

New Billing Project

ICP Enquiry (Billing Usage) API Specifications Part 1

Revision History

Revision	Date	Description	Author
1.0	17-Dec-2024	List of ICP Data Usage Enquiry that are interfaced with new billing API	Claudia Fung
	02-Apr-2025	Modfiy getTagOnNB (Remove TagOnNB from this spec) Modify getTravelSIMInfoNB Add IddCallUsageNB	Claudia Fung
	29-May-2025	Modify logic for NspVrsUsageNB	Claudia Fung
	10-Jun-2025	Modify logic for NspVrsUsageNB – revise the logic to derive discount bucket code and balance unit per Patrick Kwok update on Jan 8	Claudia Fung
	30-Jul-2025	TagOnInfo to replace the existing getTagOn API for Usage Enquiry Specifications TagOnInfo (New Billing) API is put into ICP Enquiry (Billing) API part 5.pdf	Claudia Fung
	31-Jul-2025	Add currentMonthNRDataUsageNB for Postpaid	Claudia Fung
	4-Aug-2025	Add topUpInfo API for Postpaid	Claudia Fung

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Objectives

This document is to provide the list of data usage enquiry API interfaced with Covalense Billing API for retrieval Billing information for the New Billing Project. Parallel run logic is also included.

ICP Enquiry (Billing Usage) API Specifications

1. Result Code Definition

Result Code	Severity	Code Description
0	N/A	Success
-1	N/A	Not Success. Invalid input argument is provided
	N/A	Not Success. Record cannot be found by the provided identifier
-1000 ~ -1999	N/A	Not Success. The request cannot be processed due to violation to the business logic
-2000 ~ -4999	Minor	Error. Unexpected runtime exception
-5000 ~ -8999	Major	Error. Unexpected runtime exception
-9000 ~ -9999	Fatal	Error. Dependent (south-bound) resources outage

2. Prepaid Local Data Usage (New Billing)

Purpose

To get prepaid local data usage from the new billing system for the prepaid subscriber

Interface Details

Production Endpoints: https://tykapi.hksmartone.com/icp/NBill/brm/v1/subscription

System	Endpoint (UAT)
UAT	https://crm-uat.smartone.com/api/brm/v1/subscription
TYK	https://tykapi-u.hksmartone.com/icp/NBill/brm/v1/subscription

API: /prepaidLocalDataUsageNB

Type: REST

Method: POST

Add Key to HTTP Request Header for TYK API:

Name	Auth_ID
Value	eyJvcmcjOjI2NGY2Y2I1ZmFiYzRhYWl4MGNIWDE1NTUjLCJpZCI6IjFiYzI4OGIzYzZjMTQxNjFhM2ZiMWUyNGJlMDAyN2FkIiwiaCI6Im11cm11cjY0In0=

Request Parameters

Parameter	Data Type	Description	Possible Value	Remarks
custNum	String	Customer number	85012345	Mandatory
acctNum	String	Account number	85012345.00001	Mandatory
subrNum	String	Subscriber number	91234567	Mandatory
ratePlan	String	Rate Plan	C28	Mandatory
parallelRun	String	parallelRun indicator to determine the state of the workflow	<u>Postpaid parallel run - Value of 1st character</u> 0 – existing system 1 – new billing 2 – parallel run in GNV & new billing in OM <u>Prepaid parallel run – Value of 2nd character</u> 0 – existing system 1 – new billing	Mandatory

Sample Request

```
Enquiry by customer number, account number, subscriber number
{
  "custNum": "85012345",
  "acctNum": "85012345.00001",
  "subrNum": "91234567",
  "ratePlan": "C28",
  "parallelRun": "11"
}
```

Response Parameters

Parameter	Data Type	Description	Possible Value	Remarks
resultCode	String	Return Result	Refer below resultCode	
resultMsg	String	Return Error Message		
errorCode	String	Error code return from Covalense billing api		
errorDesc	String	Error description return from Covalense billing api		
prepaidLocalDataUsage	Json Array	Array of Prepaid Local Data Usage		
prepaidLocalDataUsage -> dayCharge	String	Day of Charge		
prepaidLocalDataUsage -> dayChargeCap	String	Day of Charge Cap		
prepaidLocalDataUsage -> reachDayChargeCap	Boolean	Reach Day Charge Cap		
prepaidLocalDataUsage -> hasDayCap	Boolean	Has Day Cap values?		

