-case. The OCR tab will show in the Previewer, and the "OCRed" category in the Features facet reflects all OCRed items.
- Compound cases now show the item comments present in sub-cases. These comments are read-only.
- Improved the contents of the "Has Imported Text" category in the Features facet. The resulting item set now contains items that have imported text in their sub-case.
- Resolved an issue with the attachment links in conversation items not working properly when using a compound case.

Crawler scripts

- Added the ability to define a crawl script in a source. A crawler script is code (Python, Groovy or Java) that can run during the indexing and processing of that source. A crawler script can collect, extract, or process data. It can also be used to enrich or reduce data sets by adding or removing data based on specific criteria. For example, a user might create a crawler script to exclude data that is not relevant to their needs, or to add additional data that they want to include in their dataset. Intella crawler scripts can be customized to meet the specific needs and requirements of individual users. Documentation and sample scripts are available on our GitHub page: https://github.com/vound-software/intella-crawler-scripts

Indexing – General

- Resolved an issue with indexing of an exported case bringing back items that were not part of the export. Cases or sources that were created by exporting items to a case can no longer be reindexed.
- Resolved an issue with incorrect progress percentages (e.g., "Processed 150% of 300 GB") when indexing a File or Folder source.
- Resolved an issue with memory errors on embedded images in PDFs not being reported when the PDF originated from a container such as a disk image or email archive.
- Resolved a rare issue where the crawling retry mechanism would result in a broken case.

Indexing – Disk images

- Added support for discontiguous AFF4 images.

- Several disk image processing improvements related to third party library upgrades.
- Resolved an issue with disk images failing to index when certain time zones were used in the source settings.
- The volume numbering in the Specify Volume Shadow Copies screen is now consistent with the numbering in the subsequent Select Folders screen.
- Resolved an issue with AFF4 images getting skipped when indexed as part of a File or Folder source.
- Resolved an issue with indexing AFF4-L disk images made with Axiom.
- Resolved an issue with indexing disk images that contain a pool of APFS file systems.
- Resolved an issue with indexing disk images that have file names containing non-Latin characters, including umlauts (e.g., ü).
- Resolved an issue with a BitLocker-encrypted image failing to decrypt, logging a "missing password volume master key" error in the log files.
- Resolved an issue with indexing failed to complete on Linux ext2 file systems.
- Resolved an issue with indexing AD1 disk images made from CDs or DVDs.
- Resolved an issue with Intella failing to distinguish a BitLocker To Go partition from a Windows 95 boot partition.
- Resolved several issues with DMG images that failed to validate.
- Resolved an InvalidCipherTextException error that would occur when indexing AFF4 images with multiple passwords present in the keystore.

Indexing – Email

- Improved the time needed to perform PST/OST email recovery. Field tests often reported 25-50% time savings.
- Improvements related to indexing MS Exchange EDB databases. A new EDB processor has been integrated, based on Microsoft's open-source Extensible Storage Engine (ESE) framework.
- Resolved an issue with images embedded in MSG emails not being classified as embedded images.

Indexing – Chat

- Added a Conversation ID property. This lists the ID associated with the conversation as found in the evidence data. This property will not be present if the evidence data has no such value.
- Added an Intella Conversation ID property. This is a uniquely generated conversation ID that is present for all conversation items, regardless of origin. Beware that this ID will change when the source or case is re-indexed.

- Added a “Present chat messages as” source setting, which lets the user control whether chat messages are represented one-on-one as chat message items, are to be bundled into conversation items, or both.
- The “Split chat conversations” option already allowed one to split conversations by day, week, month, or year. This list has been extended with “per hour” and “per 12 hours” options.
- Instant Messages in a Cellebrite report are no longer mapped to Conversation items. Instead, they are now represented as chat items that are assigned an Intella Conversation ID property.
- One can now use a “numbers.txt” file to specify the sender of chat messages in an evidence source. Earlier, this mechanism would only apply to the phone calls and SMS/MMS messages found in that source.
- Stability improvements to the indexing of RSMF containers, based on encountered RSMF files that used date formats not listed by the RSMF standard.
- Resolved an issue with emoticons in RSMF files not being processed correctly.
- Resolved several issues with indexing Slack exports, including missing messages, incorrect message sequences, and broken message threading.
- Resolved several issues with indexing IBM Sametime messages.
- Resolved an issue with missing chat messages when indexing an iTunes backup.
- Resolved an issue with chat messages from an iTunes backup not being threaded properly.

Indexing – Cellphones

- Improved the processing of the Social Media Activity category of Cellebrite reports.

Indexing – Load files

- Resolved an issue with a broken progress message when importing a load file overlay.

Indexing – Cloud

- Rewritten the iCloud connector, resulting in reliability and performance improvements. This also resolved the problem that sometimes two different 2FA codes were sent to the phone.
- Adapted the Dropbox connector to work with Dropbox’ latest API, involving the use of short-lived refresh tokens.
- Resolved an issue with access to OneDrive drives not working in certain access configurations.

Analysis

- Added an “Image Analysis” option to the right-click menu’s Process submenu. This lets the user organize a selected set of images into categories like Documents, Photos, Screenshots, and more. Additionally, the selected images can be subjected to object detection. This detects whether and where the image contains objects of interest, such as Persons, Vehicles, Handwriting, and several other object categories. The results are displayed in the new Image Analysis facet and various other places.
- When running Content Analysis, any excluded paragraphs are now excluded from analysis.
- Resolved an issue with regular expression results not being properly highlighted in the Previewer when the matches were not complete words.

OCR

- Upgraded the bundled OCR engine, bringing various quality improvements.

Tasks

- Added a Generate Thumbnails task.
- Resolved an issue with the date range of an indexing task changing slightly after being set. This occurred when using certain time zones only.
- Resolved an issue with the Apply button in the Sources tab not becoming enabled when the configuration of an indexing task was changed.

Searching

- Various improvements to keyword searching based on third party library upgrades.
- Improved searching on email addresses when using wildcards, and on complex terms that mix letters, numbers, and certain symbols.
- Resolved an issue with Commented and Flagged searches not being restored when the “Restore last used queries” checkbox is selected in Preferences.

Results

- Various improvements in the Thumbnails view:
    - Added support for video thumbnails. When hovering over the video thumbnails, selected frames of the video are shown, giving a quick impression of the video’s contents.

- Various preferences are added in the Preferences window and the Generate Thumbnails dialog to control how such video summaries are generated.
- Added the ability to change the thumbnail size. The Generate Thumbnails dialog and processing task have been extended to specify which size(s) it needs to generate.
- The order of the thumbnails can now be specified, using the same sorting dialog as used in the Table view.
- A selected thumbnail can now be zoomed into from inside the Thumbnails view. This allows a user to quickly inspect visual details (recognize people, read scanned documents, etc.) without having to open the image in a separate Previewer.
- Added a button toggling the presence of embedded images in the Thumbnails view. Note that embedded images that are selected in the Results Panel will still be shown; this button only suppresses those images that are only nested in items in that result set. These embedded images are now indicated by a gray background color.
- Smaller usability improvements to the Thumbnails view.

Previewer

- When previewing a video file, the frames used for the video in the Thumbnails view are shown in the Contents tab.
- Added support for displaying WebP images.
- Improvements in displaying emojis.
- Improvements in displaying chat threads.
- Attachment titles of chat message attachments are now displayed in the Contents tab.
- Resolved an issue with the native preview tab showing an incorrect date for so-called “Fixed date” fields in MS PowerPoint slides.
- Resolved an issue with MSG emails failing to preview when they contain an embedded calendar.

Redaction

- Resolved an issue with the export of a redacted document showing garbled rendering artifacts.

Exporting – General

- Unified the exporting of chat messages and conversations, so that individual messages have a uniform rendering in the export results.

- Improvements in exporting emojis.
- Resolved an issue with items failing to export when their file name contained forbidden device names, such as AUX, PRN, COM1, LPT1, etc. File name normalization was already in place but failed to capture certain corner cases.
- Suppressed the logging of unsupported export template properties.

Exporting – PDF

- Several improvements to PDF generation related to third party library upgrades.
- Resolved an issue with email bodies with inconsistent Content-Type headers failing to export.
- Resolved an issue with exporting running into file system issues when the original file had a very long file name or title.

Exporting – PST

- Added support for exporting MS Teams messages to a PST file.

Exporting – Load file

- See the changes listed beneath Exporting – PDF.

Exporting – Item report

- Resolved an issue with the exporting of items having attachments, where the attachment would not be exported.

Exporting – Relativity(One)

- Several stability improvements.
- Several performance improvements.
- The password field now masks its input with * characters.
- Improved error logging.
- Resolved an issue where Intella hangs after completing its export.

Exporting – Words

- Resolved an issue where the exporting of all terms in the keyword index would make Intella run out of memory.
- Words are now exported lexicographically, sorted first by field name and then by word.
- Resolved an issue with the exported words sometimes containing hidden paragraph markers (@@…[[and @@…]]) used internally by Intella.

Intella Viewer

- The ability to export an Intella Work Report (IWR) file has been removed. The Intella TEAM Manager product that was able to process such files has been replaced with Intella Investigator.

Upgrade Notes

Case versions 2.1.x to 2.5.x – Intella 2.6 can open cases made with Intella versions 2.1.x to 2.5.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 original 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 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 2.0.x or older are not supported.

To open cases made with the 1.9.x and 2.0.x versions, please use Intella 2.5.1. This is the last version to support the 1.9.x and 2.0.x versions.

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 2.5.x range of products. Vound always recommends that users upgrade to the latest version.

Intella 2.5.1

Released: March 22, 2022

Highlights

- Added **compound case** support to **Intella Viewer**.
- Extended **IntellaCmd.exe** functionality.
- **Stability** and **performance** improvements.
- **IMPORTANT:** Deleted item recovery is now turned OFF by default.

General

- Resolved an issue with XPS documents, and PDF documents containing forms, showing an "Evaluation Only" message when previewed or when exported to PDF or TIFF format.

Case Management

- Compound cases can now be opened with Intella Viewer.
- Added validation to the case memory settings, preventing the user from configuring the software to consume more than what the system has to offer. Note that the total amount of memory that can be consumed by Intella equals "memory allocation + #crawlers * service memory".
- Extended case templates to also contain the case's memory and crawler settings.
- Resolved an issue with the case failing to open due to corruption of some databases related to source error reporting.
- Resolved an issue with the case failing to open when the case was closed with the Table in a particular sort order.

Indexing – General

- The option to recover deleted and orphan items from email archives (PST, EDB, NSF) and disk images (NTFS Master File Table) is now turned off by default. Item recovery is often time-consuming, to the point that it can even lead to time-out issues during indexing. Furthermore, it typically requires expert knowledge to correctly interpret the results for what they are. It can be re-enabled by checking the "Recover deleted emails, files and Notes deletion stubs" option in the Add New Source wizard or Sources tab. Note that items present in the Windows

Recycle Bin are still retrieved, as these do not suffer from these processing and interpretation issues.

- Resolved an issue with missing attachments in OST files.
- Resolved an issue with attachments not being linked to their parent email when indexing Apple Mail 6 mail stores (macOS Mojave).
- Resolved an issue with the owner's own phone number not being registered for certain item types in a Cellebrite report.
- Resolved several issues with Cellebrite reports failing to index.
- Resolved an issue with Intella failing to roll-back and recover from an indexing time-out, due to a slow file system.
- Resolved an issue with items being assigned a different item ID when re-indexing failed with a crash.
- Resolved an issue with some parts of the case potentially getting damaged when the user clicked the Stop button during indexing.
- Resolved an issue with the Sources tab failing to load when the source path contained illegal characters.
- When using a case size-restricted Intella license (Intella 10, 100 or 250), adding a source that would let the case grow beyond that size now results in an error rather than a warning. This was done because when the user would proceed, it was unpredictable what amount of evidence data would still not have been indexed when Intella stopped processing because the case size limit was reached.

Indexing – Disk images

- Significantly reduced the temporary disk space needed to index DMG images, by preventing entire partitions from being copied out to a separate file during indexing.
- The "Folder Selection" sheet is now also shown for DMG and AFF4-L images.
- Resolved an issue with certain Lx01 disk images failing to index.
- Resolved an issue with indexing NTFS file systems with incorrect headers produced by KAPE.
- Resolved an issue with validating VHDX images.
- Resolved an issue with registry items being reported even when the Windows folder was explicitly excluded from indexing.
- Resolved an issue with certain temporary files not being removed when the case is stored on a network drive.

Indexing – Chat data

- Various improvements in processing Slack exports.
- Stability improvements in processing chat data from Cellebrite reports.

- Resolved an issue with certain emoji characters in chat messages in a Cellebrite report failing to display.
- Resolved an issue with items originating from an RSMF container missing an item type.
- Resolved an issue with certain dates in chat message and conversation items being displayed in the system time zone rather than the source time zone.

Indexing – Cloud sources

- Several improvements in iCloud acquisitions, related to API changes made by Apple, and other stability improvements.
- Resolved an issue with the IMAP connector failing to correctly retrieve items from the mail server.

IntellaCmd.exe

- The evidence option (-e) is no longer required. This makes it possible to use IntellaCmd.exe to create an empty case.
- The evidence option (-e) no longer triggers the immediate indexing of the specified evidence files. To trigger indexing, one of the following new options should be specified:
    - -indexAddedSource
    - -indexNewData
    - -reindexAll
- Command-line arguments have been added in this release for chat processing features that were added in the 2.5 release:
    - -indexChatMessages
    - -splitChatConversations
    - -maxMessagesPerConversationItem
- Resolved an issue with large cases failing to open due to time-out issues.
- Resolved an issue with incorrect progress indication, reporting progress > 100%.

Near-duplicates

- The groups in the Near-Duplicates facet can now be sorted by group name or group size.
- Resolved an issue with items getting a 1.0 near-duplicate score, despite having small textual differences in their item texts. Consequently, the Near-Duplicate tab would also remain hidden for such items.
- Resolved a fatal error that could occur during near-duplicate analysis when the option to ignore excluded paragraphs was turned off.

Searching

- Resolved an issue with single term prefix queries not working correctly when that query was wrapped in quotes (e.g., "foo*" – including the quote characters).

Results

- Resolved an issue with tag query results not updating automatically when item tags were changed.

Insight tab

- The Significant Words and Notable Registry Artifacts panels are now only loaded on demand after clicking a button in that panel. This was done to prevent selecting the Insight tab from automatically launching these long-running, disk-intensive, and non-cancellable operations.
- Resolved a display issue in the Paragraphs panel, causing some of the labels to disappear on mouse-over.

Keywords tab

- Resolved an issue with incorrect hit counts (not item counts) when using phrase or proximity queries with embedded Boolean queries. These queries would incorrectly report 0 hits, despite locating items that match these queries.
- Resolved an issue with incorrect hit counts (not item counts) when a proximity query found hits with the terms in the item text placed in a different order than the order used in the query.

Previewer

- When previewing emails in HTML form, the URL of links embedded in the body is now revealed.
- Resolved an issue with the Headers and Raw Data tabs showing incorrect data on items in compound cases.

Exporting – PST

- Resolved an issue with calendar items failing to export to a PST file.

Upgrade Notes

Case versions 2.1.x to 2.5 – Intella 2.5.1 can directly open cases made with Intella 2.5, 2.4.x, 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 2.5.1, adding Custom ID tasks to the case in version 2.5.1 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.

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 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 – Intella 2.5.1 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 2.4.x range of products. Vound will always recommend that users upgrade to the latest version.

Intella 2.5

Released: November 29, 2021

Highlights

- Added **compound cases**, for instantly bundling two or more cases into a single case.
- **Upload cases** to an Intella Connect server.
- Various improvements to **indexing stability** and **crawl process monitoring**.
- Usability improvements in **chat message presentation**.
- Added **two-factor authentication (2FA)** and **single-sign on (SSO)** support in Intella Viewer.
- 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.
- Improved rendering of **emojis**.
- Added **sentiment analysis**, for detecting very negatively or positively worded texts.
- Added support for **nesting phrase and proximity queries**.
- **Exporting to PST** no longer relies on MS Outlook.

General

- Intella 2.5 has been tested for use on Windows 11.
- The Intella installer is now digitally signed.
- 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.

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 the ability to upload a case in its entirety from the Intella Case Manager to an Intella Connect server.
- Added the ability to sort cases by created or last opened date, case name, case folder, creator name, evidence size, or case version.
- 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 disk image 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.

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 Advanced section in the Case Manager.
- A Crawlers tab has been added to the indexing progress screen. This shows:
    - The crawler processes that are currently running and their state: Running or Idle.

    - The file name, type, and size of the main evidence item that they are currently processing.
    - The time spent thus far on crawling that evidence item.
    - The number of items that that item has produced thus far.
    - A button to forcefully terminate the crawler process. This can be used to stop a crawling process that appears to hang, without having to wait for the crawler time-out mechanism to get triggered.
- Added support for indexing HWPX documents, made by the Hangul word processor.
- Added support for adding cases made with Vound W4 1.1.2.
- Removed the Attach Evidence dialog, as this functionality is now provided by the Sources tab.
- 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 Sources tab not populating correctly when one of the evidence file paths contained a quote character.
- Resolved an issue with the Errors tab retaining errors that originated from removed sources.
- 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.
- Re-indexing is now prohibited when one of the selected sources has missing evidence files.

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.
- 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 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.
- 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.
    - The old character-based algorithm, which still is to be preferred when processing Chinese, Japanese, Korean, and Vietnamese texts.
- Once near-duplicate processing finishes, a dialog with processing statistics is now shown. This lists various statistics such as the number of near-duplicate groups and the average group size. The report can be exported as a PDF file.
- The shingle size thresholds used for near-duplicate processing can now be configured through the Preferences window.
- 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.

Identities

- Resolved an issue with the Identity tab showing incorrect item counts for the leaf nodes in the tree of suggested identities.
- Resolved an issue with identity creation not carrying across the chat accounts and phone numbers of a suggested identity.

Searching

- Added support for combing phrase and proximity queries. This allows for searching for one phrase within a maximum distance of another phrase.
- 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.

- Resolved an issue with the item counts in the Features facet not updating instantly when certain review operations occurred.

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 table selections using the Shift and arrow buttons not working when tag-related columns were displayed.

Social graph

- Resolved an issue where clicking on an edge connecting two chat account nodes did not list any associated items in the Details panel.

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.
- Added support for displaying emojis.
- Resolved an issue with hit highlighting failing to highlight hits that use a certain mixture of hyphens and hexadecimal digits.
- Resolved an issue in the Properties tab when displaying values containing line breaks.
- Improvements in loading indicators.

Tagging

- 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”.
- Resolved an issue with the Auto-Tag function of the Keyword List facet, in case the keyword list was added via the Keywords tab.
- Improvements to the normalization of entered tag names, to prevent illegal tag names.

Redacting

- Resolved an issue with full page redactions not covering the entire page when applied on pages in landscape orientation.
- Resolved an issue where the deletion of a redaction profile could trigger an error message.

Exporting – General

- Resolved an issue with the Export wizard’s Cancel buttons becoming and staying disabled after the wizard was cancelled once.

Exporting – CSV

- Added the option to preserve line breaks in multi-line values.

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 “OCRed text” option has been renamed to “OCRed 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.

- 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.
- 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 – Relativity

- Updates to exporting to a Relativity or RelativityOne instance.

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.

Intella Viewer

- Intella Viewer can now connect to Intella Connect instances that use two factor-authentication (2FA) or single sign-on (SSO) in their login phase.
- Improved the user experience when connecting to a case shared in Intella Connect while that case has gone into standby mode.
- Resolved an issue with setting or removing custodians on items when connected to a remote case.
- Resolved slow loading of the Geolocation view when connected to a remote case.

Upgrade Notes

Case versions 2.1.x to 2.4.x – Intella 2.5 can directly open cases made with Intella 2.4.x, 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 2.5, 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 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.

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 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 – Intella 2.5 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 2.4.x range of products. Vound will always recommend that users upgrade to the latest version.

Intella 2.4.2

Released: May 19, 2021

Highlights

- Added support for **X-Ways images** (CTR and E01 files).
- Added the ability to **edit source settings**.
- Added a **case log analysis** utility, providing instant insight into common case errors.
- Added support for displaying **HEIC/HEIF images**.
- IntellaCmd.exe can now handle **keystore** information.
- Faster creation of **ICF files**.

Dongle Manager

- Various usability improvements.

Case Manager

- Case templates now carry across the tag colors.
- Resolved an issue with cases made with Intella/Connect 2.0.x and 2.1.x failing to open in 2.4.x.

Indexing - General

- Added the ability to edit source settings. Before, only a source's name, evidence folder and time zone could be altered. Now, settings such as the types and hash lists used to filter items during indexing, options to recover information, and other options can also be edited. Note that most source setting changes are applied during indexing, and therefore require the source to be re-indexed to take effect.
- Added a log analysis utility. This new functionality scans the case log files for known errors, provides a high-level overview of the issues that it finds, and gives directions on how to resolve them. To use this functionality, choose Help > Scan Logs For Errors.
- Improvements to the processing of MS Teams data:
    - Enhanced the textual representation of chat messages.
    - Populated the Recipient Count column.

    - Stability improvements.
- Improvements to the processing of Cellebrite reports:
    - Added support for social media activity entries.
    - Resolved an issue with processing chat conversations with mixed protocols (e.g., SMS and MMS).
- Resolved an issue with emails in PST, MSG or EDB files lacking sender metadata when the actual sender was stored in the PR_CREATOR_... properties.
- Resolved an issue with missing recipients in MSG emails.
- Resolved various issues with PDF files that would not process correctly.
- Resolved an issue with emails extracted from Outlook for Mac OLM files that were missing email headers, recipients, and OLM-specific email threading metadata.
- Resolved an issue with jump list items showing incorrect dates, due to NULL values or zeroes being interpreted as if they were valid dates.
- Resolved an issue with certain MS-DOS executables not being classified as such.
- Stability improvements to the processing of Slack exports.
- Stability improvements to the processing of Notes NSF files.
- Stability improvements to the processing of MS Visio documents.
- Relaxed the thresholds for detecting so-called ZIP bombs, as they could potentially flag certain MS Office documents as ZIP bombs.
- The value of the intella.itemTextMaxCharCount property is now capped at 2^{31}.
- Restored the Ctrl+N shortcut for adding new sources.
- Various usability improvements in the Sources tab.

Indexing – Disk images

- Added support for indexing X-Ways disk images (CTR and E01 with XWFS2 file system).
- Improvements for handling large (multi-TB) E01 and L01 disk images.
- Improvements for indexing BitLocker images that lack a volume system. This occurs when only one partition of the drive was imaged.
- General improvements to the processing of E01, Ex01, L01 and Lx01 disk images.
- Improved the indexing of system files like $Boot, $Header, etc., which occur in the root folder of a disk and which were incorrectly identified as being NTFS file systems on their own.
- Resolved an issue with a Linux disk image with Ext2 file system not processing correctly.

Indexing – Cloud sources

- The Office 365 source type has been renamed to Microsoft 365.
- Resolved an issue with iCloud sources, where accounts using two-factor authentication were not able to verify the account credentials.
- Resolved an issue with certain emails with attachments from iCloud accounts not processing correctly.

Indexing – Load files

- Added support for importing BegAttach and EndAttach fields.
- To properly support the BegAttach field, the "Parent Document ID" column was renamed to "BegAttach / Parent ID".
- Resolved an issue where an error occurring during file type identification would halt the entire importing of a load file.

IntellaCmd.exe

- Added the ability to specify key store information such as passwords, BitLocker keys and certificates to IntellaCmd.exe.

OCR

- Added support for OCR-ing HEIC/HEIF images.

Analysis

- Resolved an issue with Email Threading analysis terminating with an error.

Searching

- Resolved an issue with phrase searches not producing optimal results when using complex search terms such as email addresses inside the phrase query.
- Resolved an issue with path queries not producing optimal results when the query terms contain slashes or underscores.
- Resolved an issue with the Search field's history drop-down not working properly when CJK (Chinese, Japanese, Korean) characters were entered.
- The "Microsoft Teams Conversation" is now located in the Type facet beneath "Chat Conversations", rather than beneath "Chat Messages".
- The "Parent Document ID" column has been renamed to "BegAttach / Parent ID". This was necessary to properly support the BegAttach and EndAttach load file fields.

- Resolved an issue with MD5 search not returning items that were imported as part of a load file overlay.
- Resolved an issue with the Location facet not updating immediately when a source was renamed.

Results

- The Cluster Map would automatically switch and enforce “Sets” mode when more than seven result sets are present in the Searches list. It has been changed to switch when more than seven *non-empty* result sets are present.
- Resolved an issue where moving the mouse over tag-related columns resulted in an error message being shown to the user.
- Resolved an issue with the Table not refreshing properly after Near-Duplicate Analysis completed.
- Resolved a performance issue with the Table populating very slowly due to some of the items in the list being linked to a large amount of entities (credit card numbers, person names, etc.)

Previewer

- Added support for displaying HEIC/HEIF images. These are commonly found on modern iOS devices.
- Various improvements to the native rendering of documents, presentations, and spreadsheets.
- Resolved an issue with the Near-Duplicate tab no longer highlighting the differences with the master item after the user clicked Show Full Text.
- Visual refinements in the display of the item tags.

Keywords tab

- Resolved an issue where queries for exclusive items would not work correctly when the current keyword list has any query errors in it.
- Resolved an issue where controls in this tab became unreachable when Intella was used on a smaller resolution screen (e.g., 1365 x 768), or the window was reduced to such a size.

Export – PST

- Stability improvements for exporting to PST.

Exporting – PDF

- Added "Page Number" as an option for Bates stamps. This allows for the pages to be numbered independent of the chosen file naming scheme.
- Resolved an issue with hidden sheets in MS Excel spreadsheets not being exported to PDF/TIFF format.

Exporting – Load files

- See also the notes for the PDF exporting method, listed above.
- Renamed the RECORD_ID_GROUP_BEGIN and RECORD_ID_GROUP_END load file fields to BEGATTACH and ENDATTACH. This improves the ease with which the produced load files can be ingested by Relativity.
- Improved the rendering of the export settings in the export wizard on how the extracted text will be exported.

Exporting – Report

- Improved the report contents when there are no items to report on, either for the entire report or for a specific section.
- Resolved a stability issue where the report export failed, when the original binary file was to be included but was not available in the case.

Exporting – Case

- When exporting items to a second case, the exported data now includes the following columns: Custom ID, Custom Family ID, Duplicate Locations, Duplicate Custodians.
- Improvements for exporting a case to an ICF file:
    - ICF files can now be split into chunks of a given file size.
    - Several optimizations to the compression algorithm. As part of these optimizations, one can now specify how many CPU cores can be utilized for the compression. Tests showed up to 3 times faster ICF creation on a regular workstation.
    - Temporary files are now placed in the same folder as the ICF file, rather than in the OS temporary folder.

Upgrade Notes

Case versions 2.1.x to 2.4.x – Intella 2.4.2 can directly open cases made with Intella 2.4(.1), 2.3.x, 2.2.x and 2.1.x.

Due to changes in data storage, Intella 2.4 is not able to open cases made with Intella 2.4.1 or 2.4.2.

When a case made with Intella 2.3.0 or older is opened in Intella 2.4.2, adding Custom ID tasks to the case in version 2.4.2 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.

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 2.4.2 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.

Intella 2.4.1

Released: February 02, 2021.

Highlights

- Added a top-level **Sources tab**, adding the ability to **(re)index individual sources**.
- Added support for **Microsoft Teams**.
- Notable improvements for processing **BitLocker images** and **NSF files**.
- Indexing and case merging/exporting **performance improvements**.

Sources

- Added a new top-level Sources tab. The new tab allows certain operations to be performed on specific sources, whereas previously this could only be done on the case in its entirety:
    - The ability to index specific sources.
    - The ability to re-index specific sources.
    - The ability to scan specific sources for new evidence files.
- Other notable elements in the new Sources tab:
    - Buttons for adding and removing sources, as well as creating an Exceptions Report.
    - Sources with critical issues, such as missing evidence files or major indexing errors, are emphasized.
    - Details panel now shows dates when source has been added, last indexed, as well as a result of the last crawling status.
- The Sources menu and the Source Editor dialog have been removed, as their functionalities are now handled by the new Sources tab.
- Resolved a performance issue when initializing the file browser in the Specify File Or Folder sheet of the New Source wizard.
- The branches in the "File type settings" tree are now sorted alphabetically where appropriate.

Indexing - General

- Added several optimizations to the post-processing phases of the indexing operation. These relate to the steps taken immediately after crawling of the evidence files, when several databases are constructed from the crawl results. The

optimizations improve the time needed for indexing evidence files. The optimizations also benefit case merging/exporting, as that operation predominately consists of the tasks performed in these phases.

- Added support for indexing Microsoft Teams data, in particular (but not limited to) chat messages. Teams data from PST files and Office 365 sources are both supported.
- Several improvements for the processing of BitLocker disk images:
    - Added support for BitLocker volumes with clear keys. These are keys stored in unencrypted and unprotected form in the BitLocker volume.
    - Added support for BitLocker volumes with multiple recovery keys. Earlier, only the first encountered recovery key was used to validate and index the disk.
    - Improved error reporting when the disk cannot be decrypted.
    - Resolved an issue with disk images of non-encrypted drives incorrectly being classified as an encrypted BitLocker disk.
- Several improvements for the processing of Notes NSF files:
    - Added support for HCL Notes 11.
    - Added support for decrypting individually encrypted emails in a non-encrypted NSF file.
    - Indexing stability improvements. Access to the NSF file through Notes now takes place in a dedicated process. This way, any Notes crashes can now be recovered from more reliably and cannot result in case corruptions anymore.
    - Resolved an issue with files in a folder being skipped when that folder also contains a Sametime dump.
    - All references to “IBM Notes” in the user interface and documentation have been renamed to “HCL/IBM Notes”, to reflect the new owner of this product.
- Added recovery of deleted mails from MS Outlook 2013 OST files.
- Added file type detection for AppleSingle and AppleDouble files.
- Added support for loose instant messages and DeviceConnectivity items in Cellebrite dumps.
- Added an “Advanced Indexing” tab to the Preferences window. This tab allows the user to specify the sections in a Cellebrite extraction dump that the user wants to skip indexing. Future versions will add other advanced indexing options that are currently only available through (generally undocumented) commandline options.
- Several extraction improvements as a result from software library upgrades.
- Resolved a stability issue when indexing E01 disk images made with the Tableau TD3 Forensic Imager.

- Stability improvements for indexing APFS disk images contained in AFF4 containers.
- Resolved a memory usage issue introduced in the 2.4 release when indexing exceptionally large text files (e.g., log files in the hundreds of MBs).
- Resolved a concurrency issue with the processing of prefetch (.pf) files.
- Resolved a stability issue where data integrity issues within certain parts of a Slack archive caused other items to be omitted as well.
- Resolved an issue with truncated text errors being shown as source level errors rather than item level errors.

Indexing – Cloud Sources

- Updated the Dropbox source so that it works with the new "Scoped access" API. Note that Dropbox is retiring the old Dropbox API and Dropbox Business API. It is no longer possible to define new apps on Dropbox with these APIs. The online documentation in the Vound knowledge base has been updated accordingly.
- Several stability and usability improvements for indexing iCloud accounts.

Near-Duplicates

- Optimized the time needed to open a case containing near-duplicate detection results.
- Optimized the loading speed of the Near-Duplicates facet in remote cases.
- Documents consisting only of paragraphs marked as excluded are now skipped during near-duplicate detection. Earlier, they were all placed into the same near-duplicate group.
- The algorithm used in the Previewer's Near-Duplicate tab for highlighting the differences between the current item and its master item has been made case-insensitive.

Searching

- Resolved a stability issue when evaluating Show Conversation queries.

Results

- Added a Table column and item property for the chat protocol of a message or conversation item. E.g. Skype, Slack, SMS, iMessage, ... The case needs to be (re)indexed with the 2.4.1 version for these values to appear.

Previewer

- Resolved an issue with the Contents, Headers and Raw Data tabs showing their content in a skewed manner when Windows display scaling was set to an uneven number, for example 125% or 175%.
- Resolved an issue with the Previewer not rendering properly when displaying certain types of emails with embedded images.
- Resolved an issue with certain Content Analysis entities failing to be highlighted in the Contents tab.

Tagging

- Added safe-guards to prevent reviewers from creating circular parent-child references in the tag model. These could lead to system instability.
- Resolved an issue with certain child tags disappearing in the Tags facet until the case was restarted, which would occur when a tag was given a different parent tag.

Redaction

- Resolved an issue with redactions being multiplied when the case is under heavy load.

Insight

- Resolved an issue with titles and subtitles of Insight panels failing to render Japanese values.
- The Insight tab now shows the link rather than the case folder of a remote case.

Exporting – PST

- Stability improvements for MS Outlook validation.

Exporting – Load Files

- Resolved an issue with certain load file configurations resulting in the Subject being rendered twice and the Attachments line being omitted.

Upgrade Notes

Case versions 2.1.x to 2.4.x – Intella 2.4.1 can directly open cases made with Intella 2.4, 2.3.x, 2.2.x and 2.1.x.

Due to changes in data storage, Intella 2.4 is not able to open cases made with Intella 2.4.1.

When a case made with Intella 2.3.0 or older is opened in Intella 2.4.1, adding Custom ID tasks to the case in version 2.4.1 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.

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 2.4.1 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.

Intella 2.4

Released: October 28, 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 haspupdate.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.
- 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.
- 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 (2^{21}) 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.
- 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 2^{27}) 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 a 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.
- 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.

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.

Intella 2.3.1

Released: December 19, 2019.

Highlights

- Index **BitLocker** disk images, **APFS** file systems and **Slack** exported content.
- Added **hash-based filtering** of items during indexing, e.g. for **DeNISTing**.
- Added a top-level **Errors tab**, giving an overview of all indexing errors.
- Added **colored tags**.
- Improved **Includes** functionality.
- Several improvements to the **Keywords tab**, including new export options.
- Added **redaction templates** and **text overlays**.
- Added **Custom ID** and **Custom Family ID** columns.

