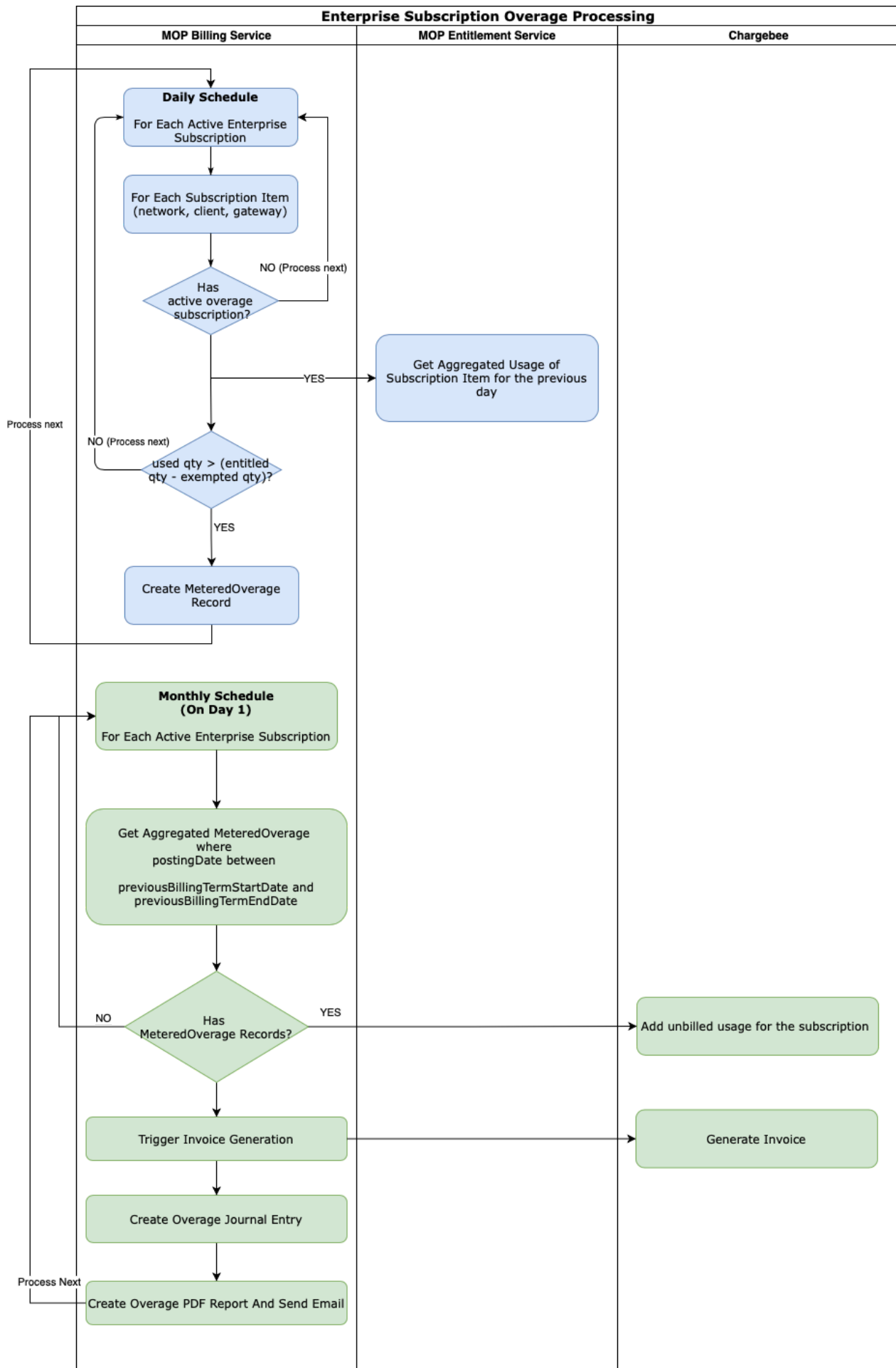


Enterprise Subscription Overage Automation

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Overage Processing Flow



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Overage Data Model

OverageSubscription Table & Columns

Overage subscription defines the additional usage agreements with a customer. It is linked to the enterprise subscription (defined in contract entity) opted by the customer, and specifically details the charges involved in case the usage exceeds the entitlements defined in the subscriptions.

