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1. Request Fields

1.1 WebGMID - GMID protection

Real GMID must be protected against javascript hacking. To achieve this the GMID must be hashed on the backend using SHA256 and the uppercase HEX encoded result will be the Web GMID. All requests sent directly from Web browsers must use the hash of the real GMID. C9PG will look up the real GMID using the GTID and it will validate the hash.

```
backend > "GMID":"2001008149"  
Web >  
"WebGMID":"4FDB4707CB8A821C49ED19B0F2F26C6FF7D6572057C8EB5A8492E9763CB3E3DD"
```

1.2 Seed - Protecting transactions

It is the identifier for the transaction, used to ensure its uniqueness and integrity. This field needs to be generated on the server-side, and **GMPW** should not be accessible to others.

The **Seed** is valid for **5 minutes**. `
` **GMPW** is the key field for seed validation. Please do not include it in the request or send it to the browser **EVER** and you can regularly update and use it through the portal.

```
SHA256(InvoiceNum:WebGMID:GTID:SeedTime:GMPW) hex uppercase
```

1.3 SeedTime -> UTC timezone

Seed generated date and time. Format: DD-MM-YYYY:HH:MM:SS:SSS. `
`

1.4 AcceptPaymentList

There are four payment methods: ACH, GPay, ApplePay, and Card. If more than two payment methods are supported, use "," If all methods are supported, use "all"(default is all).

```
AcceptPaymentList=ACH,GPay  
AcceptPaymentList=All
```

1.5 Template

This is for specifying the CSS template. Please send us the CSS in advance, and after installation, you can specify the use of a particular CSS template.

1.6 GTID

Cloud9 Gateway Terminal ID.

1.7 InvoiceNum

Invoice Number, an optional field.

1.8 CallbackUrl

The merchant backend server callback url to send back the authorization response.

1.9 UICallbackUrl

If provided, IFrame redirect to the UICallbackUrl after transaction (optional).

1.10 CallbackContext

The IFrame and the Cloud9 server return the CallbackContext in the response sent to your server and you can trace the transaction using it.

1.11 MerchantName

The Gpay and Applepay display name.

2 IFrame Response Fields

2.1 Status

Only if the CallbackUrl call is successful, the status will be set to success.

2.2 CallbackContext

The merchant trace value for the request.

2.3 CallbackVersion

Option value:0.1, 1.0, 2.0. default value 0.1
0.1: IFrame redirect to the CallbackUrl with real response
1.0: Cloud9 backend send real response to CallbackUrl Api
2.0: IFrame post real response to parent window.

2.4 KeyIndex

Use for RSA encrypt, from Cloud9.

3. RSA encryption

3.1 Fields

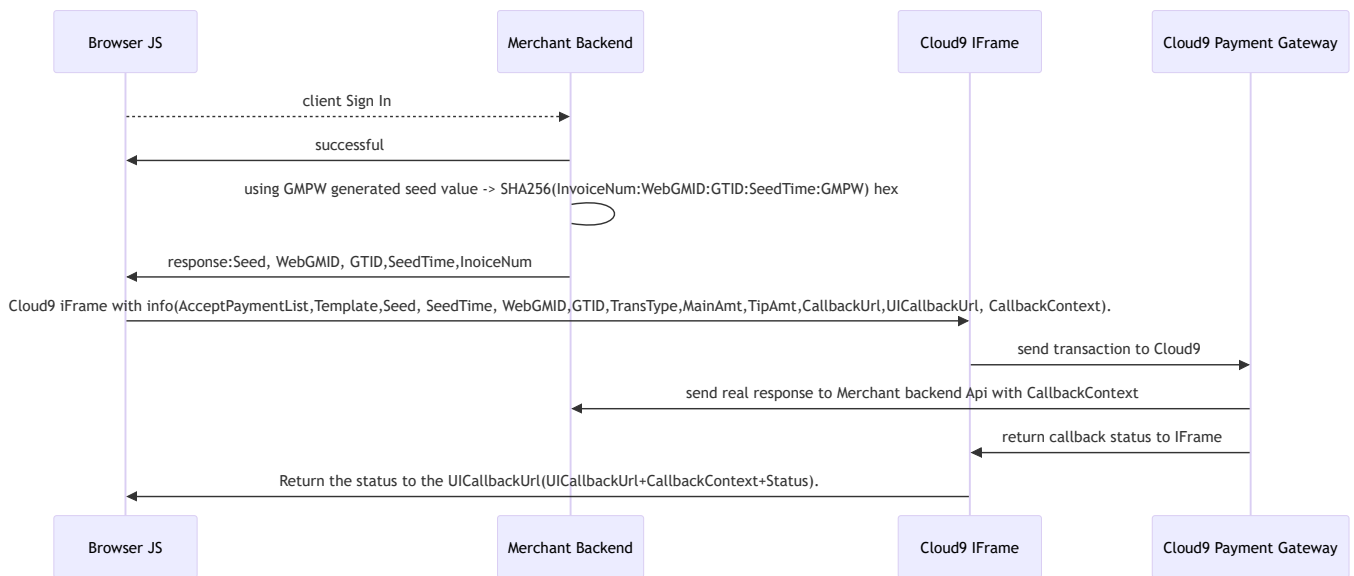
We will send you the public key and the "KeyIndex", then you can use the public key to encrypt the required parameters(GTID encryption will add extra security) and then send them base64 encoded.

