Hyland™

Brainware for Transcripts

User Guide

22.1

Documentation Notice

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Brainware for Transcripts

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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 supports document types such as, high school, college, multidistrict 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.

About the Transcript fields

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

If the Applicant ASE is configured for Applicant Site ID, the **ApplicantID** and the **ApplicantSiteID** needs to be entered in the relevant fields. The search is triggered only after you save the details by clicking outside the **ApplicantID** field and pressing **Enter**. The ApplicantASE, Last Name, First Name, Middle Name and DOB fields are automatically updated on the Verifier form.

The **ApplicantID** 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. An 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. An 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 on the **Date Settings** page in SCM.

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 **Date Settings** page in SCM.

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 ID fields, ApplicantID, ApplicantSiteID, and the ASE field - ApplicantASE are set to blank and valid. Additionally the applicant data fields - First Name, Middle Name, Last Name, SSN, and DOB are set to invalid. 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.

Invalid Reason	Usage	Effect	Class
INSTITUTION NOT FOUND	This invalid reason is selected if the institution issuing the transcript cannot be found using the institution search function.	**RULE** SETINSTTOVALID The ID fields (InstitutionID and InstitutionSiteID), and the ASE field (InstitutionASE) are set to blank and valid. An Institution ID is not exported.	Appears in all classes.
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 The ID fields, Institution ID, ApplicantID, InstitutionSiteID, ApplicantSiteID, and the ASE field InstitutionASE and ApplicantASE are set to blank and valid. Additionally the applicant data fields - First Name, Middle Name, Last Name, SSN, and DOB are set to invalid. 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.

Invalid Reason	Usage	Effect	Class
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 within a specified tolerance. The transcript applicant cannot be found using the applicant search function.	**RULE** SETGPAANDAPPTOVALID The ApplicantID, ApplicantSiteID, and the ASE field ApplicantASE are set to blank and valid. Additionally the applicant data fields - First Name, Middle Name, Last Name, SSN, and DOB are set to invalid. 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.
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 InstitutionID, InstitutionSiteID, InstitutionASE 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.

Invalid Reason	Usage	Effect	Class
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 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.	**RULE** SETGPAINSTAPPTOVALID The InstitutionID, InstitutionSiteID, InstitutionASE fields are set to blank and valid. The Cumulative GPA field is set to valid. The ApplicantID, ApplicantSiteID, and the ASE field ApplicantASE are set to blank and valid. Additionally the applicant data fields - First Name, Middle Name, Last Name, SSN, and DOB are set to invalid. 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. Only applicable to college transcripts.
UNABLE TO NORMALIZE TERM			
UNABLE TO TRANSLATE GRADE			

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 **Invalid Reason Display Text** page in SCM 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 **Invalid Reasons** page.

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 **Invalid Reason Display Text** page in SCM.

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 **Field Settings** page in SCM. Also, the field labels are updated in the Verifier form based on the label settings in SCM.
- 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 **UnivHeader** page in SCM.
  - High School fields are mapped via the **HSHeader** page in SCM.
  - Military fields are mapped via the **Mil Header** page in SCM.
- 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 in the **Date Settings** page in SCM.

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.

Coursework field	Description
Grade	This is the letter grade achieved for the course. Acceptable grades can be configured via **Grade Settings** in SCM. 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 **Numeric Grade Extraction** page in SCM. If the InstitutionID extracted from the ASE pool exists in Numeric Grade Extraction, 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** into the course subject and the course number forced by the Course ID lookup table. For more information, refer to the Split Course ID topic.

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.
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.

Parameter	Description
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
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 the Validate Course ID from DB topic.

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 Date Settings page.

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 Grade Settings.
Sem2/Q2	This is the letter or number grade achieved for semester 2 or quarter 2. Acceptable grades can be configured in Grade Settings.
Sem3/Q3	This is the letter or number grade achieved for semester 3 or quarter 3. Acceptable grades can be configured in Grade Settings.
Q4	This is the letter or number grade achieved for quarter 4. Acceptable grades can be configured in Grade Settings.
Final Grade	This is the letter or number grade achieved for the school year. Acceptable grades can be configured in Grade Settings.
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.

Coursework field	Description
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 Field setting requirements.

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 **Field Settings > Active** check box for **Coursework.StartDate** is used to enable or disable this field. If the **Active** check box is selected, 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** check box is cleared, and only a single date is available for the coursework row, then the date is extracted to the "**Date Completed**" field for the row.

Coursework field	Description
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** check box is selected in **Field Settings**. This field is configurable through the **Mil Courses** page in SCM.
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** check box is selected in **Field Settings**. This field is configurable through the **Mil Courses** page in SCM.
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** check box is selected in **Field Settings**. This field is configurable through the **Mil Courses** page in SCM.

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 **Client Settings** page in SCM. 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 Institution Partition and Applicant Partition pages of the SCM respectively.
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 settings in SCM.
6. Configure the ASA sections in the <**project**>.ini file.
7. Create the ASE pools.
8. Configure the **Institution Master Mapping** and **Applicant Master Mapping** pages in the SCM.

Activate partitioning

To activate partitioning, complete the following steps.

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

```
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 **Institution Partition** and **Applicant Partition** settings in SCM.
2. Enter the institution and applicant partition IDs. 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 **Client Settings** in SCM.

2. In the corresponding **InstitutionPartition** and **ApplicantPartition** fields, enter the ID of the newly registered partition for the appropriate client.
3. Save the changes.

View the master tables

Within BFT, sample institution, and applicant master settings are provided. These contain an example structure that the tables should follow. To view the master tables, complete the following steps.

1. Open **Institution Master Mapping** and **Applicant Master Mapping** in SCM
2. View the following details.

Column	Explanation of usage
IndexNum	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 as well as the Site ID.
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.
PartitionID	This is the partition ID for the institution or applicant master as set in the Client Settings, Institution Partition, and Applicant Partition.
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.

```
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** 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 repeat from step 1.
4. On the General tab, complete the following substeps.
   a. 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.
   b. In the Filter column, set the radio button to the PartitionID field.
   c. 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.
   a. Reimport the pool.
   b. Set the class settings to the following.

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

   c. 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.

```
[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.
7. Repeat the steps to cerate the ApplicantASE pool.

Configure the Institution Master Mapping and Applicant Master Mapping settings

The Institution Master Mapping and Applicant Master Mapping settings instruct the system which field 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 settings, complete the following step.

- Map the field in the **Institution Master Mapping** and **Applicant Master Mapping** pages to the column name of the database column within the master table or the CSV file column header for the respective ASE pool.
  - The first line in the CSV file must contain the column names and the Import field from first row must be selected.

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.

```
GRL_OP_ActivateInstitutionFiltering=No
GRL_OP_ActivateApplicantFiltering=No
```

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.

You need to install the SCM package corresponding to your version of BFT. You need to ensure this, regardless of whether you are installing SCM for the first time or if you are upgrading BFT.

INI File Configurations

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.

Parameter	Type	Description
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. 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.

Parameter	Type	Description
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 instance, only High School institutions are returned if the transcript is classified as High School. **Note:** While modifying INI file settings, If a document has already been processed till Extraction state then the status should be changed to Successful Import for the modified settings to be effective.

Parameter	Type	Description
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. **Note:** This requires that the filter is checked for the InstitutionType column within the ASE.
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.

Parameter	Type	Description
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.
ActivateTermFormatAnalysis	Yes/No	This is the flag to indicate if the option to use format analysis search strings in order to extract terms is available to the user or not.
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.

Activate Institution Filter by Class

You can use this feature to filter the search results of the Institution Search in Verifier, based on the classified class name of the processed transcript.

You can enable this feature by selecting **YES** in the **GRL_OP_ActivateInstitutionFilterByClass** field in the .ini file. The default value is NO. This activates filtering the Institution ASE search results based on the class name.

Set the value of the **GRL_VL_InstFilterByClassColumn** settings to the name of the InstitutionASE column that contains the School Type information. The filtering happens based on this value. This setting value must match with the institution pool column name which is given for the school type.

Set the values of **GRL_VL_InstFilterByClassCollege**, **GRL_VL_InstFilterByClassHighSchool** and **GRL_VL_InstFilterByClassMilitary** to the value specified in the column that references the School type information. These are the school type values matching the Institution pool data based on which the filtering needs to happen.

The Institution Search filter in the Verifier works based on the settings configured by you. For instance, only High School institutions are returned if the transcript is classified as High School. Same holds true for College and Military transcripts.

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.

Parameter	Type	Description
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 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.

Parameter	Type	Description
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, underscore (_). **Note:** An underscore character "_" is the default component separator assigned in the INI file.
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 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.

Parameter	Type	Description
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.

Parameter	Type	Description
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.
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.

Parameter	Type	Description
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 wr

Parameter	Type	Description
SQLConnectionGroup	NN	This is the SQL connection group specifying th

Parameter	Type	Description
ReportingInDesigner	Yes/No	This is the flag to indicate whether documents

Parameter	Type	Description
StartNewRecordFor ImportedDocument	Yes/No	If this is set to Yes, Intelligent Capture cre

Parameter	Type	Description
ReportingDBDocument Table	Freetext	Name of the document header table in the report

Parameter	Type	Description
ReportingDBFieldTable	Freetext	This is the name of the document header table

Parameter	Type	Description
ReportingDBLineItemsTable	Freetext	This is the name of the document field table i

Parameter	Type	Description
ReportingDBLineItemsTable2	Freetext	This is the name of the military coursework li

Parameter	Type	Description
ReportingDBHistory Table	Freetext	This is the name of the document history table

Parameter	Type	Description
ReportingDBImage Table	Freetext	This is the name of the document image table i

Parameter	Type	Description
StoreImageInReporting Tables	Yes/No	This indicates whether the document image is s

Parameter	Type	Description
ReportingKey	Freetext	This contains the component to be used as the

Parameter	Type	Description
ArchiveURL	Freetext	This contains the mask for the URL associated

Parameter	Type	Description
StorageDirectory	Freetext	This is the path to the directory that is used

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. Open the **<project>.ini** file, locate the ASA section, and complete the following substeps.
   a. Ensure that the Class parameter is set to **Transcripts**.
   b. Depending on whether you are configuring an Institution ID field or an Applicant ID field, set the Fieldname to **InstitutionASE** or **ApplicantASE** only. The field names are predefined and must not be modified in any case.
   c. 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.
   d. 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.
   e. Set the PoolDirectory parameter to Pool.
   f. Set the PoolName parameter to Institutions when configuring an Institution field, and set it to Applicant when configuring the Applicant field. Any valid filename can be used, however for different pools different pool names need to be configured.
   g. If the institution pool import file (CSV import 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.
   h. Save the changes and close the INI file.
3. Open the project file, and in the **Transcripts** class, navigate to the InsitutionASE field, display the field settings, and complete the following substeps.

   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.

   a. To import the pool, on the **File Import** tab, click **Import**.
   b. 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.

c. 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.

4. To reimport the pool, on the **File Import** tab, click **Import**.
5. 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]
   ```

6. 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*]
   ```

7. 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 **Applicant Master Mapping** and **Institution Master Mapping** pages in SCM, 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.

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. In the **Settings** drop down list, select **Global Settings**.
3. In the **Global Settings** list, under **Search Settings**, click **Applicant Master Mapping** or **Institution Master Mapping**. Enter the following details in the fields that are displayed.

   ```
   ID=Org_ID
   First 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 in the **AlphNumSiteSeparator** field in **Institution Settings** for an institution and in **Applicant Settings** 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 CSV Import files for Institution ASE and Applicant ASE, 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

Configure the InstitutionASE or ApplicantASE columns

To configure the InstitutionASE and/or ApplicantASE columns, complete the steps in the Configure Standard Institution ID and Applicant ID fields 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 **Institution Master Mapping** and **Applicant Master Mapping**, 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.

