Appendix

Version	Date	Description
0.1	Dec-2023	Appendix

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1. Response Codes

Response Code	Response message	Comments
000	Success	Transaction captured
001	Acquirer Error	Acquirer bank not available
002	Denied	Denied by Bank
003	Timeout	Transaction timed out
004	Declined	Declined by bank
005	Authentication not available	Authentication issue
006	Transaction processing	Transaction in process
007	Rejected by acquirer	Rejected by bank
008	Duplicate	Duplicate submission
009	Response signature did not match	Response from acquirer did not match, re-check transaction status
010	Cancelled by user	User pressed cancel button
011	Authorization success but error processing recurring payment	
012	Denied due to fraud detection	
013	Total refund amount greater than sale amount	
014	Refund Amount should be less than today's Captured Amount	
015	Transaction is pending	Transaction is pending
016	Invalid refund amount	
017	Acquirer service down	
018	Duplicate order ID	
019	Duplicate refund order ID	
022	Failed at acquirer	Transaction was not processed by bank
026	Pending	Transaction in process
100	User not found	Invalid credentials used
105	User not approved	User not active
113	Payment option not supported	Payment method not allowed for the user
130	Currency not supported	

207	Invalid refund amount	Total Refund Amount should be less than today's Captured Amount

It is recommended to check the combination of status and response code received in response.
Response Code: (000) + Status: (Captured) = Successfully Captured

- **Possible Status**
  - Authentication Failed
  - Browser Closed
  - Cancelled
  - Captured
  - Duplicate
  - Enrolled
  - Failed
  - Failed at Acquirer
  - Failed by acquirer
  - Invalid
  - Pending
  - Rejected
  - Timeout
  - Approved

Case 1: RESPONSE_CODE = 000 and STATUS = Captured : When you receive this combination, it means transaction successful and completed
Case 2: RESPONSE_CODE = Any Code and STATUS = Timeout or STATUS = Pending : When you receive this combination, It means transaction is not completed, transaction neither failed or success, PG is waiting status from Acquirer to update transaction's final status, in this case you can check with status API until you get final status of the transaction.
Case 3: RESPONSE_CODE = 000 and STATUS = Enrolled : When you receive this combination, it means transaction is not completed waiting for next step authentication, this combination usually comes in 3DS transaction
Case 4: RESPONSE_CODE = Any Code other than 000 and STATUS = Any Status other than (Captured, Enrolled, Pending and timeout): when you receive this combination you can consider transaction is failed or rejected.

- **For Invalid/Error Transaction**

Response Code	Response message
300	Invalid Request
302	No transaction found
323	Invalid Hash
327	Invalid request (Request URL)
900	Internal system error
999	Unknown Error

2. Bank Codes

Affin Bank	AFBB	MYR
AGROBANK	AGRO	MYR
Alliance Bank Malaysia Berhad	ABMB	MYR
Ambank	AMBB	MYR
Bank Islam Malaysia	BIMB	MYR
Bank Kerjasama Rakyat	BKRM	MYR
Bank Muamalat	BMMB	MYR
Bank Of America	BOFA	MYR
Bank Of China	BOCM	MYR
Bank Simpanan National	BSNB	MYR
CIMB Bank Berhad	CIMB	MYR
Hong Leong Bank Berhad	HLBB	MYR
HSBC Bank	HSBC	MYR
Maybank Berhad	MB2U	MYR
OCBC Bank	OCBC	MYR
Public Bank Berhad	PUBB	MYR
RHB Bank Berhad	RHBB	MYR
Standard Chartered Bank	STCB	MYR
UNITED OVERSEAS BANK	UOBB	MYR
Allahabad Bank	ALHB	INR
Andhra Bank	ADRB	INR
Axis Bank	AXSB	INR

