CHAPTER 1

(NLD) Managing the BRON-HO Interface

Bundle 32: This is a new chapter for BRON HO. Numerous code changes have been made to the BRON HO feature. Review the whole chapter.

This chapter provides an overview of BRON-HO functionality and discusses how to

- Set up BRON-HO.
- Manage BRON-HO student data.
- Send messages to BRON-HO and receive messages from BRON-HO.
- Review BRON-HO transactions.
- Manage outbound Suspended messages.

Understanding BRON-HO

BRON-HO is an interface created for Dutch Universities and Universities of applied Science. The Interface facilitates a regulatory data exchange between Dutch Institutions, Studielink and DUO. The larger requirement concerns data exchange during key moments in the Admissions, Enrollment and Degree process. The BRON-HO requirements cover that part of the process from which institution based funding amounts are deduced. The funding that is received from the ministry is vital. (For more information on funding please refer to http://www.vsnu.nl/Universities/Funding.htm)

Oracle facilitates the exchange of Person data, Tuition fee requirements and Admissions through Studielink functionality.
See *PeopleSoft Recruiting and Admissions 9.0 PeopleBook***,** (NLD) Managing Studielink
The exchange of enrollments and degrees from which DUO ascertains for which students the institution is eligible to receive funding is covered by the BRON-HO interface. We speak of BRON-HO when referring to the interface as well as the overall functionality. We refer to DUO when we are referring to the third party who maintains and oversees BRON-HO processing and determines funding status.

The following overview shows how Studielink and BRON-HO processing facilitate this business process.

Business Process	Covered By
Admissions The student uses the Studielink admissions portal to create a user account with the intent of requesting an admission to a university or university of applied science.	Studielink
Admissions - Student Identification Students are identified and authenticated by DIGID (Dutch nationals) or by the Institution itself. Students receive an Education number or National ID. Current information from the government registry is sent to the institution.	Studielink
Admissions - Delivery of Prior Education records	Studielink

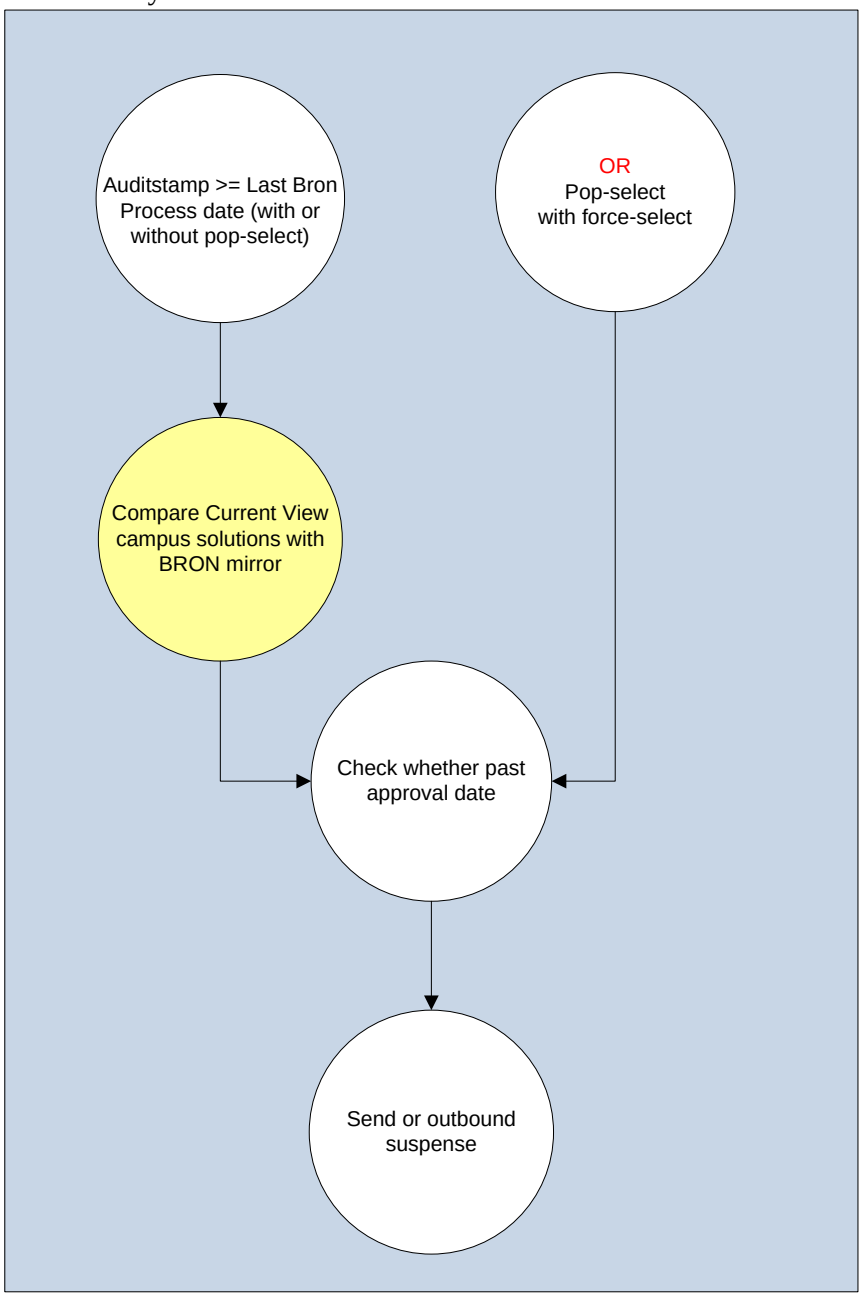
DUO delivers current enrollments and prior education data to the institution including any registered course grades.	
Admissions - Selecting an Academic Program Student selects academic program and institution via Studielink website. Studielink exchanges admission request with institution in question.	Studielink
Lot drawing process Whenever relevant DUO determines whether the academic program for which the student is requesting admission has a maximum number of applicants which may be admitted (numerus fixus). If applicable DUO admits students via a random selection process (Lot Drawing).	Studielink
Determination of Tuition Fees DUO indication tuition fees is determined based on academic program (first or second Program of Study), academic period, Nationality (European Union, non-European union) is sent to institution. The institution uses this information to calculate Tuition Fees	BRON-HO
Communication of Tuition fees The institution sends calculated Tuition Fees information to Studielink. The Tuition Fee amount is visible for the student at the Studielink website.	Studielink
Enrollment – Confirmation After the student has been admitted and matriculated the institution sends an enrollment confirmation to Studielink. The Enrollment Confirmation is visible for the student at the Studielink website.	Studielink
Enrollment – Notification to DUO for funding After the student has been admitted and matriculated the institution sends the enrollment information to DUO. The Enrollment is registered (if it concerns a CROHO academic Program) in the *OD Register*.	BRON-HO
Determination of status Funding Based on delivered Enrollment data DUO will communicate whether the institution will receive funding for this student enrollment. The indication Funding can be communicated multiple times with status temporary and once with status Final.	BRON-HO
End of Enrollment- Confirmation If and when the student withdraws from the academic program or terminates his/her admission or enrollment, the institution confirms the cancellation or end of enrollment to Studielink. Likewise student requests concerning end of enrollment requested via the Studielink website are communicated to the institution. The status of the end of admission/enrollment is visible to the student via the Studielink website.	Studielink
End of Enrollment – Notification to DUO for funding If the academic program is a CROHO program the termination of admission or enrollment may impact funding allocation and will need to be communicated to DUO	BRON-HO
End of Enrollment – Notification of Degree obtained If the student completes an accredited CROHO program (or program phase) with Degree, the institution communicates this to DUO. The Degree is registered in register OR.	BRON-HO
Yearly Cycle Relevant steps in the process are repeated yearly during Registration, such as: Determination of Tuition Fees Communication of Tuition fees Enrollment – Confirmation Enrollment – Notification to DUO for funding Determination of status Funding	Studielink and BRON-HO

Studielink processing is based on initiation by specific triggers which can be initiated by the user. BRON-HO processing is done based on comparison of a “Snapshot” of the relevant tables in Campus Solutions and comparing that to a table which contains data which has been received from BRON as an approved mutation.

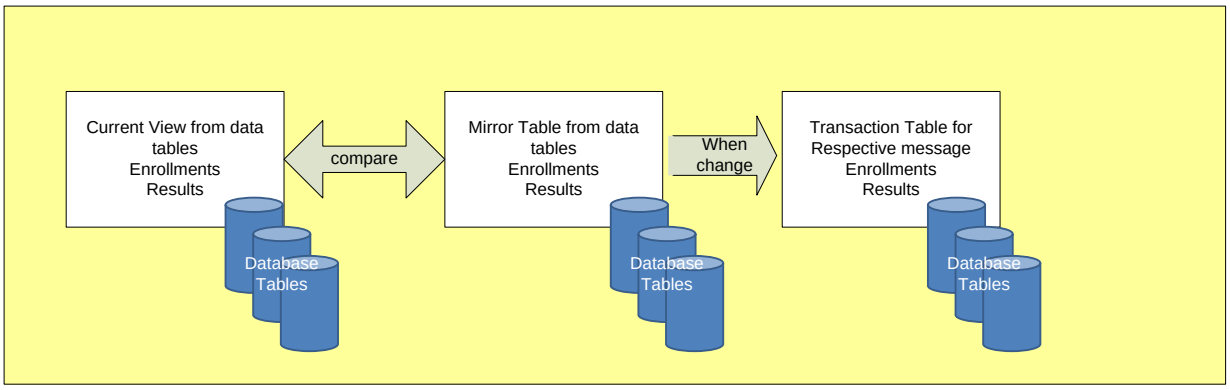
The first view is hence referred to as the *Current View*. This view incorporates all necessary business logic for selecting the correct Enrollment and Correct Result (Degree) row for any given student. The BRON-HO table is referred to as the *BRON Mirror Table*. There is a *Current View* which contains all data concerning Student

Enrollments and a *Current View* which contains data concerning Student Degrees. There is a corresponding *Mirror Table* for both Enrollments and Degrees.

The *BRON Mirror Table* is updated whenever a message approval is received from BRON-HO. The information, when both CS and BRON are in sync, should be exactly the same. The processing flow is schematically as follows:



Detailed process showing the compare between the *Current View* and the *Mirror Table.*



During processing without Population Selection Resend options any mutation that was made after the last Processing date is considered by the BRON process. If users want to override the settings this is possible by overriding the process by toggling options on the BRON run control record combined with using Population Selection.

Setting Up BRON-HO

This section discusses how to:

- Activate BRON-HO functionality.
- Set up BRON-HO sequence numbers.
- Set up BRON-HO sequence triggers.
- Set up BRON-HO process options.
- Set up BRON-HO cross reference tables.
- Set up BRON-HO inclusions/exclusions.
- Set up BRON-HO program actions.
- Set up BRON-HO funding codes.
- Set up BRON-HO study levels.
- Set up BRON-HO higher education sections.
- Set up BRON-HO funding status awarded.
- Set up BRON-HO end reasons.
- Set up Integration Broker to communicate with BRON-HO.
- Set up conversion import/export.

Note. Institutions are expected to complete the necessary Academic Structure setup to support the NLD Higher Education functionality within the Campus Solutions system. Your institution should register with Studielink to access the Studielink application.

See Also

PeopleSoft Campus Solutions 9.0 Application Fundamentals PeopleBook, Designing Your Academic Structure, (NLD) Defining Dutch Academic Structure

Pages Used to Set Up BRON-HO

Page Name	Definition Name	Navigation	Usage
Academic Institution 6	SSR_INST_FEATURES	SACR, Foundation Tables, Academic Structure, Academic Institution Table	Set up to indicate that BRON-HO processing is being used by this institution.
BRON Sequence Numbers	SSR_BRHO_SQTRG_NLD	Records and Enrollment, Base register Higher ED NLD, BRON-HO Setup, BRON-HO sequence Numbers Setup	The last Sequence number for the BRON Enrollment sequence Number and BRON Result Sequence number are administered here. Numbers are allocated from this table.
BRON-HO Sequence Numbers Triggers	SSR_BRHO_SQTRG_NLD	Records and Enrollment, Base register Higher ED NLD, BRON-HO Setup, BRON-HO Setup, BRON-HO sequence Numbers Setup.	Administer the format and the Last number allocated for BRON Enrollments and Results.
BRON-HO Process Options	SSR_BR_PRC_OPT_NLD	Records and Enrollment, Base register Higher ED NLD, BRON-HO Setup, BRON-HO Setup, BRON-HO Processing Options	Administer a start date from which times mutations will be processed and determine whether mutations must be sent after formal Approval.
BRON-HO Cross Reference	SSR_BR_CROSREF_NLD	Records and Enrollment, Base register Higher ED NLD, BRON-HO Setup ,BRON-HO Setup, BRON-HO Cross Reference	Establish a mapping between setup values in Campus Solutions and values known to BRON.
BRON-HO Inclusions/Exclusions	SSR_BR_INC_EXC_NLD	Records and Enrollment, Base register Higher ED NLD, BRON-HO Setup, BRON-HO Setup, BRON-HO Inclusions/Exclusions	Include or Exclude any values from the Academic Structure for BRON Processing selection.
Program Actions BRON	SSR_BR_PRGACT_NLD	Records and Enrollment, Base register Higher ED NLD, BRON-HO Setup ,BRON-HO Setup, Program Actions BRON	Administer Program Actions which are used to establish whether an Enrollment or Result may be sent to BRON as well as BRON End Reason enrollment actions.
BRON Funding Codes	SSR_BR_FUND_CD_NLD	Records and Enrollment, Base register Higher ED NLD, BRON-HO Setup , BRON Funding Codes	Funding code values as present in the Inbound Message Indication Tuition Fees.
BRON Study Levels	SSR_BR_STD_LVL_NLD	Records and Enrollment, Base register Higher ED NLD, BRON-HO Setup, BRON Study Levels	BRON Study Level values as present in the Inbound Message Indication Tuition Fees.
BRON Higher Education Sections	SSR_BR_HE_SECT_NLD	Records and Enrollment, Base register Higher ED NLD, BRON-HO Setup, BRON Higher Education Sections	BRON Sections values as present in the Inbound Message Indication Tuition Fees.
BRON Funding Status Awarded	SSR_BR_FND_AWD_NLD	Records and Enrollment, Base register Higher ED NLD, BRON-HO Setup, BRON Funding Status Awarded	Provisionally awarded funding status which is supplied by the funding status awarded message.