Fields in Institution Master Mapping	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 **Institution Master Mapping** or **Applicant Master Mapping**, complete the following.
   - 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 **Institution Master Mapping** or **Applicant Master Mapping**, complete the following.
   - 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 fields in Applicant Master Mapping are mapped as seen in the following table.

Fields in Applicant Master Mapping	Value
ID	IndexID
ExternalID	Org_ID

Or, if the downstream uses an external institution ID and a site ID, then the fields in Applicant Master Mapping are mapped as seen in the following table. In this example, Org_ID represents the external institution ID field, rather than the internal institution ID.

Column in Applicant Master Mapping	Value
ID	IndexID
SiteID	SiteID

Column in Applicant Master Mapping	Value
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 the following settings. 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 within UserExitCustomExport on the UserExits script class level. Each table is keyed by an export profile ID that can be assigned to a client.

- Export Options
- Header Field
- Mil Courses
- Applicant Record
- Univ Courses
- Univ Degree
- Univ Record

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 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 **Export Settings**.

3. In the **Profile** list, click the relevant profile.
4. In the **Export Settings** list, click **Export Options**.
5. Enable the **OutputTiffFile** field.
6. 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 **Export Options**, enter **a DPI of your choice in the TiffDPI** field. The default image compression is 300 dots-per-inch.
2. Set image compression to one of the following. The default is standard Grade 4 compression.

Compression Type	Description
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 in SCM.

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. Navigate to **Settings > Export Settings > Export Options**.
3. Enable **OutputPDF**.
4. To set the name of the PDF file to match the document URN in the <project>.ini file, set the **PDFName** 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 Field Settings page in SCM. 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 Field Settings page in SCM allows 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 cannot be modified.

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 **Field Settings** for a profile, it is considered inactive. The following fields cannot be disabled.

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

Switch fields on and off

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

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. Navigate to **Settings > Profile Settings > Field Settings**.
3. Select the **Active** check box to enable it. You can clear the check box to disable it.
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 options in the **Field Settings** page in SCM. 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.

RequiredInRTS	RequiredInVerifier	Effect
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. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. Navigate to **Settings > Profile Settings > Field Settings**.
3. To make a field mandatory, select the **RequiredInRTS** and **RequiredInVerifier** fields.
4. To make a field optional, set the **RequiredInRTS** and **RequiredInVerifier**.
5. 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 in SCM.

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. Navigate to **Settings > Profile Settings > Field Settings**.
3. Set the **ForceVerify** column to `True`.
4. Save the changes.

Label a field in Verifier

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

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. Navigate to **Settings > Profile Settings > Field Settings**.
3. In the **VerifierLabel** column, enter the text that you want to appear in the Dynamic Verifier.
4. 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 in SCM.

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. Navigate to **Settings > Profile Settings > Field Settings**.
3. 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).
4. 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).
5. 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`.
6. 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`.

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

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. Navigate to **Settings > Profile Settings > Field Settings**.

3. In the **MinLength** column, enter a numeric value that represents the minimum permitted length of the field.
4. In the **MaxLength** column, enter a numeric value that represents the maximum permitted length of the field.
5. 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.
6. To have a value padded by the character entered on the left, such as 000001234, set the **RightJustify** column to `True`.
7. To remove all special characters from a value, set the **RemoveAllSpecials** column to `True`.
8. To remove all spaces from a value, set the **RemoveBlanks** column to `True`.
9. To retain non-comma separated lists of special characters that are retained when the **RemoveAllSpecials** column is selected, set the KeepCertainSpecials column to `True`.
10. 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`.
11. To remove any leading zeros from an extracted or user-entered value, set the **RemoveLeadingZeros** column to `True`.
12. 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 **Field Settings** page in SCM, 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 **Substitution Rules** page in SCM, 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.

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**.

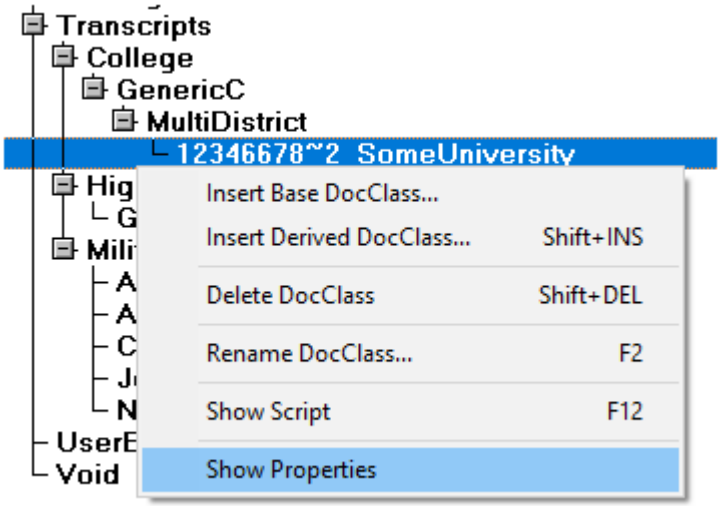
To create a new class for a multi-district college, complete the following steps:

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: 12345678~2_SomeUniversity

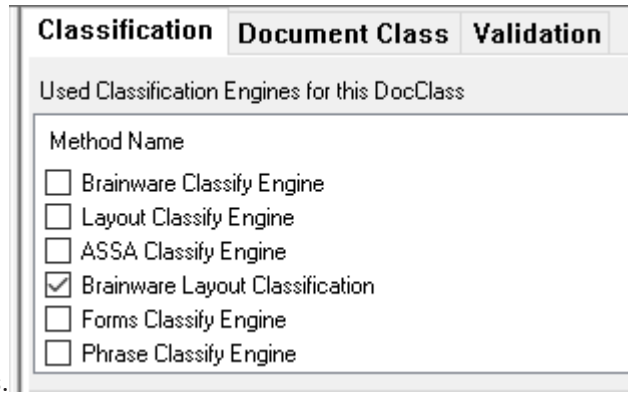
   Do not include the angular brackets (<>) while using the name format.

   - **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.

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`.

   If the Chain Table Extraction (CTE) functionality is enabled, then this feature will not work even if it is enabled.
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. Add `GRL_OP_DynamicDebug` and set 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 the **User Management** page in SCM 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.

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.

AuthorityLevel value	Description
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 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 Management fields

The **User Management** page in SCM 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. For example, if user JSMITH needs to be assigned to client groups 1 and 2, the User ID field has two entries.

To populate the user table, complete the following steps.

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. In the **Settings** drop down list, select **Global Settings > User Management**.
3. In the **UserID** field, enter a user's user name.
4. To have the user log in with a username and password, enter a password In the **Password** field. If you want the user to log in using Windows Authentication, leave the column blank.
5. If the user is using Windows Authentication to log in, in the **Domain** field, enter the Windows Domain information.

6. In the **Primary Group Name** field, enter the group name for the group that the user is assigned to.
7. Save the changes.

Configure an automatic import job

After the **User Management** fields are 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.
   a. In the Every field, enter the number of minutes, hours, or days that Intelligent Capture imports users from **User Management**.
   b. From the time list, select minutes, hours, or days
   c. In the Starting at fields, enter the date and time that Intelligent Capture should start importing users.
   d. To update system security during an import, select Update system security
   e. 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.

   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 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 **Client Settings > Client Settings**.
3. Select the **Requires Review** check box.
4. 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 **Client Settings** page in SCM. 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. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. In the **Settings** drop down list, navigate to **Global Settings > User Management**.
3. Select the **Requires Review** check box.
4. 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 **DefaultExportPath** column, enter the path to the output directory.

The export path defined here overrides the export path defined in RTS. If there is no export path defined here, the system uses the one that is defined in RTS. This aids in a multi-tenancy environment where multiple clients in a single BFT instance might need to export documents to individual directories. You need to ensure that the folder defined in the export path must be a valid (existing) one with write permission.

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**.

   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.
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.

BRWEXP Column	Description
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.
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

Configuration Table Name	XML Section
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.

   ```
   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.

   ```
   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
   ```

   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.

   ```
   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`.

   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 the **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.

    ```
    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.

    ```
    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 selected, all documents are routed to the verifier. If it is not enabled, 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.

Column	Explanation of usage
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.
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.

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.

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.

Parameter	Description
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). • 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.

Parameter	Description
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.

About Chain Table Extraction

The Chain Table Extraction (CTE) engine is a Brainware Intelligent Capture Analysis engine that is used for table field extraction. It is a configurable engine that has a persistent and manageable chain configuration.

CTE engine works on the principle of learning sequences of words in a document called learned chains. Based on the learned chains, the engine then identifies similarly structured candidate chains in the same document or in other documents. This allows CTE to extract values from simple to complex table structures.

Unlike Brainware Table Extraction, for which a single training is applied per CTE class, CTE is designed to recognize multiple formats (defined in a chain) within a single CTE class.

Note: Access to configure and use CTE requires a separate Chain Table Extraction license. To request the Chain Table Extraction license please contact the product licensing team or your Hyland customer success individual.

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

- Brainware Intelligent Capture (BIC)
- Basic knowledge of Chain Table Extraction (CTE) engine and how it works, how to train and create chains for different types of documents, and how to debug CTE.
- How to use and test Format analysis engine using regular and simple expressions.
- Basic understanding of Brainware for Transcripts (BFT).
- Basic knowledge of Solution Configuration Manager (SCM).

Purpose of using CTE

The table structures within university and high school transcripts vary greatly from institution to institution and are often quite complex.

The ability to identify and then search for arbitrary chains of words helps in defining the actual table layout. Once the layout of the table is known, there is less ambiguity for the engine to perform

extraction. This enables CTE to be more flexible to accommodate complex table layouts than the Transcript Table Extraction engine.

Configure CTE Engine for Brainware for Transcripts

You can configure Chain Table Extraction engine for BFT by using Solution Configuration Manager.

To configure and use CTE in Brainware for Transcripts 22.1, you need to install the Brainware Foundation EP2 CTE Add-on Build 6021, in addition to the Brainware Intelligent Capture Foundation EP2. The Brainware Intelligent Capture license must include the Chain Table Extraction (CTE) engine as an available licensed engine for Brainware to utilize. In cases where an installation already exists, the license must be updated to include Chain Table Extraction (CTE) engine.

To request a new or updated license which includes CTE, contact the product licensing team or your Hyland customer success individual. Alternatively, customers can choose to request and install a new license themselves by referring to the Brainware Product Licensing Guide. The BFT solution utilizes the Transcript Table Engine (TTE) for extraction of tabular formatted data, by default.

Through SCM, BFT can be configured to use CTE as the extraction engine for BFT tables. Once CTE is configured, it can be also be used as an add-on table engine on top of the TTE engine to make the combined extraction results more reliable for customers.

To configure the CTE engine for BFT, complete the following steps in Solution Configuration Manager.

1. Log on to Solution Configuration Manager.
2. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
3. In the **Settings** drop down list, select **Profile Settings** and in the **Profile** list, select the relevant processing profile.
4. Click **Chain Table Extraction Settings**.
5. Select the **Activate CTE** check box to enable CTE.