Result Code

Result Code	Severity	Description
0	N/A	Success
-1	N/A	Missing input parameter
-2	N/A	Prepaid subscriber is not found

Success response

```
{
  "resultCode": "0",
  "resultMsg": "",
  "errorCode": "",
  "errorDesc": "",
  "prepaidLocalDataUsage": {
    "dayCharge": "$4",
    "dayChargeCap": "$5",
    "reachDayChargeCap": FALSE,
    "hasDayCap": TRUE
  }
}
```

Fail response

```
{
  "resultCode": "-1",
  "resultMsg": "missing input parameter"
}
```

3. NSP Vrs Usage (New Billing)

Purpose

To get VRS usage from the new billing system for the prepaid subscriber

Interface Details

Production Endpoints: https://tykapi.hksmartone.com/icp/NBill/brm/v1/subscription

System	Endpoint (UAT)
UAT	https://crm-uat.smartone.com/api/brm/v1/subscription
TYK	https://tykapi-u.hksmartone.com/icp/NBill/brm/v1/subscription

API: /nspVrsUsageNB

Type: REST

Method: POST

Add Key to HTTP Request Header for TYK API:

Name	Auth_ID
Value	eyJvcmcjOil2NGY2Y2l1ZmFiYzRhYWl4MGNIWDE1NTUjLCJpZCI6IjFiYzI4OGIzYzZjMTQxNjFjM2ZiMWUyNGJlMDAyN2FkIiwiaCI6Im11cm11cjY0In0=

Request Parameters

Parameter	Data Type	Description	Possible Value	Remarks
custNum	String	Customer number		Mandatory
acctNum	String	Account number		Mandatory
subrNum	String	Subscriber number		Mandatory
parallelRun	String	parallelRun indicator to determine the state of the workflow	<u>Postpaid parallel run - Value of 1st character</u> 0 – existing system 1 – new billing 2 – parallel run in GNV & new billing in OM <u>Prepaid parallel run – Value of 2nd character</u> 0 – existing system 1 – new billing	Mandatory

Sample Request

```
Enquiry by customer number, account number, subscriber number
{
    "custNum": "85012345",
    "acctNum": "85012345.00001",
    "subrNum": "91234567",
    "parallelRun": "11"
}
```

Response Parameters

Parameter	Data Type	Description	Possible Value	Remarks
resultCode	String	Return Result	Refer below resultCode	
resultMsg	String	Return Error Message		
errorCode	String	Error code return from Covalense billing api		
errorDesc	String	Error description return from Covalense billing api		
resultMsg	String	Return Error Message		
nspVRSUsage	Json Array	Array of NSP VRS Usage		
nspVRSUsage ->dataDetailList	Json Array	Array of Data Detail List		
nspVRSUsage -> dataDetailList -> discBucket	String	Discount Bucket		
nspVRSUsage -> dataDetailList -> description	String	Bucket Description		
nspVRSUsage -> dataDetailList -> descriptionChi	String	Bucket Description in Chinese		
nspVRSUsage -> dataDetailList -> entitled	String	Entitlement		
nspVRSUsage -> dataDetailList -> remaining	String	Remaining		
nspVRSUsage -> dataDetailList -> used	String	Used		
nspVRSUsage -> dataDetailList -> thereAfterSpending	String	There After Spending		
nspVRSUsage -> usageDetailList	Json Array	Array of Usage Detail List		
nspVRSUsage -> usageDetailList -> discBucket	String	Discount Bucket for Prepaid service		
nspVRSUsage -> usageDetailList -> description	String	Bucket Description		
nspVRSUsage -> usageDetailList -> descriptionChi	String	Bucket Description in Chinese		
nspVRSUsage -> usageDetailList -> entitled	String	Entitlement		
nspVRSUsage -> usageDetailList -> remaining	String	Remaining		
nspVRSUsage -> usageDetailList -> used	String	Used		
nspVRSUsage -> usageDetailList -> thereAfterSpending	String	There After Spending		

Result Code

Result Code	Severity	Description
0	N/A	Success
-1	N/A	Missing input parameter
-2	N/A	Prepaid subscriber is not found

Success response

```
{
  "resultCode": "0",
  "resultMsg": "",
  "nspVRSUsage": {
    "dataDetailList": {
      "discBucket": "DATA",
      "description": "Data",
      "descriptionChi": "Data",
      "entitled": "100GB",
      "remaining": "20GB",
      "used": "",
      "thereafterSpending": ""
    },
    "usageDetailList": {
      "discBucket": "BASIC",
      "description": "Basic",
      "descriptionChi": "Basic",
      "entitled": "10:00:00",
      "remaining": "15:00:00",
      "used": "",
      "thereafterSpending": ""
    }
  }
}
```

