PBS Batch Module
File Documentation

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1 Document history

Revision	Date	Change
1	1st August 2006	Version 1

2 Introduction

The purpose of this document is to describe the procedure for uploading and downloading files to the PBS Batch module.

3 Directory Structure on the FTP server

Each merchant has a start directory that contains 3 directories:

1. inbox
2. processing
3. status

All files should be uploaded to the “Inbox” directory. The merchant has reading and writing access to this directory. The directory only contains files that have been uploaded.

All files that are being processed are located in the “Processing” directory. Files only exist in this directory for a short time since they are deleted after processing is completed.

The "output file" is created in the “Status” directory. These files contain a status for the processing of the uploaded file. The merchant has reading and writing access and is responsible for deleting old status files. If status files are not deleted within a 90-day period, the files will automatically be deleted by the PBS Batch module.

Through these 3 directories, the merchant is able to monitor the progress of the uploaded files.

When a merchant logs on the system for the first time, none of the above directories exist. The merchant must create the “inbox” directory (be aware that the name is case-sensitive – it must be in lower-case). The other 2 directories are automatically created by the system when the first file is processed.

4 Uploading files

The connection required to upload files is FTPS in passive mode (not SFTP, which is similar but not the same) using SSL encryption (explicit mode) when transmitting data. Connection must be established to pay.pbs-international.dk on port 21.

4.1 Naming

When uploading files to be processed, the file name must meet 2 criteria:

1. All files must be allocated unique names within the same day. If a file name is not unique, an existing file may be overwritten.
2. All files must have a “.txt” extension. If the file extension is not “.txt”, the file will not be processed

Good practice is to have unique file names within at least a 90-day period (or longer), as this will facilitate the process of mapping the status files to an uploaded file. This can be done by adding a serial number to the file name; e.g. “file01.txt”, “file02.txt”, “file03.txt”

Note: the names of the files do not influence the sequence in which they are processed.

4.2 Processing transactions

All files are processed in the order of uploading. Also, all transactions are processed in the same sequence as they are specified within the files.

4.3 Character set/encoding

All content of the files must be in

ISO-8859-1 (Latin-1)

http://en.wikipedia.org/wiki/ISO_8859-1

4.4 Content format

The content of the file must match a fixed format where each line in the file is considered a transaction.

New lines are given as “0x0A” hex (line feed) (UNIX systems) *or* as “0x0D 0x0A” hex (Carriage return, line feed) (Windows systems).

4.5 Transactions

The first two characters in each line indicate which transaction type is contained in the line.

The following transactions are allowed:

Trans number	*Description*	*Record length*
01	Start record of the file	2
02	sendReversalAdvice	26
03	sendCapture	37
04	sendCaptureCredit	34
05	sendRecurringAuthorize	60
06	sendRecurringCapture	34
07	sendRecurringAuthorizeCapture	60
08	sendRecurringCaptureCredit	34
09	findOrder	22
10	findOrders	51
99	End record.	2

Note: It is not possible to process a transaction successfully if no authorization has been obtained. Authorization is not possible in the PBS Batch module (for security reasons).

Note: The first line of each file must contain a 01 transaction and the last line must contain a 99 transaction.

4.5.1 sendReversalAdvice (02)

This transaction type is used to cancel an authorization.

A transaction results in one line of response in the status file (the file to be downloaded later).

Field	*Length*	*Type*	*Position*	*Description*
Trans #	2	Numeric	1-2	Must be 02
Order ID	20	Alpha-numeric	3-22	Contains the order ID used in the authorization. Value must be left-aligned and padded with spaces if length is less than 20.

4.5.2 sendCapture (03)

This transaction type forms the basis of the withdrawal of the authorized amount from the cardholder's account.

A transaction results in one line of response in the status file (the file to be downloaded later).

Field	*Length*	*Type*	*Position*	*Description*
Trans #	2	Numeric	1-2	Must be 03
Order ID	20	Alpha-numeric	3-22	Contains the order ID used in the authorization. Value must be left-aligned and padded with spaces if length is less than 20.
Amount	12	Numeric	23-34	The amount (in minor unit) to be withdrawn from the cardholder's account. The amount may not exceed the authorized amount. Value must be left-aligned and padded with spaces if length is less than 12.
Function code	3	Numeric	35-37	201 – Amount should be the **same** as the authorized amount. 202 – Amount should be the **less** than the authorized amount.

4.5.3 sendCaptureCredit (04)

This transaction is used to transfer an amount to the cardholder's account (reversal of sendCapture).