   For information on specific fields, see the following table:

Field Name	Description
Activate CTE	Select this check box to enable and activate CTE. The system compares between CTE & TTE records, and rectifies TTE results based on CTE extraction results. If you do not activate CTE, TTE records will be extracted by the TTE engine only.
Matching Confidence Threshold	This is the minimum confidence threshold required for CTE & TTE results to be compared and rectified.
Remove Bad TTE Records	Select this check box to delete the unmatched or extra TTE records (based on CTE results). If you do not select this check box, no TTE records will be deleted after comparing.

Field Name	Description
Remove TTE Confidence Threshold	This is the minimum confidence required for deleting unmatched or extra TTE records (the records which are not present in CTE). The default value is 10. This means that the system will delete the extra TTE rows which have less than 10% confidence. For example, if this value is set to 85, the system deletes all the extra TTE records that have a confidence percentage of 85 or less. This option is only available when the **Remove Bad TTE Records** check box is selected.

Chain Table Extraction Setup and Usage for Brainware for Transcripts

Prerequisite: Before you can configure CTE, you need to ensure that Brainware Foundation EP2* or newer and BFT 22.1* or newer is installed and configured. Also ensure that documents are pre-classified as high school or college. are pre-classified as high school or college. This release of BFT supports the use of CTE for high school and college transcripts only.

Note:

- Brainware for Transcripts has adopted a new version structure. Brainware for Transcripts 22.1 is the latest release following Brainware for Transcripts 2.4.
- To configure and use CTE in Brainware for Transcripts 22.1, you need to install the Brainware Foundation EP2 CTE Add-on Build 6021, in addition to the Brainware Intelligent Capture Foundation EP2. The Brainware Intelligent Capture license must include the Chain Table Extraction (CTE) engine as an available licensed engine for Brainware to utilize. In cases where an installation already exists, the license must be updated to include Chain Table Extraction (CTE) engine.

Note: Only administrators having access to Designer can configure the CTE engine.

The SDP file has been configured to include three tables as fields in Designer as well as in Verifier form. They are:

- CTEColCoursework

  Note: For documents classified under the "college" category.
- CTEHSCoursework

- CTEHSNoSemCoursework

Note: For documents classified under the "high-school" category.

View the Class ID

A CTE Engine in BFT is configured for institutions. Therefore CTE needs a Class ID field that provides the institution identifier, when a chain is going to be captured from the document. The ClassID field needs to have a unique value to distinguish between each document. This also ensures that different chain configurations can be setup for each document belonging to a DocClass.

In BFT the Transcript class field **InstitutionIDCTE** is configured as CTE Class ID field.

To view the Class ID field, do the following:

1. Open the <project>.sdp file in Brainware Intelligent Capture Designer.
2. Log on with your credentials to access the project details.
3. Navigate to the **Definition** mode and in the **Classes** tab, double-click **Transcripts**. The **Transcripts** fields are displayed.
4. View the **InstitutionIDCTE** field.

View the CTE table for college

CTE can be configured for college and high school classes only.

To view the CTE table for college, do the following:

1. Navigate to the **Definition** mode and under the **Classes** tab, expand the **Transcripts** class and double-click **College**. The **College** fields are displayed.
2. Select the **CTEColCoursework** field, right-click and select **Show Properties**. The **Analysis** tabbed area is displayed.
3. In the **Available Analysis Engines** drop-down, **Table Analysis Engine** is displayed, by default.

View the CTE tables for high school

CTE can be configured for college and high school classes only.

To view the CTE table for college, do the following:

1. Navigate to the **Definition** mode and under the **Classes** tab, expand the **Transcripts** class and double-click **High School**. The **High School** fields are displayed.
2. Select either **CTEHSCoursework** or **CTEHSNoSemCoursework** field, right-click and select **Show Properties**. The **Analysis** tabbed area is displayed.
3. In the **Available Analysis Engines** drop-down, **Table Analysis Engine** is displayed, by default.

   For high school documents, two CTE tables are used because for some high school documents, the semester results are grouped together and presented in columns dedicated for each semester such as semester1, semester2 etc. Such transcripts can be trained and extracted using **CTEHSCoursework** table alone. Figure 1:Data presented in columns.

GR	Course	S1 Mk	S1 Cr	S2 Mk	S2 Cr	S3 Mk	S3 Cr	YR Mk	YR Cr	GR	Course
12-13 Ivanna Eudora Kean High School											
11	AP Biology I	90	1								
11	AP Biology II			85	1						
11	AP English Language I	90	1								

In this case only **CTEHSCoursework** table is enough to handle the extraction that means no need to use the other table i.e. **CTEHSNoSemCoursework** for those transcripts.

However, in some other cases the Term or Semester values are presented in rows and not in columns (See Figure 2 and 3) or in cases where there is no clearly visible separate column available to group the semester records (See Figure 4), in such cases, it is advised to use **CTEHSNoSemCoursework** table.

Schl Year	Grade	Course	Course Title	Mark	Rpt Tag	Q Pt	Credit Attempted	Credit Earned	Subj Area	Enrolled Dst	Schl	Term	Flags
2011	09	85003550	NUTRITION & WELLNESS	C			0.50	0.50	VO	52	3781	S1	
2011	09	07083500	SPANISH 2	C			0.50	0.50	FL	52	3781	S1	
2011	09	10013200	ENG HON 1	D	X	Q	0.00	0.00	EN	52	3781	S1	W
2011	09	05005000	PERS.CAR.SCH DEV 1	B			0.50	0.50	EL	52	3781	S1	
					Credit Totals:		1.50	1.50	Unweighted GPA: 2.3333				

3781-ST.
Grd 09 6/2012 Term: S2

Schl Year	Grade	Course	Course Title	Mark	Rpt Tag	Q Pt	Credit Attempted	Credit Earned	Subj Area	Enrolled Dst	Schl	Term	Flags
2011	09	85003900	PRIN FOOD PREPR	F			0.50	0.00	VO	52	3781	S2	
2011	09	07083500	SPANISH 2	F			0.50	0.00	FL	52	3781	S2	
2011	09	21063200	AMER GOVT HON	D	X	Q	0.00	0.00	AG	52	3781	S2	X
2011	09	10013200	ENG HON 1	D	X	Q	0.00	0.00	EN	52	3781	S2	X
2011	09	13023600	ORCH 1	A			0.50	0.50	PF	52	3781	S2	
					Credit Totals:		1.50	0.50	Unweighted GPA: 1.3333				

YEAR: 2011-2012 GRADE LEVEL: 09

T	COURSE#	COURSE TITLE	SUBJECT AREA	CRSE FLAG	G R	A C	O N	CREDIT ATT./EARN
1	0102300	CERAM/POT 1	PF	IJ	B		N	0.50 0.50
1	0111300	3-D ART/SCULPT	PF	IJ	B	Z	N	0.50 0.50
1	0708350	SPANISH 2	FL	IJ	A		N	0.50 0.50
1	1001320	ENG HON 1	EN	IJH	A		N	0.50 0.50
1	1501310	FIT LIFST DESIGN	PE	IJ	A		N	0.50 0.50
1	1503350	TEAM SPRTS 1	PE	IJ	A	Z	N	0.50 0.50
1	2103400	ADV PL HUMAN GEOG	SS	IJH	A		N	0.50 0.50
2	0708350	SPANISH 2	FL	IJ	C	Z	N	0.50 0.50
2	1001320	ENG HON 1	EN	IJH	A	Z	N	0.50 0.50
2	2103400	ADV PL HUMAN GEOG	SS	IJH	B	Z	N	0.50 0.50
3	1206320	GEO HON	GE	IJH	B	Z	N	1.00 1.00
3	2000320	BIO 1 HON	BI	IJH	B	Z	N	1.00 1.00
			CREDIT, TERM:					7.50 7.50

For such documents (Figure 2 and 3) where Term or Semester values are present in rows, the column "Term" or "T" should be trained as "Sem" in the CTE table.

Also "Mark" (in Figure 2) or "G" (in Figure 3) columns of the documents should be trained as "Mark" in the CTE table.

10-11		
English 1-1	A	1.000
Soc- Global I	A	0.500
Soc- US Hist II	A	0.500
M- Integ II	A	1.000
E- Soft Appl.	A	0.500
Sc- Academic Biology	A	1.000
FL_Spanish 1	A	1.000
PE_ Gr 9-10	A	0.250
General Art	A	0.500

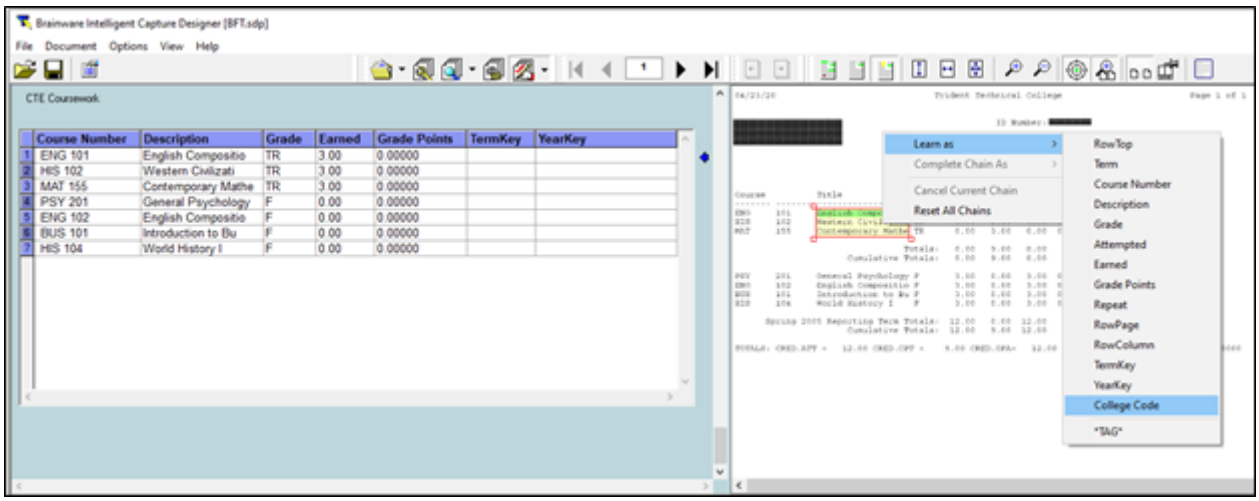
In such cases (see Figure 4), where there are no Term or Semester values present in the document, you don't need to train the "Sem" column in the CTE table, but you need to train "Mark" and other columns accordingly.

Apart from the structures explained above, there is a possibility that in few transcripts a single document might have both types of structures. For example, in the upper half of the document semester results are grouped as columns, and the lower half of the document has coursework records which also needs to be extracted. For such cases both parts can be trained separately with appropriate CTE tables. For the upper half **CTEHSCoursework** table can be used and for the bottom half **CTEHSNoSemCoursework** table can be used to train and extract.

The extraction results from CTE are saved in these tables.

All these CTE tables in the Verifier form, which contain the pure CTE extraction results i.e. **CTEColCoursework**, **CTEHSCoursework** and **CTEHSNoSemCoursework** are visible only in Designer or Verifier Test Mode and not in Verifier. Therefore, to train the CTE engine, or create chains for CTE, you need to use the Verifier Test Mode.

Note: CTE cannot be used for "Dynamic Verifier Form". BFT does not have any preconfigured CTE chains. Therefore, you need to configure CTE engine after BFT is installed.