Columns

Column Name	Column Type	Column Constrains	Column Description
id	binary(16)	Primary Key	Unique identifier
contractId	binary(16)	NOT NULL, FOREIGN KEY REFERENCES Contract(id)	reference id field of contract entity.
accountId	binary(16)	NOT NULL	Billing account of the overage contract
subscriptionItem	varchar(45)	NOT NULL	Overage contract id defined for specific items. The list includes : Networks (network) Client Endpoints (endpoint) Edgerouter [public+private] (gateway) NF Hosted Edgerouters (gatewayPublic) Customer Hosted Edgerouters (gatewayPrivate) Data Usage (dataGb)
entitledQuantity	int(11)	NULLABLE	This field if not null, it overrides the entitled quantity defined for the subscribed item in Chargebee
exemptionQuantity	int(11)	NULLABLE	Quantity exempted from overage computing
pricePerUnit	double	NOT NULL	Per unit cost of the subscription item
volumePricing	text	NULLABLE	[{"rangeStart":1,"rangeEnd":99,"unitQuantity":10,"unitPrice":163.46}, {"rangeStart":100,"rangeEnd":500,"unitQuantity":10,"unitPrice":

			115.38}, {"rangeStart":501,"rangeEnd":null,"unitQuantity":10,"unitPrice":76.92}}
currencyCode	varchar(25)	NOT NULL	Currency code
status	bit(1)	NOT NULL	Contains values 1 or 0 indicating active(1) or cancelled(0)
createdAt	datetime(6)	NOT NULL	DEFAULT CURRENT_TIMESTAMP(6)
updatedAt	datetime(6)	NOT NULL	DEFAULT CURRENT_TIMESTAMP(6) ON UPDATE CURRENT_TIMESTAMP(6)
deletedAt	datetime(6)	DEFAULT NULL	Update on deletion of contract

MeteredOverage Table & Columns

Maintains additional usage metering records for every overage contract

Columns

Column Name	Column Type	Column Constrains	Column Description
id	binary(16)	Primary Key	Unique identifier
overageSubscriptionId	binary(16)	NOT NULL	OverageSubscription for which the additional usage is being metered
meteredItemId	varchar(128)	NOT NULL	Provider specific id of the item being metered
meteredQuantity	double	NOT NULL	Number of units additionally used
postingDate	datetime(6)	NOT NULL	DEFAULT CURRENT_TIMESTAMP(6)
notes	text	NULLABLE	Overage posting description

MeteredOverageJournal Table & Columns

Maintains journal of metered charges submitted for invoicing

Columns

Column Name	Column Type	Column Constrains	Column Description
id	binary(16)	Primary Key	Unique identifier
overageSubscriptionId	binary(16)	NOT NULL	OverageSubscription for which the additional usage is

			submitted for invoicing
meteredItemId	varchar(128)	NOT NULL	Name of the add-on component
meteredQuantity	double	NOT NULL	Number of units additionally used
fromTime	datetime(6)	NOT NULL	Usage computed from time
toTime	datetime(6)	NOT NULL	Usage computed to time
meteredAmount	double	NOT NULL	Total amount charged
status	varchar(45)	NOT NULL	SUCCESS, ERROR
billingProvider	varchar(45)	NOT NULL	Has one of the following values : CHARGELEE
providerReference	varchar(45)	NULLABLE	Reference id assigned to the metering record at the billing provider's system

Overage Subscription API Contract

Create Overage Subscription

Server URL

POST /billing/v1/enterprise-subscriptions/{subscriptionId}/overage-subscriptions

Headers

Content-Type: application/json

Authorisation: bearer {bearer_token}

Request Body (Sample)

```

1 {
2   "subscriptionItem": "endpoint", //Required and oneof [network, gateway, gatewayPrivate, gatewayPublic, dataGb
3   "pricePerUnit": 50000, //Required, Eg. 500 USD in cents
4   "currencyCode": "USD",
5   "entitledQuantity": 10, //Optional and overrides quantity defined in main subscription
6   "exemptionQuantity": 3 //Optional, quantity exempted from overage processing
7 }
```

