Brainware for Transcripts

User Guide

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About Brainware for Transcripts

Brainware for Transcripts (BFT) captures information from transcripts fields such as school name, student's name, birth-date, GPA, and grades and stores the information as a transcript document.

The document is then available to use with your institution's student information system and can be shared among different departments. You can also store additional documents with a transcript, such as a letter of recommendation.

Brainware for Transcripts contains document type support for high school and college transcripts, as well as Navy, Marine Corps, Army, and Joint Services transcripts.

Supported languages and locations

Brainware for Transcripts supports transcripts presented in English from United States-based institutions.

Brainware for Transcripts components

Brainware for Transcripts includes the following components.

- Brainware Visibility for auditing and reporting purposes.
- Brainware Verifier for document quality-assurance purposes.
- Perceptive Content (optional).

About the Brainware for Transcripts solution architecture

Brainware for Transcripts can be implemented as an early archiving solution where transcript documents are scanned directly into an existing document management solution (DMS). A copy of the document, one file per transcript, and URL are passed to the runtime server. For documents that require processing for a particular client, the ID of the client must also be incorporated into the image filename. The document is processed by Brainware for Transcripts with the metadata exported to Perceptive Content (optional).

Brainware Visibility is also included for auditing and reporting purposes. Verifier workstations can be used for document quality assurance. Perceptive Content is used for escalating of exceptions and other admissions functions prior to the transcript written to the Student Information System (SIS). Data validation occurs through a live connection to the SIS or alternative data source.

About Brainware for Transcripts Solution Features

The following are the features available within the Brainware for Transcripts solution.

- Data export options
- Document management system (DMS) integration
- Solution reporting

Data export options

Brainware for Transcripts provides the following standard export options.

- Output of XML files.
- Output of TIFF files.
- Output of fully text-searchable PDF files.

Note:
It is recommended that when configuring the Run Time Service, only one instance has Export enabled per project. Multiple instances with Export enabled may run into an issue if several transactions are executed simultaneously.

Document management system (DMS) integration option

Brainware for Transcripts supports integration to DMS in both the early and late archiving scenarios.

Early archiving integration

Early archiving means that an image has already been archived prior to reaching Intelligent Capture. In this scenario, Intelligent Capture requires a copy of the archived image with the unique archive document ID embedded into the document filename.

Configuration options in the IMP section in the INI file define whether this unique archive document ID constitutes the entire filename or an underscore-separated component.

At the time of document export, the archive document ID is passed downstream through the Intelligent Capture URN field.

Late archiving integration

Late archiving means that the image is to be archived after processing in Intelligent Capture.

Brainware for Transcripts can be configured to produce a TIFF or PDF of the image and/or store the image in the Visibility reporting database.

Solution reporting

Brainware for Transcripts contains connectors to populate the Visibility reporting tables.

ALE Learnset Manager (ALM) Integration

The ALE Learnset Manager (ALM) is an application utilizing a trainable engine (Automated Learning Engine - ALE) in order to automate processing of documents. ALM is a web-based administration client that enables you to capture, prepare, and manage training documents that are to be learned by the Automatic Learning Engine. Based on what the engine learns from the training documents (learnsets), ALM improves extraction of document header fields, eliminating user intervention.

You can configure BFT to use ALM as an additional extraction resource helping improve header field extraction results for transcripts. Performing verifier actions such as, correcting fields configured for ALM learning, improves the learning process. After a configured header field is modified in Verifier, the associated transcript is added as a training document in ALM, to be learned. Once learned, BFT compares the ALM extraction candidates against the BFT candidates and selects the best candidate. This integration can help improve BFT's extraction accuracy, while reducing repetitive verifier corrections.

You can use Solution Configuration Manager (SCM) to configure the ALM integration for BFT and define the fields which are to be configured for learning.

About the Transcript fields

The transcript fields are included within the Transcript document class and are used by all college, high-school, and military transcript document types.

Transcript type field

The transcript type field denotes whether the incoming document is a college, high school, or military transcript. The field result is determined by the system automatically, based on the classification results. The field is presented as read-only within Verifier and can only be changed by reclassification of the document.

In order to eliminate chances of mis-classification by the automated classification process, you can pre-define the document type using standardized auto-index values in the document file-name.

Institution ID, Site ID, and Internal Institution ID fields

Brainware for Transcripts uses an associative search engine in order to ascertain the issuing institution. Multiple instances of institution master data, each referred to as an institution partition, are also supported.

By pointing Intelligent Capture to an extract of the client's institution master, whether it resides in a flat file or in a database table, the system analyzes the text of the transcript and then selects the closest matching institution record in a fault-tolerant manner that accounts for spelling differences, OCR errors, abbreviations, and institution details embedded within logos on the transcript.

If the system is not confident that the closest matching institution from the extract is the correct institution, the field is marked invalid and the document is sent to Verifier. A Verifier user then chooses to accept this institution or select an alternative using the institution search facility within Verifier.

The institution ID is a mandatory field for all transcript types.

Brainware for Transcripts also supports scenarios where the SIS uses an external institution ID for display to a user, but another institution ID internally. In this scenario, the external institution ID is displayed within Verifier, but the system stores the internal institution ID in the internal institution ID field so that both values are available for export to the downstream system(s).

Applicant ID, Applicant Site ID, and Internal Applicant ID fields

Brainware for Transcripts uses an associative search engine in order to ascertain the applicant. Multiple instances of applicant master data, each referred to as an applicant partition, are also supported by the solution.

By pointing Intelligent Capture to an extract of the client's applicant master, whether it resides in a flat file or in a database table, the system analyzes the text of the transcript and then selects the closest matching institution record in a fault-tolerant manner that accounts for spelling differences, OCR errors, and abbreviations.

If the system is not confident that the returned applicant from the extract is the correct applicant, the field is marked invalid and the document is sent to Verifier. A Verifier user then chooses to accept this applicant or select an alternative using the applicant search facility within Verifier.

When the Verifier user manually enters an applicant ID, that exists in the ApplicantASE pool, in the ApplicantID field and presses Enter, the ApplicantASE, Last Name, First Name, Middle Name and DOB fields are automatically updated on the Verifier form.

The applicant ID is a mandatory field for all transcript types.

Brainware for Transcripts also supports scenarios where the SIS uses an external applicant ID for display to a user, but another applicant ID internally. In this scenario, the external applicant ID is displayed within Verifier, but the system stores the internal applicant ID in the internal applicant ID field so that both values are available for export to the downstream system(s).

First Name field

This field is used to capture the first name of the applicant. For college and high school transcripts, the first name is populated when either the runtime server or a Verifier user validates the applicant ID. If an invalid reason is selected for the applicant ID, the field is manually entered by a Verifier user, and automatic extraction from the transcript image is not performed.

Note:
Automated extraction of this field is applied for Army, Navy, Marine, and Joint Services transcripts. If the applicant information does not match the extracted value, the field is presented for verification.

Middle Name field

This field is used to capture the middle name of the applicant. For college and high school transcripts, the middle name is populated when the applicant ID is validated by either the runtime server or a Verifier user. If an invalid reason is selected for the applicant ID, the field is manually entered by a Verifier user, and automatic extraction from the transcript image is not performed.

Note:
Automated extraction of this field is applied for Army, Navy, Marine, and Joint Services transcripts. If the applicant information does not match the extracted value, the field is presented for verification.

Last Name field

This field is used to capture the last name of the applicant. For college and high school transcripts, the last name is populated when the applicant ID is validated by either the runtime server or a Verifier user. If an invalid reason is selected for the applicant ID, the field is manually entered by a Verifier user, and automatic extraction from the transcript image is not performed.

Note:
Automated extraction of this field is applied for Army, Navy, Marine, and Joint Services transcripts. If the applicant information does not match the extracted value, the field is presented for verification.

DOB field

This field is used to capture the date of birth of the applicant. If the applicant ID was validated by the runtime server and the DOB is present in the Application ASE pool, the DOB from the Applicant pool is populated in the DOB field.

If the applicant was not validated by the runtime server or the DOB is not present in the applicant pool, the Brainware for Transcripts attempts to extract the applicant's date of birth. The system automatically converts the date of birth on the document, irrespective of how it is expressed, into the designated Verifier output format. The format can be set to DD/MM/YYYY or MM/DD/YYYY using the configuration settings in the BRWDAT table.

If a date is entered manually in Verifier, then conversion does not take place unless the date entered is does not match the Verifier output format.

The system can be configured to invalidate the date of birth if the following is true. X is configurable.

- It is more than x days in the future.
- It falls more than x days prior to the current date.

Machine and local user settings play no part in the system's internal handling of dates. User input into the date field is not subject to the checks previously listed as long as the date entered is valid for the output format.

SSN field

This field is used to capture the social security number of the applicant. If the applicant ID was validated by the runtime server and the SSN is present in the Application ASE pool, the SSN from the Applicant pool is populated in the SSN field.

If the applicant was not validated by the runtime server or the SSN is not present in the Applicant pool, the Brainware for Transcripts attempts to extract the applicant's social security number. Only social security numbers matching the ######### or ###-##-#### format are considered valid formats.

Date Issued field

This field is used to capture the issue date of the transcript. The system automatically converts the date issued on the document, irrespective of how it is expressed, into the designated Verifier output format. The format can be set to DD/MM/YYYY or MM/DD/YYYY using the configuration settings in the BRWDAT table.

If a date is entered manually in Verifier, then conversion does not take place unless the date entered is does not match the Verifier output format.

The system can be configured to invalidate the date of birth if the following is true. X is configurable.

- It is more than x days in the future.
- It falls more than x days prior to the current date.

Machine and local user settings play no part in the system's internal handling of dates. User input into the date field is not subject to the checks previously listed as long as the date entered is valid for the output format.

Invalid Reason field

This field contains a list of possible exceptions that could prevent a Verifier user from being able to correct a document in its entirety.

The system default is None, but a Verifier user may change this value through the field drop down list when a particular exception is encountered, so that the document can be moved out of the Verifier application.

The following table contains a list of the system delivered invalid reasons, their corresponding rules, when they is selected, and the effect of selecting them.

Invalid Reason	Usage	Effect	Class
APPLICANT NOT FOUND	This invalid reason is selected if the transcript applicant cannot be found using the applicant search function.	**RULE** SETAPPTOVALID The Applicant ID field and Applicant Info fields are set to blank and valid. Verifiers have the ability to manually enter applicant fields, such as First Name, Middle Name, Last Name, SSN, and DOB. An applicant ID is not exported.	Appears in all classes.
INSTITUTION NOT FOUND	This invalid reason is selected if the institution issuing the transcript cannot be found using the institution search	**RULE** SETINSTTOVALID The Institution ID field and Institution Info fields are set to blank and valid. An institution ID is not exported.	Appears in all classes.

Invalid Reason	Usage	Effect	Class
	function.		
INSTITUTION AND APPLICANT NOT FOUND	This invalid reason is selected if the institution issuing the transcript cannot be found using the institution search function and the transcript applicant cannot be found using the applicant search function.	**RULE** SETINSTANDAPPTOVALID T he Institution ID, Institution Info, Applicant ID, and Applicant Info fields are set to blank and valid. Verifiers have the ability to manually enter applicant fields, such as First Name, Middle Name, Last Name, SSN, and DOB. An institution ID or applicant ID is not exported.	Appears in all classes.
CUMULATIVE GPA <> CALCULATED GPA	This invalid reason applies only to College transcripts and is selected if the difference in the GPA extracted from the transcript and the GPA calculated from the Coursework table do not fall within a specified tolerance.	**RULE** SETCUMGPATOVALID The Cumulative GPA field is set to valid.	Appears in all classes. Only applicable to college transcripts.
GPA AND APPLICANT INVALID	This invalid reason applies only to College transcripts and is selected if both of the following conditions apply. The difference in the GPA extracted from the transcript and the GPA calculated from the Coursework table do not fall	**RULE** SETGPAANDAPPTOVALID The Applicant ID field and Applicant Info fields are set to blank and valid. The Cumulative GPA field is set to valid. Verifiers have the ability to manually enter applicant fields, such as First Name, Middle Name, Last Name, SSN, and DOB. An applicant ID is not exported.	Appears in all classes. Only applicable to college transcripts.

Invalid Reason	Usage	Effect	Class
	within a specified tolerance. The transcript applicant cannot be found using the applicant search function.		
GPA AND INSTITUTION INVALID	This invalid reason applies only to College transcripts and is selected if both of the following conditions apply. The difference in the GPA extracted from the transcript and the GPA calculated from the Coursework table do not fall within a specified tolerance. The institution issuing the transcript cannot be found using the institution search function.	**RULE** SETGPAANDINSTTOVALID The Institution ID field and Institution Info fields are set to blank and valid. The Cumulative GPA field is set to valid. An institution ID is not exported.	Appears in all classes. Only applicable to college transcripts.
GPA, INSTITUTION, APPLICANT INVALID	This invalid reason applies only to College transcripts and is selected if all of the following conditions apply. The difference in the GPA extracted from the transcript and the GPA calculated from	**RULE** SETGPAINSTAPPTOVALID The Institution ID field and Institution Info fields are set to blank and valid. The Cumulative GPA field is set to valid. The Applicant ID field and Applicant Info fields are set to blank and valid. Verifiers have the ability to manually enter applicant fields, such as First Name, Middle Name, Last Name, SSN, and	Appears in all classes. Only applicable to college transcripts.

Invalid Reason	Usage	Effect	Class
	the Coursework table do not fall within a specified tolerance. The institution issuing the transcript cannot be found using the institution search function. The transcript applicant cannot be found using the applicant search function.	DOB. An institution ID or applicant ID is not exported.	

After selecting an Invalid Reason, it takes effect when a user presses Enter while in the InvalidReason field or the corresponding field(s).

Hotkey shortcuts have been enabled to set the Institution Not Found (Shift+F2) and Applicant Not Found (Shift+F4) invalid reasons.

You can use the settings in the BRWIVRType table to change the text, rule, and export code associated with an invalid reason, as well as add new invalid reasons based on an existing invalid reason rule. The invalid reason rules available are listed in the previous table.

Invalid reason code

The invalid reason code is the value that the system assigns to a selected invalid reason for the purposes of document export so that a downstream workflow or SIS can act upon that code and behave accordingly.

The code against each invalid reason can be set in the BRWIVRType table.

Custom fields

Ten custom fields, Custom1 to Custom10, are added to the Verifier form. These are text fields used to capture the notes which cannot be automatically extracted from the Transcript. You can either lasso the data from the Transcript or manually enter data into these fields.

The features of the custom fields are as follows.

- You can configure the fields through the BRWFLD table in the database. Also, the field labels are updated on the Verifier form on the basis of the label settings in the BRWFLD table.
- The data from the fields is available for export to the downstream system(s) only in XML format.
- The mapping of the fields occur as follows.
  - College fields are mapped via the BRWEXPUnivHeader table.
  - High School fields are mapped via the BRWEXPHSHeader table.
  - Military fields are mapped via the BRWEXPMilHeader table.
- If the reporting functionality is enabled, then the fields display in the BRWDistillerFields table.
- The method UserExitValidateCustomFields is called to validate the events for each of the ten fields.

College Transcript fields

The following college fields are included within the College document class.

Cumulative GPA field

This field is used to capture the cumulative GPA from the transcript.

Graduation Date field

This field is used to capture the latest graduation date from the transcript. The system automatically converts the date of birth on the document, irrespective of how it is expressed, into the designated Verifier output format. The format can be set to DD/MM/YYYY or MM/DD/YYYY using the configuration settings in the BRWDAT table.

If a date is entered manually in Verifier, then conversion does not take place unless the date entered is does not match the Verifier output format.

The system can be configured to invalidate the date of birth if the following is true. X is configurable.

- It is more than x days in the future.
- It falls more than x days prior to the current date.

Machine and local user settings play no part in the system's internal handling of dates. User input into the date field is not subject to the checks previously listed as long as the date entered is valid for the output format.

Degree Earned field

This field is used to capture the highest degree earned that is listed on the transcript. For example, if the transcript denotes that an applicant earned both an Associate's and Bachelor's degree, the Bachelor's degree information is extracted.

Coursework field

Brainware for Transcripts attempts to capture the following information at coursework line-item detail from college transcripts.

Coursework field	Description
Course Number	This is the course department and number combine. For example, MTH101 MTH = Course Department (Math) and 101 = Course Number. You can configure Brainware for Transcripts to compare extracted course numbers against a database table of known course numbers, including the issuing institution ID. If only one record exists for the extracted course number within the database for the issuing institution, the course number is validated. If multiple records exist for the course number within the table but only one of the database course descriptions match the extracted description, the course number is validated. If these validations are unsuccessful, the course number is presented for verification. You can configure Brainware for Transcripts to add new course number and description combinations to the database table upon export.
Description	This is the description of the course.
Grade	This is the letter grade achieved for the course. Acceptable grades can be configured in the BRWGRD table. The system attempts numeric grade extraction for any coursework table where no alpha grades are extracted. You can configure BFT to force numeric grade extraction based on the InstitutionID issuing the transcript by adding the InstitutionID to the BRWNUMGRD table. If the InstitutionID extracted from the ASE pool exists in BRWNUMGRD, the system removes any RTS extracted grade prior to performing numeric grade extraction.
Earned	This is the credits earned for the course.
Grade Points	This is the grade point earned for the course. Grade points are systematically validated by multiplying the Grade * Earned using both 4 and 11-point grading scales.
Term	This is the term in which the course was taken. The "Copy Terms" button added to the College Verifier form above the Coursework table allows you to quickly fill empty "Term" cells within the Coursework table. On clicking the "Copy Terms" button, the system checks for empty "Term" cells and copies the text from the row above if the cell text is blank. If the "Term" cell text is not blank, then it remains unchanged. The "Copy Terms" button is not visible on the form if the "Coursework.Term" column is not active within Field Settings.

Course ID Lookup

The Course ID lookup feature enables you to validate extracted Course IDs of College documents. Therefore, a lookup table is required that holds the information of Course IDs for any institution.

Institution Identifier: The institution ID (and optional an institution Site ID). For more information, refer to Institution ID, Site ID, and Internal Institution ID fields.

Course ID: A unique identifier as string for a course that contains:

- The Course Subject: Alphabetical part of the course ID. Example: “MATH” for a Course ID: MATH-1234”
- The Course Number: Integer part of the course ID. Example: “1234” for a Course ID: MATH-1234”

Description: The name of the course

The **Course ID** and **Description** must be inserted like the institutions transcripts documents.

The Course ID lookup table is used to validate the Course IDs after the extraction in Runtime Server. Any extracted Course ID is looked up against the Course ID lookup table.

If a match is found (Course ID or Description) for the selected institution, the extracted Course ID is set to valid; if no match is found, the extracted Course ID is set to invalid.

If a match is found for the description, the extracted Course ID is replaced by the Course ID of the lookup table. For more information, refer to Validate Course ID from DB.

To ensure that only validated values are inserted into that table, the records can be inserted automatically while exporting a document, during document validation. For more information, refer to Update the Course ID lookup table on Export.

The Course ID lookup is also used at the time of export for splitting the Course ID (which is not a default export field) into the export fields **Course Subject** and **Course Number**. For more information, refer to Split Course ID into the course subject and the course number forced by the Course ID lookup table.

Validate Course ID from DB

The extracted Course IDs of a College transcript can be validated against information stored in a Course ID lookup table.

After a Course ID is extracted, it can be validated if the lookup finds a valid match in the configured Course ID lookup table. When the extracted Course ID matches a Course ID from the lookup table within a defined Levenshtein distance, it is considered a valid match.

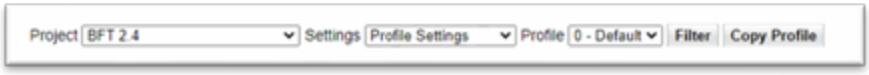
If no match for the Course ID is found, a second search for the Course Description is executed. If the extracted Course Description matches the Course Description from the lookup table within a defined Levenshtein distance, it is considered a valid match.

For valid matches, the extraction result is set to valid otherwise the extraction result is set to invalid with an error description.

If a match is found where the lookup value for the Course ID differs from the extracted value, the extraction value is replaced by the lookup value.

To enable the Course ID lookup, complete the following steps in SCM:

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. In the **Settings** list, click **Profile Settings**.
3. In the **Profile** list, click the relevant profile.



4. In the **Profile Settings** list, click **College Coursework Settings**.
5. Select the **Validate From DB** check box. A list of other configuration options are available.
   To enable validation from DB, the connection to the Course ID lookup table needs to be defined.

For information on specific fields, refer to the following table.

Parameter	Description
Validate From DB	This is the flag to denote whether the course number is validated against course numbers from the same institution in a database table.
SQL Connection Group	This is the SQL connection group specifying the course number validation database connection string as set in the SQL section. The SQL connection groups are defined in the INI file (Section SQL) and may need the configuration of the wanted connection string. If no connection group is specified, the system uses group 01. **Note:** This field is displayed only if **Validate From DB** check box is selected.
Course Table	This is the name of the course validation database table. **Note:** This field is displayed only if **Validate From DB** check box is selected.
Inst ID Column	This is a column in the database table that holds the institution ID. This setting is mandatory. **Note:**

Parameter	Description
	This field is displayed only if **Validate From DB** check box is selected.
Remove Inst Lead Zeros	This is a flag to denote whether leading zeros is removed from the institution ID when validating the course number. **Note:** This field is displayed only if **Validate From DB** check box is selected.
Course ID Column	This is a column in the database table that holds the course ID. **Note:** This field is displayed only if **Validate From DB** check box is selected.
Desc Column	This column in the database table that holds the course description. **Note:** This field is displayed only if **Validate From DB** check box is selected.
Include Site	This is a flag to denote whether the institution's Site ID is used when validating the course number. **Note:** This field is displayed only if **Validate From DB** check box is selected.
Site ID	This is a column in the database table that holds the external institution's site ID if applicable. **Note:** This field is displayed only if **Validate From**

Parameter	Description
	DB check box is selected.
Use Internal Inst ID	This is a flag to denote whether the internal SIS institution ID is used when validating the course number. **Note:** This field is displayed only if **Validate From DB** check box is selected.For more information, refer to About configuring the Institution ID and Applicant ID fields without using a partition
Max Course Number Compare Distance	This is the maximum valid compare distance for the course number **Note:** This field is displayed only if **Validate From DB** check box is selected. It is recommended not to modify this field unless necessary.
Max Description Compare Distance	This is the maximum valid compare distance for the course description. **Note:** This field is displayed only if **Validate From DB** check box is selected. It is recommended not to modify this field unless necessary.
Update DB Export	This is the flag to denote whether the course number is validated against course numbers from the same institution in a database table.If checked, the system updates the course number validation table with new record having **Institution ID** (and its optional **Site ID**), the **Course ID**and the course **Description** values as content. For more information, refer to Update the Course ID lookup table on Export.

Parameter	Description
Subject Column	The column name in the defined Course ID lookup table that holds the Subject name. If set, also the **Course Number Column** setting must be set. **Note:** This field is displayed only if **Validate From DB** check box is selected.
Course Number Column	The column name in the defined Course ID lookup table that holds the Course Number.If set, the **Subject Column** setting must be also be set. **Note:** This field is displayed only if **Validate From DB** check box is selected.

Update the Course ID lookup table on Export

The **Update DB Export** functionality enables you to enhance the Validate Course ID from DB functionality by writing lookup records into the lookup table at the time of export.

Only a fully validated document can get exported. If no Invalid Reason is selected, the Course information is used to update the lookup table. Therefore, the extracted Course ID and its Description is used to find a match in the lookup table. If no match is found, the Institution ID (and its optional Site ID), the Course ID and the course Description is used to insert a new record into the lookup table. Note that all other lookup table fields are NULL.

Note:
To enable this functionality, the **Validate from DB** check box and the **Update DB Export** check box under **College Coursework Settings** in SCM must be selected. For more information, refer to Validate Course ID from DB.

Split Course ID into the course subject and the course number forced by the Course ID lookup table

You can split the course ID and the course subject based on the information in the course ID lookup table.

Note:
To enable this functionality, the **Validate from DB** check box and the **Update DB Export** check box under **College Coursework Settings** in SCM must be selected. For more information, refer to Validate Course ID from DB.

You can:

- Split the Course ID into its subject and course number for export, based on the data in the course ID lookup table

This functionality is disabled if:

- The lookup of the Course ID finds a match
- The **Subject Column**, and **Course Number Column** are configured and mapped with relevant fields in the lookup table.
- The match record holds values for the mapped columns **Subject Column**, and **Course Number Column**.

High-school Transcript fields

Eight fields are included within the High School document class.

Cumulative GPA field

This field is used to capture the unweighted cumulative GPA from the transcript.

Graduation Date field

This field is used to capture the graduation date from the transcript. The system automatically converts the date of birth on the document, irrespective of how it is expressed, into the designated Verifier output format. The format can be set to DD/MM/YYYY or MM/DD/YYYY using the configuration settings in the BRWDAT table.

If a date is entered manually in Verifier, then conversion does not take place unless the date entered is does not match the Verifier output format.

The system can be configured to invalidate the date of birth if the following is true. X is configurable.

- It is more than x days in the future.
- It falls more than x days prior to the current date.

Machine and local user settings play no part in the system's internal handling of dates. User input into the date field is not subject to the checks previously listed as long as the date entered is valid for the output format.

Class Rank field

This field is used to capture the unweighted class rank from the transcript.

Class Size field

This field is used to capture the unweighted class size from the transcript.

Class Year field

This field is used to capture the class year from the transcript.

Total Credits Earned field

This field is used to capture the total credits earned from the transcript.

Weighted GPA field

This field is used to capture the weighted GPA from the transcript.