While training it is recommended to only train the columns that are visible in the left CTE table. It is not necessary to train hidden columns.

In the image above (Figure 5), the **Learn As** context menu displays additional columns than the ones that are displayed in the CTE coursework table. For example, "RowTop", "Term", "Attempted", "Repeat", "RowPage", "RowColmn", "College Code" etc.

Note: While configuring CTE, do not create chains for transcripts where "Terms" appear below the coursework table. Currently CTE does not support terms below coursework table. But TTE will be still continue to function in the same manner.

Change default engine to Chain Table Engine for CTE tables

Prerequisite: CTE license is included in the installed Brainware license.

1. Open the SDP in designer and switch to definition mode.
2. Double-click on the **College** class and then select **CTEColCoursework** on the **Fields** tab.
3. Right-click on **CTEColCoursework** and click **Show Properties**.
4. In the **Available Templates** drop-down list, select **CTEColCoursework** and then click **Copy Template**.
5. Click **Save**. You need to repeat the same steps for Highschool fields as well. Please refer to the following table for all 3 CTE fields.

Class Name Template	Field Name
CollegeCTEColCoursework	CTEColCoursework
HighschoolCTEHSCoursework	CTEHSCoursework
HighschoolCTEHSNoSemCoursework	CTEHSNoSemCoursework

6. After configuring CTE, if you do not want to use CTE, you need to configure the following fields with their respective templates as per the following table. You also need to deactivate CTE in SCM.

Class Name and Field Name	**Template**
College - CTEColCoursework	TAEColCoursework
Highschool - CTEHSCoursework	TAEHSCoursework
Highschool - CTEHSNoSemCoursework	TAEHSNoSemCoursework

Switching templates will remove all the previously captured chains and relevant information.

Capturing Chains for Chain Table Extraction Classes

Capturing chains for the definition of CTE classes from the document image is done in BIC Designer Verifiier Test Mode. It requires a valid Institution ID in the CTE class ID field (InstitutionIDCTE).

To enable the CTE tables to be displayed in Verifier Test Mode, ensure that the **Allow firing of VerifierFormLoad event when in Verifier Test/Train Modes** check box in the **Compatibility** tab of the project settings is cleared. By default, this check box is already unchecked.

The linked **Class ID** field needs to be successfully extracted. You need to build trained chain nodes by assigning a word or group of words on the document to specific CTE table column or a TAG, in a manner similar to when training a Brainware Table Extraction (BTE) field, though it is not necessary to activate **Correct Tables**.

Each document layout is learned against different sets of captured chains. The specific captured chain set applied during extraction is based on the value of a linked header field. For example, if a CTE table is linked to an ASE header field, each ASE record is trained individually. Also, the CTE chain configurations is saved within the project file and 'learning' is performed immediately on training. Additional project learning operations aren't required.

Format Templates

Format Templates are used for saving field configurations and settings so that they can easily be applied and re-used later to replicate the configurations.

There are three dedicated analysis templates for the three CTE tables i.e. **CTEColCoursework** , **CTEHSCoursework** and **CTEHSNoSemCoursework**. Each of these templates (of type CTE Analysis Settings) are dependent on multiple analysis templates (of type Format Analysis Settings) for most of their columns.

You should avoid changing the names or deleting these templates or any of the dependent templates. However, you can modify the existing templates based on your requirements.

Note: At runtime, BFT assigns and loads the analysis templates of type CTE Analysis Settings for the CTE fields. So, modifying any values related to CTE is overridden by BFT during the next runtime. Changes made to the analysis templates of type Format Analysis Settings, which are assigned in the analysis templates of type CTE Analysis Settings will remain. You need to modify the respective analysis templates of type Format Analysis Settings, accordingly.

Please refer to Brainware Intelligent Capture documentation for more details on Format Analysis Engine or Analysis Templates and how to configure them and also for information on simple and regular expressions

CTEColCoursework (table format analysis template) (Dependent templates for CTEColCoursework)

Column	Templates
Course Number	ColCTECourse
Grade	ColCTEGrade
Earned	ColCTEEarned
Grade Points	ColCTEPoints
TermKey	ColCTETerm
YearKey	ColCTEYear
College Code	CollegeCode

CTEHSCoursework (table format analysis template) (Dependent templates for CTEColCoursework)

Column	Templates
Sem1/Q1	HSTMark,HSCTEMarkNum,HSCTEMarkABC
Sem2/Q2	HSTMark,HSCTEMarkNum,HSCTEMarkABC
Sem3/Q3	HSTMark,HSCTEMarkNum,HSCTEMarkABC
Q4	HSTMark,HSCTEMarkNum,HSCTEMarkABC
Final Grade	HSTMark,HSCTEMarkNum,HSCTEMarkABC
Earned 1	HSCTEEarnNum
Earned 2	HSCTEEarnNum
Earned	HSCTEEarnNum
Year	HSCTEYear
Grade Level	HSCTEGradeLevel

CTEHSNoSemCoursework (table format analysis template) (Dependent templates for CTEColCoursework)

Column	Templates
Sem1/Q1	HSTMark,HSCTEMarkNum,HSCTEMarkABC
Sem2/Q2	HSTMark,HSCTEMarkNum,HSCTEMarkABC
Sem3/Q3	HSTMark,HSCTEMarkNum,HSCTEMarkABC
Q4	HSTMark,HSCTEMarkNum,HSCTEMarkABC
Final Grade	HSTMark,HSCTEMarkNum,HSCTEMarkABC
Earned 1	HSCTEEarnNum
Earned 2	HSCTEEarnNum
Earned	HSCTEEarnNum
Year	HSCTEYear
Grade Level	HSCTEGradeLevel
Sem	HSCTESemester
Mark	HSCTEMarkABC,HSCTEMarkNum

Reporting Table

The Reporting has the following two changes at the database level:

For BRWdocument table in Reporting database:

A new column "**ADDITIONALTABLEENGINE**" has been added. This contains the engine name which is a predetermined value i.e. "CTE" in case CTE is enabled in **Chain Table Extraction Settings** in SCM while processing the document. Using this option all the documents can be identified which have used CTE as table engine for coursework table.

For BRWdistillerFields in Reporting database:

A new column "**ADDITIONALTTECANDIDATE**" has been added which contains the old data before merging CTE and TTE data. Therefore, this column will display only TTE records.

For the existing columns in BRWdistillerFields:

- **CONTENTRTS**: This column contains the values before CTE-TTE merging. This is the value determined by the TTE engine.
- **CONTENTV**: This column contains the values after the verification process is complete and before export. For example, if a verifier corrects a value then the new value will be displayed in **CONTENTV**.
- **DETAIL**: In case CTE is enabled the description will be appended with **CTECol**, **CTEHS** or **CTEHSNoSem** based on the table that got used by CTE while extraction. For manual descriptions, no suffix will be added.

"Description" field values	When
"Automatic CTECol" / "Semi-Automatic CTECol"	For college transcripts.
"Automatic CTEHS" / "Semi-Automatic CTEHS"	For High School documents when CTEHSCoursework table got used to extract data by CTE engine.
"Automatic CTEHSNoSem" / "Semi-Automatic CTEHSNoSem"	For High School documents when CTEHSNoSemCoursework table got used to extract data by CTE engine.

Debugging/Scripting

CTE Diagnostic report

CTE Diagnostic report files help to debug or diagnose any problem related to CTE tables or learning process. By default, it is disabled and not configured to generate any report files. You can generate the report file for each CTE field in the project by adding and configuring a registry key.

To generate the report file, complete the following steps.

1. Open registry editor (from run type regedit and press enter) and go to the location - "Computer \HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Hyland_BW\Cedar".

   Add a new "String Value" with name "CTERPT_Path" and set Value Data as a full path to the desired txt file.

   For example, string value CTERPT_Path has value data 'D:\CTE.txt', for BFT each college document extraction will generate/update the file D:\CTE_ CTEColCoursework.txt, and

for high school document will generate D:\CTE CTEHSCoursework.txt and D:\CTE_ CTEHSNoSemCoursework.txt (assuming all CTE fields are already copied from the templates and ready for CTE according to the documentation) with the following content

Extracting CTE table for doc: [workdoc's path]

CLASS: [ClassID], [ClassName, optional]

Learnset(#[number of chains]) + trained chains tree as shown in GUI\Configuration\'Learnset' paragraph above.

COMPILED LEARNSET (list of compiled chains created in the result of merging/splitting trained chains)

Alignment: (deduced column's alignment)

Tab_Rows(#[number of regular row chains]) + nodes info

Tab_Header(#[number of table header chains]) + nodes info

Row_Comment(#[number of row comment chains]) + nodes info

Row_Header(#[number of row header chains]) + nodes info

Col_Header(#[number of column header chains]) + nodes info

Results: List of extracted chains for each compiled chain formatted as (WordIdx1)(WordIdx2)… () along with the optional INFO\WARNING diagnostic messages. Could be no any word's index for MBE columns.

CTE Configuration XML schema overview

The XML contains following main sections/top nodes:

FormatAnalysisTpls: List of FAE templates (**Fats** nodes), with the general template parameters and children **Fat** for each template search pattern and its parameters (see "DataExtraction\Format Analysis Engine\Configure the Format Analysis Engine" in Designer's Guide [1].

CTE with the **cidfld** attribute for the CTEClassID field and with two children sections:

- Columns: Contains **Column** nodes with the attributes for each CTE table field column.
- Learnset: Contains **Chain** nodes for each trained chain. Each chain has a "type" attribute for the chain type (Tab_Header, Row_Header, etc.) and children **Node** nodes with the bounding boxes/ text for the lines and words sub-children. Each **Node** contains also a "colidx" attribute with the index of the binded column or "-1" for the TAGs

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.

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

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

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 on how to generate an encrypted password, refer to the Encrypt a password topic.