Response Body (Sample)

```

1 {
2   "overageSubscriptionId": "00ed10b5-3f4f-48ca-b7d1-18254a339282",
3   "subscriptionId": "AzZm0iSd6htcn2D10",
4   "paymentProfileId": "6olzTSbjLk05yGY",
5   "billingAccountId": "372432f4-0eb9-455b-855a-7195ba56aac7f",
6   "sapAccountId": "262626",
7   "subscriptionItem": "endpoint"
8   "pricePerUnit": 50000,
9   "currencyCode": "USD",
10  "entitledQuantity": 10,
11  "exemptionQuantity": 3,
```

```
12  "status": "ACTIVE",
13  "createdAt": "2022-06-14 10:37:30.0",
14  "updatedAt": "2022-06-14 10:37:30.0",
15  "deleted": false
16 }
```

Get Overage Subscription

Server URL

```
GET /billing/v1/enterprise-subscriptions/{subscriptionId}/overage-subscriptions/{overageSubscriptionId}
```

Headers

```
Authorisation: bearer {bearer_token}
```

Response Body (Sample)

```
1  {
2    "overageSubscriptionId": "00ed10b5-3f4f-48ca-b7d1-18254a339282",
3    "subscriptionId": "AzZm0iSd6htcn2D10",
4    "paymentProfileId": "6olzTSbjLk05yGY",
5    "billingAccountId": "372432f4-0eb9-455b-855a-7195ba56aac7f",
6    "sapAccountId": "262626",
7    "subscriptionItem": "endpoint"
8    "pricePerUnit": 50000,
9    "currencyCode": "USD",
10   "entitledQuantity": 10,
11   "exemptionQuantity": 3,
12   "status": "ACTIVE",
13   "createdAt": "2022-06-14 10:37:30.0",
14   "updatedAt": "2022-06-14 10:37:30.0",
15   "deleted": false
16 }
```

Find Overage Subscription

Server URL

```
GET /billing/v1/enterprise-subscriptions/{subscriptionId}/overage-subscriptions
```

Headers

```
Authorisation: bearer {bearer_token}
```

Response Body (Sample)

```
1  [
2    {
3      "overageSubscriptionId": "00ed10b5-3f4f-48ca-b7d1-18254a339282",
4      "subscriptionId": "AzZm0iSd6htcn2D10",
5      "paymentProfileId": "6olzTSbjLk05yGY",
6      "billingAccountId": "372432f4-0eb9-455b-855a-7195ba56aac7f",
7      "sapAccountId": "262626",
8      "subscriptionItem": "endpoint"
9      "pricePerUnit": 50000,
10     "currencyCode": "USD",
11     "entitledQuantity": 10,
12     "exemptionQuantity": 3,
```

```

13     "status": "ACTIVE",
14     "createdAt": "2022-06-14 10:37:30.0",
15     "updatedAt": "2022-06-14 10:37:30.0",
16     "deleted": false
17 },
18 {
19     "overageSubscriptionId": "6a4ca1eb-cbff-4d6a-9362-17c052b6851c",
20     "subscriptionId": "AzZm0iSd6htcn2D10",
21     "paymentProfileId": "6olzTSbjLk05yGY",
22     "billingAccountId": "372432f4-0eb9-455b-855a-7195ba56aac7f",
23     "sapAccountId": "262626",
24     "subscriptionItem": "gateway"
25     "pricePerUnit": 75000,
26     "currencyCode": "USD",
27     "entitledQuantity": 10,
28     "exemptionQuantity": 0,
29     "status": "ACTIVE",
30     "createdAt": "2022-06-13 10:37:30.0",
31     "updatedAt": "2022-06-13 10:37:30.0",
32     "deleted": false
33 }
34 ]

```

Update Overage Subscription

Server URL

```
PATCH /billing/v1/enterprise-subscriptions/{subscriptionId}/overage-subscriptions/{overageSubscriptionId}
```

Headers

```
Content-Type: application/json
```

```
Authorisation: bearer {bearer_token}
```

Request Body (Sample)

```

1 {
2     "pricePerUnit": 50000, //Optional, Eg. 500 USD in cents
3     "currencyCode": "USD", //Optional
4     "entitledQuantity": 15, //Optional and overrides quantity defined in main subscription
5     "exemptionQuantity": 3 //Optional, quantity exempted from overage processing
6 }

