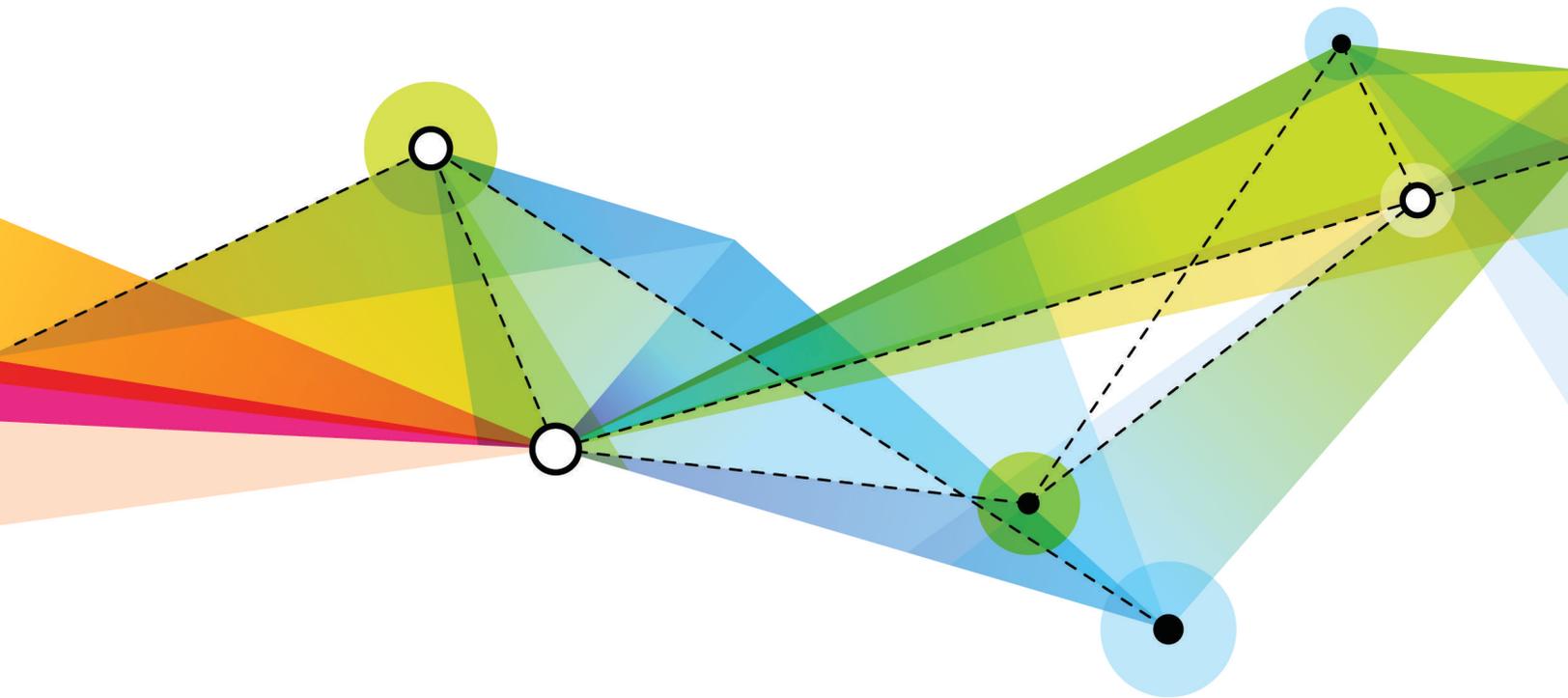




Smile Rated CDR Export Format

Specification and Documentation



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Rated call record specification

We provide access to rated call records (RCRs) for our customers. An RCR is a Call Detail Record (CDR) to which rating has been applied. In some circumstances, a CDR may be rated multiple times, in which case multiple RCRs will be provided to a customer over time. If a CDR is re-rated, then the total amount charged for the call is the sum of all RCRs issued.

Please see the *Smile Developer Guide* for details of how to get an RCR batch file.

CDR adjustments and re-rating

If a CDR is re-rated, a new RCR will be generated. The original RCR will continue to be available in the original batch, and the adjustment RCR(s) will appear in a new batch.¹ The sum of all RCRs applied to a single CDR gives the total amount charged by Smile for that call. The CDR for a particular RCR is identified by the CDR Call ID. For example, if two RCRs have the same CDR Call ID, they represent two ratings for the same CDR.

A CDR which has been re-rated would typically have three RCRs associated with it:

1. the original RCR
2. a negative RCR to reverse the original RCR
3. a new RCR to charge the new amount

Customers should be aware that:

- A CDR may be re-rated more than once. The number of RCRs that could potentially be assigned to a CDR is technically unlimited.
- Invoice adjustments that are negotiated between the Service Provider and the Customer and that do not involve the re-rating of a CDR will not appear as an RCR adjustment.
- A single CDR may be split into several RCRs by the rating engine. For example, if the tax rate changes during the middle of a phone call then the phone call may have two RCRs: one for the duration of the call with the original tax rate, and another for the duration of the call with the new tax rate.
- The sum of charges in an RCR batch may not equal the amount shown on an invoice line item, because of account-level post-processing such as discounts.