   ```
   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.

   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+DqkFPAuQ1aRPE0lcV868A75AzbFrnGWHv/
   oFae893qUwQZNTgjGBfRZAblqT4nsxBQld12XwAmKlP3qVhOwFlfas5/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). 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.

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.

ACT Score Validation

This table is used to set the range of acceptable values for ACT Scores. To configure the ACT Score Validation, complete the following steps in Solution Configuration Manager.

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used. Refer to
2. In the **Settings** drop down list, select **Global Settings**.
3. Navigate to **Global Settings > Test Score Settings > ACT Score Validation**.

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

Parameter	Description
English Max	The maximum allowable value for English.
English Min	The minimum allowable value for English.
Math Max	The maximum allowable value for Math.
Math Min	The minimum allowable value for Math.
Reading Max	The maximum allowable value for Writing..
Reading Min	The minimum allowable value for Writing.
Science Max	The maximum allowable value for Essay.
Science Min	The minimum allowable value for Essay.
Composite Max	The maximum allowable value for Composite.
Composite Min	The minimum allowable value for Composite.
Combined EW Max	The maximum allowable value for Combined English/Writing.
Combined EW Min	The minimum allowable value for Combined English/Writing.
Writing Max	The maximum allowable value for Writing.
Writing Min	The minimum allowable value for Writing.

SAT Score Validation

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. To configure the SAT Score Validation, complete the following steps in Solution Configuration Manager.

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. In the **Settings** drop down list, select **Global Settings**.
3. Navigate to **Global Settings > Test Score Settings > SAT Score Validation**.

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

Parameter	Description
Rule Id	This is the ID for the validation rule.
Effective Date	This is the date from which the validation rule is effective.
Reading Max	The maximum allowable value for Critical Reading.
Reading Min	The minimum allowable value for Critical Reading.
Math Max	The maximum allowable value for Math.
Math Min	The minimum allowable value for Math.
Writing Max	The maximum allowable value for Writing.
Writing Min	The minimum allowable value for Writing.
Essay Max	The maximum allowable value for Essay.
Essay Min	The minimum allowable value for Essay.
Multiple Choice Max	The maximum allowable value for Multiple Choice.
Multiple Choice Min	The minimum allowable value for Multiple Choice.
EBRW Max	This is the maximum allowable value for Evidence-Based Reading and Writing.
EBRW Min	This is the minimum allowable value for Evidence-Based Reading and Writing.

Configure the applicant settings

You can configure the settings for validating an extracted applicant ID. To configure applicant settings, complete the following steps in Solution Configuration Manager.

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, select the relevant profile.
4. In the **Profile Settings** list, click **Applicant Settings**.

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

Parameter	Description
Validate From ASSA	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 enabled.
Alph Num Site Separator	This is the special character used to separate an applicant ID and site ID in the unique ID column in the applicant ASE pool.
Default Country	If no country column is available in the applicant extract used by the **Applicant ASE** 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	If the **Validate From ASSA** check box is selected, this field denotes that the minimum weight for an Applicant candidate to be valid.
Distance	If **Validate From ASSA** is selected, this field denotes the minimum distance for an Applicant candidate to be valid.

Applicant Partition Settings

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. To configure the Applicant Partition settings, complete the following steps in Solution Configuration Manager.

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. In the **Settings** drop down list, select **Global Settings**.
3. Navigate to **Global Settings > Partition Settings > Applicant Partition**.

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

Parameter	Description
Applicant Partition	This is the unique ID of the applicant partition.
Description	This is the description of the partition.

Configure the client settings

You can set up and configure clients. To configure client settings, complete the following steps in Solution Configuration Manager.

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. In the **Settings** list, click **Client Settings > Client Settings**.

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

Parameter	Description
Client ID	This is the unique ID of the client, which must always be set to an integer value.
Profile ID	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.
Export Profile ID	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.
Client Name	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.
Instructions Profile ID	The instructions profile ID is the ID assigned to a particular set of instructions that are saved in Instructions Settings.
Force Verify	This is a flag value that controls whether all documents for this client should stop in Verifier. If selected, all documents stop. If not enabled, only documents requiring user attention stop.

Parameter	Description
Client Group	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.
Requires Review	This is a Boolean flag that indicates whether documents assigned to the client should always be subject to review post verification.
Institution Partition	This is the ID of the institution master data partition to be used by the client. Institution ASE results are filtered based on this institution partition if ActivateInstitutionFiltering=YES within the INI file.
Applicant Partition	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	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. 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.

Configure the coursework filtering options

You can configure the settings for inspection of course rows for common issues. To configure coursework filtering, complete the following steps in Solution Configuration Manager.

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 **Coursework Filtering**.

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

Parameter	Description
Filter Courses	This is a flag value that controls whether the filtering runs. If selected, each individual filter is evaluated on whether or not it runs by its property. If it is not enabled, none of the course filters run.
Credit Calculation	This is a flag value that controls whether the Credit Calculation filter runs. If selected, 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 it is not enabled, the filter does not run. **Note:** This filter only runs if over half the rows have either credits or grades.
Course Number Pattern	This is a flag value that controls whether the Course Number Pattern filter runs. If selected, 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 it is not enabled, the filter does not run.
Description With Header	This is a flag value that controls whether the Course Number Pattern filter runs. If selected, the 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 it is not enabled, the filter does not run.
Scale Keyword	This is a flag value that controls whether the Scale Keyword filter runs. If selected, 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 it is not enabled, the filter does not run.

Parameter	Description
Header And Footer Keyword	This is a flag value that controls whether the Header and Footer keyword filter runs. If selected, 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 it is not enabled, the filter does not run.
Blank Row	This is a flag value that controls whether the Blank Row filter runs. If selected, any row that is missing the course number, description, grades, and credits is filtered. If it is not enabled, the filter does not run.
Use Grade Level Inference	This is a flag to denote whether the Grade Level is inferred from the Course Descriptions if it cannot be obtained any other way.

Configure the college coursework settings

You can configure the settings for the validation options available for the course number field for College transcripts. Although these settings are optional, it is recommended that you configure these settings. A table with the coursework information is needed in order to configure this. To configure college coursework settings, complete the following steps in Solution Configuration Manager.

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**.

   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. 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.

Parameter	Description
Update DB Export	If selected, the system updates the course number validation table with new course numbers from the current document at the point of document export. If it is not enabled, the BFT solution will not update the course validation table.
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.
Site ID Column	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.
Course ID Column	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. **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.
Subject Column	This column is mapped from the course subject field in the coursework validation database table. **Note:** This field is displayed only if **Validate From DB** check box is selected.
Course Number Column	This is a column in the database table that holds the course number. **Note:** This field is displayed only if **Validate From DB** check box is selected.

Parameter	Description
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
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.
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.
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.

Configure the date settings

You can configure the settings to control the formatting and validation of the transcript dates. To configure date settings, complete the following steps in Solution Configuration Manager.

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, select the relevant profile.
4. In the **Profile Settings** list, click **Date Settings**.

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

Parameter	Description
Verifier Format	If set to DDMMYYYY, Brainware for Transcripts displays the date in Verifier as DD/MM/YYYY. If set to MMDDYYYY, BFT displays the date in Verifier as MM/DD/YYYY. If set to YYYYMMDD, BFT displays the date as YYYY-MM-DD.
Export Format	This is the output date format for export. This setting applies to database output and all flat file exports.
Export Separator	This is the separator that is used when exporting a date value. For example, a slash (/), dot (.), or hyphen (-).
MMDD Countries	This is the comma-separated list of countries that use MM/DD/YYYY as the date format preference.
YYMMDD Countries	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.
JST Date Gap Allowed	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.

Configure the field settings

You can configure the settings that control which fields are activated for a given profile, along with their corresponding types and validation settings. To configure field settings, complete the following steps in Solution Configuration Manager.

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 **Field Settings**.

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

Parameter	Description
Document Type	This is the name of the transcript type associated with the field. Current support transcript types are: College, HighSchool, Multidistrict, Military and All. All is the default type for a field setting that is applied to all the transcript type.
Field Name	This is the name of the Brainware for Transcripts field. Standard field names should not be altered.
Verifier Label	This is the text indicating how the field is labeled on the dynamic Verifier form.
Active	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. When using the dynamic verifier form, this also hides fields and columns when they are set as inactive.
Required In RTS	This is the flag to indicate whether the field is mandatory in RTS.
Required In Verifier	This is the flag to indicate whether the field is mandatory in Verifier.
Country Filter	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 Required In RTS and Required In Verifier. 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.
Field Type	This is the type of the field.
Force Verify	This is the flag to indicate whether the field should always be marked as invalid and sent to a Verifier for review.
Default Value	This is the field default value.
Default If Nothing Extracted	This is the default value if the system does not automatically capture a value from the document.

Parameter	Description
Substitution Rule	This is the field substitution rule for text fields as registered in the BRWSUBSTITUTION table.
Min Length	This is the field minimum permitted length for text fields.
Max Length	This is the field maximum permitted length for text fields.
Right Justify	If a value has been entered in Pad Character, and this parameter is selected, the system pads the field value with that character from the left until the length specified in Max Length is reached. If a value has been entered in Pad Character, and this parameter is not enabled, the system pads the field value with that character to the right until the length specified in Max Length is reached.
Pad Character	This is the padding character for a text field.
Remove All Specials	This is the flag to indicate whether all special characters is removed from a text field.
Remove Spaces	This is the flag to indicate whether spaces is removed from a text field.
Keep Certain Specials	This is the non-comma-separated list of special characters that is retained if Remove All Specials is selected.
Remove Start End	If selected, Brainware for Transcripts removes any special characters at the beginning and at the end of an extracted text value.
Substring Start Position	The starting character used in conjunction with Substring Length when trimming an extracted value. Positive numbers start from the left while negative numbers start from the right.
Substring Length	This is the substring length.
Remove Leading Zeros	If selected, Brainware for Transcripts removes any leading zeros from an extracted text value.
Decimal Places	This is the number of decimal places for an amount field that is outputted at time of export.

Parameter	Description
Negative Type	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- **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)
Output For Zero	This is the output value during export for an amount value if it is zero.
Substitute Value If Over 0	This is the output value during export for an amount value if it is greater than zero.
Future Days	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.
No Days In Past	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.

Parameter	Description
Date Only In Current Month	If this column is selected, 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.
Field Mask	This is the comma-separated list of valid entries for the extracted or user-entered value. 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.

Error Message Settings

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. To configure the error message settings, complete the following steps in Solution Configuration Manager.

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. In the **Settings** drop down list, select **Global Settings**.
3. Navigate to **Global Settings > Error Message Settings**.

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

Parameter	Description
Error Number	This is an error message number.
Message	This is the error message text.

Configure the export options settings

You can configure the BFT data export options. It is keyed upon the export profile ID, which can be assigned to individual clients. To configure the export settings, complete the following steps in Solution Configuration Manager.

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.

2. In the **Settings** list, click **Export Settings**.
3. In the **Profile** list, select the relevant profile.
4. In the **Export Settings** list, click **Export Options**.

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

Parameter	Description
Profile Name	This is the name of the export profile.
Description	This is the description of export profile
Redo All Exports	If selected, 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 not enabled, upon retrying, only the failed export is carried out. If the flag is selected, then all three exports is performed again.
Default Export Path	This is the UNC path to the export directory which is used as the default should no export directory be set in RTS.
Output Tiff File	If selected, the system outputs a TIFF file of the document image in the export directory.
