

Integration Document Seamless Mode v2.4.2





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Revision History

Version	Date	Description
2.2	2021-05-20	Revamp Version of document
2.2	2024 05 22	5.1.3.2 Bet & Payout
2.3	2021-05-28	Amended Failed Transaction section
		Added new contents
		• 5.1.1.3 Hash Authentication
		Added new APIs
		• <mark>5.1.3.2.3</mark> Bet Payout
		• 5.1.3.3 Balance Adjustment
		Amended restricted countries
		8.1 IP Amonded surrency list
		Amended currency list • 9.2 Currencies
		9.2 Currencies Amended contents
		• 5.1.3.2.1 Bet
		• 5.1.3.2.2 Payout
2.4	2021-10-13	Amended Trace Id in API URL and API URL example
		• 5.1.2 Verify Session
		• 5.1.3.1 Get Player Wallet
		• 5.1.3.2.1 Bet
		• 5.1.3.2.2 Payout
		Added new error code
		9.1 Error codes Annual add browners are a series and a series are a series and a series are a series ar
		Amended browser support version
		2.3 Browser Amended request
		3.1.1 URL Scheme
		Removed section
		• 9.6 Games
		Amended Request
		• 5.1.3.2.3 Bet Payout
2.4.1	2021-11-10	Change validation description
2.4.1	2021-11-10	• 5.1.3.2.3 Bet Payout
		Fixed incorrect document layout and format issue
		• 5.1.2 Verify Session
		Amended Request
2.4.2	2021-11-24	• 5.1.3.2.3 Bet Payout
2.4.2	2021-11-24	Added validation condition
		• 5.1.3.2.3 Bet Payout



1 Overview

This document details the Integration of the operator wallet mode, also known as Seamless Wallet mode. This process details that PG Soft system will call the operator API in real time for every single transaction while the player is playing games to achieve the addition or deduction of the player's balance.



2 System Requirements

2.1 Game Dimensions

PG games are responsive H5 and are displayed vertically, thus, minimum dimensions are required. Please refer to the following for game dimensions in iframe:

Ideal dimensions : 1280 x 720
 Minimum dimensions : 540 x 960
 Maximum dimensions : 1080 x 2340

2.2 Hardware

	Android	iOS	Windows
Version of Operating System	5.0 or above	10.0 or above	7 or above
RAM	2GB	1GB	2GB
СРИ	ARM Cortex-A9 or above	iPhone 6 or above	 1 gigahertz (GHz) or faster 32-bit (x86) or 64-bit (x64) processor Dual core at least
Storage	2GB and above	2GB and above	20GB and above

2.3 Browser

Microsoft Edge: version 79 or above

• Firefox : version <mark>58</mark> or above

Google Chrome: version 59 or above

Safari : version 11.1 or above

• others : browser based on Chromium that equal to Google Chrome 59 or above



3 Launch Game

3.1 Game Authorization Modes

PG supports three kinds of game launch authorization modes:

- **URL scheme** mode is for iOS, Android and browser, it uses the token parameters to authorize and login.
- **Web lobby** mode is a responsive web page which uses token parameters to authorize and login.
- **WebView** mode is applicable to all platforms, it is the Integration mode which embeds into the game interface and uses username and password to authorize players to login.



3.1.1 URL Scheme

URL scheme is an ordinary method for game launch. Player is required to login via the operator's website and launch the game through the operator's game lobby page

Note

Operator is required to provide verifySession¹ API for operator's player session authentication.

Request

API URL : {PgSoftPublicDomain}/{GameId}/index.html

HTTP method : GET

URL:

Parameter name	Data Type	Mandatory	Description
Gameld	String	Yes	Unique identity for each game ²

URL Parameters:

Parameter name	Data Type	Mandatory	Description
btt	Integer	Yes	Game launch mode ³
ot	String	Yes	Unique identity of operator
ops	String	Yes	Token generated by operator system Note: • Max 200 characters • Please encode the value with UrlEncode to avoid unexpected error
I	String	No	Display language of game ⁴ Default: en
te	Integer	No	Time elapsed for game health reminder in seconds for operator (Reality check ⁵)
ri	Integer	No	Reminder interval for game health reminder in seconds (Reality check ⁶)
ор	String	No	Custom parameter for operator, PG API will include parameter value upon verifying operator's player session Note: Please encode the value with UrlEncode to avoid unexpected error

¹ Please refer to <u>Verify Session</u> section for more information

² Please get the latest list from PG

³ Please refer to <u>Bet Types</u> section for complete list

⁴ Please refer to <u>Languages</u> section for complete list

⁵ Please refer to Reality Check section for more information

⁶ Please refer to <u>Reality Check</u> section for more information



f	String	No	Game exit URL Default: Redirect to PG quit page Note: In Trial Game mode, value will be used for redirection of the Real Game prompt Assign value to PGGameCloseUrl to close the game window. Please encode the value with UrlEncode to avoid unexpected errors
rurl	String	No	This URL will be used for redirection during Real Game prompt Default: Redirect to PG lobby Note: • For trial game only • Please encode the value with UrlEncode to avoid unexpected errors
ct	String	No	To cache player session 0: Player session will be stored for PG game (Global) 1: Player session will be stored for each game respectively 2: PG will always call verifySession for every login. Player session will not be stored
iwk	Integer	No	Device compatibility check ⁷ when launching the game 0 : Normal mode (Default) 1 : Skip compatibility check
ос	Integer	No	Screen orientation check ⁸ when launching the game O: Skip screen orientation check 1: Normal mode (Default)

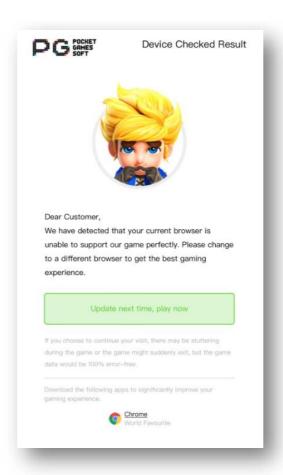
Example:

https://m.pg-demo.com/1/index.html?ot=abcd&ops=12345-abcd-1234-abcd-12345&btt=1 Screenshot

⁷ Please refer to screenshot

⁸ Please refer to screenshot





Device compatibility check



Screen orientation



3.1.1.1 Reality Check

In URL scheme⁹, operator may include "time_elapsed" and "reminder_interval" parameter into the launch game URL for reality check.

• time_elapsed : Time used in the calculation for the first reality check in second(s)

• reminder_interval : Reality check interval in second(s)

Example:

reminder_interval=300&time_elapsed=290

The first reality check reminder will show after 10 seconds (300s-290s=10s), and subsequence reminders will show up for every 5 minutes.

⁹ Please refer to <u>URL Scheme</u> section for more information



3.1.2 Web Lobby

PG web lobby is a responsive web page with all PG games which allows player to play PG games in one place. It provides a brand-new experience to the player using beautiful, attractive, informative, and effective UI design. We recommend operators to integrate PG web lobby into their website.

Player is required to login via operator's website and launch PG games through PG web lobby.

Note

Operator is required to provide verifySession¹⁰ API for operator's player session authentication.

Request

API URL : {PgSoftPublicDomain}/web-lobby/{panel_type}

HTTP method : GET

URL:

Parameter name	Data Type	Mandatory	[Description
name panel_type	Integer	Yes	[NO VALUE] smartbot smartbot/history tournament/open	b lobby at first load : Default panel (Smartbot) : Smartbot – In progress panel : Smartbot – Stopped panel : Tournament – Open for entry panel ss: Tournament – In progress panel : Tournament – Ended panel : Show only game

 $^{^{10}}$ Please refer to $\underline{\text{Verify Session}}$ section for more information



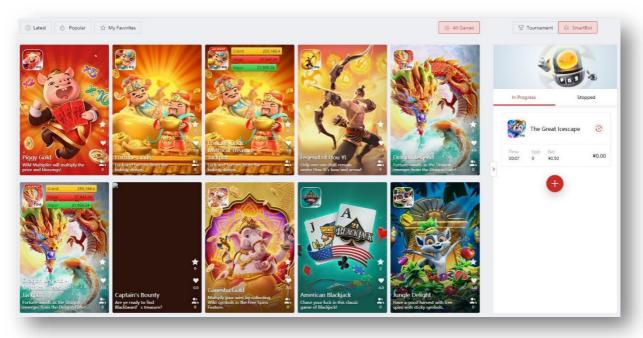
URL Parameters:

Parameter name	Data type	Mandatory	Description
operator_token	String	Yes	Unique identity of operator
operator_player _session	String	Yes	Token generated by operator system Note: • Max 200 characters • Please encode the value with UrlEncode to avoid unexpected error
language String No		No	Display language of web lobby ¹¹ Default: Player device language
width	Integer	No	Page width of web lobby Default: Responsive Value range: Value ≥ 930

Example:

https://public.pg-redirect.net/weblobby/smartbot/?operator_token=abc123&operator_player_session=abc123abc123&language=en

Screenshot



 $^{^{\}rm 11}$ Please refer to $\underline{\text{Languages}}$ section for complete list



3.1.3 WebView (For PG Apps and PG Lobby only)

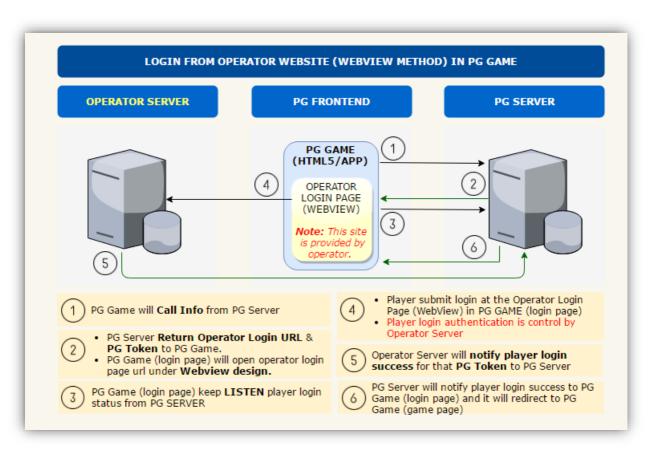
WebView login method provides a seamless login experience to players. It is applicable to all platforms; player is required to log in and launch the game through PG game client.