Bandhan Bank	BDHN	INR
Bank Of Baroda	BOBB	INR
Bank of India	BOIB	INR
Bank of Maharashtra	BOMB	INR
Canara Bank	CNRB	INR
Central Bank of India	CBIB	INR
City Union Bank	CUBL	INR
Deutsche Bank	DSHB	INR
HDFC Bank	HDFC	INR
Federal Bank LTD	FEDB	INR
ICICI Bank	ICBB	INR
IDBI Bank	IDBI	INR
IDFC Bank	IDFC	INR
Indian Bank	INDB	INR
IndusInd Bank	IDSB	INR
India Post Payment Bank	IPPB	INR
Jammu and Kashmir Bank Limited	JAKB	INR
Karnataka Bank Limited	KBLB	INR
Kotak Mahindra Bank	KTKB	INR
Lakshmi Vilas Bank	LXVB	INR
Punjab National Bank	PNBB	INR
PAYTM Payments Bank LTD	PTMB	INR
South Indian Bank	SINB	INR
State Bank of India	SBOI	INR
Ujjivan Small Finance Bank	UJVB	INR
Union Bank of India	UBOI	INR
Yes Bank	YESB	INR
Bangkok Bank	BKKB	THB
Bank for Agriculture and Agricultural Cooperatives	BAAC	THB
Bank of Ayudhya (Krungsri)	KSAB	THB
CIMB Thai Bank	CIMT	THB
Government Savings Bank	GSBA	THB
Kasikorn Bank	KSKB	THB
Kiatnakin Bank	KKBB	THB
Krung Thai Bank	KTBA	THB
Siam Commercial Bank	SCBB	THB
Standard Chartered Bank (Thai)	SCBT	THB
TISCO Bank	TISC	THB
TMBThanachart Bank	TMBB	THB

United Overseas Bank (Thai)	UOBT	THB
AGRIBANK	AGRB	VND
Asia Commercial Bank	ACBB	VND
Bank for Investment and Development of Vietnam	BIDV	VND
DongA Bank	DABB	VND
Eximbank	EXMB	VND
Ho Chi Minh City Development Joint Stock Commercial Bank	HDBB	VND
National Citizen Commercial Joint Stock Bank	NCBB	VND
Ocean Commercial One Member Limited Liability Bank	OCNB	VND
SacomBank	SACB	VND
Saigon Hanoi Commercial Joint Stock Bank	SHBB	VND
TechcomBank	TCBB	VND
Tien Phong Commercial Joint Stock Bank	TPBB	VND
VietcomBank	VCBB	VND
VietinBank	VTBB	VND
Vietnam International Commercial Joint Stock Bank	VIBB	VND
Vietnam Maritime Commercial Joint Stock Bank	MSBB	VND

3. Payment Methods

Payment Method	Value
Credit/Prepaid Cards	CC
Debit Card	DC
Wallets	WL
Peer to Peer	PP

4. Mop Types

Mode of Payment	Value
MasterCard	MC
Visa	VI
Maestro	MS
American Express	AX
Diners	DN
RuPay	RU
Union Pay	UP
Peer to Peer	P2P
Discover	DI
JCB	JC
Diners	DN

5. Currency Codes and Minor Units

Our APIs expect amounts to be submitted in minor units: the smallest unit of a currency, depending on the number of decimals.

Most currencies have two decimals. Some currencies do not have decimals, and some have three decimals. For example:

- 10 USD: USD has two decimals, so in minor units submit an amount of 1000.
- 10 JPY: JPY has no decimals, so in minor units submit an amount of 10.
- 10 BHD: BHD has three decimals, so in minor units submit an amount of 10000.

Currency	Alphabetical Code	Numeric Code	Decimals
United Arab Emirates Dirham	AED	784	2
Australian dollar	AUD	036	2
Canadian Dollar	CAD	124	2
Euro	EUR	978	2
Pound sterling	GBP	826	2
Indian rupee	INR	356	2
United States Dollar	USD	840	2
Bangladeshi Taka	BDT	050	2
Bahraini dinar	BHD	048	3
Swiss Franc	CHF	756	2
Japanese yen	JPY	392	0
Kenyan shilling	KES	404	2
Kuwaiti dinar	KWD	414	3
Sri Lankan rupee	LKR	144	2
Nepalese rupee	NPR	524	2
Qatari Riyal	QAR	634	2
South African Rand	ZAR	710	2
Nigerian Naira	NGN	566	2
Vietnamese Dong	VND	704	0
Saudi Riyal	SAR	682	2
Omani Rial	OMR	512	3
Singapore Dollar	SGD	702	2
Philippine Peso	PHP	608	2
Egyptian Pound	EGP	818	2
Zambian Kwacha	ZMW	967	2

Russian Ruble	RUB	643	2
Ghanaian Cedi	GHS	936	2
Ugandan Shilling	UGX	800	0
Tunisian Dinar	TND	788	3
Ukrainian Hryvnia	UAH	980	2
Jordanian Dinar	JOD	400	3
Moroccan Dirham	MAD	504	2
Iraqi Dinar	IQD	368	3
Turkish lira	TRY	949	2
Chinese Yuan	CNY	156	2