QA KeyLength:1024 Production KeyLength:2048 RSAKeyGenerator:
<https://cryptotools.net/rsagen> ToBase64: <https://www.base64decode.org/>

3.2 Encryption parameters

PublicKey:Base64 Padding:RSA_PKCS1_OAEP_PADDING

4. Flow



5. Example

5.1 iFrame request pattern:

```

https://testvterm.c9pg.com/checkout?
AcceptPaymentList=All&WebGMID=4FDB4707CB8A821C49ED19B0F2F26C6FF7D6572057C8EB5A8492E
9763CB3E3DD&SeedTime=12-08-
2023:12:32:11:023&InvoiceNum=IN1234&Seed=D1A39C95730BA9754784C502698D17E9A90CB5F389
DBB509AE683D573030C8A9&GTID=GT1001396406&CallbackUrl=https://www.vterm.c9pg.com.com
/Cloud9_callback&UICallbackUrl=http://localhost:3000/Cloud9_callbacks/card_entry&Ca
llbackContext=eyJhY3Rpb24iOiJ0aWNRZXRQYXltZW50In0
  
```

URL with encrypted GTID

```

https://testvterm.c9pg.com/checkout?
AcceptPaymentList=All&WebGMID=B30E905CA075FBF0E3F4008BBA37906C6875F26AD1475F9C7B5D9
924900D1AA9&SeedTime=11-11-
2023:08:16:37:358&Seed=EE9BCCF2E3BFD2B199C0B05AE03E59461D327A7BE62C8691FD87D8410820
1ED7&GTID=R0rmLFfs+JDP4k240lFl30VQDoeiUyVCxpbRst5pmlwG1Gk66ea3BiYt+Pji73CLYJF5wtK9/
FNHvNo8BLfbd8h7oJnfdJkGYkoo0D/1wSxJc1SedhSxT/j3aqcgqZMsjsbI7BYuKPPcyzQkOHjytvu3zek3
iywQ7gMkmK8HWeG6/tA6YPcqzXRcnINpsM71ilps+vfptpSJC+EKbei//xihNnt1NdeCMRPzpC8txkwKsKs
1BwoQ437sQ9NvRjhnMHY1908tDm7iA9l0XvGwjgk5ThY5TMHsR78A2lqo14oUNxT5IOvZcIvP+CtzIjinyx
c1YuILaZvhc797lKyKTg==&KeyIndex=15224f027c780ef857e2c3895aa401a2&CallbackVersion=2.
0
  
```

5.2 iFrame UICallbackUrl response pattern:

```

http://localhost:3000/Cloud9_callbacks/card_entry?
  
```

```
CallbackContext=eyJhY3Rpb24iOiJ0aWNRZXRQYXltZW50In0&Status=success
```

5.3 CallbackUrl payload

```
curl --location 'CallbackUrl' --header 'Content-Type: application/json' --data
'{"AccountNum":"411111*****1111","AuthAmt":"0","AuthDate":"20230925","AuthTime":"1
21344","Brand":"Visa","ErrorCode":"101","ErrorText":"Invalid
GMID","ExpDate":"1223","GMID":"1110101051","GMPW":"GMPW3010020711","GTID":"GT112002
6347","MainAmt":"100","Medium":"Credit","NewRecordCreated":"N","ProcessorID":"40190
","ResponseCode":"01","ResponseText":"Invalid
GMID","ResultCode":"101","ResultText":"Invalid
GMID","SESSIONID":"WebCallbackUrl{c845ec1e-df23-4c42-994a-
ffd5535be222}_1695658424505","Status":"fail","SysLogInfoOfModule":"Cube","TipAmt":"
0","TransType":"Auth", "CallbackContext":"eyJhY3Rpb24iOiJ0aWNRZXRQYXltZW50In0"}'
```