Note

- WebView methods are only applicable for PG Apps and PG lobby only
- Operator is required to provide a login page (hosted in operator's own server) for players to login
- Operator is required to call PG LoginGame API¹² when player has login successfully

Login Flow

Operator is required to provide a login page, and this login page will be embedded into PG game client through WebView, to achieve a seamless login-effect. Player is required to login via operator's login page and launch the game through PG game client.



WebView login flow diagram

¹² Please refer to <u>Login Game</u> section for more information



1. Operator Login Page

PG game client will open operator's login page and concatenate with token parameters.

Login Page URL : {OperatorLoginURL}

URL Parameters:

Parameter name	Data type	Mandatory	Description
pgsoft_token	String	Yes	Player token generated by PG system

Example:

https://loginPage.operatordomain.com/login?pgsoft_token=pg_token_xxx;

2. Notify Successful Player Login

Player is required to login via operator's login page.

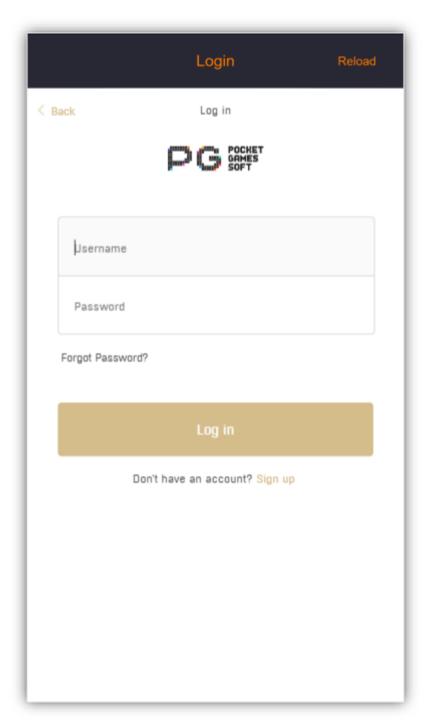
If player login verification is successful, operator is required to call PG LoginGame API¹³ to notify PG for the successful login.

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¹³ Please refer to <u>Login Game</u> section for more information



Screenshot



Sample of WebView login page



3.2 Game Launch Restrictions

Multiple windows or multiple game launches are unsupported by PG games. Players will be locked and kick out of games, and encounter errors when multiple game sessions are detected:

\$1302XXXXXXXX: Unsuccessful Game Authorization

\$1309XXXXXXXX: Player account been suspended

\$1305XXXXXXXX: Server request failure

When encountering the above errors, players may close the game windows and relaunch the game to unlock their player accounts:

\$1302XXXXXXXX: Please relaunch the game

\$1309XXXXXXXX: Player account will be unlocked automatically after 10 minutes, please relaunch

the game after 10 minutes

\$1305XXXXXXXX: Please relaunch the game



4 Game Launch JS Library

Operator is required to launch the game by using PG JS library to provide the best gaming experience to players:

- Implementation of automatically adapting pop-up window according to the user's display size.
- PG games are all designed to be displayed vertically, the pop-up window format is consistent with product design.
- Achieving the optimal gaming Interface height will allow users to feel visually comfortable, in line with usage habits.
- Presenting the best in-game visual quality to the players, providing the best gaming experience.

4.1 Avoid Browser Pop-up Blockers

The general rules that popup blockers will engage are:

- Invoked from JavaScript that is not invoked by direct user action
- Pop-up content are not from the same domain as the source

Operator is recommended to follow the instructions below to avoid browser pop-up blockers:

- Create a redirection page and redirect to game launch URL (URL scheme¹⁴)
- When players click the game launch button/link, use the PG JS function (PGSDK.launchGame) and launch the redirection page.

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¹⁴ Please refer to <u>URL Scheme</u> section for more information



4.2 Implementation

Step 1

Include the following line in the HTML <head> tags:

```
<script defer src="https://public.pg-
redirect.net/sdk/main.min.js"></script>
```

Note:

Operator can self-host the JS library as well: https://public.pg-redirect.net/sdk/main.min.js

Step2

Operator is required to create a self-host redirection page to bypass popup blockers on web browsers.

Sample code of redirect page:

```
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<script>
    window.location.replace("https://m.pg-
redirect.net/diaochan/index.html?language=en&bet_type=1&operator_token=123
45abcde&operator_player_session=abcde-12345-abcde-12345");
</script>
</head>
</html>
```

Step3

Use the following JS script to launch PG games. Operator is required to create a self-host redirection page to bypass popup blockers on web browsers.

```
PGSDK.launchGame('{operator_redirection_URL}');
```

Parameters:

Parameter name	Data Type	Mandatory	Description
			Operator self-host page which
operator_redirection_URL	String	Yes	will redirect to game launch
			URL (URL scheme ¹⁵)

Example:

PGSDK.launchGame('https://[OperatorDomain]/redirect.html');

¹⁵ Please refer to URL Scheme section for more information



5 Integration API

5.1 Operator Provided API

5.1.1 API Formats

5.1.1.1 Request

The API uses HTTP form methods and a RESTful endpoint structure. PG will send requests in the following content type:

```
Content-Type: application/x-www-form-urlencoded 5.1.1.2 Response
```

API returns JSON-formatted responses. For successful and failed API request, operator is required to return an API response with HTTP status code 200.

API uses global JSON response format for all API methods, with the following content type: Content-Type: application/json

Parameters:

Parameter name	Data Type	Description
data ¹⁶	JSON Object	Response information for API methods
error	JSON Object	Error information when an error or exception occur

Example:

```
Success Response
{
   "data": {
      [API method response. JSON object format may vary depending on API methods]
   },
   "error": null,
```

Failed/Error Response

```
"data": null,
"error": {
    "code": "[Error code]",
    "message": "[Error message]"
}
```

¹⁶ This field will show *null* value in error response



5.1.1.3 Hash Authentication (Optional)

We highly recommend that operator integrate with hash authentication to secure every request. If operator choose to integrate with hash authentication, PG system will validate the hash information provided in the header fields in every request.

5.1.1.3.1 Hash Fields

The following table describes the various request headers in the preceding example:

Component	Description
	API domain
Host	Example: apiexample.pgsoft.com
	Current date (UTC) in YYYYMMDD format
x-date	Example: 20190902
	SHA256 hash of the request string body
x-content- sha256	Example: 1700116101F424B9F6FC695B4DBAF2B7B0EE763BA1B3B53298 E3069143ED46F1
	Combination of various components for request authentication
Authorization	Example: PWS-HMAC-SHA256 Credential=20190902/OPERATORTOKENEXAMPLE/pws/v1,Sig nedHeaders= host;x-content-sha256;x- date,Signature=a389b0b50f6839157e225a5437876025529a 4513e178a4917la08f2600786857

Example

Host:

apiexample.pgsoft.com

x-date: 20190902 x-content-sha256:

 $1700116101 \\ \text{F}424 \\ \text{B}9 \\ \text{F}6 \\ \text{FC}695 \\ \text{B}4 \\ \text{DBAF}2 \\ \text{B}7 \\ \text{B}0 \\ \text{EE}763 \\ \text{BA}1 \\ \text{B}3 \\ \text{B}53298 \\ \text{E}3069143 \\ \text{ED}46 \\ \text{F}306 \\ \text{EE}763 \\ \text{BA}1 \\ \text{B}3 \\ \text{EE}3069143 \\ \text{ED}46 \\ \text{EE}3069143 \\ \text{EE}3069143$

1

Authorization: PWS-HMAC-SHA256

Credential=20190902/OPERATORTOKENEXAMPLE/pws/v1,SignedHeaders=

host; x-content-sha256; x-

 $\verb|date,Signature=a389b0b50f6839157e225a5437876025529a4513e178a49171a08| \\$

f2600786857



Header: x-content-sha256

Calculate a SHA256 hash of the request string body:

Example

POST body:

 $operator_token=abc123\&secret_key=a1b25cde5f3gh46ijkl\&count=5000\&bet_type=1\&row_version=1346592723000$

x-content-sha256:

1700116101F424B9F6FC695B4DBAF2B7B0EE763BA1B3B53298E3069143ED46F1

Header: Authentication

The following table describes the various components of the Authorization header value in the preceding example:

Component	Description
	Your access key ID and the scope information, which includes the date, operator token, and service that were used to calculate the signature.
	This string has the following form:
Credential	{x-date}/{operator_token}/pws/v1
	Example: 20190902/OPERATORTOKENEXAMPLE/pws/v1
SignedHeaders	A semicolon-separated list of request headers that you will use to compute the Signature. The list includes header names only, and the header names must be in lowercase.
	Fixed Value: host;x-content-sha256;x-date
	The 256-bit signature expressed as 64 lowercase hexadecimal characters.
Signature	Example: e3b0c44298fc1c149afbf4c8996fb92427ae41e4649b934ca4 95991b7852b855



To calculate a signature, you first need a string that includes {host}{x-content-sha256}{x-date} to sign. You will then calculate a HMAC-SHA256 hash of the string to sign by using a signing key:

hmac-sha256({salt}, {host}{x-content-sha256}{x-date})

Calculate a HMAC-SHA256 hash of the string body:

Example

Salt : SALTEXAMPLE

x-date : 20190902

x-content-sha256

1700116101F424B9F6FC695B4DBAF2B7B0EE763BA1B3B53298E3069143ED46F1

Signature:

2461227daf8132ee6cd86a144205e229fee0382c549f8b68807948c076568469



5.1.2 Verify Session

PG game system will call this operator API to check the player session token generated when players login to game.