6. Country Codes

Country name	ISO Codes
Afghanistan	AF
Aland Islands	AX
Albania	AL
Algeria	DZ
American Samoa	AS
Andorra	AD
Angola	AO
Anguilla	AI
Antarctica	AQ
Antigua and Barbuda	AG
Argentina	AR
Armenia	AM
Aruba	AW
Australia	AU
Austria	AT
Azerbaijan	AZ
Bahamas	BS
Bahrain	BH
Bangladesh	BD
Barbados	BB
Belarus	BY
Belgium	BE
Belize	BZ
Benin	BJ
Bermuda	BM
Bhutan	BT
Bolivia	BO
Bonaire	BQ
Bosnia and Herzegovina	BA
Botswana	BW
Bouvet Island	BV
Brazil	BR
British Indian Ocean Territory	IO

Brunei Darussalam	BN
Bulgaria	BG
Burkina Faso	BF
Burundi	BI
Cabo Verde	CV
Kyrgyzstan	KH
Cameroon	CM
Canada	CA
Cayman Islands	KY
Central African Republic	CF
Chad	TD
Chile	CL
China	CN
Christmas Island	CX
Cocos	CC
Colombia	CO
Comoros	KM
Congo	CG
Congo Republic	CD
Cook Islands	CK
Costa Rica	CR
Cote dIvoire	CI
Croatia	HR
Cuba	CU
Curacao	CW
Cyprus	CY
Czech Republic	CZ
Denmark	DK
Djibouti	DJ
Dominica	DM
Dominican Republic	DO
Ecuador	EC
Egypt	EG
El Salvador	SV
Equatorial Guinea	GQ
Eritrea	ER
Estonia	ER
Ethiopia	ET
Falkland Islands	FK

Faroe Islands	FO
Fiji	FJ
Finland	FI
France	FR
French Guiana	GF
French Polynesia	PF
French Southern Territories	TF
Gabon	GA
Gambia	GM
Georgia	GE
Germany	DE
Ghana	GH
Gibraltar	GI
Greece	GR
Greenland	GL
Grenada	GD
Guadeloupe	GP
Guam	GU
Guatemala	GT
Guernsey	GG
Guinea	GN
Guinea Bissau	GW
Guyana	GY
Haiti	HT
Heard Island and McDonald Islands	HM
Holy See	VA
Honduras	HN
Hong Kong	HK
Hungary	HU
Iceland	IS
India	IN
Indonesia	ID
Iran	IR
Iraq	IQ
Ireland	IE
Isle of Man	IM
Israel	IL
Italy	IT
Jamaica	JM

Japan	JP
Jersey	JE
Jordan	JO
Kazakhstan	KA
Kenya	KE
Kiribati	KI
Korea	KP
Kuwait	KW
Kyrgyzstan	KG
Lao People Democratic Republic	LA
Latvia	LV
Lebanon	LB
Lesotho	LS
Liberia	LR
Libya	LY
Liechtenstein	LI
Lithuania	LT
Luxembourg	LU
Macao	MO
Macedonia	MK
Madagascar	MG
Malawi	MW
Malaysia	MY
Maldives	MV
Mali	ML
Malta	MT
Marshall Islands	MH
Martinique	MQ
Mauritania	MR
Mauritius	MU
Mayotte	YT
Mexico	MX
Micronesia	FM
Moldova	MD
Monaco	MC
Mongolia	MN
Montenegro	ME
Montserrat	MS
Morocco	MA

Namibia	MZ
Myanmar	MM
Namibia	NA
Nauru	NR
Nepal	NP
Netherlands	NI
New Caledonia	NC
New Zealand	NZ
Nicaragua	NG
Niger	NE
Nigeria	NH
Niue	NU
Norfolk Island	NE
Northern Mariana Islands	MP
Norway	NO
Oman	OM
Pakistan	PK
Palau	PW
Palestine	PS
Panama	PA
Papua New Guinea	PG
Paraguay	PY
Peru	PE
Philippines	PH
Pitcairn	PN
Poland	PL
Portugal	PT
Puerto Rico	PR
Qatar	QA
The Republic of Korea	KR
Réunion	RE
Romania	RO
Russian Federation	RU
Rwanda	RW
Saint Barthelemy	BL
Saint Helena	SH
Saint Kitts and Nevis	KN
Saint Lucia	LC
Saint Martin	MF