Page Name	Definition Name	Navigation	Usage
BRON End Reason	SSR_BR_END_RSN_NLD	Records and Enrollment, Base register Higher ED NLD, BRON-HO Setup, BRON End Reason	BRON End Reason as used on the cross reference setup page 'Program Actions Bron'.
Service Operations		PeopleTools, Integration Broker, Integration Setup, Service	Activate all BRON-HO inbound and outbound service operations.
Conversion Import/Export	SSR_BRHO_CONV_NLD	Records and Enrollment, Base register Higher ED NLD, BRON-HO Setup, Conversion Import/Export	One off process used for BRON conversion.

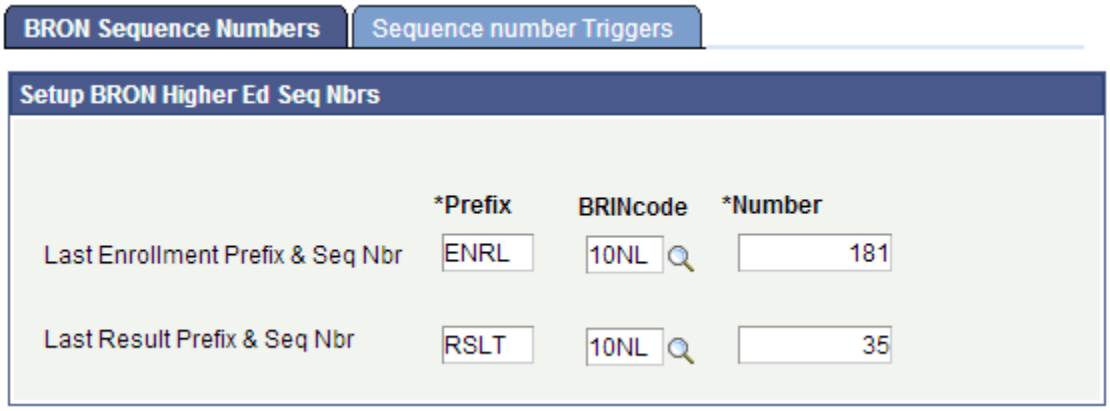
Activating BRON-HO functionality

Access the institution 6 setup page (SACR > Foundation Tables > Academic Structure > Academic Institution Table, Academic Institution 6).

BRON-HO Interface Select this check box to start using BRON-HO Interface. This check box controls visibility of BRON features on certain NLD pages as well as automatic numbering of Enrollments and Results with a BRON Sequence number.

Setting up BRON-HO Sequence Numbers

To setup BRON Sequence Numbers and activate the allocation of Sequence Numbers, access the BRON-HO sequence Numbers setup page (Records and Enrollment, Base register Higher ED NLD, BRON-HO Setup, BRON-HO Setup, BRON-HO sequence Numbers Setup, BRON Sequence Numbers).



The following setup must be done *before* running the BRON-HO process for the first time but after having completed requisite steps.

Prefix Use a prefix of choice to identify Enrollment or Result Sequence Numbers. The prefix is required but any alphanumeric value is allowed. There is no specific business logic or validation associated with this field.

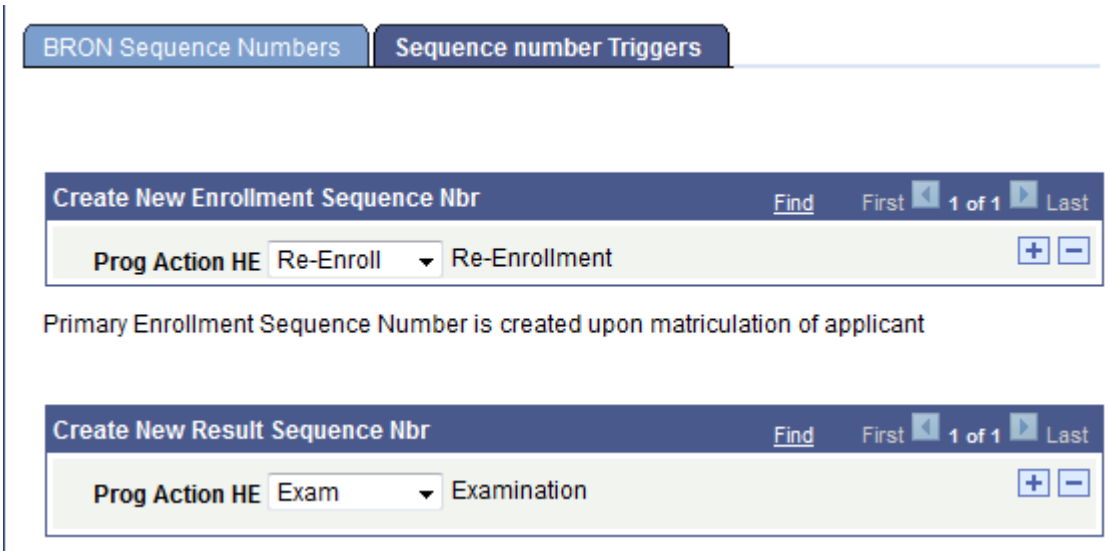
BRINcode An Institution BRINcode can be added to the Enrollment or Result Sequence Number. This field is not required. There is no specific business logic or validation associated with this field. Number Update with last allocated sequence number. The number will be augmented by 1 when assigned.

Note: Use any prefix except for the one used by BRON as supplied in the Snapshot Conversion files.

Prerequisite: It is advised that the BRON-HO interface option and setting up the sequence numbers be done after you run the Conversion Process Import which loads the Snapshot files you have received from BRON. And after having updated the table SSR_STD_PRG_NLD table with received Enrollment Sequence Numbers and Result Sequence Numbers. Updating the SSR_STD_PRG_NLD table is Institution specific and update processes have not been delivered with this interface.

Setting up BRON-HO Sequence Number Triggers

Access the BRON-HO Sequence Numbers Triggers page (Records and Enrollment, Base register Higher ED NLD, BRON-HO Setup, BRON-HO Setup, BRON-HO sequence Numbers Setup, Sequence Number Triggers).

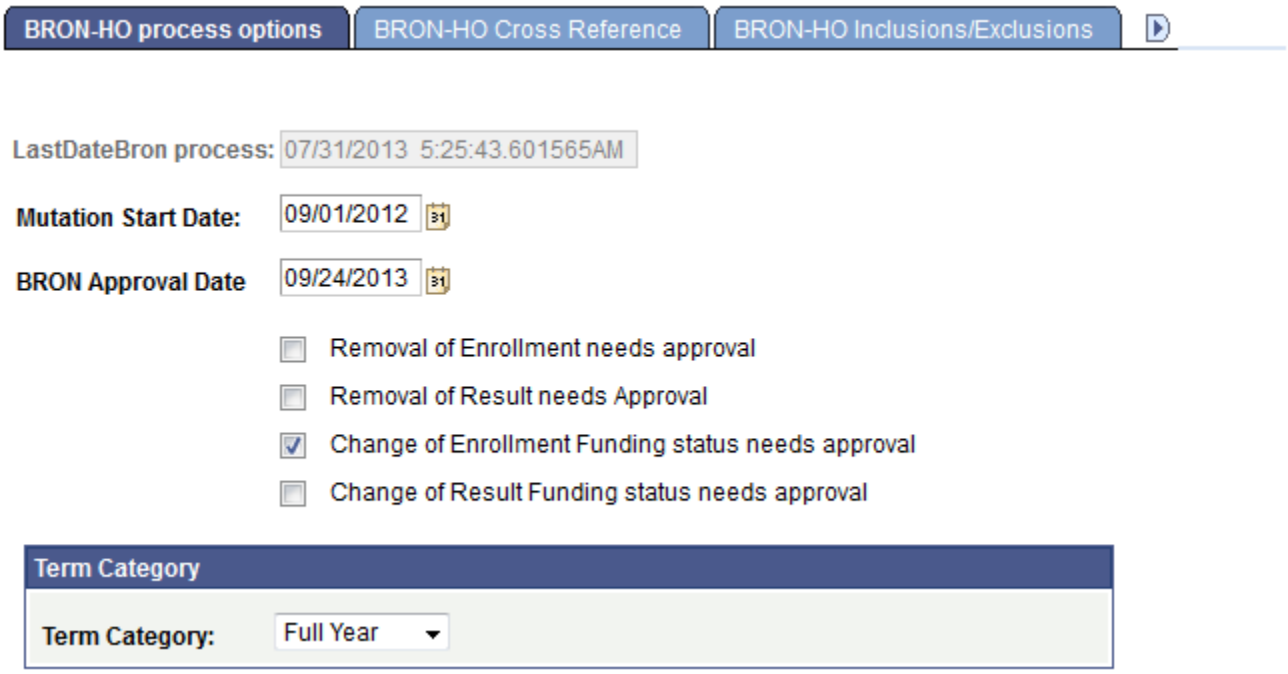


Prog Action HE When this Program Action is entered on the Academic Program Higher Education page (Records and Enrollment, Higher Education NLD, Student Records Higher Edu NLD) a new Enrollment sequence number or Result Sequence number respectively will be created for the student upon save.

Setting up BRON-HO Process Options

Access the BRON-HO Process Options page (Records and Enrollment, Base register Higher ED NLD, BRON-HO Setup, BRON-HO Setup, BRON-HO Process Options).

BRON-HO Process options are used to determine from which point in time mutations can be sent to BRON.



LastdateBRONprocess	This field will be updated by the BRON Process when appropriate after sending mutations to BRON. It must be updated once, initially on this page. Any mutation which occurs after the date time stamp may be relevant as a BRON-HO mutation. **Note:** After this field has been updated by the institution upon start of the process, it can no longer be updated via this page.
BRON Approval Date	If administered, any mutation for which the effective date is on or after the Approval Date and which is relevant according to one of the checkbox options is placed in Outbound Suspense with indication Approval Pending. This has been provided as a means to make sure that from a certain period in time all specified mutations are approved first before sending. If BRON Approval Date has been filled in at least one of the approval check box options must be used.
Term Category	Administer the Term Category from which the full Academic Year can be selected as set up on the Term Session table for each Academic Career. This Academic Year is used in the *BRON Current View.*

Setting up BRON-HO Cross Reference

Access the BRON-HO Cross Reference page (Records and Enrollment, Base register Higher ED NLD, BRON-HO Setup, BRON-HO Setup, BRON-HO Cross Reference).

The BRON-HO Cross Reference page is used to establish a mapping between those values in Campus Solutions and those values as they are known in BRON-HO system. The values which are set up are used in the *BRON Current View*. Set up the Cross Reference with appropriate values.

BRON-HO process options | **BRON-HO Cross Reference** | BRON-HO Inclusions/Exclusions | Program actions BRON

Form Of Study Higher Education Find First 1-2 of 2 Last

Institution Value	BRON-HO Cross Reference
Extraneus	Extraneus
Student	Student

Academic Load Find First 1-2 of 2 Last

Institution Value	BRON-HO Cross Reference
Full-Time	Full-Time
Part-Time	Part-Time

Acad Level Higher Education Find First 1-5 of 5 Last

Institution Value	BRON-HO Cross Reference
Associate Degree	Associate Degree
Bachelor	Bachelor
Propaedeutic Bachelor	Propaedeutic Bachelor
Main	Main
Master	Master

Funding Code Find First 1-2 of 2 Last

Institution Value	BRON-HO Cross Reference
N	False
Y	True

Form of Study Higher Education

Administer one or more Institution values against values known in BRON-HO. The Current View will take the Student value as administered on the Academic Program Higher Education page (Records and Enrollment, Higher Education NLD, Student Records Higher Edu NLD) and convert this to a value relevant for BRON-HO.

Academic Load

Administer all relevant Academic Loads and establish a mapping to a value in BRON-HO.

Acad Level Higher Education	Administer an Institution value against a value known in BRON-HO. The Current View will take the Student value as administered on the Academic Program Higher Education page (Records and Enrollment, Higher Education NLD, Student Records Higher Edu NLD) and convert this to a value relevant for BRON-HO.
Funding Code	Administer an Institution value against a value known in BRON-HO. The Current View will take the Student value as administered on the Academic Program Higher Education page (Records and Enrollment, Higher Education NLD, Student Records Higher Edu NLD) and convert this to a value relevant for BRON-HO.

Setting up BRON-HO Inclusions/Exclusions

Access the BRON-HO Inclusions/Exclusions page (Records and Enrollment, Base register Higher ED NLD, BRON-HO Setup , BRON-HO Setup, BRON-HO Inclusions/Exclusions).

Use the Inclusions and Exclusions page to administer which Academic Careers, Academic Programs , Academic Plans and Academic Level Higher Education values are considered for inclusion in the *BRON Current view*.

Note: Values not set up may lead to Suspense in Outbound Suspense processing or a failure of the BRON process to select the appropriate value in the *BRON Current View*.

Setting Up BRON Program Actions

Access the Program actions BRON page (Records and Enrollment, Base register Higher ED NLD, BRON-HO Setup, BRON-HO Setup, Program actions BRON).

BRON-HO Cross Reference | BRON-HO Inclusions/Exclusions | Program actions BRON

Enrollment Confirmation

Progr Action Higher Education: Payment — Payment

Enrollment End Date & End Reason — Personalize | Find | First 1-6 of 6 Last

	*Program Action	Description	Action Reason	Description	*End Enrollment Reason
1	COMI	Completion of Program			afsluitend_examen
2	DISC	Discontinuation			op_verzoek
3	DISM	Dismissal			bindend_studieadvies
4	SPND	Suspension		Suspended Studies	op_verzoek
5	VDIS	Voluntarily Discontinued			op_verzoek
6	WADI	Administrative Withdrawal			op_verzoek

Enrollment Confirmation

Progr Action Higher Education

Administer a Program action as the program action that *MUST* be in place for any Enrollment (on the Academic Program Higher Education page - Records and Enrollment, Higher Education NLD, Student Records Higher Edu NLD) before it is considered to be sent to BRON. Without this Program action an enrollment is NOT sent to BRON.