Note

- This API is required for URL scheme or web lobby authorization mode¹⁷
- New player will be created automatically

 $^{^{17}}$ Please refer to <u>URL Scheme</u> and <u>Web Lobby</u> section for login flow and details



Request

API URL : {OperatorAPIDomain}/VerifySession

HTTP method : POST

URL Parameters:

Parameter name	Data Type	Mandatory	Description
trace_id			Unique identity (GUID) of the request
	String	Yes	Note:
			Please set the parameter value
			as GUID format

Body Parameters:

Parameter name	Data Type	Mandatory	Description
operator_token	String	Yes	Unique identity of operator
secret_key	String	Yes	Shared passphrase between PGSoft and operator
operator_player_session	Please decode the value w		system Note: • Max 200 characters • Please decode the value with UrlDecode to avoid unexpected
ip	String	No	Player IP address
custom_parameter	String	No	operator_param values in URL scheme ¹⁸
game_id	Integer	No	Unique identity of games

Example:

URL:

https://operator.api/VerifySession?trace_id=b3f37e57-2873-40b1-aa95-f126c25ed311

Body:

operator_token=abc123&secret_key=a1b25cde5f3gh46ijkl&operator_player_session=a2b3c 4d5e6f7g8&ip=1.1.1.1&custom_parameter=operatorparam123&game_id=1

 $^{^{\}rm 18}$ Please refer to $\underline{\rm URL~Scheme}$ section for more information



Validation

Operator is required to perform validations to the following parameters:

Parameter name	Description	Expected behaviour
operator_token		
secret_key	the one PG has provided.	Return error when
operator player session	Make sure the operator_player_session matches	not match
operator_prayer_session	with the token generated in URL scheme ¹⁹	

Response

Body Parameters:

JSON Object

3011 03,000				
Parameter name	Data type	Mandatory	Description	
player_name	String	Yes	 Unique identity of players player name is not case sensitive Only alphabet, number, and "@", "-", "_" symbols are allowed Note: Max 50 characters 	
nickname	String	No	Nickname of player Note: Max 50 characters	
currency	String	Yes	Currency of player	

```
Example:
```

```
"data": {
          "player_name": "player1",
          "nickname":"nickname",
          "currency": "USD"
          },
          "error": null
```

Error Response

Code	Message
1034	Invalid request
1200	Internal server error

 $^{^{19}}$ Please refer to $\underline{\mathsf{URL}\;\mathsf{Scheme}}$ section for more information



5.1.3 Wallet Operation

5.1.3.1 Get Player Wallet

Operator is required to provide the total balance of the wallets that can be used in all PG games. It includes total balance in the cash wallet.

Request

API URL : {OperatorAPIDomain}/Cash/Get

HTTP method : POST

URL Parameters:

Parameter name	Data Type	Mandatory	Description
			Unique identity (GUID) of the request
			Note:
trace_id	String	Yes	This ID is for issue troubleshooting
			only. Please do not use this <mark>ID</mark> in
			duplicate request validation

Body Parameters:

Parameter name	Data Type	Mandatory	Description
operator_token	String	Yes	Unique identity of operator
secret_key	String	Yes	Shared passphrase between PGSoft and operator
player_name	String	Yes	Unique identity of players
operator_player_session	String	No	Token generated by operator's system when the game is launched (URL Scheme ²⁰)
game_id	Integer	No	Unique identity of games

Example:

URL:

https://operator.api/Cash/Get?trace_id=b3f37e57-2873-40b1-aa95-f126c25ed311

Body:

 $operator_token=abc123\&secret_key=a1b25cde5f3gh46ijkl\&player_name=player123\&operator_player_session=a2b3c4d5e6f7g8\&game_id=1$

 $^{^{\}rm 20}$ Please refer to $\underline{\sf URL\ Scheme}$ section for more information



Validation

Operator is required to perform validation to the following parameters:

Parameter name	Description	Expected behaviour
operator_token	Make sure the parameter value is the same as	
secret_key	Return error when	
playor pamo	Make sure the parameter value matches the	not match
player_name	given player's name in Verify Session ²¹	

Response

Body Parameters:

JSON Object

Parameter name	Data type	Mandatory	Description
currency_code	String	Yes	Currency of player
			Cash Balance of player
			Note
	Decimal		• Supports up to 2 decimal places
balance_amount		Yes	Extra decimal values will be
			truncated.
			e.g: Game will show 11.12 if
			balance_amount value is 11.125
updated time	Long	Yes	Updated time of player record
upuateu_time	Long	162	(Unix time stamp in milliseconds)

Error Response

Code	Message
1034	Invalid request
3005	Player wallet does not exist

 $^{^{21}}$ Please refer to $\underline{\text{Verify Session}}$ section for more information



5.1.3.2 Bet & Payout

PG system will expect **idempotent operations** for all API operations. Operator is required to perform duplicate request checking for all incoming transaction requests.

PG may resend the transaction due to network difficulties or other unforeseen circumstances. Please refer to the following for the precautions and correct process flow to handle duplicated requests:

- Operator is required to perform validation of operator_token and secret_key for every transaction request.
- transaction_id is the only unique identifier for every transaction request, including bet and payout
- In the case where a request with the same transaction id is found and operator has proceeded the previous request, please ignore the duplicated request, and return the previous successful response for the duplicated request.
- In the case where a request with the same transaction id is found and the previous request has failed, please retry, and return the corresponding results to PG.
- In the case of a request with new transaction id, operator may proceed to wallet addition or deduction accordingly, and return the successful response to PG.



Game Disconnected

In the case where players are encountering errors and have been disconnected from the game, PG system will automatically resume the game from its previous stage (including free spin, bonus, free game) without any alert on the next player login.

Player will see the same screen before the error happened and will be able to continue the game from the previous stage.

Failed Transaction

PG games will stop and show errors when PG receives the following error codes during bet transactions:

- 3004 PlayerNotFoundException
- 3005 WalletNotFoundException
- 3008 BonusNotFoundException
- 3009 FreeGameNotFoundException
- 3019 NotEnoughFreeGameException
- 3021 BetNotFoundException
- 3055 SnapshotNotFoundException
- 3059 BetLimitExceededException
- 3062 TransactionRolledBackException
- 3073 BetFailedException
- 3200 NotEnoughBalanceException
- 3201 NotEnoughBonusBalanceException
- 3202 NotEnoughCashBalanceException
- 3094 MaximumBetLimitReachErrorCode
- 3095 BalanceDecreasesLimitReachErrorCode

Operator should not cancel the pay-out transaction for a successful bet. System will always retry for a pay-out transaction until it is successful. Please contact PG if you would like to cancel the pay-out transaction.



5.1.3.2.1 Bet (Deprecated)

PG Soft system will call the operator API in real time while the player is betting to achieve the deduction of the player's balance.

Note

This API method has been deprecated. It will still be functioning, but will remain in maintenance mode, which means PG will no longer actively enhance this API or its capability with new features.

Operators are encouraged to move to new replacement API - Bet Payout API (TransferInOut)²², which provides more functionality and better performance.

Existing operators are required to maintain the old bet and payout API as previous pending bets will be resent using the old API.

Request

API URL : {OperatorAPIDomain}/Cash/TransferOut

HTTP method : POST

URL Parameters:

Parameter name	Data Type	Mandatory	Description
			Unique identity (GUID) of the request
			Note
trace_id	String	Yes	This ID is for issue troubleshooting
			only. Please do not use this <mark>ID</mark> in
			duplicate request validation

Body Parameters:

Category	Parameter name	Data Type	Mandatory	Description
	operator_token	String	Yes	Unique identity of operator
tication nation	secret_key	String	Yes	Shared passphrase between PGSoft and operator
Authenticatior Information	operator_player _session	String	No	Token generated by operator system when game is launched (URL Scheme ²³)
	player_name	String	Yes	Unique identity of players
н с	game_id	Integer	Yes	Unique identity of games
Bet tior	parent_bet_id	String	Yes	Unique identity of parent bet
General Bet Information	bet_id	String	Yes	Unique identity of child bet Note Unique key for bets
	currency_code	String	Yes	Currency of player

²² Please refer to <u>Bet Payout</u> section for more information

²³ Please refer to <u>URL Scheme</u> section for more information



	platform	String	No	Platform of player ²⁴
				Bet amount.
				Note
	transfer_amount	Decimal	Yes	PG will send a bet request
				with ZERO transfer amount
				for free spins
				Unique identity of transaction.
				Format:
				{BetId}-{ParentBetId}-
				{transactionType}-{balanceId}
	transaction_id	String	Yes	
		Julig	163	Transaction type:
				101 : Payout
				201 : Bet
				400: BonusToCash
				403: FreeGameToCash
				To indicate the type of wallet for
				the current transaction.
	wallet_type	String	No	C: Cash
				B: Bonus
				G : FreeGame
	create_time	Long	Yes	Bet start time and bet last updated time
	-	, o		(Unix time stamp in milliseconds)
	updated_time		Yes	Note
				updated_time is not equal to
				bet end time
				To indicate if the request is a
	is_validate_bet	Boolean	No	transaction that has been resent
				for validation
				True: Resent transaction
				False: Normal transaction
Bet Indicator				To indicate if the request is an
				adjustment or a normal transaction
	is_adjustment	Boolean	No	for a pending bet
				True: Adjustment
				False: Normal transaction
				To indicate if the request is having
	is_parent_zero_stake	Boolean	No	0 bet amount for <mark>the</mark> first bet of
				the round.