A transaction results in one line of response in the status file (the file to be downloaded later).

Field	*Length*	*Type*	*Position*	*Description*
Trans #	2	Numeric	1-2	Must be 04
Order ID	20	Alpha numeric	3-22	Contains the order ID used in the authorization. Value must be left-aligned and padded with spaces if length is less than 20.
Amount	12	Numeric	23-34	The amount to be transferred to the cardholder's account. The amount may not exceed the originally captured amount. Value must be left-aligned and padded with spaces if length is less than 12.

4.5.4 sendRecurringAuthorize (05)

This transaction type is used for recurring authorization requests.

A transaction results in one line of response in the status file (the file to be downloaded later).

Field	*Length*	*Type*	*Position*	*Description*
Trans #	2	Numeric	1-2	Must be 05
Order ID	20	Alpha-numeric	3-22	Contains the order ID to be used in this capture – not the same order ID as in the original authorization performed when the subscription order was taken out.
Amount	12	Numeric	23-34	The amount in minor unit to be authorized. Value must be left-aligned and padded with spaces if length is less than 12.
Subscription ID	20	Alpha numeric	35-54	Contains the order ID used in the original authorization. Value must be left-aligned and padded with spaces if length is less then 20.
Processing code	6	Numeric	55-60	000000 – Goods and services 110000 – Quasi-cash

4.5.5 sendRecurringCapture (06)

This transaction type forms the basis of the withdrawal of the authorized amount from the cardholder's account. For each recurring capture, a recurring authorization must be requested.

A transaction results in one line of response in the status file (the file to be downloaded later).

Field	*Length*	*Type*	*Position*	*Description*
Trans #	2	Numeric	1-2	Must be 06
Order ID	20	Alpha numeric	3-22	Contains the order ID to be used in this capture – not the same order ID as in the original authorization performed when the subscription order was taken out.
Amount	12	Numeric	23-34	The amount in minor unit to be withdrawn from the cardholder's account. The amount may not exceed the authorized amount. Value must be left-aligned and padded with spaces if length is less than 12.

Note: "sendRecurringCapture" will fail if a "sendRecurringAuthorize" with same order ID has not been processed previously. Please refer to chapter "4.2 Processing transactions" for a description of the sequence of processing transactions.

4.5.6 sendRecurringAuthorizeCapture (07)

This transaction type forms the basis of the withdrawal of an authorized amount from the cardholder's account. When using this transaction type, the system will automatically authorize and capture the transaction based on the subscription order.

A transaction results in one line of response in the status file (the file to be downloaded later).

Field	*Length*	*Type*	*Position*	*Description*
Trans #	2	Numeric	1-2	Must be 07
Order ID	20	Alpha numeric	3-22	Contains the order ID to be used in this capture – not the same order ID as in the original authorization that was performed when the subscription order was taken out.
Amount	12	Numeric	23-34	The amount in minor unit to be withdrawn from the cardholder's account. Value must be left-aligned and padded with spaces if length is less than 12.
Subscription ID	20	Alpha numeric	35-54	Contains the order ID used in the original authorization that was performed when the subscription order was taken out. Value must be left-aligned and padded with spaces if length is less than 20.
Processing code	6	Numeric	55-60	000000 – Goods and services 110000 – Quasi-cash

4.5.7 sendRecurringCaptureCredit (08)

The transaction type is used to transfer an amount to the cardholder's account (reversal of sendRecurringCapture).

A transaction results in one line of response in the status file (the file to be downloaded later).

Field	*Length*	*Type*	*Position*	*Description*
Trans #	2	Numeric	1-2	Must be 08
Order ID	20	Alpha numeric	3-22	Contains the order ID used in the authorization. Value must be left-aligned and padded with spaces if length is less than 20.
Amount	12	Numeric	23-34	The amount in minor unit to be transferred to the cardholder's account. The amount may not exceed the originally captured amount. Value must be left-aligned and padded with spaces if length is less than 12.

4.5.8 findOrder (09)

This transaction type is used to retrieve a specific order.

A transaction results in one line of response in the status file (the file to be downloaded later).

Field	*Length*	*Type*	*Position*	*Description*
Trans #	2	Numeric	1-2	Must be 09
Order ID	20	Alpha numeric	3-22	The unique string generated by the merchant.

4.5.9 findOrders (10)

This transaction type is used to retrieve a list of all orders for a given period of time.

A transaction results in 0 - a number of lines of response in the status file (the file to be downloaded later).