```

Response Body (Sample)

```

1 {
2     "overageSubscriptionId": "00ed10b5-3f4f-48ca-b7d1-18254a339282",
3     "subscriptionId": "AzZm0iSd6htcn2D10",
4     "paymentProfileId": "6olzTSbjLk05yGY",
5     "billingAccountId": "372432f4-0eb9-455b-855a-7195ba56aac7f",
6     "sapAccountId": "262626",
7     "subscriptionItem": "endpoint"
8     "pricePerUnit": 50000,
9     "currencyCode": "USD",
10    "entitledQuantity": 15,
11    "exemptionQuantity": 3,
12    "status": "ACTIVE",
13    "createdAt": "2022-06-14 10:37:30.0",

```

```
14   "updatedAt": "2022-06-15 10:37:30.0",
15   "deleted": false
16 }
```

Modify Overage Subscription Status

Server URL

```
PUT /billing/v1/enterprise-subscriptions/{subscriptionId}/overage-subscriptions/{overageSubscriptionId}
```

Headers

```
Content-Type: application/json
```

```
Authorisation: bearer {bearer_token}
```

Request Body (Sample)

```
1 {
2   "status": "CANCELLED" // OneOf [ACTIVE, CANCELLED]
3 }
```

Response Body (Sample)

```
1 {
2   "overageSubscriptionId": "00ed10b5-3f4f-48ca-b7d1-18254a339282",
3   "subscriptionId": "AzZm0iSd6htcn2D10",
4   "paymentProfileId": "6o1zTSbjLk05yGY",
5   "billingAccountId": "372432f4-0eb9-455b-855a-7195ba56aac7f",
6   "sapAccountId": "262626",
7   "subscriptionItem": "endpoint"
8   "pricePerUnit": 50000,
9   "currencyCode": "USD",
10  "entitledQuantity": 15,
11  "exemptionQuantity": 3,
12  "status": "ACTIVE",
13  "createdAt": "2022-06-14 10:37:30.0",
14  "updatedAt": "2022-06-15 10:37:30.0",
15  "deleted": false
16 }
```

Overage Metering API Contract

Create Metered Usage

Server URL

```
POST /billing/v1/enterprise-subscriptions/{subscriptionId}/metered-overages
```

Headers

```
Content-Type: application/json
```

```
Authorisation: bearer {bearer_token}
```

Request Body (Sample)

```
1 {
2   "overageSubscriptionId": "00ed10b5-3f4f-48ca-b7d1-18254a339282", //Required, overage subscription for which u
```

```

3     "meteredQuantity": 7, //Required, over usage quantity
4     "postingDate": "2022-06-16 00:00:01.0", //Required, Current time in UTC
5     "notes": "Additional endpoints used in network X" //Optional, description of overage
6 }

```

Response Body (Sample)

```

1 {
2     "meteredUsageId": "7d02a230-a89b-4a7f-850b-b936d6bdd855",
3     "overageSubscriptionId": "00ed10b5-3f4f-48ca-b7d1-18254a339282",
4     "meteredItemId": "Netfoundry-Endpoints-Additional-Usage-Charges-USD",
5     "meteredQuantity": 7,
6     "postingDate": "2022-06-16 00:00:01.0",
7     "notes": "Additional endpoints used in network X"
8 }

```

Find Metered Usage

Server URL

```

GET /billing/v1/enterprise-subscriptions/{subscriptionId}/metered-overages?
fromEpochMs=1654093384&toEpochMs=1655302984

```

Headers

```

Authorisation: bearer {bearer_token}

```

Request Parameters

```

fromTimeEpoch //Required - From Posting date in epoch timestamp

```

```

toTimeEpoch //Required - To Posting date in epoch timestamp

```

Response Body (Sample)

```

1 [
2   {
3     "meteredUsageId": "7d02a230-a89b-4a7f-850b-b936d6bdd855",
4     "overageSubscriptionId": "00ed10b5-3f4f-48ca-b7d1-18254a339282",
5     "meteredItemId": "Netfoundry-Endpoints-Additional-Usage-Charges-USD",
6     "meteredQuantity": 7,
7     "postingDate": "2022-06-16 00:00:01.0",
8     "notes": "Additional endpoints used in network X"
9   },
10  {
11    "meteredUsageId": "7f7b5da9-2c88-4a0b-9425-527988458889",
12    "overageSubscriptionId": "00ed10b5-3f4f-48ca-b7d1-18254a339282",
13    "meteredItemId": "Netfoundry-Endpoints-Additional-Usage-Charges-USD",
14    "meteredQuantity": 6,
15    "postingDate": "2022-06-15 00:00:01.0",
16    "notes": "Additional endpoints used in network X"
17  }
18 ]