 $^{^{\}rm 24}$ Please refer to $\underline{\text{Platform}}$ section for more information



				True: Having 0 bet amount for the first bet of the round (For Bacarrat Deluxe's free hands action) False: Having amount larger than 0 in the first bet of the round To indicate the spin type
	is_feature	Boolean	No	True: Feature spin False: Normal spin
	is_feature_buy	Boolean	No	Note Only applicable for feature buy games
	is_wager	Boolean	No	To indicate if the transaction is wager True: bet_amount > 0 False: bet_amount = 0
C	free_game _transaction_id	String	No	Unique identity of free game. It can only be seen when Free Game has been assigned to the player Note Only available for free game created using External API
Game Information	free_game_name	String	No	Given name of free game. It can only be seen when Free Game has been assigned to the player
Free Gan	free_game_id	Integer	No	Unique identity of free game. It can only be seen when Free Game has been assigned to the player
	is_minus_count	Boolean	No	To indicate the spin type in free game True: Normal spin (Free game count is deducted) False: Free spin
Bonus Game Information	bonus_transaction_id	String	No	Unique identity of bonus game. It can only be seen when Bonus Game has been assigned to the player Note



				Only available for bonus game created using External API
	bonus_name	String	No	Given name of bonus game. It can only be seen when Bonus Game has been assigned to the player
	bonus_id	Integer	No	Unique identity of bonus game. It can only be seen when Bonus Game has been assigned to the player
	bonus_balance _amount	Decimal	No	Total number of bonus amount in bonus wallet. It can only be seen when the player chooses to complete the bonus with cash.
	bonus_ratio_amount	Decimal	No	Rollover amount the player needs to achieve in bonus game. It can only be seen when the player chooses to complete the bonus with cash.
Jackpot Information	jackpot_rtp _contribution_amount	Decimal	No	Jackpot contribution amount of player Note Only applicable for jackpot games

Example:

URL:

https://operator.api/Cash/TransferOut?trace id=b3f37e57-2873-40b1-aa95-f126c25ed311

Body:

operator_token=abc123&secret_key=a1b25cde5f3gh46ijkl&player_name=player123&operator_player_session=a2b3c4d5e6f7g8&game_id=1&parent_bet_id=123456&bet_id=123456&bet_type=1¤cy_code=EUR&platform=1&jackpot_rtp_contribution_amount=0&jackpot_win_amount=0&create_time=1530879795000&updated_time=1530879795000&transfer_amount=0.11&transaction_id=123456-123456-201-

0&is_validate_bet=false&is_parent_zero_stake=false&is_feature=false



Validation

Operator is required to perform validation to the following parameters:

Parameter name	Description	Expected behaviour
player_name	Make sure the parameter value matches the given	
currency_code	player information in Verify Session ²⁵	
operator_token	Make sure the parameter value is the same as the	Return error
secret_key	one PG has provided.	when not match
	Make sure the operator_player_session matches	
	the token generated in URL scheme ²⁶	
	Do not validate operator_player_session when	Return successful
operator_player_session	is_validate_bet or is_adjustment parameter value	response even
operator_prayer_session	is true	with outdated
	Note	operator_player_
	PG system may resend request for validation	session
	or pending bet	
	Make sure there is an error response when there	Return error
	is insufficient balance	response 3202
	Make sure player balance after deduction (amount	
	with 2 decimal places) is correct	
	Make sure zero bet amount is accepted for parent	
	bet	
	Note	
transfer_amount	PG system will send a bet request with ZERO	
	transfer amount for Bacarrat Deluxe's free	
	hands action	Return successful
	Make sure zero bet amount is accepted for child	response with
	bet	the correct cash
	Note	balance
	PG system will send a bet request with ZERO	
	transfer amount for free spin	
transaction_id	Ignore wallet operation for duplicated requests	
	(requests with the same transaction_id)	
parent_bet_id	Proceed wallet operation for request with the	
bet_id	same game hand (requests with the same	
	parent_bet_id but different bet_id)	

 $^{^{25}}$ Please refer to $\underline{\text{Verify Session}}$ section for more information 26 Please refer to $\underline{\text{URL Scheme}}$ section for more information



Response

Body Parameters:

JSON Object

Parameter name	Data type	Mandatory	Description
currency_code	String	Yes	Currency of player
			Cash Balance of player
			Note
			• Support up to 2 decimal places
balance_amount	Decimal	Yes	Extra decimal values will be
			truncated.
			e.g: Game will show 11.12 if
			balance_amount value is 11.125
			Updated time of transaction
			(Unix time stamp in milliseconds)
			Note
updated_time	Long	Yes	 Response updated_time must be
			the same as the requested
			updated_time for transaction
			reference

```
Example:
```

```
{
    "data": {
        "currency_code": "CNY",
        "balance_amount": 11.12,
        "updated_time": 1530879795000
        },
    "error": null
}
```

Error Response

Code	Message
3004	Player does not exist
3005	Player wallet does not exist
3021	Bet does not exist
3033	Bet failed
3202	Insufficient player balance



5.1.3.2.2 Payout (Deprecated)

PG Soft system will call operator API in real time while the player is betting to achieve the addition of the player's balance.

Note

This API method has been deprecated. It will still be functioning, but will remain in maintenance mode, which means PG will no longer actively enhance this API or its capability with new features.

Operators are encouraged to move to new replacement API - Bet Payout API (TransferInOut)²⁷, which provides more functionality and better performance.

Existing operators are required to maintain the old bet and payout API as previous pending bets will be resent using the old API.

Request

API URL : {OperatorAPIDomain}/Cash/TransferIn

HTTP method : POST

URL Parameters:

Parameter name	Data Type	Mandatory	Description
			Unique identity (GUID) of the request
			Note
trace_id	String	Yes	This ID is for issue troubleshooting
			only. Please do not use this <mark>ID</mark> in
			duplicate request validation

Body Parameters:

Category	Parameter name	Data Type	Mandatory	Description
	operator_token	String	Yes	Unique identity of operator
Authentication Information	secret_key	String	Yes	Shared passphrase between PGSoft and operator
	operator_player _session	String	No	Token generated by operator system when game is launched (URL Scheme ²⁸)
	player_name	String	Yes	Unique identity of players
.	game_id	Integer	Yes	Unique identity of games
Bet tior	parent_bet_id	String	Yes	Unique identity of parent bet
General Bet Information	bet_id	String	Yes	Unique identity of child bet Note Unique key for bets
	currency_code	String	Yes	Currency of player

²⁷ Please refer to <u>Bet Payout</u> section for more information

²⁸ Please refer to URL Scheme section for more information



platform	String	No	Platform of player ²⁹
transfer_amount	Decimal	Yes	Payout amount. Note PG will send a payout request with ZERO transfer amount for the following: • Every action (e.g.: split card) performed by player in card game • Special feature in some slot games
transaction_id	String	Yes	Unique identity of transaction. Format: {BetId}-{ParentBetId}- {transactionType}-{balanceId} Transaction type: 101: Payout 201: Bet 400: BonusToCash 403: FreeGameToCash
bet_transaction_id	String	No	Unique identity of bet transaction (transfer out). Format: {BetId}-{ParentBetId}- {transactionType}-{balanceId} Transaction type: 101: Payout 201: Bet 400: BonusToCash 403: FreeGameToCash
wallet_type	String	No	To indicate the type of wallet for the current transaction. C: Cash B: Bonus G: FreeGame
create_time	Long	Yes	Bet start time and bet last
updated_time	Long	Yes	updated time

²⁹ Please refer to <u>Platform</u> section for more information



				(Unix time stamp in milliseconds)Noteupdated_time is not equal to bet end time
	is_validate_bet	Boolean	No	To indicate if the request is a transaction that has been resent for validation True: Resent transaction False: Normal transaction
	is_adjustment	Boolean	No	To indicate if the request is an adjusted or normal transaction for a pending bet True : Adjusted transaction False : Normal transaction
Bet Indicator	is_parent_zero_stake	Boolean	No	To indicate if the request is having 0 bet amount for the first bet of the round. True: Having 0 bet amount for the first bet of the round (For Bacarrat Deluxe's free hands action) False: Having amount larger than 0 in the first bet of the round
	is_feature	Boolean	No	To indicate the spin type True: Feature spin False: Normal spin
	is_wager	Boolean	No	To indicate if the transaction is wager True: bet_amount > 0 False: bet_amount = 0
	is_end_round	Boolean	No	To indicate if the current game hand has ended
Free Game Information	free_game _transaction_id	String	No	Unique identity of free game. It can only be seen when Free Game has been assigned to the player Note Only available for free game created using External API



	free_game_name	String	No	Given name of free game. It can only be seen when Free Game has been assigned to the player
	free_game_id	Integer	No	Unique identity of free game. It can only be seen when Free Game has been assigned to the player
	is_minus_count	Boolean	No	To indicate the spin type in free game True: Normal spin (Free game count is deducted) False: Free spin
	bonus_transaction_id	String	No	Unique identity of bonus game. It can only be seen when bonus game has been assigned to the player Note Only available for bonus game created using External API
mation	bonus_name	String	No	Given name of bonus game. It can only be seen when bonus game has been assigned to the player
us Game Information	bonus_id	Integer	No	Unique identity of bonus game. It can only be seen when bonus game has been assigned to the player
Bonus	bonus_balance _amount	Decimal	No	Total number of bonus amount in bonus wallet. It can only be seen when the player chooses to complete the bonus game with cash.
	bonus_ratio_amount	Decimal	No	Rollover amount the player needs to achieve in bonus game. It can only be seen when the player chooses to complete the bonus game with cash.



