SHIFT④ ™

API Specifications

SmartGuard

Fraud Scoring Model for non-Acquiring Merchants

Version 1.1 | November 2023

Contents

Introduction

The specifications below guide you on how to use Shift4 SmartGuard fraud prevention services if you are connected to Shift4 gateway and process transactions with other acquirers. The specifications also apply if you are connected to Shift4 gateway for our fraud prevention services only and are interested in receiving the fraud score in order to process transactions using other gateways.

The SmartGuard fraud-prevention solution protects your payments by enabling you to send transactions and receive an automatic decision whether to reject, approve or review the transaction based on various parameters such as transaction amount, card type, country and more.

To optimise these decisions and best feed SmartGuard's machine-learning algorithm, it is required that you send us a daily report (see *Daily Report*) that details all of your daily fraud and chargeback data reported to you by your acquirer.

If you are using SmartGuard for transaction scoring only, without processing with Shift4, then in addition to the *Daily Report* you also need to update us regarding the status of each transaction you send on for processing – whether it was approved or rejected by the issuer. This information serves as a feedback loop for the machine-learning algorithm (see *Transaction Approved/Rejected Update*).

How to send a daily report containing your fraud & chargeback data

1. In your Shift4 SFTP folder you have a dedicated folder for the SmartGuard service.

2. Every day, upload to the dedicated folder a file containing the daily fraud and chargeback information you received from your acquirer.

3. The file name should be in the format detailed below, based on Shift4 identification details you received from your Solution Architect.

   • For direct merchants: Client ID_MerchnatName_Date_FileNumber.csv

   • For a PSP or PF: Partner ID_Partnername_Date_FileNumber.csv

   The Date should be in the following format: YYMMDD

   The FileNumber should indicate the number of files sent so far today. Thus, the first file sent on a given day should be numbered 01, the second file sent on the same day should be numbered 02, and so on.

4. The file should be in pipe delimiter format.

5. The file structure is specified in the table below:

File structure of daily report

#	Field name	Type	Length	Mandatory/ Optional	Description	Comments
1	client_ID	[a-zA-Z0-9]	1,15	Mandatory	Merchant identifier in Shift4	Direct merchants and PSPs: The value provided by your Shift4 Solution Architect (opportunity ID). PFs: The sub merchant ID you assigned to the sub merchant.
2	z1	[a-zA-Z0-9]	1,32	Mandatory	Shift4 Gateway Transaction ID - uniquely identifies this transaction in the Shift4 gateway	

#	Field name	Type	Length	Mandatory/ Optional	Description	Comments
3	fraud_indication	[Y/N]	1	Mandatory	Is the transaction marked as fraud based on the information received from your acquirers	
4	scheme	[A-z,0-9]	1,16	Optional	Scheme name such as Visa, Mastercard	
5	fraud_type	Varchar	1,32	Optional	The code specifying the type of fraudulent activity	
6	fraud_subtype	Varchar	1	Optional	The code specifying the sub type of the fraudulent transaction	
7	fraud_posting_date	YY/MM/ DD		Optional	The date the transaction was posted as fraudulent at the issuer's site	
8	chargeback	[Y/N]	1	Optional	Was the transaction received as chargeback from the issuer	1st chargeback only
9	chargeback_posting_date	YY/MM/ DD, HH/MM		Optional	The chargeback posting date sent by the issuer	
10	orig_transaction_currency	Varchar	3	Optional	The currency of the original presentment in ISO 4217 alpha-3 format	
11	orig_transaction_amount	Decimal	23,5	Optional	The amount of the original presentment	

#	Field name	Type	Length	Mandatory/ Optional	Description	Comments
12	cbk_currency	Varchar	3	Optional	The currency in which the chargeback was raised (issuer currency)	
13	cbk_amount	Varchar	32	Optional	The amount for which the chargeback was raised (issuer amount).	
14	reason_code	Varchar	1,4	Optional	The chargeback reason code received from the issuer	
15	reason_desc	Varchar	255	Optional	The chargeback reason description received from the issuer	

How to send the transaction status update: approved / rejected

This section is relevant if you are connected to Shift4 gateway for SmartGuard transaction scoring only, and process the transactions using a third party gateway.

To use SmartGuard's machine-learning model, you are required to send each transaction using the Get Fraud Scoring operation code [103], described in the *Shift4 Payment API Specifications* guide available on the *Shift4 Developer Portal*. In return, you will receive a fraud score for the transaction.

Based on the fraud score, you decide whether to stop processing the transaction or continue processing the transaction via the third party gateway. If you decide to process the transaction, you will be required to update us, using operation code [301], regarding the transaction's subsequent actual approved/rejected status as reported back to you by the issuer. If relevant, you will also need to update us regarding any additional transactions (such as Void or Capture) related to the specific scored transaction. The information will serve as a feedback loop for our machine-learning model. If no [301] update is received by Shift4 for a transaction that was given a fraud score, we assume that the transaction was not sent on for processing.

The following table describes the parameters of operation code [301].

Operation code [301]

Parameter name	Description	Type	Length	M/O
M	*Shift4* assigned gateway Merchant ID	[A-Z0-9_]	3,6	M
K	Unique cipher used for authenticating requests Refer to *Appendix A: Message Cipher* of the *Shift4 Payment API Specifications* for details on generating the cipher	[0-9A-Za-z]	1,32	M
O	The Operation Code used for the original or updated transaction	[0-9]	1,3	M
operation_result_successful	The actual transaction processing result returned by the issuer Valid values are: • approved • rejected • partially_approved			M

Parameter name	Description	Type	Length	M/O
operation	The type of payment/transaction Valid values are: • authorization • capture • void • refund • sale			O
a1	Request ID A unique transaction reference number. It should be unique to each transaction and to each MID. May be used when corresponding with the payment processor or reconciling transactions. Note: No plaintext cardholder data should be provided in this field.	[A-Za-z0-9-]	1,32	M
a4	Requested billing amount The amount value should not include a decimal point. Amounts in currencies that have two, three or no exponents should be formatted according to their currency requirements. Refer to *Appendix H: Transaction Currencies* of the *Shift4 Payment API Specifications* for further information. The minimum transaction value should be 0.01 EUR (or the equivalent or EUR 0.01 in another currency), otherwise the request is rejected.	[0-9]	1,12	M
a5	Transaction currency Indicates the currency that should be used in the transaction (every currency used must be preconfigured on the *Shift4* platform). Refer to *ISO 4217-alpha-3* for further information.	[A-Z]	3,3	O

Parameter name	Description	Type	Length	M/O
cvv_result	CVV2 response code Valid values are: 'M' - CVV2/CVC2 Matches 'N' – CVV2/CVC2 does not Match 'P' – Not processed 'S' – The CVV2 should be on the card but the merchant indicates it is not. 'U' – CVV2/CVC2 Unavailable – issuer does not support this parameter 'Y' – CVC1 Incorrect '1' - CVV2/CVC2 Unavailable – processor / card type does not support this parameter '2' - An unrecognised result code was returned by the processor '3' - No result code was returned by the processor.	[A-Z]	(1,1)	O
avs_result	The AVS check result code as received from the issuer	[A-Z]	(1,1)	O
authorization_code	The issuer authorisation code	[0-9A-Za-z]	(1,10)	O
acquirer_name	The acquirer name for this transaction	Text	(1,31)	O

Change History

Version	Subject/Date	Description
1.1	November 2023	Rebranded as Shift4
1.0	December 2020	Preliminary release

Need Support?

Contact our 24/7 Client Relations Center for any additional information or technical issue:

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