Weighted Class Rank field

This field is used to capture the weighted class rank from the transcript.

Coursework field

Brainware for Transcripts attempts to capture the following information at coursework line-item detail from high school transcripts. If a valid Highschool Transcript license file is not used, the Coursework table is not available.

Coursework field	Description
Course Number	This is the course department and number combine.
Description	This is the description of the course.
Sem1/Q1	This is the letter or number grade achieved for semester 1 or quarter 1. Acceptable grades can be configured in the BRWGRD table.
Sem2/Q2	This is the letter or number grade achieved for semester 2 or quarter 2. Acceptable grades can be configured in the BRWGRD table.
Sem3/Q3	This is the letter or number grade achieved for semester 3 or quarter 3. Acceptable grades can be configured in the BRWGRD table.
Q4	This is the letter or number grade achieved for quarter 4. Acceptable grades can be

Coursework field	Description
	configured in the BRWGRD table.
Final Grade	This is the letter or number grade achieved for the school year. Acceptable grades can be configured in the BRWGRD table.
Earned	This is the credits earned for the course.
Year	This is the school year in which the course was taken. The "Copy Year" button added to the College Verifier form above the Coursework table allows you to quickly fill empty "Year" cells within the Coursework table. On clicking the "Copy Year" button, the system checks for empty "Year" cells and copies the text from the row above if the cell text is blank. If the "Year" cell text is not blank, then it remains unchanged. The "Copy Year" button is not visible on the form if the "Coursework.Year" column is not active within Field Settings.
Grade Level	This is the grade level in which the course was taken. The "Copy Grade" button added to the College Verifier form above the Coursework table allows you to quickly fill empty "Grade Level" cells within the Coursework table. On clicking the "Copy Grade" button, the system checks for empty "Grade Level" cells and copies the text from the row above if the cell text is blank. If the "Grade Level" cell text is not blank, then it remains unchanged. The "Copy Grade" button is not visible on the form if the "Coursework.Grade Level" column is not active within Field Settings.

Validate Coursework button is available for mass validation of all cells within the High School coursework table. When the button is used, all cells become valid with the exception of cells that has FLD setting requirements.

Course ID Lookup

The Course ID lookup feature enables you to validate extracted Course IDs of College documents. Therefore, a lookup table is required that holds the information of Course IDs for any institution.

Institution Identifier: The institution ID (and optional an institution Site ID). For more information, refer to Institution ID, Site ID, and Internal Institution ID fields.

Course ID: A unique identifier as string for a course that contains:

- The Course Subject: Alphabetical part of the course ID. Example: “MATH” for a Course ID: MATH-1234”
- The Course Number: Integer part of the course ID. Example: “1234” for a Course ID: MATH-1234”

Description: The name of the course

The **Course ID** and **Description** must be inserted like the institutions transcripts documents.

The Course ID lookup table is used to validate the Course IDs after the extraction in Runtime Server. Any extracted Course ID is looked up against the Course ID lookup table.

If a match is found (Course ID or Description) for the selected institution, the extracted Course ID is set to valid; if no match is found, the extracted Course ID is set to invalid.

If a match is found for the description, the extracted Course ID is replaced by the Course ID of the lookup table. For more information, refer to Validate Course ID from DB.

To ensure that only validated values are inserted into that table, the records can be inserted automatically while exporting a document, during document validation. For more information, refer to Update the Course ID lookup table on Export.

The Course ID lookup is also used at the time of export for splitting the Course ID (which is not a default export field) into the export fields **Course Subject** and **Course Number**. For more information, refer to Split Course ID into the course subject and the course number forced by the Course ID lookup table.

Validate Course ID from DB

The extracted Course IDs of a College transcript can be validated against information stored in a Course ID lookup table.

After a Course ID is extracted, it can be validated if the lookup finds a valid match in the configured Course ID lookup table. When the extracted Course ID matches a Course ID from the lookup table within a defined Levenshtein distance, it is considered a valid match.

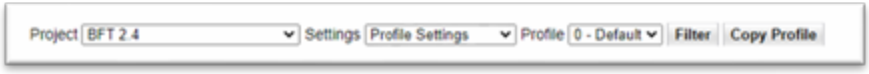
If no match for the Course ID is found, a second search for the Course Description is executed. If the extracted Course Description matches the Course Description from the lookup table within a defined Levenshtein distance, it is considered a valid match.

For valid matches, the extraction result is set to valid otherwise the extraction result is set to invalid with an error description.

If a match is found where the lookup value for the Course ID differs from the extracted value, the extraction value is replaced by the lookup value.

To enable the Course ID lookup, complete the following steps in SCM:

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. In the **Settings** list, click **Profile Settings**.
3. In the **Profile** list, click the relevant profile.



4. In the **Profile Settings** list, click **College Coursework Settings**.
5. Select the **Validate From DB** check box. A list of other configuration options are available.
   To enable validation from DB, the connection to the Course ID lookup table needs to be defined.

For information on specific fields, refer to the following table.

Parameter	Description
Validate From DB	This is the flag to denote whether the course number is validated against course numbers from the same institution in a database table.
SQL Connection Group	This is the SQL connection group specifying the course number validation database connection string as set in the SQL section. The SQL connection groups are defined in the INI file (Section SQL) and may need the configuration of the wanted connection string. If no connection group is specified, the system uses group 01. **Note:** This field is displayed only if **Validate From DB** check box is selected.
Course Table	This is the name of the course validation database table. **Note:** This field is displayed only if **Validate From DB** check box is selected.
Inst ID Column	This is a column in the database table that holds the institution ID. This setting is mandatory. **Note:** This field is displayed only if **Validate From DB** check box is selected.
Remove Inst Lead Zeros	This is a flag to denote whether leading zeros is removed from the institution ID when validating the course number. **Note:** This field is displayed only if **Validate From DB** check box is selected.

Parameter	Description
Course ID Column	This is a column in the database table that holds the course ID. **Note:** This field is displayed only if **Validate From DB** check box is selected.
Desc Column	This column in the database table that holds the course description. **Note:** This field is displayed only if **Validate From DB** check box is selected.
Include Site	This is a flag to denote whether the institution's Site ID is used when validating the course number. **Note:** This field is displayed only if **Validate From DB** check box is selected.
Site ID	This is a column in the database table that holds the external institution's site ID if applicable. **Note:** This field is displayed only if **Validate From DB** check box is selected.
Use Internal Inst ID	This is a flag to denote whether the internal SIS institution ID is used when validating the course number. **Note:** This field is displayed only if **Validate From DB** check box is selected.For more information, refer to About configuring the Institution ID and Applicant ID fields without using a partition

Parameter	Description
Max Course Number Compare Distance	This is the maximum valid compare distance for the course number **Note:** This field is displayed only if **Validate From DB** check box is selected. It is recommended not to modify this field unless necessary.
Max Description Compare Distance	This is the maximum valid compare distance for the course description. **Note:** This field is displayed only if **Validate From DB** check box is selected. It is recommended not to modify this field unless necessary.
Update DB Export	This is the flag to denote whether the course number is validated against course numbers from the same institution in a database table.If checked, the system updates the course number validation table with new record having **Institution ID** (and its optional **Site ID**), the **Course ID**and the course **Description** values as content. For more information, refer to Update the Course ID lookup table on Export.
Subject Column	The column name in the defined Course ID lookup table that holds the Subject name. If set, also the **Course Number Column** setting must be set. **Note:** This field is displayed only if **Validate From DB** check box is selected.
Course Number Column	The column name in the defined Course ID lookup table that holds the Course Number.If set, the **Subject Column** setting must be also be set.

Parameter	Description
	Note: This field is displayed only if **Validate From DB** check box is selected.

Update the Course ID lookup table on Export

The **Update DB Export** functionality enables you to enhance the Validate Course ID from DB functionality by writing lookup records into the lookup table at the time of export.

Only a fully validated document can get exported. If no Invalid Reason is selected, the Course information is used to update the lookup table. Therefore, the extracted Course ID and its Description is used to find a match in the lookup table. If no match is found, the Institution ID (and its optional Site ID), the Course ID and the course Description is used to insert a new record into the lookup table. Note that all other lookup table fields are NULL.

Note:
To enable this functionality, the **Validate from DB** check box and the **Update DB Export** check box under **College Coursework Settings** in SCM must be selected. For more information, refer to Validate Course ID from DB.

Split Course ID into the course subject and the course number forced by the Course ID lookup table

You can split the course ID and the course subject based on the information in the course ID lookup table.

Note:
To enable this functionality, the **Validate from DB** check box and the **Update DB Export** check box under **College Coursework Settings** in SCM must be selected. For more information, refer to Validate Course ID from DB.

You can:

- Split the Course ID into its subject and course number for export, based on the data in the course ID lookup table

This functionality is disabled if:

- The lookup of the Course ID finds a match
- The **Subject Column**, and **Course Number Column** are configured and mapped with relevant fields in the lookup table.
- The match record holds values for the mapped columns **Subject Column**, and **Course Number Column**.

Military Transcript fields

The military fields are included within the Military document class.

Coursework field

Brainware for Transcripts attempts to capture the following information at coursework line item detail from Military transcripts.

Coursework field	Description
ACE Identifier	This is the American Council on Education (ACE) identification number.
Course ID	This is the military course ID for the coursework line.
Start Date	This is the start date for the coursework line and is applicable to only Joint Services Transcripts. The BRWFLD.Active column for Coursework.StartDate is used to enable or disable this column. If the Active column is set to True for this field, and only a single date is available for a coursework row, then the date is extracted to this field for the row. If the Active column is set to False for this field, and only a single date is available for the coursework row, then the date is extracted to the "Date Completed" field for the row.
Date Completed	This is the completion date for the coursework line.
Course Title	This is the title of the course for the coursework line.
Credit Area	This is the credit area for the coursework line applicable to only Joint Service Transcripts. This field is available only if the Active column is set to True for this field in the BRWFLD table. This field is configurable through the BRWEXPMilCourses table.
Credit Recommendation	This is the credit recommendation for the coursework line applicable to only Joint Service Transcripts. This field is available only if the Active column is set to True for this field in the BRWFLD table. This field is configurable through the BRWEXPMilCourses table.
Level	This is the course level data for the coursework line applicable to only Joint Service Transcripts. It denotes whether the course enrolled is a lower or an upper division course. This field is available only if the Active column is set to True for this field in the BRWFLD table. This field is configurable through the BRWEXPMilCourses table.

About creating institution and applicant master partitions

The choice to implement institution and applicant partitions must be made during the installation and setup process.

Brainware for Transcripts supports multiple sets of institution and applicant data within the same project file. Each set of master data is referred to as a partition and is assigned its own partition ID within the system. Partitions IDs are, in turn, assigned to clients in the BRWClient table. Multiple clients may share the same partitions.

When the institution and applicant are being determined by the system at runtime, the system only takes into account institutions and applicants that belong to the institution and applicant partition assigned to the client. Within the Dynamic Verifier application, when the user executes a search, only institutions and applicants assigned to that client are included in the results.

Creating a partition for Institution and Applicants

The following is a high-level overview of the steps for implementing a partition.

1. Activate partitioning within the <*project*>.ini file.
2. Register the institution and applicant partitions in the BRWINSPartition and BRWAPTPartition tables.
3. Assign the partition IDs to the client.
4. Populate the institution and applicant master tables.
5. Create a user DSN for the institution and applicant master tables.
6. Configure the ASA sections in the <*project*>.ini file.
7. Create the ASE pools.
8. Configure the BRWSRC (institution) and BRWSRA (applicant) tables.

Activate partitioning

To activate partitioning, complete the following steps.

1. Open the **<*project*>.ini** file.
2. Navigate to the **Global** directory.
3. Set the following parameters.

   Example

   ```
   GRL_OP_ActivateInstitutionFiltering=Yes GRL_VL_
   InstitutionFilterColumn=PartitionID GRL_OP_
   ActivateApplicantFiltering=Yes GRL_VL_
   ApplicantFilterColumn=PartitionID GRL_OP_
   ActivateInstitutionFilterByClass=YES GRL_VL_
   InstFilterByClassColumn=InstitutionType GRL_VL_
   InstFilterByClassCollege=College GRL_VL_
   InstFilterByClassHighSchool=HighSchool GRL_VL_
   InstFilterByClassMilitary=Military
   ```

4. Save and close the INI file.

Register the partition

To register the partitions, complete the following steps.

1. Open the **BRWINSPartition** and **BRWAPTPartition** tables.
2. Populate a row with a partition ID. This must be an integer.
3. Add a description. Adding a description of the partition is optional, but its naming is indicative of what it represents.
4. Save the changes.

Assign the partition ID to the client

To assign the partition ID to the client, complete the following steps.

1. Open the **BRWClient** table.
2. In the corresponding **InstitutionPartition** and **ApplicantPartition** columns, enter the ID of the newly registered partition for the appropriate client.
3. Save the changes.

Populate the master tables

Included within the Brainware for Transcripts database are sample BRWInstitutionMaster, BRWApplicantMaster institution, and applicant master tables. These contain an example structure that the tables should follow. To populate the master tables, complete the following steps.

1. Open the **BRWInstitutionMaster** and **BRWApplicantMaster** master tables.
2. Populate the following columns in the tables.

Column	Explanation of usage
ID	This is the client's institution or applicant ID.
Name	This is the name of the client’s institution or applicant.
Address1	This is the street address of the institution or applicant.
City	This is the city of the institution or applicant.
Zip	This is the zip code of the institution or applicant.
Country	This is the country to which the institution belongs.
Index	This is a unique identifier for the record in the table. This value is set to the partition ID followed by a hyphen, and then the client's institution or applicant ID.

Column	Explanation of usage
PartitionID	This is the partition ID for the institution or applicant master as set in the BRWClient, BRWINSPartition, and BRWAPTPartition tables.
DOB	This is the date of birth of the applicant.

3. Populate additional columns according to your business needs. This is an optional step.
4. Save the changes.

Create a user DSN for the institution or applicant master tables

Intelligent Capture requires a user DSN to be created which reflects a connection to the Brainware for Transcripts database using SQL Server-based authentication. You create the user DSN using Administrative Tools on a Windows machine. For more information about creating a user DSN, refer to Windows documentation.

Configure the ASA section in the INI file

To configure the ASA section in the INI file, complete the following steps.

1. 1. Open the ***<project>*.ini** file.
2. 2. In the **ASA** section, configure the following settings, replacing `myDSN` with the name of the user DSN created in the previous section, and `myUSERNAME` and `myPASSWORD` with the appropriate database credentials.

   Example

   ```
   ASA_VL_01_Class=Transcripts ASA_VL_01_Fieldname=InstitutionASE ASA_OP_
   01_UseRMS=NO ASA_VL_01_RMSURL= ASA_VL_01_RMSConnectionString= ASA_OP_
   01_AlphaNum=Yes ASA_OP_01_PoolRelative=Yes ASA_VL_01_PoolPath= ASA_VL_
   01_PoolDirectory=Pool ASA_VL_01_PoolName=Institutions ASA_OP_01_
   FileRelative=Yes ASA_VL_01_ImportPathFilename= ASA_VL_01_
   ImportFilename= ASA_VL_01_ImportODBCDSN=myDSN ASA_VL_01_
   ImportODBCSelect=select * from BRWInstitutionMaster ASA_VL_01_
   ImportODBCUser=myUSERNAME ASA_VL_01_ImportODBCPWD=myPASSWORD ASA_VL_
   01_AutoImportOption=ODBC
   ```

3. Save and close the INI file.

Create the ASE pool

To create the ASE pool, complete the following steps.

1. Open the ***<project>*.sdp** file and navigate to the **InstitutionASE/ApplicantASE** on the **Transcripts** class.
2. Display the field settings.
3. On the **File** Import tab, to import the pool from the database table, click **Import**. A message stating that

the pool was created is displayed. If an error message is displayed, the institution or applicant master tables have not been configured correctly. Correct any configuration errors and reimport the pool.

4. On the General tab, complete the following substeps.
   1. In the ID column, set the radio button to the field that is the unique identifier for the institution or applicant row in the database.
   2. In the Filter column, set the radio button to the PartitionID field.
   3. In the Search column, only select those field values that are strong and unique criteria for selecting the institution or applicant.
5. On the **File** import tab, complete the following substeps.
   1. Reimport the pool.
   2. Set the class settings to the following.

      Example

      ```
      [Name]_[Index]
      ```

   3. Configure the following field settings, set the first line to the unique identifier for the record in the institution or applicant extract. It is recommended that the field uses the following structure, but this is optional depending on what is appropriate for the client as long as the first line is the unique identifier.

      Example

      ```
      [Index] [Name] [Address1] [City] [State] [Zip]
      ```

6. The institution or applicant field configuration is complete, and a green light with the message Engine Is Ready should appear in the field status box. Save and close the project file.

Configure the BRWSRC and BRWSRA tables

The BRWSRC and BRWSRA tables tell the system which column in the institution master or applicant master pool corresponds to the internal field that is used during processing. Both are global tables and should only have a single row. To configure the tables, complete the following step.

- Map the column in the BRWSRC and BRWSRA tables to the column name of the database column within the master table or the CSV file column header for the respective ASE pool.

Working without institution or applicant partitions

If the project does not require an institution or applicant partition, because it is for a single client or multiple clients that pool the same set of institution or applicant data, complete the following step to set up your environment without partitions.

- In the <*project*>.ini file, set the following parameters.

  Example

  ```
  GRL_OP_ActivateInstitutionFiltering=No GRL_OP_
  ActivateApplicantFiltering=No
  ```

Configure Brainware for Transcripts

The following section describes the configuration settings with which you can configure BFT.

The Brainware for Transcripts solution configuration is managed via the Solution Configuration Manager (SCM). SCM is a web-based tool that provides an interface for an administrator to configure and maintain the solution configuration. You can also use it for change management control as changes are migrated between development, test and production environments.

SCM requires the installation of the corresponding BFT SCM package. You must ensure that the correct SCM package for BFT (in this case, version 2.4) is installed. You need to ensure this, regardless of whether you are installing SCM for the first time or if you are upgrading BFT.

INI file settings

The INI file is subdivided into sections that control different aspects of the project file behavior. The sections include the following.

- GRL
- IMP
- REP
- SQL
- ASA

INI file nomenclature

Each file setting parameter is comprise of one of the following nomenclatures.

- XXX_YY_DDDDD=ZZZ
- XXX_YY_NN_DDDDD=ZZZ

Where

- XXX is the INI file section ID, such as GRL, IMP, REP, SQL, and ASA.
- YY is the type of setting where VL denotes a value or list of values, and OP denotes an on/off switch and is set either to Yes or No.
- NN is an optional INI file group ID used to tie multiple individual settings together to form a settings group. This is similar to a database table where XXX is table name, NN represents the unique table row and DDDDD represents the unique table column name.
- DDDDD is the parameter name, which may be more or less than five characters.
- ZZZ is the parameter setting, which can be completed by the individual configuring the project and can be more or less than three characters. Only ZZZ values should ever be changed in the file, though additional NN settings groups may also be added as appropriate.

GRL section in the INI file

This section contains global settings for the project that are used for the purposes of solution reporting.

The following parameters can be set.

Parameter	Type	Description
ProjectName	Freetext	This is the name of the project.
Version	Number	This is the version number of the project implementation at the client.
ClientName	Freetext	This is the name of the client.
VerifierFormStyle	Freetext	Color scheme applied to the Verifier form. The options are as follows. SAP - SAP style color scheme If any other setting is applied (including blank), the system displays the default Verifier color scheme, such as gray form with valid fields marked in green and invalid fields marked in red.
UseDynamicVerifierForm	Yes/No	This is the flag to indicate whether the project should use the dynamic verifier form.
ReviewState	Freetext	This is the RTS state that a document is set to if it is subject to review.
ReadSettingsFromDB	Yes/No	This is the flag to indicate whether the Brainware for Transcripts settings is read from the database. This value should always be set to Yes.
SQLConnectionGroup	NN	This is the numeric reference to the SQL connection group that represents the database in which the configuration tables have been created. This is set to `01`, `02`, and so on.
DynamicDebug	Yes/No	If this is set to Yes, logging for the internal mechanics for the layout of the dynamic verifier form is written into the standard Brainware for Transcripts Verifier log file.
BatchInDatabase	Yes/No	This is the flag to indicate whether the batch containing the production documents exists within a database or within a batch root folder.

Parameter	Type	Description
		This should always be set to `Yes`.
BatchSQLConnectionGroup	NN	This is the numeric reference to the SQL connection group that represents the primary Brainware for Transcript database. This is set to `01`, `02`, and so on.
ActivateInstitutionFiltering	Yes/No	This is the flag to specify whether the system utilizes multiple sets of institution master data/partitions.
InstitutionFilterColumn	Freetext	This is the case-sensitive name of the database column in the institution master table that contains the partition ID.
ActivateApplicantFiltering	Yes/No	This is the flag to specify whether the system is to utilize multiple sets of applicant master data/partitions. Applicant filtering is enabled or disabled based on this flag.
ApplicantFilterColumn	Freetext	This is the case-sensitive name of the database column in the applicant master table that contains the partition ID. If this setting is enabled, filtering is applied during both RTS and Verifier searches. Also, filtering is applied when using the "Show Best" button in Verifier search.
BufferClientSettings	Yes/No	If set to Yes, the system buffers the configuration settings for the current client in order to reduce repeated calls to the database. For example, if the system is processing a document for client 1, then following an initial read of the database, those settings are stored in memory. If the next document is also for client 1, then the system pulls the settings from memory, rather than read the database. Only settings for the current client are held in memory. This means that any changes made to the database may not take effect instantly for all clients, and a restart of the RTS would be required. If this is not desirable, this option is set to No.
ActivateInstitutionFilterByClass	Yes/No	This is the flag to specify whether the system filters the institution ASE results based on the classname. For

Parameter	Type	Description
		instance, only High School institutions are returned if the transcript is classified as High School.
InstFilterByClassColumn	Freetext	This is the case-sensitive name of the InstitutionASE column in the institution master table that contains the text used to filter the results based on classname. The default value is InstitutionType.
InstFilterByClassCollege	Freetext	This is the case-sensitive text used to filter the InstitutionASE results if found in the column defined in InstFilterByClassColumn for College transcripts. For example, if this is set to 'CE', only records with 'CE' within the InstFilterByClassColumn are considered viable results when the document is classified as College. The default value is College.
InstFilterByClassHighSchool	Freetext	This is the case-sensitive text used to filter the InstitutionASE results if found in the column defined in InstFilterByClassColumn for High School transcripts. For example, if this is set to 'HS', only records with 'HS' within the InstFilterByClassColumn are considered viable results when the document is classified as High School. The default value is HighSchool.
InstFilterByClassMilitary	Freetext	This is the case-sensitive text used to filter the InstitutionASE results if found in the column defined in InstFilterByClassColumn for Military transcripts. For example, if this is set to 'MIL', only records with 'MIL' within the InstFilterByClassColumn are considered viable results when the document is classified as a military class. The default value is Military.
ActivateWaterMarkRemoval	Yes/No	This is the flag to indicate if the watermark removal feature for CI (text-based) PDFs is available to the user or not. **Note:** This feature works with text-based PDFs only, so to be able to use this feature, clear the Convert images into check box within the processing settings in the BFT project file.

IMP section in the INI file

This section contains settings revolving around document import, specifically the mapping of values contained within the image filename to fields in Intelligent Capture. This provides a simple means to pass data to Brainware for Transcripts from an upstream system.

Filename components are separated by an underscore, such as COMPONENT1.tif, COMPONENT1_ COMPONENT2.tif, COMPONENT1_COMPONENT2_COMPONENT3.tif, and so on.

The values provided in the following IMP_VL components are included within the filename.

- IMP_VL_URN=COMPONENT3
- IMP_VL_BatchName=
- IMP_VL_ScanDate=
- IMP_VL_PriorityFlag=
- IMP_VL_TranscriptType=
- IMP_VL_DestinationArchive=
- IMP_VL_InputSource=
- IMP_VL_ClientID=
- IMP_VL_LocationID=
- IMP_VL_ApplicantID=COMPONENT1
- IMP_VL_SiteID=
- IMP_VL_InstitutionID=COMPONENT2

For example, IMP_VL_ScanDate=COMPONENT1 for the 12022008_1234_123456.tif file inserts 12022008 into the ScanDate field in Intelligent Capture.

Brainware for Transcripts also enables you to pre-define documents, based on the transcript type, using standardized auto-indexing values in the document filename. The auto-indexing configurations are as follows:

- IMP_VL_CollegeTranscriptType=C
- IMP_VL_HighSchoolTranscriptType=H
- IMP_VL_MilitaryTranscriptType=M

In order to use this feature, you must first configure the TranscriptType field in the IMP section of the INI file. This enhancement eliminates any chances of classification errors by the automated classification process. Based on the indexes you provide in the filename of the document, the post-classification process re-classifies erroneously classified documents to the correct category.

For example, if the Auto-Index is College and the resulting classification is not college, then the classification will be set to College.If the Auto-Index is High School and the resulting classification is not High School, then the classification will be set to School.If the Auto-Index is Military and the resulting classification is not one of the supported military classes, then the classification will be set to Joint Services.

The following settings are available.