Fail response

```
{
  "resultCode": "-9000",
  "resultMsg": "Error: get NSP VRS Usage"
}
```

4. Travel SIM Info (New Billing)

Purpose

To get Travel SIM data of the subscriber for postpaid service

Note: The stored procedureSMC_GET_TRAVEL_SIM_USAGE.GetTravelSimUsageis replaced to vendor API

Interface Details

Production Endpoints: https://tykapi.hksmartone.com/icp/NBill/brm/v1/subscription

System	Endpoint (UAT)
UAT	https://crm-uat.smartone.com/api/brm/v1/subscription
TYK	https://tykapi-u.hksmartone.com/icp/NBill/brm/v1/subscription

API: /getTravelSimInfoNB

Type: REST

Method: POST

Add Key to HTTP Request Header for TYK API:

Name	Auth_ID
Value	eyJvcmcjOil2NGY2Y2l1ZmFiYzRhYWl4MGNIzDE1NTUilCjPZCI6ljFiYzI4OGIzYzZjMTQxNjFiM2ZiMWUyNGJlMDAyN2FkliwiaCl6Im11cm11cjY0In0=

Request Parameters

Parameter	Data Type	Description	Possible Value	Remarks
custNum	String	Customer number		Mandatory
acctNum	String	Account number		Mandatory
subrNum	String	Subscriber number		Mandatory
planCode	String	Subscriber Plan Code		Mandatory
parallelRun	String	parellelRun indicator to determine the state of the workflow	<u>Postpaid parallel run - Value of 1st character</u> 0 – existing system 1 – new billing 2 – parallel run in GNV & new billing in OM <u>Prepaid parallel run – Value of 2nd character</u> 0 – existing system 1 – new billing	Mandatory

Sample Request

```
Enquiry by customer number, account number, subscriber number
{
    "custNum": "85012345",
    "acctNum": "85012345.00001",
    "subrNum": "91234567",
    "planCode": "RD501",
    "parallelRun": "11"
}
```

Response Parameters

Parameter	Data Type	Description	Possible Value	Remarks
resultCode	String	Return Result	Refer below table	
errorCode	String	Error code return from Covalense billing api		
errorDesc	String	Error description return from Covalense billing api		
travelSim	Json Array	Array of Trave Sim Information		
travelSim -> remainDay	Number	Remaining day for Travel Sim		
travelSim -> remainUsage	Number	Remaining usage for Travel Sim		
travelSim -> isUnlimited	Boolean	Unlimited usage for Travel Sim		
travelSim -> expiryDate	String	Expiry date of Travel Sim		

Result Code

Result Code	Severity	Description
0	N/A	Success
-1	N/A	Missing input parameters
-2	N/A	Postpaid subscriber is not found

Success response

```
{
    "resultCode": "0",
    "resultMsg": "",
    " travelSim": {
        "remainDay": 10,
        "remainUsage": -1,
        "isUnlimited": TRUE
        "expiryDate": "2023-09-01 23:59:59"
    }
}
```

Fail response

```
{
    "resultCode": "-1",
    "resultMsg": " Missing input parameter"
}
```

5. IDD Call Usage (New Billing)

Purpose

To get IDD Usage Details for Prepaid Subscriber, replace the existing IDD Call Usage

Interface Details

Production Endpoints: <https://tykapi.hksmartone.com/icp/NBill/brm/v1/subscription>

System	Endpoint (UAT)
UAT	https://crm-uat.smartone.com/api/brm/v1/subscription
TYK	https://tykapi-u.hksmartone.com/icp/NBill/brm/v1/subscription

API: /IddCallUsageNB

Type: REST

Method: POST

Add Key to HTTP Request Header for TYK API:

Name	Auth_ID
Value	eyJvcmcjOjI2NGY2Y2I1ZmFiYzRhYWw1MGNIWDE1NTUjLCJpZCI6IjFiYzI4OGIzYzZjMTQxNjFhM2ZiMWUyNGJlMDAyN2FkIiwiaCI6Im11cm11cjY0In0=

Request Parameters

Parameter	Data Type	Description	Possible Value	Remarks
custNum	String	Customer number		Mandatory
acctNum	String	Account number		Mandatory
subrNum	String	Subscriber number		Mandatory
billDay	String	Bill Day		Mandatory
parallelRun	String	parallelRun indicator to determine the state of the workflow	<u>Postpaid parallel run - Value of 1st character</u> 0 – existing system 1 – new billing 2 – parallel run in GNV & new billing in OM <u>Prepaid parallel run – Value of 2nd character</u> 0 – existing system 1 – new billing	Mandatory