Field	*Length*	*Type*	*Position*	*Description*
Trans #	2	Numeric	1-2	Must be 10
Request ID	20	Alpha numeric	3-22	Unique string. Generated by the merchant.
Server flag	1	Alpha numeric	23-23	T – Test P – Production
Created after	12	Numeric	24-35	Start date for search; date format is "yyyymmddhhmi" yyyy = year.

				mm = month (01=January, 12 = December) dd = date (from 01 to 31) hh = hours (from 00 to 23) mi = minutes (from 00 to 59) E.g. 200512312359 = 31st December 2005 at 23:59 o'clock.
Created before	12	Numeric	36-47	End date for search; date format is "yyyymmddhhmi" yyyy = year mm = month (01=January, 12 = December) dd = date (from 01 to 31) hh = hours (from 00 to 23) mi = minutes (from 00 to 59) E.g. 200512312359 = 31st December 2005 at 23:59 o'clock.
Transaction status	4	Alpha numeric	48-51	The following characters are allowed. Characters may be in random order. C – Captured R – Credited A – Authorized N – Cancelled E.g. "C" = only captured orders E.g. "CRAN" = All orders

Note: Irrespective of the number of orders found, the system will return only the first 1000 hits.

5 Downloading status files

Each line processed will result in a response. The first two characters of each line indicate which type of transaction is contained in the line.

5.1 Allowed transactions

The following transactions are allowed:

Trans number	*Description*	*Record length*
41	Start record of the file.	2
42	sendReversalAdvice response	29
43	sendCapture response	29
44	sendCaptureCredit response	29
45	sendRecurringAuthorize response	29
46	sendRecurringCapture response	29
47	sendRecurringAuthorizeCapture response	29
48	sendRecurringCaptureCredit response	29
49	findOrder response	89
50	findOrders response	144
97	System error	107
98	Process error	107
99	End record.	2

5.1.1 sendReversalAdvice response (42)

Field	*Length*	*Type*	*Position*	*Description*
Trans #	2	Numeric	1-2	Always 42
Order ID	20	Alpha numeric	3-22	Contains the order ID used in the authorization. Value must be left-aligned and padded with spaces if length is less than 20.
Action code	3	Numeric	23-25	3 digit code – a response code from PBS indicating status of transaction and which action the merchant must take. If “actionCode” is “000”,”060”,”061”,”063”,”900” or “901”, the reversal advice is approved.
Failed	1	Numeric	26-26	0 – successful 1 – failed
Gateway response code	3	Numeric	27-29	3 digit code – gateway status returned from PBS, indicating 1 of 5 possible values. Response code 000 = OK.

5.1.2 sendCapture response (43)

Field	*Length*	*Type*	*Position*	*Description*
Trans #	2	Numeric	1-2	Always 43
Order ID	20	Alpha numeric	3-22	Contains the order ID used in the authorization. Value must be left-aligned and padded with spaces if length is less than 20.
Action code	3	Numeric	23-25	3 digit code – a response code from PBS indicating status of transaction and which action the merchant must take. If “actionCode” is “000”,”060”,”061”,”063”,”900” or “901”, the capture is approved.
Failed	1	Numeric	26-26	0 – successful 1 – failed
Gateway response code	3	Numeric	27-29	3 digit code – gateway status returned from PBS, indicating 1 of 5 possible values. Response code 000 = OK.

5.1.3 sendCaptureCredit response (44)

Field	*Length*	*Type*	*Position*	*Description*
Trans #	2	Numeric	1-2	Always 44
Order ID	20	Alpha numeric	3-22	Contains the order ID used in the authorization. Value must be left-aligned and padded with spaces if length is less than 20.
Action code	3	Numeric	23-25	3 digit code – a response code from PBS indicating status of transaction and which action the merchant must take. If “actionCode” is “000”,”060”,”061”,”063”,”900” or “901”, the capture credit is approved.
Failed	1	Numeric	26-26	0 – successful 1 – failed
Gateway response code	3	Numeric	27-29	3 digit code - gateway status returned from PBS, indicating 1 of 5 possible values. Response code 000 = OK.

5.1.4 sendRecurringAuthorize response (45)

Field	*Length*	*Type*	*Position*	*Description*
Trans #	2	Numeric	1-2	Always 45
Order ID	20	Alpha numeric	3-22	Contains the order ID used in the authorization. Value must be left-aligned and padded with spaces if length is less than 20.
Action code	3	Numeric	23-25	3 digit code – a response code from PBS indicating status of transaction and which action the merchant must take. If “actionCode” is “000”,”060”,”061”,”063”,”900” or “901”, the authorization is approved.
Failed	1	Numeric	26-26	0 – successful 1 – failed
Gateway response code	3	Numeric	27-29	3 digit code – gateway status returned from PBS, indicating 1 of 5 possible values. Response code 000 = OK.