Parameter	Type	Description
URN	Freetext	This is the document unique reference number.
BatchName	Freetext	This is the document batch name.
ScanDate	Freetext	This is the document scan date.
PriorityFlag	Freetext	This is the document priority flag.
TranscriptType	Freetext	This is the document transcript type. **Note:** You can use the auto-index feature to pre-classify college, high-school and military documents only if you have configured this field.
DestinationArchive	Freetext	This is the document destination archive.
InputSource	Freetext	This is the document input source, such as SCAN, EDI, and EMAIL.
ClientID	Freetext	This is the document client ID. In a multi-client project, this value must be mapped. If not, the configuration set associated with client zero is used.
LocationID	Freetext	This is the document Location ID. This field can be used to hold the operation location ID that is relevant for the document. For example, the ID of a shared service center. The value contained within the filename is written into the Visibility reporting tables for that particular document to enable location level reporting.
ApplicantID	Freetext	This is the ApplicantID that can be pre-linked to a transcript before processing through BFT. This allows you to continue the transcripts receipt process while not stopping the documents in

Parameter	Type	Description
		Verifier based on the ApplicantID ASE results. • If ApplicantID is mapped, the value mapped must exist in the ASE pool data. • If the mapped value does not exist in the ASE pool, or the component is not in the filename, the ApplicantID is extracted normally.
SiteID	Freetext	This is the applicant site ID assigned to the transcript if pre-linking is used with the implementation and a site ID is assigned to the applicant pool. Mapping of applicant SiteID is not required if the implementation does not include an applicant SiteID.
InstitutionID	Freetext	This is the InstitutionID that can be pre-linked to a transcript before processing through BFT. This allows you to continue the transcripts receipt process while not stopping the documents in Verifier based on the InstitutionID ASE results. • If InstitutionID is mapped, the value mapped must exist in the ASE pool data. • If the mapped value does not exist in the ASE pool, or the component is not in the filename, the InstitutionID is extracted normally.
InstSiteID	Freetext	This is the InstSiteID assigned to the transcript if pre-linking is used with the implementation and a site ID is assigned to the institution pool. Mapping of InstSiteID is not required if the implementation does not include InstSiteID.
ComponentSeperator	Freetext	This is the character used to segment the components of the document filename, for example, ^. If left blank, the system uses underscore as the component separator.
PriorityFlagYes	Freetext	This is the value that denotes a positive setting for the priority flag.
DateFormat	Freetext	This is the format of a date contained within the document filename. Options are DDMMYYYY, MMDDYYYY or YYYYMNDD.

SQL section in the INI file

This section contains the SQL connection strings that are used by Intelligent Capture.

The solution supports Oracle and Microsoft SQL Server databases.

Parameter	Type	Description
NN_ConnectionString	Freetext	This is the connection string for SQL group NN.
NN_ EncryptedPassword	Freetext	The encrypted password used in a connection string. The NN value should match the NN value of the ConnectionString object that the password is for. For example, To provide an encrypted password for SQL_VL_02_ConnectionString=…, you should assign it as SQL_VL_02_EncryptedPassword=… Please see Appendix D for information on encrypting a password.

ASA section in the INI file

This section contains settings that control the Associate Search Engine (ASE) pools used for the institution and applicant look-ups in Intelligent Capture.

BIC version 5.7 introduced the Remote Matching Service (RMS), as an alternative implementation of the Associate Search Engine (ASE). A project can be configured to use RMS in the Designer application by selecting the "Remote Matching Service" option of the "Used core engine" drop-down when the "Associative Search Engine" is selected as the analysis engine. Once the "Remote Matching Service" is selected, the connection options can then be specified via the GUI. The necessary connection options are as follows.

- URL
- Connection String
- Search Index

RMS configuration allows "Remote Matching Service" to be selected and configured through the project INI file, thereby eliminating the need to use the Designer GUI. This also helps to migrate projects from the testing to the production environment without making changes by using the Designer.

BFT supports using ASE for one search field and RMS for another search field.

The following settings are configurable.

Parameter	Type	Description
Class	Freetext	This is the name of the Brainware Intelligent Capture class on which the field was created.
Fieldname	Freetext	This is the technical name of the Brainware Intelligent Capture field.
UseRMS	Yes/No	If set to YES, the project connects to the RMS server as

Parameter	Type	Description
		defined for the ASE field.
RMSURL	Freetext	The URL to connected to the RMS service.
RMSConnectionString	Freetext	The connection string provided by RMS for use with an external client. This value can be obtained from the RMS admin page.
AlphaNum	Yes/No	This indicates whether the key field for the pool record is alphanumeric if set to Yes. If set to No, the field is assumed to be numeric. This must be set correctly in order to generate the pool correctly.
PoolRelative	Yes/No	This indicates whether the location of the pool directory is relative to the project file.
PoolPath	Freetext	This is the UNC path to the pool directory if it is not relative to the project file.
PoolDirectory	Freetext	This is the name of the pool directory.
PoolName	Freetext	This is the name of the pool or the RMS Search Index.
FileRelative	Yes/No	This indicates whether the location of the pool import CSV file is relative to the project file.
ImportPathFilename	Freetext	This is the UNC path to the pool import CSV file if it is not relative to the project file.
ImportFilename	Freetext	This is the name of the pool CSV import file.
ImportODBCDSN	Freetext	This is the name of the user DSN for the ODBC pool import.
ImportODBCSelect	Freetext	This is the select statement used to create the pool.
ImportODBCUser	Freetext	This is the User ID used to connect to the database. This can be left blank and specified in the Brainware for Transcripts project file if security requires it.
ImportODBCPWD	Freetext	This is the user password to access the database. This can be left blank and specified in the Brainware Intelligent Capture project file if security requires it. Password can also be encrypted. Please see Appendix D for information on encrypting a password.

Parameter	Type	Description
AutoImportOption	FILE, NoNE or ODBC	This indicates the source from which the pool is created via the Brainware Intelligent Capture Runtime server (RTS). If set to None, the pool is not updated automatically by RTS.
FirstPageOnly	Yes/No	This is the flag to indicate whether only the OCR text on the first page of the document is used to determine the field result.
PageZoneALeft	0-100	This is Zone A left search %.
PageZoneAWidth	0-100	This is Zone A width search %.
PageZoneATop	0-100	This is Zone A top search %.
PageZoneAHeight	0-100	This is Zone A height search %.
PageZoneBLeft	0-100	This is Zone B left search %.
PageZoneBWidth	0-100	This is Zone B width search %.
PageZoneBTop	0-100	This is Zone B top search %.
PageZoneBHeight	0-100	This is Zone B height search %.
UseRMS	Yes/No	This is the flag to indicate whether the selected engine uses the Remote Matching Service. If set to YES, the system must set the field to AlphaNum=YES regardless of the INI setting.
RMSURL	Freetext	This is the URL to the RMS server.
RMSConnectionString	Freetext	This is the connection string used to connect to the RMS server. It can be found within the admin console of RMS.

REP section in the INI file

This section contains the configuration settings relating to Visibility reporting.

The following parameters can be set.

Parameter	Type	Description
ConnectToReportingDB	Yes/No	This is the flag to set whether the project writes out reporting data or not.

Parameter	Type	Description
SQLConnectionGroup	NN	This is the SQL connection group specifying the reporting database connection string as set in the SQL section. If no connection group is specified, the system uses group 01.
ReportingInDesigner	Yes/No	This is the flag to indicate whether documents processed or analyzed in the Intelligent Capture Designer Module should have the results written to the reporting database.
StartNewRecordFor ImportedDocument	Yes/No	If this is set to Yes, Intelligent Capture creates a new reporting record for each document imported into Designer, removing any old ones for the same document key. If this is set to No, Intelligent Capture only writes to the reporting database if an entry exists for the same document key. This can be used in the event that the reporting trail begins at the scan station.
ReportingDBDocument Table	Freetext	Name of the document header table in the reporting database
ReportingDBFieldTable	Freetext	This is the name of the document header table in the reporting database.
ReportingDBLineItemsTable	Freetext	This is the name of the document field table in the reporting database.
ReportingDBLineItemsTable2	Freetext	This is the name of the military coursework line items table in the reporting database.
ReportingDBHistory Table	Freetext	This is the name of the document history table in the reporting database.
ReportingDBImage Table	Freetext	This is the name of the document image table in the reporting database.
StoreImageInReporting Tables	Yes/No	This indicates whether the document image is stored in a binary type field in the reporting database.
ReportingKey	Freetext	This contains the component to be used as the database table key for the document record. If left blank, the key is set to the image filename (minus the file extension). If just a component of the filename is required, then this

Parameter	Type	Description
		value is populated with URN , then the URN component of the filename is mapped correctly in the IMP section.
ArchiveURL	Freetext	This contains the mask for the URL associated with a document link. XXXXX should denote the part of the URL that is substituted with the unique document ID from the point of view of the archiving system to form a valid URL that retrieves the document.
StorageDirectory	Freetext	This is the path to the directory that is used as a repository to store images subsequent to document export.

Configuring the Institution ID and Applicant ID fields without using a partition

About configuring the Institution ID and Applicant ID fields without using a partition

This section contains the instructions for configuring the Institution ID or Applicant ID fields in Intelligent Capture without using a partition. The system determines the institution ID or applicant ID with the Intelligent Capture Associative Search engine. Each institution or applicant at a single address must have a unique identifier. This unique identifier can be either numeric or alphanumeric.

About the CSV file format

If you are using a flat CSV file, then it must meet the following requirements.

- Each row in the file should represent a single institution or applicant at a single address.
- Each row should include, as a minimum, columns that represent the institution or applicant name, the street address, the city, and the postcode/zip code.
- Each row in the file must have one column that is a unique identifier for that record and is common only to that row.
- Each row in the file must have an equal number of columns.
- The column separator must be a semicolon, such as content within a single column must be stripped of any semicolons in advance.
- Each column must be stripped of double-quotes (").
- If the CSV file is being used as the institution or applicant extract source, the first line of the CSV file needs to include the column names, and that the Import field names from first row option be enabled for the InstitutionASE or ApplicantASE field in the designer. This configuration eases Verifier searches when using the Details option in the Verifier search.

CSV file encoding for non-western characters

If the CSV file includes non-western characters, the file must have a UNICODE encoding. ANSI or UTF-8 encodings are not supported.

About using a Standard Institution or Applicant ID field without a partition

This is the most basic configuration option for configuring an Institution or Applicant ID field without using a partition. You should use this configuration when the SIS system provides a single field identifier for a single institution or applicant at a single address.

In this scenario, each record in the institution or applicant extract is supplied by the client, whether it is provided as a CSV file or within a database table, and it should represent a single institution or applicant at a single address. Additionally, one column in the record needs to be a unique identifier. The generation of the institution or applicant pool based upon the institution or applicant extract fails if more than one record shares the same unique identifier.

Configure Standard Institution ID and Applicant ID fields without a partition

To configure a standard Institution or Applicant ID field, complete the following steps. Once for the InstitutionASE field and once for the ApplicantASE field.

Note:
If you are using UNC paths, the relevant directories should have the appropriate shares, which is usually full control, so that the system can perform the required read-write operations.

1. Navigate to the directory that contains the **Global project** file.
2. Create a new directory and name it `Pool`.
3. Open the ***<project>*.ini** file, locate the ASA section, and complete the following substeps.
    1. Set the Class parameter to Transcripts.
    2. Depending on whether you are configuring an Institution ID field or an Applicant ID field, set the Fieldname to Institution ASE or Applicant ASE.
    3. If the unique identifier for each row in the institution extract is numeric, then set the AlphaNum parameter to No. Otherwise, set it to Yes.
    4. If the Pool directory is located in the same directory as the project file, then leave the PoolPath parameter empty and set the PoolRelative parameter to Yes. Otherwise, in the PoolPath parameter, enter the path to the pool, and set the PoolRelative parameter to No.
    5. Set the PoolDirectory parameter to Pool.
    6. Set the PoolName parameter to Institutions when configuring an Institution field, and set it to Applicant when configuring the Applicant field.
    7. If the Institution Extract file is located in the same directory as the <project>.ini file, then set the FileRelative parameter to Yes, and in the ImportFileName parameter enter the name of the Institution Extract file, including the file extension. If the Institution Extract file is not located in the same directory as the <project>.ini file, then set the FileRelative parameter to No, and in the

ImportPathFileName parameter, enter the UNC path to the Institution Extract file.

8. Save the changes and close the INI file.

4. Open the project file, and in the **Transcripts** class, navigate to the InsitutionASE field, display the field settings, and complete the following substeps.

> **Note:**
> The names of the columns shown in the field display are system-assigned names. These names may not be indicative of the contents of the fields in the Institution Extract file. SupplierID is always the first column in the Institution Extract file, SupplierIndex is the second column, SupplierName is the third column, and so on. When using a CSV file as the institution or applicant extract source, we recommend that the first line of the CSV file contains the column names as they appear in the Institution Extract file, and that you enable the Import field names from first row option for the InstitutionASE or ApplicantASE field in the designer. This configuration eases Verifier searches through the Details option within Verifier search.

1. To import the pool, on the **File Import** tab, click **Import**.
2. To configure the search fields to identify the institution or applicant, on the **Analysis** tab, in the **Search** column, select the **Institution name**, **Street address**, **City**, To configure the search fields to identify the institution or applicant, on the Analysis tab, in the Search column, select the Institution name, Street address, City, Zip/postal code, and Institution telephone numbers, and **Institution telephone numbers** boxes.
3. To select the column in the institution extract that denotes the unique identifier for the institution record, select the radio button in the ID column.

5. To reimport the pool, on the **File Import** tab, click **Import**.
6. Set the **Class** settings to the following.

```
[*institution name*] + underscore + [*institution ID*]
```

However, if the Org_ID column contains the unique institution ID, and the InstName column contains the institution name, which varies depending on the column order in the actual institution extract, then set the class to the following.

```
[InstName]_[Org_ID]
```

7. The field settings control how the institution address is displayed on the Verifier form. It is a multi-line field, and the first line must be set to the unique identifier for the record in the institution extract. The file should have the following structure, but the structure may vary depending on your business needs. However, the first line must be set to the unique identifier.

```
[*Unique ID*] [*Institution Name*] [*Street Address*] [*City*],
[*State / Region*] [*Postal / Zip Code*]
```

8. The configuration of the Institution or Application field is complete. A green light with the message Engine Is Ready should appear in the field status box. Save and close the project file.

Map the field identification

To map the identification of each field in the institution master extract to the relevant fields in the BRWSRC and BRWSRA tables, complete the following step. It is recommended that as many fields as possible are mapped in the institution extract, which must include the ID parameter and all the fields displayed in the Institution Address dialog box.

- In the BRWSRC or BRWSRA table, set the following fields to the following values.

```
ID=Org_ID Name=InstName Address 1=Address1 City=City Zip=Postal
State=State
```

About configuring columns for the Institution ID, Applicant ID and Site ID fields

Intelligent Capture does not permit the use of a composite key within the Institution or Applicant file extract, so the two values need to be within a single column if you have a single institution or an applicant at a single address that is represented in the downstream SIS system by a combination of an institution and applicant ID and a site ID.

The nominated separator is specified within the AlphNumSiteSeparator column in the BRWINS table for an institution and the BRWAPT table for an applicant. This must be populated and adhered to if you are using alphanumeric Institution or Applicant ID fields and a Site ID field. An error is displayed if this configuration is not followed, or more than one separator is found as part of a single unique identifier.

Therefore, in the Institution or Applicant extract file, the following columns are required.

- A column representing the combined unique identifier.
- A column representing the site ID.
- A column representing the institution or applicant ID.

Configure the Institution ID/Applicant ID and Site ID columns

The steps for placing the values in a single column depend on whether the Institution or Applicant ID and Site ID fields are numeric or alphanumeric.

To configure institution/applicant and site ID columns, complete the following steps.

1. If the both fields are numeric, the Institution or Applicant extract file needs to contain an additional column representing the combined institution or applicant ID and site ID, using the following formula.

   ```
   Unique Identifier = (Institution/Applicant ID * 1000000 ) + Site ID
   ```

   For example, if the institution ID is 1234 and the site ID is 5678 then the unique identifier is as follows.

   ```
   (1234 * 1000000) + 5678 = 1234005678
   ```

2. If either the institution or applicant ID or the site ID contains alpha characters, then use the following formula for combining the two.

   ```
   Unique Identifier = Institution/Applicant ID + [Separator] + Site ID
   ```

For example, if the institution ID is A12345, the Site ID is 1000, and the designated separator is a hyphen (-), then the Institution Extract file should have the following in the unique identifier column.

```
A12345-1000
```

Configure the InstitutionASE or ApplicantASE columns

To configure the InstitutionASE and/or ApplicantASE columns, complete the steps in the Configure a standard Institution or Applicant ID field without a partition section with the following variations.

1. For **step 8**, set the ID in the **class-name** to the field that represents the standalone institution or applicant ID.
2. For **step 11**, in the **BRWSRC** or **BRWSRA** tables, complete the following mapping.
   - Map the **Unique Record Identifier** field to the **ID** column.
   - Map the **SiteID** field to the **SiteID** column.
   - Map the **Institution ID** or **Applicant ID** field to the **ExternalID** column.

   For example, if the CSV file has allocated technical names of IndexID to the unique ID column, SiteID to the site ID, and Org_ID to the institution ID component, then the mappings is as follows.

Column in BRWSRC	Value
ID	IndexID
SiteID	SiteID
ExternalID	Org_ID

About configuring the External Institution and Applicant ID columns

Use the configuration steps in this section if the downstream-SIS system differentiates between an internal and an external institution or applicant ID by using an internal institution or applicant ID at the database table level, but the user is presented with an external ID via the application itself.

If the client requires that the Verifier application follows this pattern and displays the external institution or applicant ID to the user, then the institution or applicant extract requires that the external institution or applicant ID is included as a column, but the SIS system internal institution or applicant ID is the unique identifier.

Configure the External Institution or Applicant ID columns

To configure an external institution and applicant ID columns, complete the steps in the Configure a standard Institution or Applicant ID field without a partition section with the following variations.

1. For **step 8**, set the ID in **class-name** to the field that represents the external institution or applicant ID.
2. For **step 11**, in the **BRWSRC** or **BRWSRA** tables, complete the following mapping.
   - Map the **Unique Record Identifier**field to the **ID** column.

- Map the **Institution ID** or **Applicant ID** field to the **ExternalID** column.

3. If the downstream uses an external institution ID and a site ID, in the **BRWSRC or BRWSRA** tables, complete the following mapping.
   - Map the **Unique Record Identifier** field to the **ID** column.
   - Map the **SiteID** field to the **SiteID** column.
   - Map the **External Institution** field to the **ExternalID** column.

   For example, if the CSV file has allocated technical names of IndexID to the unique ID column, and Org_ID to the external institution ID component, then the columns in the BRWSRC table are mapped as seen in the following table.

Column in BRWSRC	Value
ID	IndexID
ExternalID	Org_ID

   Or, if the downstream uses an external institution ID and a site ID, then the columns in the BRWSRC table are mapped as seen in the following table.

   Note:
   In this example, Org_ID represents the external institution ID field, rather than the internal institution ID.

Column in BRWSRC	Value
ID	IndexID
SiteID	SiteID
ExternalID	Org_ID

About configuring data exports

The following data exports are available in Brainware for Transcripts.

- Export an additional TIFF image.
- Export a PDF file.
- Write data to an XML file.
- Set up a custom export.

Data export is controlled by settings in the following tables. Exports only apply to documents classified to the Transcripts class or to one of its child classes. For custom base classes, the data export needs to be coded programmatically within UserExitCustomExport on the UserExits script class level. Each table is keyed by an export profile ID that can be assigned to a client.

- BRWEXP
- BRWEXPHSHeader
- BRWEXPMilCourses
- BRWEXPStudentHeader
- BRWEXPUnivCourses
- BRWEXPUnivDegree
- BRWEXPUnivRecord

One TIFF image is always output to the export directory when a transcript is added to the system. It is recommended that this setting should always be used over custom settings. However, custom settings provide additional options for outputting a second TIFF image and is used when one or more of the following applies.

- A second TIFF file is required during document export.
- The TIFF file name must be set to the document URN rather than the original image file name.
- The TIFF image resolution needs to be changed from the original image.
- The TIFF image compression ratio needs to be changed from that of the original image.

About exporting an additional TIFF image

The additional TIFF file is always written to the directory specified as the export directory on the runtime server instance settings for the instance that is carrying out the document export. If you do not specify an export directory, the default export directory in the DefaultExportPath setting is used. If the setting is left blank, the document export fails and the batch goes to a status of 750.

Export an additional TIFF image

To export an additional TIFF image, complete the following steps.

1. Open the **BRWEXP** table.
2. Set the **OutputTiffFile** column to `True`.
3. To set the name of the TIFF file to match the document URN in the <project>.ini file, set the **TiffName** column to `URN`. Otherwise, the name is the same as the original imported document.

Configure the DPI and image compression type

Configuring the DPI and image compression types is optional. To change the image DPI and compression, complete the following steps.

1. In the **BRWEXP** table, set **TiffDPI** column to a DPI of your choice. The default image compression is 300 dots-per-inch.
2. In the same column, set image compression to one of the following. The default is standard Grade 4 compression.
   - **G4FAX** This is standard Grade 4 compression.
   - **G3FAX** This is standard Grade 3 compression.
   - **LZWFAX** This is LZW compression.
   - **HUFFAX** This is HUF compression.

About exporting a PDF file

You can output a transcript as a searchable PDF file. The PDF file is always written to the directory specified as the export directory on the runtime server instance settings for the instance that is carrying out the document export. If you do not specify an export directory, the default directory in the DefaultExportPath setting is used, the export fails, and the batch goes to status 750.

Export a PDF file

To export a PDF file, complete the following steps.

1. Open the **BRWEXP** table.
2. Set the **OutputPDF** column to `True`.
3. To set the name of the PDF file to match the document URN in the <project>.ini file, set the **PDFName** column to `URN`. Otherwise, the name is the same as the original imported document.

Field configuration

The following sections contain the instruction for configuring fields. The extraction and validation of fields is controlled in the Brainware for Transcripts database in the BRWFLD table. Extraction and validation rules are set at the profile ID level and assigned to clients.

Each row in the database represents a field, and the table is keyed by the profile ID and the technical name of the field. During installation, the table is populated with a full list of the fields available within the project for Client 0 (zero).

The entries in BRWFLD table allow you to do the following.

- Switch fields on and off.
- Set fields to mandatory or optional.
- Set default field values.
- Set a field type, such as date, amount, table, text, and corresponding validation rules.

Note:
The name of the field is displayed in the FieldName column. This name should not be changed.

About switching fields on and off

Fields that are not active do not appear on the Dynamic Verifier form. If a standard field in the project is not listed in BRWFLD table for a profile, it is considered inactive. The following fields cannot be turned off.

- InstitutionID
- InstitutionASE
- ApplicantID
- ApplicantASE
- TranscriptType
- InvalidReason

Switch fields on and off

To turn a field on or off, complete the following steps.

1. Open the **BRWFLD** table.
2. To turn a field on, set the **Active** column to `True`.
3. To turn a field off, set the **Active** column to `False`.
4. Save the changes.

Set a field to be mandatory or optional

Whether a field is mandatory or optional is controlled using the RequiredInRTS and RequiredInVerifier columns in the BRWFLD table. The following describes the effect of setting these columns to True and False in isolation and in tandem.

RequiredInRTS	RequiredInVerifier	Effect
False	False	Population of the field is entirely optional within the project.
True	False	The field is marked invalid and the document sent to Verifier if the system does not extract a value into this field automatically. The user is permitted to pass a blank value in the Verifier application.
True	True	The field is marked invalid and the document sent to Verifier if the system does not extract a value into this field automatically. The user must enter a value in Verifier.

Set a field to be mandatory or optional

To make a field mandatory or optional, complete the following steps.

1. Open the **BRWFLD** table.
2. To make a field mandatory, set the **RequiredInRTS** and **RequiredInVerifier** columns to `True`.
3. To make a field optional, set the **RequiredInRTS** and **RequiredInVerifier** columns to `False`.
4. Save the changes.

Force a field to appear in Verifier

To configure a field so it is always marked invalid and then reviewed by a user in Verifier, complete the following steps.

1. Open the **BRWFLD** table.
2. Set the **ForceVerify** column to `True`.
3. Save the changes.

Label a field in Verifier

To control how a field is labeled in Verifier, complete the following steps.

1. Open the **BRWFLD** table.
2. In the **VerifierLabel** column, enter the text that you want to appear in the Dynamic Verifier.
3. Save the change.

Set field default values

There are two default settings for every field, and the field usage depends upon how the default is applied. To set the default values for a field, complete one of the following steps.

- If a field should always be set to a fixed value irrespective of extraction, set the DefaultValue column to `True`.
- If a field should default to a value because the system has not extracted anything into that field, set the DefaultIfNothingExtr column to `True`.

About configuring field types

The following are the four field types you can assign to each field.

- Date
- Text
- Table

The field type governs which of the additional settings in the table affect the validation of the field. The different types, along with their configurations, are described in the following sections.

Configure date fields

To configure date fields, complete the following steps.

1. Open the **BRWFLD** table.

2. In the **FutureDays** column, enter a numerical value that indicates the number of days in the future from the present date that an extracted date is considered valid. If future dates are not permitted, then this is set to `0` (zero).
3. In the **NoDaysInPast** column, enter a numerical value that indicates the number of days in the past from the present date that an extracted date is considered valid. If future dates are not permitted, then this is set to `0` (zero).
4. To force an extracted date to stop in Dynamic Verifier if the displayed date is not in the current month, set the **DateOnlyInCurrentMonth** column to `True`.
5. 5. To have the date in the Dynamic Verifier displayed as MM/DD/YYYY, in the **VerifierOutputFormat** column, enter `MMDDYYYY`, or to display the date as DD/MM/YYYY, enter `DDMMYYYY`.

   Note:
   The date output format settings are set for each profile ID, so a different configuration is permitted for each client.

6. Save the changes.

Configure text fields

Text fields are fields that can contain numeric and alphanumeric characters. To configure text fields, complete the following steps.