Indexing

- Added support for BitLocker-encrypted disk images.
- Added support for disk images containing APFS file systems. APFS-level file encryption is supported. Volume-level encryption, e.g. encrypted DMG images, are not supported.
- Added support for indexing exported Slack content.
- Added support for filtering files during indexing based on a repository of known hashes. This can be used for DeNISTing items, among other tasks.
- Added support for indexing Skype 14.x databases.
- Added type detection for HEIF/HEIC image files.
- Added metadata extraction for HEIF image files.
- Added detection of MacOS encrypted disk images.
- Added detection of AMR audio files. These are often used to record voice mails.
- Added an Errors tab that opens at the end of indexing.
- Added support for extracting launched programs from the Background Activity Monitor (BAM) Cache in Windows 10 disk images.
- Added support for extracting launched programs and recently used files from the RecentApps registry key in Windows 10 disk images.
- Added support for extracting the Windows 10 build number and release ID.
- Added support for Volume serial numbers in LNK files and jump lists.
- Added support for extracting "Target ID List" properties from LNK files and jump lists.

- Performance optimizations of the post-crawling indexing phases. The optimizations are especially significant when using network shares.
- Improved indexing of MS Office and RTF documents.
- Improved indexing of MS Exchange databases.
- Improved indexing of Cellebrite UFDR reports.
- Improved indexing of Oxygen XML reports.
- Improved indexing of Skype 7.x databases.
- Improved indexing of Dropbox for Business accounts.
- Improved error reporting when indexing Windows 10 Mail containers.
- Improved extraction output and memory usage of PDF document processing.
- Improved processing of VCards.
- Improved processing of Outlook for Mac olk15* files.
- Resolved an issue with certain disk images not being processed when they are contained in an archive.
- Resolved an issue with the list of users in a DropBox source not listing all users.
- Resolved network protocol errors when connecting to an iCloud account.
- Resolved an issue with the timestamps in EXIF metadata being interpreted incorrectly.
- Resolved an issue with the MD5 of contact and calendar items changing during re-indexing of a case.
- Resolved an issue with SMS messages in Oxygen XML reports not being decoded properly.
- Resolved an issue with documents whose language could not be determined being mistakenly classified as "Not applicable" rather than "Unidentified".
- Resolved an issue where the ffmpeg and exiftool commandline tools were inadvertently being launched during indexing.
- Resolved an issue with the indexing of Windows Event Log .etvx files not working correctly when the case folder was accessed via a UNC path.
- Resolved an issue with very high memory usage when processing certain XML documents.
- Added support for IBM Notes 10 and verified that NSF files can successfully be indexed with an IBM Notes 10 installation. In our tests, the MD5's were different for a small amount of the items (< 1%), compared to when older Notes versions are used. Sampling these items showed that this is typically due to small changes in formatting that had no impact on the conceptual content of the item.
- Added safeguards against noisy data ending up in the keyword index.
- Custom columns can now be case-insensitive.
- Improved the wording in the Check Folder Size and Case Size Limit Exceeded dialogs. These dialogs may show when using an Intella license with a maximum

case size restriction, when attempting to index an evidence set larger than the allowed size.
- Stability improvements and updates required for the Office 365 and SharePoint connectors.

Indexing – Load Files

- Usability improvements when importing Tag Groups.
- Resolved an issue with the Conversation Index column getting filled with zeroes upon certain load file imports.

Tasks

- Added the ability to define Custom IDs. These IDs reflect the item location/family structure and can be used to identify items within their families during review.
- Added the ability to define Custom Family IDs. These are either equal to the top-level parent's Custom ID or are derived from the range of Custom IDs that occur in an item family. Family IDs can be used for sorting purposes.

OCR

- Resolved an issue with OCR failing due to a lack of write permissions in certain locations.

Insight

- Optimized calculation of the table holding the top 10 email addresses.

Analysis

- Reduced memory consumption of the email threading calculations.

Searching

- The Includes functionality has been named to Required. When adding two or more item sets to the Required list, a drop-down will appear that lets the reviewer choose whether items passing this filter should be in any or all the item sets. Previously, the Includes functionality requires that an item was present in any of the item sets. This approach did not work for all use cases.
- Added a "Downloaded from Internet" category in the Features facet.
- Performance optimizations targeting a specific case database that gave issues when the case contained more than approximately 107 million items.
- Resolved an issue with the Export Sets facet not highlighting facet values.

- Resolved an issue with the Smart Search dialog not enabling certain document fields for certain item types.

Social Graph

- Resolved an error that occurred when using the mouse wheel to zoom in an empty social graph.

Results

- Added Custom ID and Custom Family ID columns. See the Tasks section for more details.
- Added a Phone Call Type column, indicating the type or direction of a phone call.
- Added a Queued for Redaction column.
- Resolved an issue with the table scrolling back to the start when columns were resized.

Previewer

- MSG emails can now be previewed in their native layout.
- Chat conversation items now show seconds in the timestamps of the individual messages.
- The dialogs that open when choosing the Print option in the right-click menu can now be cancelled.
- Resolved an issue with the Quick Tags panel not updating properly when tags are deleted from the Tags facet.
- Resolved an issue with incorrect word frequencies in the Words tab.

Keywords tab

- A “Totals” line has been added at the bottom of the table.
- An “Exclusive items” column has been added. For each query, this column shows the number of items that are returned by that query and by none of the other queries in the keyword list.
- The entire table can now be filtered by one or more saved searches. This lets one evaluate a keyword list on a subset of the case, e.g. a specific custodian or date range. Previously, saved searches were added as additional columns in the table. While this would calculate the intersection of each query with that saved search, this would not calculate the deduplicated items and family items within the filtered set.
- The table can now be exported to a report in PDF or DOCX format. Several charts are shown that provide additional insight into the keyword list’s results.

- The table can now also be exported as an Excel XLSX spreadsheet. This has several benefits over the already existing export to CSV, e.g. in how it handles characters other than plain ASCII.
- Resolved an issue with the querying functionality not querying for the correct term when the table was not sorted in the default order.

Tagging

- Tags are now associated with a user-defined color. Reviewers can use tag colors to visually group tags. For example, one could make all topic-oriented tags green, all processing-related tags blue, and all confidentiality-related tags red. Tag colors are shown in the Tags facet, in the Previewer, and in the new Tag Colors table column. This column gives a visual overview of an item's tags by displaying all associated tag colors.
- The Add Tags and Remove Tags menu options in the Details views have been replaced by a single Edit Tags menu option.
- The Rename Tag menu option in the Tags facet has been renamed to Edit Tag.

Redaction

- Added the ability to overlay a text on a redacted area, e.g. to indicate the reason for redacting that area.
- Added the ability to define redaction templates. Such templates bundle a set of visual redaction settings, such as color, overlay text, and overlay font, and give it a symbolic name, e.g. "privileged content". This lets one centrally manage the visual style for a specific type of redaction. The items redacted with a specific redaction template can be retrieved via the Features facet. Redaction templates can be carried over to other cases using the Case Template functionality.
- Added the ability to use a custom color for mass redactions.
- Added an option to draw a border around white redactions.
- Added an option to render all redactions in black upon export.

Reporting

- Added an optional Table of Contents.

Exporting

- Resolved the exporting of the event log to an XLSX file failing due to cells that reach Excel's maximum cell text length limit.

Exporting – PDF

- Improved exporting of MS Office files to PDF/TIFF.
- Improved exporting of chat messages to PDF/TIFF.

Exporting – Item Reports

- Added Case Name and Case Created custom fields.
- Added the ability to add custom logos.
- Improved the rendering style of hyperlinks in the reports.
- Improvements that make it easier to reuse report templates across cases.
- Resolved an issue with the inconsistent use of bold fonts in the Table of Contents.
- Resolved an issue with certain images failing to export to a report.

Exporting – Load Files

- Added the ability to export time zone offsets and time zone names.
- Resolved an issue with PDFs containing certain types of form fields not exporting to TIFF correctly.

Intella TEAM

- Resolved an issue with redactions failing to store.
- Resolved an issue with queries launched from the Internet Artifacts section in the Insight tab resulting in an error and failing to evaluate.

Dongle Manager

- Resolved an issue with the Blink button no longer working.

Upgrade Notes

Intella 2.3.1 can directly open cases made with Intella 2.3, 2.2.x and 2.1.x.

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

The Raw Data field names for items extracted from a Cellebrite report are now all in lowercase. This may affect rules for deriving custom columns. A new option has been introduced to make the check for a given field name case-insensitive.

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.

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.

Intella 2.3.1 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.

Cases made with Intella 1.8.x or older are not supported.

Cases made with beta versions are not supported and should be recreated.

Intella 2.3

Released: July 22, 2019.

Highlights

- Introducing a new product: **W4**, for the rapid analysis of user activity.
- Added support for **load file overlays**.
- Items can now be exported to an **item report**.
- Added support for MS Exchange **EDB 2013/2016** files.
- Added support for **Outlook for Mac** olk15* files.
- Added a user interface for managing **memory and crawling settings**.

W4

The Intella 2.3 release coincides with the launch of a new Vound product: W4.

W4 is an application for detecting user activity in a disk image or file collection. With W4, you can quickly answer questions such as:

- Does the user possess material of type X (e.g. documents, images, emails, chat messages, notable application types) and what do these items look like?
- What USB devices were used; what files have been copied to those devices?
- What web pages were visited and what files were downloaded?
- What files were sent or received by email?
- What programs were launched?
- What folders were explored?
- Is this evidence data relevant to my investigation, and what follow-up analysis is warranted?

Key benefits of W4 are:

- **Easy to use interface**; the very gentle learning curve makes it suitable for non-specialists.
- **Very fast indexing** allows to quickly scan and assess the evidence.
- **Search during indexing** lets one see the first results within minutes.
- A **powerful indexing engine** supporting a variety of system and registry artifacts.
- A **Timeline** for visualizing data distribution over time and filtering items.

- The innovative **Events** view allows for seeing all user actions in a single unified chart. Events can be annotated via tags and notes, allowing for the creation of a custom timeline.
- A **Thumbnails** view for easy previewing of all images in the case.
- Simple to use **annotation tools**, for tagging items and adding notes.
- The **Item Links** feature allows unveiling and exploring hidden links between artifacts, such as documents copied to a USB device, downloaded from the Internet, or sent by email.
- Flexible **reporting** functionality, with sections that can be configured individually (table, events, image gallery or link graph), to create professionally styled reports.

W4 and Intella are separate yet complementary applications. A smooth transition path is possible, where data is first investigated in W4 and then further analyzed in Intella. The more extensive indexing, analysis and exporting functionalities that Intella has to offer can then be used on the case.

W4 cases can be added via Intella's Add New Source wizard. When W4 detects an Intella 2.3 installation, it will also show a "Process in Intella" button in its Case Manager.

When adding the W4 source in Intella, the investigator can select what case elements should be carried across. For example, tags, item notes and keyword lists can be either copied into or left out of the Intella case.

Intella can also enhance the W4 case data. It can analyze the items that were already tagged in the W4 case and suggest additional, similarly looking items that come to light through Intella's deeper indexing of the evidence data. Furthermore, item data can be enhanced during the import phase through content analysis, OCR, or by re-applying keyword lists.

Once the source has been imported, a top-level tab is added to Intella, showing how the original W4 case has been expanded. The number of additional items that were found are listed, grouped by file category and type. Newly tagged items, through tag analysis and keyword lists, are reported.

To learn more about W4, please visit https://www.vound-software.com/W4.

Installer

- Resolved an issue with the Browse button in the installer not functioning properly.

Indexing

- The memory settings and maximum crawler count for the indexing engine can now be managed from within the user interface. Before, this was controlled via the l4j.ini files in the application folder. The settings are now case-specific rather than installation-specific.
- Added support for MS Exchange EDB 2013 and 2016 files.
- Added support for Outlook for Mac olk15* files.
- Added support for Apple Disk Image (DMG) files. Please see the User Manual for which compression methods are supported.
- Added support for indexing installed and startup programs found in the Windows registry.
- Added support for indexing UserAssist entries, prefetch files and jump lists.
- Added support for LNK and URL files. Previously these could only be identified.
- Added support for Windows XML event log (.evtx) files, including logon and logoff events.
- Added support for extracting artifacts from Windows.old folders, which may be present after a major Windows update has been performed.
- Improved support for indexing the contents of Recycle Bins, including metadata such as time of deletion.
- Updated the Office 365 and SharePoint connectors in accordance with changes to these Microsoft services. Furthermore, these connectors have been made more robust against server errors.
- Updated the iCloud connector in accordance with changes to this Apple service.
- Preserved text styling when extracting the contents of an RTF-encoded PST/MSG/EDB email.
- Improved the extraction of non-Latin and/or long file names in MIME-formatted emails.
- Improved calculation of message hashes of items whose attachments are organized in a folder tree.
- Resolved an issue with non-matching paragraph hashes due to the line breaks that are introduced by certain email clients.
- Resolved an issue with the parsing of LDAP email addresses that lack a domain.
- Resolved an issue with SMS messages in Cellebrite reports being incorrectly classified as “Unsent”.
- Made the parsing of Skype databases more robust.
- Resolved an issue with the incorrect modeling of the hierarchy of the root item in an L01 image, which could trigger a variety of problems.
- Resolved an issue with certain PST calendar items missing a location property.

- Resolved issues with the indexing of MS Internet Explorer 10, 11 and Edge web history on Windows 10.
- Resolved an issue with items from MS Outlook for Mac OLM files missing a location property.

Indexing - Load Files

- Added support for adding a load file overlay. This lets one extend or overwrite the metadata of previously imported load file items.
- Resolved an issue with load files in UTF-8 format that start with a Byte Order Mark (BOM). The BOM would become part of the first column name.
- Resolved an issue with tag columns with multiple values not being parsed correctly, resulting in the tags being reported as a single concatenated tag.

OCR

- Updated the embedded OCR engine. This fixes several issues with problematic PDFs.
- Resolved an issue with the CSV file holding the OCR log not being written properly.

Searching

- A Statistics dialog has been added to the Details view's popup menu. This dialog lists statistics about the selected items, such as their cumulative file size, total number of document pages, as well as other attributes.
- Added a separate keyword search option for file names, so that they can be searched independently from their folder names.
- IBM Sametime chat dumps are now listed in the Type facet beneath Chat Conversations, rather than Forensic Containers.
- Resolved the incorrect determination of top-level items in SharePoint and Office 365 sources.
- Resolved an issue with incorrect results of phrase queries with wildcards on items with reviewer comments.

Keywords Tab

- Resolved an issue where searching using keyword lists in the Keywords tab where imported texts (e.g. using the -importText command line argument) were not included.
- Resolved an issue with incorrect item counts for certain types of Boolean queries and with the "Hits" option selected in the Calculate section.

- Resolved an issue with incorrect hit counts on certain types of complex phrase queries.

Tasks

- Added an option to select all items in a task.

Social Graph

- Added a Review menu option to the Social Graph's popup menu.

Previewer

- Various improvements to the rendering of PDF documents containing charts.
- Improved the rendering of chat conversation items that lack sender information.
- The Words tab is now always shown; it is no longer tied to the presence of the Contents tab.
- The visit date of typed URLs is now being shown in the Previewer.

Redaction

- Resolved an issue with keyword search in the Redaction tab not working properly due to the incorrect handling of whitespace characters between words in the item text.

TEAM

- Resolved an issue with the communication with remote cases not being restored properly after a temporary network glitch.

Exporting - General

- Added exporting of selected items to an item report. Such a report lists a user-defined set of content and metadata properties of the selected items, in a table, list or thumbnail gallery. Various options for sorting, styling, and other customization of the report are available. Item reports can be exported to PDF and DOCX format.
  An item report should not be confused with an export report. The purpose of an export report is to log what items were exported to e.g. PDF, PST or native format, including any errors that occurred during that process.
- Resolved an issue with the Default button in the Export wizard's export template section not always working correctly.

Exporting – PDF

- Optimized performance by reducing the number of child processes that is generated during the generation of the PDFs.

Exporting – Load Files

- When an item has redactions applied to it, one can now suppress the exporting of the natives of all items in the item family. Before, only the natives of the redacted items themselves could be suppressed. This could lead to the redacted content still being exported in unredacted form when a family member was exported.
- Added an ATTACH_RANGE field, which combines the RECORD_ID_GROUP_BEGIN and RECORD_ID_GROUP_END values in a single exportable field.
- Resolved an issue with the generated HTML structure of emails whose body was originally encapsulated in RTF format in a PST/MSG/EDB email. The generated HTML would render correctly in email clients but did not render well in Relativity.
- Resolved an issue with the exporting of chat conversation items to a load file. If the conversation item has attachments, the exported extracted text of the chat item would contain references to those attachments. These references are now suppressed.
- Resolved an issue with newly created export sets not being available in the advanced file naming column chooser until after Intella had been restarted.

Upgrade Notes

A dongle update is needed to upgrade from earlier Intella versions.

Intella 2.3 can directly open cases made with Intella 2.2.x and 2.1.x.

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.

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.

Intella 2.3 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.

Cases made with Intella 1.8.x or older are not supported.

Cases made with beta versions are not supported and should be recreated.

Intella 2.2.2

Released: March 18, 2019.

Highlights

- **Indexing** improvements, including support for **Outlook for Mac OLM** files.
- **Configurable message hashing** algorithm, letting the user control the degree of deduplication on email messages.
- Extended **command-line** arguments, allowing for better automation.
- Various **redaction** improvements, including setting the redaction rectangle's color. The enhanced redaction functionality is now also available in **remote cases**.

General

- Several stability improvements that protect against or recover from case corruptions.

Command-line support

- Added an -exportBinaries option. This option exports the selected items in their original format.
- Added a -runTaskFile option. This option runs a JSON task file on an existing case. The
  -taskFile option can only run after indexing completes.
- Added an -importLoadFile option. This option lets one import a load file into a case.

Indexing – General

- Added the ability to configure which parts of an email are involved in the calculation of its message hash: the headers (subject, sender and sent date), the recipients, the body and/or the attachments. This subsequently influences how these emails are deduplicated and how duplicates are found. The configuration can be changed after indexing and it does not require re-indexing.
- Added support for indexing Outlook for Mac OLM files.
- Indexing performance improvements, especially when the case is located on a non-local drive.

- Tested indexing of files made with MS Office 2019.
- Improvements to the indexing of SQLite databases.
- Added extraction of the save history from PDF files made or edited with certain PDF editors, e.g. Nuance Power PDF.
- Resolved an issue with the Attach Evidence dialog not working correctly when using UNC paths with complex evidence folder trees.
- Resolved an issue with Intella running out of memory when indexing a small but corrupt .bplist file.
- Reduced memory usage of PDF processing, which were a common cause of Intella running out of memory.
- Resolved an issue with floating content in NSF files, i.e. minor differences in extracted white space in separate indexing runs, causing the MD5s of these items to be different.
- Resolved an issue with JPEG items embedded in PDF documents getting different MD5 hashes in separate indexing runs.
- Resolved an issue with the attachments of SMS/MMS messages in an iTunes backup being linked to all messages in that backup.
- Resolved an issue with the indexing progress user interface not reflecting correctly that indexing has completed.
- Resolved an issue with indexing of Safari browser bookmarks.
- Resolved an issue with certain plain text files being incorrectly classified as emails.
- Reduced the potentially large amount of log messages that are produced when indexing corrupt PDF documents.

Indexing – Load files

- Resolved an issue with page rotations when importing multi-page PDF images.
- Resolved an issue with importing dates that use a double-digit number for the year, e.g. 25-Feb-19.

Previewer

- Several fixes and improvements to the native rendering of MS Office and PDF documents.
- Resolved an issue with the Print Preview window sometimes not rendering the document correctly.
- Resolved an issue with the Zoom Marquee Tool in the Preview and Redaction tabs not zooming correctly to the selected area.

OCR

- Added support for ABBYY FineReader Server 14, the successor of ABBYY Recognition Server.

Redaction

- One can now choose the color of each individual redaction rectangle, rather than all redaction rectangles always being black.
- Improved the determination of duplicates suitable for redaction when using the "Auto-redact duplicates" option.
- Resolved an issue with resizing of redaction rectangles not working properly.
- Improved the user experience when using the "Auto-redact duplicates" option.

TEAM

- The features added in Intella 2.2.1 for queueing items for redaction, redacting entire page ranges, and the automatic redaction of duplicates are now also available in remote cases that are shared with Intella TEAM Manager.
- Resolved an issue with table sorting when working on very large shared cases. This only affects cases where the highest item ID is above 67,108,864 (= 2^{26}).

Exporting - PDF

- Several fixes and improvements to the native rendering of MS Office and PDF documents.
- Improved the rendering of the metadata of phone calls and chat messages.

Exporting – PST

- Tested exporting to a PST file with MS Office 2019.

Upgrade Notes

Intella 2.2.2 can directly open cases made with Intella 2.2.x and 2.1.x.

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.

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.

Intella 2.2.2 uses a new method for calculating message hashes for new cases. 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.

Intella 2.2.2 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.

Cases made with Intella 1.8.x or older are not supported.

Cases made with beta versions are not supported and should be recreated.

Intella 2.2.1

Released: December 3, 2018.

Highlights

- Added a **Welcome** tab.
- Improvements supporting the **large-scale redaction** of items, such as **queuing** items for redaction based on their keyword hits, **pre-generating redaction PDFs** to speed up the Redaction tab's loading time, redacting entire **page ranges**, and the automatic **redaction of duplicates**.
- Reorganized the **right-click menus** in the Table and other components.
- Several **facets load faster**.
- Many **indexing** and **OCR** improvements.

General

- A Welcome tab is now shown in all cases. This tab shows an overview of what is new in this Intella release, points the user to the various documentation, support, and training options, and offers hyperlinks to e.g. add a new evidence source or open the Dongle Manager.
- Various improvements to how the events.log file stores information and how the Restore Annotations functionality can use it to recover data when the case becomes corrupt, e.g. due to a power outage or disk failure.
- Improvements to the default window size and positioning.
- Reorganized the contents of the General tab in the Preferences window.
- Added a "Release Notes" item to the Help menu.
- Resolved a fatal error that would result in Intella not shutting down properly.
- Resolved a rendering error when the first tab in the main window is the default tab in a case.

Licensing

- The requirement to have at least 100 days of remaining Maintenance Agreement coverage has been reduced to 60 days.
- The version update notification now indicates when a license upgrade is required to run the new version. Dongle users will see "Dongle upgrade required". Intella P.I. users will see "License upgrade required".

Indexing – General

- Resolved an issue with the Remove button in the Passwords tab of the Key Store window not working properly.
- Updates for processing Apple Mail files and EMLX files.
- Added support for indexing loose S/MIME encrypted messages (usually .p7m files).
- Many improvements to the indexing of archives.
- Updates for indexing the most recent Cellebrite UFED XML exports and UFDR reports.
- Images in OpenOffice/OpenDocument files are now extracted.
- Improved parsing of email senders and receivers in cellphone extracts that contain both the contact name and the email address.
- Improved the extraction of email senders and receivers from PST/MSG/TNEF items. Instead of Active Directory addresses (X.500 Distinguished Names), regular contact names and email addresses will now be shown.
- Updates for indexing various browser artifacts such as download histories, typed URLs, and bookmarks.
- Improvements to the processing of date attributes:
    - Unrealistic dates are suppressed, e.g. dates before or at 1-1-1970 00:00:00 GMT, or at 1-1-1980.
    - Two-digit years in Date headers are corrected to a date in the range 1950 – 2049.
- Improved handling of emails with a non-standard MIME multipart hierarchy.
- Added the ability to index L01 files that contain folders with illegal characters in their name.
- Resolved an issue with missing files when indexing a MacOS disk image.
- Resolved some indexing issues with MS Exchange EDB files.
- Resolved suppressed indexing errors when processing registry artifacts.
- Resolved unnecessary copying of disk images to a temporary file.
- Email items that lack a body and all header fields relevant for message hash calculation are no longer seen as duplicates.
- Various logging improvements.

Indexing – Load Files

- Reintroduced the “Use the following column and value to identify emails” field. This was removed in an earlier version.
- Performance improvements when importing a large number of custodians.
- Added the ability to map data to the Conversation Index column.

- Added the ability to import hierarchical tags.
- Resolved an issue with rotated PDFs not importing correctly.

OCR

- Resolved memory issues that could occur when OCR-ing very large files.
- Various improvements to OCR-ing problematic files due to an upgraded OCR library.
- When using ABBYY Recognition Server, version 4 is now the default version.

Searching

- Performance improvements for opening branches in the Email Address, Chat Account and Phone Number facets. In one test, loading and displaying the From branch in the Email Address facet went from 4 minutes to 5 seconds.
- The Email Address and Chat Account facets are now case-insensitive. For example, two occurrences of the same address but with different casing will now be shown as a single entry in the Email Address facet.

Results

- The growing right-click menu in the Table, List and Thumbnail views has been reorganized to be easier to handle and allow for future expansion. This menu is now also used in the Timeline, Cluster Map, Geolocation view and Searches list.
- The table row divider is now turned on by default. When the table is sorted on a column supported by this divider (e.g. a date-based column), it will render lines in the table that group the rows that have the same value in that column.
- The Location column that is populated through Content Analysis has been renamed to “Geographical Location”. This prevents confusion with the Location column that represents the evidence location and prevents column name clashes in the CSV export.
- Added a “Batches” column to the Table and CSV export and to the Properties tab in the Previewer.
- Resolved a fatal error when creating a very large Timeline visualization.
- Resolved an issue with the Custodians facet not updating properly after deletion of a source.

Previewer

- The output of the Print Report button has been simplified to only show the item’s native rendering, the most critical item metadata, and (optionally) the native rendering of its attachments.

Tagging

- Performance and stability improvements when using the -importTags command-line option.

Redaction

- Added an option to queue the current item for redaction, together with its currently highlighted keyword hits. This queue can then be processed batch-wise later, which creates their redaction PDFs and applies the redactions to these keywords.
    - This functionality makes it possible to quickly review keyword hits in the Contents and Preview tabs and postpone the generation of the redaction PDF generation. That generation can then be run when Intella is not in use, e.g. run overnight.
    - It is recommended to review the redaction PDFs and the added redactions in the Redaction tab after processing the queue.
    - This functionality is currently only available for local cases.
- Added a menu item for pre-generating redaction PDFs for a set of items. This can be used to speed up the initialization time of the Redaction tab.
    - The benefit of this option over the queue option described above is that the user is reviewing the redaction PDF, which may differ from the presentation shown in the Contents and Preview tab.
    - The downside is that redaction PDFs are generated for items that ultimately turn out not to need any redactions.
- Added an option to let any redactions be applied to all duplicates automatically.
- Added a button to redact full pages. One can either redact the current page or a range of pages.
- Added a menu item for removing all redactions of a set of items.
- Resolved an issue with export errors being added to the redaction PDF rather than the export report.

Exporting – General

- When exporting items from the Review tab, the sort order used in this tab is now used for ordering the export, rather than the sort order that is used in the Search tab.

Exporting – PST

- Improvements related to exporting to PST on Windows 10 or when using MS Outlook 2019.

Exporting – Load Files

- Added a checkbox titled “Opticon Page Count field contains number of pages of entire document”. This checkbox controls the meaning of the last field in an Opticon file. When switched off, the field is interpreted as the number of pages of the current image file. When switched on, it becomes the number of pages in the entire document. This number should then only be listed for the first page.
- Added ALL_LOCATIONS and ALL_CUSTODIANS as custom field types.
- Reduced the verbosity of the date notation when using the “date only” format for a custom field.

Upgrade Notes

Intella 2.2.1 can directly open cases made with Intella 2.2 and 2.1.x.

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.

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.

Intella 2.2.1 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.

Cases made with Intella 1.8.x or older are not supported.

Cases made with beta versions are not supported and should be recreated.

Intella 2.2

Released: August 3, 2018.

Highlights

- Added support for basic **case merging**.
- Items can now be **exported to a new case**.
- **Case templates** enable quick initialization of a new case.
- Added a **GDPR** Insight info panel, listing privacy-sensitive data found in the case.
- Added command-line options and samples for **scripting** and analysis purposes. Sample scripts are provided that enhance case data using **Google Cloud AI** services.
- Added support for indexing **Windows 10 Mail**.
- Added a **Show Family** search option.

General

- Several improvements to reduce the chance of information loss when processes terminate unexpectedly, e.g. due to a power outage.
- Resolved an issue with cases failing to open due to incorrectly formatted memory settings in the Intella.l4j.ini file.
- Resolved an issue with the Geolocation database presence check resulting in Intella not shutting down properly.
- The executables (Intella.exe and DongleManager.exe) now work properly when invoked on the command line from a different folder than where they are installed.

Case Management

- One can now export items to a case. This can either be an existing case or a new case. Several configuration options are available for controlling what item information is included, e.g. tags, comments, custodians, OCR text, etc. Parents of exported items that are not in the export set themselves are represented as stubs in the destination case.
  The new export functionality supports several use cases:
  - Merging of two or more cases, so that indexing can be spread across multiple machines.

    - Adding data to an ongoing case. The new evidence is indexed in a separate case first, rather than by adding a source to the current case.
    - Exporting of selected items to a new case, e.g. to filter out privileged information or irrelevant items, or to divide the work among reviewers in such a way that each reviewer only has access to their own assigned items.
- The settings of a case can now be stored in a case template. Such a template can be used to initialize the settings of a new case, e.g. to comply with organization policies or to optimize it for the nature of the investigation. Case templates can for example cover:
    - Settings in the Preferences window.
    - Default table column setup.
    - Saved Searches.
    - Task definitions.
    - Tags.
    - Keyword and MD5 hash lists.
    - Export templates.
    - Redaction profiles.
- Improved the functionality for adding cases when selecting a case whose case ID or case folder is already present in the cases list.

Auditing

- The Actions tab is now showing the date and time of the events again. This was removed in an earlier version for technical reasons.

Indexing - General

- Added support for the local storage of Windows 10 Mail accounts. Only POP accounts are supported, not IMAP, because only POP accounts store emails locally.
- Updated Skype support to cover versions 7.x, 8.x, 11.x and 12.x. Support for versions 8.x, 11.x and 12.x is still experimental.
- Added support for extracting Chrome bookmarks, cookies, site logins, form history and keyword search history.
- Added support for extracting Mozilla Firefox bookmarks, cookies, and form history.
- Added support for extracting the volume serial numbers and (dis)connect timestamps of USB devices.
- One can now define multiple sources with the same folder path. This supports for example adding the same EDB file twice but with different mailboxes. Another

use case is swapping evidence drives between the indexing of two sources that use that same drive path.

- Added detection of Windows Event Log files (EVT and EVTX files).
- Added detection of JSON files.
- Added support for extracting attachments from Notes NSF DXL content. Previously, only inline pictures were extracted.
- Added support for detecting individually encrypted emails in a Notes NSF file.
- Improved the tokenization of texts that contain IP addresses.
- The Source Edit page of an iCloud source can now show the trust token. This is only used when two-factor authentication is used by the account.
- Resolved case indexing errors due to the use of non-ASCII characters in the case folder name.
- Added detection and decryption of loose PGP encrypted files.
- Added detecting and decryption of inline PGP email. PGP mime mail was already supported.
- Improvements for processing Cellebrite UFDR files. Besides fixes for covering e.g. new item types, date formats, etc., a provision has been made so that unrecognized item types are still reflected in the case rather than skipped.
- Several fixes and improvements related to the indexing of MS Exchange EDB files.
- Improvements to the indexing of iTunes archives.
- Improved error reporting and logging when indexing iCloud accounts.
- Improved handling of emails with an invalid character encoding specified in the MIME headers.
- Improved handling of CJK text files (Chinese, Japanese, Korean).
- Improved the Raw Data tab contents of iCloud items, to make it easier to review and to allow for using it as input for custom columns.
- Several improvements in the processing of shell bags.
- Resolved an issue with email body fragments from Mbox files ending up in the logs.

Indexing – Load Files

- Improved importing speed of load files and overlays.
- Load file import no longer adds duplicates in the case when it sees that an item is a child of multiple other items. This change was made because duplicate filtering is typically already done by the application that produced the load file, so these should not be brought back into the data set.
- Cells with formatted numbers (like 1,345,345) can now be parsed.

- Resolved an issue with Intella 2.1.x always enforcing paragraph analysis on imported load files, regardless of the setting chosen by the user.
- Made the import process more robust against character encoding errors.
- Improved handling of empty cells in a load file.
- Improved the validation of load files that use a different encoding than their accompanying text files.

Analysis

- Added a GDPR info panel in the Insight tab. 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 or XLS file.
- Added command-line options than enable advanced forms of textual analysis:
    - Added an option for exporting item texts and for importing alternative texts. Imported texts are shown in the "Imported Text" tab in the Previewer, can be found via the Has Imported Text category in the Features facet, are subject to keyword search, and can be exported.
    - Added an option for importing item tags via a CSV file.
    - Added options for finding items based on a keyword search or saved search, and for deduplicating the found results.
    - Sample Windows batch scripts and tutorials are provided that demonstrate how this can be used, in combination with Google Cloud command-line tools, to enhance case data with e.g. entity recognition, sentiment analysis, text classification, and translated document texts.
- The suggestions in the Identities tab can now be sorted by name and by item count.
- Added suppression of noisy values in some of the Content Analysis branches.
- Performance and stability improvements in skin tone analysis.
- Resolved the Insight tab failing to update its status in the Workflow section after the user ran OCR, Email Threading, etc.

OCR

- Resolved the error messages that could occur when one clicked the Stop button in the OCR progress dialog.
- Resolved a discrepancy between the amount of OCR candidates reported in the Insight tab's Workflow section and the actual number of items that get OCRed. This is because the OCR output is applied to all duplicates. The count would differ

when OCRed images were embedded, as well as be present as loose files or attachments elsewhere in the case.
- Resolved the OCR dialog failing to cancel properly when in the middle of the validation phase.

Tasks

- Resolved an issue with tasks made with Intella 2.1 failing to load in 2.1.1.x.
- Improvements to make restoring annotations more robust.