Enrollment End Date & End Reason

Program Action

Administer a program action to map against a BRON End Reason. Program actions are limited to the following: COMP, DISC, DISM, LEAV, SPND, VDIS and WADM.

Action Reason

Administer a Program action reason if in need of more granular processing.

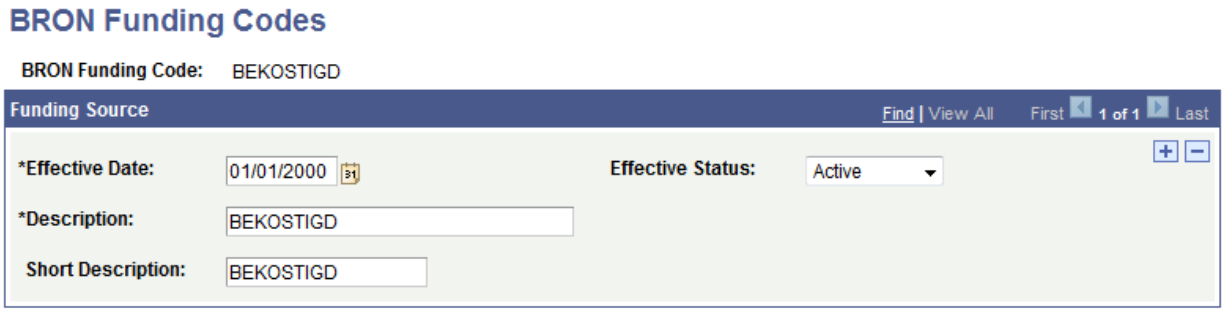
End Enrollment Reason

Administer a BRON End Enrollment Reason. These Reasons must be setup in Dutch as specified in BRON-HO documentation.

Use the Enrollment end date and end reason mapping for supplying the correct enrollment end reason to BRON if any.

Setting up BRON Funding Codes

Access the BRON Funding Codes page (Records and Enrollment, Base register Higher ED NLD, BRON-HO Setup , BRON-HO Setup, BRON Funding Codes).

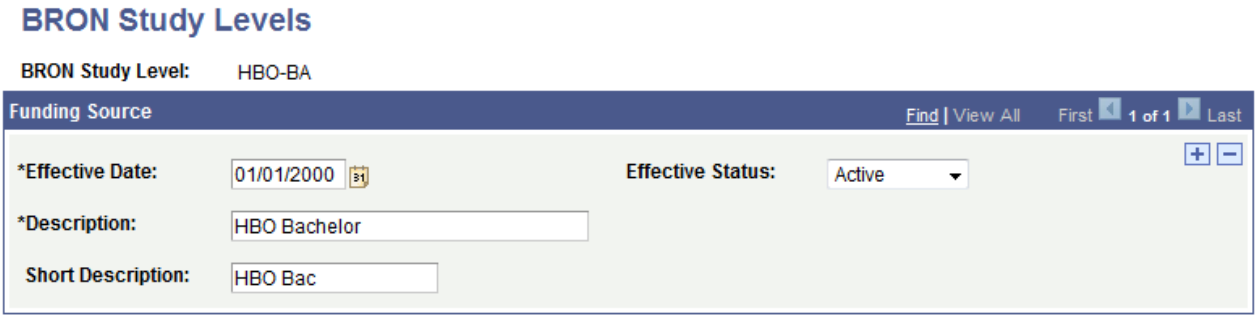


In the BRON-HO interface this value is exchanged as “bekostigingscode” in inbound message Indication tuition Fees Response. The setup tables are to be set up as reference only and may be used for selection or reporting purposes.

Note: The importing process does not check against the values present in this table. The table has been created in anticipation of future legal requirements.

Setting up BRON Study Levels

Access the BRON Study Levels page (Records and Enrollment, Base register Higher ED NLD, BRON-HO Setup, BRON-HO Setup, BRON Study Levels).



In the BRON-HO interface this value is exchanged as “opleidingsniveau” in inbound message Indication Tuition Fees Response.

Note: The importing process does not check against the values in this table. The table has been created in anticipation of future legal requirements.

Setting up Higher Education Sections

Access the BRON Higher Education Section page (Records and Enrollment, Base register Higher ED NLD, BRON-HO Setup, BRON-HO Setup, Higher Education Section).

In the BRON-HO interface this value is exchanged as “opleidingsonderdeel” in inbound message Indication Tuition Fees Response.

Note: The importing process does not check against the values in this table. The table has been created in anticipation of future legal requirements.

Setting up Funding Status Awarded

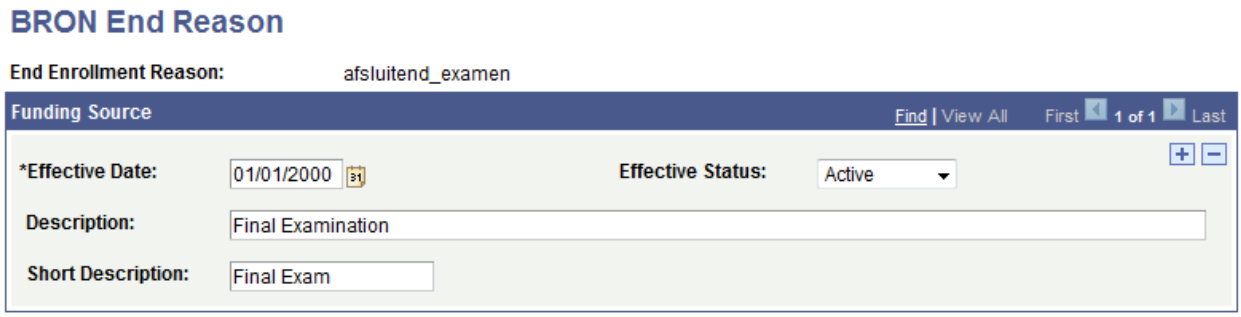
Access the Status Funding Awarded page (Records and Enrollment, Base register Higher ED NLD, BRON-HO Setup, BRON-HO Setup, Status Funding Awarded).

In the BRON-HO interface this value is exchanged as “bekostigingstatus” in inbound message Indication ‘Voorlopigebekostigingstatusresponse’ which is the message which provides continuous updates on the funding status of the student.

Note: The importing process does not check against the values in this table. The table has been created in anticipation of future legal requirements.

Setting up BRON End Reasons

Access the BRON End Reason page (Records and Enrollment, Base register Higher ED NLD, BRON-HO Setup, BRON-HO Setup, BRON End Reason).



This table is used on the cross reference setup and values must be provided in order to be able to correctly exchange information with BRON-HO.

Setting up BRON-HO Service Operations

Access the Service Operations page (PeopleTools, Integration Broker, Integration Setup, Service).

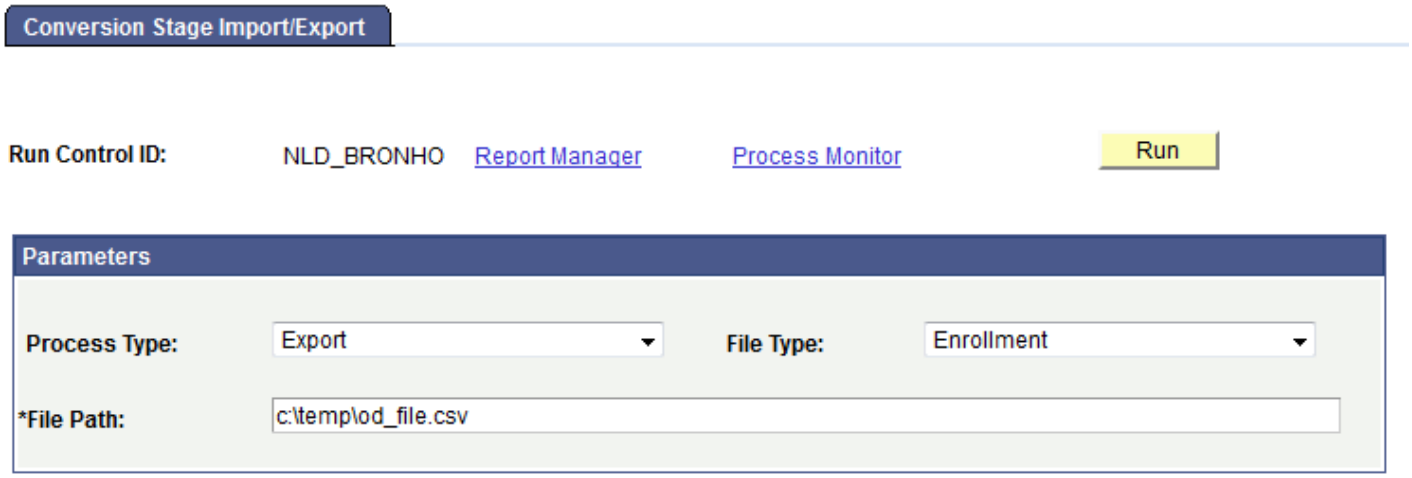
Access Service SSR_BRON_HO and activate all the Inbound and Outbound Service Operations that are part of this Service. Please consult with the third party provider which hosts the BRON-HO Integration Adaptor to obtain more information about required security certificates as well as specific settings for each service operation.

Select a service operation to test — Personalize | Find | View All | First 1-10 of 11 Last

Service Operation	Version	Default Version	Service	OType	Status
SSR_BR_DEG_ACHVD_FBK	v1	Y	SSR_BRON_HO	Synchronous	Inactive
SSR_BR_DEG_REM_FBK	v1	Y	SSR_BRON_HO	Synchronous	Inactive
SSR_BR_ENRL_DEL_FBK	v1	Y	SSR_BRON_HO	Synchronous	Active
SSR_BR_ENRL_REM_FBK	v1	Y	SSR_BRON_HO	Synchronous	Active
SSR_BR_ENROLLDELIVERY_OUT	v1	Y	SSR_BRON_HO	Synchronous	Inactive
SSR_BR_ENROLLREMOVAL_OUT	v1	Y	SSR_BRON_HO	Synchronous	Inactive
SSR_BR_FUNDSTAT	v1	Y	SSR_BRON_HO	Synchronous	Active
SSR_BR_RESULTDELIVERY_OUT	v1	Y	SSR_BRON_HO	Synchronous	Inactive
SSR_BR_RESULTREMOVAL_OUT	v1	Y	SSR_BRON_HO	Synchronous	Inactive
SSR_BR_TUTIONFEES_OUT	v1	Y	SSR_BRON_HO	Synchronous	Inactive

Using the Import/Export Process

Access the Conversion Stage Import/Export page (Records and Enrollment, Base register Higher ED NLD, BRON-HO Setup, Conversion Import/Export).



The Conversion Stage Import loads Snapshot files supplied by DUO which contain the last known Institution Enrollments and Results as registered in BRON-HO into staging tables. The staging tables can be used to update the received Enrollment Sequence Number and Result Sequence number in table SSR_STD_PRG_NLD. The staging tables in turn need to be updated with any data element which DUO has labeled as missing and required. After the staging tables have been updated they need to be extracted and supplied to DUO.

Note: This process is used only at the onset of BRON-HO communication and serves as a starting point for the interface cycle. Institutions will enrich CS data based on received snapshots and provide DUO with missing information via the exported snapshot files.

Process Type	Select Export to extract data from the staging table. Select import to import data into the staging table.
File Type	Select the appropriate file type ‘Enrollment’ or ‘Result’.
File Path	Supply the file path for the uploaded or generated file.

Files are csv-format (“;” separated)
De filenames to be imported have the following structure:

- Enrollments(A): <"OD"><BRINcode><creationdate>.csv
- Results (B): <"OR"><BRINcode><creationdate>.csv

De filenames to be exported have the following structure:

- Enrollments: <filename file A><”RET”><creationdate>.csv
- Resultaten: <filenam efile B><”RET”><creationdate>.csv

Managing BRON-HO Student Data

This section discusses how to:

- Administer student data for BRON-HO.
- Administer student data on the BRON-HO Details page.

Pages used to administer Student Data for BRON-HO

Page Name	Definition Name	Navigation	Usage
Academic Program Higher Education	SSR_STD_PRG_NLD	Records and Enrollment, Higher Education NLD, Student Records Higher Edu NLD, Student Program Higher Edu	Administer Yearly Registration, Degree or Examinations which result in changes being sent concerning BRON-HO Enrollments and or Results.
BRON-HO Details	SSR_BRHO_DTL_NLD	Records and Enrollment, Higher Education NLD, Student Records Higher Edu NLD, BRON-HO Details	Correct existing BRON-HO Enrollment or BRON-HO Result sequence numbers or Assign new Numbers.

Administering Student Data for BRON-HO

Access page Academic Program Higher Information (Records and Enrollment, Higher Education NLD, Student Records Higher Edu NLD, Student Program Higher Edu).

Student Program Higher Edu | BRON-HO Details

Academic Prog Higher Education

Sabina Sabinasen 1370

Academic Career:	Undergraduate	**Student Career Nbr:**	0
Program Short Descr:	Law	**Career Req. Term**	Acad year 2013-2014

Higher Education Information Find | View All First 1 of 4 Last

Progr Status Higher Education:	Enrollment	**Action Date:**	08/05/2013
***Effective Date:**	09/01/2014	**Effective Sequence:**	4
***Progr Action Higher Education:**	PAYM Payment		
Studielink Status:	I Registered/Enrolled	Detail	
Form of Study Higher Education	Student	Student Messages	
Acad Level Higher Education:	Main		
	☑ **Funding Applies**		
	☐ **Program Units Apply**		
***Academic Year:**	2014		
Studielink Enroll Seq Nbr:			

Form of Payment

Form of Payment:

Studielink Payment Information

Payment Indicator			
Payment Amount			
Studielink Form of Payment:			
Paid by:		☐ **Request Payment Terms**	
Paid at Brincode			
Paid at Institution Name			
Barcode			
Ordernumber		Student Bank Accounts	

Progr Action Higher Education

In order to automatically assign a new Enrollment Sequence Number or Result Sequence Number per start of effective date, enter a new effective dated row here with a Program Action which corresponds to a Program Action as has been set up on the BRON-HO Sequence Numbers Triggers page (Records and Enrollment, Base register Higher ED NLD, BRON-HO Setup, BRON-HO Setup, BRON-HO sequence Numbers Setup, Sequence Number Triggers). Assigning a new sequence number will roll forward to any subsequent rows already created after the current row. The sequence number is assigned when saving the component.