1. Open the **BRWFLD** table.
2. In the **MinLength** column, enter a numeric value that represents the minimum permitted length of the field.
3. In the **MaxLength** column, enter a numeric value that represents the maximum permitted length of the field.
4. In the **PadChar** column, enter a numeric value that is the length a field is padded to the right when a maximum field length is not met, such as 123400000.
5. To have a value padded by the character entered on the left, such as 000001234, set the **RightJustify** column to `True`.
6. To remove all special characters from a value, set the **RemoveAllSpecials** column to `True`.
7. To remove all spaces from a value, set the **RemoveBlanks** column to `True`.
8. To retain non-comma separated lists of special characters that are retained when the **RemoveAllSpecials** column is set to true, set the KeepCertainSpecials column to `True`.
9. To have positive numbers start from the left side of a field and negative numbers start from the right side, set the **SubstringStartPos** column to `True`.
10. To remove any leading zeros from an extracted or user-entered value, set the **RemoveLeadingZeros** column to `True`.
11. 11. To enable a field to have a comma separated list of valid entries that contains only approved characters for an extracted or user entered value, in the **FieldMask** column, enter any letter, number or wildcard character. For example, if the content of this column is set to `ABCD,WXYZ` then no value is permitted in this field unless it is equal to either ABCD or WXYZ.

About using substitution rules

In the BRWFLD table, a text field can be assigned a substitution rule, which permits an extracted text value to be substituted in part, or as a whole, with another value. This works in a similar way to the standard VB replace command. One substitution rule can be assigned per field.

Substitution rules are contained in the BRWSubstitution global table, which has the following structure.

Fieldname	Explanation of usage
Index	Substitution rule index.
Original	String value to be replaced.
Replace	String value to be substituted.

About the tmpCLSRES field

The tmpCLSRES field is used to store the full classification results and weightings before they are written to the reporting database. It is an internal field and does not require any action beyond its creation. If the field is not created, the full classification results and weightings are not written into the reporting database, only the final class in which the document was placed.

Create the tmpCLSRES field

To create the tmpCLSRES field, complete the following steps.

1. In the custom base class, go to the Fields view mode.
2. Right-click in the grey space and select **Insert Field Definition**.
3. Enter `tmpCLSRES`. This is case sensitive.
4. Right-click on the new field and select **Show Properties**.
5. In the pane on the right side, select the **Validation** tab, and then select the **Always Valid** flag.
6. Save the project.

Customize the project for multi-district transcripts

A few institutions have multiple child colleges available in the same district. A student can enroll in courses in multiple child or parent institutions as per choice. The transcripts generated for such a student are termed as multi-district or multi-campus transcripts.

Note:
The following description can only be executed, if BFT is not installed in a hosted environment, because it needs access to the BIC Designer application. In that case you must reach out to your Hyland services Team, to update the project.

A new field tmpCollegeHeader is introduced in the multi-district class in **Intelligent Capture Designer**, which represents the unique identification code of the colleges where the student had enrolled in.

Create child class for a multi-district college

To enable BFT to process documents of a multi-district college, a document class needs to be created for it. Such a class must be created as a child class of the **MultiDistrict** class (Transcripts\College\GenericC\Multidistrict), so that documents that are classified to the new child class inherit all functionality that is implemented for **College**, **GenericC** and **MultiDistrict**.

To create a new class for a multi-district college, complete the following steps:

1. Open the BFT project in **Brainware Intelligent Capture Designer** and navigate to the **Definitions** mode.
2. On the left navigation panel, under the **Classes** tab, create a new child class for the multi district college, where the class name must be in the following format: `<InstitutionID><AlphNumSiteSeparator><SiteID><_ ><CollegeShortNameOrDescription>`

   Example

   Example: 12345678~2_SomeUniversity

   Do not include the angular brackets (<>) while using the name format.

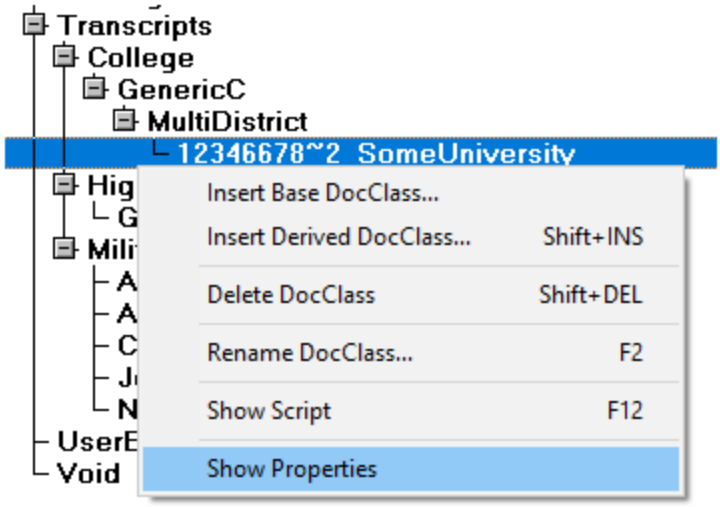
   InstitutionID and **SiteID** align with the values provided with the Institutions ASE pool data

   The inclusion of Site ID in the subclass name is optional; it must be included only if the usage of a SiteID is configured. Otherwise, only the Institution ID is used as the sub-class name: `<InstitutionID><_><CollegeShortNameOrDescription>` For example:12345678_ SomeUniversity

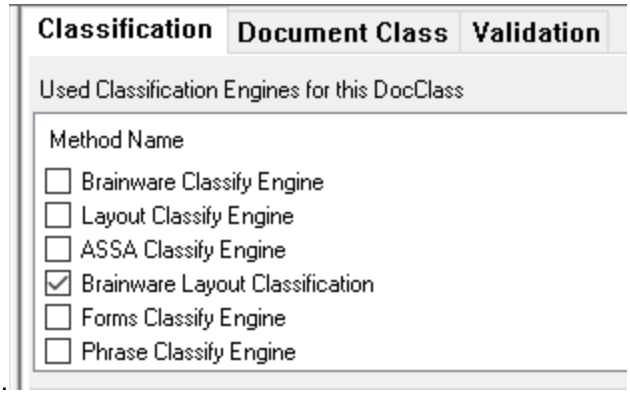
   The **CollegeShortNameOrDescription** can be any value. But the final name of the sub-class must be unique.

   The value for **AlphNumSiteSeparator** is configured in SCM (**Profile Settings** and **Institution Settings**).

3. Open the properties for the newly created multi-district document class.



4. Select the **Brainware Layout Classification Engine** from the **Classification** tab for the newly added subclass.



5. Save the project.

Learn documents for a multi-district child class

For a multi-district child class, it is important, that the system learns the classification for it. To learn a multi-district child class, you need to ensure that a couple of documents for the multi-district child class are available in the batch root job. The documents should be OCR'd at minimum. These documents are needed to learn the multi-district child class, as well as to test the learned classification.

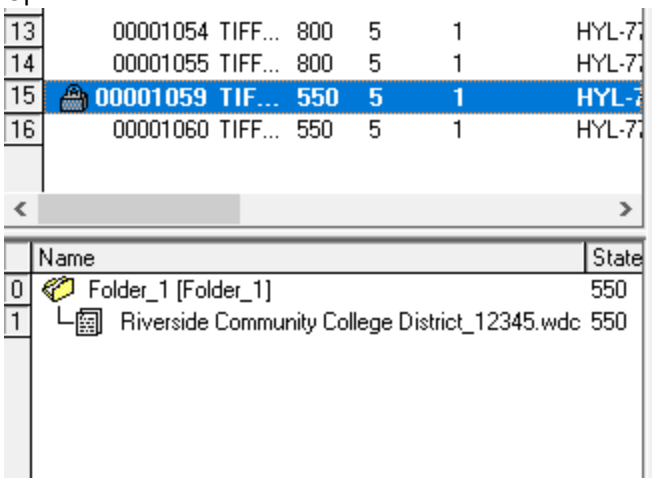
Note:
To learn more about classification training refer to the Classification section in the Brainware Intelligent Capture Online Help forDesigner

This section is for Administrators who have prior knowledge in the following:

- Brainware Intelligent Capture (BIC)
- Basic understanding of Brainware for Transcripts (BFT).
- Basic knowledge of Solution Configuration Manager (SCM).

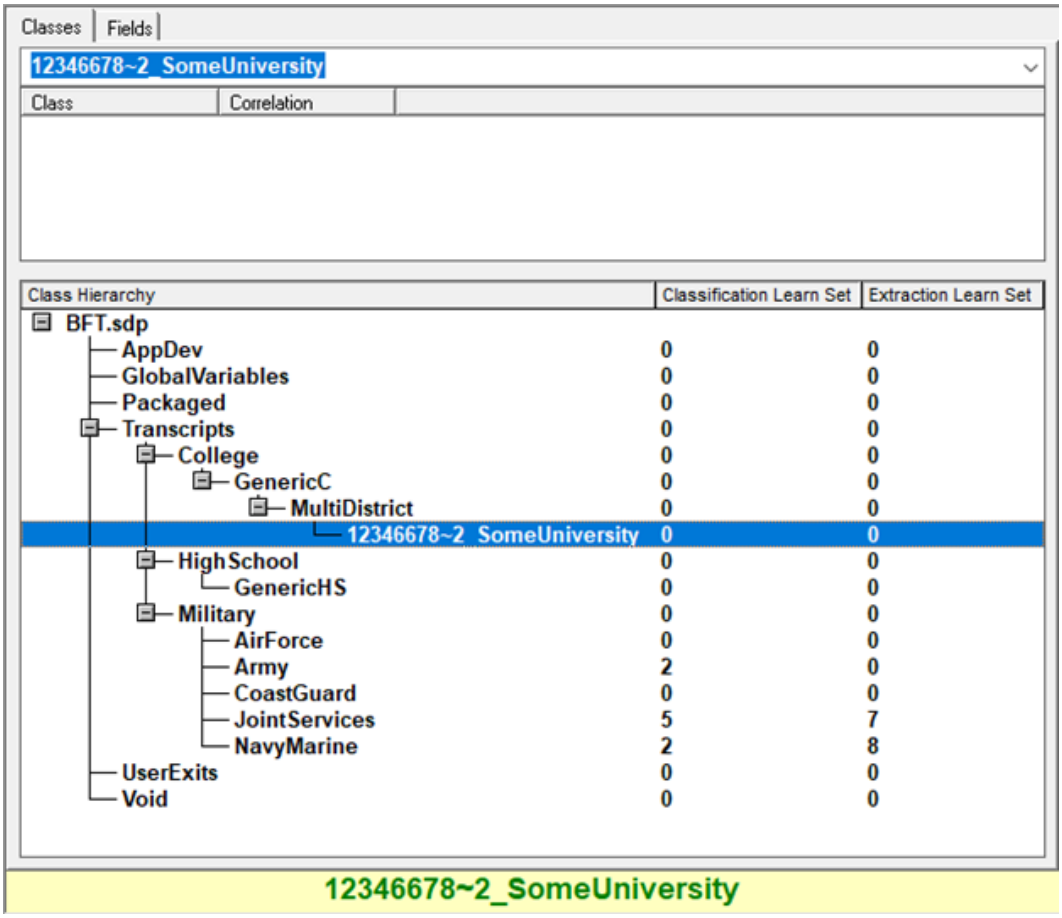
To learn a multi-district child class, complete the following steps:

1. Open the BFT project in **Brainware Intelligent Capture Designer** and switch to the **Definition** mode.
2. In the**Options** menu, clear the **Incremental Learning** check box.
3. Open a batch that contains the documents of the multi-district college.



4. Select a document that should be added to the learn set.
5. Select **Normal Train Mode**.
   The **Verifier Train Mode** is not supported for this classification training.

6. In the tree view of the left navigation panel, under **Classes** tab, select the child class of the **MultiDistrict** class, to which the document should be added.



7. Click **Add document to Learn Set**.
8. Click **Learn Documents**.
9. Save the project.

Next

When done, the classification can be tested, by executing one (or more) the documents of the multi-district college documents. If the classification does not work properly, another document can be added to the learnset, by repeating the steps 3 to 8 above.

About Verifier forms

A Dynamic Verifier form is a window presented to users in the Verifier application that contains fields that are active and that can be updated by users. A Dynamic Verifier form is activated in the *<project>*.ini file. When a Dynamic Verifier form is activated, all documents imported into Intelligent Capture use the Dynamic Verifier form from that point forward. The following sections contain the instructions for configuring and activating Dynamic Verifier forms.

The following fields cannot be deactivated and appear in a Dynamic Verifier form even though they cannot be updated by users.

- InstitutionID
- InstitutionASE
- ApplicantID
- ApplicantASE
- TranscriptType
- InvalidReason

Activate a Dynamic Verifier form

To activate a Dynamic Verifier form, complete the following steps.

1. Open the **<*project*>.ini** file.
2. Set `GRL_OP_UseDynamicVerifierForm` to `Yes`.
3. Save the changes.
4. Restart the **Verifier** application on each client machine.

Turn on Dynamic Verifier logging

Diagnostic logging for Dynamic Verifier is off by default. When you enable dynamic verifier logging, it exports the logging information to an Intelligent Capture V_ log file. To turn logging on, complete the following steps.

1. Open the **<*project*>.ini** file.
2. Set `GRL_OP_DynamicDebug` to `YES`.
3. Save the changes.

Turn off Dynamic Verifier logging

Dynamic Verifier exports logging information to an Intelligent Capture V_ log file. To turn logging off, complete the following steps.

1. Open the **<*project*>.ini** file.
2. Set `GRL_OP_DynamicDebug` to `No`.
3. Save the changes.

About configuring users

You use settings in the BRWUser user table to configure users, including the following.

- The Intelligent Capture permissions for each user.
- Whether a user logs in using Windows authentication, or with a username and password.
- The client groups a user can access and the corresponding documents a user can process.
- Which users are subject to quality reviews.

After you configure the user table, you configure a server job to automatically import the user table into Intelligent Capture.

Authority level settings

The AuthorityLevel column controls what the user is permitted to do within the Verifier application. Possible entries are as follows.

AuthorityLevel value	Description
ADM	The Administrator role is to manage users, groups, and user-to-group assignments. Administrators install the system, configure applications, and manage data. They also design and maintain projects. This role is the most powerful of the roles, because it encompasses the permissions for all other authority objects. For a user that is granted the ADM role, the client group may be left blank. If it is left blank, the administrator is able to see documents in Verifier belonging to all clients.
SLM	The Supervised Learning Manager role is to define, modify, and maintain the Learnset. This functionality is accessible only through Verifier.
SLV	The Supervised Learning Verifier role is to collect and manage local training data. Supervised Learning Verifiers are subject-matter experts who can propose Learnset candidates to improve system performance. This functionality is accessible only through Verifier.
VER	The role of the Verifier is to verify documents that could not be automatically processed. Typically, members of the Verifier group are clerks. This functionality is accessible only through Verifier.
SET	The Verifier Settings role is to change the Intelligent Capture Verifier configuration. This role is given to users who are considered to have enough knowledge

AuthorityLevel value	Description
	of the application to make changes that is beneficial to all Intelligent Capture Verifier users.
AEB	The AEB (Authorization for External Batches) role enables a server user to perform automatic import using the import API provided by the Brainware 5.9 core platform. **Note:** This role is available only if you have Brainware Intelligent Capture 5.9.

Populate the user table

The BRWUser table is keyed by a unique combination of users' user names and the client groups that they are assigned to. If a user is assigned to multiple client groups, then multiple rows need to be added into the table. For example, if user JSMITH needs to be assigned to client groups 1 and 2, the UserID column has two entries in the BRWUser table.

To populate the user table, complete the following steps.

1. Open the **BRWUser** table.
2. In the **UserID** column, enter a user's user name.
3. To have the user log in with a username and password, enter a password In the **Password** column. If you want the user to log in using Windows Authentication, leave the column blank.
4. If the user is using Windows Authentication to log in, in the **Domain** column, enter the Windows Domain information.
5. In the **Primary Group Name** column, enter the group name for the group that the user is assigned to.
6. Save the changes.

Configure an automatic import job

After the BRWUser table is populated, an automatic import job is configured to import users into the main database. The automatic import job is configured in the RTS Management Console against the RTS instance that is carrying out document import.

To configure an automatic import job, complete the following steps.

1. Open the **RTS Management Console**.
2. On the **General** tab, complete the following substeps.
    1. In the Every field, enter the number of minutes, hours, or days that Intelligent Capture imports users from the BRWUser table.
    2. From the time list, select minutes, hours, or days

3. In the Starting at fields, enter the date and time that Intelligent Capture should start importing users.
4. To update system security during an import, select Update system security
5. To update the pool automatically, select Automatic pool update

3. On the **General** tab, click **OK**.

Configuring review states

About the review states

Brainware for Transcripts has a second verification step that you can turn on or off at either the user or client levels. This step allows for additional quality control of either automatic extractions, or a user entry prior to document export.

Activating this second level of document review changes the document flow to the following.

- If all fields are extracted by the system automatically, then the document flow is as follows.

  Import -> OCR -> Classification -> Extraction -> Review -> Export

- If one or more fields in the document requires a review by a user, then the document flow is as follows.

  Import -> OCR -> Classification -> Extraction -> Verification -> Review -> Export

When a document goes to review, it is set to a specific state, which by default is 699. This state is accessible only by members of your organization who are authorized to review documents. When the reviewers enter the batch through the Verifier, they can make changes to any of the fields if they detect any issues, or if they do not find any issues, they can press Enter on the first editable field. The document then moves to the regular export.

The before and after values for each field are stored in the Visibility reporting database along with the review start and end time, and the ID of the reviewer.

Set the review state

To set the review state, complete the following steps.

1. Open the **<*project*>.ini** file.
2. Navigate to the **GRL** section.
3. Set the **GRL_VL_ReviewState** parameter to `699`.

> **Note:**
> If you configure any deviating values, set the values within the 650-699 or 701-749 range.

Activate document review for clients

You can activate document reviews at the client level to send every processed document in a specific client to the review state prior to data export. To activate document reviews, complete the following steps.

1. Open the **BRWClient**.

2. Set the **RequiresReview** column to `True`.
3. Save the changes.

About activating document review for specific users

You can activate document reviews at the individual user level. If you implement review states for users, then all documents processed by that user are sent for further review, regardless of the setting at the client level in the BRWClient table. This can be relevant for operations who would wish documents processed by less-experienced users to be subject to supervisory review until the user becomes more proficient.

Activate document review for specific users

To configure document review for a user, complete the following steps.

1. Open the **BRWUser** table.
2. Set the **RequiresReview** column for the user to `True`.
3. Save the changes.

About configuring the XML file

The following sections contain the steps to configure the export of data to an XML file, and how the XML file can be set up to include custom fields. The XML file itself, and the following output instructions, are divided into separate sections based on the document type.

About the XML file sections

The standard XML output file is divided into separate sections. Some sections are the same regardless of the document type, while other sections are dependent on the document type. The following sections are the same for all document types.

- **Document section** This section includes global document fields such as the file name, the document type, and the date issued.
- **Student record section** This section includes fields associated with the applicant such as the applicant's ID, first name, and last name.

XML file sections for college transcripts

The following sections of the XML file are reserved for college transcripts.

University degree This section includes information such as the degree earned and graduation date.

University institution This section includes information pertaining to the issuing institution, such as the institution ID, institution name, FICE and OPE ID.

University course records This section contains the transcript coursework information, written line-by-line, grouped by Term, and includes information such as the course number, course description, and grade.

XML file sections for high school transcripts

The following sections of the XML file are reserved for high school transcripts.

High school header This section Includes header fields that are extracted from high school transcripts, such as cumulative GPA, weighted GPA and total credit hours.

High school institution section Includes information pertaining to the issuing institution such as institution ID, institution name, FICE and OPE ID.

XML file section for military transcripts

The following section of the XML file is reserved for military transcripts.

Military course records The transcript coursework information in this section is written in line-by-line and includes information such as the ACE identifier, course number and course title.

Activate output to an XML file

To set up output to an XML file, complete the following steps.

1. Open the ***<project>*.ini** file.
2. To set the name of the XML file to match the document URN, in the ***<project>*.ini** file, set the **XMLFileName** column to `URN`. Otherwise, the name is the same as the original imported document.
3. Open the **BRWEXP** table.
4. In the **DefaultExportPathcolumn**, enter the path to the output directory.
5. Optional. To set the file extension to .xml, set the **XMLFileType** column to `True`. The default extension is .xml.
6. Optional. To support UTF-16 for non-western characters, such as Chinese, set the **XMLEncodingHeader** column to `UTF-16`.

> **Note:** An XML file is not generated if the output data contains non-western characters and the encoding header is set to UTF-8.

Additional XML file section options

Configure the following document fields and section tags in the **BRWEXP** table.

BRWEXP Column	Description
XMLFileHeader	This is the document header tag.
XMLFileHeaderAttributes	Optional. This controls the attributes assigned to the document header tag, such as namespace information.
XMLDocName	This is the exported document file name.
XMLType	This denotes the transcript type, college, high school or military.

BRWEXP Column	Description
XMLIssueDate	This is the date the transcript was issued.
XMLStudentHeader	This is the student record section.
XMLUniversityHeader	This is the university degree section.
XMLUniversityDegreeHeader	This is the university degree subsection.
XMLUnivRecordHeader	This is the university institution section.
XMLHighSchoolRecordHeader	This is the high school institution section.
XMLHighSchoolHeader	This is the high school header section.
XMLUnivCourseHeader	This is the university course records section.
XMLUnivCourseTag	This is the each university.
XMLMilCourseHeader	This is the military course records section.
XMLHSCourseHeader	This is the high school coursework section.
XMLHSCourseTag	This is the high school course subsection.
XMLHSSATScoresHeader	This is the high school SAT scores subsection.
XMLHSACTScoresHeader	This is the high school ACT scores subsection.
XMLHSOtherScoresHeader	This is the high school Other scores subsection.
XMLHSGrade	This is the high school grade section header.
XMLHSGradeSemester	This is the high school semester section header.
XMLMilRecordHeader	This is the military institution section.
XMLMilHeader	This is the military header field section.
XMLMilCreditDetailsHeader	This is the military credit details section.
XMLHSHeaderSATRecords	This is the high school SAT scores section.

BRWEXP Column	Description
XMLHSHeaderACTRecords	This is the high school ACT scores section.
XMLHSHeaderOtherRecords	This is the high school Others scores section.
XMLCustomFieldsHeader	This is the Custom fields 1-10 section.

About defining field output

After the XML output has been activated and you have configured the section tags, you configure the fields that are written into the file and define how they are tagged. The field output is configured in the following tables. Tags for each field and section are defined in the XML file sections in the corresponding tables.

Configuration Table Name	XML Section
BRWEXPHSHeader	High School Header
BRWEXPMilCourses	Military Course Records
BRWEXPStudentHeader	Student Record
BRWEXPUnivCourses	University Course Records
BRWEXPUnivDegree	University Degree
BRWEXPUnivRecord	University and High School Institution
BRWEXPUnivHeader	University Header Fields
BRWEXPMilRecord	Military Institution Details
BRWEXPHSACTScores	ACT Test Records
BRWEXPHSSATScores	SAT Test Records
BRWEXPHSOtherScores	Other Test Records
BRWEXPHSCourses	High School Course Records
BRWEXPMilHeader	Military Header Fields

Define field output

To configure a field in the XML file, complete the following steps.

For example, if the Cumulative GPA is to be written into the XML file with a tag of CUMGPA, the row representing the Cumulative GPA field should have CUMGPA populated in the XMLTag column.

Note:
If there is a field that you do not want written into the XML file, leave the XMLTag column for the field row blank.

1. Populate the column **XMLTag** with the desired XML tag value for the given field.
2. Repeat step 1 for all fields in the XML section.

Note:
A new entry called URN has been introduced in the BRWEXPHeader table. This creates a new XML tag called URN which displays the mapped URN value from the document name in the XML export output

Configure Visibility

About configuring Visibility

Brainware Visibility is a reporting tool that provides access to solution performance data using a web interface. It is a separate component to Intelligent Capture for Transcripts. The tool allows process supervisors to do the following.

- Obtain solution key performance metrics.
- Monitor documents as they move through the system.
- Identify solution bottlenecks.
- Report on productivity at the project and client levels.
- Report on user productivity.

The Brainware Visibility portal points to a standard table schema held in a reporting database, which is populated by the Intelligent Capture solution as documents move through the system.

This following section describes the steps necessary to activate the connection to the reporting database. As a prerequisite, the reporting database should already have been created, and the scripts required to create the tables successfully executed.

Configure Visibility reporting

To configure Visibility reporting, complete the following steps.

1. Open the **<*project*>.ini** file.
2. Set the **ConnectToReportingDB** parameter to `Yes`.

3. Set the **SQLConnectionGroup** parameter to the following.

   Example

   ```
   REP_OP_ConnectToReportingDB=Yes REP_VL_SQLConnectionGroup=01
   ```

4. Intelligent Capture begins the reporting trail for each document upon the initial import of the document into the system, but if you want reporting to start sooner, such as at scan time, then set the **REP_OP_StartNewRecordForImportedDocument** parameter to `No`.
5. Set the ConnectionString parameter to the following for each string connection, SQL_VL_01_ConnectionString, SQL_VL_02_ConnectionString, and so on.

   Example

   ```
   SQL_VL_01_ConnectionString=Provider=SQLOLEDB.1;Password=test;Persist
   Security Info=True;User ID=test;.initial Catalog=BFT;Data Source=W08-
   SERVER\SQLEXPRESS,1254
   ```

   Note:
   If no SQL connection group is specified, the system always defaults to group 01. This applies to all SQL connection groups within the system.