Searching

- The Search button is now always enabled and, when no text has been entered, will return all items in the case.
- Added a Show Family search option. This new operation effectively combines the Show Parents and Show Children operations into a one-click operation, by determining for the selected item(s) the top-level parents and all their nested items. This also relates to the Families column in the Keywords tab and the Family Date field.
- The functionality for determining the top-level items now takes databases into account, so that these will not be the top-level items anymore. The Load File and Cellphone items are now captured into a single Forensic Containers category.
- Added a Features facet category that returns all top-level items.
- One can now upload multiple keyword, hash, and item ID lists at once.
- Improved tag names when using the Auto-tag function in the Keyword Lists facet.
- Reduced the logging of invalid keyword queries to a reasonable level.

Results

- Added a column that indicates whether an item is a top-level item.

Previewer

- Resolved missing inline images and attachments in iCloud emails.
- SMS and chat conversation items extracted from iTunes backups were lacking Next Day/Previous Day links and the Show Conversation search option. This has been fixed.

Tagging

- When adding a new tag, the Add Tags dialog lists any existing tags matching that text. This used to only list the tags whose name start with the entered text. Now it checks whether the tag contains the entered text anywhere in its name.
- The Add Tags dialog would not let users add a tag if all items in the set already had that tag. This check has been removed, as it did not take potential tag inheritance by family members and duplicates into account.
- Tagging events now show the full tag path, rather than only the tag name.
- Resolved quick tag keyboard shortcuts not working properly.
- Resolved an issue with the exporting of deep tag hierarchies in the Tags facet to a CSV file.

TEAM

- Improved the speed of populating the Table view.
- Improved the exporting speed.
- Improved the performance of the Show Parents and Show Children operations.
- Improved the handling of folder items recorded in an Intella Work Report (IWR) file.

Exporting – General

- Resolved not being able to export specific item types such as calendar items, reminders, notes, and devices, extracted from iCloud accounts or iTunes backups.
- A warning is now shown in the Export wizard when some evidence paths are missing.
- Exported conversation items now have a file extension.
- Resolved export issues caused by file name length limitations in MS Windows.

Exporting – CSV

- The hash character (#) can now be used as a delimiter.

Exporting – PST

- Resolved an issue with items failing to export to a PST file due to a quote character in the PST file path.

Exporting – Load Files

- Added “duplicate locations” and “duplicate custodians” fields. These report the locations and custodians of all duplicate items in the case, excluding the item itself.
- The encoding of a Relativity or Concordance load file is now configurable.

Upgrade Notes

Backwards compatibility – Intella 2.2 can directly open cases made with Intella 2.1.x, without any case conversions or other transformations.

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.

Intella 2.2 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.

Cases made with Intella 1.8.x or older are not supported.

Cases made with beta versions are not supported and should be recreated.

Update notifications – The Intella update notification, shown in the menu bar when the user has the automatic update check enabled, now makes a distinction between regular version upgrades and patch upgrades.

Patch upgrades are released to fix urgent issues that cannot wait until the next release version. They are identified by the fourth digit in the version numbers. Users on an older release version (e.g. 2.1.1) always get to see the regular version announcement (e.g. about

the 2.2 release). Users that are already on this release version get to see an announcement about a patched version if there is one (e.g. a 2.2.0.1 release), unless they are already using this patch version.

The download links in the support portal always point to the latest patch release.

Intella 2.1.1

Released: February 14, 2018.

Highlights

- Added retrieval of information stored in in **iCloud accounts**.
- Added support for indexing **XPS** documents and **XLSB** spreadsheets.
- Improved **handling of decrypted items**.
- Resigned the **table column chooser** to scale to more columns, allow for storing the current column setup as a template for later use, and more.
- Added **Content Analysis columns**, showing information such as credit card numbers, locations, and the outcome of regular expressions.
- Various **performance, stability, and accuracy** improvements.

General

- It is no longer necessary to manually install the "JCE Unlimited Strength Policy Files" to get support for strong cryptography. This is now included by default.
- Reduced the chance of case corruptions when Intella is not shut down in a proper manner.

Case Management

- The case conversion functionality now considers the user preference for checking the presence of the original evidence files. These files are not required for performing the case conversion, but they may be needed for other operations when working with the case.
- Made the ICF creation process more fault-tolerant.

Command-line support

- Cases can now be converted using command-line invocations.
- Resolved an issue with command-line invocations failing due to the presence of multiple applicable licenses.
- Added options for selecting which dongle and/or product type to use.
- Added options for indicating that the first available license should be used (suppressing the interactive license chooser window) or that the first "full" license should be used, i.e. a license capable of case creation, indexing, etc.

Indexing – General

- Added support for indexing iCloud accounts.
- Added support for indexing XPS documents.
- Added support for indexing Excel binary spreadsheets (XLSB files).
- Many improvements in indexing MS Office and PDF documents.
- When items are decrypted during indexing, the decrypted variant is now stored inside the case, rather than being discarded once the content has been processed. This makes it available for exporting, previewing in native layout, OCR-ing, opening in the native application, etc.
- Various performance improvements.
- Improved indexing of non-email items in PST files.
- Improved support for cellphone reports made with XRY versions 6.x and 7.x.
- Added support for decrypting PowerPoint 1997-2003 presentations.
- Improved support for detecting and indexing UTF-7 files and Japanese UTF-16 files.
- Added support for extracting visited pages and visit dates from browser history entries in cellphone reports.
- Resolved several cases of indexing errors not being reported to the end user.
- Resolved an issue with certain SQLite files that were very slow to process.
- Improved processing of EDB files containing broken data.
- Resolved an issue with temporary files not being deleted during or at the end of indexing.
- Resolved an issue with long texts in Notes NSF files getting truncated.
- Resolved an issue with certain HTML files being typed as emails.
- MS Graph Chart files are no longer incorrectly classified as MS Excel spreadsheets.
- Improved the extraction and indexing of XMP metadata in image files.
- Resolved an issue with the New Source wizard not resetting properly when it was cancelled or used for a subsequent cloud source.

Indexing – Disk Images

- Various stability and performance improvements when reading disk images.
- Resolved an issue with the Find Parts button not finding disk image parts beyond *.ezz.

Indexing – Load File

- Resolved an issue where searching for a DocumentID (originating from a load file) would return not only that item but also all its duplicates (same MD5 but different DocumentID).
- Resolved an issue where items without natives but with extracted text were classified as "Empty Documents" in the Features facet.
- Improved the processing of load files where text is both extracted from the natives and is included in the load file itself. This resolves potential inconsistencies between what text is displayed and how keyword queries are evaluated.
- Improved the importing speed of overlay load files that use item IDs and/or URIs.
- Resolved an issue where tags that were deleted in an older case (2.0 format or earlier) reappeared when the case was converted to the 2.1 format. This only happened when the tags were imported via a load file.
- Various stability improvements.

OCR

- Individual items can now be OCRed from within the Previewer.
- An OCR error report can now be generated after a set of items has been OCRed.
- The item text obtained from OCR-ing items is now subjected to standard content analysis (Credit Cards, Social Security Numbers, Phone Numbers).
- Resolved an issue with the OCR progress monitor showing incorrect progress percentages.
- Resolved an issue with loss of OCR data due to the case not being shut down properly.
- Resolved an issue with the OCR task in the Insight tab being marked as completed when the user cancelled the OCR process.

Content Analysis

- When defining a new Content Analysis category, one can now indicate whether the search should be case-insensitive and whether multi-line matches should be allowed.
- Various accuracy and performance improvements in email threading.
- Resolved an issue with the Content Analysis procedure not cancelling properly in remote cases.

- Resolved an issue with multiple entities being concatenated into a single entity depending on the presence of specific white space sequences separating them in the document text.

Insight

- Resolved an issue with the Timeline not having any default date attributes selected.

Searching

- Queries can now be launched from the Keywords tab by double-clicking on the table row. Previously, the Details table did update when one selected a row in the Keywords table, but no corresponding query result set would be added to the Searches list. This made further handling of this result set cumbersome. Additionally, one can now also select multiple rows in the Keywords table and query for all these keywords by using the right-click menu.
- Added a "Check / uncheck all" option in the Date facet, for (de)selecting all field attributes at once.
- Keyword lists can now be deleted in the Keyword Lists facet without having to expand the keyword list's node.
- The Email Thread facet now uses a language-dependent alphabetic sorting method to sort the thread names.
- Made sure that very long keyword queries cannot bring the application in an unstable state.

Results

- Completely redesigned the table column chooser. The new user interface makes it easier to find, add and remove columns. Columns can now also be reordered from within this screen. The new dialog takes up a lot less screen space than before. The column settings can be stored as a template. This makes it possible to easily switch from e.g. an email-specific setup to a more cellphone-oriented setup. Templates can also be shared between cases.
- The results of Content Analysis can now be shown as table columns. This makes it possible to populate the Details table with entities such as Credit Cards, Person names, Location names, etc. Custom categories, for example a regular expression search revealing IBAN numbers in the document text, can also be published this way. This functionality is only available when Content Analysis has been performed in version 2.1.1 or later.
- Usability improvements when reordering columns by dragging them.

- Added a Message Count column. This applies to items that combine multiple messages into a single item, e.g. Skype Conversation items.

Previewer

- The current text scroll position is now retained when clicking on the "Show full text" button.
- Improved the zooming options in the Email Thread tab, as well as various other usability improvements in this tab.
- Resolved an issue with the "Mark below/above as Seen" options not marking all the corresponding paragraphs.
- Added support for showing text extracted from load file images.
- The item size threshold in the Preview tab did not prevent the item's binary from being downloaded in the first place. This has been fixed.

Tagging

- The behavior and rendering of the quick tag buttons in the Previewer has changed. Before, one could only use these buttons to assign tags. To remove tags, a different part of the user interface had to be used. In the new setup, the buttons work like toggle buttons. A green checkbox icon shows that that tag has been set on the current item. Clicking the button once more will then remove the tag.
- Resolved an issue with tagging failing due to the initialization procedure of the popup menu interfering with a subsequently launched tagging process.

Redaction

- Resolved an issue with redactions becoming corrupt due to the case being shutdown abruptly.

Identities

- Many usability improvements in the Identities tab.

Exporting – General

- A new wizard sheet has been added to all export variants, except for exporting to PDF. This new wizard sheet lets the user control in what order Intella should pick variants of the item: the original binary item, the decrypted variant, the OCR-ed content, or an image imported from a load file.
- A warning is now shown when the user selects an export template that refers to custom columns defined in a different case.

Exporting – CSV

- The dialog for exporting the table contents to a CSV file has received the same redesign as the table column chooser (see above).
- The CSV export templates now also support storing the order of the columns.
- The control characters used to delimit values, escape characters, and quote entire values are now configurable.
- The time zone-related settings are now stored in the template, rather than being used case-wide.

Exporting – PDF

- Added a Source Path property in the Properties listing.
- Added an option to include the extracted text for images.
- Removed the "Prefer image imported from load file over Original view" option. It is replaced with a new "Configure Original view" dialog that allows the user to control in what order Intella should pick variants of the item when generating the original view: the original binary item, the decrypted variant, the OCR-ed content, or an image imported from a load file.
- Improved rendering of conversation items (e.g. Skype conversations). The visual styling shown in the Previewer is now also shown in the PDF.
- Resolved an issue with emails without content not being properly exported to PDF.

Exporting – PST

- Stability improvements when exporting to PST.
- Resolved a regression that caused slow exports to PST files in some cases.

Exporting – Load File

- All improvements related to PDF exporting also apply to load file exporting.
- Resolved an issue where images imported via a load file would not export to PDF properly when the option to concatenate all items into a single PDF was used.

Upgrade Notes

Backwards compatibility – Intella 2.1.1 can directly open cases made with Intella 2.1, without any case conversions or other transformations.

Intella 2.1.1 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.

Cases made with Intella 1.8.x or older are not supported.

Cases made with beta versions are not supported and should be recreated.

Update notifications – The Intella update notification, shown in the menu bar when the user has the automatic update check enabled, now makes a distinction between regular version upgrades and patch upgrades.

Patch upgrades are released to fix urgent issues that cannot wait until the next release version. They are identified by the fourth digit in the version numbers. Users on an older release version (e.g. 2.1) always get to see the regular version announcement (e.g. about the 2.1.1 release). Users that are already on this release version get to see an announcement about a patched version if there is one (e.g. a 2.1.1.1 release), unless they are already using this patch version.

The download links in the support portal always point to the latest patch release.

Intella 2.1

Released: October 4, 2017.

Highlights

- **Email threads** are now detected and visualized. This includes the determination of the **inclusive emails**: together these cover all the content in the thread. This can reduce review time and effort. **Missing emails** are highlighted in the thread.
- **Identities** modeling lets one build an "address book" of the persons of interest, bundling their aliases such as email addresses, phone numbers and chat accounts into a single unit. Various facets and displays use this to improve their content.
- Added an **integrated OCR** option. All Intella users can now OCR documents and images without requiring additional software, licenses, or systems.
- Added **recovery of deleted files** in NTFS disk images using the MFT.
- Added functionality for **removing sources** from a case.
- **Custom columns** let one extend Intella's data model with new columns, populated by selected headers, raw data fields or load file columns.
- Added support for the **Ext4** file system.
- Added support for indexing non-encrypted **iTunes backups**.
- Improved the **presentation of instant messages** by bundling them in day-to-day conversation items.
- The **Social Graph** now also shows phone calls and instant messages. When any of the aliases are found in an Identity, these nodes are merged. This presents a unified view of the communication between people, regardless of the communication medium used.

General

- The Intella 2.1.x version range will be the last range to support installation on a 32-bit Windows platform. Starting with Intella 2.2.x, a 64-bit platform will be required.
- Several performance and stability improvements in reading and writing case files, for both local and network file systems.
- Improved a potentially misleading error message related to a failed backup.
- The 32-bit edition of Intella now issues a warning when attempting to index or export data. As these tasks are very memory-intensive, use of the 64-bit version is strongly recommended.

- Improved temp folder management when indexing.

Case Management

- Cases that can only be opened in "review only" mode are now labeled as such in the Case Manager.
- It is no longer possible to open the Add New Source wizard in a review-only case.
- One can now "tab" through all fields in the Add New Case window.

Indexing – General

- Sources can now be removed from a case.
- It is now possible to define custom columns. This allows one to extend the data model of an Intella case with new columns, based on values found in the Headers or Raw Data tabs. For example, one can create a custom column to show the "X-Mailer" header value as a "Mail Client" column.
  Custom columns are typed, e.g. as a string, number, or date. This ensures a proper sort order when sorting on that column. The data in custom columns is generally searchable using keyword search. Custom columns that use the date type can be found and queried in the Date facet.
- Added support for indexing non-encrypted iTunes backups. This was tested on iTunes 12 with a variety of iOS versions. Other iTunes versions are being tested.
- Item IDs now stay the same when re-indexing a case.
- Many stability and performance improvements for indexing PDF documents. This results in more and better extracted text and images, faster extraction times and improved resilience to broken data.
- Improved indexing speed on large SQLite files.
- Improved the processing of TNEF attachments (winmail.dat files).
- Added detection of Apple icon (.icns), Radiance High Dynamic Range RGBE Format (.hdr) and DjVu (.djvu, .dvj) images.
- Geolocation references that are embedded in Google Maps URLs are now extracted and can be displayed in the Geolocation views.
- Improved paragraph hashing, resulting in better detection of duplicate paragraphs. A number of search features benefit from this.
- Improved modeling and normalization of the sender and receiver information of instant messages and phone calls.
- Resolved a concurrency issue that could occur when indexing PST files.
- Improved type identification of Bloomberg plain text documents.
- Improved processing of hierarchical generic Notes documents.
- Improved determination of the Source IP address of emails.

- The NSF document UID is now logged before processing that NSF item. This can help diagnose NSF items that fail to index.
- Improved resilience for NSF files containing items on which Notes crashes.
- Resolved an issue with MBOX and EML files originating from MacOS platforms not indexing correctly due to their end of line encodings.
- Resolved an issue with the longitude and latitude properties of items in an XRY phone dump not being extracted.
- Resolved an issue with the sorting on primary or family dates that could produce an incorrect sort order when the primary date preferences were changed and the user canceled the subsequent recalculation of these dates.
- Resolved an issue with incorrectly processed MMS messages in XRY phone reports.

Indexing – Disk Images

- Intella can now extract deleted items from disk images. File recovery is currently restricted to NTFS file systems and is based on traces of the deleted files found in the Master File Table (MFT). Intella tries to recover as much as possible of the file content and metadata. Whether a full or even partial recovery is possible depends on how the disk was used after the file deletion. Note that this functionality does not scan the unallocated space or slack space.
- Added support for the Ext4 file system.
- Added support for MacQuisition disk images (IMG format).
- Cellphone reports and IBM Sametime dumps can now also be indexed when they are contained in a disk image. Previously, they had to be present in the local file system.
- Resolved an issue with indexing file system roots in AD1 disk images.
- Resolved an issue with the indexing of disk images mounted as a virtual drive with EnCase.
- Various stability improvements for indexing disk images containing an NTFS file system.
- Resolved an issue with DD disk images consisting of more than 99 parts that would not index properly.

Indexing – Load files

- When importing a load file, it is now possible to define custom columns. This allows one to extend the data model of an Intella case with new columns. Contrary to the global Custom Columns feature, here the new columns are populated with selected columns from the load file, allowing any type of load file to be imported fully into an Intella case.

Custom columns are typed, e.g. as a string, number, or date. This ensures a proper sort order when sorting on that column. The data in custom columns is generally searchable using keyword search. Custom columns that use the date type can be found and queried in the Date facet.

- Improved the importing speed of load files containing custodian columns.
- When processing the content of binary items bundled with a load file, one can now specify the same configuration options as when adding a source, e.g. whether item recovery should be used, whether archives should be expanded, etc.
- The unit of the Size column can now be bytes, kilobytes, megabytes or gigabytes.
- Improved importing speed through better utilization of CPU cores.
- The import configuration is now logged when importing a load file.
- Items with empty content (zero byte files) no longer get a message hash.
- Resolved an issue with documents getting typed incorrectly when they had an incorrect file extension and the binaries were available for proper file type detection.
- Resolved an issue with load files containing MSG files getting incorrect message hashes.

Indexing – Cloud Sources

- Improved robustness and error handing of all cloud sources.

Content Analysis

- Improved content analysis speed. Typically, computations can be up to twice as fast depending on the CPU type, except for skin tone analysis.
- Added support for various image types in skin tone analysis.
- The item field(s) on which content analysis is applied can now be specified. Before, content analysis could only be done on the document text.
- Resolved an issue with incorrect match highlighting in the Regular Expression Assistant's sample text.
- Resolved a UI layout issue in the Regular Expression Assistant when using Windows font scaling at a value larger than 100%.
- Resolved an issue with content analysis calculations proceeding when Intella was shut down.

Email Threading

- Added functionality for threading a set of emails. This process determines the "reply", "reply all" and "forward" relationships between emails, based on

metadata found in the email headers, the email container or embedded in the email body.

- The resulting sequence or tree of emails is displayed in the Email thread tab in the Previewer, with an indicator of where the current email is located within its thread.
- Mails that are referenced in the email metadata but that could not be found in the evidence data are marked as "missing emails". An example is a mail with an In-Reply-To header that refers to another mail that is not present in the current evidence set.
- The "inclusive" mails are determined and highlighted in the Email Thread tab. These are the mails that *together* contain all content present in the thread. Having read all inclusive mails implies having read the entire thread. This can be used to improve the time needed to review a large collection of emails.
- The determined threads are listed in the new Email Thread facet and can be used as queries.

Identities

- A new top-level tab called "Identities" has been added. The functionality in this tab can be used to organize all aliases used by a specific person or organization in their communication, e.g. the various email addresses, phone numbers and instant messaging IDs used by a person.
- This information is used to improve the display of values in the respective facets and other displays. For example, the Email Address facet will group the addresses by identity, letting the user query for all the identity's addresses at once. The Social Graph will combine the nodes representing those email addresses and bundle them into a single node, reducing the graph complexity and painting a more accurate picture of the communication flow.
- An Identity facet has been added, allowing for the querying of all communication of an identity, regardless of the communication media and addresses used. This allows for following a conversation that is taking place across multiple channels.
- Intella can show a list of suggested identities, based on patterns found in the evidence data such as similarly looking email addresses. Identity information can also be added manually.

Tasks

- A task condition called "OCR Candidates" has been added. This can be used to gather e.g. all documents and non-embedded images. This way they can be conveniently OCR-ed, tagged or exported. The condition can be configured to

focus on specific types of documents and images, whether it should be limited to empty documents (not containing any text), etc.

- Resolved an issue with the match all/match any drop-down list incorrectly initializing its value when editing a task.

OCR

- Added an integrated OCR engine (ABBYY FineReader) to Intella. This lets users OCR items directly from within Intella, without requiring any additional software, systems, or licenses. This functionality is available in all Intella editions, regardless of the license type.
- The OCR text is now shown in a separate tab in the Previewer; it is no longer part of the Contents tab. It is still subject to full-text search, this is only to make it clear where the text originates from.
- When OCR-ing items, one can now indicate what to do with items that already have been OCRed: either skip them, or replace the old OCR text with the new OCR text. Previously, the OCR text would be appended to the currently stored text, which may include the results from a previous OCR job.
- Resolved an issue with OCR results not getting imported properly.
- Improved OCR speed when using ABBYY Recognition Server.
- The OCR task in the Insight tab's Workflow section now uses the same logic as the OCR Candidates task.

Searching

- The "Export" search field has been renamed to "Export ID".
- Added an "Has Attachments" category to the Features facet.
- Added a "Batched" category to the Features facet, containing the items that have been assigned to a coding batch in Intella Connect.
- Registry artifacts can now be skipped when searching for the direct and top-level parents in the item hierarchy. See the Search tab in the Preferences window.
- Resolved an issue with saved searches referring to items that no longer exist after a re-index.
- Resolved an issue with visualized tag queries not updating their result sets after a re-index.
- Resolved an issue with Ctrl-clicking and Shift-clicking not working in certain facets when the facet was being filtered using user-entered text.

Results

- Added a Geolocation column to the Table view, reporting the longitude and latitude of items such as digital camera photos.
- Added a Conversation Index column, reporting the PR_CONVERSATION_INDEX property or Thread-Index header.
- An "Analysis" table column group has been added, containing columns that indicate items whose content has been processed by content analysis, email threading and OCR.
- A divider can now optionally be drawn in the Table view, dividing the rows into groups that have the same value in the sorting column. For example, one can group items on their email subject line. Note that not all columns support this divider.
- The CSV export option can now export arbitrary fields from the Raw Data section of an item. An example use case is exporting of the PR_... MAPI properties of the selected items.

Previewer

- Instant message types such as SMS, MMS, iMessage and the various chat clients supported by the cellphone extraction tools are now processed similar to how Skype messages are processed and displayed: all messages between two people or in a group chat are combined into items that cover the messages of a single day, with the option to navigate to the previous and next day in the conversation. This improves the ease of review of such instant message types.
- Added support for natively previewing OpenDocument documents.
- Removed the preference for the maximum number of pages limit. This used to limit the maximum number of pages shown in the Preview tab. In its place comes a preference for the maximum file size, which defaults to 10 MB.
- Many improvements in rendering PDFs. This also affects the Preview tab for other item types, such as MS Office documents.
- CSV and XLS files now render with auto-fitting of columns in the Preview tab (optional for XLS).
- Added support for previewing and exporting various image file types: Windows icons (ICO files), HDR, Apple icons (ICNS), IFF, PCX, Photoshop (PSD), SVG, WMF/EMF (partial).
- For XLS files, text is no longer truncated using scientific notation in the Preview tab, unless the cell in the original file is set to use scientific notation.
- The Headers tab now preserves the indentation in the header text.
- The PR_MESSAGE_FLAGS value in the Raw Data tab now shows a human-readable value.

- Resolved an issue with the Previewer not showing the Attachments tab when viewing calendar items.
- Resolved an issue with the Words tab listing duplicate words.

Social Graph

- The Social Graph has been extended to support all forms of communications. Before it was limited to showing only emails. Now, it also supports phone calls and chat messages (SMS, MMS, iMessage, Skype, etc.).
- The Social Graph now merges address nodes occurring in the same identity – see the Identities section for more information. This reduces graph complexity and improves the informational value of the display.
- An "Edges" filter has been added with three possible states: "All", "At least one Identity" and "Only Identities". This can be used to filter out edges that do not involve identities. This is useful in cases where sufficient effort went into the modeling of identities and the communication with other addresses is no longer of interest.

Tagging

- The tag hierarchy can now be rearranged, i.e. the parent tag of a tag can be changed.

Keywords tab

- Resolved an issue with keyword queries containing wildcards always reporting "0" in the Hits column.

Redaction

- Changed the settings in the default redaction profile so that only limited metadata is contained in exported redacted items.

Exporting – Original Format

- File names are no longer truncated to 120 characters when exporting on Windows 10, as the limits for file name lengths have been increased on that platform.
- Resolved an export error that would occur when exporting items typed as "Email Headers".

Exporting – PDF

- The pages can now be numbered automatically.

- Added support for Open Type font (OTF) files.
- Various fixes and improvements for exporting MS Office files to their native rendering.
- Resolved an issue with redacted attachments and embedded items being exported incorrectly.
- Resolved an issue with (partially) transparent pixels in PNG files being rendered incorrectly.

Exporting – PST

- One can now export directly to the PST root folder.
- Resolved an issue with MSG files contained in a ZIP file that could not be exported to a PST file.
- Resolved several issues where specific types of calendar files could corrupt the PST file they were being exported to.

Exporting – Load Files

- All PDF exporting improvements apply to the exporting of load files as well.
- Added an "Has extracted or OCRed text" field.
- When exporting items as images in a non-PDF format (e.g. TIFF or PNG), PDFs can now optionally be generated as well.
- Added support for exporting to Multi-page TIFFs.
- One can now export arbitrary fields from the Raw Data section of an item. An example use case is exporting of the PR_... MAPI properties of the selected items.
- When skipping items, the document type can now optionally be mentioned in the placeholder text.
- The unit of the Size column can now be bytes, kilobytes, megabytes or gigabytes.
- Added the Page Count field to Opticon (OPT) files.
- Resolved an issue with an incorrect load file being created when export errors occurred.
- The "Relativity" load file format is no longer marked as "experimental".

Upgrade Notes

Intella 2.1 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 evidence is re-indexed 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.

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 takes considerable time, comparable to what it took to index the original case.

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

Cases made with Intella 1.8.x or older are not supported.

Cases made with beta versions are not supported and should be recreated.

Intella 2.0.1

Released: January 24, 2017.

Highlights

- Added support for **custom designations** to exported PDFs and load file images.
- Added support for **multi-page TIFFs**.
- Improved **indexing error reporting**.
- Various **performance and stability** improvements.

General

- Added support for multi-page TIFFs. Such images are now displayed, redacted and exported in a way that reveals all pages in the image. The Page Count column shows the number of images inside the file.
- Added a command-line option for listing the source definitions of a case to an XML file.
- Various minor UI improvements.
- Resolved an issue with the dongle driver causing a BSOD during installation.
- Resolved an issue with the presence of environment variables from other applications causing problems when opening cases.
- Resolved an issue with the event log of cases made with Intella 1.9.1 or older failing to export.

Indexing – General

- The maximum text length of a document is now set to 50M (52,428,800) characters in the 64-bit version and 10M (10,485,760) characters in the 32-bit version. Any text beyond that point is ignored. This prevents memory issues when indexing very large textual files, such as log files and CSV files. The limit can be adjusted on a case-specific basis via the case.prefs file or globally via the Intella.l4j.ini file. A future Intella version will also make this configurable via the user interface.
- Improved error reporting, both in the indexing progress user interface and the log files.
- Added disk image validation: when trying to add a disk image source using segments that relate to different images, an error is now shown.

- Added support for certain date formats found in Cellebrite UFED reports that could not be parsed before.
- Added support for the deleted_state property in Cellebrite UFED reports.
- Resolved an issue with geolocation coordinates in XRY reports not being processed.
- Geolocation coordinates are now validated before being processed.
- Improved memory usage and stability when indexing MS Exchange EDB files.
- Resolved an issue with folder selection of a Dropbox account not working when selecting the root folders.
- Resolved an issue with encrypted emails attached to PST emails not indexing properly.

Indexing – Load Files

- Resolved an issue with incorrect handling of separator chars inside multi-value cells.
- Resolved an issue with Location and MIME Type columns that failed to import.
- Improved performance when importing tags via a load file.
- Added a usage warning in the load file import wizard.

Content Analysis

- Usability improvements in the Content Analysis dialog.
- Resolved an issue with the Regular Expression Assistant's preview text not fully highlighting a hit if there is a line break inside the matching text.
- Resolved an issue with skin tone analysis producing errors on certain types of images.

Searching

- Improved the algorithm used for the text filter functionality that is available in some facets. This results in a more accurate filtering of the facet's values.

Results

- Folders extracted from an archive no longer show a size of 0 bytes.

Previewer

- The Image tab, used for displaying load file images, now remembers the last used page fit mode.
- Resolved an issue with certain JPEG files not displaying nor exporting properly.

- Resolved an issue with the Attachments tab not being shown when opening a case made with Intella 1.8.x.
- Resolved an issue with the keyword hit navigation buttons not being shown when previewing a Skype conversation item.
- Resolved an issue with paragraphs not expanding or collapsing properly when clicking repetitively and very fast on the expansion knobs.

Tagging

- Resolved an issue with the deletion of a hierarchy of tags in the Tags facet resulting in other, non-related tag groups no longer showing their tags in the Details table.
- Resolved an issue with the Annotations History window producing an error upon opening of the window.

TEAM

- Resolved an issue with work reports containing hierarchical tags that would fail to import.

Exporting – General

- Resolved an issue with problematic items being reported twice in the export report: once with "Exported: False" and once with "Exported: True".

Exporting – PDF

- Added the ability for custom designations, e.g. texts like "Confidential" and "For attorneys' eyes only", to be placed in one of the corners of the produced PDF. The designations that are added to a specific item are controlled using tags.
- It is now possible to have headers and footers centered at the top and bottom of a page, in addition to the four page corners.

Exporting – PST

- Improved error handling when exporting to a PST fails.

Exporting – Load Files

- All PDF exporting improvements apply to load files as well.
- Performance improvements in image creation through the increased use of multithreading and smarter gray-scaling algorithms.

- "-1" values that represent unknown values in various columns are now suppressed in the export.
- Added a usage warning in the load file export wizard.

Upgrade Notes

Tasks – The storage format of indexing tasks (e.g. for the automated running of keyword lists, applying tags, etc.) has changed in Intella 2.0. Tasks in cases made with 1.9.1 and earlier need to be recreated from scratch.

Backwards compatibility – Intella 2.0.1 can open cases made with the Intella 1.8.x, 1.9.x and 2.0.0 versions. Cases made with beta versions are not supported and should be recreated.

Cases made with Intella 1.8.x and 1.9.x do not require any case conversion or re-indexing. However, some functionalities and improvements may not be available for such cases.

Cases made with Intella 1.7.x or older are not supported.

While we aim to ensure full backwards compatibility with older cases and older Intella versions where we reasonably can, opening a case made with an older Intella version in a newer version may result in that case no longer opening properly in the older version. We strongly recommend to always create a backup of the case before upgrading.

Intella 2.0

Released: November 3, 2016.

Highlights

- Updated and **modernized the user interface**.
- Added a **Geolocation** results view, showing the geographic locations of search results, e.g. based on GPS data and IP addresses.
- Added a **Histogram** results view, showing the date distribution of search results.
- Added a **Review** tab, for convenient viewing of all items in a set.
- Added new cloud sources: **Dropbox**, **Office 365 (incl. OneDrive)**, **SharePoint, Gmail**.
- Added indexing of **virtual machine** images (VMDK and VHD formats).
- Completely redesigned user interface for **importing load files**.
- Added detection of **Bitcoin** cryptocurrency files.
- **Indexing performance** improvements, both raw indexing time and when adding additional data to a case.
- Added **regular expression**-based detection of text patterns, e.g. bank account numbers. A **Regular Expression Assistant** is included for constructing the expressions, together with a library of example expressions.
- Added **skin tone analysis** of images.
- Added several **table columns**, e.g. covering the number of recipients of emails and other communications, passwords and certificates of decrypted items, and others.
- Added a **Recipient Count** facet.
- Refined the classification of **embedded items**, and consequently improved the suppression of **irrelevant items** using this improved classification.

General

- Intella 2.0 offers an updated and modern user interface.

Case Management

- Improved the handling of corrupt cases, increasing the chance of being able to open them. While corrupt cases can no longer be relied upon for future use, this might let the user salvage any work product from the corrupt case.

Indexing - General

- The minimum and recommended amounts of memory required for indexing have been increased.
- Added support for virtual machine images in VMDK (VMware) and VHD (Hyper-V, VirtualBox, XenSource, ...) format. See the User Manual for restrictions on file formats.
- Added detection of Bitcoin wallets and blockchain files. Supported Bitcoin applications are: Bitcoin, Dogecoin, Litecoin, Multibit Classic and Multibit HD.
- Added support for ZIPX files.
- Added support for ISO images in UDF format.
- Indexing performance improvements:
    - Improved parallelization inside and between crawler processes and smarter file usage improves the overall indexing time for new and re-indexing cases. Speed improvements up to twice as fast have been reported.
    - Other improvements specifically targeted the time needed for the "Index new data" operation. Adding a few files to a large case is now a lot faster. Speed improvements up to four times as fast have been reported.
    - The cost of the "Analyze paragraphs" indexing option has been greatly reduced. The option now typically imposes a cost of < 10% of the total indexing time.
- The "Index content embedded in documents" option has been replaced by the "Index images embedded in emails and documents" option. Differences:
    - The new option affects the processing of child items found in documents (Word, PDF, etc.) and emails. Previously it would only apply to documents.
    - The notion of "embedded" and "attachment" has changed. Previously, all direct child items of documents would always be classified as "embedded item", and all direct child items of emails would become "attachments". Now it depends on whether the item is an image and how that image is handled when its parent item is displayed. When the image is visible as part of its parent's native rendering (commonly referred to as an "inlined image"), it is now classified as "Embedded image". All other child items, including any non-inlined images, are classified as "Attachment".
    - Where necessary, Intella will stay on the safe side. For item types where the native application typically supports the inline display of images but Intella does not, all child items are classified as "Attachment". Examples are images that are part of a Contact in a PST file. This matters as the "Embedded image" category is now also part of the suppressed set of items when the "Hide Irrelevant" option is turned on, see below.