Jackpot Information	jackpot_rtp _contribution_amount	Decimal	No	Jackpot contribution amount of player Note Only applicable for jackpot games
Jackpot	jackpot_win_amount	Decimal	No	Note Only applicable for jackpot games

Example:

URL:

https://operator.api/Cash/TransferIn?trace_id=b3f37e57-2873-40b1-aa95-f126c25ed311

Body:

operator_token=abc123&secret_key=a1b25cde5f3gh46ijkl&player_name=player123&operator_player_session=a2b3c4d5e6f7g8&game_id=1&parent_bet_id=123456&bet_id=123456&bet_type=1¤cy_code=EUR&platform=1&jackpot_rtp_contribution_amount=0&jackpot_win_amount=0&create_time=1530879795000&updated_time=1530879795000&transfer_amount=0.11&transaction_id=123456-123456-101-

0&is_validate_bet=false&is_parent_zero_stake=false&is_feature=false&is_end_round=t
rue



Validation

Operator is required to perform validation to the following parameters:

Parameter name	Description	Expected behaviour
player_name	Make sure the parameter value matches the given	
currency_code	player information in Verify Session ³⁰	
operator_token	Make sure the parameter value is the same as the	Return error
secret_key	one PG has provided.	when not match
	Make sure the operator_player_session matches	
	the token generated in URL scheme ³¹	
	Do not validate operator_player_session when	Return successful
operator_player_session	is_validate_bet or is_adjustment parameter value	response even
operator_player_session	is true.	with outdated
	Note	operator_player_
	 PG system may resend request for validation or pending bet 	session
	Make sure player balance after addition (amount	
	with 2 decimal places) is correct	
	Make sure zero payout amount is accepted	
	Note:	
	PG may send a payout request with ZERO transfer	
	amount for the following:	
	Specific actions (e.g.: split card) performed by	
	player in card game	
transfer_amount	Special feature in some slot games	Return successful
	Make sure payout without bet request is accepted Note:	response with correct balance
	PG may send a payout request WITHOUT bet	
	request for the following:	
	 When player perform "convert to cash" action 	
	in the bonus game	
	When player perform "convert to cash" action	
	in the free game	
Lancia de la constanta de la c	Ignore wallet operation for duplicated requests	
transaction_id	(request with same transaction_id)	

 $^{^{\}rm 30}$ Please refer to $\underline{\rm Verify\ Session}$ section for more information $^{\rm 31}$ Please refer to $\underline{\rm URL\ Scheme}$ section for more information



Body Parameters:

JSON Object

Parameter name	Data type	Mandatory	Description
currency_code	String	Yes	Currency of player
balance_amount	Decimal	Yes	Cash Balance of player Note: Support up to 2 decimal places Extra decimal values will be truncated. e.g: Game will show 11.12 if balance_amount value is 11.125
updated_time	Long	Yes	Updated time of transaction (Unix time stamp in milliseconds) Note: Response updated_time must same with request updated_time for transaction reference

```
Example: { "data"
```

```
"data": {
        "currency_code": "CNY",
        "balance_amount": 11.12,
        "updated_time": 1530879795000
        },
        "error": null
```

Code	Message
3004	Player does not exist
3005	Player wallet does not exist
3021	Bet does not exist
3034	Payout failed



5.1.3.2.3 Bet Payout

This transaction request is the combination of both bet and payout within a single request. PG Soft system will call operator API in real time while the player is betting to achieve either the addition or deduction of the player's balance.

Request

API URL : {OperatorAPIDomain}/Cash/TransferInOut

HTTP method : POST

URL Parameters:

Parameter name	Data Type	Mandatory	Description
trace_id String		Yes	Unique identity (GUID) of the request
	String		Note
	Julia		 Please set the parameter value as
			GUID format

Body Parameters:

Category	Parameter name	Data Type	Mandatory	Description
	operator_token	String	Yes	Unique identity of operator
Authentication Information	secret_key	String	Yes	Shared passphrase between PGSoft and operator
Authen Inforn	operator_player _session	String	No	Token generated by operator system when game is launched (URL Scheme ³²)
	player_name	String	Yes	Unique identity of players
	game_id	Integer	Yes	Unique identity of games
	parent_bet_id	String	Yes	Unique identity of parent bet
bet_id	bet_id	String	Yes	Unique identity of child bet Note Unique key for bets
mat	currency_code	String	Yes	Currency of player
General Bet Information	bet_amount	Decimal	Yes	Bet amount. Note PG will send a bet request with ZERO transfer amount for free spins
9	win_amount	Decimal	Yes	Win amount. Note PG will send a payout request with ZERO transfer amount for the following:

 $^{^{\}rm 32}$ Please refer to $\underline{\sf URL\ Scheme}$ section for more information



				 Every action (e.g.: split card) performed by player in card games Special feature in some slot games
	transfer_amount	Decimal	Yes	Player Win Loss amount Note The amount can be positive or negative Negative: Balance deduction Positive: Balance addition
	transaction_id	String	Yes	Unique identity of transaction. Format: {BetId}-{ParentBetId}- {transactionType}-{balanceId} Transaction type: 106: BetPayout 400: BonusToCash 403: FreeGameToCash
	wallet_type	String	No	To indicate the type of wallet for the current transaction. C: Cash B: Bonus G: FreeGame
	is_minus_count bet_type	Boolean	No Yes	To indicate the spin type in free game True: Normal spin (Free game count is deducted) False: Free spin Bet types of bet record:
	updated_time	Long	Yes	1: Real game Bet last updated time (Unix time stamp in milliseconds) Note updated_time is not equal to bet end time
Bet Indicator	is_validate_bet	Boolean	No	To indicate if the request is a transaction that has been resent for validation True: Resent transaction False: Normal transaction



	is_adjustment	Boolean	No	To indicate if the request is an adjustment or a normal transaction for a pending bet True: Adjustment False: Normal transaction
	is_parent_zero_stake	Boolean	No	To indicate if the request is having 0 bet amount for the first bet of the round. True: Having 0 bet amount for the first bet of the round (For Bacarrat Deluxe's free hands action) False: Having amount larger than 0 in the first bet of the round
	is_feature	Boolean	No	To indicate the spin type True: Feature spin False: Normal spin
	is_feature_buy	Boolean	No	Note Only applicable for feature buy games
	is_wager	Boolean	No	To indicate if the transaction is wager True: bet_amount > 0 False: bet_amount = 0
	is_end_round	Boolean	No	To indicate if the current game hand has ended
formation	free_game _transaction_id	String	No	Unique identity of free game. It can only be seen when Free Game has been assigned to the player Note Only available for free game created using External API
Free Game Information	free_game_name	String	No	Given name of free game. It can only be seen when Free Game has been assigned to the player
	free_game_id	Integer	No	Unique identity of free game. It can only be seen when Free Game has been assigned to the player



	is_minus_count	Boolean	No	To indicate the spin type in free game True: Normal spin (Free game count is deducted) False: Free spin
	bonus_transaction_id	String	No	Unique identity of bonus game. It can only be seen when Bonus Game has been assigned to the player Note Only available for bonus game created using External API
ormation	bonus_name	String	No	Given name of bonus game. It can only be seen when Bonus Game has been assigned to the player
Bonus Game Information	bonus_id	Integer	No	Unique identity of bonus game. It can only be seen when Bonus Game has been assigned to the player
	bonus_balance _amount	Decimal	No	Total number of bonus amount in bonus wallet. It can only be seen when the player chooses to complete the bonus with cash.
	bonus_ratio_amount	Decimal	No	Rollover amount the player needs to achieve in bonus game. It can only be seen when the player chooses to complete the bonus with cash.
Jackpot Information	jackpot_rtp _contribution_amount	Decimal	No	Jackpot contribution amount of player Note Only applicable for jackpot games



Example:

URL:

https://operator.api/Cash/TransferlnOut?trace_id=b3f37e57-2873-40b1-aa95-f126c25ed311

Body:

operator_token=12345&secret_key=bfvcdb&player_name=player123&operator_player_session=vcbcvbcvb&game_id=1&parent_bet_id=123456&bet_id=123456&bet_type=1¤cy_code=EUR&&updated_time=1530879795000&&bet_amount=100&win_amount=40&transfer_amount=-60&transaction_id=123456-123456-106-0&wallet_type=C&is_feature=False&is_minus_count=False

Validation

Operator is required to perform validation to the following parameters:

Parameter name	Description	Expected behaviour
player_name	Make sure the parameter value matches the given	
currency_code	player information in Verify Session ³³	
operator_token	Make sure the parameter value is the same as the	Return error
secret_key	one PG has provided.	when not match
	Make sure the operator_player_session matches	
	the token generated in URL scheme ³⁴	
	Do not validate operator_player_session when	Return successful
operator_player_session	is_validate_bet or is_adjustment parameter value	response even
operator_prayer_session	is true	with outdated
	Note	operator_player_
	PG system may resend request for validation	session
	or pending bet	
bet_amount	Make sure there is an error response when there	
bet_amount	is insufficient balance (bet_amount)	Return error
	Make sure there is an error response when there	response 3202
	is insufficient balance (negative transfer_amount)	
	Make sure player balance after transaction	
	(amount with 2 decimal places) is correct	
transfer_amount	Make sure zero transfer amount is accepted for	Return successful
transier_amount	parent bet	response with
	Note	the correct cash
	PG system will send a request with ZERO	balance
	transfer amount for Bacarrat Deluxe's free	
	hands action	

³³ Please refer to <u>Verify Session</u> section for more information

³⁴ Please refer to <u>URL Scheme</u> section for more information



	Make sure zero transfer amount is accepted for child bet		
	Note		
	PG system will send a request with ZERO		
	transfer amount for free spin		
transaction id	Ignore wallet operation for duplicated requests		
transaction_ia	(requests with the same transaction_id)		
parent_bet_id	Proceed wallet operation for request with the		
bet id	same game hand (requests with the same		
bet_lu	parent_bet_id but different bet_id)		



Body Parameters:

JSON Object

Parameter name	Data type	Mandatory	Description
currency_code	String	Yes	Currency of player
balance_amount	Decimal	Yes	 Cash Balance of player Note Support up to 2 decimal places Extra decimal values will be truncated. e.g: Game will show 11.12 if balance_amount value is 11.125
updated_time	Long	Yes	Updated time of transaction (Unix time stamp in milliseconds) Note Response updated_time must be the same as the requested updated_time for transaction reference

```
Example:
```

```
"data": {
        "currency_code": "CNY",
        "balance_amount": 11.12,
        "updated_time": 1530879795000
        },
        "error": null
}
```

Code	Message
3004	Player does not exist
3005	Player wallet does not exist
3021	Bet does not exist
3033	Bet failed
3202	Insufficient player balance



5.1.3.3 Balance Adjustment

PG will use this API to perform player's balance addition or deduction. This API can be used for certain events, such as Cash Tournament.