Note: Removing a Program Action here will roll back the created sequence number.

Note: To include the Enrollment for BRON-HO processing administer the program action as set up on the Program actions BRON page (Records and Enrollment, Base register Higher ED NLD, BRON-HO Setup, BRON-HO Setup, Program actions BRON).

Administering Student Data on the BRON-HO Details Page

Access the BRON-HO Details page (Records and Enrollment, Higher Education NLD, Student Records Higher Edu NLD, BRON-HO Details).

BRON Enrolment Seq Nbr	Administer an Enrollment Sequence Number for BRON-HO.
BRON Result Seq Nbr	Administer a Result Sequence Number for BRON-HO.
Assign Next Enrol seq Nbr	Check to automatically assign the next number upon save of the component.
Assign Next Result Seq Nbr	Check to automatically assign the next number upon save of the component.

Note: Enrollment and Result Sequence numbers are created automatically when administering specific program actions and should be overridden manually only if the process fails to assign or in exceptional circumstances where normal business processing cannot be followed.

Funding Status Awarded Group Box
This group box details information obtained from the last relevant Funding Status Awarded as received from DUO via BRON-HO for this Enrollment Sequence Number and this Academic Year.

Transaction DateTime	Transaction Date Time Stamp which matches the Last transaction of message Funding Status Awarded which matches this Enrollment Sequence Number.
Funding Year	Academic Year to which Provisional Status Awarded applies.
Funding Indication	Indication received from DUO e.g. True or False.
Joint Degree Factor	Joint Degree Factor received from DUO.
Sofi Number	National ID received from DUO.
Onumber	Education Number Received from DUO.
Funding Status Awarded	Click the link to view all received Funding Status Awarded transactions for this student.

Status and Definitions Group Box
This group box show the Funding Status Awarded Code(s) and Description(s) obtained from the last relevant Funding Status Awarded as received from DUO via BRON-HO.

Examples of Data which may trigger an Enrollment or Result to be sent to BRON-HO

The following table lists examples of data entry that may occur as part of normal business processing at Institutions and the possible effect on Enrollment and or Result messages to be sent to BRON-HO.

The following setup is assumed to exist at the Institution:

- Program Actions MATR and RENR have been set up as triggers for creation of new enrollment sequence numbers.
- Program action RENR has been set up on page table “Sequence number Triggers”. Program Action MATR always creates new enrollment sequence numbers per default.
- Program Actions VDIS, DISC, DISM and SPND have been set up as program actions in *BRON-HO Setup, Enrollment end date and enrollment end reason* with program action for end of enrollment and action reason which is required as well as BRON-HO end reason.
- Program action PAYM is setup as program action in *BRON-HO Setup, Program actions for enrollment* and must be present before an enrollment is sent to BRON-HO.

The Table lists the following:

- Business Process: This column has a short description of the action taken by the Institution.
- ACAD_PROG: This column shows which Program Action and Effective Date is present in the Academic Program Table for the student.
- SSR_PRG_NLD: This column shows which Program Action Higher Education and Effective date is present in the NLD Academic Program Table for this student.
- Process Check: This column lists which evaluation has been done by the BRON-Delivery Process.
- Expected Result: This Column lists what the expected Result is of the current situation.
- Effective Date formats shown as follows: DD-MM-YYYY. If relevant, the effective sequence of the row is indicated.

Business Process	ACAD_PROG	SSR_PRG_PRD	Process Check	Expected Result
New Enrollment in 2012	MATR 01-09-2012	MATR 01-09-2012 effseq 1 PAYM 01-10-2012 effseq 1	Current View is compared to Mirror Table. No identical approved enrollment exists in the Mirror Table No same sent enrollment exists in the Transaction table	New enrollment is sent for 2012
Yearly Registration in 2012 for a student Matriculated in 2011	MATR 01-09-2011	MATR 01-09-2011 effseq 1 PAYM 01-10-2011 effseq 1 RENR 01-09-2012 effseq 1 PAYM 01-10-2012 effseq 1	Current View is compared to Mirror Table. Yes an identical approved enrollment exists in the Mirror Table for 2011 No identical approved enrollment exists in the Mirror Table for 2012 No same sent enrollment exists in the Transaction table for 2012	New enrollment is sent or 2012
New enrollment *after* start of term in 2012	MATR 01-11-2012	MATR 01-11-2012 effseq 1 PAYM 01-11-2012 effseq 2	Current View is compared to Mirror Table. No identical approved enrollment exists in the Mirror Table No same sent enrollment exists in the Transaction table	New enrollment is sent or 2012
New academic plan is added with same effective date on existing academic program.	MATR 01-09-2012 effseq 1 DATA 01-09-2012 effseq 2	MATR 01-09-2012 effseq 1 PAYM 01-10-2012 effseq 1	Current View is compared to Mirror Table. An identical approved enrollment exists in the Mirror Table No same sent enrollment exists in the Transaction table	Nothing happens, The academic plan is NOT a consideration for the process
Enrollment is "re-activated". This will need to be done manually by the user by updating the enrollment sequence number.	MATR 01-09-2012 Enrollment was ended WADM 01-09-2012 ACTV 01-11-2012	MATR 01-09-2012 PAYM had been removed but has been re-instated, per 01-09-2012	Current View is compared to Mirror Table. No Identical Enrollment Exists in Mirror Table due to earlier Processing of Removal. Result is removed due to the fact that Current View is no longer identical to Result Mirror Table.	New enrollment is sent to BRON with the old enrollment sequence number
Correction of academic level	N/A	Academic Level on MATR or RENR row is adjusted to new value	Current View is compared to Mirror Table. Approved enrolment exists with old academic level in the Mirror Table. The Value in the Current View is different. No same message with status sent are present in transaction Table	Same enrollment is sent containing the new academic level
Correction on field funding code	N/A	On MATR or RENR row funding is corrected from N to Y or vice versa	Current View is compared to Mirror Table. Approved Enrollment exists with old indication funding in Mirror Table. No same message with status sent in transaction Table.	Same enrollment is sent containing the new funding status.
Change of Campus	Change of Campus on DATA row	N/A	Current View is compared to Mirror Table. Approved enrollment exists with different field value in Mirror Table. No same message with status sent in Transaction Table.	Same enrollment is sent containing the new field value.
Change of academic load	Change of academic load on DATA row	N/A	Current View is compared to Mirror Table. Approved enrollment exists with different field value. No same message with status sent in Transaction table	Same enrollment is sent containing the new field value.

Business Process	ACAD_PROG	SSR_PRG_PRD	Process Check	Expected Result
Added DATA-row without relevant changes	New effective date with DATA row but no relevant changes to BRON-HO fields	N/A	Current View is compared to Mirror Table. No relevant changes are seen	No Action
Removal of DATA-row	Data row is removed containing changed campus field	N/A	Current View is compared to Mirror Table. Approved enrollment exists with different field value No same message with status sent in the Transaction Table.	Same enrollment is sent containing the new field value.
Change of Form of Study is effected	n/a	Change of Form of Study on MATR/RENR/CENR from value Student to value Extraneus.	Current View is compared to Mirror Table. Approved enrollment exists with different field value. No same message with status sent in the Transaction Table.	Same enrollment is sent containing the new field value.
End of enrollment is effected in ACAD_PROG by adding program action VDIS per effective date	Program action VDIS is added with effective date	N/A	Current View is compared to Mirror Table Approved enrollment exists with different field value e.g. the end Reason is not present in Mirror Table. No same message with status sent in Transaction table.	Same enrollment is sent containing the new end of enrollment date plus end reason
End of enrollment date is changed in ACAD_PROG	New effective date in ACAD_PROG on row with above program actions	N/A	Current View is compared to Mirror Table Approved enrollment exists with different field value e.g. the end Reason is present in Mirror Table but the end date is not the same. No same message with status sent in Transaction table.	Same enrollment is sent containing the new end of enrollment date plus end reason.
Enrollment is cancelled (Enrollment was known in BRON)	WADM is entered per Effective date. (action reason Not in setup)	PAYM row is removed.	Current View is compared to Mirror Table Approved enrollment exists in Mirror Table but not in Current View. No same message with status sent in Transaction table.	Removal of enrollment is sent.
Enrollment is cancelled(not known in BRON)	WADM is entered per Effective date. (action reason Not in setup)	PAYM row is removed.	Current View is compared to Mirror Table Current View and Mirror Table are the same. Neither has the Enrollment.	Nothing happens
Enrollment is cancelled	WADM is entered per Effective date. (action reason Not in setup)	PAYM row is removed./ NRNR or DSAC have been added.	Current View is compared to Mirror Table Approved enrollment exists in Mirror Table but not in Current View. No same message with status sent in Transaction table.	Removal of enrollment is sent.

The following table shows examples of possible data changes which may trigger a Result to be sent to BRON-HO. It is assumed that:

- EXAM is the trigger for creation of new result sequence number and EXAM has been set up on page table "Sequence number Triggers".
- No program action is set up as program actions in *BRON-HO Setup, Program actions for result*

Business Process	ACAD_PROG	SSR_PRG_PRD	Process Check	Expected Result
Propedeuse Certificate Result is administered	N/A	EXAM - fase Propedeuse Certificate Per new effective date	Current View is Compared to the Mirror Table. No approved Result (result sequence Nbr) is present in BRON and no same message with status sent is present in the Transaction Table.	New result message is sent to BRON
Bachelor Result is administered	N/A	EXAM - fase Bachelor Per new effective date	Current View is Compared to the Mirror Table. No approved Result (result sequence Nbr) is present in BRON and no same message with status sent is present in Transaction table.	New Result message is sent to BRON
Bachelor Result is removed	N/A	EXAM - fase Bachelor Per new effective date has been removed due to an administrative error.	Current View is Compared to the Mirror Table. The Mirror Table contains a Result which cannot be found in the Current View.	A Result Removal is sent to BRON-HO
Propedeuse Certificate date is changed	N/A	EXAM -fase P, new effective date	Current View is Compared to the Mirror Table. Same approved Result (result sequence Nbr) is present in BRON with different date and no same message with status sent in Transaction Table.	Result Message with new effective date is created.
Result Funding Status is Changed	N/A	EXAM row funding indication is set to Y was N	Current View is Compared to the Mirror Table. Same approved Result (result sequence Nbr) is present in BRON with different Funding Status and no same message with status sent is present in Transaction Table	Result Message with new Funding status is created for same Result Sequence Number.
Examen correction not Bachelor but Propedeuse Certificate examen	N/A	EXAM academic level is changed from Bachelor to Propedeutic Exam	Current View is Compared to the Mirror Table. Same approved Result (result sequence Nbr) is present in BRON but with a different academic level and no same message with status sent in Transaction Table,	Result Message with new Academic Level is created for same Result Sequence Number.
Examen correction not Propedeuse but Bachelor Certificate examen	N/A	EXAM academic level is changed from Propedeutic to Exam Bachelor. The corresponding enrollment nbr is changed as well, new number is assigned	Current View is Compared to the Mirror Table. There is a new Result in the Current View which does not exist in the Mirror Table. If the previous row was overwritten there is now also a row in the Mirror Table which is not recognized in the Current View.	Result a New Result is sent to BRON-HO together with a Result Removal from the previous Result Sequence Number.

Sending and Receiving BRON-HO Messages

This section provides an overview of the BRON-HO delivery process and discusses how to:

- Send messages about enrollment and results to BRON-HO.
- Send Indication Tuition Fees requests to BRON-HO.
- Process feedback messages from BRON-HO.
- Process response messages from BRON-HO.

Pages used to Manage BRON-HO Delivery and Return Processes

Page Name	Definition Name	Navigation	Usage
BRON-HO Delivery process	SSR_BRHO_RUNDL_NLD	Records and Enrollment, Base register Higher ED NLD, BRON-HO Messaging, BRON-HO Delivery Process	Send messages to BRON-HO which concern Enrollments, Results and changes or removals of either Enrollments or Results. Use population selection to limit processing to a select number or students.
BRON-HO Feedback Process	SSR_BRHO_FBKPR_NLD	Records and Enrollment, Base register Higher ED NLD, BRON-HO Messaging, BRON-HO Feedback Process	Process Inbound Technical acknowledgements from BRON-HO and update the sent messages with technical acknowledgements.
BRON-HO Return process	SSR_BRHO_RETPR_NLD	Records and Enrollment, Base register Higher ED NLD, BRON-HO Messaging, BRON-HO Return Process	Process Inbound Functional acknowledgements from BRON-HO and update the *BRON Mirror Tables*.
BRON-HO Request Indication Tuition Fees	SSR_BR_RUN_TUT_NLD	Records and Enrollment, Base register Higher ED NLD, BRON-HO Messaging, BRON-HO Indication Request	Send an outbound message to BRON-HO for selected students and request that an Indication Tuition Fees be sent to the Institution.

Understanding the BRON-HO Delivery Process

The purpose of delivering transactions via BRON-HO is to provide information to the Educational OD Database which is maintained by DUO. The data contained in this database is be used for various processes, e.g. determining the amount of funding to which the institution is entitled and to deliver policy-related information and determining the legality of granting student grant/loan to the student.

The BRON-HO Delivery Process will select all transactions from the system which are considered relevant to the information needed by DUO. In order to determine funding status two categories of messages are sent to BRON, those that BRON-HO considers an “Enrollment” and those which BRON-HO considers a “Result”.

BRON-HO Enrollments

An "Enrollment" is captured in the *BRON-HO Current View for Enrollments* (SSR_BR_ENRDL_VW) which contains Academic Career and Program information for students as of point of Matriculation as well as information from the Dutch Academic Program Higher Education table (SSR_STD_PRG_NLD). This table captures information about yearly Student Registration. The view takes into account the setup which has been done to include or exclude Academic Careers, Academic Programs etc. The *BRON-HO Current View* is compared to the *BRON-HO Mirror Table* in order to determine whether relevant changes (for example changes to Academic Level or Academic Load or administration of end of Enrollment) need to be sent to BRON-HO. The *BRON-HO Mirror Table* (SSR_BR_MENR_DEL) is updated by the BRON-HO Feedback Process whenever an approved mutation is received.