5.1.5 sendRecurringCapture response (46)

Field	Length	Type	Position	Description
Trans #	2	Numeric	1-2	Always 46
Order ID	20	Alpha numeric	3-22	Contains the order ID used in the authorization. Value must be left-aligned and padded with spaces if length is less than 20.
Action code	3	Numeric	23-25	3 digit code – a response code from PBS indicating status of transaction and which action the merchant must take. If “actionCode” is “000”,”060”,”061”,”063”,”900” or “901”, the capture is approved.
Failed	1	Numeric	26-26	0 – successful 1 – failed
Gateway response code	3	Numeric	27-29	3 digit code – gateway status returned from PBS, indicating 1 of 5 possible values. Response code 000 = OK.

5.1.6 sendRecurringAuthorizeCapture response (47)

Field	*Length*	*Type*	*Position*	*Description*
Trans #	2	Numeric	1-2	Always 47
Order ID	20	Alpha numeric	3-22	Contains the order ID used in the authorization. Value must be left-aligned and padded with spaces if length is less than 20.
Action code	3	Numeric	23-25	3 digit code – a response code from PBS indicating status of transaction and which action the merchant must take. If “actionCode” is “000”,”060”,”061”,”063”,”900” or “901”, the capture is approved.
Failed	1	Numeric	26-26	0 – successful 1 – failed
Gateway response code	3	Numeric	27-29	3 digit code – gateway status returned from PBS, indicating 1 of 5 possible values. Response code 000 = OK.

5.1.7 sendRecurringCaptureCredit response (48)

Field	*Length*	*Type*	*Position*	*Description*
Trans #	2	Numeric	1-2	Always 48
Order ID	20	Alpha numeric	3-22	Contains the order ID used in the authorization. Value must be left-aligned and padded with spaces if length is less than 20.
Action code	3	Numeric	23-25	3 digit code – a response code from PBS indicating status of transaction and which action the merchant must take. If “actionCode” is “000”,”060”,”061”,”063”,”900” or “901”, the capture credit is approved.
Failed	1	Numeric	26-26	0 – successful 1 – failed
Gateway response code	3	Numeric	27-29	3 digit code – gateway status returned from PBS, indicating 1 of 5 possible values. Response code 000 = OK.

5.1.8 findOrder response (49)

This search may or may not result in a hit – if no matching order is found, the status field of the response contains an "M".

If the search results in a hit, the response contains the following:

Field	*Length*	*Type*	*Position*	*Description*
Trans #	2	Numeric	1-2	Always 49
Order ID	20	Alpha numeric	3-22	Contains the order ID used in the authorization. Value must be left-aligned and padded with spaces if length is less than 20.
Status	1	Alpha numeric	23-23	C – Captured R – Credited A – Authorized N – Cancelled M – No order found (subsequent fields are empty)
Created	14	Numeric	23-37	Time when the order was authorized (created); date format is ”yyyymmddhhmiss” yyyy = year

				mm = month (01=January, 12 = December) dd = date (from 01 to 31) hh = hours (from 00 to 23) mi = minutes (from 00 to 59) ss = seconds (from 00 to 59) E.g. 20051231235959 = 31st December 2005 at 23:59:59 o'clock.
Expiration date	4	Numeric	38-41	Date when the card will expire. Date format is "mmyy" mm = month yy = year
Max capture amount	13	Numeric	42-53	Amount in major unit that can be withdrawn from the cardholder's account. The decimal separator is a dot (.) and at least one decimal is present. E.g. 25.0
Max capture credit amount	13	Numeric	54-65	Amount in major unit that can be transferred to the cardholder's account. The decimal separator is a dot (.) and at least one decimal is present. E.g. 25.0
Recurring	1	Numeric	66-66	0 – not recurring 1 – recurring
Currency Code	3	Alpha numeric	67-69	ISO 3166-1 alpha-3 currency code http://en.wikipedia.org/wiki/ISO_3166-1_alpha-3
PAN	19	Alpha numeric	70-88	Masked PAN – only the last 4 digits are visible (the remaining digits are masked by 'x')
Authorization Type	1	Numeric	89-89	1 – ecommerce 2 – eDankort 3 – 3D Secure

5.1.9 findOrders response (50)

This response can contain more than one line (one line for each order found). If more orders are found, the request ID can be used to link the orders found with the right request. If no orders are found, no lines are included in the response file.