Request

API URL : {OperatorAPIDomain}/Cash/Adjustment

HTTP method : POST

Body parameters:

Category	Parameter name	Data Type	Mandatory	Description
ication ation	operator_token	String	Yes	Unique identity of operator
Authentication Information	secret_key	String	Yes	Shared passphrase between PGSoft and operator
	player_name	String	Yes	Unique identity of players
	currency_code	String	Yes	Currency of player
	transfer_amount	Decimal	Yes	Adjustment Amount Negative amount: Balance deduction Positive amount: Balance addition
_	adjustment_id	String	Yes	Reference <mark>ID</mark> for Adjustment
General Information	adjustment_transac tion_id	String	Yes	Unique identity of transaction Note Operator should use this parameter to check if the request is duplicated and implement idempotent operation
	adjustment_time	Long	Yes	Adjustment time (Unix time stamp in milliseconds)
	transaction_type	String	Yes	Adjustment source: 900: External Adjustment 901: Tournament Adjustment
	bet_type	Integer	Yes	Game launch mode ³⁵

Example:

operator_token=abc123&secret_key=a1b25cde5f3gh46ijkl&player_name=player123&bet_type=1¤cy_code=CNY&transfer_amount=100.00&adjustment_time=1530879795000&adjustment_id=ABC1530879&adjustment_transactionid=ABC1530879-900&transaction_type=900

³⁵ Please refer Bet Types for more info



Validation

Operator is required to perform validation to the following parameters:

Parameter name	Description	Expected behaviour
player_name currency_code	Make sure the parameter value matches the given player information in Verify Session ³⁶	Return error
operator_token secret_key	Make sure the parameter value is the same as the one PG has provided.	match
	Make sure player balance after adjustment (amount with 2 decimal places) is correct Make sure negative amount is accepted	Return
transfer_amount	 Make sure the adjustment performs correctly and accordingly Negative: Balance deduction Positive: Balance addition 	response with correct balance
adjustment_transaction _id	Ignore wallet operation for duplicated requests (Request with same transaction_id)	

 $^{^{\}rm 36}$ Please refer to $\underline{\rm Verify\ Session}$ section for more information



Body Parameters:

JSON Object

Parameter name	Data type	Mandatory	Description
adjust_amount	Decimal	Yes	Adjusted Amount Note:
,			This amount is for reference purpose. PG will not validate it.
balance_before	Decimal	Yes	Player balance before adjustment (balance_before) & Player balance after adjustment (balance_after) Note: Only support up to 2 decimals
balance_after	Decimal	Yes	 Extra decimal values will be truncated. e.g: Game will show 11.12 if balance_amount value is 11.125
updated_time	Long	Yes	Updated time of transaction (Unix time stamp in milliseconds)

Code	Message
3004	Player does not exist
3005	Player wallet does not exist



5.2 PG Provided API

5.2.1 API Formats

5.2.1.1 Request

The API uses HTTP form methods and a RESTful endpoint structure. Operator is required to send requests in the following content type:

Content-Type: application/x-www-form-urlencoded

5.2.1.2 Response

API returns JSON-formatted responses. For successful and failed API requests, PG system will return an API response with HTTP status code 200.

API uses global JSON response format for all API methods, with the following content type: Content-Type: application/json

Parameters:

Parameter name	Data Type	Description
data ³⁷	JSON Object	Response information for API methods
error ³⁸	JSON Object	Error information when an error or exception occur

Example:

}

```
Success Response
```

```
"data": {
    [API method response. JSON object format may vary depending on API methods]
},
    "error": null,
}
Failed/Error Response
{
    "data": null,
    "error": {
```

"code": "[Error code]",
"message": "[Error message]"

³⁷ This field will show *null* value in error response

³⁸ This field will show *null* value in success API response. Please refer to <u>Error codes</u> section for error response format



5.2.2 Login Game (For WebView Game Launch Only)

To notify PG server that the player's login has been successfully authorized.

Note

This API is required for WebView authorization mode³⁹

New player will be created automatically

Request

API URL : {PgSoftAPIDomain}/Login/v1/LoginGame

HTTP method : POST

URL Parameters:

Parameter name	Data Type	Mandatory	Description	
			Unique identity (GUID) of the request	
trace id	Ctring	Yes	Note:	
trace_iu	String	res	Please set the parameter value	
			as GUID format	

Body Parameters:

Parameter name	Data Type	Mandatory	Description
operator_token	String	Yes	Unique identity of operator
secret_key	String	Yes	Shared passphrase between PGSoft and operator
player_session	String	Yes	Token generated by PG
operator_player_session	String	Yes	Token generated by operator system Note: Max 200 characters Please encode the value with UrlEncode to avoid unexpected error
player_name	String	Yes	 Unique identity of players player name is not case sensitive Only alphabet, number, and "@", "-", "_" symbols are allowed Note: Max 50 characters
currency	String	Yes	Currency of player
nickname	String	No	Nickname of player Note: Max 50 characters

³⁹ Please refer to WebView section for more information

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Example:

URL:

https://api.pg-bo.me/external/Login/v1/LoginGame?trace_id=b3f37e57-2873-40b1-aa95f126c25ed311

Body:

operator_token=abc123&secret_key=a1b25cde5f3gh46ijkl&player_session=pg_token_xxx&operator_player_session=a2b3c4d5e6f7g8&player_name=player123¤cy=EUR&nickname=player123

Response

Body Parameters:

JSON Object

Parameter name	Data type	Description
player_name	String	Name of player
player_session	String	Session of player

```
Example:
```

Code	Message
1034	Invalid request
1200	Internal server error



5.2.3 Create Player (Optional)

Create a new player account in PG game system.

Note

Implementation of this API is optional. A player account will be created automatically when a first-time player accesses a PG game.

Request

API URL : {PgSoftAPIDomain}/Player/v1/Create

HTTP method : POST

URL Parameters:

Parameter name	Data Type	Mandatory	Description
			Unique identity (GUID) of the
			request
trace_id	String	Yes	Note:
			Please set the parameter value
			as GUID format

Body Parameters:

Parameter name	Data Type	Mandatory	Description
operator_token	String	Yes	Unique identity of operator
secret_key	String	Yes	Shared passphrase between PGSoft and operator
player_name	String	Yes	 Unique identity of players player name is not case sensitive Only alphabet, number, and "@", "-", "_" symbols are allowed Note: Max 50 characters
nickname	String	No	Nickname of player Note: Max 50 characters
currency	String	Yes	Currency of player

Example:

URL:

https://api.pg-bo.me/external/Player/v1/Create?trace_id=b3f37e57-2873-40b1-aa95f126c25ed311

Body:

 $operator_token=abc123\&secret_key=a1b25cde5f3gh46ijkl\&player_name=player123\¤cy=EUR\&nickname=player123$



Body Parameters:

JSON Object

Parameter name	Data type	Description
		Status of the request
action_result	Integer	1: success
		0: failed

Code	Message
1034	Invalid request
1035	Operation Failed
1200	Internal server error
1204	Invalid operator
1305	Invalid player (player already existed)



5.2.4 Kick Out Player (Optional)

Kick out a player from PG game system. The player can still re-login to the games.

Request

API URL : {PgSoftAPIDomain}/Player/v1/Kick

HTTP method : POST

URL Parameters:

Parameter name	Data Type	Mandatory	Description
			Unique identity (GUID) of the
			request
trace_id	String	Yes	Note:
			Please set the parameter value
			as GUID format

Body Parameters:

Parameter name	Data Type	Mandatory	Description
operator_token	String	Yes	Unique identity of operator
secret_key	String	Yes	Shared passphrase between PGSoft and operator
player_name	String	Yes	Unique identity of players

Example:

URL:

https://api.pg-bo.me/external/Player/v1/Kick?trace_id=b3f37e57-2873-40b1-aa95f126c25ed311

Body:

operator_token=abc123&secret_key=a1b25cde5f3gh46ijkl&player_name=player123



Body Parameters:

JSON Object

Parameter name	Data Type	Description	
		Status of the request	
action_result	Integer	1: success	
		0: failed	

Code	Message
1034	Invalid request
1035	Operation Failed
1200	Internal server error
1204	Invalid operator



5.2.5 Suspend Player (Optional)

Suspend a player's account. The suspended players will not be able to access PG games anymore.

Request

API URL : {PgSoftAPIDomain}/Player/v1/Suspend

HTTP method : POST

URL Parameters:

Parameter name	Data Type	Mandatory	Description
			Unique identity (GUID) of the
			request
trace_id	String	Yes	Note:
			Please set the parameter value
			as GUID format

Body Parameters:

Parameter name	Data Type	Mandatory	Description
operator_token	String	Yes	Unique identity of operator
secret_key	String	Yes	Shared passphrase between PGSoft and operator
player_name	String	Yes	Unique identity of players

Example:

URL:

https://api.pg-bo.me/external/Player/v1/Suspend?trace_id=b3f37e57-2873-40b1-aa95f126c25ed311

Body:

operator_token=abc123&secret_key=a1b25cde5f3gh46ijkl&player_name=player123



Body Parameters:

JSON Object

Parameter name	Data Type	Description	
		Status of the request	
action_result	Integer	1: success	
		0: failed	

Code	Message
1034	Invalid request
1035	Operation Failed
1200	Internal server error
1204	Invalid operator



5.2.6 Resume Player (Optional)

Resume a suspended player's account.

Request

API URL : {PgSoftAPIDomain}/Player/v1/Reinstate

HTTP method : POST

URL Parameters:

Data Type	Mandatory	Description
		Unique identity (GUID) of the
		request
String	Yes	Note:
		 Please set the parameter value as GUID format

Body Parameters:

Parameter name	Data Type	Mandatory	Description
operator_token	String	Yes	Unique identity of operator
secret_key	String	Yes	Shared passphrase between PGSoft and operator
player_name	String	Yes	Unique identity of players

Example:

URI ·

https://api.pg-bo.me/external/Player/v1/Reinstate?trace_id=b3f37e57-2873-40b1aa95-f126c25ed311

Body:

operator_token=abc123&secret_key=a1b25cde5f3gh46ijkl&player_name=player123



Body Parameters:

JSON Object

Parameter name	Data Type	Description	
		Status of the request	
action_result	Integer	1: success	
		0: failed	

Code	Message
1034	Invalid request
1035	Operation Failed
1200	Internal server error
1204	Invalid operator



5.2.7 Check Player Status (Optional)

To check a specific player's account status.