Saint Pierre and Miquelon	PM
Saint Vincent	VC
Samoa	WS
San Marino	SM
Sao Tome and Principe	ST
Saudi Arabia	SA
Senegal	SN
Serbia	RS
Seychelles	SC
Sierra Leone	SL
Singapore	SG
Sint Maarten	SX
Slovakia	SK
Slovenia	SI
Solomon Islands	SB
Somalia	SO
South Africa	ZA
South Georgia	GS
South Sudan	SS
Spain	ES
Sri Lanka	LK
Sudan	SD
Suriname	SR
Svalbard and Jan Mayen	SJ
Swaziland	SZ
Sweden	SW
Switzerland	CH
Syrian Arab Republic	SY
Taiwan	TW
Tajikistan	TJ
Tanzania	TZ
Thailand	TH
Timor Leste	TL
Togo	TG
Tokelau	TK
Tonga	TO
Trinidad and Tobago	TT
Tunisia	TN
Turkey	TR

Turkmenistan	TM
Turks and Caicos Islands	TC
Tuvalu	TV
Uganda	UG
Ukraine	UA
United Arab Emirates	AE
United Kingdom	GB
United States	US
United States Minor Outlying Islands	UM
Uruguay	UY
Uzbekistan	UZ
Vanuatu	VU
Venezuela	VE
Vietnam	VN
Virgin Islands British	VG
Virgin Islands US	VI
Wallis and Futuna	WF
Western Sahara	EH
Yemen	YE
Zambia	ZM
Zimbabwe	ZW

7. Hash Generation Mechanism

Every request is accompanied by a secure Hash that verifies the request's Integrity as well as merchant identity. The secure Hash algorithm is SHA-512.

- To generate secure Hash, use the following method: Take all the request parameters that are to be sent to trustflowpay and sort them in ascending order according to the name of each field.
- Now prepare a String of these sorted name value params with Tiled (~) as the separator like:

AMOUNT=1000~APP_ID=1000221129001154~CARD_EXP_DT=122030~CARD_NUMBER=41111100 00000211~CURRENCY_CODE=840~CUST_CITY=Winterfell~CUST_COUNTRY=US~CUST_EMAIL=john snow@test.com~CUST_NAME=John Snow~CUST_PHONE=9454243567~CUST_SHIP_FIRST_NAME=John~CUST_SHIP_LAST_NAME=Snow ~CUST_STATE=The North~CUST_STREET_ADDRESS1=Great Wall~CUST_ZIP=32546~CVV=123~INITIATE_SEAMLESS_TRANSACTION=Y~MERCHANTNAME=Test Merchant~ORDER_ID=7773428492547592~PAYMENT_TYPE=CC~PRODUCT_DESC=Valerian Streel Blades~RETURN_URL=https://www.merchantname.com/response.jsp~TXNTYPE=SALE

- Next step is to append the Salt Key at the end of the parameter string given by trustflowpay Payment Gateway to you. After adding you will get the following output (If salt key is 5cd925b2d0254be0)

AMOUNT=1000~APP_ID=1000221129001154~CARD_EXP_DT=122030~CARD_NUMBER=41111100 00000211~CURRENCY_CODE=840~CUST_CITY=Winterfell~CUST_COUNTRY=US~CUST_EMAIL=john snow@test.com~CUST_NAME=John Snow~CUST_PHONE=9454243567~CUST_SHIP_FIRST_NAME=John~CUST_SHIP_LAST_NAME=Snow ~CUST_STATE=The North~CUST_STREET_ADDRESS1=Great Wall~CUST_ZIP=32546~CVV=123~INITIATE_SEAMLESS_TRANSACTION=Y~MERCHANTNAME=Test Merchant~ORDER_ID=7773428492547592~PAYMENT_TYPE=CC~PRODUCT_DESC=Valerian Streel Blades~RETURN_URL=https://www.merchantname.com/response.jsp~TXNTYPE=SALE5cd925b2d0 254be0

Note: Please append the secret key in lower case without any separator after the last value.