6. Set the **IMP_VL_URN** parameter to `COMPONENT2`.
7. Set the **REP_VL_ReportingKey** parameter to `URN`.
8. (Optional) If you want to use a specific naming convention for any Visibility reporting tables created in the databases, set the names of the tables using the following parameters.

   Example

   ```
   REP_VL_ReportingDBDocumentTable=BRWdocument REP_VL_
   ReportingDBFieldTable=BRWdistillerfields REP_VL_
   ReportingDBLineItemsTable=BRWdistillerLineItems REP_VL_
   ReportingDBLineItemsTable2=BRWdistillerLineItems2 REP_VL_
   ReportingDBHistoryTable=BRWdocstatus REP_VL_
   ReportingDBImageTable=BRWDOCIMAGE
   ```

9. (Optional) Information is not written to a database from any documents processed in the Designer module. However, you can have information written to a database from any document processed in the designer for testing and debugging purposes by setting the **REP_OP_ReportingInDesigner** parameter to `Yes`.

   Note:
   In a production environment, this should always be set to `No`.

10. (Optional) If you want to use the Visibility Reporting database to house an image of the document, set paclthe **REP_OP_StoreImageInReportingTables** parameter to `Yes`. Only configure this parameter if you are using Brainware Visibility reporting for late archiving. In all other cases, to display the document image using Visibility, set the **REP_VL_StorageDirectory** parameter to the following.

Example

```
REP_VL_StorageDirectory=\\My Computer\Brainware Projects\Export
```

11. (Optional) To retrieve a document stored within the Brainware Visibility tables using a URL, which is both stored against the record in the reporting database and is also available for export to a downstream system, set the **REP_VL_ArchiveURL** parameter to the following.

    Example

    ```
    REP_VL_
    ArchiveURL=http://archivesystem.brainware.com/Page.aspx?URN=XXXXX
    ```

    Where `XXXXX` is the point in the URL where the unique document identifier is inserted by the system to retrieve the image.

Upgrading Visibility with Brainware for Transcripts

Creating a new Visibility database

It is recommended that the Brainware for Transcripts tables should exist in their own database. To create the database and Brainware for Transcripts tables, complete the following steps.

1. On your database server, create a new dtabase.
2. Run the **ReportingDB.sql** script against the new database. This script is included in the Brainware for Transcripts installation package.
3. Follow the steps above for configuring the Visibility reporting.

Upgrading an existing visibility database

Existing users have the option of continuing to use the visibility reporting as it is already setup. When the project is upgraded, it also upgrades the reporting database to the current level.

About setting up custom exports

If you have a required data export and the existing export options do not support the data export's format, or if you need to export data for a custom base class, you must create a custom export. The custom export must be scripted and executed within a special user exit. The following sections describe how to implement a custom export.

The user exit is called once for each document that is exported. Once a document is exported, the export history is updated against the document so that it is not unintentionally exported a second time. The history can be cleared by resetting the document back to state 200. If an export is not successful, the user exit is called again during the next attempt.

The script contents of a user exit can be set to anything that your business needs require.

You should check the document class before developing any script that refers to fields using hard-coded field names, particularly if the project uses custom base classes. If a field is that does not exist is referenced against the document class, it results in a runtime error. The fnGetBaseClass global function, described in the Global Variables Scrip Class, can be used to check the document class.

Configure and activate a custom export

To configure and activate a custom export, complete the following steps.

1. Open the project file with the **Designer** module.
2. Navigate to **Definition** mode and highlight the **UserExits** class.
3. Right click on the class and select **Show Script**.
4. Navigate to the **UserExitCustomExport** user exit subroutine.
5. Configure the parameters listed in the following table.

Parameter name	Description
pWorkdoc	This is the standard Workdoc object that provides access to all document field information, including the originally extracted line item data, the document classname, the document OCR text, and the document file name.
ExportPath	This is the destination folder for file output. This value is taken from the export file path configured on the RTS instance that is responsible for document export. If the RTS instance path is blank, the export path is set to the value held against the system configuration EXP_VL_DefaultExportPath parameter.
strDocLink	This is the path to the image of the document, which can be stored in a storage director or the batch directory, or as a URL, to retrieve the image from an archive.

6. Activate the custom export by setting the **CustomExport** column in the **BRWEXP** table to `True`.

About adding and configuring clients

Brainware for Transcripts is a solution that permits multiple configuration types to operate within a single installation. A single configuration type is referred to as a client. Each document that passes through the system is preassigned to a client, and it is the client that controls the following.

- The overall document flow.
- The fields that are extracted.
- Those fields that are mandatory and those that are optional, and their corresponding validation rules.
- The data sources that are used for field validation.
- How data is exported.

When you are designing a Brainware for Transcripts client, consideration is given to how the client is utilized for your business needs, for example.

- If the end user is a BPO, a client can be used to represent a single customer of the BPO or a division of a single customer.
- If you have one user working in multiple regions or with multiple divisions with their own requirements, a client can be used to represent each region or division.
- If you have one user working with multiple SIS systems, each SIS system can be set up as an individual client for the different SIS-system connections and processing rules.

About the client settings and properties

Client settings and properties are contained in the BRWClient table in the Brainware for Transcripts database. A basic installation creates a single client with a client ID of 0 (zero), and this is the default client the system uses.

The columns contained in the BRWClient table and their uses are described in the following table.

Column	Explanation of usage
ClientID	This is the unique ID of the client and must always be set to an integer value.
ProfileID	This is ID of the profile assigned to the client. The profile controls what fields are extracted and how they are validated. More than one client may share the same profile ID if the extraction and validation requirements are identical.
ExportProfileID	This is the ID of the export profile assigned to the client. The export profile ID controls how data is exported for a client. More than one client may share the same export profile ID if the export requirements are identical.
ClientName	This is a free text string containing the name of the client. This data is written to the Visibility reporting database for each document assigned to a client.
ForceVerify	This is a flag that controls whether all documents for a client is routed to the Dynamic Verifier. If this column is set to True, all documents are routed to the verifier. If it is set to False, only documents requiring review by a user attention are routed to the verifier.
ClientGroup	This is the ID of the client group to which the client belongs. It is an integer value that can be set by the system administrator. You use this group to give users access to documents belonging to specific clients.
RequiresReview	This is a flag that indicates whether documents assigned to a client should always be subject to review by a user after the document has been routed through the Dynamic Verifier.
InstitutionPartition	This is the ID of the institution master data partition that is used by the client.

Column	Explanation of usage
ApplicantPartition	This is the ID of the applicant master data partition that is used by the client.
Priority	When documents are imported into Intelligent Capture, they are placed in batches and each batch is assigned a priority. This priority controls the order by which the runtime server component of Intelligent Capture processes the batches, and the order in which the documents appear in the Dynamic Verifier. The priority scale runs from 1 to 9, and 1 is the highest level of priority. If you set this to 1, all batches from this client have a priority of 1.

About assigning documents to a client

Documents must be preassigned to clients prior to being captured by Intelligent Capture. Intelligent Capture uses a parameter in the image file name to identify the client a document is assigned to. Therefore, a client ID must be embedded within the image file name and separated by an underscore. The part of the file name that represents the client ID is specified in the IMP section in the <*project*>.ini file in the IMP_VL_ClientID parameter with the word COMPONENT followed by a number that indicates the client ID's position in the file name.

For example, processing a document using the component assigned to client 2 has a client ID embedded in the file name as follows.

```
12345_2_20120901.tif
```

The first component of the file name is 12345, the second component and client identifier is 2, and the third component is 20120901. The<*project*>.ini file setting is configured as follows.

```
IMP_VL_ClientID=COMPONENT2
```

If the file name for client 2 is 12345_20120901_2.tif, the<*project*>.ini file setting is configured as follows because the client identifier is located in the file name's third component.

```
IMP_VL_ClientID=COMPONENT3
```

Note:
If this parameter is not set or the file component does not exist, the system processes the document using the default configuration assigned to client zero.

Configure the ALM settings in BFT

Prerequisite

Install and configure ALE Learnset Manager (ALM). For information on how to install and configure ALM, refer to ALM Documentation.

You can configure the settings to use ALM for Brainware for Transcripts. In addition to configuring the Brainware database, the database connection string of ALM must be provided in the INI file for this purpose. To configure the ALM settings, complete the following steps in Solution Configuration Manager.

1. On the **Configure Project** page, in the **Projects** list, select the BFT project to be used.
2. In the **Settings** drop-down list, select **Global Settings**.
3. In the **Global Settings** list, click **ALE Settings**.
   For information on specific fields, refer to the following table.

Parameter	Description
Enable Automatic Learning	Select this check box if you want to enable the ALM integration feature for Brainware for Transcripts.
UserName	This is the username associated with the ALM account.
Password	This is the password associated with the ALM account.
Automatic Learning URL	This is the base URL of ALM in the format "http://IP:Port/ALM/", where IP and Port are based on the installation of ALM. **Note:** The base URL is case-sensitive.
Automatic Learning Project Name	This is the name of ALM project. This is a required field. The system automatically creates a project with the same name within ALM, if it is not already present.
Fields Enabled for Learning	This is a comma-separated list of Brainware fields, required for ALM integration. Only those Brainware fields, which are specified here, communicate and compare results with ALM. These fields are automatically created by the system in ALM, if it is not already present. The following criteria must be fulfilled: • The field name must match an existing field name in the Transcript class. • It must be a plain text field (not a table).

Parameter	Description
	• The field must be configured in a way that it can extract a candidate from the document. • It must be a header field.
ConnectionGroup	This is the connection group corresponding to a connection string mentioned in the INI file, which connects to the ALM database. For example, if SQL_VL_06_ConnectionString = "connection string to ALM" is mentioned in the INI file, then the connection group corresponding to this connection string is "6".
Confidence	This is the minimum confidence that needs to be achieved for comparing ALM results with Brainware. If this minimum confidence is not attained for an ALM field, the result is ignored and comparison does not occur. The default confidence value is set to 70. It is recommended to maintain the minimum default confidence value as 70, to get optimum results.
Distance	This is the difference between two best candidates of ALM, configured as a tolerance. The system allows comparison result with ALM, if the following conditions hold true. • The confidence for the ALM field is greater than the minimum confidence value. • The difference between the two best candidates of ALM for a specific field is greater than the difference value configured in this field. If there is only one candidate available in ALM for a particular field, you can use the value specified in the **Confidence** field to compare.

Configure Password Encryption

Encrypt a password

To encrypt a password, complete the following steps.

1. Open the command prompt as an administrator.

2. At the command prompt, navigate to the directory where the **Password_Encrypt.bat** file is located, and run the below command.

   Example

   ```
   Password_Encrypt.bat<space><Password to encrypt><space><Path of the Output Encrypted Password file>
   ```

   Note:
   You can use any name for the Output Encrypted Password file, for example **Encrypted_Password.txt**. The password must not exceed 280 characters in length. After you run the above command, the text file that is generated contains the encrypted password. The **Password_Encrypt.bat** file uses RSA3072 encryption, by default. It is therefore recommended that you use the RSA3072 encryption methodology. However, if you want to use the RSA1024 encryption methodology, enter **RSA1024** as the value of the optional parameter.

   Example Example: `Password_Encrypt.bat<space><Password to encrypt><space><Path of the Output Encrypted Password file><space><RSA1024>`

   Note:
   For RSA1024, the password must not exceed 30 characters in length.

Use an encrypted password in the database connection strings

To use an encrypted password, complete the following steps.

1. Generate an encrypted password from the **Password_Encrypt.bat** file. For more information about how to generate an encrypted password, refer to Encrypt a password.

   Example

   ```
   IPEnmmcqUfVudqwKxWzoJE/smb5H4L2KgJ7n2UjvUYZ5iZ+eHA+udol+rOp+DqkFPAuQ1aRPE0lcV868A75AzbFrnGWHv/oFae893qUwQZNTgjGBfRZAblqT4nsxBQld12XwAmKlP3qVhOwFlfas5/dbgX+lmx7zS/fzyzes7yY=
   ```

2. Copy and paste the encrypted password to the **Project.ini** file, next to the corresponding `SQL_VL_<Connection group number>_EncryptedPassword` key.
3. You can use the corresponding `SQL_VL_<Connection group number>_ConnectionString` without any password information. Remove the unencrypted password key-value pair from the connection strings if it already contains password information.

   Example

   Remove password information from the connection string.

   Note:
   The values in the Data Source and Password fields are fictitious and are for representation sake only.

```
SQL_VL_01_ConnectionString=Provider=ORAOLEDB.ORACLE;Data
Source=EXAMPLE;Password=EXAMPLE1;User ID=Hyland
```

The final connection string looks like:

```
SQL_VL_01_ConnectionString=Provider=ORAOLEDB.ORACLE;Data
Source=EXAMPLE; User ID=Hyland SQL_VL_01_EncryptedPassword=
IPEnmmcqUfVudqwKxWzoJE/smb5H4L2KgJ7n2UjvUYZ5iZ+eHA+udol+rOp+DqkFPAuQ1a
RPE0lcV868A75AzbFrnGWHv/oFae893qUwQZNTgjGBfRZAblqT4nsxBQld12XwAmKlP3qV
hOwFlfas5/dbgX+lmx7zS/fzyzes7yY=
```

Use an encrypted password for ALM

The password for ALM is stored in the BRWALE Database table. You can modify this information using SCM (Solution Configuration Manager) or by directly accessing the database table. You can either use plain text as your password or use an encrypted password. Brainware automatically detects and decrypts an encrypted password. To use an encrypted password, complete the following steps.

1. Generate an encrypted password from the **Password_Encrypt.bat** file. For more information about how to generate an encrypted password, refer to Encrypt a password.
2. Open the Solution Configuration Manager and navigate to **Configure Project > Global Settings > ALE Settings**.
3. In the **Password** box, copy and paste the encrypted password generated from the **Password_ Encrypt.bat** file.
4. Click **Save**. The encrypted password is saved.

About the Brainware for Transcripts customization options

The Brainware for Transcripts solution can be customized to meet specific requirements. Customization takes the following forms.

- Project setting customizations
- Script customizations

Project setting customizations include such things as changing tolerances and thresholds within the project, adding new fields and classes, configuring existing ASE fields as described in Appendix A, changing or creating Verifier forms, or setting up new users.

Existing fields or classes should not be deleted or renamed. Doing so causes the solution to stop operating.

It is also possible to add script customizations into the project. For custom fields and classes, scripts can be added to the appropriate custom field event and class windows. For customizations to the existing Transcripts class, this must be done on the UserExits class script window.

About customizing the project script class

The project script class contains script associated with standard Intelligent Capture system events, which are known as the ScriptModule events.

These ScriptModule events are called at specific points within the Intelligent Capture workflow. For example, at pre and post-import, pre and post-OCR, pre and post classification, and at time of document export.

Do not make any changes to the code on this class level. Doing so causes the solution to stop operating.

About customizing the global variables script class

The global variables script class contains all global variables that are used within the solution. These data definitions are exposed so that you can use them within custom code, and also so that the you can see the definition of the custom structures and arrays as a point of reference.

In addition to global variables, this script class also houses a series of common functions and subroutines used throughout the solution. You can use these common functions within custom code placed on the user exit script class, or within code for any additional classes that are created.

The common functions, along with a description of their potential uses, are described in the following table.

Name of function / sub-routine	Description
ReadSettings	This function reads the system configuration INI file.
DicVal	This function returns the value of any parameter contained within the system configuration INI file. The function parameters are as follows. **strKey** This is the name of the INI file parameter. **strDic** This is the name of the INI section in which the parameter is held. Neither strKey nor strDic are case-sensitive. For example, if the EXP_VL_OutputDateFormat configuration parameter contains MMDDYYYY, then the following command copies MMDDYYYY into the strOutputDateFormat local string variable. strOutputDateFormat = DicVal ("OutputDateFormat", "EXP") For configuration parameters that have a Boolean type of OP, the function only returns a value of Yes or No.
Parse_INIVal_Yes	This function receives an INI file strVal parameter value that has been entered against a parameter with Boolean type OP, and determines whether the value is interpreted as Yes or No.
SplitString	This subroutine performs a split on a given string based on a nominated separator, and returns the

Name of function / sub-routine	Description
	components of the string back to the calling function in an array, along with the number of values in the array. The interface parameters are as follows. **strSource** This is the input string to be split. **strSplitArray** This is the array containing the split results passed back to the calling module. **strDesignator** This is the delimiter to be used when performing the split. **ArrayLineCount** This is the number of array elements in the returned strSplitArray. For example usage, Dim myString As String Dim Words() As String Dim intWordCount As Integer myString = "MARY HAD A LITTLE LAMB" A space is set as the delimiter. Call SplitString(myString, Words(), " ", intWordCount) The returned Words array would contain the following. Words(1) = "MARY" Words(2) = "HAD" Words(3) = "A" Words(4) = "LITTLE" Words(5) = "LAMB" The returned intWordCount parameter would be set to 5.
fnConvertToExternal	This function converts a date in the date format used internally, for example DD/MM/YYYY, into a specified format. The interface parameters are as follows.

Name of function / sub-routine	Description
	strDate This is the date to be formatted. strFormat This is the format of date, either MMDDYYYY or YYYYMMDD. Any other entry returns DDMMYYYY. strSeparator This is the separator to be used when converting the date. For example, Dim myDate as string myDate = "12/08/2009" 12th August 2009 myDate = fnConvertToExternal(myDate, "MMDDYYYY", "-") The value of myDate is set as 08-12-2009.
fnConvertToInternal	This function is used to convert a date with a specified format into the date format used internally within Brainware for Transcripts, such as DD/MM/YYYY. The interface is as follows. **strDate** The date to be formatted to DD/MM/YYYY. **strFormat** The current format of strDate (either YYYYMMDD, MMDDYYYY - any other entry returns DDMMYYYY. **strSeparator** The separator currently used in strDate. For example, Dim myDate as String myDate = "2009-08-12" 12th August 2009 myDate = fnConvertToInternal(myDate, "YYYYMMDD", "-") The value of myDate is now set to 12/08/2009.
fnFormatDateForExport	This function converts a date in the Verifier output format, as configured in the DAT section of the system configuration, into a date in the export output format, as configured in the EXP section. For example, date can appear in any format, but the

Name of function / sub-routine	Description
	system converts it to the format specified in the DAT section. If that format is MMDDYYYY, 12 th August 2009 is displayed in Verifier as 08/12/2009, which is also the technical content of the field object text property. For example, the contents of pField.Text or pWorkdoc.Fields("MyDate").Text). fnFormatDateForExport takes the technical contents of the field and converts it into the date format as specified in the EXP section. If the export format is YYYYMMDD with a hyphen (-) as the separator, then the following command populates the strDate string variable with 2009-08-12. **strDate** This is the fnFormatDateForExport (pWorkdoc.Fields("MyDate").Text) The interface of the function is as follows. **strDate** This is the date to be converted.
fnWriteXMLField	This function writes a single line into the XML file, and is intended for use within UserExitXMLOutput and provides a mechanism to add a custom field into the XML file with a single command. The interface of the function is as follows. strAttribute = name of the configuration parameter containing the tag for the XML field. strValue = value of the field to be outputted. For example, in the configuration database, a new parameter called EXP_VL_XMLHCTranscriptCode has been created with a value of TCODE, and a new field has been created against the Transcript class in the TranscriptCode project which contains the extracted value of 12345, and this value is written to the document header section of the XML file. This can be achieved by placing the following in the UserExitXMLOutput framework. `Select Case strSection Case cDefaultXMLDocHeader fnWriteXMLField("TranscriptCode", pWorkdoc.Fields ("TranscriptCode").Text) Case`

Name of function / sub-routine	Description
	`cDefaultXMLStudentHeader … End Select` This writes the following line into the document header section of the XML file. <TCODE>12345</TCODE> The function is deprecated. It is replaced by fnInsertXMLNode.
fnWriteXMLDateField	This function is used to write out a date field to the XML file where the date to be written is in the Verifier output date format specified in the DAT section of the system configuration. As well as writing the value into the XML file, the system converts the date passed into the date export format as specified in the EXP section of the system configuration. The interface and function usage is identical to that of fnWriteXMLField as described above. The function is deprecated. It is replaced by fnInsertXMLNode.
fnGetFileName	This simple function receives a full filename, which includes the file path and file extension, and returns the name of the file itself. For example, if c:\My Documents\12345.tif is passed to the function, the output is 12345. Interface is strFileName
fnGetBaseClass	This simple function returns the base class associated with the class passed to the function. If a base class is passed to the function, the same base class is returned. For example, if the function receives College and that class is a child class of Transcripts, the function returns Transcripts. Interface is strClass
fnIsVerifier	This function returns a Boolean value of True if the current Intelligent Capture Module executing the script is the Verifier Module.

Name of function / sub-routine	Description
fnGetBatchID	This function receives the path to a document in the batch directory (strWorkfile), parses the file path, and returns the batch ID number as a string. Interface is strWorkfile
fnIsAlpha	This function returns a Boolean value of True if the string passed in the strString parameter is composed entirely of alpha characters (upper or lower case). Interface is strString
fnGetUserDecimalSeparator	This function reads the local Windows settings for the user logged onto the machine and returns either a full stop/period or a comma depending on the decimal separator preferences.
fnSetDBConnection	This function can be called from a user exit in order to connect to a database. The function takes in a database connection string using the input strConnection parameter. If the connection is already available, the index of the connection in global database connection array objDBConn is returned; if it is not available or not open, the function initializes the connection and return the relevant index of the objDBConn object. If the connection cannot be made, the function returns -1 and an appropriate error message is written into the standard Brainware for Transcripts log file. For example, the following code instantiates a database connection and execute an SQL call where variable myDBConnection represent the connection string, and mySQL represents the SQL statement (both string variables). `Dim lngConnection As Long Dim myConnection As ADODB.Connection lngConnection = fnSetDBConnection (myDBConnection) If lngConnection = -1 Then ' Connection could not be made - error handling Else ' Execute SQL using connection Set myConnection = objDBConn`

Name of function / sub-routine	Description
	`(lngConnection) myConnection.Execute(mySQL) End If` objDBConn is a global database object available for use in any user exit. Interface is strDBConnection
fnMatchDBComponents	This is a supporting function used by fnSetDBConnection.
fnCheckDBArray	Utility function that checks to see whether a passed database connection array of type ADODB.Connection is initialized. If it is not, the function initializes it. Interface is myArray()
fnExtractDBComponents	This is a supporting function used by fnSetDBConnection.
fnGetFieldAnalysisSettings	This function returns an instantiated AnalysisSettings object for given associative search engine field oASSA and document class strClass. Interface is strClass, oASSA
fnIsValueInList	This function takes a comma-separated list in strList input parameter and a value strValuePreserve. The function returns a Boolean true value if strValuePreserve is one of the values in the list. Interface is strList, strValuePreserve
fnConvertToDouble	This utility function takes in a string strString and converts it to a double value in a way that is consistent with the locale settings of the machine. If the string cannot be converted, the output is zero. Interface is strString
fnIsNumeric	This utility function returns a Boolean true value if all characters passed in the strTemp input parameter are numeric (For example, 0-9). Interface is strTemp

Name of function / sub-routine	Description
fnCheckForNull	This function receives a field component of a database record set and returns the value as a string to the calling routine using the function name. If the field component has a null value, an empty string is returned. Interface is strString
fnConvertBoolean	This function receives a Boolean field component from a database record set and returns Yes if the value is positive (and No if the value is negative) back to the calling routine using the following function name. Interface is blBool
fnSetFromFileName	This function takes the same of a parameter is the IMP section of the INI file, along with the document filename, and parses out the corresponding value from the filename passing it back to the calling routine using the function name. If the field is a date, it is formatted in accordance with the VerifierOutputFormat setting in the DAT table. Interface is strFieldName, strFile
RedimClientGlobals	This function takes the global client buffer array and initializes it if it has not already been done.
RedimFSGlobals	This function takes the global field settings buffer array and initializes it if it has not already been done.
fnGetClientData	This function receives a client ID and returns its corresponding settings from table Client using the ClientData structure. For example, to retrieve details for client zero, use the following. `Dim Client As ClientData Client = fnGetClientData("0")` Interface is strClientID
fnGetClientDataForWorkdoc	This function receives a workdoc object and returns the client settings configured in table Client that are

Name of function / sub-routine	Description
	associated with that workdoc using the ClientData structure. For example, `Dim Client As ClientData Client = fnGetClientDataForWorkdoc (pWorkdoc)` Interface is pWorkdoc
fnGetFieldSettings	Function to retrieve the field settings from the BRWFLD table for a given combination of field name and profile ID. The settings are passed back using the FieldSettings structure. For example, to retrieve settings for the transcripts number associated with profile ID 1, use the following. `Dim FS as FieldSettings FS = fnGetFieldSettings ("TRANSCRIPTNUMBER", "1")` Interface is strFieldName, strProfileID
fnReadSubRule	This function receives a substitution rule ID as a string and populates the SubRule object with the rule details, which is then passed back to the calling routine with the function name. Interface is strRule
fnGetValueForIR	This function receives the text for an invalid reason as displayed in the field in Verifier with the strIR parameter and returns a corresponding property (specified by strValue) belonging to that rule back to the calling routine with the function name. Possible values for strValue are RULE and EXPORTCODE. Interface is strValue, strIR
RedimCountryGlobals	This function takes the global country buffer array and initializes it if it has not already been done.
fnInsertXMLNode	This function inserts a child node to the specified

Name of function / sub-routine	Description
	parent node. If there are multiple parent nodes, a child node is inserted to each parent node. It is intended for use withing UserExitXMLDoc and provides a mechanism to add a custom field into the XML file. The interface of the function is as follows. xmlDoc = the output XML document parentName = tag name of the parent node newNodeName = tag name of the inserting node newNodeValue = text value of the inserting node duplicateAllowed = flag to allow duplicate nodes or not For example, in the configuration database, a new parameter called EXP_VL_XMLHCTranscriptCode has been created with a value of TCODE, and a new field has been created against the Transcript class in the TranscriptCode project which contains the extracted value of 12345, and this value is written to the student header section of the XML file. This can be achieved by placing the following in the UserExitXMLDoc framework. fnInsertXMLNode (xmlDoc, "studentRecord", "TranscriptCode", pWorkdoc.Fields("TranscriptCode").Text, False) This writes the following line into the student header section of the XML file. <TCODE>12345</TCODE>

About the user Exits script class

This class contains the project user exit script points. Do not remove or change the definitions of the user exits provided. Doing so causes the solution to stop operating.