Field	*Length*	*Type*	*Position*	*Description*
Trans #	2	Numeric	1-2	Always 50

Request ID	20	Alpha numeric	3-22	Echoed from the request. Used to determine which orders are linked with which “findOrder” request.
Server flag	1	Alpha numeric	23-23	Echoed from the request. T – test P – production
Created after	12	Numeric	24-35	Echoed from the request. Start date of search period; date format is ”yyyymmddhhmi” yyyy = year mm = month (01=January, 12 = December) dd = date (from 01 to 31) hh = hours (from 00 to 23) mi = minutes (from 00 to 59) E.g. 200512312359 = 31st December 2005 at 23:59 o'clock.
Created before	12	Numeric	36-47	Echoed from the request. End date of search period; date format is ”yyyymmddhhmi” yyyy = year mm = month (01=January, 12 = December) dd = date (from 01 to 31) hh = hours (from 00 to 23) mi = minutes (from 00 to 59) E.g. 200512312359 = 31st December 2005 at 23:59 o'clock.
Order ID	20	Alpha numeric	48-67	The order ID from the authorization.
Status	1	Alpha numeric	68-68	C – Captured R – Credited A – Authorized N – Cancelled
Created	14	Numeric	69-82	Time when the order was authorized (created). Date format is ”yyyymmddhhmiss” yyyy = year. mm = month (01=January, 12 = December)

				dd = date (from 01 to 31) hh = hours (from 00 to 23) mi = minutes (from 00 to 59) ss = seconds (from 00 to 59) E.g. 20051231235959 = 31. December 2005 at 23:59:59 o'clock.
Expiration date	4	Numeric	83-86	Date when the card will expire. Date format is "mmyy" mm = month yy = year
Max capture amount	13	Numeric	87-98	Amount in major unit that can be withdrawn from the cardholder's account. The decimal separator is a dot (.) and at least one decimal is present. E.g. 25.0
Max capture credit amount	13	Numeric	99-110	Amount in major unit that may be transferred to the cardholder's account. The decimal separator is a dot (.) and at least one decimal is present. E.g. 25.0
Recurring	1	Numeric	111-111	0 – not recurring 1 – recurring
Currency Code	3	Alpha numeric	112-114	ISO 3166-1 alpha-3 currency code http://en.wikipedia.org/wiki/ISO_3166-1_alpha-3
PAN	19	Alpha numeric	115-133	Masked PAN – only the last 4 digits are visible (the remaining digits are masked by 'x')
Authorization Type	1	Numeric	134-134	1 – ecommerce 2 – eDankort 3 – 3D Secure

Note: irrespective of the number of orders found, the system will return only the first 1000 hits.

Note: transactions created by using the recurring transaction types cannot be found using this transaction – instead use the "findOrder" transaction.

5.1.10 System Error (97)

When the system fails, this transaction is written in the response file. It indicates that the system has somehow failed processing the transaction – not that there was a problem with the submitted transaction.

When this transaction occurs, the transaction should be re-submitted.

Field	*Length*	*Type*	*Position*	*Description*
Trans #	2	Numeric	1-2	Always 97
Failed Trans #	2	Numeric	3-4	Contains the Trans# of the processed file that failed. Value is empty if error is not related to the data in the transaction (e.g. system restarting)
Order Id	20	Alpha numeric	5-24	Order ID or Request ID (depending on the "Failed Trans #") – used to determine which order failed. Value is empty if error is not related to the data in the transaction (e.g. system restarting)
Message	128	Alpha numeric	25-152	Error message text

5.1.11 Process Error (98)

When an error occurs while a request is being processed, this transaction is written instead of any of the above mentioned responses. This is typically a format error and re-submitting the transaction will not help.

Field	*Length*	*Type*	*Position*	*Description*
Trans #	2	Numeric	1-2	Always 98
Failed Trans #	2	Numeric	3-4	Contains the Trans# of the processed file that failed. Value is empty if error is not related to the data in the transaction (e.g. parse error of the file)
Order Id	20	Alpha numeric	5-24	Order ID or Request ID (depending on the "Failed Trans #") – used to determine which order failed. Value is empty if error is not related to the data in the transaction (e.g. parse error of the file)
Message	128	Alpha numeric	25-152	Error message text