- After completing the above-mentioned process, you will have to call SHA 512 algorithm and pass the parameter string to the same and the SHA will return you the desired result as

Hash Value

1ed4fc3edf91e2d991a47a3d0492fe21e21195ff5ea20322c27fbc1bb3d09f56f03d6a24bf1138eaaceeffa9b6d16b381731ab330b1654e39d1c9711862744bc

- Now you must convert the generated value to the Upper Case, and you will get the result.

Final Hash Value

1ED4FC3EDF91E2D991A47A3D0492FE21E21195FF5EA20322C27FBC1BB3D09F56F03D6A24BF1138EAACEEFFA9B6D16B381731AB330B1654E39D1C9711862744BC

8. Fields Description

Field name	Description	Min	Max	Example
APP_ID	APP ID is a unique merchant identifier provided by trustflowpay	16	16	160234578452178
ORDER_ID	Merchant reference number	1	50	ESN78452
RETURN_URL	URL of merchant website to get the response after transaction is processed	5	1024	http://www.response.com
HASH	Unique value generated by SHA 512 hashing algorithm	128	128	8F70F040893AA7EE39D1363FEC537560992E3979E40FDD4FE970D1CA4AA119BF815B22AA1E601D4BDDD9C0ACB2B9157DA0830CD7FB00D59BC22269B8A0A57193
MERCHANT_PAYMENT_TYPE	Merchant Payment Type	2	3	NB, UP
CUST_FIRST_NAME	Customer first name	2	150	王, John
CUST_LAST_NAME	Customer last name	2	150	何活枢, Doe
CUST_STREET_ADDRESS1	Customer address	2	250	House no-101
CUST_CITY	Customer city	2	50	Beijing
CUST_STATE	Customer State Code	2	50	BJ
CUST_COUNTRY	2 Digit Customer country Code / ISO Code	2	50	CN = China Click here to see the country List (Please use the same country ISO code to pass)

CUST_ZIP	Customer zip	2	50	100001 (Post Code)
CUST_PHONE	Customer phone	2	50	999999999
CUST_EMAIL	Customer email	2	50	test@test.com
CUST_SHIP_FIRST_NAME	Customer Shipping last name	2	50	王, John
CUST_SHIP_LAST_NAME	Customer Shipping First name	2	50	何活枢, Doe
CUST_SHIP_EMAIL	Customer shipping email	2	50	testing@tesing.com
CUST_SHIP_STREET_ADDRESS1	Customer shipping address	2	50	House no-102
CUST_SHIP_STREET_ADDRESS2	Customer shipping address	2	50	Near XYZ Building
CUST_SHIP_CITY	Customer shipping city	2	50	Beijing
CUST_SHIP_STATE	Customer shipping state	2	50	Beijing
CUST_SHIP_COUNTRY	Customer shipping country	2	50	China
CUST_SHIP_ZIP	Customer shipping zip	2	50	00000
CUST_SHIP_PHONE	Customer shipping phone	2	50	999999999
AMOUNT	Total Sale Amount	3	50	1245 (multiple of 100, like 12.45 would be 1245) Min Amount – 1000.00 (Example: 100000) Currency Codes and Minor Units
CURRENCY_CODE	3-digit code of the currency	3	3	156

TXNTYPE	Type of transaction to be processed	4	50	SALE/AUTH
PRODUCT_DESC	Description of product	2	50	Test Product
MERCHANTNAME	Merchant business name	1	150	Test Merchant
PAYMENT_TYPE	Payment type	2	2	CC, DC
CARD_NUMBER	Customer card number	15	19	4012001037141112
CARD_EXP_DT	Customer card expiry date	6	6	122030
CVV	Customer card CVV	3	4	225
CUST_NAME	Customer name	1	150	John Doe
TXN_ID	Transaction ID	16	16	2255648569875425
BROWSER_USER_AGENT	Browser user agent	1	2048	Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/120.0.0.0 Safari/537.36
BROWSER_LANGUAGE	Browser language	1	8	en-US
BROWSER_JAVA_ENABLED	Browser java enabled	1	10	true
BROWSER_COLOR_DEPTH	Browser color depth	1	3	24
BROWSER_SCREEN_HEIGHT	Browser screen height	1	8	714
BROWSER_SCREEN_WIDTH	Browser screen width	1	6	796
BROWSER_TZ	Browser TZ	1	5	0
BROWSER_ACCEPT_HEADER	Browser accept header	1	2048	text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,*/*;q=0.8,application/signed-exchange;v=b3;q=0.7