The exchange of Enrollment information consists of the following steps:

- Delivery of Enrollments via a web service from Institution to DUO.
- Receipt of acknowledgement.
  DUO checks whether the delivered message meets the agreed technical syntax. Should this not be the case, then the message will be rejected. If the message meets with the agreed syntax, then the institution receives an acknowledgement.
- Receipt of feedback
  DUO performs several functional checks after receipt of the message. The result of these checks will reported back to the supplying party. Should the message have been approved, the student Enrollment is confirmed as such in the OD database (the database at DUO which contains Enrollment information). If the message be rejected, then the rejection message will be reported back with at least one ground for its rejection.

The following messages are used to support the process above when it concerns Enrollments:

Message	From	To	Handling
Delivery Enrollment	Institution	DUO	• De HO-institution sends a message delivery of enrollment. Message: • aanleverenInschrijvingRequest
Acknowledgement	DUO	Institution /Studielink	• Synchronous response that a message has been received by DUO. Message: • aanleverenInschrijvingResponse
Feedback Processing result	DUO	Institution/ Studielink	• The a-Synchronous response to the notification of enrollment. Message: • terugkoppelenInschrijvingRequest

The following messages are used to support the process above when it concerns Removal of Enrollments:

Message	From	To	Handling
Delivery removal of enrollment	Institution/ Studielink	DUO	• The HO-institution sends the message removal of enrollment. Message: • aanleverenVerwijderingInschrijvingRequest
Acknowledgement	DUO	Institution/ Studielink	• Synchronous response that a message has been received by DUO. Message: • aanleverenVerwijderingInschrijvingResponse
Feedback with Processing Result	DUO	Institution/ Studielink	• The aSynchronous response to the notification of enrollment. Message: • terugkoppelenVerwijderingInschrijvingRequest

BRON-HO Results

A "Result" is captured in the *BRON-HO Current View for Results* (SSR_BR_RSLT_VW) which contains Academic Career and Program Completion information for students as of point of Completion as well as information from the Dutch Academic Program Higher Education table (SSR_STD_PRG_NLD). This table captures information about intermediate Degrees (example Bachelor Propedeuse). The view takes into account the setup which has been done to include or exclude Academic Careers, Academic Programs etc as well as the Program actions which have been captured as Result Trigger. The *BRON-HO Current View* is compared to the *BRON-HO Mirror Table* in order to determine whether relevant changes (for example Completion due to obtaining a Degree) need to be sent to BRON-HO. The *BRON-HO Mirror Table* (SSR_BR_MRST_DEL) is updated by the BRON-HO Feedback Process.

The following messages are used to send Results:

Message	From	To	Handling
Delivery of achieved degree	Institution/ Studielink	DUO	• The HO-institution sends the message delivery of result. Message: • aanleverenResultaatRequest
Acknowledgement	DUO	Institution/ Studielink	• Synchronous response that a message has been received by DUO. *Message:* • aanleverenResultaatResponse
Feedback Processing result	DUO	Institution/ Studielink	• The aSynchronous response to the notification of achieved degree. Message: • terugkoppelenResultaatRequest
Acknowledgement	Institution	DUO	• Synchronous response that a message has been received by Studielink. Message: • terugkoppelenResultaatResponse

The following messages are used to send Removal of Results:

Message	From	To	Handling
Delivery Removal of Result	Institution	DUO	• De HO-institution sends the message removal of degree. Message: • aanleverenVerwijderingResultaatRequest
Acknowledgement	DUO	Institution	• Synchronous response that a message has been received by DUO. Message: • aanleverenVerwijderingResultaatResponse
Feedback Processing result	DUO	Institution	• The aSynchronous response to the notification of degree removal. Message: • terugkoppelenVerwijderingResultaatRequest
Acknowledgement	Institution	DUO	• Synchronous response that a message has been received by Studielink. Message: • terugkoppelenVerwijderingResultaatResponse

BRON-HO Indication Type Tuition Fees

Students in Higher Education are required to pay Tuition Fees before the start of each Academic Year. Payment of Tuition Fees is considered to be a key step in the yearly Registration Process. Part of the Tuition Fee amount is determined by DUO in accordance with legislation using an Evaluative system which considers a number of

indicators to determine what the legal basis is for the Tuition Fee amount. Among those indicators are the students Nationality, Residency Status and Higher Education Degrees. Once the status has been determined, DUO provides the institution with the *Indication Type Tuition Fees*. The institution uses this indication to calculate Institutional Tuition fees.

In order to accommodate the yearly process, the Institution can request the Indication Tuition Fees for specified students before the start of the Academic Year. At the same time, if changes occur to one of the key indicators, DUO will also send updated Indication Tuition Fees to the Institution throughout the year. The BRON-HO Interface supports this process through web services. The process is as follows:

- Request of indication
  Studielink or the HO-institution calls for a Web Service at DUO through Studielink.
  The BRIN-number, the National ID/Education Number, together with Academic Program information and the preferred date of registration are to be included in the request.
- Receipt of acknowledgement
  DUO controls whether the delivered message is in accordance with the agreed syntax. Should this not be the case, then the message will be rejected on technical grounds. The HO-institution receives an acknowledgement through Studielink if the message does comply with the agreed syntax.
- DUO then determines the Indicative Type of Tuition Fees in accordance with legislation.
- The Indication Type Tuition Fees is communicated back to the requesting Institution.
- The institution through Studielink sends a technical acknowledgement back to DUO.

The process can also be initiated based on a change in one of the systems administered by DUO:

- DUO notifies Studielink that there has been made a change in the database to determine the indicative type of tuition fees for a particular person.
- Studielink receives the National ID/Education Number of the person from DUO.
- Studielink requests the Indication Type Tuition Fees from DUO which is registered for the particular student.
- Receipt of acknowledgement: DUO checks whether the delivered message meets the agreed syntax and send an acknowledgement message if appropriate.
- The Indication Type Tuition Fees is sent to Studielink and the Institution.

The following messages are used to send Indication Type Tuition Fees:

Message	From	To	Handling
Request for Indication Type Tuition Fees	Institution/ Studielink	DUO	• Studielink sends on behalf of a HO-institution the message request for type of tuition fees Message: • aanvragenIndicatieSoortCollegegeldRequest
Acknowledgement	DUO	Institution	• Synchronic response that a message has been received by DUO. Message: • aanvragenIndicatieSoortCollegegeldResponse
Feedback Indication Type Tuition Fees	DUO	Institution	• The a-synchronic response to the request for indication type of tuition fees. This will be sent to the BRIN from the request message. Message: • terugkoppelenIndicatieSoortCollegegeldRequest
Acknowledgement	Institution	DUO	• Synchronous response which indicates receipt of message. Synchronous response Message: • terugkoppelenIndicatieSoortCollegegeldResponse

BRON-HO Funding Status Awarded

Through Message Funding Status Awarded the Institution is informed of whether a Student Enrollment or a Result (aka Degree) is eligible for Funding. Having obtained the Indication Funding Status Awarded the Institution is able to estimate the Funding amount which will be awarded.

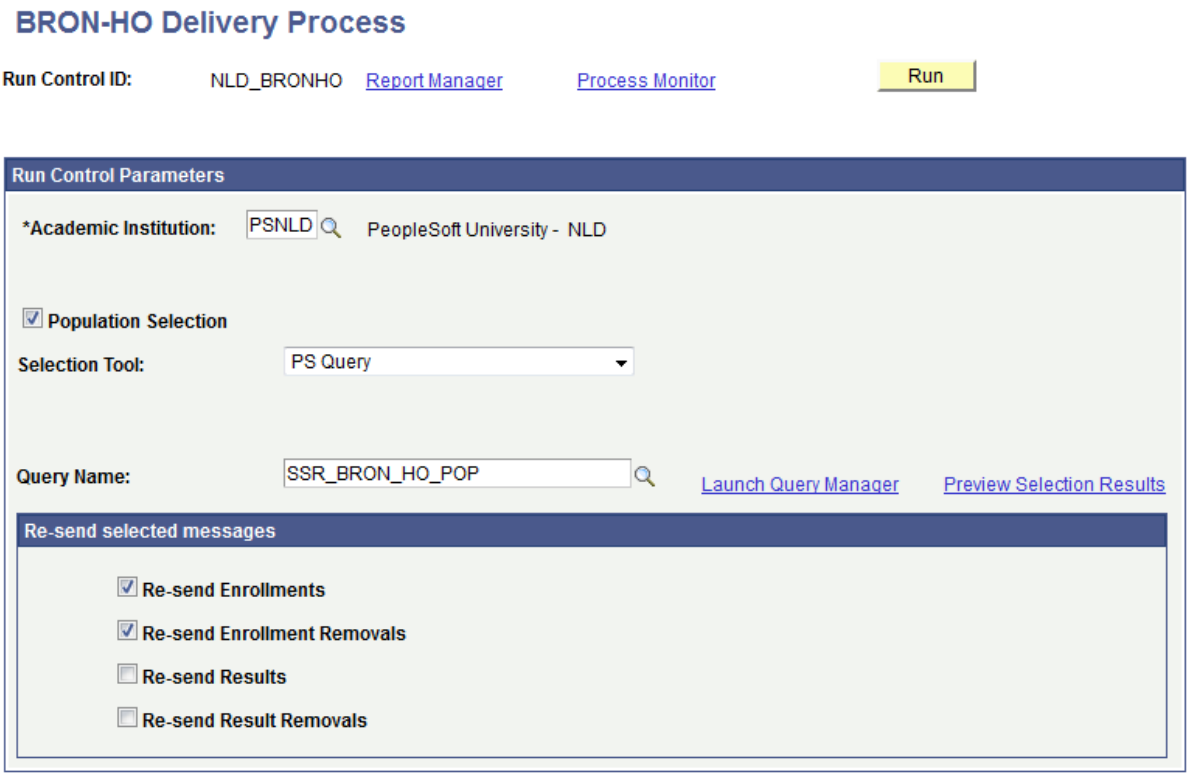
The process consists of the following: DUO determines the status of Funding for each Enrollment or Result based on information received from the institution. If there are relevant changes the Funding Status Awarded is sent to the Institution via the relevant message.

The following messages support this process:

Message	To	From	Handling
Provisional funding status	DUO	Institution/ Studielink	• The funding status of a participation or result is determined and delivered. Message: • verstrekkenVoorlopigeBekostigingstatusRequest
Acknowledgement of message	Studielink	DUO	• Synchronous response that a message has been received by Studielink. Message: • verstrekkenVoorlopigeBekostigingstatusResponse

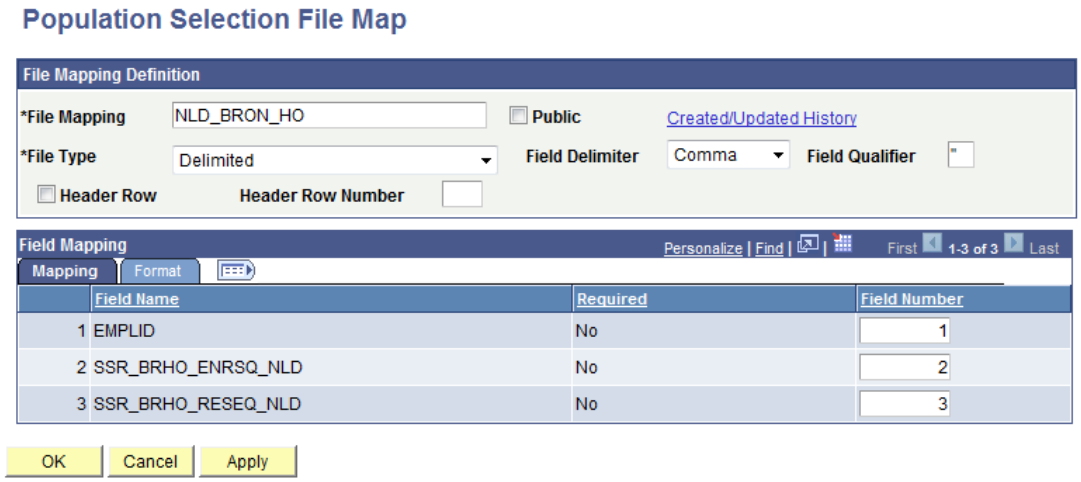
Sending Messages about Enrollment and Results to BRON-HO

Access the BRON-HO Delivery page (Records and Enrollment, Base register Higher ED NLD, BRON-HO Messaging, BRON-HO Delivery Process).



Example of selection results when using population selection:

Example of file mapping:



The BRON-HO Delivery Process is used to Create and Send the following messages:

- Message containing Enrollment
- Message containing Removal of Enrollment
- Message containing Degree (Results)
- Message containing Removal of Degree (Results)

The BRON-HO Delivery process evaluates whether a potential mutation should be sent to BRON-HO by looking at the Last Date BRON process date and comparing this to the date in the Audit Date Timestamp in sub records included in ACAD_PROG and SSR_STD_PRG_NLD. If this is the case (the effective date is on or after the Mutation Start Date), the student's records are further evaluated to determine what kind of message needs to be created if at all. This is done by comparing the *BRON Current View* to the *BRON Mirror table* and determining whether there is a change in fields relevant to BRON-HO processing logic. If a message is to be sent a row is added to the relevant transaction table with corresponding status (Created). When a message has been sent to BRON-HO successfully the status is set to Processed.

Population Selection	Select this check box to send a specified group of Student to BRON. Population selection record is based on EmplID, Enrollment Sequence Number and Result Sequence Number.

Processing without Population Selection

The BRON-HO Delivery Process evaluates **all student transactions** where the Audit Stamp in SSR_STD_PRG_NLD or ACAD_PROG tables is greater than or equal to (>=) the Last Date BRON Process and evaluates whether a mutation needs to be sent to BRON by comparing the content of the *BRON Current View* for each message type to the content of the *BRON Mirror Table*. The Effective Date of the Student transaction must be Greater than the *BRON Mutation Start Date*.