Sample Request

```
Enquiry by customer number, account number, subscriber number
{
  "custNum": "85012345",
  "acctNum": "85012345.00001",
  "subrNum": "91234567",
  "billDay": "5",
  "parallelRun": "11"
}
```

Response Parameters

Parameter	Data Type	Description	Possible Value	Remarks
resultCode	String	Return Result	Refer below table	
resultMsg	String	Return Error Message		
iddCallUsage	Json Array	Array of IDD Call Usage		
iddCallUsage -> countryList	Json Array	Array of country		
iddCallUsage -> countryList -> country	String	Country		
iddCallUsage -> countryList -> iddVoice	Json Array	Array of IDD voice for this country		
iddCallUsage -> countryList -> iddVoice -> usage	Number	IDD Voice Usage		
iddCallUsage -> countryList -> iddVoice -> usageType	String	IDD Voice Usage from History or Real-Time	RealTime History	
iddCallUsage -> countryList -> iddVideo	Json Array	Array of IDD Video for this country		
iddCallUsage -> countryList -> iddVideo -> usage	Number	IDD Video Usage		
iddCallUsage -> countryList -> iddVideo -. usageType	String	IDD Video Usage from History or Real-Time	RealTime History	

Result Code

Result Code	Severity	Description
0	N/A	Success
-1	N/A	Missing input parameters
-2	N/A	Postpaid subscriber is not found

Success response

```
{
  "resultCode": "0",
  "resultMsg": "",
  "iddCallUsage": {
    "countryList": "JAPAN",
    "iddVoice": [{
      "usage": 100,
      "usageType": "RealTime"
    }, {
      "usage": 200,
      "usageType": "History"
    }],
    "iddVideo": [{
      "usage": 300,
      "usageType": "RealTime"
    }],
    }, {
    "countryList": "KOREA",
    "iddVoice": [{
      "usage": 100,
      "usageType": "RealTime"
    }
  ]
}
```

Fail response

```
{
  "resultCode": "-1",
  "resultMsg": "Error: Failure to get IDD Call Usage"
}
```

6. Get Current Month NR Data Usage (New Billing)

Purpose

To get the current month of nearly real-time data usage for Postpaid Subscriber for New Billing

Interface Details

Production Endpoints: https://tykapi.hksmartone.com/icp/NBill/brm/v1/subscription

System	Endpoint (UAT)
UAT	https://crm-uat.smartone.com/api/brm/v1/subscription
TYK	https://tykapi-u.hksmartone.com/icp/NBill/brm/v1/subscription

API: /currentMonthNRDataUsageNB

Type: REST

Method: POST

Add Key to HTTP Request Header for TYK API:

Name	Auth_ID
Value	eyJvcmcjOil2NGY2Y2l1ZmFiYzRhYWl4MGNIzDE1NTUilCjZCj6ljFiYzI4OGIzYzZjMTQxNjFjM2ZiMWUyNGJlMDAyN2FkIiwiaCI6Im11cm11cjY0In0=

Request Parameters

Parameter	Data Type	Description	Possible Value	Remarks
custNum	String	Customer number		Mandatory
acctNum	String	Account number		Mandatory
subrNum	String	Subscriber number		Mandatory
isFixedLine	Boolean	FixedLline?	TRUE / FALSE	Mandatory
parallelRun	String	parellelRun indicator to determine the state of the workflow	<u>Postpaid parallel run - Value of 1st character</u> 0 – existing system 1 – new billing 2 – parallel run in GNV & new billing in OM <u>Prepaid parallel run – Value of 2nd character</u> 0 – existing system 1 – new billing	Mandatory

Sample Request

```
Enquiry by customer number, account number, subscriber number
{
  "custNum": "85012345",
  "acctNum": "85012345.00001",
  "subrNum": "91234567",
  "isFixedLine": FALSE,
  "parallelRun": "11"
}
```