Note

This API is not to check a player's online status, just to check their status in PG. To check if an active player is online, please check in the back office.

Request

API URL : {PgSoftAPIDomain}/Player/v1/Check

HTTP method : POST

URL Parameters:

Parameter name	Data Type	Mandatory	Description
			Unique identity (GUID) of the
			request
trace_id	String	Yes	Note:
			Please set the parameter value
			as GUID format

Body Parameters:

Parameter name	Data Type	Mandatory	Description
operator_token	String	Yes	Unique identity of operator
secret_key	String	Yes	Shared passphrase between PGSoft and operator
player_name	String	Yes	Unique identity of players

Example:

URL:

https://api.pg-bo.me/external/Player/v1/Check?trace_id=b3f37e57-2873-40b1-aa95-f126c25ed311

Body:

operator_token=abc123&secret_key=a1b25cde5f3gh46ijkl&player_name=player123



Body Parameters:

JSON Object

Parameter name	Data Type	Description		
player_name	String	Unique identity of players		
	status Integer	Status of the request		
status		0: Inactive		
		1: Active		
		3: Suspended		

Code	Message
1034	Invalid request
1035	Operation failed
1200	Internal server error
1204	Invalid operator



5.2.8 Bet History Interpreter (Optional)

To reveal a player's bet results and details for specific bet.

Step 1

Before getting the bet detail, operator is required to call this API to get operator's session (Session timeout: 30 minutes).

Request

API URL : {PgSoftAPIDomain}/Login/v1/LoginProxy

HTTP method : POST

URL Parameters:

Parameter name	Data Type	Mandatory	Description
trace_id		Yes	Unique identity (GUID) of the request
	String		Note:
	String		Please set the parameter value
			as GUID format

Body Parameters:

Parameter name	Data Type	Mandatory	Description
operator_token	String	Yes	Unique identity of operator
secret_key	String	Yes	Shared passphrase between PGSoft and operator

Example:

URI ·

https://api.pg-bo.me/external/Login/v1/LoginProxy?trace_id=b3f37e57-2873-40b1aa95-f126c25ed311

Body:

operator_token=abc123&secret_key=a1b25cde5f3gh46ijkl



Body Parameters:

JSON Object

Parameter name	Data Type	Description
operator_session	String	Operator session

```
Example:
```

```
{
    "data": {
         "operator_session": E4ECB5CF-0BC6-4DA8-8551-8526F48AB9CD
    },
    "error": null
}
```

Step 2

Get bet detail by:

API URL : {PgSoftPublicDomain}/redirect.html

HTTP method : Get

URL Parameters:

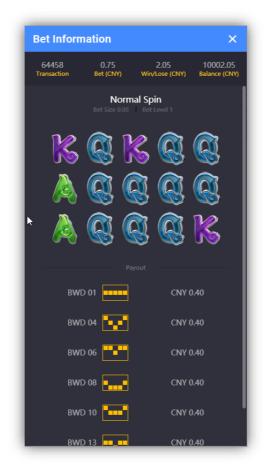
Parameter name	Data Type	Description
trace_id	String	Unique identity (GUID) of the requestNote:Please set the parameter value as GUID format
t	String	Operator session from Step 1
psid	String	Parent Bet ID
sid	String	Bet ID
lang	String	Language: • en (default) • zh
type	String	Fixed value: operator

Example:

 $\label{lem:https://public.pg-redirect.net/history/redirect.html?trace_id=b3f37e57-2873-40b1-aa95-f126c25ed311\&t=E4ECB5CF-0BC6-4DA8-8551-\\$

8526F48AB9CD&psid=12345&sid=12345&lang=en&type=operator





Screenshot of betting detail



5.2.9 Others (Optional)

PG provides several APIs for different modules and it is optional for integration. Operator may choose to integrate based on requirements:

• Bet History : To get a player's bet history

• Game List : To get the latest game list and available bet sizes

• Free Game : To perform several actions (For example create free game, assign player into

free game, cancel free game, etc.) through API

• **Bonus** : To perform several actions (For example create bonus game, assign player into bonus game, cancel bonus game, etc.) through API.

• Jackpot : To get jackpot information through API

• Tournament : To get tournament list, add player into tournament and get tournament

ranking through API



5.3 Integrate PG Game into Operator's iOS Application

Operator's application needs to meet the following requirements to launch PG games in the application client:

- iOS 8.0 or above
- WKWebView

PG game will prompt a "Poor Visit Experience" message if it does not meet the minimum requirements. Player is allowed to continue launching the game but it may not guarantee a stable, and high performance experience of the PG game.

To ensure the application client passes the PG game requirement check, operator is required to include the following codes when initializing WKWebView component in application:

```
WKUserContentController *controller = [[WKUserContentController alloc] init];
[controller addScriptMessageHandler: self name: @"Could be any srting value"];

WKWebViewConfiguration *configuration = [[WKWebViewConfiguration alloc] init];
configuration.userContentController = controller;

WKWebView *webView = [[WKWebView alloc] initWithFrame: CGRectZero
configuration:
configuration];
webView.uiDelegate = self;
self.view = webView;
```

This is to construct a WKUserContentController object and set its userContentController property on the configuration. Please take note that the userContentController must have at least one scriptMessageHandler (assign through addScriptMessageHandler)

For more details regarding WKWebView, please refer to Apple Developer Documentation



6 Resolve Pending Bet

Sometimes pending bets may occur due to unforeseen circumstances during gameplay due to network latency, system failure, system timeout and so on.

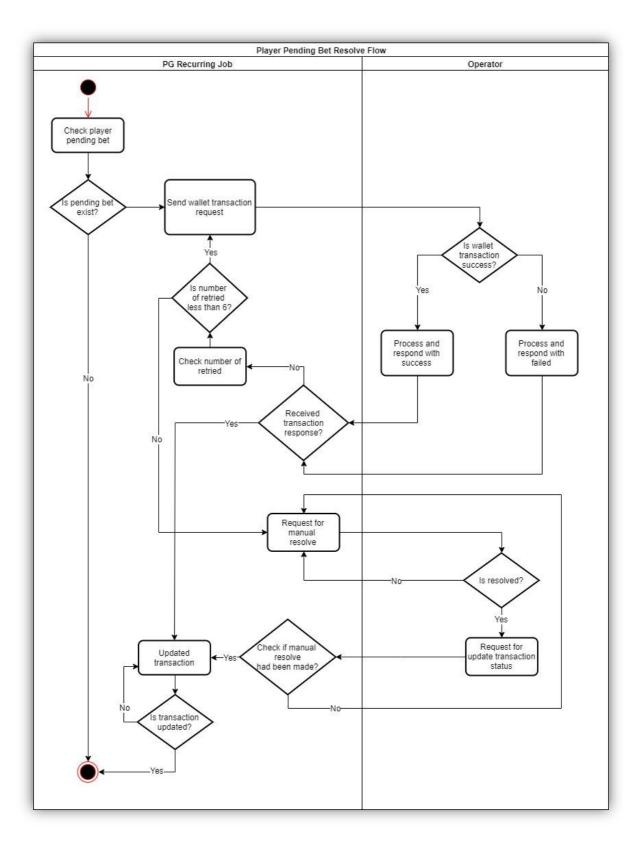
Generally, pending bet will be resolved automatically when the player relaunches the game. However, the bet will remain in pending status for some rare scenarios:

- Player did not relaunch the game after encountering an error
- PG Soft system did not receive any response from the operator when resolving pending bets
- PG Soft system receive an error response from the operator when resolving pending bets

Default interval of pending bet resolving time is set to 60 minutes. Pending bets which exceed the interval will be resolved by PG Soft system automatically. This interval is customizable, and every operator can have their own bet resolve interval time.

Manual resolve is required when failure to resolve pending bets after several attempts. In such case, operator is required to resolve the pending bet manually, and PG Soft will mark these bets' statuses as complete after getting the confirmation from the operator.





Player Pending Bet Resolve Flow



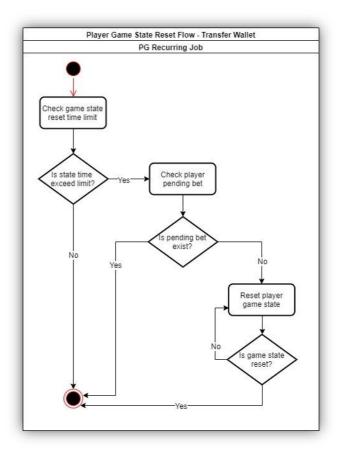
7 Reset Game State

All games will support the resume feature which allows returning players to continue the game at their last game state from any device. For example, players will be able to continue a game with a bonus game state few days after even if the player had closed the game when the player won the bonus game.

However, the player's game state will reset every 90 days by default. This interval is customizable, and every operator can have their own game state reset interval time. System will clear all finished and unfinished game progress, and the player will not be able to continue a game after it has been reset.