Output PDF	If selected, the system outputs a searchable PDF file for each document.
Custom Export	This is a flag to indicate whether a custom export is carried out, as specified in the User Exit Custom Export script user exit.
Output XML File	If selected, 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, then the XML export fails and the batch is sent to status 750.
XML Filename	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.

Parameter	Description
XML File Type	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.
XML Encoding Header	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.
XML File Header	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.
XML File Header Attributes	This contains any attributes that need to be assigned to the XML file header tag.
XML Doc Name	This denotes the value of the tag marking the document name section in the XML file, for example <FileInfo>.
XML Type	This denotes the value of the tag marking the transcript type (College, High School, or Military) item in the XML file, for example <type>.
XML Issue Date	This denotes the value of the tag marking the transcript issue date.
XML Student Header	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.
XML Univ Record Header	This denotes the value of the tag marking the university record section in the XML file, for example <universityInstitutionalRecord>. This value defaults to University Record if nothing else is set.
XML University Header	This denotes the value of the tag marking the university degree summary section in the XML file, for example <universitySummary>. This value defaults to University Summary if nothing else is set.

Parameter	Description
XML University Degree Header	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.
XML Univ Course Header	This denotes the value of the tag marking the university coursework sectione.g.This value will default to "University Courses" if nothing else is set.
XML Univ Course Tag	This denotes the value of the tag marking each individual college course.
XML High School Record Header	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.
XML High School Header	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.
XML Issue Date	This denotes the value of the tag marking the transcript issue date in the XML file, for example <DateIssued>.
XML Univ Course Header	This denotes the value of the tag marking the university coursework section in the XML file, for example <universityCourseRecords>. This value defaults to University Courses if nothing else is set.
XML Univ Course Tag	This denotes the value of the tag marking each individual university course in the XML file, for example <Course>.
XML Mil Course Header	This denotes the value of the tag marking the military coursework section in the XML file, for example <militaryCourseRecords>. This value defaults to MilitaryCourses if nothing else is set.

Parameter	Description
EXP Filtering	This is a flag to indicate that whether the exported courses is filtered. If selected, the exported courses is filtered based on the value of EXPExcludedGradeLetters column. Otherwise, the exported courses is not filtered.
EXP Excluded Grade Letters	Comma separated list of grade letters that is filtered out from export files. This setting only applies if the EXPFiltering field is selected. If the value of the field is set to empty string, no course is filtered out.
EXP Excluded Terms	Comma separated list of terms that are filtered out from export files. This setting only applies if the EXPFiltering field is selected. The courses with blank term are filtered out by default if the EXPFiltering field is selected.
XML HS Course Header	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.
XML HS Course Tag	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.
XML HS SAT Scores Header	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.
XML HS ACT Scores Header	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.
XML HS Other Scores Header	This denotes the value of the tag marking the high school other scores section in the XML file, for example <otherScores>. This value defaults to OtherScores if nothing else is set.

Parameter	Description
XML HS Grade	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.
XML HS Grade Semester	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.
XML Mil Record Header	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.
XML Mil Header	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.
XML Mil Credit Details Header	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.
XML HS Header SAT Records	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.
XML HS Header ACT Records	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.
XML HS Header Other Records	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.
XML Custom Fields Header	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.

Parameter	Description
Profile Name	This is the shortname of the Export Profile.
Enable Course ID Subject Split	If selected, 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.
Enable Term Year Split	If selected, 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 **Activate Term Normalization** option in the Term Normalization page is selected. • 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 stores the entire value of the term in the "Term" XML key and the "Year" XML key remains blank.

Configure the header field settings

You can configure the options that are used to map the header fields to the XML file or columns in a database. To configure header field settings, complete the following steps in Solution Configuration Manager

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. In the **Settings** list, click **Export Settings**.
3. In the **Profile** list, click the relevant profile.
4. Navigate to **Export Settings > Export Mapping > Header Field**.

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

Parameter	Description
Field Name	This is the name of the field.
XML Tag	This column represents the tag that is used for the field in an exported XML file. If left blank, the field is not exported.

Configure the HS ACT scores settings

You can configure the options that are used to map the ACT fields to the XML file or columns in a database. To configure the HS ACT settings, complete the following steps in Solution Configuration Manager.

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. In the **Settings** list, click **Export Settings**.
3. In the **Profile** list, click the relevant profile.
4. Navigate to **Export Settings > Export Mapping > HS ACT Scores**.

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

Parameter	Description
Field Name	This is the column name of the ACT Scores table.
XML Tag	This column represents the tag that is used for the field in an exported XML file. If left blank, the field is not exported.

Configure the HS header settings

You can configure the options that are used to map the high school header fields to the XML file or columns in a database. To configure HS header settings, complete the following steps in Solution Configuration Manager.

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. In the **Settings** list, click **Export Settings**.
3. In the **Profile** list, click the relevant profile.
4. Navigate to **Export Settings > Export Mapping > HS Header**.

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

Parameter	Description
Field Name	This is the name of the field.
XML Tag	This column represents the tag that is used for the field in an exported XML file. If left blank, the field is not exported.

Configure the HS courses settings

You can configure the options that are used to map the high school coursework fields to the XML file or columns in the database. To configure HS courses settings, complete the following steps in Solution Configuration Manager.

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. In the **Settings** list, click **Export Settings**.
3. In the **Profile** list, click the relevant profile.
4. Navigate to **Export Settings > Export Mapping > HS Courses**.

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

Parameter	Description
Field Name	This is the name of the field.
XML Tag	This column represents the tag that is used for the field in an exported XML file. If left blank, the field is not exported.

Configure the high school course filter settings

You can configure the settings that are used to filter courses during export based on the course description.

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

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

Parameter	Description
Filter	This is the text that is searched for inside the course description.
Is Case Sensitive	This is the flag to indicate whether this filter is case sensitive or not.

Parameter	Description
Is Exclusion	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).

Configure the HS Other Scores settings

This table is used to map the Other Scores to the XML file or columns in a database. To configure HS Other Scores settings, complete the following steps in Solution Configuration Manager.

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. In the **Settings** list, click **Export Settings**.
3. In the **Profile** list, click the relevant profile.
4. Navigate to **Export Settings > Export Mapping > HS Other Scores**.

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

Parameter	Description
Field Name	This is the column name.
XML Tag	This column represents the tag that is used for the field in an exported XML file. If left blank, the field is not exported.

Configure the HS SAT Scores settings

This table is used to map the SAT fields to the XML file or columns in a database. To configure HS SAT Scores settings, complete the following steps in Solution Configuration Manager.

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. In the **Settings** list, click **Export Settings**.
3. In the **Profile** list, click the relevant profile.
4. Navigate to **Export Settings > Export Mapping > HS SAT Scores**.

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

Parameter	Description
Field Name	This is the column name of the SAT Scores table.
XML Tag	This column represents the tag that is used for the field in an exported XML file. If left blank, the field is not exported.

Configure the MIL Header field settings

This table is used to map the military institution export fields to the XML file or columns in a database. To configure the MIL header field settings, complete the following steps in Solution Configuration Manager

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. In the **Settings** list, click **Export Settings**.
3. In the **Profile** list, click the relevant profile.
4. Navigate to **Export Settings > Export Mapping > MIL Header**.

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

Parameter	Description
Field Name	This is the name of the field.
XML Tag	This column represents the tag that is used for the field in an exported XML file. If left blank, the field is not exported.

Configure the Mil Courses settings

This table is used to map the military coursework fields to the XML file or columns in a database. To configure Mil Courses settings, complete the following steps in Solution Configuration Manager.

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

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

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.

Configure the Mil Record settings

This table is used to map the military coursework fields to the XML file or columns in a database. To configure Mil Record settings, complete the following steps in Solution Configuration Manager.

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

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

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.

Configure the Applicant Record field settings

This table is used to map the student header export fields to the XML file or columns in a database. To configure the applicant record field settings, complete the following steps in Solution Configuration Manager.

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

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

Parameter	Type	Description
EXPProfileID	Integer	This is the export profile ID.
FieldName	Freetext	This is the name of the field.

Parameter	Type	Description
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.

Configure the university header settings

You can configure the options that are used to map the university header fields to the XML file or columns in a database. To configure the university header settings, complete the following steps in Solution Configuration Manager.

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. In the **Settings** list, click **Export Settings**.
3. In the **Profile** list, click the relevant profile.
4. Navigate to **Export Settings > Export Mapping > Univ Header**.

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

Parameter	Description
Field Name	This is the name of the field.
XML Tag	This column represents the tag that is used for the field in an exported XML file. If left blank, the field is not exported.

Configure the university courses settings

You can configure the options that are used to map the university coursework fields to the XML file or columns in a database. To configure university courses settings, complete the following steps in Solution Configuration Manager.

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. In the **Settings** list, click **Export Settings**.
3. In the **Profile** list, click the relevant profile.
4. Navigate to **Export Settings > Export Mapping > Univ Courses**.

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

Parameter	Description
Field Name	This is the name of the field.
XML Tag	This column represents the tag that is used for the field in an exported XML file. If left blank, the field is not exported.

Configure the university degree settings

You can configure the options that are used to map the university degree fields to the XML file or columns in a database. To configure university degree settings, complete the following steps in Solution Configuration Manager.

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. In the **Settings** list, click **Export Settings**.
3. In the **Profile** list, click the relevant profile.
4. Navigate to **Export Settings > Export Mapping > Univ Degree**.

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

Parameter	Description
Field Name	This is the name of the field.
XML Tag	This column represents the tag that is used for the field in an exported XML file. If left blank, the field is not exported.

Configure the university records settings

You can configure the options that are used to map the institution export fields to the XML file or columns in a database. To configure the university records settings, complete the following steps in Solution Configuration Manager.

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. In the **Settings** list, click **Export Settings**.
3. In the **Profile** list, click the relevant profile.
4. Navigate to **Export Settings > Export Mapping > Univ Record**.

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

Parameter	Description
Field Name	This is the name of the field.

Parameter	Description
XML Tag	This column represents the tag that is used for the field in an exported XML file. If left blank, the field is not exported.

Configure the grade settings

You can configure the settings for grade validation for transcripts. To configure grade settings, complete the following steps in Solution Configuration Manager.

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, select the relevant profile.
4. In the **Profile Settings** list, under **Grades**, click **Grade Settings**.

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

Parameter	Description
Accepted College Grade Letters	This is a comma-separated list of valid entries for the extracted grade.
Accepted HS Grade Letters	This is a comma-separated list of valid entries for the extracted grade of a high school document.
Accepted HS Numeric Grade Range	This is a range of valid numbers for the extracted grades of a high school document.
Enable GPA Validation	When selected, the extracted GPA is compared against the GPA calculated from each course on the transcript.
GPA Validation Tolerance	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.
Allow Invalid GPA In Verifier	When selected, this allows a verifier to manually validate the Cumulative GPA field.

Parameter	Description
Set Invalid Reason In Verifier	When selected, this translates the following 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.
Excluded Grade Letters	This is a comma-separated list of grades to exclude when calculating the GPA. This setting only applies to College transcripts.
Perform Numeric Grade Translation	This is a comma-separated list of grades to exclude when calculating the GPA.This setting only applies to College transcripts.

Configure the numeric grade extraction settings

This table contains a list of Institution IDs which must always trigger numeric grade extraction from College transcripts. On the **Institution Settings** page, if the **Update Numeric Grade Table** check box is selected, an institution is added to this table automatically if it reports numeric grades during export. To configure numeric grade extraction settings, complete the following steps in Solution Configuration Manager.