    - As the new option now also applies to inlined images found in emails, the performance gain obtained by turning this indexing option off will typically be larger than before.
- Added an option in the preferences to check for the presence of the case's evidence files on opening of the case.
- Added support for indexing virtual files in disk images, such as the Master Boot Record.
- Several improvements to the processing of MS Office files.
- Several improvements to the processing of RTF files.
- Several improvements to the processing of cellphone dumps.
- Improved the body selection algorithm for emails in PST, MSG and EDB files that have their body stored in multiple formats (plain text, HTML and/or RTF).
- Missing items in a PST file are now recorded in the Exception Items category in the Features facet.
- Extended the metadata extracted from JPEG images and improved the processing of JPEG metadata containing non-ASCII characters.
- Added extraction of metadata from PNG, GIF, BMP, TIFF, WebP, PSD, ICO and PCX image files.
- Improved the accuracy of IBM Notes NSF file type identification, reducing the number of false positives.
- Added support for detecting Adobe FrameMaker files.
- Added support for detecting PCF and ICO image files.
- Added support for Lotus Notes ID files with non-ASCII identity names.
- The Suggest button in the Case Editor now uses the last used parent folder as a location for the new case folder.
- The user interface for importing OCR-ed items now shows the number of failed items at the end of importing.
- Improved error reporting when indexing a folder source and part of the folder cannot be read due to lack of access rights.
- Improved the default name given to disk image sources.
- Resolved an issue with indexing email metadata in PST and MSG files, where the contents of the Sender header would be reported as the value of the From header.
- Resolved an issue with indexing getting stuck on processing certain MS OneNote files.
- Resolved an issue with certain types of virtual folders in AD1 disk images not being recognized as such, which had consequences for indexing performance.
- Resolved an issue with disk image indexing failures not resulting in the disk image being registered as an exception item.

- Resolved an issue with PowerPoint documents failing to index properly due to missing embedded images.
- Resolved an issue with the indexing of broken SQLite files resulting in certain temporary files not getting deleted.
- Resolved an issue with images in PDF documents failing to extract.
- Resolved an issue with certain types of dates in PDFs failing to have their time zone parsed correctly.
- Resolved an issue with the Source wizard listing SQLite 2 files being supported. Only SQLite 3 is supported. Also, SQLite 2 files are now properly reported as Extraction Unsupported in the Features facet.
- Resolved an issue with the crawl progress not showing properly when Intella did not have the required access permissions for one or more evidence files.
- Resolved an issue with a case failing to index when indexing via the command line.
- Resolved an issue with very large "paragraphs" blocking indexing when "Analyze paragraphs" was turned on. This could occur when indexing certain types of log files.
- Resolved an issue with Intella moving evidence files out of the evidence folder into the case folder during indexing of a load file or Lotus Sametime chat dump.
- Resolved the "There is an incompatible JNA native library installed on this system" error message.
- Resolved an issue with timestamps in "Zulu time" notation not parsing correctly.
- Due to differences in how the Optimization folder is now used, its recommended free space is now 1 x the evidence size rather than 2 x the evidence size.

Indexing – Cloud

- Added support for indexing Dropbox accounts. Both personal Dropbox accounts and Dropbox for Business accounts can be indexed. File versions can be extracted and are presented chronologically.
- Added support for indexing Office 365 accounts. Retrieved information includes users, user groups, emails, attachments, folders, instant messages and files stored in the associated OneDrive. Intella can also connect to the cloud SharePoint instance associated with the Office 365 account.
- Added support for indexing SharePoint instances. Retrieved information includes basic site and owner information, users, hierarchically nested sites, conversations, posts, attachments, document libraries, and files and folders from the document libraries. Both standalone and on-premise instances can be indexed, as well as instances hosted in the cloud as Office 365 SharePoint

services. The following authentication protocols are supported: OAuth2 (for cloud instances), Kerberos, NTLM and basic authentication.

- Added support for indexing Gmail mail accounts. The retrieved information can optionally be restricted to a specific date range. Benefits of using the Gmail connector over the generic IMAP connector are: better performance, more accurate data representation (e.g. folders vs. Gmail's Labels, threads), and a read-only data connection ensuring that no data is altered.
- All cloud connectors support multi-threaded access to the cloud source to make use of the provided bandwidth as best as possible. All cloud connectors feature automatic retry logic, in case retrievals fail due to intermittent network problems or when exceeding the service's throttling policy limits.
- To improve usability, the list of source types in the Source wizard has been divided into two columns: file-based sources and server-based sources.

Indexing - Load Files

- This releases offers a completely redesigned user interface for importing load files and load file overlays. The number of load file-specific wizard sheets dropped from 13 to just 3 sheets. The new user interface offers more control options on how the load file is imported, shows a live preview of how the data is parsed, and gives better validation and error messages.
- Intella now bundles Relativity export and import templates that are designed to be compatible with each other, so one can export items out of one Intella case and into another case using these templates.
- When a load file does not contain information to populate the Type column, it can now optionally be derived by Intella from the bundled binary items.
- When adding a load file overlay, the method for matching load file items with existing items in the case can now also be based on the Document ID.
- The node in the Location facet representing the load file is now showing the source name, rather than both the file and source name.
- The "Import ID" column has been renamed to "Document ID". Furthermore, a "Parent Document ID" has been added.
- Resolved an issue with load file import incorrectly deduplicating images and/or texts when the associated items in the load file are also duplicates.

Content Analysis

- Added regular expression-based detection of text patterns, such as bank account numbers, monetary values, shipment tracking numbers, patent numbers, etc. This functionality comes with a Regular Expression Assistant for constructing

and testing regular expressions on sample text. This Assistant also offers a library of example regular expressions.

- Added skin tone analysis. This analyzes selected image files for the presence of human skin colors. The images are categorized in Strong, Medium and Weak categories. Supported file formats include JPEG, PNG, GIF and TIFF. Note that the methods used for skin tone analysis are highly heuristic and will typically produce false positives and false negatives.
- The new Money category finds potential monetary amounts mentioned in document texts.
- The new Time category finds potential time-based references like hours, weekdays, dates, references like "after 7 p.m.", etc.
- All items on which Content Analysis is run are now registered in the "Content Analyzed" category in the Features facet. Previously, only items that had at least one extracted entity were put in this category.
- Resolved an issue with the default content analysis categories (Credit Cards, SSNs, Phone Numbers) not being applied on texts obtained through OCR.

Indexing Tasks

- The user interface for creating tasks has been redesigned, making it easier to define tasks while at the same time allowing for more powerful tasks.
  Each task now consists of three parts:
  - One or more search operations, e.g. a keyword search, date search or tag search. Multiple searches can be combined using an AND or OR.
  - Zero or more "item set refinement" operations, applied on the result of the search operation. These operations take an item set as input and produce another item set. Examples are filtering of duplicates, filtering of irrelevant items, finding the parent items. Multiple filter operations can be pipelined here.
  - One or more actions, e.g. tag or export the produced item set.
- Added "Content Analysis" as a task action type. This runs one or more of the Content Analysis processors on the resulting items.

Insight

- The loading time of the Insight tab has improved considerably.
- Optimized the layout of the boxes in the Insight tab.
- The entries in the "Top 100 visited URLs" and "Top 100 visited domains" tables can now be queried for by double-clicking on them.
- Improved the presentation of Insight components that have no data to show.

- Resolved an issue with Internet Explorer cache entities such as cookies being reported as browser history entries.
- Resolved an issue with tasks in the Workflow section not being marked as completed when they were done via a different route, e.g. via the menu bar.
- Resolved an issue with the Insight tab failing to export after a source had been added or the case had been re-indexed in that same session.
- Resolved an issue with certain Insight components failing to refresh automatically when case data changed. They would only update properly when reopening the case.
- Resolved an issue with double-clicking on tree nodes in the Notable Registry Artifacts section resulting in case-wide queries for all User Accounts/Time Zones/etc., rather than the ones specific to the machine represented by that tree branch.
- Resolved minor usability issues.

Searching

- The Statistics view has been removed, its parts being placed elsewhere in the user interface.
- The Keywords functionality, part of the former Statistics view, has become a top-level tab in the main window. This gives it a lot more screen space to work with.
- The Keywords statistics functionality now allows for an arbitrary combination of item text fields (e.g. body, title, location, etc.) to be searched, rather than restricting the search to either a single field or all fields. This brings it in line with how manual keyword search works.
- Added a Recipient Count facet, letting the user query for the number of recipients of communications. The primary use case for this is filtering out all emails, chat messages etc. that are between two parties and no one else.
- When the "Hide Irrelevant" filter is switched on, it now also filters out embedded images. See the Indexing section for how this category is established. This may result in more items being filtered out, which reduces review time when items are typically reviewed in their native rendering.
- Added and changed categories in the Features facet:
    - Has Geolocation – indicates whether a geolocation has been associated with the item, either as part of the original metadata or through an IP geolocation lookup.
    - Text Fragments Extracted – indicates whether heuristic string extraction has been applied on a (typically unrecognized or unsupported) binary item.

    - "Embedded" has become "Embedded images". The definition of this category and the "Attached" category has been refined. See the Indexing section for details.
    - "Empty document" has become "Empty documents".
    - "Unsupported" has become "Extraction Unsupported".
- The nodes in the Location facet tree that correspond with sources can now be sorted alphabetically or by date added. See the "Display and Locale" tab in the Preferences.
- Improved usability of the date picker in the Date facet.
- Resolves various issues with phrase search corner cases.

Results

- A Geolocation results view has been added, showing the geolocation of items on a zoomable world map. Items are grouped in clusters that break down into smaller clusters when zooming in. Map tile data for the first zoom levels has been bundled with Intella. For deeper zoom levels a connection with a tile server is required. Each cluster of items can be clicked, which lists the items in the Details view beneath the map. Geolocations are obtained from:
    - Geographic coordinates stored in the EXIF data of digital camera photos.
    - Geographic coordinates stored in items extracted from cellphones.
    - Email sender locations, using a geolocation lookup of the sender's IP address.
- A Histogram results view has been added, showing the timestamps of items as a time-based bar chart. The date field(s) on which the chart is based can be selected by the user. By default, the Family Date is used, ensuring that practically every result item will be accounted for in this chart. The Histogram can toggle between showing years or months. One or more bars can be selected by clicking on the bars or dragging in the chart. This will list the respective items in the Details view beneath the chart.
- Added columns showing the number of recipients of communications such as emails, chat messages and phone calls:
    - Recipient Count – counts all recipients.
    - Visible Recipient Count – excludes email Bcc recipients.
    - Bcc Count.
- Added Password and Certificate columns, showing the credentials that have been used to decrypt an encrypted item. The values shown here are subject to full-text search, as part of the Summary field.
- Added a Source IP column.
- Added a Has Geolocation column.
- Added a File Extension column.

- The “Embedded Item” column has become “Embedded Image”.
- Resolved an inconsistency in the Page Count column. It now makes a proper distinction between “zero items” (showed as “0”) and an unknown page count (shown as an empty cell).
- Resolved an issue with a checkbox for cell text truncation showing in the table column chooser. This functionality only affects the CSV export of the table and should only have been visible in the corresponding export dialog.

Previewing

- Added a Review tab, combining the Details list and an embedded Previewer into a single window. The result is a user interface that allows for convenient browsing of a list of search results without double-clicking and having to handle a lot of Previewer windows.
  The Review tab can be launched by right-clicking on elements in the Results or Details view and selecting “Review n items”. This opens a new top-level tab in which the selected items can be explored. One can have multiple Review tabs open simultaneously.
- Added a Geolocation tab, which shows the geolocation associated with the item on a geographical map.
- The Properties tab now shows the longitude and latitude coordinates found in EXIF metadata.
- Improved rendering of hierarchical tags through the “Expand top-level tag groups in item properties” setting. When enabled, a Tag hierarchy like “Location” > “USA” will show as “Location: USA” in the Tags line of the Contents tab, rather than “Location/USA”.
- Added support for rendering EMLX files in their native layout.
- Improved navigation of keyword search hits, scrolling the text in such a way that the context of the hit is properly revealed.
- Improved the hit highlighting algorithm for phrase searches.
- Added text wrapping to the Properties tab, making it better able to display long values.
- The “page fit” mode (Fit Width, Fit In Window or Actual Size) of the Preview tab has been made persistent: subsequent displayed items are now shown using the last used mode.
- Resolved an issue with decrypted documents not showing their native rendering.
- Resolved an issue with Intella crashing when right-clicking in the Contents tab.
- Resolved an issue with missing hit highlighting in the Save History in the Properties tab.

- Resolved an issue with the text in OpenOffice documents being rendered in tiny fonts in the Preview tab.

Tagging

- Several usability improvements in the dialogs used for adding, removing and renaming tags.

Redaction

- Added the ability to clear all redactions of an item.
- Removed duplicate information in the default redaction profile.

Event Log

- The Annotation History functionality that was disabled in Intella 1.9.1 due to case database changes has been enabled again in this release.
- When exporting (parts of) the event log, the user is now given the option to export related item IDs to separate text files (one file per event), include the item IDs in the exported file, or skip them altogether. The primary use case of this is to export the IDs of tagged items.
- Added support for exporting the event log to Excel (.xlsx) format.
- Resolved an issue with the event log becoming corrupt when indexing was interrupted.

Exporting – General

- Resolved an issue with the manually entered export destination folder being reset when an export template was selected.
- Resolved an issue with certain social graphs failing to export.

Exporting – PDF

- Resolved an issue with decrypted documents not exporting to PDF in their native rendering.
- Resolved an issue with EML emails attached to other emails that would not render properly in PDF.
- Resolved an issue with the text in OpenOffice documents being rendered in tiny fonts when exporting in original view mode.
- Resolved an issue with certain PDFs having an incorrect document orientation.
- Resolved an issue with export errors related to the creation of the item's original view not being reported.

Exporting – PST

- Improved support for MS Outlook 2016.
- Several stability improvements.

Exporting – Load Files

- Added an attachment count field.
- When using custom fields, the selected field type and column are now shown in the field chooser table.
- Resolved an issue with the body of redacted emails not being suppressed in Summation load files.
- Resolved an issue with unselecting the "Exclude content" checkbox having no effect.

TEAM

- Added support for opening a remote case on the command line.
- Resolved an issue with a Work Report not being properly restricted to the selected set of items, when requested to do so. Instead, all items would be covered in the work report.
- Several stability improvements, resulting in a higher likelihood of work reports exporting successfully when the case contains broken case data files.
- Resolved an export error caused by illegal MIME type values in the evidence data.
- Improved logging when the TEAM Manager or Connect server can no longer be reached.

Miscellaneous

- Changes to the logging configuration are now effective immediately; it is no longer required to reopen or reshare the case.
- Resolved an issue with harmless yet annoying error messages popping up because of an issue with the Chinese translation files.
- Improved the explanatory text of the error dialog that is used for reporting errors that are not explicitly handled in the code.

Upgrade Notes

Tasks – The storage format of indexing tasks (e.g. for the automated running of keyword lists, applying tags, etc.) has changed. Tasks in existing cases need to be recreated from scratch.

Backwards compatibility – Intella 2.0 can open cases made with the Intella 1.8.x and 1.9.x versions. Cases made with beta versions are not supported and should be recreated.

Cases made with Intella 1.8.x and 1.9.x do not require any case conversion or re-indexing. However, some functionalities and improvements may not be available for such cases.

Cases made with Intella 1.7.x or older are not supported.

While we aim to ensure full backwards compatibility with older cases and older Intella versions where we reasonably can, opening a case made with an older Intella version in a newer version may result in that case no longer opening properly in the older version. We strongly recommend to always create a backup of the case before upgrading.

Intella 1.9.1

Released: April 13, 2016

Highlights

- Added an **Insight** view, giving an extensive yet concise overview of **suspect behavior** gathered from browser histories, Windows registries and other sources. Examples are most often visited sites, connected USB storage devices, connected networks, system and service accounts, social media usage (e.g. Facebook, LinkedIn), webmail usage (e.g. Gmail), cloud storage usage (e.g. DropBox, OneDrive), online productivity sites (e.g. Google Docs, Office 365), etc.
- Added support for FTK's **AD1** disk image format.
- Added indexing of the **Windows registry**.
- Added indexing of **browser histories** of all major browsers.
- Added support for **MS OneNote** files.
- Added **text extraction** from unsupported binary files.
- Improved **Type facet** tree structure.
- Extended **keyword list statistics** with user-defined columns.
- Greatly improved **tagging speed**, often 1-2 orders of magnitude.
- **Indexing speed** improvements.

General

- This version incorporates a new icon set.
- The audit trail functionality has been replaced by an exportable event log. The binary events.log file, which has been around for some time and holds all information of the audit trail, can now be exported to a CSV file. When exporting the events, one can choose what types of actions need to be exported (e.g. related to tagging, indexing or exporting), filter events by date and restrict the exported events to particular users only.
- Certain harmless error messages in the log file, e.g. about search operations being cancelled during application shutdown, are now suppressed.
- Several minor user interface improvements.
- Resolved an issue with a case containing an IMAP source that refused to open.
- Improved the help text accompanying the case backup option.

Indexing

- Added optional indexing of all keys and values in the Windows registry. When turned off, the extraction of particular artifacts necessary for the Insights tab (see below) will still take place.
- Added optional indexing of browser histories. Supported browsers are Internet Explorer/Edge, Chrome, Firefox and Safari.
- Added optional extraction of human-readable text from binary files whose file type is not recognized or supported by Intella. By default this option is turned off due to the impact it has on indexing speed and case size and because the outcome may be noisy and require forensic insight to interpret correctly.
- The Items sheet in the Source wizard has been extended with additional options, giving greater control of the types of items that Intella will index. Previously this sheet would let the user toggle the processing of mail archives, file archives, embedded content in documents and deleted emails. New options are:
    - Chat messages – controls the processing of Skype and Pidgin databases, Bloomberg XML dumps, WhatsApp messages in cellphone reports, etc.
    - Databases – controls the processing of non-Skype SQLite databases.
    - Windows registry – see above.
    - Browser history – see above.
    - The deleted emails option has been extended to cover Notes deletion stubs as well.
    - Text fragments from unsupported and unrecognized file types – see above.
- Added support for MS OneNote Notebooks. Supported versions are OneNote 2010, 2013 and 2016.
- Added support for Mac OS property lists (.plist files). The ASCII, XML and binary variants are all supported.
- Improved detection of MS Office formats, relying less on known file extensions.
- Added support for AD1 (v3 and v4) disk images.
- Added support for ExFat file systems.
- Added support for the LZMA2 and PPMd compression methods.
- Added support for XZ archives.
- Improved support for broken ISO archives.
- Added support for indexing Pidgin chat logs and accounts.
- Various indexing speed improvements, e.g. better multi-threading on disk image indexing, reduced overhead on large sets of loose files, reduced indexing time of very large archives, removed multi-threading bottlenecks on NSF files, cellphone report and Sametime dumps.

- The check on start-up for the availability of the evidence files has been made optional on a per case basis.
- Several refinements to EDB file processing.
- Several refinements for rendering and text extraction of MS PowerPoint files.
- Several refinements to the indexing of SQLite databases.
- Improved processing of generic Notes documents.
- The list of indexing tasks can now be reordered.
- Conditions in a task definition can now optionally deduplicate the determined set of items.
- Verified that files made with MS Office 2016 will index properly.
- For File and Folder sources the Attach Evidence dialogue now allows for the selection of evidence files. Previously it would only support the selection of folders.
- Resolved an issue with indexing tasks defined during source definition not being stored correctly. This affected cases where multiple sources were defined in sequence and indexed all at once using the "Re-index" button.
- Custodian names can now be changed.
- The UI will no longer let the user enter a custodian name containing the slash character ('/').
- Resolved an issue with the "Include subfolders" and "Include hidden folders and files" options in a File or Folder source being ignored.
- Resolved an issue with certain HTML and XML files not being classified as such.
- Resolved an issue with HTML files using UTF-16 encoding failing to index.
- Resolved an issue with UTF-16 text files containing non-ASCII characters not being classified properly.
- Resolved an issue with indexing becoming unstable when encountering IBM Notes deletion stubs.
- Resolved an issue with crawling terminating immediately when a single file or folder in the evidence folder is being denied access to.
- Resolved an issue with the associated phone number file not being taken into account when indexing an UFDR cellphone report.
- Resolved an issue with the importing of load files containing images in PDF format.
- Resolved an issue with the importing of load files causing existing tag group columns to disappear.
- Resolved an issue with importing load files that contain hierarchical tags.
- Resolved an issue with certain PDF metadata fields not being full-text indexed.
- Resolved an issue with the port configuration of an IMAP source not being used.

- Resolved an issue with certain encrypted NSFs not being detected as encrypted, causing the decryption step to be skipped.
- Resolved an issue with encrypted (and possibly decrypted) NSF files not being marked as such in the results list and item properties.
- Resolved an issue with the importing of OCR-ed items replacing rather than extending the existing stored text for those items.
- Resolved an issue with Window directory junction file system links being followed during crawling.
- EDB sources are no longer labeled as “experimental”.

Searching

- The tree structure of the Type facet has been reorganized to make it easier to oversee and to better suit investigator needs.
- Added an “All Items” branch to the Features facet.
- The Saved Searches facet now has a separate branch for the default saved searches, keeping them separated from the user-defined saved searches. The “Default searches” node is the first in the list, followed by the user branches in alphabetical order.
- The Keywords table in the Statistics view can now have columns representing saved searches. This allows for the creation of a matrix where a keyword list can be compared against virtually any other aspect (or combination of aspects) that one can query on, e.g. a date range, a tag, item type, review status, etc.
- The accounts in the Chat Account facet now have a suffix indicating the chat client, e.g. Skype, ICQ, Jabber, ...
- Resolved an issue with the Delete menu option in the Saved Searches facet becoming inactive.
- Improved handling of unusual quote characters in keyword queries.
- Resolved an issue with Intella crashing when entering non-existing dates in the Date facet.
- Resolved an issue with the Show Parents search option not functioning correctly on items originating from DD disk images.

Results

- Added an Insight tab to the main window, giving a concise and exportable overview of suspect behavior gathered from browser histories, Windows registries and other sources.
  The Insight tab holds the following information:
  - Basic case information such as creation date, location and evidence size.

    - Various total and deduplicated item counts: all items, encrypted & decrypted, exceptions, recovered items, ...
    - A quick overview of encountered item types and their volumes.
    - A visualization of the item volume per custodian.
    - Top 100 visited URLs and Top 100 visited domains, per browser history as well as cumulative for the entire case.
    - A breakdown of visited URLs w.r.t. social media usage (Facebook, Twitter, ...), cloud storage (DropBox, OneDrive, ...), webmail (Gmail, Hotmail, ..) and productivity (Google Docs, Office 365, ...). The statistics can be shown per browser history or cumulative for the entire case.
    - A timeline of dates encountered in the evidence.
    - An overview of detected user accounts (Windows, Skype, ...).
    - A summary of the most used email addresses and email server host names.
    - Notable registry artifacts, e.g. network interfaces, recent files, shellbags, ...
    - USB Mass Storage Devices that have been connected.
    - Networks that have been connected to; both wired and wireless.
    - A visualization of significant words encountered in the text index.
    - A Workflow section, showing a list of potential next steps to refine the index (e.g. through OCR-ing and decryption) or to start the search and analysis of the case (e.g. by adding keyword lists and saved searches).
- Added a Page Count column. Currently supported are MS Word, OpenOffice documents and PDF. Note that the page count is extracted from the document's metadata, not by counting the actual pages in the document.
- Improved the speed of sorting on Family Date.
- Renamed the "Parent ID" column to "Direct Parent ID" and renamed "Child IDs" to "Direct Child IDs".
- Keyword search results are now updated immediately when the set of excluded paragraphs changes.
- Improvements to the display of items in the List view.
- Resolved an issue with incorrect counts being shown in the Duplicates column.
- Resolved an issue with excluded paragraphs not being taken into account with keyword searches containing wildcards.
- All child items of a cellphone report now inherit the IMEI and IMSI properties.
- Resolved an issue with the Histogram in the Statistics view using overlapping time intervals.
- Resolved an issue with the Language column always showing "Unidentified".

Taggings

- Greatly improved tagging speed, often one or two orders of magnitude.
- The Quick Tag buttons in the Previewer and the tag names shown in the Searches list now take the tag hierarchy into account.
- Improved the display of selected tags in the Tags facet.
- Resolved a regression with the Add Tags dialog not filtering the tags list anymore when entering the name of a tag.
- Exporting of the tags list in the Tags facet now supports hierarchical tags.

Previewer

- The Actions tab now also displays information on tagging, flagging, commenting, redaction and OCR actions that have taken place on the item. The timestamp is no longer displayed. To obtain this information, one can use the new event export functionality.
- The Contents tab now scrolls horizontally if necessary when navigating from keyword hit to keyword hit, in order to fully reveal the hit.
- Typing Ctrl+P now triggers the Print Tab function.
- Several improvements for displaying PDFs.
- Resolved various hit highlighting issues, e.g. with phrase or proximity queries containing nested Boolean expressions, queries involving escaped wildcard characters, text fragments including HTML markup symbols.
- Resolved the display of Skype messages sometimes lacking avatars.
- Several item loading and hit highlighting performance improvements.
- Resolved an issue with the Previewer producing an error when viewing certain chat messages.

Exporting – General

- A “Redacted items” sheet has been added to the Export wizard. The available options in this sheet depend on the chosen export format:
    - For Original Format export:
        - “Use redacted images when available” checkbox.
        - “Suppress redacted items” checkbox.
    - For PDF export:
        - “Use redacted images when available” checkbox.
    - For PST and i2 iBase/ANB exports:
        - “Suppress redacted items” checkbox.
    - For Load File export:
        - “Use redacted images when available” checkbox.

        - "Suppress natives for redacted items" checkbox.
        - "Suppress text for redacted items" checkbox, with a sub-option for specifying a placeholder text.
- Resolved an issue with the Print Report function not including the original document view when invoked on emails.
- Resolved an issue with incorrect file extensions being added to the names of exported files.
- Resolved a regression with the "Export values..." in the Export Sets facet no longer working.

Exporting – CSV

- Added an option to set the maximum length of the text in a cell to 32,000 characters. This appears to be the limit imposed by MS Excel. Cells with more than this amount of characters typically spill over to the next row when viewed in MS Excel, breaking the structure of the CSV.

Exporting – PDF

- Added an option for controlling whether OCR-produced text for images is exported.
- Resolved an issue with pages being scaled incorrectly when the evidence page format and export page format do not match.
- Several improvements for displaying MS Office documents.
- Resolved an issue with the "Original view, x pages (displayed on pages y to z)" line in the produced PDF not being translated when the Intella UI language is set to a language other than English.

Exporting – PST

- Improved exporting of emails containing a broken plain body and a correct RTF body.
- Added support for exporting to PST with MS Office 2016 installed.

Exporting – Load Files

- All changes related to PDF exporting.
- Added the ability to configure what the extracted text should be composed of. One can choose to export Properties, Main properties above body, Contents, Headers and Raw Data, in any possible order.
- Added three new custom field types:
    - EXTRACTED_TEXT

- BEG_ATTACH
- END_ATTACH

Intella TEAM

- Improved support for user names containing non-ASCII characters.
- Resolved an issue with logging in with Intella Viewer on a case shared by Intella Connect where the server has been configured to use LDAP.
- Resolved an issue with the Edit Tag option being disabled mistakenly.
- Resolved an issue with Intella TEAM Manager 1.9 failing to share a case made with Intella 1.7.x.
- Resolved an issue with the Export Work Report function failing to produce a work report.

Upgrade Notes

Undo Actions and action timestamps – To realize the much-desired tagging speed improvements, it was necessary to disable the Undo Actions functionality and the timestamps column in the Previewer's Actions tab. This functionality may be reinstated in a future release. As a workaround, exporting of the event log to CSV format may provide most of this information.

Backwards compatibility – Intella 1.9.1 can open cases made with the Intella 1.7.x, 1.8.x and previous 1.9.x versions. Cases made with beta versions are not supported and should be recreated.

Cases made with Intella 1.7.x or Intella 1.8.x do not require any case conversion or re-indexing. However, some functionalities and improvements may not be available for such cases.

Cases made with Intella 1.7.x cannot be re-indexed or extended with additional sources. These restrictions do not hold for cases made with Intella 1.8.x, i.e. they can be re-indexed and have new sources added to them.

Cases made with Intella 1.6 or older are not supported. One can however use Intella 1.7.3 to convert these cases to the 1.7 format and then open them in Intella 1.9.1.

While we aim to ensure full backwards compatibility with older cases and older Intella versions where we reasonably can, opening a case made with an older Intella version in a newer version may result in that case no longer opening properly in the older version. We strongly recommend to always create a backup of the case before upgrading.

Intella 1.9

Released: October 9, 2015.

Highlights

- Added indexing of **MS Exchange EDB** files, in their entirety or by mailbox.
- Added indexing of **Skype** databases.
- Added indexing of **SQLite** databases.
- Added **custodian** support.
- Added an **Irrelevant Items** classification, for suppressing items that have no intrinsic value to the case.
- Added support for determining advanced **keyword statistics**.
- Added the ability to **refresh a case** and pick up new evidence items.
- Several improvements to indexing **IBM Notes NSF** files.
- Added **Primary Date** and **Family Date** attributes.
- Added **tag group columns**.

General

- Improvements to automatic memory management on systems with 32 GB RAM or more.

License Management

- The Dongle Manager can now show the maintenance agreement expiration dates for the products on the dongle.
- For customers who cannot use the Dongle Manager (e.g. because their dongle cannot be plugged into an Internet-connected PC), a web page is now available through which they can upload the .c2v file of their dongle and retrieve .v2c files with license updates. See https://www.vound-software.com/dongle-update.
- When running on a trial license, a Buy Now option is now presented in the main window's menu bar and the Case Manager window.
- When running on a dongle license, a link is now shown in the Case Manager next to the dongle ID that opens the bundled Dongle Manager application.

Security

- Added the ability to disable specific cipher suites and protocols via the user.prefs file. This lets IT admins immediately disable such technologies when a security vulnerability arises.

Case Management

- When creating a new case on a network drive, the user is now shown a warning rather than an error, making it possible to create a case at such a location.
  We still recommended against using network drives: in principle they can work well when managed properly, but in practice we see lots of issues due to the use of networks or storage devices that are not suited for extensive database access, causing the case databases to become corrupt. The likelihood of that happening with local, internal disks is negligible.
- Improved error reporting when the creation of a case backup fails.
- When a case contains sources that have the "cache evidence" option switched off and Intella detects that the evidence files (or at least the roots) are no longer present when the case is opened, a warning is now displayed.
- Resolved an issue with the Case Manager refusing to close when an Unnamed Case (typically a case whose case folder cannot be found) is selected.

Indexing - General

- Intella can now index MS Exchange EDB databases. EDB files can be indexed in their entirety or restricted to one or more mailboxes. This functionality is still in an experimental phase. Supported versions are MS Exchange 2003, 2007 and 2010.
- Added support for modeling the custodians of the evidence data. When indexing a folder, one can indicate during source creation that the first level of subfolders represent the custodians. The names of these folders will then automatically be mapped to a custodian in the new Custodian facet. When indexing a single file or a different source type, the custodian name can be entered instead. Custodians can also be set later or changed using the right-click menu in the Details table.
- One can now update a case's index. This operation looks for new evidence items in the defined sources, e.g. new files in a folder source. The databases are not cleared during a refresh, so any existing items and their item IDs, tags, flags etc. are all retained, even when their evidence files are no longer present.
- Improvements for defining post-processing tasks:
  - Task conditions can now check for a tag. This makes it possible to "pipeline" tasks, i.e. use the taggings created by one task as the condition

for another task. Tasks are executed in the order they are listed, so put the tagging tasks before the tasks that depend on those tags.
    - Tagging tasks now support the use of hierarchical tags. Use slashes to separate the tag names.
    - Added a task action for exporting item metadata to a CSV file.
    - Added a task action for exporting items for OCR processing.
- Improved handling of contacts, appointments, tasks and generic documents occurring as top-level items in NSF files. These used to be modeled as emails in the Intella case.
- Added indexing of IBM Notes deletion stubs (disabled by default, requires a hidden setting).
- Added indexing of IBM Notes Sametime chat transcripts.
- Improved error reporting when (re)indexing sources whose evidence files cannot be found.
- Improved error reporting when indexing is terminated due to a disk being full.
- Several stability, performance and progress notification improvements for importing OCRed items.
- The "analyze paragraphs" setting of the first source is now also used for subsequent sources. This is necessary for producing consistent and reliable results.
- Stability improvements for using ABBYY RS4 as an OCR service.
- Improvements to the representation of folders originating from XRY cellphone dumps.
- Resolved an issue with file handles not being closed during indexing.
- Resolved an issue with embedded documents in Office Open XML documents not being extracted completely.
- Reduced certain peaks in disk space usage during indexing.
- Added detection of MS Visio .vsdx files.
- Resolved an issue with the currently displayed query results not being reevaluated after a (re-)index completes.
- Resolved an issue with indexing getting stuck on a corrupted PDF.
- Resolved an issue with notes originating from cellphone reports having duplicate content in their Raw Data tab.
- Items are no longer classified as text files based on the file extension alone. This prevents binary files whose type cannot be determined based on their binary content and that have a known text file extension from being processed as a text file.
- By default Intella tries to decrypt encrypted files using a blank password. When the Key Store was populated with passwords, the blank password was no longer used automatically. This has been fixed.

- Resolved an issue with the editing of indexing tasks involving a keyword list, MD5 list or saved search, where that list had to be reselected every time the task editor was opened.
- Resolved an issue with editing of an indexing task resulting in the task name being reset to its default value.
- Made it possible to let multiple Intella instances indexing concurrently to use the same indexing optimization folder.