For transfer wallet mode, every player game state will reset every 90 days by default:

 PG Soft system will reset a player's game state automatically if there are no pending bets for the player



Player's Game State Reset Flow for Transfer Wallet



8 Restrictions

8.1 IP

Players from the following restriction area are not able to access PG game:

- Malaysia
- Singapore
- Taiwan
- United States of America
- Hong Kong
- Macau
- Israel
- Iran
- North Korea

8.2 Currency

Please find the following for the currencies not supported by PGSoft:

- HKD
- MOP
- MYR
- SGD
- TWD
- PHP
- VES
- All cryptocurrencies except mBTC, uBTC & USDT



9 Appendix

9.1 Error codes

Error code	Description
1034	Invalid request
1035	Operation Failed
1200	Internal server error
1204	Invalid operator
1300	Invalid player session
1301	Player session token is empty
1302	Invalid player session
1303	Server error occurs
1305	Invalid player
1306	Player is blocked to access current game
1307	Invalid player session
1308	Player session is expired
1309	Player is inactive
1310	Failed to verify operator player session
<mark>1315</mark>	Player's operation in progress
1400	Game is under maintenance
1401	Game is inactive
1402	Game does not exist
3001	Value cannot be null
3004	Player does not exist
3005	Player wallet does not exist
3006	Player wallet already exists
3009	Free game does not exist
3013	Out of the balance amount to transfer out
3014	Free game cannot be cancelled
3019	Not enough free game
3021	No bet exists
3022	Bet already pay-out
3030	Free game expired
3031	Free game already converted
3032	Bet already existed
3033	Bet failed
3034	Pay-out failed
3035	Invalid multiplier
3036	Not enough balance to convert



3040	Transaction does not exist
3202	Not enough cash balance to bet



9.2 Currencies

Currency Code	Currency Name	Currency Symbol	Base Unit
AED	Dirham des Émirats arabes unis	د.إ	1
AFN	Afghanistan Afghani	؋	1
ALL	Albanian Lek	L	1
AMD	Armenian Dram		1
ANG	Netherlands Antilles Guilder	f	1
AOA	Angola Kwanza	Kz	1
ARS	Argentine Peso	\$	1
ATS	Austrian Schilling	S	1
AUD	Australian Dollar	\$	1
AWG	Aruba Guilder	f	1
AZN	Azerbaijani Manat	ф	1
BAM	Bosnian Convertible Marka	KM	1
BBD	Barbados Dollar	\$	1
BDT	Taka bangladais	Tk	1
BEF	Belgian franc	fr.	1
BGN	Lev bulgare	лв.	1
BHD	Bahrain Dinar	BD	1
BIF	Burundian Franc	FBu	1000
BMD	Bermuda Dollar	\$	1
BND	Brunei Dollar	В\$	1
ВОВ	Bolíviano bolivien	\$b	1
BRL	Brazil Real	R\$	1
BSD	Bahamian Dollar	\$	1
BTN	Bhutanese Ngultrum	Nu.	1
BWP	Botswana Pula	Р	1
BYN	Belarusian Rouble	BYN	1
BYR	Belarusian Ruble	Br	1
BZD	Belize Dollar	BZ\$	1
CAD	Canadian Dollar	\$	1
CDF	Congolese Franc	FC	1000
CHF	Swiss Franc	Fr.	1
CLP	Chilean Peso	\$	1
CNY	Chinese Yuan	¥	1
СОР	Colombian Peso	\$	1000
CRC	Colon costaricain	#	1
CSD	Serbian Dinar	din	1
CUP	Cuba Peso	₽	1



CVE	Cape Verde Escudo	\$	1
CZK	Czech Koruna	Kč	1
DEM	Deutsche Mark	DM	1
DJF	Djiboutian Franc	Fdj	1
DKK	Danish Krone	kr.	1
DOP	Peso dominicain	RD\$	1
DZD	Dinar algérien	DA	1
EEK	Estonian Kroon	kr	1
EGP	Livre égyptienne	£	1
ERN	Eritrea Nakfa	Nkf	1
ESP	Spanish Peseta	Pta	1
ETB	Ethiopian Birr	ብር	1
EUR	Euro	€	1
FIM	Finnish Markka	mk	1
FJD	Fiji Dollar	\$	1
FKP	Falkland Islands (Malvinas) Pound	£	1
FRF	French Franc	F	1
GBP	British Pound	£	1
GEL	Georgian Lari	₾	1
GHC	Ghanaian Cedi	GH¢	1
GHS	Ghanaian Cedi	GH¢	1
GIP	Gibraltar Pound	£	1
GMD	Gambian Dalasi	D	1
GNF	Guinean Franc	FG	1000
GRD	Greek Drachma	Δρχ	1
GTQ	Quetzal guatémaltèque	Q	1
GYD	Guyana Dollar	\$	1
HNL	Honduran Lempira	L	1
HRK	Croatian Kuna	kn	1
HTG	Haiti Gourde	G	1
HUF	Hungarian Forint	Ft	1
IDR	Indonesian Rupiah	Rp	1000
IEP	Irish Pound	£	1
ILS	Shekel israélien	П	1
INR	Indian Rupee	₹	1
IQD	Dinar irakien	د.ع	1000
IRR	Iranian Rial	يل	1000
ISK	Couronne islandaise	kr	1
ITL	Italian Lira	L.	1000
JMD	Jamaica Dollar	J\$	1
JOD	Jordanian Dinar	د.أ	1



JPY	Japanese Yen	¥	1
KES	Kenyan Shilling	KSh	1
KGS	Som du Kirghizistan	лв	1
KHR	Cambodian Riel	ð	1000
KMF	Comorian Franc	CF	1
KPW	North Korea Won	₩	1
KRW	South Korean Won	₩	1000
KWD	Kuwait Dinar	<u>خ</u>	1
KYD	Cayman Islands Dollar	\$	1
KZT	Kazakhstani Tenge	Ŧ	1
LAK	Lao Kip	К	1000
LBP	Livre libanaise	ل.ل	1000
LKR	Roupie sri lankaise	Rs	1
LRD	Liberia Dollar	\$	1
LSL	Lesotho Loti	L	1
LTL	Lithuanian Litas	Lt	1
LVL	Latvian Lats	Ls	1
LYD	Dinar libyen	LD	1
MAD	Moroccan Dirham	DH	1
MBTC	Milli Bitcoin	mB	1
MDL	Moldovan Leu	L	1
MGA	Madagascar Ariary	Ar	1000
MKD	Dinar macédonien	ден	1
MMK	Burmese Kyat	K	1000
MNT	Mongolian Tughrik	₹	1000
MRO	Mauritanian Ouguiya	UM	1
MUR	Mauritius Rupee	Rs	1
MVR	Maldivian Rufiyaa	Rf.	1
MWK	Malawian Kwacha	MK	1
MXN	Mexican Peso	\$	1
MZN	Mozambican Metical	MT	1
NAD	Namibia Dollar	\$	1
NGN	Nigerian Naira	N	1
NIO	Cordoba nicaraguayen	C\$	1
NLG	Dutch Guilder	f	1
NOK	Norwegian Krone	kr	1
NPR	Nepal Rupee	Rs .	1
NZD	New Zealand dollar	\$	1
OMR	Oman Rial	يا <u>ل</u>	1
PAB	Balboa panaméen	B/.	1
PEN	Peruvian Sol	S/	1



PGK	Papua New Guinea Kina	К	1
PKR	Pakistan Rupee	Rs	1
PLN	Poland Złoty	zł	1
PTE	Portuguese Escudo	\$	1
PYG	Guarani paraguayen	Gs	1000
QAR	Rial qatari	QR	1
RON	Romanian Leu	lei	1
RSD	Serbian Dinar	РСД	1
RUB	Russian Ruble	₽	1
RWF	Rwandan Franc	FRw	1000
SAR	Rial saoudien	SR	1
SBD	Solomon Islands Dollar	\$	1
SCR	Seychellois Rupee	SR	1
SDG	Livre soudanaise	ج.س.	1
SEK	Swedish Krona	kr	1
SHP	Saint Helena Pound	£	1
SKK	Slovak Koruna	Sk	1
SLL	Sierra Leonean Leone	Le	1000
SOS	Somalia Shilling	S	1
SRD	Suriname Dollar	\$	1
STD	São Tomé and Príncipe Dobra	Db	1000
SVC	Colon salvadorien	\$	1
SYP	Livre syrienne	£	1
SZL	Swazi Lilangeni	L	1
THB	Thai Baht	В	1
TJS	Tajikistan Somoni	TJS	1
TMT	Turkmenistan Manat	T	1
TND	Dinar tunisien	د.ت	1
TNT	TNT	TNT	1
TOP	Tongan pa'anga	T\$	1
TRL	Turkish Lira	老	1
TRY	Turkish Lira	老	1
TTD	Trinidad and Tobago Dollar	TT\$	1
TZS	Tanzanian Shilling	TSh	1000
UAH	Ukrainian Hryvnia	€	1
UBTC	Micro Bitcoin	μB	1
UGX	Uganda Shilling	USh	1000
USD	United States Dollar	\$	1
UYU	Peso uruguayen	\$U	1
UZS	Uzbekistani Som	so'm	1000
VND	Vietnamese Dong	<u>đ</u>	1000



VUV	Vanuatu Vatu	VT	1
WST	Samoa Tala	\$	1
XAF	Central African CFA Franc BEAC	FCFA	1
XCD	East Caribbean Dollar	\$	1
XOF	CFA Franc	CFA	1
XPF	CFP Franc	F	1
YER	Rial yéménite	يال	1
ZAR	Rand sud-africain	R	1
ZMW	Zambian Kwacha	ZK	1



9.3 Bet Types

Bet Type	Game Mode
1	Real game
3	Tournament game



9.4 Transaction Types

Code	Transaction type
1	Cash
2	Bonus game
3	Free game



9.5 Platforms

Code	Category	Platform
1		Windows
2		macOS
3	Web	Android
4		iOS
5		others
6	Cordova	Android
7	Cordova	iOS
8	Electron	Windows
9		macOS
10		Windows
11	Native	macOS
12	INGLIVE	Android
13		iOS
98	others	System
99	oulers	Smartbot



9.6 Languages

Code	Language	
en	English (default)	
da	Danish	
de	German	
es	Spanish	
fi	Finnish	
fr	French	
id	Indonesian	
it	Italian	
ja	Japanese	
ko	Korean	
nl	Dutch	
no	Norwegian	
pl	Polish	
pt	Portuguese	
ro	Romanian	
ru	Russian	
SV	Swedish	
th	Thai	
tr	Turkish	
vi	Vietnamese	
zh	Chinese	