¹ If the new RCR is created before a customer downloads the original RCR, then both the original RCR and the adjustment RCRs may appear in the same batch or grouped together into one RCR.

Download rated activity statements

Activity statements, or CDRs, provide an itemised list of subscription usage over a period of time. For example, a rated activity statement for an ADSL subscription contains details of data downloads, data uploads and online time, and the charges associated with each billing item.

Downloading rated activity statements helps you track or estimate how much your customers spend in a given rating period. You can download rated activity statements after the pre-rating or rating process is complete.

The pre-rating process runs at intervals in open periods, and provides an indication of the value of subscription usage in the period to date. The rating engine runs at the end of the period; ratings produced by the rating engine do not change unless the period is reopened.

The following methods lets you download rated activity statements for a subscription:

1. `getRatingPeriods()` returns a list of rating periods for a subscription.
2. `getRatingsForPeriod()` downloads rated activity statements for a given rating period.

Note: To download the rated activity statements associated with an invoice, use `getRatings()` on the account endpoint.

Rating and invoicing cycles

Rating and invoicing cycles have similar functions:

- **rating cycle**—specifies the length of time for which usage charges are calculated.
- **invoicing cycle**—specifies when a customer is sent an invoice.

Each instance of a rating or invoicing cycle is named a period. For example, a subscription may have a rating cycle that ends on the 14th of each month and a rating period of 15 May 2012-14 June 2012.

Each subscription has both a rating and invoicing cycle. The rating and invoicing cycles may end on the same date or have different end dates. Rating and invoicing cycles can end at the end of the month or on the subscription's anniversary. The anniversary is the day of the month on which the subscription was created.

If an account has multiple subscriptions, by default Smile sets all subscriptions to use the same invoicing cycle as the account. This lets you issue a single bill for the account each month.

When a billing run starts, Smile creates an invoice for each account that has a subscription with an invoicing period that ends on the date of the billing run. If an account contains two or more subscriptions with the same invoicing period end date, Smile adds the charges for both subscriptions to the same invoice.

Example: Rating and invoicing cycles

The following diagram represents a subscription with different end dates for the rating and invoicing cycles:

- The rating cycle begins on the 10th of each month and ends on the 9th of the following month.
- The invoicing cycle begins on the 15th of each month and ends on the 14th of the following month.

For example, on the invoicing period end date of 14 July, Smile will generate an invoice for the rating period of 10 June-9 July.

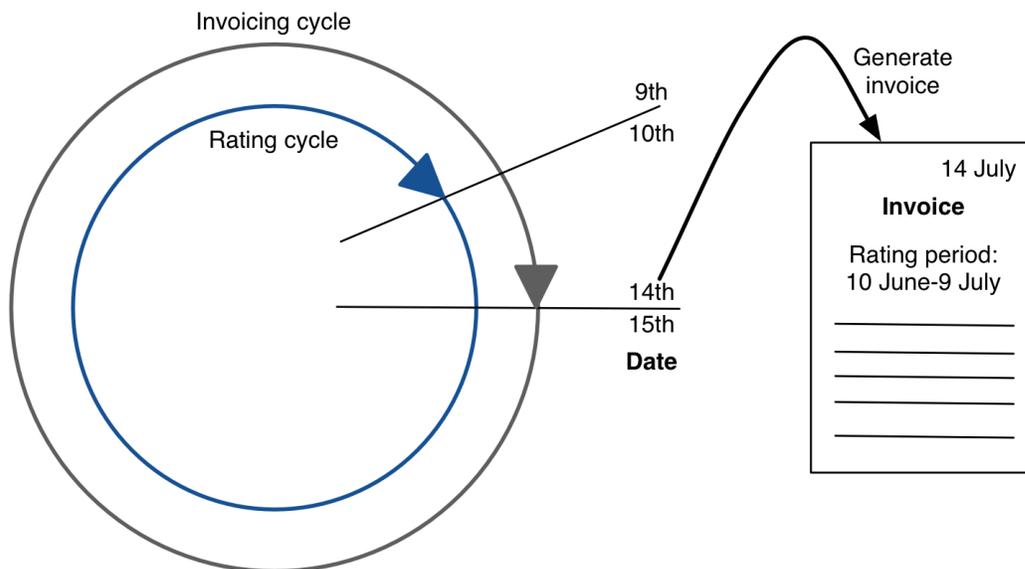


Figure 1: Rating and invoicing cycles

`getRatingPeriods()`

```
RatingPeriodList getRatingPeriods(string usn)
```

This method returns information about a subscription's rating periods. Use this method to retrieve the rating period ID before you call `getRatingsForPeriod()`.

Parameters

usn

Format: string

Purpose: Specifies the USN of the subscription for which to retrieve rating period information.

Results

This method returns a RatingPeriodList XML document that contains information about the rating periods for which the subscription has usage data.