Indexing – Load Files

- Custom columns can now be imported by mapping them to the tag group columns. These tag group columns are a new data modeling feature introduced in this release, see below.
- Importing of a load file in CSV format can now also use an Opticon image file. Previously this was only possible with load files in DAT format.
- Added an "Import Overlay File" item to the File menu. This can be used to extend the metadata of existing items in a case. The file can be in Concordance/Relativity format or can be a regular CSV file.
- Added an "Import ID" column, which can hold the load file's own item ID.
- Load files with images are now represented in a more natural way. Previously these images were represented as attachments, making them hard to review and adding to the item count in the case. Now they are all presented in the Images tab of the item that they relate to.
- All ASCII characters can now be used as delimiters, rather than the previously fixed list of 11 delimiter characters offered previously.
- An import template was only effective when it was explicitly selected by the user; when it was pre-selected in the Source wizard because it had been used in a previous import run, it would not take effect. This has been fixed.

Searching

- Added a Custodian facet. This represents all custodians defined during indexing or that are set manually.
- Added a Primary Date attribute. This date is determined using a configurable set of rules that select one of the extracted dates, based on item type and a preferential order of the extracted dates. This makes it possible to e.g. present the most important dates in a single Primary Date column and sort items chronologically, while still using different date types when mixing emails and documents.
- Added a Family Date attribute. Family dates build on primary dates and also take the item hierarchy into account. The family date of an item is defined as the

primary date of its top-level parent, i.e. all items in an item family have the same family date. Sorting on Family Date sorts by this date, but also enforces that attachments and nested items are placed right behind their parent. This makes it possible to review items in chronological order while maintaining a sense of their context.

- Added tag group columns: when using hierarchical tags, the top-level tags can now be used as table columns in the Details view. For example, when defining a tag "Priority" with subtags "High", "Medium" and "Low", the table column chooser will let you add a Priority column showing High, Medium or Low. Any other tags that the items may have will not appear in this column. All tags still appear in the Tags column.
- Added an Irrelevant Items feature. An Irrelevant Items category has been added to the Features facet and holds all items that during indexing were deemed to be of little value to the case. Currently this set contains all folders, email container files (e.g. PSTs), disk images, cellphone reports (e.g. UFDR files), archives, executables, load files (e.g. DII files) and empty (zero byte) files. This set may be extended and made configurable in a future release.
  Irrelevant items can be filtered from the Details view using a toggle button. Also they can be filtered from the set of items to export.
  The Irrelevant Items classification is not inherited by child items, i.e. a PST file will be classified as Irrelevant but the emails it contains will not.
- Added a Keywords tab to the Statistics view. This tab lets users calculate and export detailed statistics of the keywords in a keyword list, such as:
  - Total and deduplicated item counts for each keyword.
  - Total hit counts (counting the occurrences in the texts).
  - Item counts per custodian.
  - Number of item families and their volumes.
- Auto-tagging with keyword lists now supports the use of hierarchical tags. Use slashes to separate the tag names.
- The Phone Number and Chat Account facets can now associate contact names with a phone number/chat account, if that information is present in the evidence data.
- Saved searches involving tags can now be shared across cases. Previously this was not possible because the saved search referred to a hidden, case-specific tag identifier rather than the visible, user-entered tag name.
- Added a Native ID column. Currently this shows the IBM Notes UNID (Universal Notes ID) values from an NSF file. In the future this column may show the "native" IDs from other formats as well. A "Show Native ID Duplicates" search function has also been added, which in case of Notes UNIDs can be used to locate Notes deletion stubs.

- Added the following branches to the Features facet, as well as their corresponding table columns:
    - *Recovered*: identifies all emails that were deleted from a PST, NSF or EDB file but that Intella could still (partially) recover. These are the items that appear in the artificial "<RECOVERED>" and "<ORPHAN ITEMS>" folders of these files. The Recovered branch has four sub-branches, based on the recovery type and the container type:
        - *Recovered from PST*.
        - *Orphan from EDB*.
        - *Orphan from NSF*.
        - *Orphan from PST*.
    - *Attached*: indicates all items that are attached to an email. Only the direct attachments are reported; any items nested in these attachments are not classified as Attachment.
    - *Embedded*: indicates all items that have been extracted from a document.
    - *Unsupported*: all items that are larger than zero bytes, could be identified by Intella, are not encrypted, but for which Intella does not support content extraction.
    - *Redacted*: indicates all items that have been redacted. Items on which the Redact button has been used but in which no parts have been marked as redacted are not included in this count.
- Resolved an issue with Intella not closing properly when the user closes it in the middle of a keyword search evaluation.
- Resolved some usability issues with the right-click menu in the Tags facet.

Results

- Added a Parent ID column and Child IDs column.
- Various performance improvements to the Statistics view, resulting in the view populating faster and consuming less memory.
- The Emails statistics view now filters out illegal dates when reporting the first and last sent and received dates in a case.
- Improved the heuristics used for the Show Conversation search.
- Improved the locations of items in a case where multiple sources have the same folder structure, resolving the fact that it was impossible to distinguish them in the Location column.
- Added a column for each individual export set, showing the export IDs within that set.
- The column names in the Sort Editor are now sorted alphabetically.
- Resolved an issue with the Timeline updating very slowly, causing it to freeze the entire window for a considerable time.

Previewer

- Changed the default Previewer window size to accommodate all toolbar buttons on the left side of the window.
- The toolbar is now scrollable, so that it can be used on low resolution screens.
- The Previewer's size is now persisted and used when opening new Previewers.
- Text styling improvements in the Contents tab.
- Resolved an issue with embedded images in an email not showing up in the Preview tab.
- Resolved an issue with the Headers tab not showing the full headers for certain "multipart/alternative" headers.
- Resolved an issue with the tagging popup closing prematurely when a parent tag was selected.
- Fixed a regression with the right-click menu containing the Copy action that got lost in several tabs.
- Improved the message shown when trying to natively preview an item larger than 10 MB.
- Minor improvements to the Tree tab.

Tagging

- Slashes are no longer allowed in tag names, due to their use in representing hierarchical tags.
- Resolved an issue with the tagging removal progress notification not handling the removal of hierarchical tags correctly.

Exporting – General

- Added an "Open export folder" button to the "Export finished" screen.
- Added a "Suppress irrelevant items" checkbox, which lets all items classified as "Irrelevant" be skipped during exporting. This checkbox is disabled when the current set of items to export does not contain any such items.
- Speed improvements when registering the items as an export set.

Exporting – PDF

- Improved the native rendering of various document types, in particular Notes documents and Excel spreadsheets.
- Redesigned and extended the configuration options controlling which headers are shown above the body of an email, in what order, and what rendering properties

they have, e.g. which of them should be bold, whether to draw a line between the subject and the email's properties.

- When exporting to PDF or load file using the option to skip the original view for some file formats, the user can now choose to:
  - Export the item in its original format (load file export only).
  - Also skip the extracted text.
- Added an option controlling whether lines separating the header and/or footer from the body of the PDF are to be drawn.
- Resolved an issue with the Contents and Preview tabs showing broken images.
- Resolved an issue with the PDF "split into chunks" export option producing chunks that were larger than the specified size.
- Resolved an issue with dynamic date and file name fields in Word headers and footers and PowerPoint presentations being evaluated during export.
- Improved handling of the EXPORTED_FILE_NAME field in the header/footer when exporting to a single concatenated PDF.
- Resolved an issue with items failing to be added to an export set when exporting to a load file with the "Include images" option turned off or the image format set to PDF.
- The "PDF rendering options" sheet showed some disabled options that were only meant for exporting to load files. These options are now no longer visible when exporting to PDF.
- Depending on the chosen settings, the PDF document could sometimes get some extra, empty pages. This has been fixed.
- Improved the PDF rendering options quick reference.

Exporting – PSTs

- Improved the speed and stability of exporting to PST files.
- Resolved an issue with contacts not exporting to a PST file.
- Removed an unnecessary "_files" suffix that was given to folders that correspond with container files in the evidence files.
- Resolved an issue with emails with a particular content transfer encoding setup showing garbage content when exported to a PST file.

Exporting – Load Files

- Improvements beneath "Exporting – PDF" typically also apply to the PDF and TIFF generation as part of load file generation.
- An "Exclude content" option has been added that lets one suppress exporting the content of items tagged with a user-defined tag. This can e.g. be used to suppress

Privileged items. Any item that has the specified tag will still be represented in the load file, but its content will be replaced with a configurable placeholder text.
- Added an option for embedding the item text in the load file itself rather than having it exported to a separate file.
- Added an option to sort the items in the created load file by Family Date.
- Resolved errors that occurred when non-ASCII data was being exported to a load file using ASCII encoding.
- Resolved an issue with the load file export not terminating properly when stopped by the user.

TEAM

- The Previewer UI now prevents certain unnecessary UI updates triggered by other reviewers working on the same shared case, e.g. when another reviewer is tagging a different item.

Upgrade Notes

Intella 1.9 can open cases made with the Intella 1.7.x and 1.8.x versions. Cases made with beta versions are not supported and should be recreated.

Cases made with Intella 1.7.x or Intella 1.8.x do not require any case conversion or re-indexing. However, some functionalities and improvements may not be available for such cases.

Cases made with Intella 1.7.x cannot be re-indexed or extended with additional sources. These restrictions do not hold for cases made with Intella 1.8.x, i.e. they can be re-indexed and have new sources added to them.

Cases made with Intella 1.6 or older are not supported. One can however use Intella 1.7.3 to convert these cases to the 1.7 format and then open them in Intella 1.9.

While we aim to ensure full backwards compatibility with older cases and older Intella versions where we reasonably can, opening a case made with an older Intella version in a newer version may result in that case no longer opening properly in the older version. We strongly recommend to always create a backup of the case before upgrading.

Intella 1.8.4

Released: April 13, 2015.

Highlights

- Tags can now be ordered in a **tag hierarchy**.
- Improved **tagging speed** with a factor 2-3.
- Tags can now be applied using a **keyword list**.
- Improved **OCR importing speed**, typically over ten times faster.
- Improved **PDF and load file exporting speed**, up to two times faster.
- Added interactive **load file validation** when adding load files to a case.
- Various **stability fixes**.

General

- Resolved an issue with cases failing to open when the PATH environment variable contains paths wrapped in quotes.
- Resolved an issue with space characters being incorrectly processed when using Intella.exe's command-line arguments. IntellaCmd.exe was not affected by this issue.
- IntellaCmd.exe can now also be used with an Intella Professional license. Previously it could only be used with an Intella TEAM Manager license.
- Changed all occurrences of "Lotus Notes" and "IBM Lotus Notes" to "IBM Notes" throughout the user interface.

Indexing - General

- The speed of OCR importing has been improved a lot. On average OCRed items are imported at a speed more than ten times faster compared to the previous release.
- Added support for ABBYY Recognition Server 4.
- The time zone chooser now indicates which time zones correct for Daylight Saving Time (DST).
- Several improvements to file type detection, e.g. improved classification of JBIG and JPEG2000 images (jp2, jpx, jpm, mj2 and j2k files).
- Resolved an issue with broken data in NSF files resulting in NSF items or sometimes even the remainder of the NSF file not getting indexed.

- Resolved an issue with disk images not indexing properly when they contained other disk images of a different type (e.g. an E01 image nested in a L01 image).
- Resolved an issue with garbage data in a PST file causing the PST indexing process to occupy an unreasonable amount of memory (often tens to hundreds of GBs), which led to system instability.
- Empty author names in the Author facet are now suppressed.
- Resolved an issue with certain indexing operations timing out too easily.
- Resolved an issue with emails not indexing properly due to an invalid Content-Type parameter in the email headers.
- Added safety nets that prevent against case corruptions when child processes indexing evidence files terminate abnormally.

Indexing – Load Files

- The Source wizard now validates a load file before importing it. For example, warnings are now shown when file paths cannot be found, timestamps cannot be decoded, etc. File encodings are detected automatically but can still be overridden. A preview of the imported data is shown (both the table structure and imported images), enabling visual verification that the data is imported correctly. Help buttons have been added that provide further guidance.
- Resolved an issue with item texts in load files not getting imported for items that lack an MD5 hash.
- Resolved an issue with load file items not getting a correct file type due to uppercase file extensions being used in the load file. This issue only affected items that are missing a MIME type value in the first place.
- Resolved an issue with the case size shown in the Case Manager not updating properly when indexing a load file.

Searching

- Resolved an issue with keyword lists containing commas not evaluating properly.

Previewer

- Resolved an issue with the Previewer not releasing some of the memory that it uses, leading to unnecessarily increasing overall memory usage over time.

Tagging

- Tags can now be ordered in a tag hierarchy. This lets one group tags into meaningful, user-defined collections, e.g. custodians, locations, priorities or assigned reviewers. The tag hierarchy can be made arbitrarily deep and wide.

Parent tags can be used as any other tag: they can be applied to items and queried for. When querying for a tag with subtags, all items are returned that have been assigned that tag or any of its subtags. Deleting a parent tag deletes the entire subtree.

- Improved tagging performance with a factor 2-3.
- When searching with a keyword list, the found items can now optionally be tagged with the matching keyword(s) by using the Auto-tag button that has been added in the Keyword Lists facet. Alternatively a keyword list CSV file can be imported in which the first column specifies the query and the second column specifies the tag to apply to all items found with that query.
- Tagging verification, a process which runs after a tag is applied and verifies that all requested tags have been stored in the case, has been made optional and is now turned off by default. It can be turned on again in the Preferences. The reason behind this change is that recent tagging improvements have reduced the usefulness of this operation and real life issues with tag corruptions are typically caused by mishandling of disks or networks, for which this verification process offers no solution.

Exporting – PST

- Resolved an issue with emails exported to a PST file having an incorrect character encoding specified.

Exporting – PDF and Load files

- Improved PDF and load file exporting speed, up to two times faster.
- When exporting to a load file with image files, the progress screen now not only shows the number of items that have been processed thus far, but also the number of images that have been generated and the number of images that remain to be generated.
  Once a document has been converted to a PDF, it is reported as processed and the conversion from the PDF to the chosen image format is done separately. This is the reason why the total number of images to create grows so rapidly and why this number is the best indicator for the remaining exporting time.
- A “Prefer HTML over plain text content” checkbox has been added that lets one specify whether to use the HTML or plain text version of an email body for the PDF. This option is disabled when “Content as” is set to “Extracted text”.
- The “Suppress cover page” checkbox in the file section has been turned into a “Cover page” checkbox with the inverse semantics, to maintain consistency with the other exporting options. Cover pages can now also be suppressed for emails, using a separate checkbox in the email section.

- On the Load file options page three checkboxes have been added: "Content", "Headers" and "Raw data". These checkboxes can be used to control which text parts should be included in the resulting text file. In earlier versions all sections were included.
- The “Skip original view for” option did not work correctly when the “Content as” setting was set to “Both”. This has been fixed.
- Items without content can now be exported, even when exporting of metadata is turned off as well. A proper PDF or TIFF with header and footer will be created. In earlier Intella 1.8.x versions such items resulted in an error.

Upgrade Notes

Intella 1.8.4 can open cases made with Intella 1.7.x and all previous 1.8.x versions. Cases made with Intella 1.8 beta 1 or beta 2 are not supported and should be recreated.

Cases made with Intella 1.7.x do not require any case conversion or re-indexing. However, some functionalities and improvements may not be available for such cases. Cases made with Intella 1.7.x cannot be re-indexed or extended with additional sources.

Cases made with Intella 1.6 or older are not supported. One can however use Intella 1.7.3 to convert these cases to the 1.7 format and then open them in 1.8.x.

While we aim to ensure full backwards compatibility with older cases and older Intella versions, opening a case made with an older Intella version may result in that case no longer opening properly in that version. We strongly recommend always creating a backup of a case before upgrading.

Intella 1.8.3

Released: February 12, 2015.

Highlights

- One can now **export HTML emails to PDF** with preservation of their layout.
- Improved **performance of concurrent access** on shared cases.
- Added **command-line** support for creating and indexing cases.
- Improvements for **indexing cellphone reports**.
- Added a **Chat Account** facet.

General

- This release includes a large number of improvements for indexing cellphone reports, e.g. improved type detection of certain item classes, improved indexing of certain less common date formats, resolved text encoding issues, etc. Also included in this is the new Chat Account facet, see below. These changes affect indexing, searching and exporting.

Case Management

- Cases can now be created and indexed from the command-line. Users can create and open cases, index evidence folders and apply a post-processing task, e.g. searching, tagging and exporting items. A user interface showing the progress of these actions is optionally visible.

Indexing

- Several indexing performance and stability fixes.
- Added support for decrypting documents in the old Word format (.doc format; .docx was already supported).
- Made indexing tasks entirely self-contained. For example, when an indexing task relies on an MD5 list, that MD5 list is stored as part of the task rather than referenced. This ensures that such indexing tasks can be copied from one case to another.
- The indexing exceptions report now suppresses certain minor indexing issues that are not worth mentioning and can significantly expand the size of the report.

Furthermore some descriptions were improved to better reflect the nature and location of the problem.
- Improved file type detection of split ZIP archives.
- Fixed missing phone call durations when indexing Oxygen XML reports.

Searching

- Optimized the performance of saved searches involving location and parent/child searches.
- Reorganized the Type facet to better support items from cellphone reports. For example, branches have been added for Accounts, Browser Artifacts, Databases, System files and User Activities.
- Added a Chat Account facet, containing the senders and receivers of chat messages from instant messaging applications such as Skype, ICQ, WhatsApp, etc. Previously these were covered by the Phone Number facet, Email Address facet or not at all. SMS and MMS messages are covered by both the Phone Number and Chat Account facets.
- When querying for the "Others" branch in the Type facet, the items classified as "Unknown" are now included in the result set.
- Resolved an issue with the results of queries containing wildcards not having their search hits highlighted properly.
- Resolved an issue with the Language facet not making the distinction between "unidentified" and "not applicable" items.

Previewer

- Optimized the rendering speed of very large documents.
- Resolved an issue with line breaks being ignored when Intella 1.8.x was used to review a case indexed with Intella 1.7.x.
- Resolved an issue where the number of hits shown in the Contents tab did not include the hits found in the item properties at the top of the tab.
- Resolved an issue with Open Containing Folder producing an error on some items.
- Removed the (now irrelevant) warning about preview generation shown in the Preview tab.

Results

- Resolved an issue with the Cluster Map not updating correctly when one of the result sets became empty while being visualized. This can for example happen with result sets representing tags or other annotations.

- Resolved an I/O error that occurred when scrolling the results table very quickly, e.g. by keeping the Page Down key pressed.

Exporting

- The HTML view of emails, shown in the Preview tab, can now be printed and exported to PDF.
- Resolved an issue with the text body of large items getting truncated during export.
- Several improvements to the Print Preview window.
- Made sure that export and load file templates are always stored using valid file names.

TEAM

- Improved overall performance with concurrent users accessing the same shared case.

Upgrade Notes

Intella 1.8.3 can open cases made with Intella 1.7.x and all previous 1.8.x versions. Cases made with Intella 1.8 beta 1 or beta 2 are not supported and should be recreated.

Cases made with Intella 1.7.x do not require any case conversion or re-indexing. However, some functionalities and improvements may not be available for such cases. Cases made with Intella 1.7.x cannot be re-indexed or extended with additional sources.

Cases made with Intella 1.6 or older are not supported. One can however use Intella 1.7.3 to convert these cases to the 1.7 format and then open them in 1.8.x.

Intella 1.8.2

Released: December 19, 2014.

Highlights

- This release focuses mostly on fixing reported **performance and stability** issues.
- Several functional improvements to **tagging**, **invalid query errors** and **result listings**.

Indexing

- Resolved a number of issues with items being skipped during indexing under certain circumstances, leading to inconsistent indexing statistics.
- Several types of nonsensical items extracted from Office documents are now suppressed, e.g. empty embedded items without any useful metadata such as user-entered file names.
- When importing a load file source, one can now indicate whether the paths in the load file should be interpreted as absolute or relative paths.
- When importing a load file, a file extension column can now optionally be used for file type identification instead of or in addition to the MIME type column.
- Reduced the amount of (mostly redundant) log messages on Excel files.
- Lotus Notes Rich Text items containing headers without values are no longer reported as processing errors.
- Resolved an issue with duplicate emails getting their occurrence-specific dates (such as the PST-specific content created date field) mixed.
- Resolved an issue with indexing folders whose name ends with ".xml".
- Improved Intella's handling of partial indexing results after a crash, e.g. due to a power failure or the user aborting the process.
- Reinstituted some advanced indexing features that are specified via the "case.prefs" file and that did no longer work since the Intella 1.8 release.

Searching

- Improved the error dialog that is shown when an illegal keyword query is entered or a keyword list is used that contains an illegal keyword query.
- When using the "Group by host name" functionality in the Email Address facet, the host nodes are now also highlighted and show a hit count when their email

addresses are present in the current search results. Before this happened only on the address nodes beneath the host nodes.
- Resolved an issue with paragraph exclusion not being effective immediately when Intella was already showing search results.
- Resolved an issue with the Show Parents function not working on items from a load file source.

Results

- In the Details panel, the Table, List and Thumbnails views now show the number of selected rows, list items or thumbnails respectively. This relates to the items selected within that view, not the number of items selected in the Cluster Map and consequently listed in the Details views.
- The Type chart in the Statistics tab can now handle Asian characters.

Tagging

- The Add Tags dialog now has an auto-complete function: when typing in a tag name, the list of current tags is filtered down to all tags that start with the entered text. This way the user can navigate quickly to an existing tag or check if such a tag exists.
- The Add/Remove Tags dialogs now have a "Check / uncheck all" button, for selecting or deselecting all tags at once.

Previewer

- Improved hit highlighting performance on very large documents.
- Resolved an issue with keyword hit markers being misplaced in the Preview tab.
- Resolved an issue with tags applied by an indexing post-processing task not being shown as quick tag buttons in the Previewer.
- Double-clicking on folder items now obeys the user preference on whether to open items in the Previewer or in the native application (in this case Windows Explorer).

Exporting – load files

- Resolve an issue with items getting an incorrect folder number when exporting with the use of an existing export set.

Upgrade Notes

Intella 1.8.2 can open cases made with Intella 1.7.x, 1.8, 1.8.1 and 1.8.1.1.

Cases made with Intella 1.7.x do not require any case conversion or re-indexing. However, some functionalities and improvements may not be available for such cases. Cases made with Intella 1.7.x cannot be re-indexed or extended with additional sources.

Cases made with Intella 1.6 or older are not supported. One can however use Intella 1.7.3 to convert these cases to the 1.7 format and then open them in 1.8.x.

Cases made with Intella 1.8 beta 1 or beta 2 are not supported and should be recreated.

Intella 1.8.1

Released: November 25, 2014.

Highlights

- Added the ability to **export to a Relativity server**.
- Improved **Cellebrite** support, including **UFDR** files.
- The **paper size** used for printing and exporting to PDF can now be set.
- Reduced the dependency on **MS Office** for printing items or exporting them to PDF.
- Several stability and performance fixes.

Installer

- Fixed an issue with the installer sometimes not unpacking the "jre" subfolders properly.

Indexing

- Added support for indexing Cellebrite XML reports made with UFED versions 3 and 4.
- Added support for indexing Cellebrite UFDR files.
- Improved Intella's auto-tuning of RAM usage and reduced memory consumption.
- Improved detection of duplicate paragraphs.
- Resolved an issue with NSF emails with unusually long X-Notes-Item headers stalling indexing.
- Various stability improvements related to indexing of IMAP sources.
- Improved content extraction of .emlxpart files.
- Resolved an issue with MS Word save histories not being extracted properly.
- Resolved an issue with native files from load files not being accessible when the "extract text and metadata" option was not checked in the source configuration.
- JPEG date fields that lack a time zone are now resolved against UTC rather than the investigation machine's local time zone.
- Resolved an issue with very short plain text files getting processed using an incorrect character encoding scheme.
- The "Hotmail Search Warrant Result" source type is no longer labeled as "experimental".

Searching

- Optimized processing of very large MD5 hash lists, e.g. the NIST NSRL hash sets.
- Resolved an issue with certain keyword searches failing with an error when paragraph analysis is turned on and paragraphs have been marked for exclusion.
- Resolved an issue with proximity queries failing to take excluded paragraphs into account.
- Resolved an issue with the "Show only current hits" option being unset upon facet value selection.
- Resolved an issue with empty or garbage ID lists that, once added, prevented further additions of ID lists to a case.
- Resolved an issue with the "Show top-level parents" search option not working when being evaluated on IMAP mails.
- Several minor improvements to the paragraph exclusion user interface.

Results

- Improved text rendering in the Cluster Map.

Tagging

- Resolved an issue with tag renaming not functioning properly.
- Resolved an issue with the tagging progress screen showing negative percentages.

Previewer

- Made the colors used for hit highlighting consistent across tabs.
- Improved the appearance of the paragraph expand/collapse UI elements in the Contents tab.
- Export IDs are now also highlighted when they match a keyword search.
- Reintroduced the way the current hit is distinguished from the other hits when jumping from keyword hit to keyword hit with the hit navigation buttons.
- Resolved an issue with the Open Containing Folder button not working.
- Hits in suppressed paragraphs are no longer highlighted. This only affects hit highlighting; items that *only* have hits in their excluded paragraphs were already correctly excluded from the result set.

Exporting

- The "Display and Locale" tab in the Preferences window now allows for setting the preferred paper size. This setting is used for printing items and exporting them to PDF. Currently available formats are ISO A4 and US Letter.

- Since Intella 1.8, MS Office is no longer needed for viewing MS Word documents (and several other document formats) in their native view or exporting the native view to PDF. Starting with Intella 1.8.1, MS Office is also no longer needed for spreadsheets and presentations. MS Office is still necessary for exporting to PST.
- Resolved an issue with redacted documents containing pages in landscape mode being exported to portrait mode.
- Resolved an issue with subject lines appearing twice in emails exported to PDF.
- Resolved an issue with PowerPoint presentations being displayed with their images upside down.
- Resolved an issue with temporary file names appearing in the PDF or print view of an MS Word document.

Exporting – Load Files

- Added an option to directly export to a kCura Relativity server. This lets investigators add their case data in Relativity faster, with more ease and with less manual steps.
- Added an option to set the relative widths of Bates Stamps in the PDF or TIFF exports. This feature is currently only usable through editing of the export template; there is no user interface for this setting.

Upgrade Notes

Intella 1.8.1 can open cases made with Intella 1.7.x and 1.8.

Cases made with Intella 1.7.x do not require any case conversion or re-indexing. However, some functionalities and improvements may not be available for such cases. Cases made with Intella 1.7.x cannot be re-indexed or extended with additional sources.

Cases made with Intella 1.6 or older are not supported. One can however use Intella 1.7.3 to convert these cases to the 1.7 format and then open them in 1.8.

Cases made with Intella 1.8 beta 1 or beta 2 are not supported and should be recreated.

Intella 1.8

Released: October 20, 2014.

Highlights

- Greatly improved **indexing speed**: typically two to four times faster in total indexing time (more on high-end machines), depending on the evidence data and hardware used.
- Several features for searching and displaying paragraphs:
    - Search for **all items containing a specific paragraph**, regardless of item type and small variances such as line breaks and spacing.
    - **Ignore commonly occurring paragraphs** such as email signatures and legal disclaimers. These paragraphs will be ignored during keyword search.
    - Mark paragraphs as "**seen**", causing them to be displayed in a lighter color whenever they are shown.
    - **Collapse and expand** paragraphs.
- Added a user interface for defining **indexing tasks.** This lets the user define compound processing steps such as applying a keyword list and tagging or exporting the results. The primary use is for these tasks to be run automatically after indexing completes, but they can also be manually started at a later point in time.
- Improved **disk image processing**: better speed and more supported file system formats.
- The new **Sets visualization** shows how search results compare in volume, without showing the overlaps between the results. The Sets visualization is available as a mode in the Cluster Map visualization, letting the user choose between these two modes. This new visualization scales to a much larger amount of result sets than the original Cluster Map visualization.
- Simplified the **list of source types** in the Add New Source wizard.
- The Contents tab now captures the **original layout** of the item text better. E.g. tables, font styles and lists are now shown.
- Added support for **Bloomberg** email dumps.
- Improved support for running Intella on **Windows 8.1**.
- Merged the Viewer and TEAM Reviewer products into a single **Viewer** product.
- Added support for using **Lotus Notes 9** for opening NSF files during indexing.
- Many **load file import and export** improvements.

General

- The Intella Viewer and Intella TEAM Reviewer products have been merged into a single Viewer product. This product features all of the old Viewer and TEAM Reviewer functionality.
- This release fixes an issue with the dongle software that may be encountered when running Intella on Windows 8.1. Certain operations could result in an error dialog with the text "Cannot find HASP SRM Run-Time Environment DLL (E0004)". If and where the error occurred depended on the machine that Intella was running on.

Indexing

- Intella's indexing back-end has been rewritten from scratch to make better use of state-of-the-art hardware, especially improving the utilization of modern multi-core CPUs and large amounts of RAM, while maintaining its ability to run on low-end hardware for less demanding cases. On regular workstations we often see a two- to fourfold speed increase in indexing an evidence data set. On high-end hardware and with further tuning this can be increased even more. The speed improvement is typically greater on larger data sets.
- The list of source types in the Add New Source wizard has been simplified. There is now a "Folder or File" source that merges the following former source types:
    - The Folder source.
    - All single file-based email container sources: MS Outlook, MS Outlook Express, IBM Lotus Notes and Mbox.
    - The Cellphone XML Report source.
- Added an option to analyze the paragraph structure of item texts. See the paragraph functionality descriptions elsewhere for a description of the new functionality that this provides. The option is turned off by default as it incurs some extra processing time; typically around 10% extra time is needed. A future Intella release will add the ability to run this analysis as a post-processing step.
- When the user defines a new source, the Add New Source wizard will show a new wizard sheet titled "Indexing tasks". On this sheet the user can define post-processing steps that need to take place after the source has been fully indexed. These tasks can also later be edited and launched through the Tasks item in the File menu. Each task consists of a condition and an action. Currently the following conditions can be defined:
    - A keyword search, optionally combined with a date range search on all date fields.
    - Same but with a keyword list.
    - Same but with a MD5 list.

    - An arbitrary Saved Search, which effectively can combine all of Intella's search facets.

  The following actions can be defined:
    - Tag all found items with one or more tags. The tag(s) can optionally be inherited by items in the same family hierarchy and/or by duplicates of the found items.
    - Flag all found items.
    - Add a comment to all found items.
    - Export all found items using an export template.
- When indexing a folder of mail containers, only the folder is now considered to be a source (e.g. listed as such in the Source column). Previously each mail container would be listed as a separate source. From now on that will only be the case when the user explicitly defines a mail, load file, cellphone or disk image source.
- During case creation a folder can be optionally be entered for storing temporary indexing data. When this folder is located on a physically separate drive from the evidence data and case folder, this third drive can reduce the total indexing time. Note that the system requirements for this third folder and drive are equal to that of the case folder in terms of available size and speed.
- Various improvements to file type detection.
- Added a dedicated MIME type and Type column value for empty files.
- Lotus Notes 9 can now be used to index NSF files.
- The default path for Lotus Notes is now C:\Program Files (x86)\IBM\Notes.
- The indexing progress screen now mentions how much MB or GB of evidence data there is to be processed and how much of it has already been processed.
- The indexing progress screen now mentions how many indexing steps there are to be performed (crawling the evidence files is just one of the eleven steps), which step is currently being executed and (when available) what the progress of that step is as a percentage.
- Added support for indexing messages in a Bloomberg XML dump. Supported item types are messages, instant messages and related items such as invites and attachments.
- Improved disk image processing:
    - Faster opening and processing of large disk image files.
    - Added support for MacOS, GPT and ISO images.
- Resolved an issue with certain corrupt PDF files causing indexing to run into an infinite loop. This situation was automatically detected and remedied by Intella, but at the cost of reduced indexing speed as the detection of such a situation is based on a time-out mechanism.
- Resolved an issue with disk image files not being processed when the file name contained an apostrophe.

- Resolved an issue with local domain names being appended to the Sender email address of a mail extracted from an NSF file.
- Made text extraction from HTML documents more robust. Note that this also affects email bodies encoded in HTML.
- Many small improvements to text, metadata and image extraction.

Searching

- When the "Analyze paragraphs" option has been selected during source definition, Intella will show extra UI elements in the left margin of the Previewer's Contents tab. These controls mark the start and end of each paragraph and allow the user to collapse and expand paragraphs. Furthermore a popup menu is shown when the user right-clicks on a paragraph, offering the following options:
    - Mark the paragraph as Seen, or back to Unseen. This grays out all occurrences of this paragraph in all items, facilitating the review of large amounts of long and overlapping documents such as email threads with lots of quoted paragraphs.
    - Mark all paragraphs above or below the current paragraph as Seen or Unseen.
    - Search for all items in which this paragraph occurs.
    - Mark the paragraph for exclusion from keyword search. This can be used to suppress information present in lots of items but with little relevance to the investigation, such as email signatures and legal disclaimers. Consequently, keyword queries containing terms such as "confidential" and "legal" are more likely to return meaningful results.
- Resolved an issue with certain phrase queries not evaluating properly.

Results

- In order to scale to visualizing larger numbers of search result sets, the Cluster Map has been extended to offer two distinct visualization modes, called Clusters and Sets:
    - The Clusters mode shows the original Cluster Map visualization that has been a part of Intella since the start.
    - The Sets mode is a new visualization that shows each search result as a square whose size is related to the number of items in that result set. The results are furthermore grouped by their order of magnitude, e.g. < 10 items, < 100 items, < 1000 items, etc.
    - The user can toggle between the Clusters and Sets modes.

    - When the graph shown in Clusters mode is too complex to display in a reasonable amount of time, Intella will automatically and directly switch to Sets mode and disable the Clusters mode until the graph's potential complexity in that mode is feasible to be displayed again. Previously such complex Cluster Map graphs could freeze the user interface for some time.
- Empty result sets are no longer shown in the Cluster Map.
- Improved the result set name of keyword list results.