The Last Date BRON process date time stamp is updated after the BRON-HO Delivery Process completes.

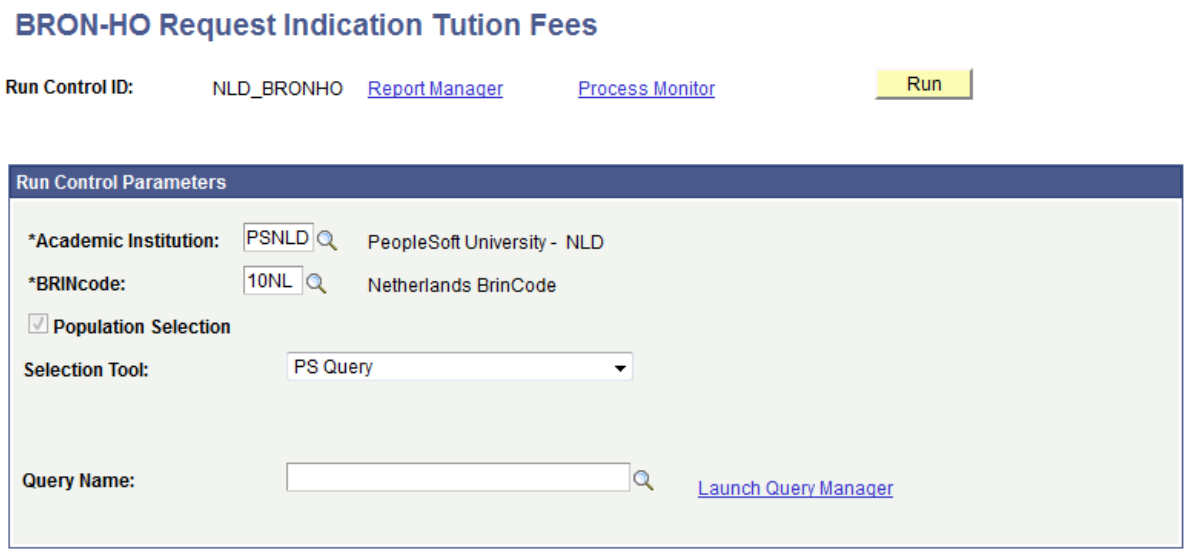
Process with Population Selection
None of Re-Send Options are checked.
The BRON-HO Delivery Process evaluates **all specified students** where the Audit Stamp in SSR_STD_PRG_NLD or ACAD_PROG tables is greater than or equal to (>=) the Last Date BRON Process and evaluates whether a mutation needs to be sent to BRON by comparing the content of the *BRON Current View* for each message type to the content of the *BRON Mirror Table*. The Effective Date of the student transaction must be greater than the *BRON Mutation Start Date.*

The Last Date BRON process date time stamp is **not** updated after the BRON-HO Delivery process completes.

Process with population Selection
One of the Re-Send Options is checked.
The BRON-HO Delivery Process evaluates **all specified students** and sends the specified content of the *BRON Current View* for each message type regardless of the content of the *BRON Mirror Table*. The process *ignores* the Mutation Start Date and Audit Stamp. The last date BRON process **not** updated after the run completes.

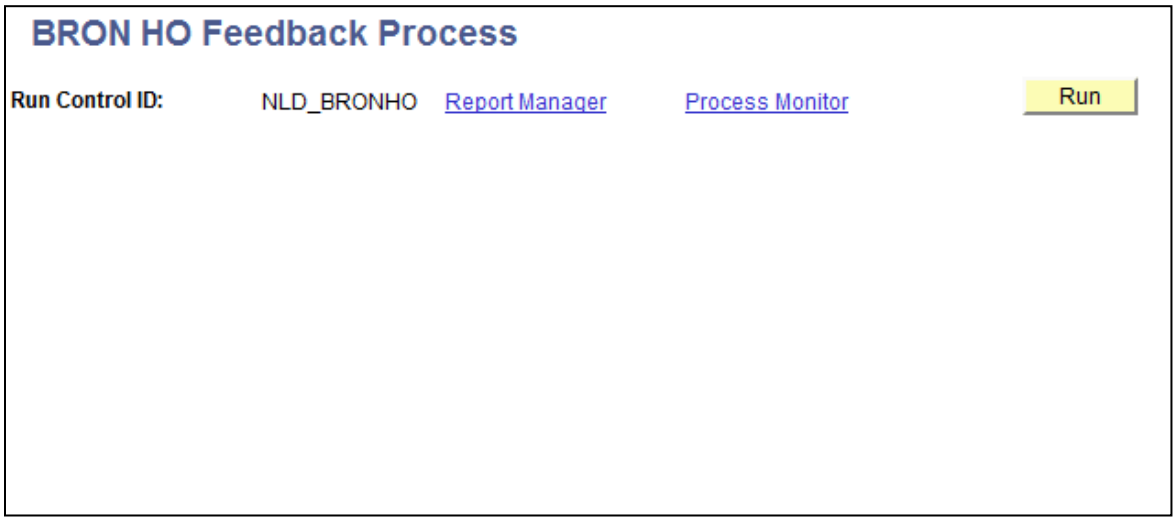
Sending Indication Tuition Fees Requests

Access the BRON-HO Request Indication Tuition Fees page (Records and Enrollment, Base register Higher ED NLD, BRON-HO Messaging, BRON-HO Indication Request). Use this process to send the Indication Tuition fees request message. Only population selection can be used to create the Indication Tuition Fees message.



Processing Feedback Messages from BRON-HO

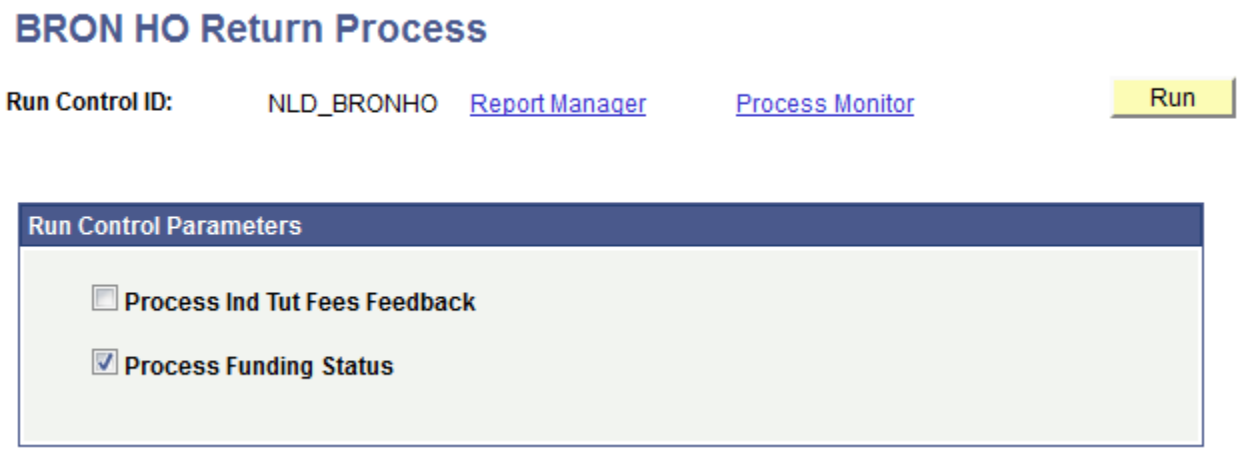
Access the BRON HO Feedback Process page (Records and Enrollment, Base Register Higher ED NLD, BRON-HO Messaging, BRON HO Feedback Process).



This process handles all inbound response messages (asynchronous responses) which are sent by BRON-HO as an acknowledgement of receipt whenever a message has been received from the Institution (directly or via Studielink).
This process should be run at least together with the BRON-Delivery process or preferably as often as possible since an asynchronous response can be received any time.

Processing Response Messages from BRON-HO

Access the BRON HO Return Process page (Records and Enrollment, Base Register Higher ED NLD, BRON-HO Messaging, BRON HO Return Process).



This process takes all received messages concerning Indication Tuition Fees and or Funding Status Awarded and processes these to designated staging Tables. The process delivers an Education Number or National ID which is used to find the matching student in Campus Solutions. If no match can be made the message will be suspended in Inbound Suspense Management. In case of Status Funding awarded a further match is done based on the BRON Enrollment Sequence Number and the Academic Program Higher Education NLD record (SSR_STD_PRG_NLD).

Process Ind Tut Fees Feedback	All received messages with status Unprocessed or Suspended Indication Tuition Fees will be processed.

Processing Funding Status All received messages with status Unprocessed or Suspended Funding Status Awarded will be processed.

Reviewing BRON-HO Transactions

This section discusses how to:

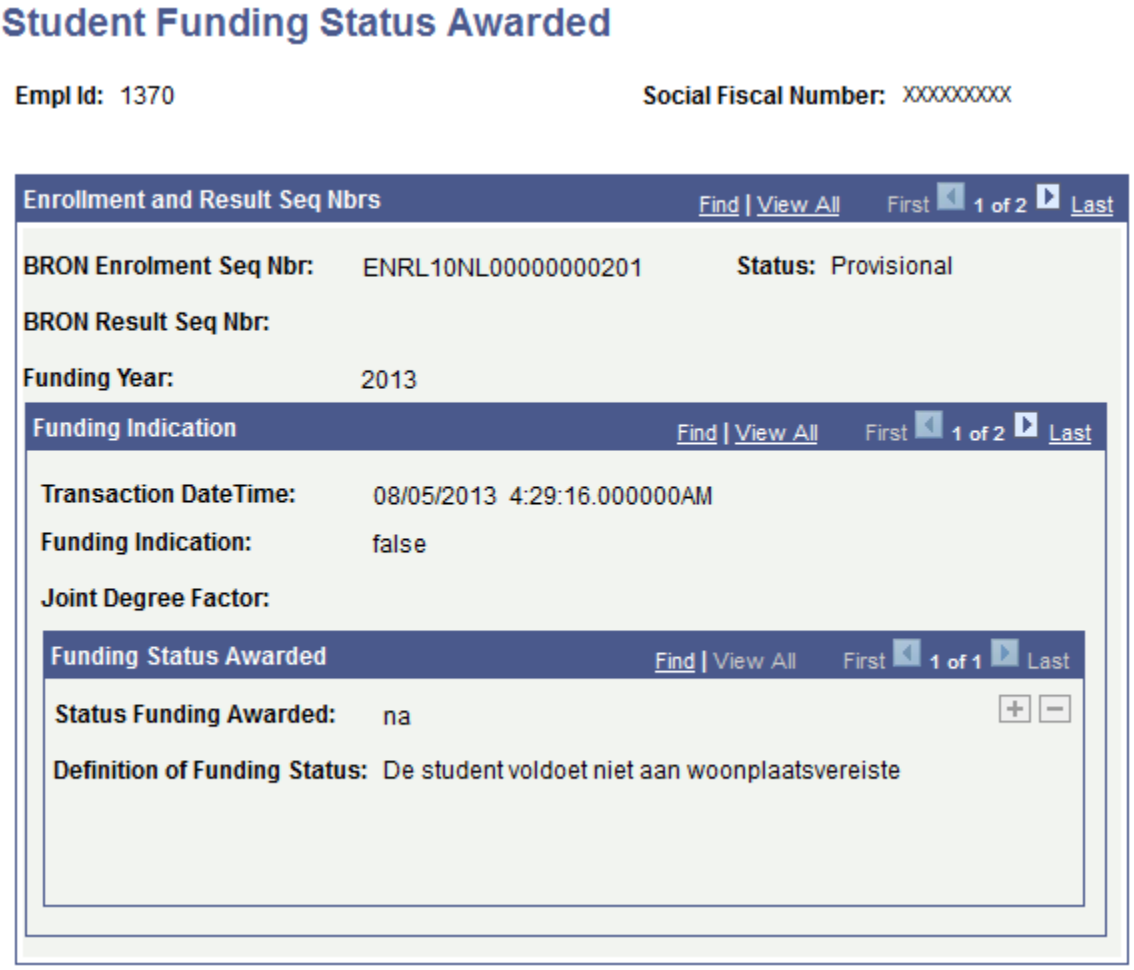
- Review content of Funding Status Awarded transactions for a student.
- Review a snapshot of student status.
- Review content of Indication Tuition Fees for a student.
- Review all transactions for a student.

Pages used to Review Transactions

Page Name	Definition Name	Navigation	Usage
Student Funding Status Awarded	SSR_BR_FNDAWD_NLD	Records and Enrollment, Base register Higher ED NLD, BRON-HO Messaging, Student Funding Status Awarded	View all Message Transactions sent to BRON HO or Received from BRON-HO.
Student Status Overview	SSR_BR_STD_STA_NLD	Records and Enrollment, Base register Higher ED NLD, BRON-HO Messaging, Student Status Overview	View the content of the *BRON Current View* as well as the *BRON Mirror View* side by side for Enrollments as well as Results.
BRON-HO Indication Tuition Fees	SSR_BR_TUT_FEE_NLD	Records and Enrollment, Base register Higher ED NLD, BRON-HO Messaging, BRON-HO Indication Tuition Fee	Review the Tuition Fees Indications received from BRON-HO for a student.
Student BRON-HO Transaction Summary	SSR_BRHO_TRANS_NLD	Records and Enrollment, Base register Higher ED NLD, BRON-HO Messaging, BRON-HO Transaction Summary	Review a summary of all Inbound and Outbound Messages processed for a student.

Reviewing Status Funding Awarded

Access the Funding Status Awarded page (Records and Enrollment, Base register Higher ED NLD, BRON-HO Messaging, Student Funding Status Awarded).



Access this page to review successfully processed messages Funding Status Awarded for each student.

Funding Indication
A new Transaction row is added for the student every time an inbound Funding Award message is received for said student. All records processed via inbound message will be set to status provisional.

