

VIP Service Response Code Specification

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This page describes VIP service response code specification, the purpose is to guide VIP developers to define the business response codes and to provide reference for VIP client libraries to handle business codes.

Background

By [RFC 2616](#), HTTP defines dozens of standard status codes grouped by five categories:

- 1xx: Informational - Request received, continuing process
- 2xx: Success - The action was successfully received, understood, and accepted
- 3xx: Redirection - Further action must be taken in order to complete the request
- 4xx: Client Error - The request contains bad syntax or cannot be fulfilled
- 5xx: Server Error - The server failed to fulfill an apparently valid request

As the restful API bases on HTTP, so for each Restful API request the HTTP status codes will be put to the response's status line, e.g.

Response Code
HTTP/1.1 200 OK Content-Type: application/json "Body Data"

However, the status codes can only represent the HTTP status like connection status, request status, etc., it can't represent business logic status. So we requires to add extra business logic codes to indicate the business status for clients.

VIP API Business Code Categories

We use two layers to express the API response status: a) HTTP codes layer, here we just use '200', '400' and '500'; b) customized business codes layer, here it's put in the response's body as one of JSON attribute. Below is the categories for business logic codes(6xx/7xx/8xx are business codes which are not conflict with HTTP status codes):

- HTTP/200, 6xx: Normal API Business Code - The business logic runs as expected, the client should take the response as expected return
- HTTP/400, 7xx: Abnormal API Business Code - The business logic runs with abnormal, the client should take the response as unexpected return
- HTTP/500, 8xx: Invalid API Business Code - The business logic is broken, the client should take the response as run-time error

Normal API Business Code

Normal API Business Code is defined as '6xx' with HTTP status code '200' in the status line, it indicates the API is normally handled by VIP service and the result is expected, e.g.

Response Code

```
HTTP/1.1 200 OK
Content-Type: application/json
{
  "response": {
    "code": 601,
    "message": "Translation Found",
    "serverTime": ""
  },
  "signature": "",
  "data": {}
}
```

Detailed business logic code:

Code	Title	Description
601	Translation Found	
602	Translation updates successfully	
603	Source is collected successfully	
604	The content of response have been version fallback	

Abnormal API Business Code

Abnormal API Business code is defined as '7xx' with HTTP status code '400' in the status line, it indicates the API is abnormally handled by VIP service and it requires the client to handle the data by the business code as necessary, e.g.

Response Code

```
HTTP/1.1 400 Bad Request
Content-Type: application/json
{
  "query": {
    "url": "/",
    "parameters": {"productName": "testing", "version": "1.0.0", "locale":""}
  },
  "errors": {
    "code": 701,
    "message": "Product not supported",
    "Type": "OAuthException",
    "Reason": "The product is not registered to VIP service"
  }
}
```

Detailed business logic code:

Code	Title	Description
701	Product not supported	
702	Locale not supported	
703	Version not found	

Invalid API Business Code

Invalid API business code is defined as '8xx' with HTTP status code '500' in the status line, it indicates the API can't be executed and it requires the client to handle the response as server error, e.g.

Response Code

HTTP/1.1 500 Internal Server Error
Content-Type: application/json
{
 "errors": {
 "code": 801,
 "status": "Internal Server Error",
 "detail": "The JSON file can't be parse due to invalid formatting"
 }
}

Detailed business logic code:

Code	Title	Description
801	Internal Server Error	
802	I/O Exception In Reading File	
803	Data Parse Error on JSON file	

Reference

HTTP Code Definition

1xx Informational

100 Continue
101 Switching Protocols
102 Processing

2xx Success

200 OK
201 Created
202 Accepted
203 Non-authoritative Information
204 No Content
205 Reset Content
206 Partial Content
207 Multi-Status
208 Already Reported
226 IM Used

3xx Redirection

300 Multiple Choices
301 Moved Permanently
302 Found
303 See Other
304 Not Modified
305 Use Proxy
307 Temporary Redirect
308 Permanent Redirect

4xx Client Error

400 Bad Request
401 Unauthorized
402 Payment Required
403 Forbidden
404 Not Found
405 Method Not Allowed
406 Not Acceptable
407 Proxy Authentication Required
408 Request Timeout
409 Conflict
410 Gone
411 Length Required
412 Precondition Failed
413 Payload Too Large
414 Request-URI Too Long
415 Unsupported Media Type
416 Requested Range Not Satisfiable
417 Expectation Failed
418 I'm a teapot
421 Misdirected Request
422 Unprocessable Entity
423 Locked
424 Failed Dependency
426 Upgrade Required
428 Precondition Required
429 Too Many Requests
431 Request Header Fields Too Large
444 Connection Closed Without Response
451 Unavailable For Legal Reasons
499 Client Closed Request

5xx Server Error

500 Internal Server Error
501 Not Implemented
502 Bad Gateway
503 Service Unavailable
504 Gateway Timeout
505 HTTP Version Not Supported
506 Variant Also Negotiates
507 Insufficient Storage
508 Loop Detected
510 Not Extended
511 Network Authentication Required
599 Network Connect Timeout Error