Previewer

- The extracted text shown in the Contents tab now preserves some of the layout attributes of the item text, such as table structures, basic font attributes and lists. This makes it easier to make sense of the extracted text while retaining a key feature of this tab: revealing all of the extracted text. For example, intentionally obscured text such as white text on a white background may be overlooked in the complete native rendering shown in the Preview tab, but will still be clearly visible in the Contents tab. What layout features are shown depends on the item type.
- Redaction improvements:
    - Added a Delete button.
    - Added Undo & Redo buttons.
    - Adding a redaction or editing one no longer requires clicking the corresponding toolbar button: just select an area to add a redaction rectangle and click on a redaction rectangle to move or resize it.
- Hit highlighting improvements:
    - Improved hit highlighting in the Preview tab for certain corner cases.
    - Hit highlighting ignored whether a keyword query was only focusing on specific item parts only, such as the item text, title or creator. This caused items to show "hits" in parts that were not being searched through.
    - Fixed an issue with hit highlighting disappearing after the user clicked the "Show full text" button in the Contents tab.
- The Properties tab now shows the item ID.
- Resolved an issue with the Tree tab not showing any sub-nodes for certain nodes.

Exporting – General

- When exporting calendar entries to a PST file, the names and extensions of any attachments they contain got lost and showed up as "noname.txt" in Outlook due to an incorrect header being set. This has been fixed.

- When rendering a Word document with an auto-date field to its original layout, the current date would always be inserted. This has been fixed.
- Exporting of documents to PDF format no longer requires MS Word to be installed. For spreadsheets and presentations an MS Office installation is still required.

Exporting – Load Files

- Calendar, contact and task items exported to a load file now have a reasonable file extension like ".ics", rather than ".bin".
- Summation load file export now has an option to export a Summation control list (.LST) file.
- Resolved an issue with XML markup being reported as the body of an email in a Summation load file.
- Resolved an issue with missing parent or child IDs. When an item such as a ZIP file contained folders with files in them and both the files and the parent ZIP file were exported, the parent and child IDs would get lost due to the fact that folder items are never exported to a load file. Such items surrounding the folder items are now re-linked during export.
- The "Use transparent numbering in groups" option has been relabeled to "Continue page numbers from previous folder".
- Changed the default image export settings:
    - The Image DPI setting changes from 72 DPI to 300 DP.
    - The TIFF compression setting changes from LZW to Group 4 Fax Encoding (CCITT T.6).

Upgrade Notes

Intella 1.8 is able to open cases made with Intella 1.7.x and 1.8.

Cases in 1.7.x format do not require any case conversion or re-indexing. However, some functionalities and improvements may not be available for such cases. Cases made with 1.7.x cannot be re-indexed or extended with additional sources.

Cases made with Intella 1.6 or older are not supported. One can however use Intella 1.7.3 to convert these cases to the 1.7 format and then open them in 1.8.

Cases made with Intella 1.8 beta 1 or beta 2 are not supported and should be recreated.

Intella 1.7.3

Released: April 7, 2014.

Highlights

- Intella now supports **redaction** of items. This feature lets a reviewer mark legally privileged or otherwise sensitive information in an item's text, metadata or graphical content. When the item is subsequently exported to a PDF or load file, the sensitive information will be blacked out.
- **Export sets** allow for better export management by letting the reviewer reuse export settings, continue item numbering from previous exports and enforce that a single item is always exported with the same file name or number.
- Previewed images can now be **zoomed, rotated and flipped**.
- Improved **Show Parents** search method: the Preferences dialog both explains and lets the reviewer modify the way the direct and top-level parents of an item are determined.
- Added **keyword hit highlighting** to the Preview tab.

General

- The memory settings that previously were controlled using the Intella.l4j.ini file can now be managed in the Case Manager. These settings are specified on a per case basis and can therefore take the case size into account.
- The folder used to store temporary files can now be configured in the case's Preferences dialog.
- Fixed a failing MS Office validation (e.g. due to a corrupt MS Office installation) from crashing Intella.
- Several minor UI improvements.

Indexing – Disk Images

- Added 64-bit disk image processing support, potentially fixing memory issues when processing large disk images.
- Added support for indexing disk images that use the Ext4 and YAFFS2 file systems.
- Resolved an issue with disk images consisting of more than 99 volumes not indexing fully.
- Improved the indexing of symbolic links in disk images.

- Other performance and reliability improvements.

Indexing – Other

- Various stability improvements for indexing archives.
- Items in a PST file that are found outside the root folder are now indexed as well. They can be found in the "<ORPHAN ITEMS>" folder.
- Improved indexing of images that use JBIG2 encoding.
- Resolved an issue with indexing of non-email NSF files.
- Resolved an issue with indexing of broken S/MIME-signed email messages.
- Improved indexing of HTML documents containing URL-encoded hyperlinks.
- Resolved an indexing error caused by corrupt data from terminating the rest of indexing.
- Resolved an issue with .p12 files that contain non-private keys and that refused to import.
- Resolved an issue with .emlx files being classified and processed as HTML documents.
- Resolved an issue with "\1Ole10Native" streams inside MS Office documents not processing correctly.
- Resolved an issue with character set detection failing to determine the correct character set on Russian emails in non-Unicode PST files.

Searching

- The criteria for determining the direct and top-level parents of an item have changed to better fit the most common use cases for this search method. The Search tab in the Preferences window now lets the reviewer control which item types are ignored when the direct or top-level parent are selected. This also affects which items are tagged when the "also tag all other items nested in the same top-level item" option is selected in the tagging preferences. The Show Parents dialog has been simplified. A separate Show Top-level Parents menu item has been added that requires no further user interaction and always takes the top-level parents, copying existing top-level parents into the result set.
- Added an Export Sets facet, providing direct access to all items in a specific export set. See below for an explanation of export sets.
- Added a "Collapse all" menu item to the popup menu in the tree-based facets: Email Address, Location, Type, Phone Number, Author and Content Analysis.
- Improved the accuracy of the Language facet.

Results

- The Details table now has columns for From, Sender, To, Cc and Bcc email headers.
- Added an Export ID column in the Details table, showing an item's ID within an export set. See below for an explanation of export sets.
- For email attachments the Size column now shows the decoded size, rather than the Base64-encoded size.
- Likewise, files contained in archives now show the extracted size, rather than the compressed size.
- The Top 10 email addresses and Top 10 host names tables in the Statistics view now also show the deduplicated amounts per email address and host name.

Previewer

- The Preview tab now supports hit highlighting. This is available for all item types for which the Preview tab is shown, except for emails with HTML bodies.
- Items can now be redacted. This allows the reviewer to prevent legally privileged information from being exported. To redact an item, click the Redact button in the toolbar. This adds a Redaction tab, which shows a PDF rendering of the item. The reviewer can then mark the privileged areas by clicking the "New redaction" button and dragging a rectangle over it. When the item is exported to PDF or a load file, the privileged information will be removed and replaced by a black rectangle.
- Speed and font rendering improvements in the Preview tab.
- When an image is previewed, the Contents tab will show controls for zooming, rotating and flipping the image.
- The set of tabs that are shown for every item is now configurable through the Previewer's View menu. By default all tabs are shown that are applicable to that item type and for which there is any information to show. Switching off unnecessary tabs can ease and speed up reviewing.
- Resolved an issue with the Comments tab name not being highlighted when there are keyword search hits in the reviewer comments.
- Resolved an issue with the tagging preferences override not displaying in full.
- Resolved an issue with the tags line in the Contents tab not updating when the item's tags changed while the item was being previewed.
- Resolved an issue with steadily increasing memory usage when previewing large collections of items.
- Keyword hit navigation used to work only when the Preview tab was in "Single Page View Non-Continuous" mode (the default). Now it also works in all other modes as well.

Tagging

- The “Also tag all other items nested in the same top-level item” option in the tagging preferences now relies on the Show Parents settings in the Search preferences tab, which control what item types are ignored when determining the top-level parent.
- Resolved an issue with the tag operation tagging too many items when the item was located inside a disk image and the “Also tag all other items in the same top-level item” setting was used.

Exporting – General

- Added “Export sets” functionality. When a user exports a set of items, the items can optionally be added to an export set. When an item is about to be exported, the file name and number is then recorded in the export set. When the export set is later selected again when exporting another set of items, this will affect that export run in a number of ways:
    - All export settings such as export format, file naming and numbering schemes, etc. will all be the same as in the first export run.
    - File numbering continues where it left off, rather than starting at 00000001 again.
    - Exported items that have been exported with this export set selected will get the same name and number as the previous time(s) they were exported.
- A “Use redacted versions when available” checkbox has been added to the “PDF rendering options” (for PDF export) and “PDF or image rendering options” (for load files) sheet.
- Items that are exported for OCR-ing are now deduplicated before export.

Exporting – Load Files

- The folders used to export the natives, images and texts to can now be configured.
- Added “Direct parent” and “Direct children” fields, complementing the existing “Parent” and “Children” fields.
- Made the ATTACH, ISEMAIL, MEDIA and FILE_EXT fields available for all load file types. Previously they were only available for Summation load files.
- Improved load file exporting speed.
- Added proper multi-value delimiters for Concordance and Relativity load files.
- Resolved an issue with incorrect Summation image tags.
- Resolved an issue with native view generation errors ending up in the PDF or TIFF.

- Fixed missing Preview tabs for documents marked as Empty Document.

TEAM

- When using Intella TEAM Reviewer or TEAM Manager as a client for cases stored on an Intella Connect server, it will automatically be subject to Connect's new role-based access control lists functionality, which controls which reviewer gets to see what part of the case, what functionalities such as exporting are available to him, etc.
- Fixed an issue with tags with zero items that could not be removed.

Upgrade Notes

Intella 1.7.3 can open cases made with 1.7 to 1.7.2. Reindexing or conversion of the case is in principle not necessary; only certain new features like the new From, Sender, To, Cc and Bcc columns will be missing or empty until the case is reindexed.

Warning: once the new OCR features are used in a case, it will refuse to open in Intella 1.7.

Cases made with Intella 1.6.x and 1.5.x can also be opened, but require conversion:

- When opening a 1.6.x case, a case conversion process is triggered that creates a copy of the case and transforms the case databases. Afterwards the copy can be opened in Intella 1.7.x. The old case is left unchanged and can still be opened with the 1.6.x versions.
- When opening a 1.5.x case, a case conversion process is triggered that creates a copy of the case and reindexes it from scratch. This will take a substantial amount of time, roughly equivalent to the time it took to index the original case. Afterwards the copy can be opened in Intella 1.7.x. The old case is left unchanged and can still be opened with the 1.5.x versions.
- Cases made with Intella 1.4.x and older are not supported.

Cases shared with Intella TEAM Manager 1.7.3 will also require a 1.7.3 Reviewer.

For more information on case conversions please see the User Manual, chapter "Converting a Case".

Please back up your cases before converting them.

Intella 1.7.2

Released: November 28, 2013.

Highlights

- Added detection of **credit card numbers, social security numbers, person names, phone numbers, organization names and locations** in document texts.
- Added a new **Statistics** view, giving the user a statistical and graphical overview of the case's content.
- Several facets now support **sorting values by size** and **filtering based on presence** in the current query results (i.e. the highlighted facet values).
- **Load files** can now also be *indexed*, meaning that you can e.g. import the information from a legal case application such as Concordance into an Intella case.
- Added **filtering of disk images** based on predefined profiles (e.g. index mail stores only, index all supported formats, etc.) or custom profiles.

Indexing

- Intella can now index load files. Supported formats are Concordance, Relativity and plain CSV files. See the Intella user manual for the supported fields. Native content and extracted text can be imported. Images can be imported via an Opticon file.
- When adding a disk image source, the user can opt to restrict processing to certain file types and locations. A number of profiles are predefined that handle common use cases, e.g. all mail containers, or all supported file formats excluding C:\Windows and the Program Files folders. The user can also define a custom profile and store it for reuse in other cases.
- Added support for indexing Outlook 2013 OST files. This feature is still experimental, especially concerning the recovery of deleted emails.
- Added support for indexing S/MIME signed messages.
- Resolved an issue with incorrect indexing of MSG files when the "Index content embedded in documents" option is turned off.
- Resolved an issue with the Source Editor taking a long time to open.
- The indexing progress screen now shows both the number of encrypted and decrypted items.

- Improved indexing of numbers.
- Resolved several issues with extracting images from PDFs.
- Improved indexing of incorrectly encoded newlines in email headers.
- Improved indexing of PST emails with invalid message classes.
- Resolved an issue with sources showing unnecessary suffixes ("(1)", "(2)", etc.) in the Location facet.

Searching

- The values in the Email Address, Author, Phone Number, Device Identifier and Content Analysis facets can now be sorted by size.
- Furthermore these facets now support filtering the list of values to those values that occur in the current search results, i.e. the values highlighted in bold.
- Resolved an issue with counter-intuitive interpretation of certain complex Boolean queries.
- The default Saved Searches used for finding email addresses, credit card numbers and social security numbers have been removed. The new Content Analysis feature provides a qualitatively better and more robust alternative for this.
- When restoring a Saved Search, the user can opt to merge all the result sets into a single cluster. This is useful if the various searches in the Saved Search conceptually are meant to find the same type of items and are only split up for technical reasons.

Results

- The List view, which shows the search results as a search engine-like list of results, has received various improvements:
    - It shows snippets of the found items, showing the context in which keyword hits are found.
    - The list shows all items at once, rather than being paginated.
    - The list can be sorted using the same fields as supported by the Table view.
    - Each item shows its tags and can be flagged from this view.
    - Like any list, the items in it can be selected by clicking, Ctrl-clicking and Shift-clicking. Right-clicking shows the same popup menu as used in the Table view.
    - Items that have been previewed are shown in a different color.
- Several stability improvements in the Social Graph.

Previewer

- The Preview tab is now also shown for emails, showing the emails the same way as a mail client would show them. This tab is now located directly next to the Contents tab.
- The Preview tab now supports text selection, rotation, various types of zooming, navigating bookmarks and keyword searching.
- Improved rendering speed when showing very large document texts in the Contents tab.
- The "The preview may have been truncated" message always used to be shown in the Preview tab. Now it is only shown when the number of pages actually have been truncated.
- Resolved an issue with the Print Tab function not including message properties like subject, sender, receiver(s) and date when printing the Contents tab.

Analysis & Statistics

- A "Content Analysis" facet has been added to the list of facets. This new facet shows e.g. credit card numbers and person names that have been found in the document texts through the use of natural language processing techniques. Some categories are automatically populated during indexing, whereas others require a post-processing step (select items in the Details table, right-click and choose "Content Analysis…") due to the amount of processing time that these types of analysis require. The following categories of entities are supported:
    - Credit Card numbers
    - Social Security Numbers
    - Phone numbers
    - Person names (requires post-processing)
    - Organizations (requires post-processing)
    - Locations (requires post-processing)
- A "Statistics" view has been added to the main window, giving the user a graphical and statistical overview of the case's content. The Statistics view contains the following tabs:
    - The Overview tab shows the total and duplicated amount of items for several key categories, such as the complete item set, email containers, encrypted and decrypted items, OCRed items, items with errors, etc. It also shows a pie chart and a top 10 list of item types.
    - The Histogram tab shows a zoomable bar chart of the items according to their timestamps. The chart's contents can be customized to show particular date fields (e.g. Sent or File Last Modified) and to show years vs. months.

- The Emails tab shows statistics such as the number of email addresses, first and last Sent date, and the top 10 most often used email addresses and host names.

Exporting - General

- The Print Preview dialog, which can be launched from the Details table and the Previewer window, now also supports saving the print output to a PDF file.
- The Export Queries option in the Searches box now exports both the total counts and the counts after applying the Includes and Excludes.
- When exporting an item to PDF with inclusion of the item comments, those comments will now show the user who added that comment.

Exporting – Load Files

- The Image DPI setting and TIFF compression type can now be set. Previously this was only possible by manually editing an export template XML file.
- Added support for "Group 4 Fax" TIFF compression.
- Added support for producing little-endian TIFF images.
- Fixed missing resolution tags in exported TIFF files.
- Added support for the "consecutive" numbering scheme when exporting to a load file.
- Several improvements to ensure that the exported load file can be imported more easily into Summation.
- Added the option to split timestamps into separate date and time values, rather than always being combined into a single value.
- Fixed missing "Parent ID" value when exporting to a load file format other than Summation.
- Fixed incorrect "Date" values when exporting to a Ringtail load file.
- Improved use of TEXT and MEMO type fields when exporting to a Ringtail load file.
- Several minor improvements.

TEAM

- Resolved an issue with TEAM Reviewer failing to access a case on a Connect server due to the case's on-demand initialization.

License Management

- Improved the Dongle Manager error messages that are shown when the proxy configuration is missing or incorrect.

Upgrade Notes

Intella 1.7.2 can open cases made with 1.7 and 1.7.1. Reindexing or conversion of the case is in principle not necessary; only certain new features like the new Email Address or Content Analysis facet branches will be missing or empty until the case is reindexed.

Warning: once the new OCR features are used in a case, it will refuse to open in Intella 1.7.

Cases made with Intella 1.6.x and 1.5.x can also be opened, but require conversion:

- When opening a 1.6.x case, a case conversion process is triggered that creates a copy of the case and transforms the case databases. Afterwards the copy can be opened in Intella 1.7.x. The old case is left unchanged and can still be opened with the 1.6.x versions.
- When opening a 1.5.x case, a case conversion process is triggered that creates a copy of the case and reindexes it from scratch. This will take a substantial amount of time, roughly equivalent to the time it took to index the original case. Afterwards the copy can be opened in Intella 1.7.x. The old case is left unchanged and can still be opened with the 1.5.x versions.
- Cases made with Intella 1.4.x and older are not supported.

Cases shared with Intella TEAM Manager 1.7.2 will also require a 1.7.2 Reviewer.

For more information on case conversions please see the User Manual, chapter "Converting a Case".

Please back up your cases before converting them.

Intella 1.7.1

Released: September 26, 2013.

Highlights

- A new **Social Graph** visualization shows the communication flow between email addresses.
- Added support for **OCR-ing** items in the case.
- The **Email Address facet** now lets the user group contacts by host name, sort contacts by name or address, and filter the list of contacts by filtering with user-entered text.
- Added **access control facilities** to TEAM case sharing.

Case Manager

- Resolved an issue with ICF files failing to be saved to an USB disk.

Indexing

- Added the ability to OCR selected files. Two OCR methods are currently supported:
    - A manual method, where files are exported, OCR-ed using the user's preferred tool of choice, and finally imported back into the case.
    - A fully automatic option that utilizes ABBYY Recognition Server.
- Improved type detection of EML files.
- Several stability improvements for processing PST/OST files.
- Stability improvements when indexing Cellebrite reports with missing path attributes.

Searching

- Several improvements have been added to the Email Address facet:
    - Optional grouping of contacts by host name.
    - Sorting by contact name or email address.
    - Quick filtering of contacts based on user-entered text.
    - Several new branches:
        - "All Senders and Receivers" combines all email addresses that are used as a sender or recipient in an email.

        - "Addresses in Text" lists all email addresses that have been found in other locations, e.g. the document text.
        - "All Addresses" is the union of these branches.
- The quick filter functionality has also been added to the Author, Phone Number and Device Identifier facets.

Results

- Added a Social Graph view, visualizing the senders and receivers of all emails in the current search results. The user can toggle between the Cluster Map and the Social Graph.
- The columns used in the Table view are now configured using a dialog rather than a popup. This improves usability on low resolution screens.
- Stability improvements related to thumbnail creation of damaged image files.

Previewing

- Improved the hit highlighting in the properties shown at the top of the Contents tab, so that hits stand out more.
- Resolved an issue with previewing and exporting not working correctly when the evidence files have been moved to a different location and the source paths have been adapted accordingly.
- Resolved an issue with the contents of PDFs showing as blurred images when previewed or exported to a Load File.
- Several stability improvements related to the initialization of the Preview tab.
- Resolved an issue with the hit highlighting of proximity search results.

Exporting - General

- Added an "Include item header" to the PDF export format. In earlier releases this information was always included.
- Resolved an issue with incorrect page orientation when exporting to a concatenated PDF.
- Several stability improvements related to exporting to PST format.

Exporting – Load Files

- Added resolution parameters (XResolution, YResolution and ResolutionUnit) to generated TIFFs.
- TIFF files can now be stored in little-endian format, also known as "Intel byte ordering".

- Added the ability to set various parameters through the export template XML files (a user interface for these settings may follow later):
    - TIFF DPI setting.
    - Text and size of the placeholder text that is shown when the native rendering is switched off for an item's file type.

TEAM

- Added an Authorizations module to the Case Sharing screen. The TEAM Manager user can now define user accounts and control which user can access which case(s). This improves on the former authorization procedure, where a case passphrase was shared by all reviewers.
- The redesigned Case Sharing interface now shows which users are currently active in the case.

Upgrade Notes

Intella 1.7.1 can open cases made with 1.7. Reindexing or conversion of the case is in principle not necessary; only certain new features like the new Email Address facet branches will be missing or empty until the case is reindexed.

Warning: once the new OCR features are used in a case, it will refuse to open in Intella 1.7.

Cases made with Intella 1.6.x and 1.5.x can also be opened, but require conversion:

- When opening a 1.6.x case, a case conversion process is triggered that creates a copy of the case and transforms the case databases. Afterwards the copy can be opened in Intella 1.7.x. The old case is left unchanged and can still be opened with the 1.6.x versions.
- When opening a 1.5.x case, a case conversion process is triggered that creates a copy of the case and reindexes it from scratch. This will take a substantial amount of time, roughly equivalent to the time it took to index the original case. Afterwards the copy can be opened in Intella 1.7.x. The old case is left unchanged and can still be opened with the 1.5.x versions.
- Cases made with Intella 1.4.x and older are not supported.

When converting a 1.5.x/1.6.x case, the pre-defined Saved Searches described above for finding credit card numbers, social security numbers etc. will be added to the new case.

Cases shared with Intella TEAM Manager 1.7.1 will also require a 1.7.1 Reviewer.

For more information on case conversions see the User Manual, chapter “Converting a Case”.

Please back up your cases before converting them.

Intella 1.7

Released: July 25, 2013.

Highlights

- Introducing a new product: use **Intella Connect** to review a case through a web browser.
- Added support for **decrypting** various file formats (e.g. NSF, PDF, ZIP).
- Improved **Previewer** interface.
- **Deduplication** is now available in all Details views.
- Considerably **extended export options.**
- Default Saved Searches for finding **credit card numbers**, **social security numbers** and **junk mails**.
- The Date facet can now **search specific days and/or times**.
- Keyword search can now use **currency symbols**, percentages, etc.

General

- With the 1.7 release we are proudly introducing a new product: **Intella Connect**. With this server product cases can be shared and accessed through a web browser. This lets an organization share a case to a group of reviewers without any software roll-out on the reviewer PCs. An up-to-date web browser and network access to the case sharing machine is all that is necessary to start reviewing the case. Reviewing the shared case with Intella TEAM Reviewer is also still possible.
- The 1.7 trial license supports use of the product over RDP. Use inside virtual machines is still blocked when using the trial license.

Case Management

- The Case Manager window now has an Investigator field. This user name entered in this field is used by default for all new local and remote cases and for annotating actions with a user name when you open a local case made by someone else. This field ensures that the current user name is always known under all circumstances.

Indexing

- A number of encrypted file formats can now be decrypted automatically during indexing, provided that their access credentials are made available to Intella beforehand:
    - NSF files, using Lotus Notes ID files and passwords.
    - PDF, Excel (.xls) and OpenXML documents (.docx, .xlsx, .pptx), based on specified passwords.
    - ZIP, RAR and 7-Zip archives, based on specified passwords.
    - S/MIME- and PGP-encrypted emails, based on specified certificates.

      Note: optimal use of this feature requires manual installation of the Java Cryptography Extension Unlimited Strength Jurisdiction Policy Files. See the user manual for more information.
- Extended archive support:
    - Added support for 7-Zip, CPIO, ARJ, Cab and Deb archives.
    - Added support for ZIP files that use the Deflate64, BZip2, LZMA or PPMD compression methods.
    - Added partial support for ZipX.
- Added experimental support for EnCase 7 images (Ex01 and Lx01 files).
- Improved indexing of VCards.
- Improved extraction of embedded items from Excel spreadsheets.
- Non-image files nested in a PDF are now also indexed. Before only nested images were extracted.
- Resolved an issue with indexing PST/OST files with an irregular structure.
- Improved the indexing of items inside PST/OST files with unrecognized item types.
- Resolved an issue with PDF forms not indexing properly.
- Resolved an issue with RAR files with non-Latin file name entries not indexing properly.
- Improved indexing of host names containing dashes.

Searching

- Currency symbols like $, € and £, and other symbols like % and & are now preserved when encountered as part of a “word”. This means that searching for $1000 will only find documents containing $1000, while searching for 1000 still matches with 1000, $1000, €1000, etc.
- A date search can now be restricted to specific days and/or time intervals. This makes it possible to e.g. search for emails sent during the weekend or outside of regular office hours.

- Every new case now has a number of default Saved Searches for finding items that potentially contain credit card and social security numbers, are potential junk mails or potentially contain email addresses in the item text.
  Caution: these searches are based on character patterns and keyword lists and may produce false positives and negatives.
- Show Conversation now also takes the In-Reply-To and References headers into account, making it possible to trace emails in a conversation where the subject line has been changed. The heuristics for finding matching subject lines have been improved.
- The Saved Searches facet now has a "Replace current results" checkbox that controls whether the current Results list and Cluster Map are cleared when the saved search is restored. This replaces the previous confirmation dialog with a more flexible and user-friendly approach.
- Added an Item ID Lists facet that can be used to search for items using a list of Item IDs.
- Added experimental support for searching with regular expressions.
- Resolved an issue with proximity queries being sensitive to the word order.
- Resolved an issue with phrase searches containing only a single term and using wild cards.
- Resolved an issue with EMF, OGG, FLAC and Adobe DNG files being placed in incorrect Type facet branches.
- Several minor stability refinements.

Results

- All Details views can now be deduplicated. Previously this was only possible in the table view.
- The Timeline view has received several improvements:
  - Added the ability to display phone calls, SMS and MMS messages.
  - Better layout, rendering and tooltips.
  - Added a Legend button.
  - Made the display of Sender headers optional. This simplifies the display of emails that have both a From and Sender header.

Previewer

- Replaced the ribbon at the top with a toolbar at the left, resulting in a more elegant and self-explanatory user interface.
- The Previewer can now loop over the items in all Details view. Previously this was only possible when launched from the table view.

- Improved error message when the item cannot be opened in the native application.
- Lots of minor usability and stability refinements.

Exporting – General

- The Export window has been redesigned and now uses a wizard approach.
- Considerably extended the options for naming exported files and organizing them in folders.
- Made the set of properties that are exported to a PDF configurable.
- Added an option to the PDF export for listing all attachment file names on a single line, as part of the item properties.
- Items can now either be sorted using Intella's build-in sort routine (which involves item hierarchy and date), or by using the current sort order from the Details view. This affects various export types as well as all export reports.
- Greatly improved the speed of exporting of calendar items to a PST file.

Exporting – Load Files

- Added support for suppressing certain item types from being rendered in their native form when exporting to a Load File. This makes it for example possible to skip native view generation of all spreadsheet types.
- Added options for adding Bates Stamps to PDFs and extended the existing Bates Stamps functionality for Load Files.
- Made the date format used in Load Files configurable.
- Added "Comma Separated Values" as a fifth Load File format.
- Resolved an issue with the presence of newline characters in a Load File, rendering the file invalid.

TEAM

- Improved connection security between TEAM Manager and its TEAM Reviewers by replacing basic authentication with digest authentication.
- Keyword lists, MD5 and message hash lists, Item ID lists and Saved Searches are now stored in the shared case. Previously these were stored locally. After uploading, these lists can be used by all investigators connected to the case.
- The Set Reviewer Name menu entry in the TEAM menu has been removed; it has been replaced by the Investigator field in the Case Manager window.

Upgrade Notes

Intella 1.7 can open cases made with Intella 1.6.x and 1.5.x. These cases require conversion before they can be opened.

- When opening a 1.6.x case, a case conversion process is triggered that creates a copy of the case and transforms the case databases. Afterwards the copy can be opened in Intella 1.7.x. The old case is left unchanged and can still be opened with the 1.6.x versions.
- When opening a 1.5.x case, a case conversion process is triggered that creates a copy of the case and reindexes it from scratch. This will take a substantial amount of time, roughly equivalent to the time it took to index the original case. Afterwards the copy can be opened in Intella 1.7.x. The old case is left unchanged and can still be opened with the 1.5.x versions.
- Cases made with Intella 1.4.x and older are not supported.

When converting a 1.5.x/1.6.x case, the pre-defined Saved Searches described above for finding credit card numbers, social security numbers etc. will be added to the new case.

For more information on case conversions see the User Manual, chapter “Converting a Case”.

Please back up your cases before converting them.

Intella 1.6.4

Released: April 25, 2013.

Highlights

- Added **six new date fields** in the Date facet and Details table, covering File Created, File Last Accessed, Start Date, End Date, Due Date and Last Printed dates.
- Improved indexing of **non-email artifacts in PST files**, such as calendar items, tasks, etc.
- Added the ability to **export non-email artifacts to a PST file**.
- Added support for indexing **winmail.dat** attachments.
- Configurable **display time zone** per source.

General

- Each source now has a time zone setting that can be used to indicate the suspect PC's time zone. All dates of items obtained from that source will be displayed in the specified time zone. The time zone can be changed at any time in the Source Editor.
- Resolved an issue with the Intella update notification in the menu bar not being displayed.
- Various performance and stability improvements.

Indexing

- Improved indexing of calendar items (appointments, meetings and meeting requests), tasks, journal entries, notes and distribution lists from PST files. Earlier these were either not supported at all or only revealed properties that also occur in emails.
- Added support for extracting and indexing the contents of winmail.dat attachments, also known as TNEF-encoded files.
- Added indexing of PR_... fields of MSG files. These fields are visible in the Raw Data tab.
- Improved the user interface for defining and editing disk image sources.

- Improved handling of time-outs when indexing large and/or complex files. The procedure for determining and, when necessary, increasing the time-out values has improved. When the recovery of deleted items from a PST/OST files consistently times out after the maximum number of attempts, this is now reported as a source error.
- Improved the locations shown in the Source Editor window and Errors tab for nested email containers.
- Resolved an issue with information entered in PDF forms not being extracted.
- Improved text extraction of HTML content. This applies to both emails and loose HTML files.
- Resolved issues with the indexing of Chinese, Japanese and Korean documents using particular encodings.
- The Generator and Template fields of MS Office documents are now also indexed.

Searching

- Smart Search now automatically applies so-called stopword lists for 13 languages. These lists contain the most common words for each of these languages. Such words are generally not considered to be very informative. By filtering them out, the automatically generated smart search expression will yield higher quality results.
- The Date facet can now also search on File Created, File Last Accessed, Start Date, End Date, Due Date and Last Printed dates.
- Resolved an issue with the evaluation of multi-term queries where the terms occur in different document fields.

Results

- The items table has been extended with File Created, File Last Accessed, Start Date, End Date, Due Date and Last Printed columns.
- Resolved an issue with sorting on the Tags column in the Details table.
- Resolved issues with hit highlighting spanning a larger portion of the document than necessary.

Previewer

- The Character Set property is now shown for all text files.
- Improved HTML text layout.

- Resolved issues with missing line breaks, making the text hard to review.

Exporting

- Export to PST now also supports calendar items (appointments, meetings and meeting requests), tasks, journal entries, notes and distribution lists. See the user manual for restrictions.
- The last used export settings are now restored automatically when the Export window opens.
- A file's creation, last accessed and last modified dates are now retained when exporting to Original Format.
- Load file export now has a new custom field called "Item's best title". This automatically selects the best candidate to describe the item, based on the item's subject and file name.
- The "Don't include any metadata" option in the load file export now also removes the item's title, main properties and page count from the first page.
- Resolved an issue with page orientation when exporting to PDF with native rendering enabled. This applies to both load file export and regular PDF export.
- Resolved an issue with Open in Application using a temporary file with a file extension that was inconsistent with the actual file type, causing the wrong native application to be used for opening the file.
- Improved exporting of PST emails that lack regular mail headers.
- Resolved an issue with load file export not cleaning up its temporary files.

TEAM

- Resolved an issue with work report exports not correctly applying the configured filters.

Installer

- Resolved an issue with the installer not being able to write a file called "88087.xml".

Upgrade Notes

Intella 1.6.4 can open cases made with all previous Intella 1.6.x versions.

For cases made with Intella 1.6.1, 1.6.2 and 1.6.3 there is in principle no need for reindexing the case. Reindexing is only recommended when the original issue had issues relating to the indexing of the case. For cases containing Chinese, Japanese and Korean documents reindexing is recommended as the improvements for indexing these languages can affect a large portion of the case.

For cases made with Intella 1.6 we do recommend that you reindex if you have not already done so with a more recent Intella version, because of memory usage improvements that require one of the databases to be rebuild.

Please back up your cases before reindexing them.

The first time a case made with Intella 1.6-1.6.2 is opened in Intella 1.6.4, a one-time only database creation process is started. This new database will speed up the deduplication operation considerably. Creation of this database may take several minutes on large cases and slow disks.

Cases made with 1.5.x versions are shown in the Case Manager as needing conversion before they can be opened. The automated case conversion process creates a copy of the case that is subsequently indexed from scratch. The old case is left unchanged and can still be opened with the 1.5.x versions.

Cases made with older Intella versions are not supported.

Intella 1.6.3

Released: January 31, 2013.

Highlights

- Indexing of **disk images** (EnCase E01 and L01 formats, DD format).
- Indexing of Microsoft (**Hotmail**) and **Yahoo** search warrant results.
- Indexing of **nested mail containers** (e.g. a zipped PST attached to an email in an Mbox file).
- Keyword search improvements: search specific **fields** (From, To, etc.), use **wildcards** within phrase and proximity queries.
- Officially supported **64-bit version**.
- Support for **64-bit MS Office and Outlook**.
- Improved **indexing performance**.
- Improved **indexing reporting**: speed graphs, overview of encountered item types and errors.
- Lots of **cellphone**-related improvements, such as XRY's latest XML format.
- Functionalities for **restoring tags** and other annotations from a broken case.
- Added a **Spanish translation**.

General

- The 64-bit version is now officially supported.
- Intella's user interface is now also available in Spanish.
- Several changes improving indexing and search performance, memory usage and stability.
- Fixed the main window's components refusing to resize when dragging the vertical divider.
- Improved the way the software deals with invalid backup paths.
- The backup dialog can now be cancelled, cancelling exiting the application as well.
- Resolved issues with Intella not exiting properly, resulting in files that were kept locked.