Social Fiscal Number	Contains the National ID or Education Number. The Burgerservicenummer (BSN) is the number used by government administrations to identify the individual person.
Enrollment Sequence Number	A sequence number assigned to the Enrollment by the institution for the purpose of sending enrollments to DUO.
Result Sequence Number	A sequence number assigned to the Result by the institution for the purpose of sending enrollments to DUO.
Funding Year	The funding year is the year to which the funding of an Enrollment or Degree (Result) relates. The funding of enrollments relates to the reference date of the 30th of September of the funding year - 2 and for degrees in the period of the 1th of October of the funding year - 3 up to and including the 20th of September of the funding year -2.

Funding Indication	Indicates whether an enrollment or a degree is eligible to funding, which is embodied by a government grant.
Joint Degree Factor	Indicates the importance of the degree for the funding. A single degree is counted as 1, while a joint degree counts in proportion to the number of institutions which participates in the partnership.
Status Funding Awarded	Provides a detailed description of the eligibility for funding of a particular enrollment or degree.
Definition of Funding Status	An explanation of the ‘codeBekostigingStatus’.

Note: The most current Status funding Awarded can be viewed from the BRON-HO Details page (Records and Enrollment, Higher Education NLD, Student Records Higher Education NLD).

Reviewing Student Status Overview page

Access the Student Status Overview page (Records and Enrollment, Base register Higher ED NLD, BRON-HO Messaging, Student Status Overview).

Student Status Overview

Empl ID: 1336 **Name:** Querienesen,Queriene

Enrollments Find | View All First 1 of 2 Last

	Status Institution	Status BRON
SOFI Number:		
Onumber:	000000017	000000017
BRON Enrolment Seq Nbr:	ENRL10NL00000000015	ENRL10NL00000000015
BRINcode:	10NL	10NL
Sub BRINcode:	00	00
Form of Study:	S	S
HEGIS Code:	70140	70140
Acad Load:	VT	VT
Academic Level:	H	H
Enroll Dt:	09/01/2012	09/01/2012
Enrollment End Date:	08/31/2013	08/31/2013
End Enrollment Reason:		
Funding Applies:	1	1

Results Find | View All First 1 of 1 Last

	Status Institution	Status BRON
SOFI Number:		
Onumber:		
BRON Result Seq Nbr:		
BRINcode:		
Sub BRINcode:		
Program Code:		
Acad Load:		
Academic Level:		
Diploma Completed Date:		
First degree:		

The Student Status Overview page shows a “snapshot” compare between the status in Campus Solutions and the status in BRON-HO.

Status Institution Review information in the *BRON Current View*. If no information is shown for this student, the data in the system is not recognized as a valid Enrollment or Result for BRON-HO processing.

Status BRON Review information in the *BRON Mirror Table*, which contains all Approved Enrollments and Results. If no information is shown the Enrollment or Result has not been approved by BRON or is not known in BRON.

Reviewing BRON-HO Indication Tuition Fees

Access the Student BRON-HO indication Tuition Fees page (Records and Enrollment, Base register Higher ED NLD, BRON-HO Messaging, BRON-HO indication Tuition Fees).

BRON-HO Indication Tuition Fees

Empl Id: 1336 **Social Fiscal Number:** XXXXXXXXX

Find | View All First 1 of 1 Last

Transaction DateTime: 08/01/13 5:17:03.000000AM

Ind Type of Total Tution Fees:	Undeterm
BRINcode:	10NL
Program Code:	70140
Approved Academic Load:	Full-Time
Original Enrollment Date:	09/01/2012
VTI StudieLink Registration No:	

Outcome Indication Type Tuition Fees Find | View All First 1 of 1 Last

Ind Type of Tution Fees:	Inst Tut
Indiation of Higher Edu Degree:	
Master Degree:	t
Master Health/Education Degree:	
Bachelor Degree:	
Bachelor Health/Edu Degree:	

Outcome Nationality Requirement Find | View All First 1 of 1 Last

Indication Nationality:	Undeterm

Page 1 of 2

Basis Type of Tution Fees

Basis Requested Study Find | View All First 1 of 1 Last

Enrollment Sector LG:	No
Indication of Bach/Mst Degree:	Bachelor

Basis Information Acad Program

Basis Educational Results Find | View All First 1 of 1 Last

Sub Institute:	02
Acad Level Higher Education:	Prop B
Diploma Completed Date:	03/31/2013
Degree Sector LG:	No
Indication of Bach/Mst Degree:	Bachelor
BRINcode:	10NL
Name of the Institution:	PSNLD Instelling

Basis Information Acad Program

Basis Educational Participations Find | View All First 1 of 1 Last

Sub Institute:	02
Form of Study Higher Education:	Stdnt
Acad Level Higher Education:	Prop B
Original Enrollment Date:	09/01/2012
Enrollment End Date:	08/31/2013
BRINcode:	10NL
Name of the Institution:	PSNLD Instelling

Basis Information Acad Program

Error Notifications Find | View All First 1 of 1 Last

Error Code:	
Error Text:	

Page 2 of 2

Access this page to review successfully processed messages Indication Tuition Fees for each student.

Outcome indication type of tuition fees

Indication type of tuition fees	Indicates the type of tuition fees which should be requested from the student. This is based on the data as known to DUO on the moment of delivery.
Indication Bachelor Degree	Indicates whether the Student has obtained a Bachelor Degree.
Indication Higher Edu Degree	Indicates whether the Student has completed a Degree at a Higher Education Institution.
Master Degree	Indicates that the student has achieved a Master degree.
Master Health/Education Degree	Indicates that the student has achieved a Master degree for a Higher Education program in the healthcare sector or the educational sector.
Bachelor Degree	Indicates whether the Student has obtained a Bachelor Degree.
Bachelor Health/Edu Degree	Indicates that the student has achieved a Bachelor degree for a Higher Education program in the healthcare sector or the educational sector.

Outcome Nationality Requirement

Indication Nationality	Indicates whether the student is granted (or has been granted) study funding. Or, should this not be the case, it indicates whether the student meets the requirement concerning nationality or residence permit, as described in the first paragraph of article 2.2 of the WSF.

Basis for Type of tuition fees
Basis Educational Results and Basis Educational Participation

Enrollment Sector LG	Indicates whether the Enrollment belongs to the Healthcare or the Education sector.
Degree Sector LG	Indicates whether the Degree belongs to the Healthcare or the Education sector.
Indication of Bach/Mst Degree	Indicates whether the degree should be rated as a Bachelor or Master degree in the determination of the indication type of tuition fees.

Error notification

Error code	A code used to identify a specific functional error.
Error text	The explanation of a specific functional error situation.

Reviewing BRON-HO Transaction Summary Page

Access the Student BRON-HO Transaction Summary page (Records and Enrollment, Base register Higher ED NLD, BRON-HO Messaging, BRON-HO Transaction Summary).

Student BRON-HO Transaction Summary

Id: 1336 **Name:** Querienesen,Queriene

Status Funding Awarded | Indication Tuition Fees | View Student Status

Personalize | Find | View All | First 1-10 of 11 Last

Transaction Info | Transaction Detail

	Sequence	Direction	BRON Message	Action DateTime	BRON Enrol Seq	BRON Result Seq
1	11	Inbound	verstrekkenVoorlopigeBekostigingstatusRequest	08/02/13 5:23:22AM		
2	10	Inbound	verstrekkenVoorlopigeBekostigingstatusRequest	08/02/13 5:23:22AM		
3	9	Inbound	verstrekkenVoorlopigeBekostigingstatusRequest	08/02/13 5:06:20AM		
4	8	Inbound	verstrekkenVoorlopigeBekostigingstatusRequest	08/02/13 5:06:20AM		
5	7	Inbound	verstrekkenVoorlopigeBekostigingstatusRequest	08/02/13 5:06:19AM		
6	6	Inbound	verstrekkenVoorlopigeBekostigingstatusRequest	08/01/13 8:09:47AM		
7	5	Inbound	verstrekkenVoorlopigeBekostigingstatusRequest	08/01/13 8:09:47AM		
8	4	Inbound	verstrekkenVoorlopigeBekostigingstatusRequest	08/01/13 5:50:18AM		
9	3	Inbound	verstrekkenVoorlopigeBekostigingstatusRequest	08/01/13 5:50:18AM		
10	2	Inbound	verstrekkenVoorlopigeBekostigingstatusRequest	08/01/13 5:50:18AM		

Status Funding Awarded Click the link to review all transactions for message Status Funding Awarded.

Indication Tuition Fees Click the link to review all transactions for message Indication Tuition Fees.

View Student Status Click the link to review the Student Status Overview page.

Direction Inbound (from BRON-HO to Institution) or Outbound (from Institution to BRON-HO).

Action Date Time Transaction Processing Date Time Stamp.

Student BRON-HO Transaction Summary

Id: 1336 **Name:** Querienesen,Queriene

Status Funding Awarded | Indication Tuition Fees | View Student Status

Personalize | Find | View All | First 1-10 of 11 Last

Transaction Info | Transaction Detail

	Transaction DateTime	Sequence Number	Index ID	Index Id
1	08/02/13 5:22:51.000000AM	1	DUO_111111111111-18	Index Id
2	08/02/13 5:22:29.000000AM	1	DUO_111111111111-3	Index Id
3	08/02/13 5:05:43.000000AM	1	DUO_111111111111-3	Index Id
4	08/02/13 5:05:23.000000AM	1	DUO_111111111111-2	Index Id
5	08/02/13 5:05:08.000000AM	1	DUO_111111111111-1	Index Id
6	08/01/13 8:09:13.000000AM	1	DUO_111111111111-5	Index Id
7	08/01/13 8:08:34.000000AM	1	DUO_111111111111-4	Index Id
8	08/01/13 5:47:56.000000AM	1	DUO_111111111111-3	Index Id
9	08/01/13 5:47:40.000000AM	1	DUO_111111111111-2	Index Id
10	08/01/13 5:47:30.000000AM	1	DUO_111111111111-1	Index Id

Student BRON-HO Transaction Summary page (Transaction Detail tab).

Transaction Date Time Date Time Stamp for this transaction.

Sequence Number Unique sequence number.

Index ID Unique Index ID.

Index ID Hyperlink Click the link to review Details for this transaction.

Approval Process and Suspense Management

This section provides an overview of approval and suspense management and discusses how to:

- Review all BRON-HO transactions.
- Review Suspended transactions in Outbound Suspense and resolve issues.
- Review Suspended transactions in Inbound Suspense and resolve issues.
- Review all message transactions.

Pages used to Review Transactions

Page Name	Definition Name	Navigation	Usage
Outbound Suspense Management	SSR_BR_SUSOUTB_NLD	Records and Enrollment, Base register Higher ED NLD, BRON-HO Messaging, BRON-HO Outbound Suspense	Review Messages that have been suspended in Outbound Suspense and set an appropriate status to resolve.
Inbound Suspense Management	SSR_BRHO_SUSIN_NLD	Records and Enrollment, Base register Higher ED NLD, BRON-HO	Review Messages that have been suspended in Inbound Suspense and set an

Page Name	Definition Name	Navigation	Usage
		Messaging, BRON-HO Inbound Suspense	appropriate status to resolve.
BRON-HO Message Transactions	SSR_BR_MSG_TRN_NLD	Records and Enrollment, Base register Higher ED NLD, BRON-HO Messaging, BRON-HO Message Transactions	View all Message Transactions sent to BRON HO or Received from BRON-HO.

Understanding Approval and Suspense Processing

If a transaction passes all required functional and technical checks, the process inserts a row into the BRON-HO Transaction Table with status *Processed*. If a mutation is to be created and the message cannot be created due to missing elements or not having been able to pass required functional or technical checks stipulated for each message the process inserts a row into the Outbound Suspense table with Transaction Status *Suspended*. The Resend from CS box is checked automatically to indicate that data is to be selected from Campus Solutions tables when re-processing.

Approval processing can be initiated by the institution to ensure that any mutations that are sent to BRON-HO are approved prior to sending. In order to initiate the approval process the Approval Data is administered on "BRON-HO Process Options" page. When the BRON Approval Date is administered the process compares the effective date of the mutation to that Approval Start date and inserts a row into suspense table status *Approval Pending*. This occurs only if the mutation matches the criteria as indicated by the Approval checkbox toggled.

For example if an Enrollment message is to be sent where the Funding Status in the *Current View* is different from the Funding status in the *BRON Mirror Table* and the "Change or Enrollment Funding Status Needs Approval" field has been checked, the process first evaluates whether the Effective Date of the Mutation is on or after the Approval Data. If this is true then the Mutation is Suspended in Outbound Suspense.