Response Parameters

Parameter	Data Type	Description	Possible Value	Remarks
resultCode	String	Return Result	Refer below tables	
resultMsg	String	Return Error Message		
currMthNRDataUsage	Json Array			
currMthNRDataUsage -> asOfDate	String	As of Current month date	Format: YYYY-MM-DD HH:MI:SS	
currMthNRDataUsage -> isUnlimitedPlan	Boolean	Unlimited Plan?		
currMthNRDataUsage -> entitled	String	Entitled (i.e. Tariff in UI)		
currMthNRDataUsage -> boltOn	String	Bolt On Allowance?		
currMthNRDataUsage -> topUp	String	Top Up Allowance?		
currMthNRDataUsage -> rollover	String	Rollover Usage		
currMthNRDataUsage -> remaining	String	Remaining Usage		
currMthNRDataUsage -> totalData	String	Total Data Usage		
currMthNRDataUsage -> topUpCount	Number	Count of Top up		
currMthNRDataUsage -> boltOnCount	Number	Count of Bolt on		
currMthNRDataUsage -> asOfChargeDate	String	As of Current month date Charge Date	Format: YYYY-MM-DD HH:MI:SS	
currMthNRDataUsage -> totalUsageCharge	String	Total Usage Charge		
currMthNRDataUsage -> isPooledDataUsage	Boolean	Pooled Data?		
currMthNRDataUsage -> isDataUsageGenevaReady	Boolean	Data Usage ready in Geneva Billing?		

Result Code

Result Code	Severity	Description
0	N/A	Success
-1	N/A	Missing input parameters
-2	N/A	Postpaid subscriber is not found

Success response

```
{
  "resultCode": "0",
  "resultMsg": "SUCCESS",
  "currMthNRDataUsage": [{
    "asOfDate": "2023-05-01 01:00:00",
    "isUnlimitedPlan": FALSE,
    "entitled": "1GB",
    "boltOn": "N",
    "topUp": "N",
    "rollover": "",
    "remaining": "1GB",
    "totalData": "1GB",
    "topUpCount": 0,
    "boltOnCount": 0,
    "asOfChargeDate": "2023-05-01 01:00:00",
    "totalUsageCharge": "0",
    "isPooledDataUsage": FALSE,
    "isDataUsageGenevaReady": FALSE
  ]
}
```

Fail response

```
{
  "resultCode": "-1",
  "resultMsg": "Missing input parameters"
}
```

7. Get Top-Up Information (New Billing)

Purpose

To get the top-up information (the count & the maximum value) for the local top-up bill code within bill cycle for postpaid subscriber for New Billing

Note: Top-up Information is collected from the vendor API for the current month of nearly real-time data usage for Postpaid Subscriber for New Billing

Interface Details

Production Endpoints: https://tykapi.hksmartone.com/icp/NBill/brm/v1/subscription

System	Endpoint (UAT)
UAT	https://crm-uat.smartone.com/api/brm/v1/subscription
TYK	https://tykapi-u.hksmartone.com/icp/NBill/brm/v1/subscription

API: /topUpInfo

Type: REST

Method: POST

Add Key to HTTP Request Header for TYK API:

Name	Auth_ID
Value	eyJvcmdiOiI2NGY2Y2I1ZmFiYzRhYWl4MGNIWDE1NTUuLCJpZCI6IjFiYzI4OGIzYzZjMTQxNjFhM2ZiMWUyNGJlMDAyN2FkIiwiaCI6Im11cm11cjY0In0=

Request Parameters

Parameter	Data Type	Description	Possible Value	Remarks
custNum	String	Customer number		Mandatory
acctNum	String	Account number		Mandatory
subrNum	String	Subscriber number		Mandatory
parallelRun	String	parallelRun indicator to determine the state of the workflow	<u>Postpaid parallel run - Value of 1st character</u> 0 – existing system 1 – new billing 2 – parallel run in GNV & new billing in OM <u>Prepaid parallel run – Value of 2nd character</u> 0 – existing system 1 – new billing	Mandatory

Sample Request

```
Enquiry by customer number, account number, subscriber number
{
    "custNum": "85012345",
    "acctNum": "85012345.00001",
    "subrNum": "91234567",
    "parallelRun": "11"
}
```

Response Parameters

Parameter	Data Type	Description	Possible Value	Remarks
resultCode	String	Return Result	Refer below tables	
resultMsg	String	Return Error Message		
topUpCount	Number	Count of Top up		
topUpMax	Number	Max of Top up count		

Result Code

Result Code	Severity	Description
0	N/A	Success
-1	N/A	Missing input parameters
-2	N/A	Postpaid subscriber is not found

Success response

```
{
    "resultCode": "0",
    "resultMsg": "SUCCESS",
    "topUpCount": "0",
    "topUpMax": "0"
}
```

Fail response

```
{
    "resultCode": "-1",
    "resultMsg": "Missing input parameters"
}
```