Case Management

- The Case Manager now shows currently opened or shared cases as locked and disabled. This prohibits accidentally opening a case that is already open in another Intella process.
- When adding a new case, the chosen case folder path is tested for being a hard disk formatted with the NTFS file system. A warning is displayed when a different type of file system or medium (removable disk, network drive, optical drive) is detected.
- The File menu has been extended with a Restore Annotations menu item. This option can restore the annotations (tags, flags and comments) from a case that has become corrupt (e.g. due to hardware failures or incorrect use of removable drives) into a backup of that case.
- Fixed an issue with the preferences file that could result in the case refusing to open.

Indexing

- Intella can now index EnCase E01 and L01 disk images, as well as images in the DD format. Various file systems are supported, including FAT16, FAT32 and NTFS.
- Added support for XRY's new Extended XML format. This format has been introduced in XRY 6.4 and is strongly recommended over the old format.
- Intella can now index the Hotmail account dumps that Microsoft delivers in response to search warrants.
- Improvements have been made to Mbox indexing to ensure that Yahoo's dumps made in response to search warrants index correctly.
- To speed up indexing, an option is added to the Add Source wizard for turning off storage of the evidence files in the case folder. The drawback of not storing them is that these files need to be available in their original location in order to be exportable.

  Note that items *extracted* from these evidence files, such as emails extracted from a PST file, will always be stored in the case folder. This option is only about the evidence files themselves.
- The indexing progress screen has been extended with a speed graph and more detailed information about the encountered item types and errors. At the end of indexing the speed graph is also stored as a PNG in the logs folder.
- NSF indexing now also detects and indexes orphaned items.
- Mail containers that are not directly located in the file system are now also indexed. Examples are PST files that are zipped or attached to emails.

- The indexing exception report (Sources menu → Exception Report) has been extended and now shows information on problematic sources, as well as various statistics on the types of errors encountered. The report is now in XLSX format instead of the CSV format, to allow for a more user-friendly report that supports all Unicode character.
- When indexing cellphone dumps, the phone number associated with the phone (which is typically not part of the dump) can now be specified using a separate file. This way all calls and messages can have both an Incoming and an Outgoing number associated with them.
- Resolved issues with the file type detection of Cellebrite XML dumps.
- Resolved duplicate indexing of items that are part of an Oxygen XML dump.
- Resolved an issue with Cellebrite SMS messages listing the Incoming number as the Outgoing number.
- Resolved an issue with the Company field and custom properties of MS Office documents not being extracted.
- Resolved an issue with an email body failing to be indexed due to a broken MIME structure.
- Resolved an issue with some facets reporting all categories as empty after a reindex.
- Made the processing of email senders and receivers from PST files more robust w.r.t. syntax and encoding issues.
- Added support for indexing PR_... with multiple values fields in a PST file.
- Resolved an issue with certain NSF emails having incorrect Received dates.
- Message hashes are now also calculated for SMS messages, but only when the sender, recipient and content are all known.
- Resolved an issue with broken XML files triggering an infinite loop, stalling indexing.

Searching

- Wildcards can now be used within phrase and proximity queries.
- One can now explicitly search on specific sender and recipient fields. In older versions these fields were always bundled together in the "Authors & E-mail Addresses" field, making it impossible to search for e.g. a name or address occurring specifically in the From field. With this improvement, the From, Sender, To, Cc and Bcc fields can be searched separately.
- Improved performance of the deduplication operation. This used to be slow on large cases the first time it was invoked.
- Improvements to the keyword search options UI.
- The Type facet's tree now has a branch for disk image types.

- The Show Conversation option now also works on SMS messages.
- Improved the accuracy of the Empty Documents category: some unusual Unicode whitespace characters were not yet supported, resulting in false negatives.
- The Has Duplicates category in the Features facet and the corresponding table column now also take emails into account that have different MD5 hashes but identical message hashes. Before, these would not be returned, even though the Show Duplicates search would return them.
- Resolved an issue with the "Search across all fields" action in the Words tab not always searching across all fields.

Results

- The Details table has been extended with IMEI and IMSI columns, relevant to cellphone data. Furthermore a Device Identifier facet has been added that shows the encountered IMEI and IMSI values and lets the user search for all related items.

Previewer

- Added a scrolling tooltip in the property panel (above the tabs) so that values such as long lists of senders and receivers can be viewed completely.
- The Raw Data tab now also supports the low-level data extracted from NSF emails, MS Office documents and cellphone items.
- Various improvements to hit highlighting in the tabs and property panel.
- All date fields now show an explicit time zone.

Exporting

- The PDF export, the Print command and the Preview tab, which all rely on MS Office for certain file conversions, can now use both the 32-bit and 64-bit versions of MS Office. The bit variants of Intella and MS Office do not have to match. For example, you can use the 32-bit Intella version together with 64-bit MS Office.
- The 64-bit version of Intella can now also export to PST using both the 32-bit and 64-bit versions of MS Outlook. The 32-bit version of Intella still requires that you use 32-bit MS Outlook.
- Removed the Vound branding from the PDFs and TIFFs produced as part of a load file.
- Fixed the order of the columns when the Details table is exported to a CSV file.
- Resolved a MAPI_E_COLLISION error produced by Outlook when exporting to a PST file.

TEAM

- The Work Report functionality has been extended to work across different cases. This lets a user create a case using evidence files already used in another case, and bring over the tags, flags and comments from that other case into the new case. Matching items in the two cases is not trivial as item IDs and paths may be different. Any annotated items that could not be found or not with 100% certainty will be reported.
- The rules regarding who can delete the tags in a case have been relaxed. When connected to a shared case, only the creator of a tag used to be able to delete that tag. Now, users with a TEAM Manager license can also delete all tags. When working with a local case, one can always delete the tags, regardless of who made them.
- Improvements to the tagging progress messages when connected to a shared case.
- A warning dialog is now shown when you attempt to close the case sharing dialog while the case is still being shared.

Installer

- The installer would always remove the last installed set of shortcuts, regardless of the chosen start menu folder. This is problematic when installing several Intella versions side-by-side and removing one of them. This has been fixed.

Upgrade Notes

Intella 1.6.3 can open cases made with all previous Intella 1.6.x versions.

For cases made with Intella 1.6.1 and 1.6.2 there is in principle no need for reindexing the case. Reindexing is only recommended when the original issue had issue that relate to the indexing of the case.

For cases made with Intella 1.6 we do recommend that you reindex if you have not already done so with a more recent Intella version, because of memory usage improvements that require one of the databases to be rebuild.

Please back up your cases before reindexing them.

The first time a case made with Intella 1.6-1.6.2 is opened in Intella 1.6.3, a one-time only database creation process is started. This new database will speed up the deduplication operation considerably. Creation of this database may take several minutes on large cases and slow disks.

Cases made with 1.5.x versions are shown in the Case Manager as needing conversion before they can be opened. The automated case conversion process creates a copy of the case that is subsequently indexed from scratch. The old case is left unchanged and can still be opened with the 1.5.x versions.

Cases made with older Intella versions are not supported.

Intella 1.6.2

Released: October 8, 2012.

Highlights

- Improved the reporting of indexing errors.
- Various performance and stability improvements.
- An experimental 64-bit version is available on request. This version makes better use of the resources that high-end machines have to offer, such as multiple cores and large amounts of memory.

General

- Several stability improvements for locally opened and shared cases.
- Various improvements to logging, reducing the amount of irrelevant and innocent error messages.
- Fixed an issue with Intella not exiting properly under certain circumstances.

Case Manager

- Fixed an issue with the case conversion message on 1.5.x cases overlapping with the case's description.

Indexing

- The Sources menu has been extended with an Exceptions Report menu item for producing a report in CSV format of all items that had issues during indexing. Each problematic item is reported together with an error code, detailed error message and information on the item's location. Issues can range from minor metadata parsing issues (e.g. a syntactically incorrect date field) to encrypted or corrupt items.
- Various improvements to the indexing of Oxygen cellphone dumps.
- Fixed an issue with the indexing statistics shown in the user interface counting certain items twice. The statistics reported by the facets were already accurate.

Searching

- The Email Address facet now lowercases the host part (everything after the '@' sign).
- The table columns and column groups shown in the Details table's column chooser now have a fixed order.

Results

- The default icons in the Thumbnails view have been improved. The new icons stand out more from the already loaded thumbnails. Also a different icon is shown when the image fails to load properly, e.g. when the image file is broken.
- The thumbnail view no longer showed the number of embedded items found in the selected results. This functionality has been restored.

Previewing

- Fixed several issues with Open in Application failing to open the item in its native application.
- Open Containing Folder was sometimes incorrectly enabled in shared cases.

Exporting

- Added an option to export the social graph ("who communicates with whom") of a selected set of emails to a data file. The graph can be stored in CSV, GML or GraphML format. A variety of social network analysis tools exist that can consume these formats.
- Documents in landscape mode were added to exported PDFs in portrait mode. This has been resolved; the produced PDF now uses the correct orientation for every single page in the original document.
- The item's ID is now included in exported PDFs.
- The i2 Analyst's Notebook & iBase export now also contain cellphone-specific metadata such as phone numbers and call duration.

TEAM

- Several server-side and client-side performance improvements when accessing shared cases.

- Fixed an issue with the last used port and passphrase not being remembered for shared cases.
- Improved memory usage of work report exporting.

Upgrade Notes

- In principle, Intella 1.6.2 can open cases made with Intella 1.6 and 1.6.1 and search and export items from them, without any need for case conversion or reindexing. For 1.6.1 cases reindexing is only recommended when the original case had indexing issues for which Intella 1.6.2 contains a fix. For 1.6 cases we do recommend that you reindex if you have not already done so with Intella 1.6.1, because of memory usage improvements that require one of the databases to be rebuild. Please back-up your cases before attempting to reindex them.
- Cases made with 1.5.x versions are shown in the Case Manager as needing conversion before they can be opened.
- Cases made with older versions are not supported.

Intella 1.6.1

Released: August 20, 2012.

Highlights

- This release is backwards compatibility with cases made with Intella 1.5.x.
- The Dongle Manager has been extended with proxy support.
- Added “Smart Search” functionality.
- Added a case backup feature that is optionally run when a case is closed.

General

- Resolved an issue with Intella failing to render its UI properly when viewed through a remote desktop connection (RDP).
- Various improvements to reduce the potential negative impact of virus scanners on Intella’s database files.
- Added links in the Help menu to the new Dongle Manager and the online Intella forum.
- A warning is now shown when opening a case whose case folder is not writable.

Translations

- The first time when a user starts Intella, a language chooser may pop up (depending on the Windows platform language), asking the user what display language to use.
- A message is displayed when an improved translation pack is found online for the currently used Intella version. This translation pack can be installed through the Preferences window.

License Management

- The Dongle Manager has been extended with support for proxies. This facilitates the use of this utility in most corporate environments.

Case Management

- Cases made with Intella 1.5.x can be opened in Intella 1.6.1. Intella 1.6 did not have this ability and would show these cases as disabled.
  Before a 1.5.x case can be used in Intella 1.6.1, the case needs to be converted first. This process creates a duplicate of the case that is restructured so that it can be opened in 1.6.1. This way the old case is not altered in any way and can still be used by the 1.5.x versions. During the conversion process the data will be reindexed to benefit from all improvements that 1.6 and 1.6.1 have to offer. The time needed for this conversion is roughly the same as the amount of time needed for the original indexing.
- When closing a case, Intella offers the user to back up the case to the configured backup folder. This backup folder can be set in the Preferences. We recommend changing the default backup location to a folder on a separate physical disk.
- The Add Case dialog has been extended with a help dialog offering information on the best practices regarding hardware setup, especially for optimizing indexing performance.

Indexing

- Added preliminary support for indexing Oxygen cell phone dumps (version 4.x).
- Various improvements in indexing of XRY cell phone dumps.
- Improved the extraction of email senders and receivers of mails in a PST file, when the information in that PST file is inconsistent.
- A warning is now shown before indexing when the remaining free space of the disk holding the case folder is less than twice the size of the evidence data.
- M4R/M4A ringtone files are now detected and typed accordingly.
- Resolved an issue with incorrect Location values.
- The method for caching extracted items has been improved, providing better stability on very large cases.
- Tokenization improvements that improve search results on complex file names.
- Resolved an issue with indexing folders whose name contain an exclamation mark.
- Improved various logging messages, replacing long error stack traces with shorter and more meaningful errors and warnings.

Searching

- Speed improvements in the population of the Email Address and Author facets.
- "Smart Search" replaces the old near-duplicate search with an alternative that offers configurable settings, live result previews and explainable results.
- The node representing the "Others" branch in the Type facet can now also be used as a search criterion, allowing the user to gather all files with unusual types at once.

Results

- When previewing emails from PST files, the Raw Data tab in the Previewer shows the raw output of what has been extracted from the PST file, including lots of PST-specific fields. This information is also indexed and made searchable with keyword search.
- Usability improvements in the table sorting editor.

Tagging

- In some situations newly defined tags were not added to the Quick Tags buttons in the Previewer. This has been fixed.
- Tag descriptions (the optional field for documenting e.g. a tag's intended purpose and usage) can now be changed.

Exporting

- When exporting the list of values of a given facet, the resulting CSV file now contains at least three rows: (1) facet value, (2) number of matching items in the entire case and (3) number of matching items in the current result set. This makes it unnecessary to do any searching before the overall counts in the case can be reported.
- Added options for controlling the contents of PDFs and TIFFs that are produced as part of a load file.
- The item IDs (numbers) introduced in Intella 1.6 are now used in export reports. They replace the URIs previously displayed here.
- Improved the reporting of export errors on items that are inherently not exportable, e.g. files embedded in encrypted ZIP files.

- Resolved an issue with the contents of PDF documents not being processed correctly when exporting to PDF. This only affected PDF documents that Intella classifies as Empty Document.
- Resolved an issue with messages attached to MSG and EML mails failing to export.
- Resolved an issue with items not opening properly after importing an ICF file.
- Resolved an issue with reviewer comments not being added to printed items.

TEAM

- Improved the usability of the case sharing setup dialog.
- Improved the usability of the remote case connection dialog.
- Added a version check when the Reviewer opens a connection to a shared case, so that the connection is only established when client and server use compatible protocols.
- Various improvements to the user event log in shared cases.

Upgrade Notes

- Intella 1.6.1 can open a case made with Intella 1.6 and search and export items from it, without any need for case conversion or reindexing. Reindexing is only necessary when one wants or needs to make use of the indexing improvements or the new Raw Data tab in the Previewer.
- Cases made with 1.5.x versions are shown in the Case Manager as needing conversion before they can be opened.
- Cases made with older versions are not supported.

Intella 1.6

Released: May 22, 2012.

Highlights

- Share cases over a network with Intella TEAM Manager.
- Index cell phone dumps made with Cellebrite and XRY. This allows for mixing call and messaging data, emails and documents in a single case, for uniform reviewing and exporting.
- The new Dongle Manager lets dongle owners inspect their current licenses and fetch and apply updates from the Vound server with a single click.
- Case folders are now completely self-contained, meaning that items can be exported and previewed without access to the original evidence files. This makes these operations faster and more reliable.
- A translation framework allows Intella's user interface to be translated to other languages. Various translations are being worked on.

General

- This release has the ability to switch between different languages, based on the language profiles that are available in the languages subfolder in Intella's installation folder. We are working with several resellers on getting Intella translated to other languages.
- Contacts found in e.g. PST files, cell phones or as vCard files are now handled in a better way: they are displayed more naturally and with more detail in the Previewer, are exported as vCards when using Original Format, and can now also be exported to a PST.
- All case-specific preferences like tagging settings, chosen table columns, etc., are now stored in a single, simple to understand text file, stored in the case folder as prefs\case.prefs. This allows for manual editing of the file as well as copying a template file to new cases.
- Several stability and performance improvements.
- Rearranged some options in the Preferences dialog.

- Resolved an issue with the application not exiting properly, locking access to the case until the machine was rebooted.

License Management

- Intella 1.6 starts bundling a new Dongle Manager. This application shows all connected Vound dongles and displays the licenses that they hold. When the PC running the Dongle Manager is connected to the Internet, the Dongle Manager can on the user's request contact the Vound license server to see if there are any updates available for a dongle. These updates are then downloaded and applied to the dongle fully automatically.
- Resolved an issue with Intella not starting when using a Remote Desktop (RDP) session, even though a dongle with a valid license was present. This fix only applies to Intella 1.6 and newer. For Intella 1.5.x the patched dongle driver that we distribute remains necessary.

Case Management

- Various buttons in the Case Manager have been grouped behind a single "Add..." button, which opens a new dialog with all case adding options and explanations.
- The Case Manager table has been replaced with a list that shows the details of the currently selected case only. This makes the information a lot easier to oversee, allows for better display of long textual values and was necessary to accommodate the new remote case functionality.
- When opening the Case Manager, its last position, window size and last used case is restored.
- The Intella version used to create a case is now shown.
- The Case Manager now has its own folder with log files, independent of any case-specific log files. Any issues related to the creation, exporting or importing of cases will now be logged in these log files.
- When removing a case in the Case Manager, the user now needs to mark a checkbox to explicitly trigger (and approve of) the removal of the associated case folder from the file system.

Indexing

- Cell phone data extracted with Cellebrite and XRY can now be added to a case, making artifacts like phone calls, text messages, emails and images extracted

from cell phones searchable. To use this functionality, export out the contents of these dumps as an XML report and add those as a Folder or Cell Phone source to the Intella case. A case can hold multiple cell phone extracts, allowing one to investigate any number of phones at once, even mixing data obtained with both Cellebrite and XRY in the same case.

- All extracted items (emails, attachments, embedded images, etc.) are now stored inside the case folder. This ensures that results can always be exported when the user upgrades to a newer version and does not reindex. Also this makes previewing and exporting faster and more reliable.
- As all extracted items are now stored in the case folder, there is no need to access the original evidence files after indexing anymore, except when the user wants to reindex the case. Consequently, all functionalities related to setting evidence paths have been removed.
- The Add Source wizard has been simplified by the removal of the parameters that control whether MD5 hashes, message hashes, duplicate counts and near-duplicate hashes are calculated, what the maximum size of the indexed items is and whether deleted items should be recovered from PST files. These options are typically all left on and generally did little for speeding up indexing when turned off. The “create sources for mail files” option has been renamed to “index mail archives”.
- Greatly improved the indexing speed of IMAP mail folders.
- Resolved an issue with a case not accepting any new sources after an IMAP source had been added to it.
- Improved the error that is shown when the user tries to index a write-protected NSF file.
- When validation of Lotus Notes has failed, a warning is now also displayed in the folder selection screen when defining a new Folder source.
- Improved the parsing of email senders and receivers to handle more standard-violating formats that we have encountered in the field.
- Improved text and image extraction on MS Office and PDF documents.

Searching

- Added a Phone Number facet. This facet gathers all phone numbers from cell phones as well as any phone numbers found in vCard files and PST contacts.

- The Date facet has been reorganized: the Sent and Received fields are now at the top of the list and have been made the default selected fields. A “Called” field has been added for searching phone calls that were made within a certain date interval.
- The Type facet has been extended with several new document types, e.g. RSS feeds, faxes, voice mails, meeting requests, appointments, etc. The Messaging & Scheduling category has been split up in a Communications category and a separate Scheduling category.
- The Keyword Search Quick Reference has been improved to cover wildcards and proximity searching in more detail.
- Improved the Saved Searches facet to distinguish the local user’s saved searches from those made by others working on the same case.
- Resolved an issue with saved searches not storing a search properly when a keyword search started with a wildcard.

Tagging

- Usability improvements in the tag rename dialog.

Results

- Since Intella 1.5 folders can be returned as search results. Folders could not yet be tagged in the Tree tab nor where they hyperlinked. This has been fixed.
- Every item in the case now has a unique item ID (a positive number) associated with it. These numbers are shown in the Previewer’s window title bar, the Item ID column in the Details table, and in any user events visible to the TEAM Managers and TEAM Reviewers when connected to a shared case. One can directly open a numbered item by using the “Preview Item…” option in the View menu.
- When the user moves from item to item with the Previewer’s Next and Previous buttons, the currently selected tab will now stay selected.
- Resolved an issue with the Tree tab in the Previewer not showing the children of folders and certain other nodes.
- Resolved an issue with folder names not being shown in all appropriate places.
- The Name column has been renamed to File Name to make it less ambiguous.

Exporting

- Contacts can now be exported to a PST file.

- The content of the various load file exports has been improved based on customer feedback.
- Renamed the “Terms…” option in the Export menu to “Words…” to make it consistent with the Words tab in the Previewer.
- The wizard through which the Cluster Map graph could be stored has been replaced by a much simpler file chooser.
- Minor usability improvements in the export of the Details table to a CSV file.

TEAM

- When using a TEAM Manager license, the Case Manager now shows a Share button. Through this button one can provide access to the case over the network to other users that have a TEAM Manager or TEAM Reviewer license. This eliminates the need to share case files, evidence files and work reports between the investigators working on the same case. Remote case access is password-protected.

Upgrade Notes

- Cases made with older Intella versions cannot be opened in Intella 1.6. In the upcoming 1.6.1 release an upgrade function will be included for upgrading cases made with a 1.5.x version to the 1.6 format.

Intella 1.5.4

Released: February 29, 2012.

General

- User interface improvements that prevent it from freezing or experience similar problems on machines with slow disks or network connections.
- Resolved an installer issue that broke indexing and exporting from NSF sources on some PCs.

Indexing

- Improved indexing of plain text-like files like source code, shell/batch scripts, etc.

Searching

- All facets now show the total amount of items in the entire case for each value. Some facets were already showing this information; this has now been extended to all facets.
- Resolved an issue with the Type facet not updating immediately when a new source has been added.
- Resolved an issue with the last used searches not restoring fully when the "Restore the queries that were shown last" preference option is switched on.
- The Tags facet no longer shows the tree expansion toggle for nodes without sub-nodes.
- Improved the way the Date facet searches on a date range, by including the entire start and end day, rather than taking the current time of the day into account.

Results

- Resolved an issue with the contents of the Details table and the selection in the Cluster Map changing when the Previewer was opened on one of those results. This happened under specific circumstances only. It affected reviewing of a list of results using the Previewer's Next and Previous button.
- The List view (the Details view mode that resembles a search engine result listing) listed the source of each result using its internal identifier. This has been changed

to show the source name instead, consistent with the Source column in the Table view.
- Improved the indication of the found keywords in the Previewer when the shown text is initially truncated due to its length.

Exporting

- Resolved an issue with the CSV export of the facet values failing, depending on which facet value was right-clicked to initiate the export.
- Improved the progress notification dialog when exporting an ICF file: there was a delay between the progress dialog disappearing and the end dialog appearing, which could lead one to mistakenly believe that exporting had already completed.
- The audit trail used to list the identifiers of all selected items when a facet value was selected. This has been changed to only list the amount of selected items, to prevent the audit trail file from growing to impractical sizes.
- Resolved an issue with CSV exporting unnecessarily validating some sources before exporting, delaying the export a bit.

TEAM

- Resolved an issue with the Features facet not updating fully when an imported work report was rolled back.

Upgrade Notes

- Cases made with 1.5.3 that did not have any indexing issues do not require to be reindexed when the case is opened with 1.5.4.
- Cases made with 1.5, 1.5.1 or 1.5.2 can be opened and used in 1.5.4 without reindexing, but with two limitations:
    - Indexing improvements that were present in 1.5.3 and older will only be effective after reindexing. See the release notes of these previous versions for full details.
    - Some items may be problematic to export without reindexing the case first.

Intella 1.5.3

Released: January 27, 2012.

General

- Added a date format setting in the Preferences. With this setting users can adjust the way dates are displayed to their preferred regional style. This controls both the display style used in e.g. the Details table and the Previewer as well as the format in which these dates are entered in the Date facet.
- Resolved an issue with the main process not exiting properly when the user closes Intella.
- Expert option: the maximum Java heap size of the main process and child processes can now be adjusted through the Intella.l4j.ini file that is located next to the Intella.exe file. This can be used to remedy certain memory issues.

Case Manager

- Relaxed version check: 1.5.3 will be able to open cases made with future 1.5.x versions.
- Intella's File menu has been extended with a "Close case" option, which closes the current case and returns to the Case Manager.
- Cases made with 1.4.x or older can no longer be imported. Previously you were still able to import them even though you could not open them afterwards.

Indexing

- Added detection of emails encrypted with Outlook Information Rights Management (IRM).
- Added detection of MS Exchange database files (.edb files).
- Reduced the dependency on file extensions when identifying a file's type. For example, previously MS Office files could be detected based on contents but a correct file extension was still necessary for distinguishing between Word, Excel, etc. Here, type identification is now based on contents alone.
- Many minor improvements in text, metadata and image extraction quality.
- Reduced memory usage of indexing.

- Resolved an issue with mails sent from BlackBerry phones not being identified as emails.
- Improved message hashing robustness, e.g. differences in whitespaces in the body or the headers will not result in a different message hash any longer.
- Improved robustness of email body selection for PST, OST and MSG emails. The message bodies in these formats can be stored in plain text, HTML and/or RTF format, each of which can in theory be damaged independently of the others. Intella now uses the representation that shows the least signs of corruption.
- When a mail source is defined directly in the Add Source wizard, rather than inferred during processing of a Folder source, the mail file will now have a Type and MD5 hash. Previously this was only the case when a Folder source was used.

Searching

- Added a Saved Searches facet: the current list of searches, includes and excludes can now be stored under a user-defined name. This list can be restored at a later time through a single click. Saved searches can be shared through export and import options that the facet offers, or as part of a work report.
- Optimized the facet order: the most-used facets are now at the top of the list.
- Improved accuracy of near-duplicate searching.
- Resolved an issue that caused some queries not to be restored when the "Restore the queries that were shown last" option was switched on.
- Resolved an issue with the Show Parents function not reporting all parents.

Tagging

- Added an Undo Actions item in the File menu. This opens a window that lets you undo tags, flags and comments. This is particularly helpful when a tag has been used several times on lots of items and one of those times was a mistake. Removing these tags manually would otherwise be very time-consuming and error-prone.
- Resolved an issue with include and exclude searches not updating automatically when items are (un)tagged.

Results

- Resolved an issue with the Details column not showing all senders and receivers of an email. Query results and the contents of the Previewer window were not affected by this.

Load file exporting

- Intella 1.5.2 already added support for exporting Summation and Concordance load files. Version 1.5.3 extends this list of supported formats with Relativity and Ringtail.
- Improved the design of the load file field chooser.
- Increased flexibility when configuring item numbering in a load file.
- Added support for JPG and PNG as load file image formats.
- Summation load files can now use a user-specified encoding. This enables the export of load files that should not use the local platform code page.
- Improved the contents and layout of the load file images.

Other exporting

- The entire contents of the Export window, including the configuration of the load file field chooser, can now be stored as a named template.
- When exporting to Original Format or PDF, either the file name/subject or a consecutive number could be used as file name. Now these two options can be combined: a third option lets you use a consecutive number followed by the original file name or email subject.
- All sources used in an export are now validated (checked for presence and accessibility) before exporting. This way the user is notified of common errors within minutes after clicking the Export button rather than hours or longer.
- Added detection of 64-bit Outlook when exporting to a PST file. Only 32-bit Outlook is supported, 64-bit used to result in a non-descriptive error message.
- Reduced memory usage of exporting, fixing “out of memory” errors.
- Improved rendering of links in generated PDFs: the links are now blue and underlined.

TEAM

- When importing a case to a device that does not have enough free space left, the user can now enter a different path. Previously only an error was displayed.
- Fixed failed import of cases on PCs that had no cases on them created before, or where the manually specified folder did not exist.

Upgrade Notes

- Version 1.5.3 can open and search cases made with older 1.5.x versions without reindexing. However, the changes listed below “Indexing” and some of the other changes will only be effective after reindexing the case.
- Due to some necessary changes in processing, the message hashes will be different in a case made with or reindexed by 1.5.3.

Intella 1.5.2

Released: November 5, 2011.

General

- This version introduces a new product type: Intella Professional. Intella Professional has no hardcoded limit on the allowed maximum case size.

Indexing

- Resolved issues with indexing folders in NSF files whose names contain unusual characters.

Searching

- Made MD5 list search work with more plain text file encodings. This fix results in MD5 lists that are exported by EnCase to work without modifications to the file encoding.
  To benefit from this improvement, currently added MD5 lists need to be re-added to the case.
- Resolved a Cluster Map selection issue that was triggered by combining right-clicks with the Ctrl and Shift keys.

Exporting

- Added support for exporting items as a Load File. This export is currently in the beta phase and may therefore change in future versions. Initially supported are Summation and Concordance.
- Intella 1.5.2 makes the export to i2's Analyst's Notebook and iBase available to all license types. Introduced in Intella 1.5.1, this functionality was originally only available to users of Intella TEAM Manager.
- Automatic numbering of exported files is now available in all product types.
- Minor improvements to logging, export reports and indexing of large XLSX files.

TEAM

- Resolved an issue with work reports that failed to properly filter reviewer annotations by source.

Upgrade Notes

- As part of its standard procedures, Intella will detect the version upgrade when you open a case made with 1.5 or 1.5.1 and suggest that you reindex the case.
    - Reindexing of a case made with 1.5.1 is only necessary for cases containing XLSX files that could not be indexed. When this is not the case, reindexing can safely be skipped.
    - Cases made with 1.5 will open with 1.5.2, but sorting of the Senders and Receivers columns may not work correctly until the case has been reindexed.
- Cases that were made with versions older than 1.5 cannot be opened.

Intella 1.5.1

Released: October 21, 2011.

Installer

- When installing on a Windows 2008 machine, the installer no longer blocks installation but instead warns the user that this is not an officially supported platform to run Intella on.

Case Management

- Added a column in the case manager that shows the last version used to open a case.
- Resolved rendering issues in the case table when a case is imported or renamed.

Indexing

- Improved the error messages shown when an NSF file is locked by another application or for some other reason appears to be inaccessible.
- Removed the "Add..." button from the Source Editor. The only way to add a source is by using the "Add New..." option in the File menu or through the Ctrl-N shortcut. This allows for a more streamlined user experience, as the indexing process that typically follows after adding a source blocks the main window.

Searching

- Resolved an issue with keyword lists that were not being stored, due to illegal characters or other technical reasons.

Results

- Improved sorting performance in the Details table. Both single column sorting and multi-column sorting benefit from major improvements in this area.
- The component that lets the user select the visible columns in the Details table has been redesigned to allow for the growing number of columns. The columns are now grouped into five meaningful categories.

- The Details table can now be configured what to show in the Senders and Receivers columns: email addresses, contact names or both.
- Right-clicking on a cluster in the Cluster Map now automatically selects that cluster when it is not part of the current selection. This prevents potential confusion on what the selected operation in the popup menu is going to work on.

Exporting

- Added a fourth export type: iBase & Analyst's Notebook. This exports out information in a format that can be imported into these applications with the use of the provided templates and import specifications.
- Added a UTF Byte Order Mark to all generated CSV files. This improves how these files are displayed in Excel, especially when containing non-Latin characters.
- Added a template facility to the table CSV export: a specific arrangement of columns can now be stored under a user-defined name. This facilitates optimizing frequent export tasks such as exporting MD5 and message hash lists.
- Improved the performance of the first phase of exporting, where the items are sorted and prepared in other ways for exporting.
- The "Export..." menu option in the table's popup menu and other places is now explicitly disabled when you have selected a folder.
- Resolved an issue with exporting items that have an exclamation mark in the file name, under some circumstances these files refused to export.
- Improved the error messages shown during exporting that are due to NSF files being locked or that for some other reason are inaccessible.
- Resolved an issue with exporting mails from Mbox files to a PST file when the Mbox file comes from a UNIX/Linux machine. The difference in the encoding of end-of-lines between these platforms corrupted the display of certain mails.

TEAM

- Resolved an issue with work reports failing to import due to tag names that are already in use. This can happen when (1) a tag with that name is added to the master case after creation of the ICF file that the reviewer is using, or (2) when a work report imported earlier introduced a tag with the same name. Such tags can now be renamed or merged with an existing tag during importing.

Upgrade Notes

- As part of its standard procedures, Intella will detect the version upgrade when you open a case made with 1.5 and suggest that you reindex the case. The case will work without reindexing, but sorting of the Senders and Receivers columns may not work correctly.
- Cases that were made with versions older than 1.5 and could not be opened with 1.5 (grayed out in the Case Manager) remain inaccessible with version 1.5.1.

Intella 1.5

Released: August 12, 2011.

General

- Resolved an issue with Intella 1.4.3 failing to start on some PCs, exiting immediately with the message “Could not create Java virtual machine”.
- Reduced memory usage of the application, allowing larger cases to be handled.
- Performance improvements throughout the application, making especially search operations and listing of facet values faster.
- Improved number formatting throughout the application.

Indexing

- Improved the robustness of text, metadata and image extraction of files such as PDF, Word and ZIP files.
- Improved the extraction of deeply nested items in MS Office files.
- Improved indexing speed on PST and NSF files. A speed improvement of 10-50% can be expected on most PST and NSF files.
- Reduced duplicate messages extracted from NSF files.
- Added support for indexing Hangul word processor documents (HWP file format).
- Indexing speed statistics are logged to a CSV file in the logs folder, to facilitate the analysis of indexing performance bottlenecks.
- Improved the UI messages that are shown during (re)indexing.
- Resolved an issue where certain characters in an NSF file name or characters in a folder name inside an NSF file resulted in the file not being indexed.
- The folder tree in the Add Source wizard can now be refreshed to reflect changes in the file system. Right-click and choose Refresh, or move the wizard one step back and forth.
- Fixed missing message hashes in certain border cases, e.g. recovered mails.
- Improved parsing and handling of email senders and receivers that do not comply with the email standards.

- Improved error messages on files that are broken or otherwise impossible to index.
- When adding a new Folder source while using a license with a case size limit, a folder size check is always performed, to see if the chosen folder is larger than the remaining allowed case size. This check now shows a progress screen and can be skipped.
- All time-outs used during indexing can now be adapted if necessary.