```

Submit Metered Usage For Invoicing

Server URL

```
POST /billing/v1/enterprise-subscriptions/{subscriptionId}/metered-overages?
fromEpochMs=1654095600000&toEpochMs=1656082800000
```

Headers

```
Mode: Invoicing //Mandatory
Authorisation: bearer {bearer_token}
```

Response Body (Sample)

```
1  [
2    {
3      "meteredItemId": "Netfoundry-Endpoints-Additional-Usage-Charges-USD",
4      "referenceId": "li_16BY81T8q3ShjcRv",
5      "status": "SUCCESS"
6    },
7    {
8      "meteredItemId": "Netfoundry-Routers-CH-Additional-Usage-Charges-USD",
9      "referenceId": "li_AzyzaUT8q8S1kh0Z",
10     "status": "ERROR"
11   }
12 ]
```

Overage Metering Journal API Contract

Create Metered Overage Journal Record

Server URL

```
POST /billing/v1/enterprise-subscriptions/169lhYSuJDcgeTJp/metered-overage-journals
```

Headers

```
Content-Type: application/json
Authorisation: bearer {bearer_token}
```

Request Body (Sample)

```
1  {
2    "overageSubscriptionId": "1a05239b-e2ce-4055-b7b9-40d7cfe0bf67", //Required
3    "meteredItemId": "Netfoundry-Endpoints-Additional-Usage-Charges-USD", //Required, Provider specific (Charge
4    "meteredQuantity": 5, //Required, quantity to be invoiced
5    "meteredAmount": 500, //Required, total amount charged
6    "fromTime": "2022-06-01T15:00:00.00Z", //Required, Usage computed from date
7    "toTime": "2022-06-24T15:00:00.00Z", //Required, Usage computed to date}
8    "status": "SUCCESS", //Required, is charge successfully added to subscription for invoicing
9    "billingProvider": "CHARGE BEE", //Required, default CHARGE BEE
10   "providerReference": "li_16BY81T8q3ShjcRv" //Required, Reference id assigned to the metering record at the bill
11 }
```

Response Code : 200

```

1  {
2      "id": "3be239d4-0bc3-408a-82e7-52ffcc01623e",
3      "overageSubscriptionId": "1a05239b-e2ce-4055-b7b9-40d7cfe0bf67",
4      "meteredItemId": "Netfoundry-Endpoints-Additional-Usage-Charges-USD",
5      "meteredQuantity": 5,
6      "meteredAmount": 500,
7      "fromTime": "2022-06-01T15:00:00Z",
8      "toTime": "2022-06-24T15:00:00Z",
9      "billingProvider": "CHARGE BEE",
10     "providerReference": "li_dkfjk34dk",
11     "status": "SUCCESS"
12 }

```

Find Metered Overage Journal Record

Server URL

```
GET /billing/v1/metered-overage-journals?overageSubscriptionId=00ed10b5-3f4f-48ca-b7d1-18254a339282&fromEpochMs=1654095600000&toEpochMs=1656082800000
```

Headers

```
Authorisation: bearer {bearer_token}
```

Request Parameters

```
overageSubscriptionId // Optional
```

```
fromTimeEpoch //Required - From Posting date in epoch timestamp
```

```
toTimeEpoch //Required - To Posting date in epoch timestamp
```

Response Body (Sample)

```

1  [
2      {
3          "meteredOverageJournalId": "4c5f0312-72c2-4e8a-b5db-27ac00a08158",
4          "overageSubscriptionId": "00ed10b5-3f4f-48ca-b7d1-18254a339282",
5          "meteredItemId": "Netfoundry-Endpoints-Additional-Usage-Charges-USD",
6          "meteredQuantity": 7,
7          "totalAmount": 50000,
8          "fromTimeEpoch": "1654093384",
9          "toTimeEpoch": "1655302984",
10         "status": "SUCCESS",
11         "provider": "CHARGE BEE",
12         "providerReference": "li_16BY81T8q3ShjcRv"
13     }
14 ]

```