About the Transcripts / College / HighSchool / Military script classes

These classes contain the source code for the class validation events that includes the logic that is used to validate fields and the document as a whole, as well as to control the behavior of the Verifier form.

You can add new validation events that correspond to newly created fields on these classes. These extra events are created at the end of the existing code in the area marked in the script.

Do not make any changes to the existing code. Doing so causes the solution to stop operating.

About the AppDev / Packaged / GenericC / GenericHS script classes

These classes should not be deleted, changed, or renamed. Doing so causes the solution to stop operating, and the project file may not be recoverable.

About the sequence of class dependencies

When making changes to scripts, be mindful that dependencies exist between the various script layers, so it is not possible to execute one script if there is a dependency on a script that is not executing. Executing a script also performs a syntax check. Therefore, the scripts must be executed in the following sequence.

GlobalVariables -> UserExits -> Project

About user exits

A user exit is a dedicated public subroutine or function on the UserExits class script level where you can enter custom code.

Each user exit is called from a relevant point in the application layer baseline code and provides the you with a window to perform a custom activity as is appropriate for your implementation.

You should implement customizations in a modular fashion within the existing user exits. If any ancillary functions are required to support these modules, create them as public functions. You can place these ancillary functions on the UserExits script class if they are only used locally, but if they need to be accessed by custom script on other classes, you can place them at the end of the existing script on the GlobalVariables class in the marked area.

Periodically, Hyland Software reviews all submitted modules to ascertain which would be of value to be incorporated in the application layer baseline script.

The user exits that are available, along with their calling points and suggested uses, can be found in the following table.

User Exit	Calling routine	Description and possible uses
UserExitCustomExport	ScriptModule_ ExportDocument	This is the user exit for custom export modules, such as for custom flat files or custom database updates. This is the only user exit that has a corresponding activation parameter within the BRWEXP table. The interface is pWorkdoc, ExportPath, strDocLink, The strExportError global variable is populated with an appropriate error message in the event the export fails. This has the effect of setting the batch to a status of 750,

User Exit	Calling routine	Description and possible uses
		with the error message set against the institution ID. This exit only calls for documents that have not been voided. Special handling for voided documents is inserted in the UserExitVoidDocumentExport user exit.
UserExitPostExtract	Document_ PostEvaluate on the Transcripts class	This is the user exit used to set any custom field defaults, or to reevaluate any extracted fields. The interface is pWorkdoc.
UserExitRouteDocument	ScriptModule_ RouteDocument	This is the user exit for performing any custom activity connected to the Brainware for Transcripts workflow state of each document, such as changing the state based on a property of the workdoc or document filename so that they can be filtered on a user-by-user basis. The interface is pWorkdoc, State.
UserExitVoidDocument Export	ScriptModule_ ExportDocument	This is the user exit provided for the custom export of documents belonging to the void class. The interface is pWorkdoc, ExportPath, strDocLink. Populate the strExportError global variable with an appropriate error message for when the export fails. This has the effect of setting the batch to a status of 750, with the error message set against the institution ID.
UserExitTerminate	ScriptModule_ Terminate	This user exit is called from the beginning of ScriptModule_Terminate. It can be used to unload any global script objects employed in custom script. The interface is ModuleName.
UserExitPreImport	ScriptModule_ PreImport	This user exit is called from the beginning of ScriptModule_PreImport. The interface is pWorkdoc, FilePath, FileType, pCancel.

User Exit	Calling routine	Description and possible uses
UserExitPostClassify	ScriptModule_ PostClassify	This user exit is called from the beginning of ScriptModule_PostClassify. The interface is pWorkdoc.
UserExitDocument OnAction	Document_ OnAction on the Transcripts class	This user exit provides an opportunity for a developer to add script that relates to custom buttons that they may elect to add to the Verifier form. The ActionName parameter, which is passed into the function, is populated with the technical name of the action associated with a user pressing the button as designated in Verifier Design Mode in the Designer Module. The interface is pWorkdoc, ActionName.
UserExitXMLOutput	Internal application	This user exit is available for a developer to add any custom fields into the XML output file. Custom fields can be entered into any of these four sections by use of the public fnWriteXMLField and fnWriteXMLDateField functions. The interface is pWorkdoc, pTable, lngLine, strSection The function is deprecated. It is replaced by UserExitXMLDoc.
UserExitExportSuccess	ScriptModule_ ExportDocument	This user exit is called at the point where it is known that all selected exports have been successful for the document being processed. It can be used to update additional reporting data if required. The interface is pWorkdoc.
UserExitExportFailure	ScriptModule_ ExportDocument	This user exit is called at the point where it is known that export has failed for the document being processed. It can be used to update additional reporting data if required. The reason for the export failure can be found in the strExportError global parameter. The interface is pWorkdoc.

User Exit	Calling routine	Description and possible uses
UserExitVerifierException	ScriptModule_ Verifier Exception	This user exit is triggered when a user send a document to an exception state in Verifier. The interface is pWorkdoc, Reason, CreateNewBatch, BatchName, BatchDocumentState, BatchPriority, BatchFolderName, ApplyExceptionHandling.
UserExitSetReporting LoginName	Internal application	This user exit allows a developer to change the name of the user as reported in the Visibility reporting database. This is used in Intelligent Capture 5.2 and higher where the Web Verifier is being used. Otherwise, the system always populates the Verifier user column in the reporting database with the Intelligent Capture service user. The strUserName input parameter contains the user name that the system is currently using. The interface is pWorkdoc, strUserName. **Note:** It is no longer necessary to insert code into this user exit for web verifier implementations. The system always uses the Verifier logon ID as the user name.
UserExitApplicantAddressArray	Internal application	This user exit is called each time the details for an applicant are read from the applicant pool. You can amend or add new parameters to the ApplicantAddress array. The user exit is not called if the applicant details have already been read and loaded into the local cache. The interface is oASSA, strID, ApplicantAddress
UserExitInstitutionAddressArray	Internal application	This user exit is called each time the details for an institution are read from the institution pool. You can amend or add new parameters to the InstitutionAddress array.

User Exit	Calling routine	Description and possible uses
		The user exit is not called if the institution details have already been read and loaded into the local cache. The interface is oASSA, strID, InstitutionAddress
UserExitDocument Validate	Document_Validate on the Transcripts class script level	This user exit is called from Document_ Validate on the Transcripts class script level. It can be used to code in additional document level validations and activities. The interface is pWorkdoc, pValid.
UserExitEditDocument Weblink	Internal application	This user exit permits a developer to manipulate the document web link, as stored in the Visibility reporting database and exported downstream. The current web link is passed into the user exit using the strWebLink interface parameter, and this may be changed to meet your business needs. The current unique document ID is passed in the strDocID interface parameter, and this cannot be changed. The interface is strWebLink, strDocID.
UserExitVerifierFormLoad	ScriptModule_ Verifier FormLoad	This user exit is called at the end of ScriptModule_VerifierFormLoad. The interface is pWorkdoc, FormClassName, FormName
UserExitScriptModule Initialize	ScriptModule_ Initialize	This user exit is called at the end of ScriptModule_Initialize. The interface is pWorkdoc.
UserExitPostImport	ScriptModule_ PostImport	This user exit is called from the beginning of ScriptModule_PostImport. The interface is pWorkdoc.
UserExitPostImportBatch	ScriptModule_Post ImportBatch	This user exit is called at the beginning of ScriptModule_PostImportBatch. The interface is pWorkdoc.

User Exit	Calling routine	Description and possible uses
UserExitPreClassify	ScriptModule_Pre Classify	This user exit is called from the beginning of ScriptModule_PreClassify. Interface is pWorkdoc
UserExitXMLDoc	Internal application	This user exit is available for a developer to add any custom fields into the XML output file. Custom fields can be entered into the XML document by use of fnInsertXMLNode. The interface is pWorkdoc, xmlDoc.
UserExitUpdateSystemSecurity	ScriptModule_ Update SystemSecurity	This is the user exit that is called during the system security update event that is set to run as a periodic background job on the runtime server. In Brainware for Transcripts, the system security event is used to load users created in the SCM User Management settings into the main system user table. This user exit is triggered subsequent to that process. The interface is InstanceName.
UserExitMoveDocument	ScriptModule_Move Document	This is the user exit that is called when a document is sent to an exception batch in Thick Verifier. The internal application uses this event to apprise the Visibility reporting tables of any change in the document batch ID. The interface is pWorkdoc, OldBatchID, NewBatchID, Reason.
UserExitBatchOpen	ScriptModule_ Batch Open	This is the user exit that is called upon the opening of a batch in Thick Verifier. The interface is UserName, BatchDatabaseID, ExternalGroupID, ExternalBatchID, TransactionID, WorkflowType, BatchState.
UserExitProcessBatch	ScriptModule_ ProcessBatch	This is the user exit that is called during the Custom Processing workflow step. The interface is pBatch, InputState, DesiredOutputStateSucceeded, DesiredOutputStateFailed.

User Exit	Calling routine	Description and possible uses
UserExitBatchClose	ScriptModule_ Batch Close	This is the user exit that is called when a batch is exited in Thick Verifier. The interface is Username, BatchDatabaseID, ExternalGroupID, ExternalBatchID, TransactionID, WorkflowType, BatchState, BatchReleaseAction.
UserExitAppendWorkdoc	ScriptModule_ Append Workdoc	This is the user exit that is called when a user merges documents together in Thick Verifier. The interface is pLastWorkdoc, pCurrentWorkdoc, pAppendType.
UserExitPreOCR	ScriptModule_ PreOCR	This user exit is called from the beginning of ScriptModule_PreOCR. This call routine is triggered just before a document is OCR'ed. The interface is pWorkdoc and pCancel.
UserExitPostOCR	ScriptModule_ PostOCR	This user exit is called at the beginning of ScriptModule_PostOCR. This call routine is triggered just after the document is OCR'ed. The interface is pWorkdoc.
UserExitVerifierClassify	ScriptModule_ VerifierClassify	This user exit is called before and after the manual reclassification from Verifier. The interface is pWorkdoc, Reason, and ClassName.

About the triggering of user exits in Verifier

User exits are triggered when a user is working a problem document in Verifier.

The following table lists the user exits that are fired when a user performs a certain task in the order in which they are fired.

Verifier action	User exits
A user clicks on a button on the Verifier form.	UserExitDocumentOnAction
A user verifies the last invalid field on the Verifier form.	**Always calls** UserExitDocumentValidate **Potentially calls** UserExitSetReportingLoginName if Visibility reporting is activated.

About the project data structures

Brainware for Transcripts uses internal data structures to pass data between functions and subroutines. It is possible to use some of these data structures in user exit script, and in some cases, these structures are defined as formal parameters in the interface. The following structures are available.

- ApplicantAddress
- InstitutionAddress
- ClientData
- FieldSettings

ApplicantAddress structure

The ApplicantAddress structure contains data elements associated with a particular applicant, such as the applicant ID, the applicant name, address details, and additional information. The extent to which the data is populated depends on the extent to which the data is available in the applicant extract and mapped within the BRWSRA table. It is used in the interfaces to the UserExitApplicantAddressArray user exit.

The structure consists of the following elements.

Structure element	Type	Description
FNAME	String	This is the first name of the applicant.
MNAME	String	This is the middle name of the applicant.
LNAME	String	This is the last name of the applicant.
ADDRESS	String	This is the applicant street address line 1.
ADDRESS2	String	This is the applicant street address line 2.
ZIP	String	This is the applicant zip / postal code.
ID	String	This is the unique applicant ID from the point of view of the data extract where each row must have a unique reference. This is not the unique applicant ID from the point of view of the SIS if a site ID is also used.
SITEID	String	This is the applicant site ID.
TELNo	String	This is the applicant telephone number.
CITY	String	This is the applicant city.

Structure element	Type	Description
STATE	String	This is the applicant state. For US addresses, the state code is expected here. For example, CA=California, VA=Virginia, and so on.
DOB	String	This is the applicant date of birth.
SSN	String	This is the applicant social security number.
APPLICANTIDENTIFIER	String	This is the unique applicant identifier code. For example, SSN.
PARTITIONID	String	This is the applicant partition ID.
EXTERNALID	String	This is the SIS system applicant ID if a site ID is being used.
CUSTOM1	String	This is the a custom value that allows the export of additional data with each applicant.
CUSTOM2	String	This is the a custom value that allows the export of additional data with each applicant.
CUSTOM3	String	This is the a custom value that allows the export of additional data with each applicant.
CUSTOM4	String	This is the a custom value that allows the export of additional data with each applicant.
CUSTOM5	String	This is the a custom value that allows the export of additional data with each applicant.

InstitutionAddress structure

The InstitutionAddress structure contains data elements associated with a particular institution, such as the institution ID, the institution name, address details, and additional information. The extent to which the data is populated depends on the extent to which the data is available in the institution extract and mapped within the BRWSRC table. It is used in the interfaces to the UserExitInstitutionAddressArray user exit.

The structure consists of the following elements.

Structure element	Type	Description
NAME	String	This is the name of the institution.

Structure element	Type	Description
ADDRESS	String	This is the institution street address line 1.
ADDRESS2	String	This is the institution street address line 2.
ZIP	String	This is the institution zip/postal code.
ID	String	This is the unique institution ID from the point of view of the data extract where each row must have a unique reference. This is not the unique institution ID from the point of view of the SIS if a site ID is also used.
SITEID	String	This is the institution site ID.
TELNo	String	This is the institution telephone number.
CITY	String	This is the institution city.
STATE	String	This is the institution state. For US addresses, the state code is expected here. For example, CA = California, VA = Virginia.
COUNTRY	String	This is the institution country This is the two-character ISO code for the country. For example, US = United States Of America, DE = Germany.
CEEB	String	This is the institution CEED code.
ACT	String	This is the institution ACT code number.
FICE	String	This is the institution FICE.
OPEID	String	This is the institution OPE ID.
INSTITUTIONIDENTIFIER	String	Unique institution identifier code.
PARTITIONID	String	This is the institution partition ID.
EXTERNALID	String	This is the SIS system institution ID if a site ID is being used.

ClientData structure

The ClientData data structure is used to hold details of the current client. It can be read from any routine where pWorkdoc is available with the use of the fnGetClientDataForWorkdoc global function.

The structure consists of the following elements.

Structure element	Type	Description
CLIENTID	String	This is the client ID.
PROFILEID	String	This is the profile ID assigned to client.
EXPORTPROFILEID	String	This is the export profile ID assigned to client.
FORCEVERIFY	Boolean	This is the flag denoting whether all fields require verification.
CLIENTGROUP	String	This is the verifier access ID assigned to a client.
CLIENTNAME	String	This is the client name.
INSTRUCTIONS PROFILEID	String	This is the instructions profile ID assigned to client.
REQUIRESREVIEW	Boolean	This is the requires review flag.
INSTITUTIONPARTITION	String	This is the institution partition ID assigned to client.
APPLICANTPARTITION	String	This is the applicant partition ID assigned to client.
PRIORITY	String	This is the batch priority level for client.

FieldSettings structure

The FieldSettings structure holds details associated with a given field as read from the BRWFLD table.

The structure consists of the following elements.

Structure element	Type	Description
FIELDNAME	String	This is the field name.
PROFILEID	String	This is the profile ID.
VERIFIERLABEL	String	This is the field verifier label.
ACTIVE	Boolean	This is the field active flag.
REQUIREDINRTS	Boolean	This is the denotes whether the field is required in RTS.

Structure element	Type	Description
REQUIREDINVERIFIER	Boolean	This is the denotes whether field entry is mandatory in Verifier.
COUNTRYFILTER	String	This is the comma-separated list of countries that control whether the field is mandatory or not.
FIELDTYPE	String	This is the field type.
FORCEVERIFY	Boolean	This is the force verify indicator.
DEFAULTVALUE	String	This is the field default value.
DEFAULTIFNOTHINGEXTR	String	This is the field default if no value is extracted automatically.
SUBRULE	String	This is the field substitution rule.
MINLENGTH	Integer	This is the field minimum length.
MAXLENGTH	Integer	This is the field maximum length.
RIGHTJUSTIFY	Boolean	This is the indicator as to whether the field is right justified if a pad character is used.
PADCHAR	String	This is the padding character.
REMOVEALLSPECIALS	Boolean	This indicates whether special characters are removed.
REMOVEBLANKS	Boolean	This indicates whether blank spaces are removed.
KEEPCERTAINSPECIALS	String	This is the list of special characters that are retained.
REMOVESTARTEND	Boolean	This is the indicates whether special characters is removed from the start and end of the string.
SUBSTRINGSTARTPOS	Integer	This is the substring start position.
SUBSTRINGLENGTH	Integer	This is the substring length.
REMOVELEADINGZEROS	Boolean	This is the flag to indicate whether leading zeroes is removed from a string.
DECIMALPLACES	Integer	This is the number of decimal places for an exported

Structure element	Type	Description
		amount.
NEGATIVETYPE	Integer	This is the negative type code.
OUTPUTFORZERO	String	This is the export value if an amount field is zero.
SUBSTITUTEVALUEIF OVER0	String	This is the export value if an amount is greater than zero.
FUTUREDAYS	Long	This is the number of days that an extracted date is permitted to be in the future.
NoDAYSINPAST	Long	This is the number of days that an extracted date is permitted to be in the past.
DATEONLYINCURRENT MONTH	Boolean	This is the indicates whether the date should only be in the current month.
FIELDMASK	String	This is the list of valid field masks for text fields.

About custom error messages

If script code placed within the user exit framework is to include custom error messages, then these may be included as entries in the BRWERR table rather than being hard coded within the script. The error message number range is 900-999, which should not be modified in order to prevent any conflicts in the event of an upgrade. For example, in the BRWERR table, the following row has been added.

ErrorNumber	Message
900	Please check data entry.

This can be retrieved through the script with the following line of code.

```
Dim myError As String myError = DicVal("900", "ERR")
```

The local myError string now contains the following.

```
Please check data entry
```

Add a custom script to the Document_PreExtract and Document_Validate events

To insert a custom script into the Document_PreExtract and Document_Validate events, complete the following steps.

1. Open **Intelligent Capture Designer**.
2. In **Definition mode**, in the **Class view**, highlight **CustomBaseClass**, then right click and select **Show script**.
3. Copy the following script into the script window.

   Example

```
Private Sub Document_PreExtract(pWorkdoc As
SCBCdrPROJLib.SCBCdrWorkdoc) If InStr(UCase(ScriptModule.ModuleName),
cVerifier) Then gblVerifierAsServer = True Else gblVerifierAsServer =
False End If fnGetClassResultsMatrix(pWorkdoc) fnReporting(pWorkdoc,
"DOCUMENTPREEXTRACT") End Sub Private Sub Document_Validate(pWorkdoc
As SCBCdrPROJLib.SCBCdrWorkdoc, pValid As Boolean) gblVerifierAsServer
= False If UCase(ScriptModule.ModuleName) <> cVerifier Then
fnReporting(pWorkdoc, "DOCUMENTVALIDATESERVER") Else fnReporting
(pWorkdoc, "DOCUMENTVALIDATEVERIFIER") End If End Sub
```

Add the report and custom base classes

If the project involves adding a new base class, then the standard reporting audit trail is not complete without the following steps being performed. The steps are as follows.

1. Add script into Document_PreExtract and Document_Validate events on the custom base class.
2. Create the custom tmpCLSRES field on the base class.

About the automatic import job errors

An error is displayed and the import fails if any of the following conditions are met. Error messages are located in the Intelligent Capture log file for the RTS instance performing the user import job.

- You do not supply a connection string for the Intelligent Capture database referenced by the SQL connection group in the GRL section of the <*project*>.ini file.
- The system is unable to connect to the Intelligent Capture database.
- The BRWUser table is empty.
- A user name column is blank.
- The Client Group column is blank and the user is not an administrator.
- The Client Group column does not contain a numeric value.
- The primary Group ID column is not populated.
- You have not allocated clients to the Client group in the BRWClient table.

Brainware for Transcripts database tables

The Brainware for Transcripts database is subdivided into a series of tables, each containing settings that relate to various aspects of the solution.

Some of the tables contains settings that you can configure to meet your institution's transcript extraction requirements.

BRWACTScores table

This table is used to set the range of acceptable values for ACT Scores.

The following settings are available.

Parameter	Type	Description
EnglishMax	Integer	The maximum allowable value for English.
EnglishMin	Integer	The minimum allowable value for English.
MathMax	Integer	The maximum allowable value for Math.
MathMin	Integer	The minimum allowable value for Math.
ReadingMax	Integer	The maximum allowable value for Writing..
ReadingMin	Integer	The minimum allowable value for Writing.
ScienceMax	Integer	The maximum allowable value for Essay.
ScienceMin	Integer	The minimum allowable value for Essay.
CompositeMax	Integer	The maximum allowable value for Composite.
CompositeMin	Integer	The minimum allowable value for Composite.
CombinedEWMax	Integer	The maximum allowable value for Combined English/Writing.
CombinedEWMin	Integer	The minimum allowable value for Combined English/Writing.
WritingMax	Integer	The maximum allowable value for Writing.
WritingMin	Integer	The minimum allowable value for Writing.

BRWAPT table

This table contains settings for validating an extracted applicant ID.

Parameter	Type	Description
ProfileID	Integer	This is the profile ID.
ValidateFromASSA	Boolean	This denotes whether an extracted applicant ID is validated against the Associative Search Engine Pool/Applicant Extract. It is recommended that this setting should always be set to True.
AlphNumSiteSeparator	Freetext	This is the special character used to separate an applicant ID and site ID in the unique ID column in the applicant ASE pool.
DefaultCountry	Freetext	If no country column is available in the applicant extract used by the ApplicantASE field or the value in the country column is blank, a default country for all applicants may be specified here. This is a two-character ISO-code, such as United States = US, United Kingdom = GB, Germany = DE, and so on.
Weight	Integer	If ValidateFromASSA is set to True, this is the minimum weight for an Applicant candidate to be valid.
Distance	Integer	If ValidateFromASSA is set to True, this is the minimum distance for an Applicant candidate to be valid.

BRWAPTPartition table

This table contains a list of the applicant partitions active within the project. An applicant partition must be registered within this table before it can be assigned to a client.

Parameter	Type	Description
ApplicantPartition	Integer	This is the unique ID of the applicant partition.
Description	Freetext	This is the description of the partition.

BRWClient table

This table is where clients are set up and configured.

Parameter	Type	Description
ClientID	Integer	This is the unique ID of the client, which must always be set to an integer value.

Parameter	Type	Description
ProfileID	Integer	This is the ID of the profile assigned to the client. The profile controls what fields are extracted and how they are validated. More than one client may share the same profile ID if the extraction and validation requirements are identical.
ExportProfileID	Integer	This is the ID of the export profile assigned to the client. The export profile ID controls how data is exported for a client. More than one client may share the same export profile ID if the export requirements are identical.
ClientName	Freetext	This is the free text string containing the name of the client. This data is written into the Visibility reporting database for each document assigned to a client.
InstructionsProfileID	Integer	Not used in current release.
ForceVerify	Boolean	This is a flag value that controls whether all documents for this client should stop in Verifier. If set to True, all documents stop. If set to False, only documents requiring user attention stop.
ClientGroup	Integer	This is the ID of the client group to which the client belongs. It is an integer value that can be set freely by the system administrator. The client group is the means by which users are assigned to have access to documents belonging to specific clients.
RequiresReview	Boolean	This is a Boolean flag that indicates whether documents assigned to the client should always be subject to review post verification.
InstitutionPartition	Integer	This is the ID of the institution master data partition to be used by the client. InstitutionASE results are filtered based on this institution partition if ActivateInstitutionFiltering=YES within the INI file.
ApplicantPartition	Integer	This is the ID of the applicant master data partition to be used by the client. ApplicantASE results are filtered based on this applicant partition if ActivateApplicantFiltering=YES within the INI file.
Priority	Integer	When documents are imported into Brainware for Transcripts, they are placed into batches and each batch is assigned a priority. This priority controls the order by which the RTS component of Brainware for Transcripts processes the batches, and also the order in which the documents appear in the Verifier application.

Parameter	Type	Description
		The priority scale runs from 1 to 9, with 1 having the highest level of priority. If this field is populated with 1, it means that all batches containing documents from this client is accorded a priority of 1.

BRWCourseFilter table

This table is where course rows are inspected for some common issues.