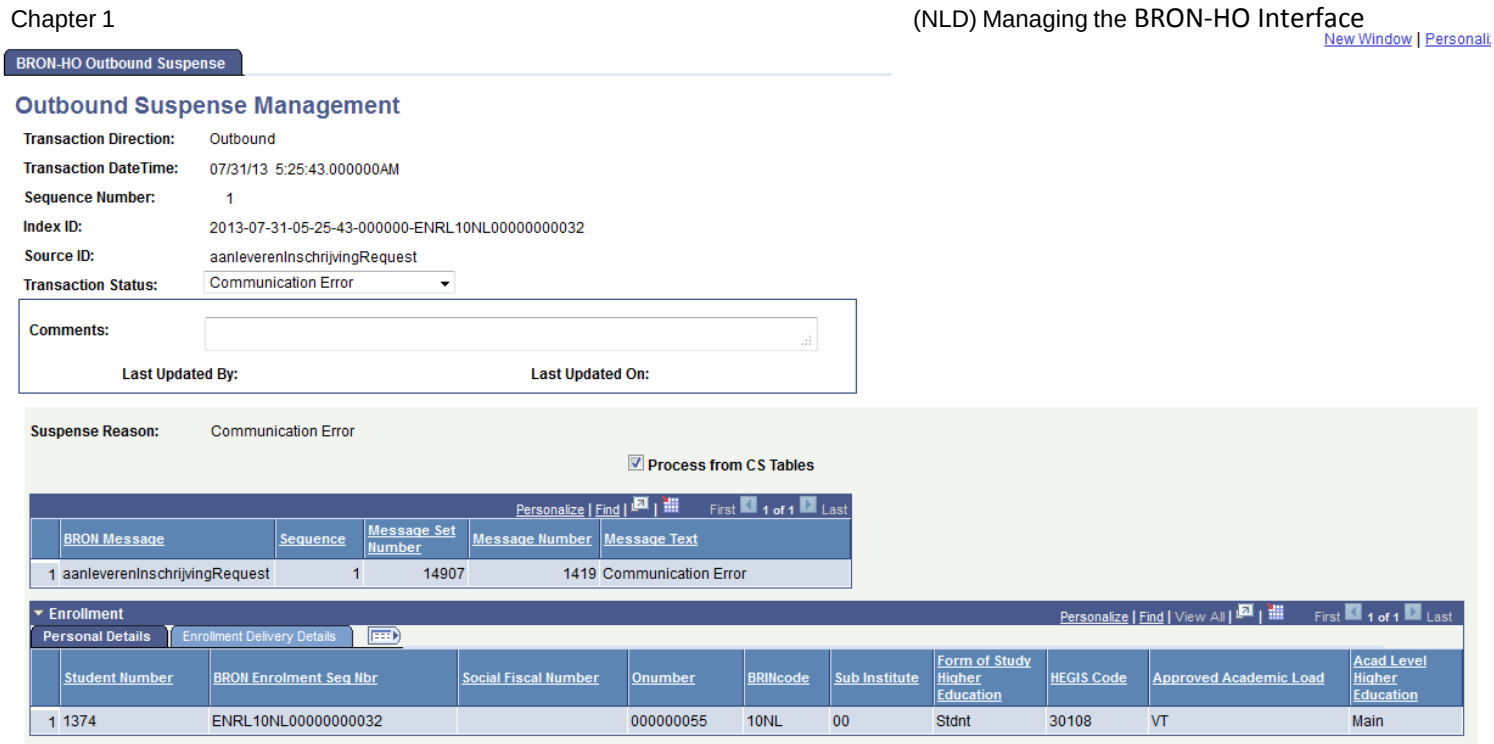
For those messages which have been suspended with status *Approval Pending* the user may access the Outbound Suspense Page and set the status to *Approved* or *Denied*. Transactions with status *Approved* will be selected by the BRON-HO delivery process and re-processed.

For those messages which have been suspended in Outbound Suspense with status *Suspended* the user may choose to not have the transaction processed again by setting the Status to *Skip Transaction* or *Manually Processed*. In case the transaction does need to be reprocessed the user may select status *Unprocessed* or leave the status to *Suspended*.

The process will pick up all messages from Outbound Suspense and re-process when the delivery process is next run if the status is *Unprocessed*, *Suspended*, *Approved* or *Communication Error*.

Reviewing Messages in Outbound Suspense

Access the Outbound Suspense Management page (Records and Enrollment, Base Register Higher ED NLD, BRON-HO Messaging, BRON-HO Outbound Suspense).



Access this page to view all messages that are suspended due to non-compliance with functional or technical checks or the fact that the message needs approval (messages for which an Approval Date has been specified on the BRON-HO Process Options page)

Search record (results restricted to those records for which the transmission status is one of the following: *Suspended, Approval Pending, Communication Error.*

Transaction Status
C - Communication Error: Error occurs when integration broker cannot process outbound message (can only be set by the process not through manual action on this page)
O - Skip Transaction: Can be set by user as indication that transaction should be skipped
M - Manually Processed: Can be set by user as indication that transaction has been processed into the system by manual update
S - Suspended: Can be set by the process to indicate that the message is suspended due to functional or technical reasons (cannot be set by user)
U - Unprocessed: Status to indicate that the message has yet to be processed (can be set by user)
A - Pending Approval: Can be set by the user or the outbound process
X - Approved: Can be set by the user to indicate that the message has been approved for further processing

When re-starting the Outbound process the process picks up automatically for reprocessing all messages with status:
- Communication Error
- Suspended
- Unprocessed
- Approved

Other message status messages are NOT reprocessed.

Suspense reason (display only)	6- missing required field (only possible value on this Page).

Comments	Description long field can be updated by user to specify reason that the transaction status was updated.
Updated operator Id and Date Time Stamp	Automatically updated with %operatorID and Datetimestamp each time page is altered and saved.
Process from CS tables	Set to Y automatically when Transaction Status is set to one of the following values: • Approved • Unprocessed • Communication Error(always re-processed automatically from CS tables) • Suspended (always re-processed automatically from CS tables) Set to N automatically when Transaction Status is set to one of the following values: • Manually resolved • Skip Transaction • Processed (by the process) • Approval Pending (by process)

Error Message grid
Displays relevant BRON message. For possible error messages refer to BRON-HO documentation.

Enrollment grid
Will show all fields from message aanleverenInschrijvingRequest (Enrollment Message) display only.

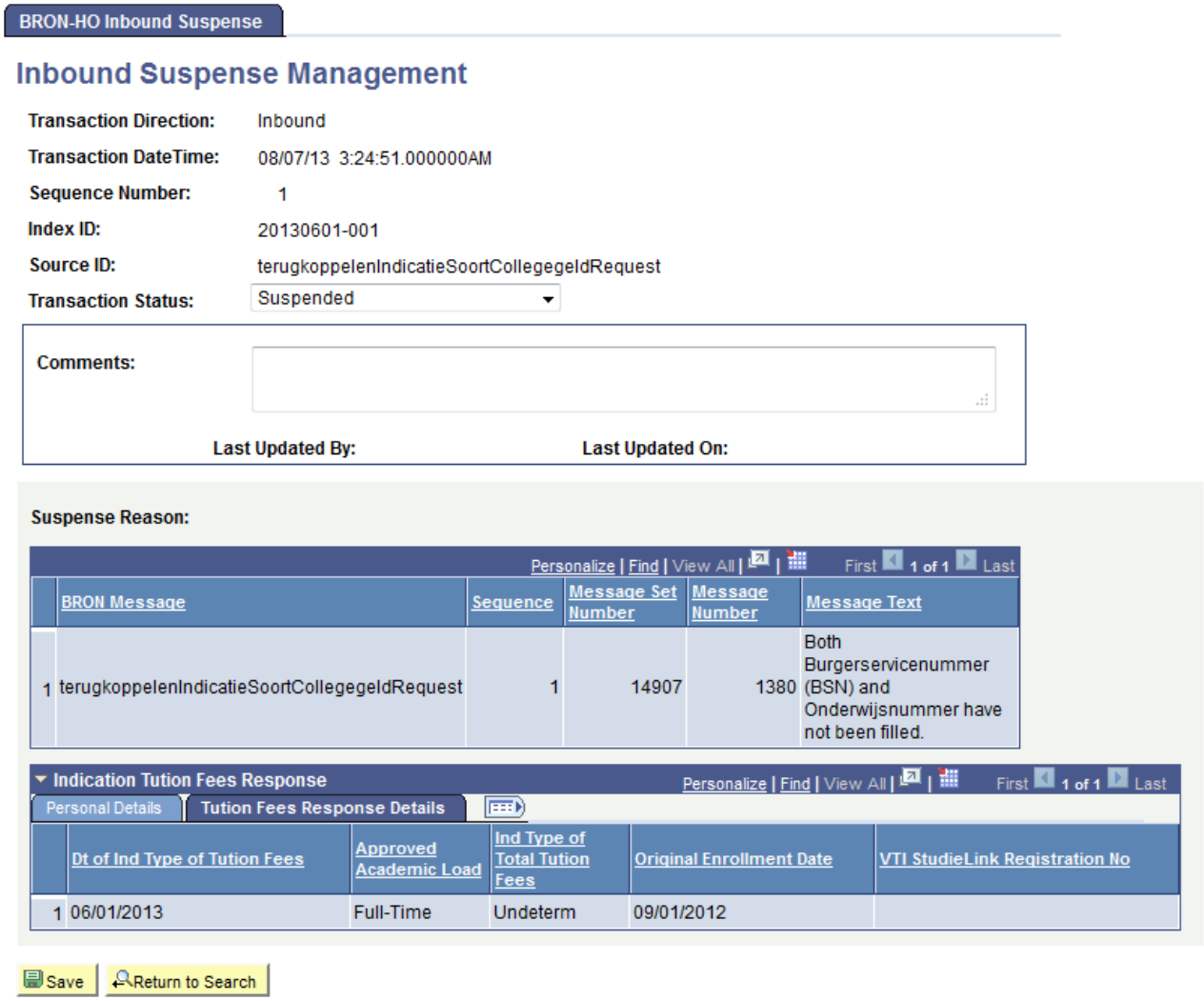
Enrollment Removal grid
Will show all fields from message aanleverenVerwijderingInschrijvingRequest (Removal of Enrollment Message) display only.

Result grid
Will show all fields from message aanleverenResultaatRequest (Result Message) display only.

Result Removal grid
Will show all fields from message aanleverenVerwijderenResultaatRequest (Result Removal Message) display only.

Reviewing Messages in Inbound Suspense

Access the Inbound Suspense Management page (Records and Enrollment, Base Register Higher ED NLD, BRON-HO Messaging, BRON-HO Inbound Suspense).



All messages that are suspended due to non-compliance with functional or technical checks or the fact that the student, enrollment or result cannot be found in CS. Search record results are restricted to those records for which the transmission status is: Suspended.

Transaction Status

Possible values on this Component are the following:

- Suspended
- Skip Transaction
- Manually Processed
- Unprocessed

User may set status to:

- Unprocessed
- Skip Transaction
- Manually Processed

Note: When re-starting the Inbound process the process picks up automatically for reprocessing all messages with status:

- Suspended
- Unprocessed

Other message status messages are NOT reprocessed.

Suspense Reason (display only)
Possible values:
2 – National ID, Education Number match error (only available for inbound process)
4 – unable to update student data (only available for inbound process)

Enrollment grid
Will show all fields from message terugkoppelenInschrijvingResponse display only.

Enrollment Removal grid
Will show all fields from message terugkoppelenVerwijderingInschrijvingResponse display only.

Result grid
Will show all fields from message terugkoppelenResultaatResponse display only.

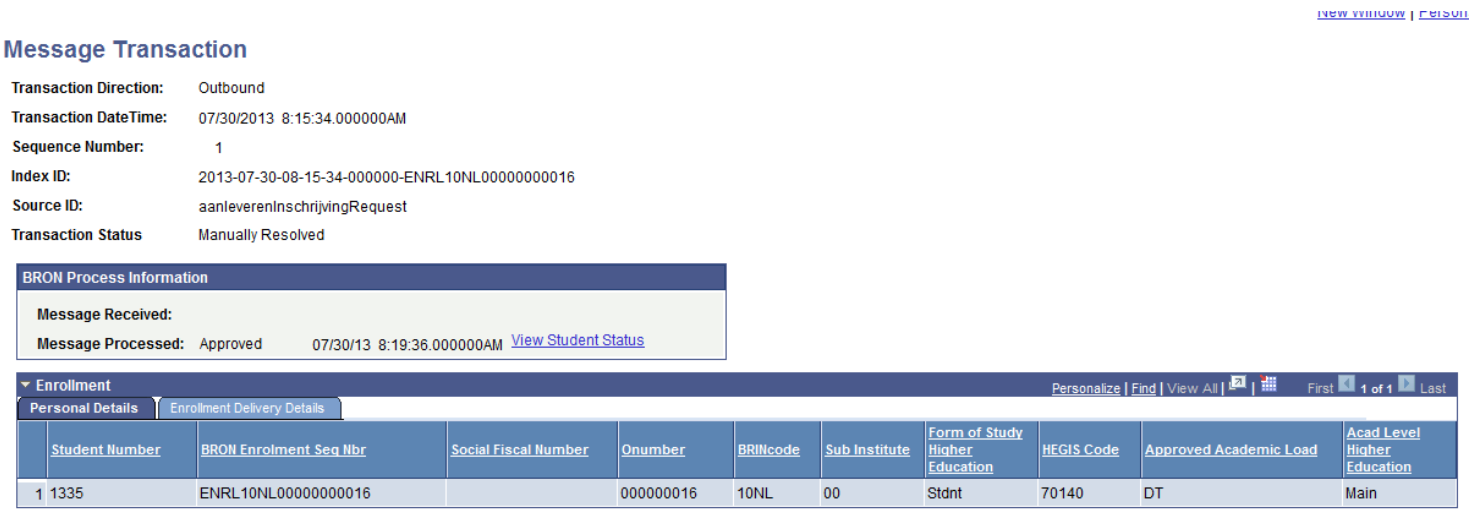
Result Removal grid
Will show all fields from message terugkoppelenVerwijderenResultaatReqsponse display only.

Indication Tuition Fees grid
Will show all fields from message terugkoppelenIndicatieSoortCollegegeldRequest display only.

Provisional Status grid
Will show all fields from message verstrekkenMeldingIndicatieSoortCollegegeldResponse display only.

Reviewing all Message Transactions

Access the Message Transaction page (Records and Enrollment, Base Register Higher ED NLD, BRON-HO Messaging, BRON-HO Message Transaction).



All messages can be viewed from the message Transactions component. Search record (results restricted to those records for which the transmission status is one of the following: Processed, Unprocessed, Approved, Skip Transaction, Manually Processed

Comments and Error message grid is only visible when transaction status is Unprocessed or status is Approval Pending

Transaction status
On this page the Transaction status is Display Only.

Enrollment grid
Will show all fields from message aanleverenInschrijvingRequest display only.

Enrollment Removal grid
Will show all fields from message aanleverenVerwijderingInschrijvingRequest display only.

Result grid
Will show all fields from message aanleverenResultaatRequest display only.

Result Removal grid
Will show all fields from message aanleverenVerwijderenResultaatRequest display only.

Enrollment Response grid
Will show all fields from message terugkoppelenInschrijvingResponse display only.

Enrollment Response Removal grid
Will show all fields from message terugkoppelenVerwijderingInschrijvingResponse display only.

Result Response grid
Will show all fields from message terugkoppelenResultaatResponse display only.

Result Removal Response grid
Will show all fields from message terugkoppelenVerwijderenResultaatReqsponse display only.

Indication Tuition Fees Response grid
Will show all fields from message terugkoppelenIndicatieSoortCollegegeldRequest display only.

Provisional Status Response grid
Will show all fields from message verstrekkenMeldingIndicatieSoortCollegegeldResponse display only.