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, under **Grades**, click **Numeric Grade Extraction**.

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

Parameter	Description
Institution ID	This is the institution ID from the SIS which requires numeric grade extraction from College transcripts.

Configure the numeric grade translation settings

You can configure the settings to enable the rules for the numerical grades of a term. To configure numeric grade translation settings, complete the following steps in Solution Configuration Manager.

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, under **Grades**, click **Numeric Grade Translation**.

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

Parameter	Description
Institution ID	This is the institution ID.
Rule ID	This is the rule ID that uniquely identifies each rule.
Alpha Grade	This is the alphabetic grade.
Num Grade Start	This is the start range of the numeric grade.
Num Grade End	This is the end range of the numeric grade.

Configure the institution settings

You can configure the settings for validating an extracted institution ID. To configure institution settings, complete the following steps in Solution Configuration Manager.

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 **Institution Settings**.

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

Parameter	Description
Validate From ASSA	This denotes whether an extracted institution ID is validated against the Associative Search Engine Pool / Institution Extract. Select this check box.
Alph Num Site Separator	This is the special character used to separate an institution ID and site ID in the unique ID column in the institution ASSA pool.
Default Country	If no country column is available in the applicant extract used by the Applicant ASE 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.

Parameter	Description
Weight	If **Validate From ASSA** is selected, this is the minimum weight for an Institution candidate to be valid.
Distance	If **Validate From ASSA** is selected, this is the minimum distance for an Institution candidate to be valid.
Update Numeric Grade Inst. Table	This denotes whether institutions with numeric grades within the College Coursework are automatically added to the Numeric Grade Extraction during Export. If the Update Numeric Grade Inst. Tableis selected, then the Institution/Site combo is added to Numeric Grade Extraction if it does not already exist in the table.
Default Military Ins ID	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.

Institution Partition

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. To configure the institution partition settings, complete the following steps in Solution Configuration Manager.

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. In the **Settings** drop down list, select **Global Settings**.
3. In the **Global Settings** list, under **Partition Settings**, click **Institution Partition**.

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

Parameter	Description
Institution Partition	This is the unique ID of the institution partition.

Parameter	Description
Description	This is the description of the partition.

Configure the instructions profile settings

You can configure 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. To configure instructions profile settings, complete the following steps in Solution Configuration Manager.

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

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

Parameter	Description
Profile Name	This is the short name for the instructions profile.
Instructions	This is the instructions text.

Invalid Reason Settings

The **Invalid Reasons Settings** page displays the default settings associated with the invalid reason field. This is a global setting that works independently of the client or profile. To configure the invalid reason settings, complete the following steps in Solution Configuration Manager.

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. In the **Settings** drop down list, select **Global Settings**.
3. In the **Global Settings** list, under **Invalid Reasons**, click **Invalid Reason Settings**.

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

Parameter	Description
Default Text	This is the default invalid reason, such as None.
Default Export Code	This is the export code associated with the default invalid reason, such as 0.

Invalid Reason Display Text

The **Invalid Reason Display Text** page contains the invalid reasons that may be selected in Verifier. It is a global setting that is independent of the client or profile. To configure the invalid reason display text settings, complete the following steps in Solution Configuration Manager.

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. In the **Settings** drop down list, select **Global Settings**.
3. In the **Global Settings** list, under **Invalid Reasons**, click **Invalid Reason Display Text**.

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

Parameter	Description
Index	This is the invalid reason index.
Rule Name	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 • SETINSTTOVALID • SETINSTANDAPPTOVALID • SETCUMGPATOVALID • SETGPAANDAPPTOVALID • SETGPAANDINSTTOVALID • SETGPAINSTAPPTOVALID • SETTERMTOVALID • SETGRADETOVALID For more information, refer to Invalid Reason Rules
Verifier Display	This is the invalid reason message displayed in Verifier.
Export Code	This is the invalid reason code exported by Brainware for Transcripts if the Invalid Reason field is set.

Invalid Reason Rules

To export documents having fields that can't be corrected in the Verifier applications, Invalid Reasons can be applied to the document. Each invalid reason is switching off parts of the field validation, which enables the verifier user to validate the document.

Invalid Reason Rule	Description
Set Applicant To Valid (SETAPPTOVALID)	The rule SETAPPTOVALID is triggered, if • Applicant not found is selected in Verifier as Invalid reason and the Invalid Reason is accepted with the return key. • Applicant not found is selected in Verifier as Invalid reason and the Applicant ID field is accepted with the return key • Applicant not found is selected in Verifier as Invalid reason and the document is validated (last invalid field is validated) Results of the triggered SETAPPTOVALID rule are: • The Applicant ID field is set to blank and valid. • Applicant Info fields are set to blank and valid. Applicant Info fields are: Applicant Site ID, Applicant ASE Details, First Name, Middle Name, Last Name, Date of Birth, and Social Security Number. • An applicant ID is not exported (export and reporting on export) • The configured Invalid Reason Code for SETAPPTOVALID is exported, if configured. Verifiers have the ability to manually enter applicant fields, such as First Name, Middle Name, Last Name, Date of Birth, and Social Security Number.

Invalid Reason Rule	Description
Set Institution To Valid (SETINSTTOVALID)	The rule SETINSTTOVALID is triggered, if • Institution not found is selected in Verifier as Invalid reason and the Invalid Reason is accepted with the return key. • Institution not found is selected in Verifier as Invalid reason and the Institution ID field is accepted with the return key • Institution not found is selected in Verifier as Invalid reason and the document is validated (last invalid field is validated) Results of the triggered SETINSTTOVALID rule are: • The Institution ID field is set to blank and valid. • Institution Info fields are set to blank and valid. Institution Info fields are: Institution Site ID, Institution ASE Details • An Institution ID is not exported (export and reporting on export) • The Invalid Reason is exported as SETINSTTOVALID, if configured • The configured Invalid Reason Code for SETINSTTOVALID is exported, if configured.

Invalid Reason Rule	Description
Set Institution and Applicant To Valid (SETINSTANDAPPTOVALID)	The rule SETINSTANDAPPTOVALID is triggered, if: • Institution and Applicant not found is selected in Verifier as Invalid reason and the Invalid Reason is accepted with the return key • Institution and Applicant not found is selected in Verifier as Invalid reason and the Applicant ID field is accepted with the return key • Institution and Applicant not found is selected in Verifier as Invalid reason and the Institution ID field is accepted with the return key • Institution and Applicant not found is selected in Verifier as Invalid reason and the document is validated (last invalid field is validated) Results of the triggered SETINSTANDAPPTOVALID rule are: • The Applicant ID field is set to blank and valid. • Applicant Info fields are set to blank and valid. Applicant Info fields are: Applicant Site ID, Applicant ASE Details, First Name, Middle Name, Last Name, Date of Birth, and Social Security Number. • The Institution ID field is set to blank and valid. • Institution Info fields are set to blank and valid. Institution Info fields are: Institution Site ID, Institution ASE Details • An applicant ID is not exported (export and reporting on export) • An institution ID and name are not exported (export and reporting on export) • The Invalid Reason is exported as SETINSTANDAPPTOVALID, if configured. • The configured Invalid Reason Code for SETINSTANDAPPTOVALID is exported, if configured

Invalid Reason Rule	Description
Set Cumulated GPA To Valid (SETCUMGPATOVALID)	The rule SETCUMGPATOVALID is triggered, if • Cumulated GPA <> Calculated GPA is selected in Verifier as Invalid reason and the Invalid Reason is accepted with the return key. • Cumulated GPA <> Calculated GPA is selected in Verifier as Invalid reason and the Cumulative GPA field is accepted with the return key. Results of the triggered SETCUMGPATOVALID rule are: • The Cumulative GPA field is set valid. The Invalid Reason is exported as SETCUMGPATOVALID, if configured • The configured Invalid Reason Code for SETCUMGPATOVALID is exported, if configured

Invalid Reason Rule	Description
Set GPA and Applicant To Valid (SETGPAANDAPPTOVALID)	The rule SETGPAANDAPPTOVALID is triggered, if • GPA and Applicant invalid is selected in Verifier as Invalid reason and the Invalid Reason is accepted with the return key. • GPA and Applicant invalid is selected in Verifier as Invalid reason and the Applicant ID field is accepted with the return key. • GPA and Applicant invalid is selected in Verifier as Invalid reason and the Cumulative GPA field is accepted with the return key. • GPA and Applicant invalid is selected in Verifier as Invalid reason and the document is validated (last invalid field is validated). Results of the triggered SETGPAANDAPPTOVALID rule are: • The Applicant ID field is set to blank and valid. • Applicant Info fields are set to blank and valid. Applicant Info fields are: Applicant Site ID, Applicant ASE Details, First Name, Middle Name, Last Name, Date of Birth, and Social Security Number • The Cumulative GPA field is set to valid. • An applicant ID is not exported (export and reporting on export) • The Invalid Reason is exported as SETGPAANDAPPTOVALID, if configured • The configured Invalid Reason Code for SETGPAANDAPPTOVALID is exported, if configured Verifiers have the ability to manually enter applicant fields, such as First Name, Middle Name, Last Name, Date of Birth, and Social Security Number.

Invalid Reason Rule	Description
Set GPA and Institution To Valid (SETGPAANDINSTTOVALID)	The rule SETGPAANDINSTTOVALID is triggered, if: • GPA and Institution invalid is selected in Verifier as Invalid reason and the Invalid Reason is accepted with the return key. • GPA and Institution invalid is selected in Verifier as Invalid reason and the Cumulative GPA field is accepted with the return key. • GPA and Institution invalid is selected in Verifier as Invalid reason and the Institution ID field is accepted with the return key. • Institution and Applicant not found is selected in Verifier as Invalid reason and the document is validated (last invalid field is validated). Results of the triggered SETGPAANDINSTTOVALID rule are: • The Institution ID field is set to blank and valid. • Institution Info fields are set to blank and valid. Institution Info fields are: Institution Site ID, Institution ASE Details • The Cumulative GPA field is set to valid. • An institution ID and name are not exported (export and reporting on export) • The Invalid Reason is exported as SETGPAANDINSTTOVALID, if configured • The configured Invalid Reason Code for SETGPAANDINSTTOVALID is exported, if configured

Invalid Reason Rule	Description
Set GPA, Institution and Applicant To Valid (SETGPAINSTAPPTOVALID)	The rule SETGPAINSTAPPTOVALID is triggered, if • GPA, Institution, Applicant invalid is selected in Verifier as Invalid reason and the Invalid Reason is accepted with the return key. • GPA, Institution, Applicant invalid is selected in Verifier as Invalid reason and the Cumulative GPA field is accepted with the return key. • GPA, Institution, Applicant invalid is selected in Verifier as Invalid reason and the Applicant ID field is accepted with the return key. • GPA, Institution, Applicant invalid is selected in Verifier as Invalid reason and the Institution ID field is accepted with the return key. • GPA, Institution, Applicant invalid is selected in Verifier as Invalid reason and the document is validated (last invalid field is validated). Results of the triggered SETGPAINSTAPPTOVALID rule are: • The Applicant ID field is set to blank and valid. • Applicant Info fields are set to blank and valid. Applicant Info fields are: Applicant Site ID, Applicant ASE Details, First Name, Middle Name, Last Name, Date of Birth, and Social Security Number • The Institution ID field is set to blank and valid. Institution Info fields are set to blank and valid. Institution Info fields are: Institution Site ID, Institution ASE Details • The Cumulative GPA field is set to valid. • An applicant ID is not exported (export and reporting on export) • An institution ID and name are not exported (export and reporting on export) • The Invalid Reason is exported as "SETGPAINSTAPPTOVALID, if configured • The configured Invalid Reason Code for SETGPAINSTAPPTOVALID is exported, if configured Verifiers have the ability to manually enter applicant fields, such as First Name, Middle Name, Last Name, Date of Birth, and Social Security Number.

Invalid Reason Rule	Description
Set Term To Valid (SETTERMTOVALID)	**Note:** The Invalid reason "UNABLE TO NORMALIZE TERM" with rule "SETTERMTOVALID" is not documented. This section tries to provide a draft for this Invalid Reason Rule The rule SETTERMTOVALID is triggered, if: • Unable to normalize Term is selected in Verifier as Invalid reason and the Invalid Reason is accepted with the return key. • Unable to normalize Term is selected in Verifier as Invalid reason and a cell of the Coursework table column "Term" is accepted with the return key. Results of the triggered SETTERMTOVALID rule are: • All cells in the column "Term" of the Coursework table are set to valid and error descriptions are emptied. (Applies only to documents that are classifies either as "College" or "MultiDistrict") • The term normalization on export is skipped (export and reporting on export) • The Invalid Reason is exported as SETTERMTOVALID, if configured. • The configured Invalid Reason Code for SETTERMTOVALID is exported, if configured.

Invalid Reason Rule	Description
Set Grade To Valid (SETGRADETOVALID)	**Note:** The Invalid reason "UNABLE TO TRANSLATE GRADE" with rule "SETGRADETOVALID" is not documented. This section tries to provide a draft for this Invalid Reason Rule The rule SETGRADETOVALID is triggered, if: • Unable to translate Grade is selected in Verifier as Invalid reason and the Invalid Reason is accepted with the return key. • Unable to translate Grade is selected in Verifier as Invalid reason and a cell of the Coursework table column "Grade" is accepted with the return key. Results of the triggered SETGRADETOVALID rule are: • All cells in the column "Grade" of the Coursework table are set to valid and error descriptions are emptied. (Applies only to documents that are classifies either as "College") • The Invalid Reason is exported as "SETGRADETOVALID", if configured • The configured Invalid Reason Code for SETGRADETOVALID is exported, if configured

Content Connections Settings

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. To configure the Content Connections Settings, complete the following steps in Solution Configuration Manager.

1. On the **Configure Project** page, in the **Project** 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 **Content Connections Settings**.

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

Parameter	Description
Write External Messages	This is the flag to indicate whether the document's status is updated in Perceptive Content's external message table.

Parameter	Description
SQL Connection Group	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. **Note:** This field is displayed only if you select **Write External Messages**.