Parameter	Type	Description
ProfileID	Integer	This is the ID of the profile assigned to the client. The profile controls what fields are extracted and how they are validated. More than one client may share the same profile ID if the extraction and validation requirements are identical.
FilterCourses	Boolean	This is a flag value that controls whether the filtering runs. If set to True, each individual filter is evaluated on whether or not it runs by its property. If set to False, none of the course filters run.
CreditCalculation	Boolean	This is a flag value that controls whether the Credit Calculation filter runs. If set to True, the Earned column is inspected to ensure it falls within a certain document dictated statistical tolerance; marking the values that fall outside this range as invalid. If there is no Description or Grade in the row, the row is removed. If set to False, the filter does not run. **Note:** Note: This filter only runs if over half the rows have either credits or grades.
CourseNumberPattern	Boolean	This is a flag value that controls whether the Course Number Pattern filter runs. If set to True, the course number pattern is evaluated (if it has not been previously validated by an external course database lookup) against the other course numbers; invalidating the rows where it fails to match. If set to False, the filter does not run.
DescriptionWithHeader	Boolean	This is a flag value that controls whether the Course Number Pattern filter runs. If set to True, the Description

Parameter	Type	Description
		column is inspected for similarities to information found in the document header; filtering out the rows where it matches. It only invalidates the cell if grades or credits exist. If set to False, the filter does not run.
ScaleKeyword	Boolean	This is a flag value that controls whether the Scale Keyword filter runs. If set to True, all rows that occur after the identified grading scale are filtered. If the row is passes, any cell that occur after the identified grading scale are invalidated. If set to False, the filter does not run.
HeaderAndFooterKeyword	Boolean	This is a flag value that controls whether the Header and Footer keyword filter runs. If set to True, the Description column is inspected for keywords and patterns that are typically found in the header and footer of a grade section; filtering out the rows where it matches. It only invalidates the cell if grades or credits exist. If set to False, the filter does not run.
BlankRow	Boolean	This is a flag value that controls whether the Blank Row filter runs. If set to True, any row that is missing the course number, description, grades, and credits is filtered. If set to False, the filter does not run.
UseGradeLevelInference	Boolean	This is a flag to denote whether the Grade Level is inferred from the Course Descriptions if it cannot be obtained any other way.

BRWCRS table

This table contains the validation options available for the course number field for College transcripts.

The following settings are available.

Parameter	Type	Description
ProfileID	Integer	This is the profile ID.
ValidateFromDB	Boolean	This is the flag to denote whether the course number is validated against course numbers from the same institution in a database table.
SQLConnectionGroup	Integer	This is the SQL connection group specifying the

Parameter	Type	Description
		course number validation database connection string as set in the SQL section. If no connection group is specified, the system uses group 01.
CourseTable	Freetext	This is the name of the course number validation database table.
InstIDColumn	Freetext	This is a column in the database table that holds the institution ID. This setting is mandatory.
SiteID	Freetext	This is a column in the database table that holds the institution's site ID if applicable.
CourseIDColumn	Freetext	This is a column in the database table that holds the course ID. This column must be a combination of the course subject and course number, for example MTH101.
DescColumn	Freetext	This column in the database table that holds the course description.
UseInternalIstID	Boolean	This is a flag to denote whether the internal SIS institution ID is used when validating the course number.
IncludeSite	Boolean	This is a flag to denote whether the institution's Site ID is used when validating the course number.
RemoveInstLeadZeros	Boolean	This is a flag to denote whether leading zeroes is removed from the institution ID when validating the course number.
UpdateDBAtExport	Boolean	If set to True, the system updates the course number validation table with new course numbers from the current document at the point of document export.
SubjectColumn	Freetext	This is a column in the database table that holds the course subject.
CourseNumberColumn	Freetext	This is a column in the database table that holds the course number.

Parameter	Type	Description
MaxCourseNumberCompareDistance	Float	This is the maximum valid compare distance for the course number
MaxDescriptionCompareDistance	Float	This is the maximum valid compare distance for the course description

BRWDAT table

The settings in this table control the formatting and validation of the transcript dates.

The following settings are available.

Parameter	Type	Description
ProfileID	Integer	This is the profile ID.
VerifierOutputFormat	DDMMYYYY or MMDDYYYY	If set to DDMMYYYY, Brainware for Transcripts displays the date in Verifier as DD/MM/YYYY. If set to MMDDYYYY, Brainware for Remittance displays the date in Verifier as MM/DD/YYYY. If set to YYYYMMDD, Brainware for Remittance displays the date as YYYY-MM-DD.
ExportFormat	MMDDYYYY DDMMYYYY YYYYMMDD	This is the output date format for export. This setting applies to database output and all flat file exports.
ExportSeparator	Freetext	This is the separator that is used when exporting a date value. For example, a slash (/), dot (.), or hyphen (-).
MMDDCountries	Freetext	This is the comma-separated list of countries that use MM/DD/YYYY as the date format preference.
YYMMDDCountries	Freetext	This is the comma-separated list of countries in which YY-MM-DD is a standard date format, for example Sweden. If the country of origin is included in this list and the date is read as 12-01-11, this is formatted as 11/01/2012 (DDMM) or 01/11/2012 (MMDD) if the date year is either the current year, the previous year, or the following year. If the date year is something else, the format is assumed to be DD-MM-YY. Use caution when adding countries to this list.

Parameter	Type	Description
JSTDateGapAllowed	Integer	This is the maximum difference in number of days between Start Date and Date Completed allowed for Joint Service Transcripts. It is set to 365 by default.

BRWERR table

This table contains the list of error message that may be displayed to a user in Verifier, or written into the Intelligent Capture log file. This is a global table that is independent of the client or profile. You can add new error messages using error number 900 onwards.

The following settings are available.

Parameter	Type	Description
ErrorNumber	Integer	This is an error message number.
Message	Freetext	This is the error message text.

BRWEXP table

This table holds configuration settings relating to the BFT data export options. It is keyed upon the export profile ID, which can be assigned to individual clients.

The following settings are available.

Parameter	Type	Description
EXPProfileID	Integer	This is the export profile ID.
Description	Freetext	This is the description of export profile
RedoAllExports	Boolean	If set to True, the system carries out all export options that have been activated even if that export has been carried out before. For example, if three export options are activated, two are completed and the last one fails, then the document goes to status 750 denoting an export failure. If the flag is set to False, upon retrying, only the failed export is carried out. If the flag is set to True, then all three exports is performed again.
DefaultExportPath	Freetext	This is the UNC path to the export directory which is

Parameter	Type	Description
		used as the default should no export directory be set in RTS.
OutputTiffFile	Boolean	If set to True, the system outputs a TIFF file of the document image in the export directory.
Tiffname	Freetext	This setting controls the name of the output TIFF file. If set to URN, it names the file according to the component of the image filename mapped in the IMP section. If left blank, or set to anything else, the filename is set to the same name as the document filename.
TiffDPI	Number	This specifies the DPI of the outputted TIFF image, such as 300. The default TIFF resolution is 300 dpi.
TiffFormat	Freetext	This is the compression format of the outputted TIFF file. The following options are available. **G4FAX** Grade 4 compression **G3FAX** Grade 3 compression **LZWFAX** LZW Compression **HUFFAX** HUF Compression The default compression is G4FAX.
OutputPDF	Boolean	If set to True, the system outputs a searchable PDF file for each document.
PDFName	Freetext	This setting controls the name of the output PDF file. This can be set to URN, which names the file according to the component of the image filename mapped in the IMP section. If left blank or set to anything else, the filename is set to same as the document filename.
CustomExport	Boolean	This is a flag to indicate whether a custom export is carried out, as specified in the UserExitCustomExport script user exit.
OutputXMLFile	Boolean	If set to True, the system outputs an XML file to the export directory configured on the RTS export instance. If no directory is configured, then the default export path parameter is used. If this is not configured either,

Parameter	Type	Description
		then the XML export fails and the batch is sent to status 750.
XMLFilename	URN [blank]	This setting controls the name of the XML output file. This can be set to URN, which names the file according to the component of the image filename mapped in the IMP section. If left blank or set to anything else, the filename is set to same as the document filename.
XMLFileType	Freetext	This is the file extension applied to the XML file, for example XML = .XML, TXT = .txt. If left blank, the file extension defaults to XML.
XMLEncodingHeader	Freetext	This is the XML file coding header that forms the first line in the XML file. For example, setting the value as <xml version="1.0" encoding="UTF-16"?> produces an XML file that supports non-Western characters such as letters from the Russian, Greek and Chinese alphabets.
XMLFileHeader	Freetext	This denotes the value of the file header tag in the XML file, for example <MyFileHeader>. This value defaults to Brainware for Transcripts Document if nothing else is set.
XMLFileHeaderAttributes	Freetext	This contains any attributes that need to be assigned to the XML file header tag.
XMLDocName	Freetext	This denotes the value of the tag marking the document name section in the XML file, for example <FileInfo>.
XMLType	Freetext	This denotes the value of the tag marking the transcript type (College, High School, or Military) item in the XML file, for example <type>.
XMLStudentHeader	Freetext	This denotes the value of the tag marking the student information section in the XML file, for example <StudentRecord>. This value defaults to StudentData if nothing else is set.
XMLUniversityHeader	Freetext	This denotes the value of the tag marking the university

Parameter	Type	Description
		degree summary section in the XML file, for example <universitySummary>. This value defaults to UniversitySummary if nothing else is set.
XMLUniversityDegreeHeader	Freetext	This denotes the value of the tag marking the university degree section in the XML file, for example <universityDegree>. This value defaults to Degree if nothing else is set.
XMLUnivRecordHeader	Freetext	This denotes the value of the tag marking the university record section in the XML file, for example <universityInstitutionalRecord>. This value defaults to UniversityRecord if nothing else is set.
XMLHighSchoolRecordHeader	Freetext	This denotes the value of the tag marking the high school record section in the XML file, for example <highschoolInstitutionalRecord>. This value defaults to HighSchoolRecord if nothing else is set.
XMLHighSchoolHeader	Boolean	This denotes the value of the tag marking the high school summary in the XML file, for example <HSSummary>. This value defaults to HighSchoolSummary if nothing else is set.
XMLIssueDate	Freetext	This denotes the value of the tag marking the transcript issue date in the XML file, for example <DateIssued>.
XMLUnivCourseHeader	Freetext	This denotes the value of the tag marking the university coursework section in the XML file, for example <universityCourseRecords>. This value defaults to UniversityCourses if nothing else is set.
XMLUnivCourseTag	Freetext	This denotes the value of the tag marking each individual university course in the XML file, for example <Course>.
XMLMilCourseHeader	Freetext	This denotes the value of the tag marking the military coursework section in the XML file, for example

Parameter	Type	Description
		<militaryCourseRecords>. This value defaults to MilitaryCourses if nothing else is set.
EXPFiltering	Boolean	This is a flag to indicate that whether the exported courses is filtered. If set to True, the exported courses is filtered based on the value of EXPExcludedGradeLetters column. Otherwise, the exported courses is not filtered.
EXPExcludedGradeLetters	Freetext	Comma separated list of grade letters that is filtered out from export files. This setting only applies if the EXPFiltering field is set to True. If the value of the field is set to empty string, no course is filtered out.
EXPExcludedTerms	Freetext	Comma separated list of terms that are filtered out from export files. This setting only applies if the EXPFiltering field is set to True. The courses with blank term are filtered out by default if the EXPFiltering field is set to True.
XMLHSCourseHeader	Freetext	This denotes the value of the tag marking the high school coursework section in the XML file, for example <highSchoolCourseRecords>. This value defaults to HighSchoolCourses if nothing else is set.
XMLHSCourseTag	Freetext	This denotes the value of the tag marking each high school coursework record in the XML file, for example <course>. This value defaults to Course if nothing else is set.
XMLHSSATScoresHeader	Freetext	This denotes the value of the tag marking the high school SAT scores section in the XML file, for example <SATScores>. This value defaults to SATScores if nothing else is set.
XMLHSACTScoresHeader	Freetext	This denotes the value of the tag marking the high school ACT scores section in the XML file, for example <ACTScores>. This value defaults to ACTScores if nothing else is set.
XMLHSOtherScoresHeader	Freetext	This denotes the value of the tag marking the high

Parameter	Type	Description
		school other scores section in the XML file, for example <otherScores>. This value defaults to OtherScores if nothing else is set.
XMLHSGrade	Freetext	This denotes the value of the tag marking the high school grade section in the XML file, for example <grade>. This value defaults to grade if nothing else is set.
XMLHSGradeSemester	Freetext	This denotes the value of the tag marking the high school grade semester section in the XML file, for example <semester>. This value defaults to semester if nothing else is set.
XMLMilRecordHeader	Freetext	This denotes the value of the tag marking the military record section in the XML file, for example <militaryInstitutionalRecord>. This value defaults to MilitaryRecord if nothing else is set.
XMLMilHeader	Freetext	This denotes the value of the tag marking the military section in the XML file, for example <militarySummary>. This value defaults to militarySummary if nothing else is set.
XMLMilCreditDetailsHeader	Freetext	This denotes the value of the tag marking the military credit details section in the XML file. This value defaults to CreditDetails if nothing else is set.
XMLHSHeaderSATRecords	Freetext	This denotes the value of the tag marking the SAT section in the XML file. This value defaults to "hssatscorerecords" if nothing else is set.
XMLHSHeaderACTRecords	Freetext	This denotes the value of the tag marking the ACT section in the XML file. This value defaults to "highschoolACTRecords" if nothing else is set.

Parameter	Type	Description
XMLHSHeaderOtherRecords	Freetext	This denotes the value of the tag marking the Other section in the XML file. This value defaults to "hsotherscorerecords" if nothing else is set.
XMLCustomFieldsHeader	Freetext	This denotes the value of the tag marking the Custom 10 fields section in the XML file. This value defaults to "customfields" if nothing else is set.
ProfileName	Freetext	This is the shortname of the Export Profile.
EnableCourseIDSubjectSplit	Boolean	If set to True, the system splits the Subject and Course ID and exports the separated values based on the following parameters. • If the value of the extracted subject and course ID is alphanumeric, the system performs the split from the first numeric value and ignores any special characters or spaces. The alphabetical value is stored in the "Subject" XML key and the numeric value is stored in the "Number" XML key. • If the value of the extracted subject and course ID is numeric, the system stores the entire value in the "Subject" XML key and the "Number" XML key remains blank.
EnableTermYearSplit	Boolean	If set to True, the system splits the Term and Year and exports the separated values based on the following parameters. • The value of the extracted term and year is split and the value of the term is stored in the "Term" XML key and the value of the year is stored in the "Year" XML key. • The term year split takes place only when the *ActivateTermNormalization* parameter in the **BRWTermNormalization** table is set to True. • If the term cannot be split, for example when the "Invalid Reason for Term" is selected, the system stores the entire value of the term in the "Term" XML key and the "Year" XML key remains blank. • If term normalization is disabled, the system

Parameter	Type	Description
		stores the entire value of the term in the "Term" XML key and the "Year" XML key remains blank.

BRWEXPHeader table

This table is used to map the header fields to the XML file or columns in a database.

The following settings are available.

Parameter	Type	Description
EXPProfileID	Integer	This is the export profile ID.
FieldName	Freetext	This is the name of the field.
XMLTag	Freetext	This column represents the tag that is used for the field in an exported XML file. If left blank, the field is not exported.
DBColumnName	Freetext	This is the technical name of the target field in the export database.

BRWEXPHSHeader table

This table is used to map the high school header fields to the XML file or columns in a database.

The following settings are available.

Parameter	Type	Description
EXPProfileID	Integer	This is the export profile ID.
FieldName	Freetext	This is the name of the field.
XMLTag	Freetext	This column represents the tag that is used for the field in an exported XML file. If left blank, the field is not exported.
DBColumnName	Freetext	This is the technical name of the target field in the export database.

BRWEXPHSACTScores table

This table is used to map the ACT fields to the XML file or columns in a database.

The following settings are available.

Parameter	Type	Description
EXPProfileID	Integer	This is the export profile ID.
FieldName	Freetext	This is the column name of the ACTScores table.
XMLTag	Freetext	This column represents the tag that is used for the field in an exported XML file. If left blank, the field is not exported.
DBColumnName	Freetext	This is the technical name of the target field in the export database.

BRWEXPHSCourses table

This table is used to map the high school courserwork fields to the XML file or columns in a database.

The following settings are available.

Parameter	Type	Description
EXPProfileID	Integer	This is the export profile ID.
FieldName	Freetext	This is the name of the field.
XMLTag	Freetext	This column represents the tag that is used for the field in an exported XML file. If left blank, the field is not exported.
DBColumnName	Freetext	This is the technical name of the target field in the export database.

BRWEXPHSCoursesFilter table

This table is used to filter courses during export based on the course description.

The following settings are available.

Parameter	Type	Description
EXPProfileID	Integer	This is the export profile ID. The profile enables configuration of unique export filters for different clients. The EXPProfileID+Filter column is the composite primary key for this table.

Parameter	Type	Description
Filter	Freetext	This is the text that is searched for inside the course description.
IsCaseSensitive	Boolean	This is the flag to indicate whether this filter is case sensitive or not.
IsExclusion	Boolean	This is the flag to indicate that, when true, excludes a row from being exported (black list) or, when false, only includes rows that match (white list).

BRWEXPHSOtherScores table

This table is used to map the Other Scores to the XML file or columns in a database.

The following settings are available.

Parameter	Type	Description
EXPProfileID	Integer	This is the export profile ID.
FieldName	Freetext	This is the column name of the OtherScores table.
XMLTag	Freetext	This column represents the tag that is used for the field in an exported XML file. If left blank, the field is not exported.
DBColumnName	Freetext	This is the technical name of the target field in the export database.

BRWEXPHSSATScores table

This table is used to map the SAT fields to the XML file or columns in a database.

The following settings are available.

Parameter	Type	Description
EXPProfileID	Integer	This is the export profile ID.
FieldName	Freetext	This is the column name of the SATScores table.
XMLTag	Freetext	This column represents the tag that is used for the field in an exported XML file. If left blank, the field is not exported.
DBColumnName	Freetext	This is the technical name of the target field in the export database.

BRWEXPMilHeader table

This table is used to map the military header fields to the XML file or columns in a database.

The following settings are available.

Parameter	Type	Description
EXPProfileID	Integer	This is the export profile ID.
FieldName	Freetext	This is the name of the field.
XMLTag	Freetext	This column represents the tag that is used for the field in an exported XML file. If left blank, the field is not exported.
DBColumnName	Freetext	This is the technical name of the target field in the export database.

BRWEXPMilCourses table

This table is used to map the military coursework fields to the XML file or columns in a database.

The following settings are available.

Parameter	Type	Description
EXPProfileID	Integer	This is the export profile ID.
FieldName	Freetext	This is the name of the field.
XMLTag	Freetext	This column represents the tag that is used for the field in an exported XML file. If left blank, the field is not exported.
DBColumnName	Freetext	This is the technical name of the target field in the export database.

BRWEXPMilRecord table

This table is used to map the military institution export fields to the XML file or columns in a database.

The following settings are available.

Parameter	Type	Description
EXPProfileID	Integer	This is the export profile ID.
FieldName	Freetext	This is the name of the field.
XMLTag	Freetext	This column represents the tag that is used for the field in an exported XML file. If left blank, the field is not exported.
DBColumnName	Freetext	This is the technical name of the target field in the export database.

BRWEXPStudentHeader table

This table is used to map the student header export fields to the XML file or columns in a database.

The following settings are available.

Parameter	Type	Description
EXPProfileID	Integer	This is the export profile ID.
FieldName	Freetext	This is the name of the field.
XMLTag	Freetext	This column represents the tag that is used for the field in an exported XML file. If left blank, the field is not exported.
DBColumnName	Freetext	This is the technical name of the target field in the export database.

BRWEXPUnivHeader table

This table is used to map the university header fields to the XML file or columns in a database.

The following settings are available.

Parameter	Type	Description
EXPProfileID	Integer	This is the export profile ID.
FieldName	Freetext	This is the name of the field.
XMLTag	Freetext	This column represents the tag that is used for the field in an

Parameter	Type	Description
		exported XML file. If left blank, the field is not exported.
DBColumnName	Freetext	This is the technical name of the target field in the export database.

BRWEXPUnivCourses table

This table is used to map the university coursework fields tp the XML file or columns in a database.

The following settings are available.

Parameter	Type	Description
EXPProfileID	Integer	This is the export profile ID.
FieldName	Freetext	This is the name of the field.
XMLTag	Freetext	This column represents the tag that is used for the field in an exported XML file. If left blank, the field is not exported.
DBColumnName	Freetext	This is the technical name of the target field in the export database.

BRWEXPUnivDegree table

This table is used to map the university degree fields to the XML file or columns in a database.

The following settings are available.

Parameter	Type	Description
EXPProfileID	Integer	This is the export profile ID.
FieldName	Freetext	This is the name of the field.
XMLTag	Freetext	This column represents the tag that is used for the field in an exported XML file. If left blank, the field is not exported.
DBColumnName	Freetext	This is the technical name of the target field in the export database.

BRWEXPUnivRecord table

This table is used to map the institution export fields to the XML file or columns in a database.

The following settings are available.

Parameter	Type	Description
EXPProfileID	Integer	This is the export profile ID.
FieldName	Freetext	This is the name of the field.
XMLTag	Freetext	This column represents the tag that is used for the field in an exported XML file. If left blank, the field is not exported.
DBColumnName	Freetext	This is the technical name of the target field in the export database.

BRWFLD table

This table controls which fields are activated for a given profile, along with their corresponding types and validation settings.

The following settings are available.

Parameter	Type	Description
ProfileID	Integer	This is the profile ID.
DocumentType	All College HighSchool Military	This is the name of the transcript type associated with the field. Current support transcript types are: College, HighSchool, Military and All. All is the default type for a field setting that is applied to all the transcript type.
FieldName	Freetext	This is the name of the Brainware for Transcripts field. Standard field names should not be altered.
VerifierLabel	Freetext	This is the text indicating how the field is labeled on the dynamic Verifier form.
Active	Boolean	This is the flag to indicate whether the field is activated for the profile. If the field is a table column, it is also a flag to indicate whether the column is visible for the verifier table.

Parameter	Type	Description
		When using the dynamic verifier form, this also hides fields and columns when they are set as inactive.
RequiredInRTS	Boolean	This is the flag to indicate whether the field is mandatory in RTS.
RequiredInVerifier	Boolean	This is the flag to indicate whether the field is mandatory in Verifier.
CountryFilter	Freetext	This is the comma-separated list of country ISO codes that allows fields to be mandatory only for specific countries. This setting is used in conjunction with RequiredInRTS and RequiredInVerifier. If a field is set for mandatory for either of them and the vendor country of origin is not specified in the list, then the field reverts to being optional.
FieldType	AMOUNT DATE TEXT TABLE	This is the type of the field.
ForceVerify	Boolean	This is the flag to indicate whether the field should always be marked as invalid and sent to a Verifier for review.
DefaultValue	Freetext	This is the field default value.
DefaultIfNothingExtr	Freetext	This is the default value if the system does not automatically capture a value from the document.
SubRule	Integer	This is the field substitution rule for text fields as registered in the BRWSUBSTITUTION table.
MinLength	Integer	This is the field minimum permitted length for text fields.
MaxLength	Integer	This is the field maximum permitted length for text fields.
RightJustify	Boolean	If a value has been entered in PadChar, and this

Parameter	Type	Description
		parameter is set to True, the system pads the field value with that character from the left until the length specified in MaxLength is reached. If a value has been entered in PadChar, and this parameter is set to False, the system pads the field value with that character to the right until the length specified in MaxLength is reached.
PadChar	Single character	This is the padding character for a text field.
RemoveAllSpecials	Boolean	This is the flag to indicate whether all special characters is removed from a text field.
RemoveBlanks	Boolean	This is the flag to indicate whether spaces is removed from a text field.
KeepCertainSpecials	Freetext	This is the non-comma-separated list of special characters that is retained if RemoveAllSpecials is set to True.
RemoveStartEnd	Boolean	If set to True, Brainware for Transcripts removes any special characters at the beginning and at the end of an extracted text value.
SubstringStartPos	Integer	The starting character used in conjunction with SubstringLength when trimming an extracted value. Positive numbers start from the left while negative numbers start from the right.
SubstringLength	Integer	This is the substring length.
RemoveLeadingZeros	Boolean	If set to True, Brainware for Transcripts removes any leading zeros from an extracted text value.
DecimalPlaces	Integer	This is the number of decimal places for an amount field that is outputted at time of export.
NegativeType	Integer	This integer setting controls the output during export if the extracted value for an amount field is less than zero. Possible settings and their effects are as follows. **1** The minus sign to appear after the amount, such as 100.00-

Parameter	Type	Description
		2 The minus sign to appear before the amount, such as 1 -100.00 **3** Is the value to appear in parentheses, such as 1 (100.00)
OutputForZero	Freetext	This is the output value during export for an amount value if it is zero.
SubstituteValueIfOverZero	Freetext	This is the output value during export for an amount value if it is greater than zero.
FutureDays	Integer	This numerical value indicates the number of days in the future from the present date that an extracted date may be considered to be valid. For example, if today's date is March 20 th and a date is extracted as March 31 st , and the value is set to 10, then the system marks the field invalid as the extracted date is 11 days in the future. If future dates are not permitted, then the column value is set to 0. To disable the check entirely, set the column value to -1. In Verifier, the user may pass any value as long as it is a valid date.
NoDaysInPast	Integer	This numerical value indicates the number of days in the past back from the present date that an extracted date may be considered to be valid. For example, if today's date is March 20 th and a date is extracted as March 9 st , and the value is set to 10, then the system marks the field invalid as the extracted date is 11 days in the past. If past dates are not permitted, then the column value is set to 0. To disable the check entirely, set the column to -1. In Verifier, the user may pass any value as long as it is a valid date.
DateOnlyInCurrentMonth	Boolean	If this column is set to True, then an extracted date stops in Verifier if the date is not in the current month. In Verifier, the user may pass any value as long as it is a valid date.
FieldMask	Freetext	This is the comma-separated list of valid entries for the extracted or user-entered value.

Parameter	Type	Description
		For example, if the content of this column is set to ABCD, WXYZ then no value is permitted unless it is equal to either ABCD or WXYZ. Wildcard characters are also permitted, where a hash symbol (#) is used to represent any number, an at symbol (@) is used to represent any letter, and a question mark (?) is used to represent either a number of a latter. For example, if entry is restricted to being 10 followed by a letter then a hyphen and then five digits, the value 10?-##### is entered into the field.