Searching

- Search performance has been greatly optimized through the use of a new, highly tuned database. Search results will now show almost instantly in the Cluster Map and Details views.
- The Source and Location facets have been merged. PST files and other mail container files now show up as nodes in a single folder tree, rather than as independent roots.
- Folders in the Location facet can now be searched with or without the inclusion of their subfolders.
- Folders can now be returned as search results.
- Improved the results of the Show Children operation on items containing folders, such as certain ZIP files.
- The Date facet now offers a calendar component for choosing the start and/or end date.
- Added categories in the Type facet for Contacts and Tasks extracted from PST files.

Tagging

- Resolved an issue where the OK button in the Add dialog would not be enabled if any of the selected results already had the selected tag.
- Resolved an issue with the Remove Tags dialog showing tag counts that were too large.
- Tags that are already applied to all selected items are now disabled in the Add Tags dialog.
- Adding and removing tags has become faster.

Results

- The Title/Subject column has been split into separate Title and Subject columns, as some document types support both fields.
- The counts shown in the Duplicates column (formerly the Copies in Source column) now reflect the number of duplicates in the entire case, rather than the number of duplicates within the same source.
- Resolved an issue with the deduplication function not removing all duplicates of an item.
- Enforced consistency between the Type facet's Images branch and the Thumbnail view: every item that is classified as an Image will now be displayed in the Thumbnail view, even when the Thumbnail view does not support that image format. In that case a generic icon is displayed.
- Improved image-related operations such as the Thumbnail viewer and the export to PDF when image caching is switched off.

Exporting

- All terms in the index can now be exported to a text file, e.g. for use in a password cracking tool. For each term the field name (corresponding with the options in the Search options panel) and document frequency is optionally listed. When these options are used, the result will be a comma-separate value file (CSV format), with each keyword described on a single line.
- Additionally, the terms of a selected set of results can be exported.
- Improved the folder layout of the generated folders to more closely reflect the location of an item in the original evidence file.
- Resolved an issue where the generated PDF of a TIFF image would contain a barely readable image. The full resolution is now retained.
- The folder being exported to no longer has to be empty. A warning is now produced when the folder is not empty. Note that each export run will start new export reports, they are not merged.
- Concatenated PDFs can optionally be split in chunks of a given size. This improves stability of the export process.
- Fixes for various time-out issues. All time-outs used during exporting can now be adapted if necessary.

Previewer

- Added a Words tab. This tab shows all terms in the full-text index that are associated with this result, ordered by field name. These fields correspond with the options in the Search options panel. The Words tab can be used to find out why certain queries won't match a particular document. The terms can be exported to a CSV file, together with their field names and other statistics.
- The tree structure shown in the Tree tab now fully corresponds with the tree structure shown in the Location facet.
- Improved the accuracy of hit highlighting for phrase searches.
- The Expand button in the Tree tab now has a corresponding Stop button, which lets you interrupt loading of the entire tree. The entire tree may be very large for file types like ZIP files.
- Enabled previewing of CSV and TSV files in their original layout.
- On small screens the default Previewer size will be reduced to fit on the screen.
- Resolved various memory leaks.

Case Management

- The Case Manager disables (grays out) cases made with Intella 1.4.3 or older. Not only are the case data files incompatible with this release, opening them with Intella 1.5 might also damage these files. Please use Intella 1.4.3 to open these cases.
- When opening a case, Intella would already check the presence of evidence files relevant for this case and give the user the opportunity to relocate the files, to work around changed folder names and drive letters. When relocating such a file, the file name and size of the chosen file is now checked against the name and size that the file had during indexing. A warning is displayed when these do not match.
- Resolved an issue with cases failing to correctly export to an ICF file due to the presence of certain non-ASCII characters in evidence file names.
- The audit trail now lists for each tagging action what tagging settings were used, i.e. what type of tagging inheritance was used (upwards/downwards/none) and whether automatic tagging of duplicates was used.
- When removing a case, the Case Manager now shows an animated indicator during the entire operation. Before, it would freeze until deletion had completed.

- Fixed an issue where exporting an ICF file failed due to lack of disk space, even though the free disk space was actually sufficient to hold the ICF file.
- Made the Attach Evidence dialog able to handle multiple sources with the same file path.

Licensing

- Intella is now distributed as a single installer that automatically runs as the product edition licensed to you (e.g. Intella Viewer, Intella TEAM Manager, etc.). When licenses can be found on the connected dongle(s) for multiple product editions, a window is opened that lets the user choose the desired license.
- The trial license is now limited to indexing 10 GB of evidence files per case and can export maximally 1000 items at a time.
- The HASP Admin Control Center sometimes used to show product numbers instead of product names in various overviews. This has been fixed; the product name should now always be shown.

Upgrade notes

- Intella 1.5 is not backwards-compatible: cases made with Intella 1.4.3 or older cannot be opened. This is because of the massive changes that were needed to improve search performance.
- Starting with version 1.5, sources can no longer be removed from a case, only added.
- The installer now refuses to install on Windows 2008. This has always been an unsupported platform on which the correct execution of the application cannot be guaranteed.

Intella 1.4.3

Released: April 13, 2011.

Case Manager

- The Case Manager now shows the full product name (including product edition) and the product version.
- The Case Manager now shows whether a trial license is used or, when running on a dongle, what the ID of the dongle is.

Indexing

- Various stability improvements, including processing of very large XLSX files.
- Resolved an issue where words in DOCX files were concatenated in the extracted text.
- Improved text extraction quality on XLSX files.
- Resolved several text extraction issues with certain mails, including Chinese mails using GB2312 encoding.
- Resolved an issue with encrypted ZIP files not being classified as encrypted.
- Resolved an issue with incorrect dates in PST files. Before, a broken Date header could lead to an email not having a Sent date in the results list. Now, when a Date header is broken, the PR_CLIENT_SUBMIT_TIME field is used instead as the Sent value.
- Resolved an issue with PST/OST files failing to index because of non-ASCII characters in the name of the PST/OST file.

Searching

- Resolved an issue where the "Restore the queries that were shown last" option was set and tag queries failed to be restored.
- The keyword search history now looks up previous searches in a case-sensitive manner.

Results

- Added a Source Path column to the Details table. This shows the full path of the source (e.g. the PST file). This improves reviewing of items from a large collection of evidence files, where the automatically chosen source name does not provide enough information to discern the origin of the information.
- Speed improvements for reviewing large documents.
- Speed improvements for quickly iterating over a list of results.
- Encrypted items are now displayed with a lock icon, to make it instantly apparent why no extracted content can be displayed.
- Applied whitespace normalization to the Contents tab: multiple blank lines are reduced to one line; multiple spaces are reduced to one space, etc.
- Reduced memory usage of previewing items.
- File type icons are now shown in the Type column and in the Type facet. The icon depends on the application that is associated with that file type on the local machine.
- The set of near-duplicates of an item no longer contains the item itself.
- Improved the automatically generated name of a set of near-duplicates.
- Resolved an issue with the Attachment tab in the Previewer failing to print.

Tagging

- The tagging dialogs no longer have a shortcut button that opens the Tagging Preferences. Instead, the "Override tag preferences" subpanel has been extended with a "remember these settings" checkbox.
- Resolved refresh issues in the tags list and quick tags buttons shown in the Previewer.
- Resolved an issue with tags not always being propagated to other parts of the same mail.
- Resolved an issue where the Previewer window would disappear behind the main window after applying a tag.
- Improved the display of long tag names in the Previewer.

Exporting

- Added support for export reports in HTML format.
- Stability improvements for exporting large result sets.

- Added the ability to let the generated PST be split automatically in chunks of a given size. This also improves stability of the export process. The export report mentions which PST an item was exported to.
- Optimized the layout of the exported PDFs to improve readability and reduce the number of pages.
- Applied whitespace normalization to exported PDFs: multiple blank lines are reduced to one, multiple spaces are reduced to one, etc. This improves readability.
- When exporting to both original format and PDF at the same time, the PDF can now optionally link to the corresponding original format file.
- Resolved an issue where the elapsed time and remaining time of exporting were not displayed.
- When exporting a single item, the mouse cursor now changes into a busy cursor while it is creating the file.
- Resolved an issue where an item could not be exported to a PST because the parent email could not be found.
- Resolved an issue where printed results were lacking images.
- Resolved an issue where embedded items were not exported to a PDF when the "Include embedded items" option was switched on.
- Attachments from EML and MSG files that are exported to original format now go into a folder nested in the message's folder and named after the message's subject (similar to PST, NSF, etc.). Before they would go into a numbered folder in the source root folder.
- When an item fails to export due to some error, it is no longer given the Exported status.
- The Export dialog now has an inline help option to explain what happens with email dates when exporting to a PST file.
- Rephrased some Export to PDF options for clarification.
- Improved export status messages.
- The default export folder has been changed from the user's home folder to the Desktop folder.

General

- Improved various error messages.

- Various changes were made to protect Intella's databases against file corruption when an Intella process is terminated through the Task Manager.
- Improved automatic clean-up of temporary files, usually made during indexing and exporting.
- Various improvements to the information in the log files.

TEAM

- The file numbering option in the Export dialog is now only enabled when Original Format and/or PDF is selected.
- The Tags and Features facets make a better distinction between tags, flags and comments made by the case manager and by a reviewer. Before, the difference was only clearly visible to the case manager.

Intella 1.4.2

Released: January 20, 2011.

Indexing

- Optimized memory usage of indexing of PST/OST/NSF files.
- Improved text and image extraction accuracy of PDF and MS Office files.
- Improved folder extraction of PST files that are made using the Hotmail Connector plugin for MS Outlook.
- Resolved an issue with near-duplicate hashing, where generated mail sources did not inherit the setting of the original Folder source.
- Resolved an issue with the Refresh operation incorrectly reporting removed items.

Search and Review

- The date facet now allows the user to search a date range using multiple date attributes simultaneously. Prior to Intella 1.4.2, a drop-down list of attributes was provided, allowing the user to use only a single attribute per search.
- The user now has the ability to sort columns in the Details list by selecting the new Sort Table button. The user can sort based on multiple search criteria in both ascending and descending order. The Sort Table button is located in the upper-right corner of the details pane.
- The Intella Previewer contains a new tab called Tree. This tab allows the user to see the entire path, from root to descendants, of the selected item being reviewed, along with clickable file names and email subjects.
  The tab shows a column with checkboxes that can be used to tag multiple items at once. The user can also right-click and choose to select all above or select all below the clicked item
- The ability to search for child items is now available by
  - Right-clicking the search results in the details list and selecting Show children.
  - Selecting Show children from the Explore tab of the Previewer.

Show children can search for directly or indirectly nested children. The preferred method can be specified in every search or set in the Search preferences.

- The Show parents option now allows the user to specify the level of search by selecting top-level parents or direct parents of the selected items. This option also allows the user to only consider the emails in the path (ignores items that are not email items) and to add all items that are already top-level items to the result.
- The number of copies is now displayed correctly in the Previewer when the number of copies equals 1 (two items with the same hash).
- The Preview tab, which allows the user to preview an item in its original layout, will appear for supported file types only.

Tagging

- An inherited tagging feature is now available in the Add tag dialog. This feature allow the user to either tag the selected item only (item), tag all attached/nested items (item + children), or tag all other items nested in the same top-level item (parents + item + siblings + children).
- The user can also choose to automatically tag copies of the item by checking Tag all copies.
- These options can also be configured globally on the Tagging preferences tab.

Exporting

- Additional options have been added for exporting to MS Outlook PST format.
    - The user can indicate how selected files that cannot be exported to a PST file directly should be handled:
        - Replace with its top-level parent email
        - Replace with its direct parent email
        - Skip
    - The user can indicate how selected emails that are also attachments should be handled:
        - Replace with its top-level parent email
        - Export the selected attached email
- The Source, Location and Tags values in exported PDFs are now located on the second page of the PDF under Properties. The user has the ability to exclude the Properties section when creating PDF exports. This allows potentially sensitive information to be excluded from the export.

- Improvements have been made to the export progress dialog.
    - The dialog no longer blocks the Intella user interface.
    - The elapsed time and the estimated time remaining are now displayed.
- Resolved issues with files that previously could not be exported by Intella.
- Intella no longer places items that fail to export in the Exported category of the Features facet.
- Improved tab printing capability of item contents.
- The file chooser in the Export dialog is now able to create new folders in non-regular Windows folders, such as the Desktop and My Documents.
- After exporting an entire case to an .icf file, a dialog will show the path of the created .icf file together with the paths of all evidence files that also need to be distributed to those importing the case.

TEAM

- The default TEAM work folder has changed from C:\Users\USER to C:\Users\USER\Desktop.

General

- You can now move and resize the Intella user interface when the Add New Source wizard is open, e.g. after opening a newly created case.
- If Intella fails to open a case, an improved initialization error message will provide the user with possible causes and solutions.
- Improved the warning dialog that is shown when opening a case made with a different Intella version.

Upgrade Notes

- Cases made with Intella 1.4.2 cannot be opened by older versions due to changes made to the text indexing.
- Existing cases made with earlier Intella versions can be opened by Intella 1.4.2 but will require the case to be re-indexed. Tags, flags and comments will be preserved when upgrading from 1.4.(1) to 1.4.2. For cases made with older versions, please check earlier upgrade notes.

Intella 1.4.1

Released: December 9, 2010.

- Resolved an error that could occur during importing of large Intella case files (.icf file extension). Importing of these files would typically exit immediately with an error message stating that the case file is not valid. ICF files on which this error occurred will have to be recreated with version 1.4.1.
- Phrase searches using smart quotes are now supported. Such quote characters are typically inserted by word processors like Microsoft Word when typing the quote character.
- Resolved an issue with recovered mails from PST/OST files that could not be exported.
- Resolved an indexing error that occurred on empty folders in PST/OST files.
- Intella cannot export to PST files when the full path to the PST file is longer than 256 characters. Attempting to do so would result in a cryptic export error. Intella now checks the length of the path and gives a more informative error message. This allows the user to fix the path before proceeding with the export.
- Improved PST/OST indexing debug messages.

Upgrade Notes

- As always, a full re-index of the case is necessary to benefit from the changes in this version. After re-indexing a case made with version 1.4.0, the database IDs of recovered mails may have changed. Consequently, the tags, flags and comments of these recovered mails may be lost.
  Regular (non-recovered) PST/OST mails as well as mails from other mail sources are not affected; their tags, flags and comments will be retained during a full re-index.

Intella 1.4

Released: November 17, 2010.

Highlights

Intella 1.4 delivers significant new features, enhancements and performance improvements to Intella. Version 1.4 also introduces a new product: Intella TEAM.

Intella TEAM enables multiple individuals (reviewers, investigators, paralegals, etc.) to review evidence independently and simultaneously. Their individual work products can then easily be merged into a single result. Intella TEAM has two components:

1. Intella TEAM Manager is the primary component and performs three critical functions:
    a. Indexing & preparation of the case data or evidence
    b. Sharing of the case data among others
    c. Combining the work product of others
2. Intella TEAM Reviewers provide the ability to independently search, filter, bookmark, tag, and comment on the case data and transfer the results of that work back to the TEAM Manager.

Important Note: Intella TEAM Reviewers CANNOT index or re-index the case data. Only the TEAM Manager can index data.

Case Management

- Indexed evidence files may now be moved and accessed more easily. Previous Intella versions required that evidence files were to always be found at the same location, the initially used for indexing. That restriction made moving evidence difficult.
- Intella will now detect moved files during startup and open a dialogue that will enable the user to locate the drives, folders, or files.
- Allows for browsing to existing case folders.

- Case importing and exporting now checks for available storage space before starting the operation.
- Case importing and exporting operations now include progress monitors and the ability to interrupt the process.
- When importing cases, the target location can now be specified. (Previously, only the default location was possible.)
- Importing now accepts ZIP files containing an entire case.
- When importing a case that is already present, a warning is now given.
- The "Remove" button is renamed "Delete" and a clear warning message is provided.
- Error fixes were applied to:
    - Keyword search history and other stored preferences related to exporting a case
    - A log file issue related to the use of brackets or other special characters in a case name.

Indexing

- Added extraction of images from PDF files.
- Added support for Foxmail email boxes (.box). Because Intella Rel.1.4 treats .box as a special subtype of Mbox files, use the Mbox source type when indexing. When .box files are contained in a folder, Intella will generate the required Mbox source automatically.
- Added support for Apple Mail email boxes (.emlx files). Because Apple Mail stores every email as a single .emlx file, use the Folder source to index.
- Added detection of AppleDouble header files containing Apple Resource Forks.
- Added support for older Outlook Express 4 (.mbx files).
- Intella-generated source names are now always unique. Thus multiple and different Outlook.pst files will result in sources of differing names, e.g. "Outlook.pst" and "Outlook.pst (2)", etc.
- Added an artificial X-Intella-Type header to items that actually represent other PST/OST artifacts such as notes, tasks, contacts, meeting requests, etc.
- Error fixes were applied to:
    - Time-out issues with certain email files.
    - Enabled indexing of PSTs containing unnamed folders.
    - Enabled proper indexing of emails with no subject lines.

Searching and Reviewing

- Added a Preview tab in the Previewer window, rendering the selected item in its original layout, limited to the first few pages (hence “Preview”). For example, the first few pages of a Word document can be shown with its original formatting, embedded images, etc. This functionality is limited to Word, Excel, PowerPoint, PDF, RTF, HTML, OpenOffice and WordPerfect files. The Preview capability requires MS Office to be installed (Office 2007 requires PDF Add-in).
- Added new categories to the Features facet:
    - “Previewed” shows all items that have been opened in the Previewer.
    - “Opened” shows all items that have been opened in their native application.
    - “Exported” shows all items that have been exported.
    - “Unread” shows all emails that have an unread status in the evidence file (applicable to PST/OST only).
    - "Empty Document" identifies all items that have no text but where text would normally be expected. A common scenario is a PDF file where all text is contained in images, typically a scanned document. The results of this category are typically candidates for OCR or encryption cracking tools.
- Several of the Features facets are now "multi-user aware.” That is, after importing one or more work reports in the Team Manager version, you can see which files were previewed, tagged, etc. and by whom.
- Improved memory usage when querying large amounts of items.
- The Auto-Advance option in the Previewer window has been made persistent.
- The Previewer now checks for unapplied comments before allowing the user to close the window.
- As a precaution, the tagging, commenting and flagging code verifies that those annotations are stored accurately and shows an error message when this is not the case.
- The “Copies” column has been renamed to the more accurately “Copies within source”. Also “Show copies” has been renamed to “Show copies within source”.
- The semantics of the Copies column and Show Copies functionality has been changed: when searching for all copies of an item, the item itself is no longer returned. Thus the count is one less than before.
- The “MD5 Hash” facet has been renamed to “MD5 and Message Hash”.

- Changed the Location facet to show the source file names as the roots for PST, OST and NSF files. This solves the problem of a large list of folders all named "Ext-Root," now making it apparent which email file they relate to.
- Error fixes applied to:
    - Hit highlighting in the Previewer
    - Missing file names for EML and MSG files in the Previewer
    - Incomplete highlighting of values in the Location facet

Exporting

- Improved the layout of the export dialog to more efficiently use the available window space.
- Exporting to PST has a revised set of options, giving more control over what is exported into the PDF.
- Added the ability to add the original rendering of an item to the exported PDF, i.e. the contents of a Word document is shown exactly as Word shows it.
- In Team Manager and Team Reviewer only: added the ability to consecutively number exported files, optionally with a prefix and given start number.
- Exported PDFs have simplified headers and footers – optionally only the consecutive number is displayed in the footer.
- The export order has been improved:
    - First, all items are sorted by source.
    - Next, emails are sorted by Sent date.
    - Each email is immediately followed by its attachments.
    - Each attachment is directly followed by any embedded items.

  The order is relevant for export reports and when concatenating all exported PDFs into a single PDF.

- Exporting of results into their original format has been made much faster.
- Improved memory usage when exporting large amounts of items. When exporting items while memory usage is already high, Intella may suggest removal of the search results from the screen before continuing with exporting the selected set. This frees memory for the export process.
- Improved validation of user-entered information in the export dialog.
- Added a CSV export report type. The CSV report lists all item metadata, accompanied by the names of the exported files in original format and PDF

format. When using consecutive numbering of exported files, the prefix and number is listed as a separate column. Finally, the last column contains any export errors that occurred.

- PDF and RTF export reports now show a divider between the item sets of different sources. The PDF report uses headings that appear in Adobe Acrobat as bookmarks. This can be used to quickly jump to the items of a specific source.
- Improved the export folder layout. Items in their original format, PDFs and PSTs, are clearly separated.
- Error fixes applied to:
    - Fixes for multipart/alternative emails that were missing HTML parts when exported.
    - Fixes for exporting emails with non-Latin content to PDF.

Intella 1.3.4

Released: September 15, 2010.

This release contains a fix that ensures that folder names inside PST and OST files are indexed, so that you can find emails using keyword search on the folder names. Previously this was not done for PST and OST files. Other mail formats did not have this problem.

Intella 1.3.3

Released: September 1, 2010.

Further improvements in recovery of deleted mail from PST/OST files.

Intella 1.3.2

Released: July 28, 2010.

User Interface Improvements and Fixes

- Tagging Fix: The "Tags" line in the properties panel of the Previewer updates correctly now when the last tag is removed from a tagged item.
- Lotus Notes validation: Improved user notification makes it clearer that Lotus Notes application files are missing or that the detected Lotus Notes version doesn't meet the required minimal (most current) version.
- Menu Bar Update Notification Fix: When the "Update Notification Message" on the Menu Bar is selected in Windows 7 the correct browser window (on the Vound website) now opens.
- Case Importing Fix: A network connection is NOT required when importing a case.

Indexing Improvements and Fixes

- Lotus Notes indexing fixes:
- Fixed missing last modification dates for attached messages in an NSF file.
- Fixed missing inline images in RichTextItems in an NSF file.
- Stability improvements for memory-intensive indexing tasks.
- Improved PDF text and metadata extraction accuracy.
- Removed all quotes from the displayed contact name in the Sender and Receiver columns in the Details Panel and the Email Address Facet

Exporting Improvements and Fixes

- Stability improvements for the PST creation process.
- Improved the recovery of deleted mail from PST files, resulting in more extracted mail and attachments.
- Corrected issue that caused exported messages to be labeled "unread" when opened in Outlook 2007 and earlier versions.
- Mbox mail fix: Corrected folder path of exported Mbox mail to remove the path of the Mbox source file.

Intella 1.3.1

Released: July 1, 2010.

New Features

- Comments can now be added to items in the Previewer. Comments are searchable, displayed as a column in the Results table and can be exported.
- Import and Export Cases via the Case Manager to allow cases to be shared among multiple reviewers. An exported .icf file allows easy transportability and ensures integrity of the exported case. The import button allows the reviewer to select an .icf file for importing into the cases folder.
- TimeLine View can now be exported as a PNG image
- Search History can now be selected or turned off by user preference.
- Message ID Column is added to the Results table to display the value of the email's message ID. If no such header is present in an email, the column shows the Mapi-Smtp-Message-Id or Mapi-125-Message-Id header.

Improved and Enhanced Features

- The MD5 column in the Results table now only shows the MD5 hashes of binary items (attached files and electronically stored information). A new Message Hash column shows hashes for email messages.
- The Message Hash algorithm has been rewritten so that the Message Hash values will remain constant when a case is reindexed with a newer Intella version.
- Improved the ability to recover deleted mails from PST and OST files.
- Exporting results as PDF files includes several refinements:
    - All PDF output can be concatenated into a single file instead of one file per result.
    - Options have been added to control the inclusion of email headers, extended properties and comments in the PDF document.
- Results tables that are exported to CSV now use a date format recognized by Excel, making it possible to accurately sort on these values.

- The ability to export lists of facet fields and their counts has been expanded to all facets. Enabling a reviewer, for example, to export a all document types and their counts, document authors and their counts, email addresses and their counts.
- The Case Manager now shows the size of each case. A feature of particular importance to Intella 10 users.
- The indexing statistics shown on the interface at the conclusion of indexing (number of files, messages, elapsed time, etc.) are now added to the log file and available for viewing.
- Because some facets take additional time to initialize, user activity in this state is now disabled so as to prevent incomplete CSV exports of these values.
- The text and metadata extraction accuracy of OpenXML files, also known as the MS Office 2007 formats (.docx, .pptx, .xlsx, ...) has been improved.
- Improved the extraction of values from vCards.
- Renamed the "Index images inside documents" option to "Index content embedded in documents," to more accurately describe what is controlled by this option.

Fixes

- Fixed a problem with PST, OST or NSF files that failed to index due to a "No response from external process" error.
- Fixed broken Export to PST functionality due to a conflict with another installed application.
- Fixes for missing receivers in mails from PST/OST files.
- Fixes for missing dates in MSG files.
- Fixes for incorrect decoding of mail subjects, senders, receivers and dates.
- Fixes for incorrect representation of encrypted messages in PST/OST files.
- Fixes for incorrect attachments in NSF files.
- Fixes for the incorrect representation of attached messages in NSF files.
- Fixed problems with previewing mails that lack a subject.
- Fixed failing indexing of evidence files that have a hash character ('#') in their paths.
- Fixed errors with exporting mails from Mbox sources.
- The Thumbnails tab in the Previewer was sometimes not reset, resulting in the Thumbnails of the previous result being shown as part of the current result.

- Korean characters in case names were replaced by dashes in the suggested case folder.
- When Intella detects a version upgrade when you open a case, a dialog is opened that suggests reindexing of the case. A problem where this dialog appeared every time the case was opened has been fixed.
- When a case was moved to a different location, the ability to show thumbnails was lost due to the use of absolute paths in the database. Those absolute paths have been replaced by relative paths.
- Near-duplicate hashes are no longer calculated for items without text. This prevents these items from being considered to be near-duplicates.
- The counts in the Features facet were not updated instantly when results were tagged, flagged or commented on.
- The Tags facet should show user names of tag creators, not their UUIDs. This only affects exported cases that contain tags.
- Export reports (RTF and PDF) should use relative paths in their links to the exported files, not absolute paths.
- The Print Preview dialog will now always fit the current display, so that no buttons are truncated.

Upgrade Notes

- As usual, when you open a case made with an earlier Intella version in Intella 1.3.1, Intella will detect the version upgrade and suggest that you reindex. Reindexing is necessary to make use of the many improvements outlined above. Two aspects are important to consider:
- After reindexing, the message hashes will differ. We have redesigned the algorithm so that this is not likely to occur with future version upgrades.
- Due to the requirement of a particular fix for indexing NSF files, some internal IDs of items extracted from these NSF files may differ. A consequence of this is that tags pointing to items from NSF files may become incorrect: they may no longer connect to an item at all or may connect to a different item. Should you have cases involving tagged items from NSF files, we recommend you continue using the previous version for that case or, alternatively, completely rebuild the case with Intella 1.3.1.

Intella 1.3

Released: April 13, 2010.

- Improved case management now allows better editing of case details, including investigator name and a case description.
- Improved feedback on indexing. Better progress reporting and statistics. The dialog that shows during indexing is no longer blocking. You can minimize the window now.
- Improved folder selection in New Source wizard
- Completely reworked Previewer. Now tasks like tagging, flagging, and finding copies of an item are offered in a strip of grouped buttons organized in three categories: Review, Explore, and Produce.
- Previewer is now the central instrument for productive reviewing of items allowing direct inspection of relations between items. For example: the relation between a zip-file and its entries.
- Previewer indicates the position of search terms in the scrollbar, and has Next and Previous buttons to quickly browse search term hits.
- Previewer indicates existence and allows you to navigate to duplicates (copies), near duplicates, emails in the same conversation, and parent items.
- Each Previewer can loop over its own results list, so changes in the results table have no impact on the operation of the Next and Previous buttons of existing Previewers. If the table is still showing the same list as when the Previewer was opened, table selection will be updated when the Next or Previous buttons are clicked.
- Improved thumbnail view. Thumbnails are now opened in separate previewer window. Like in table view, direct flagging of thumbnails and context menu operations are now possible.
- Thumbnail view shows not only the selected images, but also the images embedded in selected documents. This happens recursively, e.g., an image embedded in a MS Word document that is attached to an email is shown when the email is selected.
- Extensive tagging functionality added. Tagging can now be done with fast tag buttons and keyboard shortcuts in the previewer.

- New export option added: Export to PDF. This option exports all the selected items to separate PDF documents.
- Item printing added. You can now print the contents of a previewer tab or print a report of the entire item. Added a print preview dialog.
- Ability to find near-duplicates of an item.
- Features facet added. This facet groups the following items: encrypted, flagged, tagged and items that have copies.
- MD5-list option added. You can now upload a list of MD5-hashes to see if these hashes match with the hash value of items in your case.
- Combined keyword lists are now supported. You can combine the results of all the keywords in your list in one results set.
- Many stability improvements. Lotus Notes 8.5 or higher is now required for processing NSF files.
- Sources panel is now automatically expanded when "No sources selected" warning is shown.
- The Sources facet is now the default facet when a new case is opened.
- New manually defined PST sources have the recovery switch by default set to "on."
- Intella now automatically detects if Lotus Notes is installed on the computer. It is now very simple to configure Intella for Lotus Notes NSF files.
- Support for iCal and vCard added.
- More information is extracted from PST and OST files, e.g. meeting requests, tasks, contacts, and appointments.
- More information is extracted from Office files: various types of embedded objects.
- Case size limits are added. The evaluation version is limited to 10 GB. The dongle-controlled version will come in various case size limits.
- Added a License tab in the About dialog (Help > About), showing details of the currently active license.
- Many fixes for non-Latin languages.
- Support for Intella on Windows 7.
- As always, many stability improvements!

Notes on backward compatibility

- When opening a case made with Intella version 1.2.2 or earlier, tags made in these versions will not be recognized.
- The MD5 hashing of email messages is changed in 1.3. The MD5 hash value of email message made with Intella version 1.2.2 or earlier will be different from the MD5 hash value created with version 1.3.
- Some items will have different URI's compared to URI's created in older Intella versions.

Intella 1.2.2

Released: November 11, 2009.

- Stability improvements have been made for Lotus Notes (NSF) file indexing and exporting. In earlier releases, on rare occasions, an NSF file (usually a corrupt file) caused Lotus Notes to crash. When that happened, Intella would be shut down as well. Enhancements in Release 1.2.2 will prevent Intella from crashing under that circumstance. Under that circumstance, Intella will now continue processing the remainder of the file.
- Note that the Vound Forum contains a number of tips for fixing corrupt NSF files. You can register on the Vound Forum at this location: http://support.vound-software.com
- New automatic updater that periodically checks for a newer version of Intella over the internet. This option may be switched off.
- The Previewer features several improvements:
    - For archives (e.g., ZIP files), an Entries tab is shown that lets the user see and navigate the contents of the file.
    - The Properties tab shows an additional number of metadata fields.
    - Icons are shown for known file types, making, e.g., Word files instantly recognizable.
    - Finally, a number of usability improvements have been made.
- Previously, during a Refresh operation Intella would occasionally mistakenly report changed items when the evidence files had, in fact, not been changed. This has been fixed.
- The Add Source wizard remembers the last path of the chosen source files.
- When navigating with the Previewer from result to result, the Results table will now adapt its selected row accordingly.
- The "Export to PST" option is now explicitly disabled when Outlook cannot be found, rather than producing errors during export.
- A number of fixes have been made for retrieving and interpreting mail messages and for indexing corrupt ZIP files.

Intella 1.2.1

Released: October 17, 2009.

Indexing

- Extraction and indexing of Word revision logs, consisting of the last 10 authors and full paths saved to. All authors are listed as contributors in the Author facet and both authors and save paths can be found using keyword search. Note that not all Word versions maintain such a log.
- Added support for Word 6/Word 95 documents.
- Prevent caching of images that are directly available in the file system.
- Show elapsed time during indexing.
- Mistakenly reported unchanged items during indexing of archive entries.
- Broken body extraction of multipart/related messages.

Searching

- Split up the People facet in separate Email Address and Author facets.
- Extended the Email Address facet with lists of all From, Sender, To, Cc and Bcc values.
- Added exporting of encountered email addresses with their occurrence count.
- The Date facet no longer offers pre-defined date ranges. Instead, the custom date range selector has been given a more prominent place in the interface.
- Extended searching for dates: specify whether you want to search for file last modification dates, content created or last modified, sent or received dates.

Previewing & Results

- Added columns for File Last Modified, Content Created, Content Last Modified, Sent and Received dates.
- Show the full date and time of a timestamp in the Results table, rather than only the date.
- Added Attachments column, showing the names of the attachments of a mail.
- The Attachments tab of a previewed mail now shows the subjects of the attached messages.

- The row number in the flagged column did not match the row number shown in the Previewer.

Exporting

- Added "Create new folder" button in the Export dialog.
- Add all known timestamps (created, last modified, etc.) of each exported result in an export report.
- Export to PST: emails with non-Latin subjects could not be exported.
- Fixed broken export of Chinese mails from NSF to EML.
- Some emails exported to EML format lacked a Date header.
- Messages with missing content could not be exported.

Miscellaneous

- HASP license server installation fixes.
- Some preliminary Windows 7 fixes. Intella now runs on Windows 7 with a small number of known issues left to be worked out: no log file is stored; opening of results in their native application sometimes fails.

Intella 1.2

Released: August 20, 2009.

- Added an option to recover the deleted items from PST and OST files.
- Index partial mails found in PST and OST files.
- Added support for indexing Mbox files.
- Index a folder of mail files: New sources are created automatically for each mail file, you are no longer required to add them one-by-one.
- Export search results to PST files.
- Filter visualized results with includes and excludes sets.
- Added a Timeline view as a fourth type of result view.
- Added the Keyword Lists facet: search using keywords lists.

Intella 1.1

Released: May 1, 2009.

- Better performance and stability with new PST and OST crawler.
- Support for MS Outlook Express DBX files.
- Support for RAR archives.
- Preview shows extracted text with search term highlighting.
- Image extraction from Word, Excel, PowerPoint and OpenXML.
- Thumbnail viewer as an alternative for the table and list views.
- Support for Asian languages.
- Search on arbitrary date ranges in the Date & Time facet.
- Support for queries that start with a wildcard ('*' or '?').

Intella 1.0

Released: December 9, 2008.

First publicly available release.