Use PCR Integration	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 Export Settings. The standard XML output activation file is not needed for this to occur. For non-transcript documents, the system uses the XML file header configured in the Export Settings, 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.
PCR Update Procedure	Populated with the name of the PCR update procedure. The default value is `rs/capture/update/`. **Note:** This field is displayed only if you select **Write External Messages**.

Parameter	Description
PCR Export Procedure	Populated with the name of the PCR export procedure. The default value is `rs/capture/export/`. **Note:** This field is displayed only if you select **Write External Messages**.
PCR Output Key	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. **Note:** This field is displayed only if you select **Write External Messages**.
PCR Server	Populated with the name of the PCR server.
Use Base Class Name	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`. **Note:** This field is displayed only if you select **Write External Messages**.

Parameter	Description
External Message Schema	Populated with the name of the schema of tables for external messages. This schema name is needed when Write External Messages is selected 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. **Note:** This field is displayed only if you select **Write External Messages**.

Configure the profile settings

You can configure the list of profiles within the project, along with their descriptions. A profile must be registered within this table before it can be assigned to a client. To configure profile settings, complete the following steps in Solution Configuration Manager.

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, select the relevant profile.
4. In the **Profile Settings** list, click **Profile Settings**.

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

Parameter	Description
Profile Name	This is the short name of the profile.
Profile Description	This is the description of the profile.

Applicant Master Mapping

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. To configure the Applicant Master Mapping, complete the following steps in Solution Configuration Manager.

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. In the **Settings** drop down list, select **Global Settings**.
3. Navigate to **Global Settings > Search Settings > Applicant Master Mapping**.

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

Parameter	Description
ID	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 The delimiter (~ in the above example) is configurable using the Alph Num Site Separator 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.
First Name	This is the Capture column name denoting the applicant's first name.
Middle Name	This is the Capture ASE column name denoting the applicant's middle name.
Last Name	This is the Capture ASE column name denoting the applicant's last name.
Address1	This is the Capture ASE column name denoting the first line of the applicant's address.
Address2	This is the Capture ASE column name denoting the second line of the applicant's address.
City	This is the Capture ASE column name denoting the applicant's city of origin.
State	This is the Capture ASE column name denoting the applicant's state.

Parameter	Description
Zip	This is the Capture ASE column name denoting the applicant's zip/postal code.
Country	This is the Capture ASE column name denoting the applicant's country of origin.
Tel No	This is the Capture ASE column name denoting the applicant's telephone number.
Date of Birth	This is the Capture ASE column name denoting the applicant's date of birth.
Social Security Number	This is the Capture ASE column name denoting the applicant's social security number.
App Identifier	This is the Capture ASE column name that represents a unique applicant identifier. For example, SSN.
Partition ID	This is the Capture ASE column name that represents the applicant's partition ID.
Site ID	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.
External ID	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	This is the Capture ASE column name denoting the custom value that can contain additional information about the applicant.
Custom2	This is the Capture ASE column name denoting the custom value that can contain additional information about the applicant.
Custom3	This is the Capture ASE column name denoting the custom value that can contain additional information about the applicant.
Custom4	This is the Capture ASE column name denoting the custom value that can contain additional information about the applicant.

Parameter	Description
Custom5	This is the Capture ASE column name denoting the custom value that can contain additional information about the applicant.

Institution Master Mapping

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. To configure the Institution Master Mapping, complete the following steps in Solution Configuration Manager.

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. In the **Settings** drop down list, select **Global Settings**.
3. Navigate to **Global Settings > Search Settings > Institution Master Mapping**.

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

Parameter	Description
ID	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.

Parameter	Description
SiteID	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	This is the Capture ASE column name denoting the institution's name.
Address1	This is the Capture ASE column name denoting the first line of the institution's address.
Address2	This is the Capture ASE column name denoting the second line of the institution's address.
City	This is the Capture ASE column name denoting the institution's city of origin.
State	This is the Capture ASE column name denoting the institution's state.
Zip	This is the Capture ASE column name denoting the institution's zip/postal code.
Country	This is the Capture ASE column name denoting the institution's country of origin.
TelNo	This is the Capture ASE column name denoting the institution's telephone number.
CEEB	This is the Capture ASE column name denoting the institution's CEEB code.
ACT	This is the Capture ASE column name denoting the institution's ACT code number.
FICE	This is the Capture ASE column name denoting the institution's FICE code.
OPEID	This is the Capture ASE column name denoting the institution's OPE ID.
PartitionID	This is the Capture ASE column name that represents the institution's partition ID.
ExternalID	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.

Substitution Rules

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. To configure the substitution rules, complete the following steps in Solution Configuration Manager.

1. On the **Configure Project** page, in the **Project** 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 **Substitution Rules**.

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

Parameter	Description
Substitution Rule	This is the substitution rule ID.
Original	This is the segment of a text string to replace.
Replace	This is a text string that is used to replace the original value entered in Original if present in the string.

User Management

This table 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. To configure the user management settings, complete the following steps in Solution Configuration Manager.

1. On the **Configure Project** page, in the **Project** list, select the BFT project to be used.
2. In the **Settings** drop down list, navigate to **Global Settings > User Management**.

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

Parameter	Description
User ID	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.
Client Group	This is the client group to which the user has been assigned.

Parameter	Description
Authority Level	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.
Requires Review	If selected, all documents verified by the user go to a review state for quality control.
Domain	This is the user Windows domain for Windows based authentication.
Password	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.
Primary Group Name	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.

Configure the batch state filtering settings

You can configure batch filtering within the Verifier batch list based on the transcript type, such as Military, College, or High School. To configure batch state filtering settings, complete the following steps in Solution Configuration Manager.

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 **Batch State Filtering**.

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

Parameter	Description
Enable Batch State Filtering	If selected, 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.
Use College Batch State	This is the college batch state. It is set to 550 by default. **Note:** This field is available only when you select the **Enable Batch State Filtering**.
High School Batch State	This is the high school batch state. It is set to 551 by default. **Note:** This field is available only when you select the **Enable Batch State Filtering**.
Use Military Batch State	This is the military batch state. It is set to 552 by default. **Note:** This field is available only when you select the **Enable Batch State Filtering**.

Normalized Terms

This table contains the settings to create a normalized term table and to enable customers insert additional normalized terms to the database, if needed. To configure the normalized terms settings, complete the following steps in Solution Configuration Manager.

1. On the **Configure Project** page, in the **Project** 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 **Normalized Terms**.

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

Parameter	Description
Normalized Term	This is the constant value to be used in term normalization.

Parameter	Description
Use First Year In Date	If selected, 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 not enabled, the normalized term displays the second year available in the extracted term. For example, "95/96" is converted to 1996 or 96.

Configure the normalized term mapping settings

You can configure the settings to configure the mapping of extracted terms from a College transcript with the normalized terms. To configure normalized term mapping settings, complete the following steps in Solution Configuration Manager.

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 **Normalized Term Mapping**.

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

Parameter	Description
Normalized Term	This is the constant value to be used in term normalization.
Extracted Term	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.

Configure the terms below coursework settings

You can configure the settings to enable extraction of Terms from college transcripts which present the Term below the coursework block. To configure the terms below coursework settings, complete the following steps in Solution Configuration Manager.

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 **Terms Below Coursework**.

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

Parameter	Description
Institution ID	This is the Institution ID 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 AlphaNumSiteSeperator (e.g. 123456-1, where InstititionID=123456, SiteID=1, and AlphaNumSiteSeperator="-") .

Configure the term format analysis settings

You can configure the settings to enable adding format analysis search strings to extract terms not returned by out-of-the-box settings. To configure term format analysis settings, complete the following steps in Solution Configuration Manager.

Note: This feature can be used only if the **ActivateTermFormatAnalysis** parameter in the GRL section in the INI file is enabled (YES).

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 **Term Format Analysis**.

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

Parameter	Description
Index ID	This is the IndexID of the format analysis string.
Compare Type	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
Format String	This is the format analysis search string that is used to extract the terms.
Ignore Characters	This is the list of characters that can be ignored during extraction.

Configure the terms date rule settings

You can configure the settings to enable the rules for the date ranges of a term. To configure terms date rule settings, complete the following steps in Solution Configuration Manager.

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. Navigate to **Profile Settings > Term Settings > Terms Date Rule**.

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

Parameter	Description
Rule ID	This is the rule ID that uniquely identifies each rule.
Start Day	This is the start date of the date range. **Note:** This date must be within the range of days available in the start month.
End Day	This is the end date of the date range. **Note:** This date must be within the range of days available in the end month.
Start Month	This is the start month of the date range.
End Month	This is the end month of the date range.
Term	This is the term mapped to the date range.

MultiDistrict College Settings

This table contains the settings to enable the processing of multi-district or multi-campus college transcripts. To configure the multidistrict college settings, complete the following steps in Solution Configuration Manager.

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 **MultiDistrict College Settings**.

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

Parameter	Description
Institution ID	This is the institution ID.

Parameter	Description
College Code	This is the ID that uniquely identifies each college.
College Code Export	This is the value corresponding to each college code that is displayed after export.

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.

Name of function / sub-routine	Description
SplitString	This subroutine performs a split on a given string based on a nominated separator, and returns the 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.

Name of function / sub-routine	Description
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. 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.

Name of function / sub-routine	Description
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 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.

Name of function / sub-routine	Description

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 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.

Name of function / sub-routine	Description
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.
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.

Name of function / sub-routine	Description

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(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.

Name of function / sub-routine	Description
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
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

Name of function / sub-routine	Description
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 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

Name of function / sub-routine	Description
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 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 Export Settings. 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, 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.

User Exit	Calling routine	Description and possible uses
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.
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.

User Exit	Calling routine	Description and possible uses
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.
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.

User Exit	Calling routine	Description and possible uses
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

User Exit	Calling routine	Description and possible uses
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. 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.

User Exit	Calling routine	Description and possible uses
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.
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.

User Exit	Calling routine	Description and possible uses
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.
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.

User Exit	Calling routine	Description and possible uses
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.
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.
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.

Structure element	Type	Description
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.
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.

Structure element	Type	Description
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 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 scrip**t.
3. Copy the following script into the script window.

```
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.

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.

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.

INI File - General Settings

While modifying an INI file setting, if a document has already been processed till Extraction state then the status should be changed back to Successful Import for the modified settings to be effective.