BRWGRD table

This table contains settings for grade validation for college transcripts.

The following settings are available.

Parameter	Type	Description
ProfileID	Integer	This is the instructions profile ID.
AcceptedGradeLetters	Freetext	This is a comma-separated list of valid entries for the extracted grade.
GPAValidationTolerance	Decimal	This is the tolerance that is acceptable between the Calculated GPA derived from the extracted coursework and the Cumulative GPA. This setting only applies to College transcripts.
ExcludedGradeLetters	Freetext	This is a comma-separated list of grades to exclude when calculating the GPA. This setting only applies to College transcripts.
EnableGPACalcValidation	Boolean	When set to True, the extracted GPA is compared against the GPA calculated from each course on the transcript.
AllowInvalidGPAInVerifier	Boolean	When set to True, this allows a verifier to manually validate the Cumulative GPA field.
SetInvalidReasonInVerifier	Boolean	When set to True, this translates the following

Parameter	Type	Description
		invalid reasons. NoNE --> CUMULATIVE GPA <> CALCULATED GPA APPLICANT NOT FOUND --> GPA AND APPLICANT INVALID INSTITUTION NOT FOUND --> GPA AND INSTITUTION INVALID INSTITUTION AND APPLICANT NOT FOUND --> GPA, INSTITUTION, APPLICANT INVALID.
AcceptedHSGradeLetters	Freetext	This is a comma-separated list of valid entries for the extracted grade of a high school document.
AcceptedHSNumericGradeRange	Freetext	This is a range of valid numbers for the extracted grades of a high school document.
AllowGrdTranslation	Boolean	When set to True, numeric grades are allowed to be translated to alpha numeric grades.

BRWINF table

This table controls setting associated with the Verifier information dialog boxes. It is a global table independent of the client or profile. This table is not used in the current release.

Parameter	Type	Description
DialogHeader	Freetext	Information box title bar text

BRWINFType table

This table stores the information messages that appear in Verifier. It is a global table independent of the client or profile. This table is not used in the current release.

Parameter	Type	Description
InfNumber	Integer	Information message ID
Message	Freetext	Information message for the message ID.

In common with table BRWERR, only the text associated with each message is changed.

BRWINS table

This table contains settings for validating an extracted institution ID.

The following settings are available.

Parameter	Type	Description
ProfileID	Integer	This is the profile ID.
ValidateFromASSA	Boolean	This denotes whether an extracted institution ID is validated against the Associative Search Engine Pool / Institution Extract. Set this to True.
AlphNumSiteSeparator	Freetext	This is the special character used to separate an institution ID and site ID in the unique ID column in the institution ASSA pool.
DefaultCountry	Freetext	If no country column is available in the applicant extract used by the ApplicantASE field or the value in the country column is blank, a default country for all applicants may be specified here. This is a two-character ISO-code, for example United States = US, United Kingdom = GB, Germany = DE.
DefaultMilitaryInsID	Freetext	This is the default institution ID to be used on all military transcripts. If this column is populated, the institution information for all branches of military transcripts uses the populated value. Installations that utilize a site ID for the institutions should include the site ID and site ID separator in the value, such as 12345-1. The ID entered must exist in the Institution ASE pool. If this column is blank/NULL, Brainware for Transcripts utilizes the standard associative search to match the institution ID within the Institution ASE pool.
Weight	Integer	If ValidateFromASSA is set to true, this is the minimum weight for an Institution candidate to be valid.
Distance	Integer	If ValidateFromASSA is set to true, this is the minimum distance for an Institution candidate to be valid.
UpdateNumGrdTable	Boolean	This denotes whether institutions with numeric grades within the College Coursework are automatically added to the

Parameter	Type	Description
		BRWNUMGRD table during Export. If the "UpdateNumGrdTable" column is set to Yes, then the Institution/Site combo is added to BRWNUMGRD if it does not already exist in the table.

BRWINSPartition table

This table contains a list of the institution partitions active within the project. An institution partition must be registered within this table before it can be assigned to a client.

The following settings are available.

Parameter	Type	Description
InstitutionPartition	Integer	This is the unique ID of the institution partition.
Description	Freetext	This is the description of the partition.

BRWINSTR table

This table contains a list of instructions and their corresponding texts that are available to be assigned to clients. When using the dynamic verifier form, a button is available to deliver an instructional text to the user to help them with processing documents for a specific client. This table is not used in the current release.

The following settings are available.

Parameter	Type	Description
ProfileID	Integer	These are the instructions Profile ID.
ProfileName	Freetext	This is the short name for the instructions profile.
Instructions	Freetext	This is the instructions text.

BRWIVR table

This table contains the default setting associated with the invalid reason field. This is a global table that works independently of the client or profile.

The following settings are available.

Parameter	Type	Description
DefaultText	Freetext	This is the default invalid reason, such as None.
DefaultExportCode	Freetext	This is the export code associated with the default invalid reason, such as 0.

BRWIVRType table

This table holds the invalid reasons that may be selected in Verifier. It is a global table that is independent of the client or profile.

The following settings are available.

Parameter	Type	Description
Index	Integer	This is the invalid reason index.
RuleName	Freetext	This is the rule ID for the invalid reason. The rule governs how Verifier behaves as a result of a particular invalid reason being selected. The following rules are available. **SETAPPTOVALID** This is the Applicant ID field and Applicant Info fields are set to blank and valid. Verifiers have the ability to manually enter applicant fields (First Name, Middle Name, Last Name, SSN, and DOB). No applicant ID is exported. **SETINSTTOVALID** This is the Institution ID field and Institution Info fields are set to blank and valid. No Institution ID is exported. **SETINSTANDAPPTOVALID** This is the Institution ID field, Institution Info, Applicant ID, and Applicant Info fields are set to blank and valid. Verifiers have the ability to manually enter applicant fields (First Name, Middle Name, Last Name, SSN, and DOB). No Institution ID or Applicant ID is exported. New rules can be submitted to Hyland as a product enhancement request.
VerifierDisplay	Freetext	This is the invalid reason message displayed in Verifier.
ExportCode	Freetext	This is the invalid reason code exported by Brainware for Transcripts if the Invalid Reason field is set.

BRWNUMGRD table

This table contains a list of Institution IDs which must always trigger numeric grade extraction from College transcripts. If Institution Settings à Update Numeric Grade Table is enabled, an institution is added to this table automatically if it reports numeric grades during export, but does not already exist in the table.

The following settings are available.

Parameter	Type	Description
ProfileID	Integer	These are the Profile ID for the instructions.
InstitutionID	Freetext	This is the institution ID from the SIS which requires numeric grade extraction from College transcripts.

BRWPCO table

This section contains the connection settings to Perceptive Content through Perceptive Connect Runtime or by writing external messages. This is a global table that works independently of the client or profile.

The following settings are available.

Parameter	Type	Description
WriteExternalMessages	Boolean	This is the flag to indicate whether the document's status is updated in Perceptive Content's external message table.
SQLConnectionGroup	Integer	This is the SQL connection group specifying the external message database connection string as set in the SQL section. If no connection group is specified, the system uses group 01.
UsePCRIntegration	Boolean	This is the flag to indicate whether the solution connects to Perceptive Connect Runtime (PCR). The integration to PCR takes two forms. • The system updates PCR with the document status as it is routed through the BFT process. • The system sends an XML result file to PCR through a web service call during document export. The XML web service export for a transcript is carried out using the structure defined in the BRWEXP tables. The standard XML output activation file is not needed for this to occur. For non-transcript documents, the system uses the

Parameter	Type	Description
		XML file header configured in the BRWEXP table, but the default XML body is. `<%Classname>%Classname<%Classname>` where `%Classname` is the document classname, which can be configured to be the base class name or the child class name.The structure of the XML document for any document class can be changed using a script placed in UserExitPCRExport. If a status update to PCR fails, an error is written into the Runtime Server instance log file, but the processing continues. If the XML export fails, the export fails and the document is sent to the Verifier with a state of 750. In the event of a failed web service call, the system tries two more times automatically.
PCRUpdateProcedure	Freetext	Populated with the name of the PCR update procedure. The default value is `rs/capture/update/`.
PCRExportProcedure	Freetext	Populated with the name of the PCR export procedure. The default value is `rs/capture/export/`.
PCROutputKey	Freetext	This is where the document URN component of the PCR XML URL is configured. If left blank, the key is set to the image filename (minus the file extension). If just a component of the filename is required, then this value is populated with URN. If using URN, then the URN component of the filename must be mapped correctly in the IMP section.
PCRServer	Freetext	Populated with the name of the PCR server.
UseBaseClassName	Boolean	Set the value to `YES` if the document's parent classname is passed in the PCR export XML. Use this setting when the URL must be set to the base class name (Transcripts), rather than a specific child class name, for example, University X. If set to NO, the specific child class name is used. The flag controls the default body of the PCR XML text for documents belonging to a base class except Transcripts.The body of the XML for such documents defaults to: `<%Classname>%Classname<%Classname>` where `%Classname` is the document class. If the parameter is set to `YES`, then the document class is set to the base class. If set to `NO`, the document class is set to the specific child class. The XML document can be changed using a script placed in `UserExitPCRExport`.

Parameter	Type	Description
ExternalMessageSchema	Freetext	Populated with the name of the schema of tables for external messages. This schema name is needed when WriteExternalMessages is set to True and BFT attempts to connect to the database for external messages. A default value "dbo" for SQL and INOW for Oracle is added for this column.

BRWProfile table

This table contains a list of profiles within the project, along with a description. A profile must be registered within this table before it can be assigned to a client.

The following settings are available.

Parameter	Type	Description
ProfileID	Integer	This is the unique ID of the client that must always be set to an integer value.
ProfileName	Freetext	This is the short name of the profile.
ProfileDescription	Freetext	This is the description of the profile.

BRWSATScores table

This table is used to set the range of acceptable values for SAT Scores. BFT currently supports validation of tests held after March 2016 with the new scoring methodology, as well as the ones held before March 2016 with the old scoring format.

The following settings are available.

Parameter	Type	Description
CriticalReadingMax	Integer	The maximum allowable value for Critical Reading.
CriticalReadingMin	Integer	The minimum allowable value for Critical Reading.
MathMax	Integer	The maximum allowable value for Math.
MathMin	Integer	The minimum allowable value for Math.

Parameter	Type	Description
WritingMax	Integer	The maximum allowable value for Writing.
WritingMin	Integer	The minimum allowable value for Writing.
EssayMax	Integer	The maximum allowable value for Essay.
EssayMin	Integer	The minimum allowable value for Essay.
MultipleChoiceMax	Integer	The maximum allowable value for Multiple Choice.
MultipleChoiceMin	Integer	The minimum allowable value for Multiple Choice.
EffectiveDate	Date	This is the date from which the validation rule is effective.
EBRWMax	Integer	This is the maximum allowable value for Evidence-Based Reading and Writing.
EBRWMin	Integer	This is the minimum allowable value for Evidence-Based Reading and Writing.
RuleId	Integer	This is the ID for the validation rule.

BRWSRA table

This table holds the mapping between columns in the applicant master data table and the values used internally within the project. The table is global for the project and works independently of the client and profile. The table should only ever consist of a single row.

The following settings are available.

Parameter	Type	Description
ID	Freetext	This is the capture ASE column name denoting the applicant ID. For SIS systems where an applicant at a unique address is represented by a combination of the applicant ID and the site ID, the formula for the ID column must be set to the following. Applicant ID * 1000000 + Site ID If the applicant ID or site ID is alphanumeric, the set the formula to the following. ApplicantID~SiteID

Parameter	Type	Description
		The delimiter (~ in the above example) is configurable using the AlphNumSiteSeparator parameter in the BRWAPT table. The system raises a configuration error if no delimiter is specified, if it is more than one character, or it does not occur, occurs more than once, or occurs as the first character in the unique ASE ID column. The site ID must be mapped to SITEID in the BRWSRA table, and the applicant ID stem must be mapped to EXTERNALID. If the SIS uses an external applicant ID, map this value to EXTERNALID and the internal applicant ID stem can remain unmapped. However, the applicant ID stem component of the ID field is the internal SIS applicant ID.
SiteID	Freetext	This is the Capture ASE column name denoting the applicant site ID. This should only be mapped if the site ID forms part of the ID column above.
FName	Freetext	This is the Capture column name denoting the applicant's first name.
MName	Freetext	This is the Capture ASE column name denoting the applicant's middle name.
LName	Freetext	This is the Capture ASE column name denoting the applicant's last name.
Address1	Freetext	This is the Capture ASE column name denoting the first line of the applicant's address.
Address2	Freetext	This is the Capture ASE column name denoting the second line of the applicant's address.
City	Freetext	This is the Capture ASE column name denoting the applicant's city of origin.
State	Freetext	This is the Capture ASE column name denoting the applicant's state.
Zip	Freetext	This is the Capture ASE column name denoting the applicant's zip/postal code.
Country	Freetext	This is the Capture ASE column name denoting the applicant's country of origin.
TelNo	Freetext	This is the Capture ASE column name denoting the applicant's telephone number.

Parameter	Type	Description
DOB	Freetext	This is the Capture ASE column name denoting the applicant's date of birth.
SSN	Freetext	This is the Capture ASE column name denoting the applicant's social security number.
AppIdentifier	Freetext	This is the Capture ASE column name that represents a unique applicant identifier. For example, SSN.
PartitionID	Freetext	This is the Capture ASE column name that represents the applicant's partition ID.
ExternalID	Freetext	This is the Capture ASE column name denoting the applicant's external ID . If no external applicant ID is used by the SIS but the combination of an applicant ID and a site ID is used to identify a unique applicant address, this column must be mapped to the applicant ID stem.
Custom1	Freetext	This is the Capture ASE column name denoting the custom value that can contain additional information about the applicant.
Custom2	Freetext	This is the Capture ASE column name denoting the custom value that can contain additional information about the applicant.
Custom3	Freetext	This is the Capture ASE column name denoting the custom value that can contain additional information about the applicant.
Custom4	Freetext	This is the Capture ASE column name denoting the custom value that can contain additional information about the applicant.
Custom5	Freetext	This is the Capture ASE column name denoting the custom value that can contain additional information about the applicant.

BRWSRC table

This table holds the mapping between columns in the institution master data table and the values used internally within the project. The table is global for the project and works independently of the client and profile. The table should only ever consist of a single row.

The following settings are available.

Parameter	Type	Description
ID	Freetext	This is the Capture ASE column name denoting the institution ID. For SIS systems where an institution at a unique address is represented by a combination of the institution ID and the site ID, the formula for the ID column must be set to the following. Institution ID * 1000000 + Site ID If the institution ID or site ID is alphanumeric, the formula is the following. InstitutionID~SiteID The delimiter (~ in the above example) is configurable via the AlphNumSiteSeparator parameter in the BRWINS table. The system raises a configuration error if no delimiter is specified, if it is more than one character, or it does not occur, occurs more than once, or occurs as the first character in the unique ASE ID column. The site ID must be mapped to SITEID in the BRWSRC table and the institution ID stem must be mapped to EXTERNALID. If the SIS uses an external institution ID, map this value to EXTERNALID, and the internal institution ID stem can remain unmapped. However, the institution ID stem component of the ID field is the internal SIS institution ID.
SiteID	Freetext	This is the Capture ASE column name denoting the institution site ID. This should only be mapped if the site ID forms part of the ID column above.
Name	Freetext	This is the Capture ASE column name denoting the institution's name.
Address1	Freetext	This is the Capture ASE column name denoting the first line of the institution's address.
Address2	Freetext	This is the Capture ASE column name denoting the second line of the institution's address.
City	Freetext	This is the Capture ASE column name denoting the institution's city of origin.
State	Freetext	This is the Capture ASE column name denoting the institution's state.
Zip	Freetext	This is the Capture ASE column name denoting the institution's zip/postal code.
Country	Freetext	This is the Capture ASE column name denoting the institution's country of origin.

Parameter	Type	Description
TelNo	Freetext	This is the Capture ASE column name denoting the institution's telephone number.
CEEB	Freetext	This is the Capture ASE column name denoting the institution's CEEB code.
ACT	Freetext	This is the Capture ASE column name denoting the institution's ACT code number.
FICE	Freetext	This is the Capture ASE column name denoting the institution's FICE code.
OPEID	Freetext	This is the Capture ASE column name denoting the institution's OPE ID.
PartitionID	Freetext	This is the Capture ASE column name that represents the institution's partition ID.
ExternalID	Freetext	This is the Capture ASE column name denoting the institution's external ID. If no external institution ID is used by the SIS but the combination of an institution ID and a site ID is used to identify a unique institution address, this column must be mapped to the institution ID stem.

BRWSubstitution table

This table contains a list of rules for substituting values in an extracted or user-entered text field. Substitution rules are assigned to text fields using the SubRule column in the BRWFLD table.

The following settings are available.

Parameter	Type	Description
SubstitutionRule	Integer	This is the substitution rule ID.
Original	Freetext	This is the segment of a text string toreplace.
Replace	Freetext	This is a text string that is used to replace the original value entered in Original if present in the string.

BRWUser table

Table BRWUser contains a list of active users within the system along with their corresponding authorizations. The table is keyed on a combination of a unique user name and client group.

The following settings are available.

Parameter	Type	Description
UserID	Freetext	This is the Intelligent Capture user ID. **Note:** The maximum character length for a user name is 17. This is also the recommended maximum character length for a user name in BIC.
ClientGroup	Integer	This is the client group to which the user has been assigned.
AuthorityLevel	@@@	This is the standard Intelligent Capture role assigned to the user. **VER** This is the standard Verifier user. **SET** This is the Verifier user with permission to change verifier settings. **SLV** This is SET plus the ability to use the supervised learning function **SLM** This is SLV plus the ability to review and promote institution learnsets to the global project. **ADM** This is the administrator.
RequiresReview	Boolean	If set to True, all documents verified by the user go to a review state for quality control.
Domain	Freetext	This is the user Windows domain for Windows based authentication.
Password	Freetext	This is the user password if Windows authentication is not being used. **Note:** The maximum character length for a plain text password is 20. This is also the recommended maximum character length for a plain text password in BIC. Password can also be encrypted. After encryption, the encrypted password length can vary from 172 to 512 characters in length. However, the actual password that has been encrypted must also be limited to a maximum of 20 characters. Please see Appendix D for information on encrypting a password.

Parameter	Type	Description
PrimaryGroupName	Freetext	This is the name of the Web Verifier group to which the user belongs. This column must be populated for both the thick Verifier and Web Verifier installations.

BFT_VersionHistory table

Table BFT_VersionHistory is a reference table that contains versioning information for the BFT database along with the date of install.

The following settings are available.

Parameter	Type	Description
ID	Integer	This is the ID of version entry.
Version	Integer	This is the database version, such as 1100 - which is build 1100.
InstallDate	Date	This is the date when the database was installed.

BRWBAT table

This table contains the settings to configure batch filtering within the Verifier batch list based on the transcript type, such as Military, College, or High School.

The following settings are available.

Parameter	Type	Description
ProfileID	Integer	This is the profile ID.
EnableBatchStateFiltering	Boolean	If set to True, the batch state must be set to the configured batch state for the transcript type. This is done if the document fails extraction, regardless of the RTS batch state settings for failed extractions. The review state for all transcript types must continue as usual.
CollegeBatchState	Integer	This is the college batch state. It is set to 550 by default.
HighSchoolBatchState	Integer	This is the high school batch state. It is set to 551 by default.
MilitaryBatchState	Integer	This is the military batch state. It is set to 552 by default.

BRWTermNormalization table

This table contains the settings to configure the normalization of a college transcript term by profile.

The following settings are available.

Parameter	Type	Description
ProfileID	Integer	This is the profile ID.
ActivateTermNormalization	Boolean	If set to True, term normalization is enabled. When enabled, the system attempts to normalize the extracted value by comparing it against an extracted term configured in the term mapping table. If a match is not found within the term mapping table, the system attempts a fault tolerant match using the extracted value and the normalized terms found in the terms table.
DateFormat	Freetext	This is the format of the date contained in the normalized term value. Options are YY or YYYY.
UpdateTermMapping	Boolean	If set to True, the extracted terms are automatically added to the normalized term mapping table upon export, if the Verifier user manually mapped the term with one of the available normalized terms from the database.
ConfidenceThreshold	Integer	This is the minimum confidence threshold required to consider a term for normalization when using the fault tolerant normalization.
DistanceThreshold	Integer	This is the minimum distance required between the best and the second best candidate for term normalization, when using the fault tolerant normalization.
Activate Date Term Normalization	Boolean	If set to True, then date range term normalization is enabled.

BRWTerms table

This table contains the settings to create a normalized term table and to enable customers insert additional normalized terms to the database, if needed.

The following settings are available.

Parameter	Type	Description
ProfileID	Integer	This is the profile ID.
NormalizedTerm	Freetext	This is the constant value to be used in term normalization.
UseFirstYearInDate	Boolean	If set to True, then the normalized term displays only the first year available in the extracted term in a 2 or 4 digit format, based on the date format configured in the term normalization table. For example, "95/96" is converted to 1995 or 95. If set to False, the normalized term displays the second year available in the extracted term. For example, "95/96" is converted to 1996 or 96.

BRWTermMapping table

This table contains the settings to configure the mapping of extracted terms from a College transcript with the normalized terms from the database.

The following settings are available.

Parameter	Type	Description
ProfileID	Integer	This is the profile ID.
NormalizedTerm	Freetext	This is the constant value to be used in term normalization.
ExtractedTerm	Freetext	This is the value of the extracted term that needs to be replaced by a a normalized term value. This value should not include dates.

BRWTermsBelow table

This table contains the settings to enable extraction of Terms from college transcripts which present the Term below the coursework block.

The following settings are available.

Parameter	Type	Description
ProfileID	Integer	This is the profile ID.
InstitutionID	Freetext	This is the InstitutionID which enables the Term to be extracted below the coursework block. If your installation utilizes Institution SiteIDs, the SiteID must be included with the InstitutionID along with the configured

Parameter	Type	Description
		AlphaNumSiteSeperator (e.g. 123456-1, where InstitutionID=123456, SiteID=1, and AlphaNumSiteSeperator="-") .

BRWTermFormatAnalysis

This table contains the settings to enable adding format analysis search strings to extract terms not returned by out-of-the-box settings.

The following settings are available.

Parameter	Type	Description
ProfileID	Integer	This is the profile ID.
IndexID	Integer	This is the IndexID of the format analysis string.
CompareType	Freetext	This is the type of comparison used to identify the format analysis string. The available options are: • Simple Expression • Regular Expression • String Compare • Trigram • Levenshtein
FormatString	Freetext	This is the format analysis search string that is used to extract the terms.
IgnoreCharacters	Freetext	This is the list of characters that can be ignored during extraction.

BRWTermsDateRule

This table contains the settings to enable the rules for the date ranges of a term.

The following settings are available.

Parameter	Type	Description
ProfileID	Integer	This is the profile ID.

Parameter	Type	Description
RuleID	Integer	This is the rule ID that uniquely identifies each rule.
StartDay	Integer	This is the start date of the date range. **Note:** This date must be within the range of days available in the start month.
EndDay	Integer	This is the end date of the date range. **Note:** This date must be within the range of days available in the end month.
StartMonth	Integer	This is the start month of the date range.
EndMonth	Integer	This is the end month of the date range.
Term	VarChar	This is the term mapped to the date range.

BRWNumGradesRule

This table contains the settings to enable the rules for the numerical grades of a term.

The following settings are available.

Parameter	Type	Description
ProfileID	Integer	This is the profile ID.
InstitutionID	VarChar	This is the institution ID.
RuleID	BigInt	This is the rule ID that uniquely identifies each rule.
AlphaGrade	VarChar	This is the alphabetic grade.
NumGradeStart	Decimal	This is the start range of the numeric grade.
NumGradeEnd	Decimal	This is the end range of the numeric grade.

BRWMultiDistrict

This table contains the settings to enable the processing of multi-district or multi-campus college transcripts.

The following settings are available.

Parameter	Type	Description
ProfileID	Integer	This is the profile ID.
InstitutionID	VarChar	This is the institution ID.
CollegeCode	Freetext	This is the ID that uniquely identifies each college.
CollegeCodeExport	Freetext	This is the value corresponding to each college code that is displayed after export.

Known Issues

Export

Documents are not exported and the log file has the an ORA-01691 error

When using Oracle, you run across an error in the log file similar to: "Visibility archive: ORA-01691: unable to extend lob segment VISIBILITY.SYS_LOB0000023860C00002$$ by 128 in tablespace <TABLESPACE_NAME>"

This happens when the user that was created for the Visibility schemas has a restricted size on that users tablespace. To fix the problem, you can run the following commands as the SYSTEM user on your database server:

1. Start SQLPlus. Login with the SYSTEM credentials.
2. Run: *SELECT * FROM dba_tablespace_usage_metrics order by used_percent desc;*
   - Find the TABLESPACE_NAME where USED_PERCENT is close to being full.
3. Run: *SELECT df.tablespace_name, df.file_name FROM dba_data_files df;*
   - Get the FILE_NAME that matches the TABLESPACE_NAME from the previous step.
4. Run: *ALTER DATABASE DATAFILE '<FILE_NAME>' AUTOEXTEND ON MAXSIZE UNLIMITED;*
   - Substitute <FILE_NAME> for the FILE_NAME value from the previous step.
5. Rerun Export.

Result This allows the datafile to grow as needed. Alternatively you could add another datafile to the tablespace or extend the space of the existing datafile. For these options, consult with your Oracle database administrator.