If the subscription is not yet activated, this method returns an empty list. If the subscription is closed, the status of each rating period is Closed.

There are no messages defined by this method.

Example: A returned RatingPeriodList XML document

This example shows a returned RatingPeriodList XML document for a subscription with USN 2142420815. The <releaseDate> element specifies the date that the rating period becomes available for billing. Each <ratingPeriodId> is unique to this subscription.

The <status> element has one of the following values:

Open	The billing run for the period has not begun, and usage can be associated with the rating period.
Holding	The invoicing period has been removed from automatic billing. Smile cannot set this status, but it may occur as a result of manual intervention.
Waiting	The billing run is processing and awaiting results. From this status, a rating period moves to Approving or Closed status.
Approving	The billing run is complete and awaiting approval.
Closed	The billing run is complete and approved. Any charges have been added to the subscription's account as an invoice or a set of deferred charges.

This example shows two rating periods with Closed status, and three rating periods with Open status.

```
<RatingPeriodList>
  <RatingPeriodSummary>
    <USN>2142420815</USN>
    <ratingPeriodId>3045</ratingPeriodId>
    <invoicingPeriodEnd>2012-04-30+10:00</invoicingPeriodEnd>
    <ratingPeriodEnd>2012-04-30+10:00</ratingPeriodEnd>
    <releaseDate>2012-05-01+10:00</releaseDate>
    <status>Closed</status>
  </RatingPeriodSummary>
  <RatingPeriodSummary>
    <USN>2142420815</USN>
    <ratingPeriodId>3046</ratingPeriodId>
    <invoicingPeriodEnd>2012-05-31+10:00</invoicingPeriodEnd>
    <ratingPeriodEnd>2012-05-31+10:00</ratingPeriodEnd>
    <releaseDate>2012-06-01+10:00</releaseDate>
    <status>Closed</status>
  </RatingPeriodSummary>
  <RatingPeriodSummary>
    <USN>2142420815</USN>
    <ratingPeriodId>3047</ratingPeriodId>
    <invoicingPeriodEnd>2012-06-30+10:00</invoicingPeriodEnd>
    <ratingPeriodEnd>2012-06-30+10:00</ratingPeriodEnd>
    <releaseDate>2012-07-01+10:00</releaseDate>
    <status>Open</status>
  </RatingPeriodSummary>
  <RatingPeriodSummary>
    <USN>2142420815</USN>
    <ratingPeriodId>3048</ratingPeriodId>
```

```

<invoicingPeriodEnd>2012-07-31+10:00</invoicingPeriodEnd>
<ratingPeriodEnd>2012-07-31+10:00</ratingPeriodEnd>
<releaseDate>2012-08-01+10:00</releaseDate>
<status>Open</status>
</RatingPeriodSummary>
<RatingPeriodSummary>
  <USN>2142420815</USN>
  <ratingPeriodId>3049</ratingPeriodId>
  <invoicingPeriodEnd>2012-08-31+10:00</invoicingPeriodEnd>
  <ratingPeriodEnd>2012-08-31+10:00</ratingPeriodEnd>
  <releaseDate>2012-09-01+10:00</releaseDate>
  <status>Open</status>
</RatingPeriodSummary>
</RatingPeriodList>

```

Faults

NoSuchItemException

This fault is returned when the specified USN is not a subscription.

Java client syntax

```

java -cp build/smilewsv2-client.jar [options]
com.inomial.smile.client.v2.examples.GetRatingPeriods usn

```

usn

Purpose: Specifies the USN to retrieve rating periods for.

Note: For more information about the Java client and the options it accepts, see [Java client syntax](#).

getRatingsForPeriod()

```

ActivityBatchURL getRatingsForPeriod(int ratingPeriodId)

```

This method returns a URL from which you can download the rated activity statements, or CDRs, for a subscription by rating period. Downloading rated activity statements helps you track or estimate how much your customers spend in a given rating period.

You can download activity statements only after the rating or pre-rating process runs. You cannot use this method to download unrated activity statements.

This method returns all rated activity statements in the rating period. If you call this method twice in a rating period, Smile returns the statements at the start of the period twice.

Before you call this method, call [getRatingPeriods\(\)](#) to retrieve the rating period ID. Each rating period ID is unique and identifies a rating period for a specific subscription.

Parameters

ratingPeriodId

Format: integer

Purpose: Specifies the ID of the rating period to download activity statements for.

Results

This method returns a URL from which you can download the rated activity statement. The URL is valid for 24 hours after it is generated by Smile. Activity statements are collated into a CSV file.

If there is no activity in the rating period, the method returns `activity="false"`.

This method and the URL both use basic access authentication. You must use the same credentials to access the URL as you did to call the method.

There are no messages defined by this method.

Note: For more information about the format of activity statements, see the CDR documentation in the Document Repository.

Example: A returned ActivityBatchURL XML document with activity statements

This example shows a returned ActivityBatchURL document with the URL from which you can download the activity statements.

```
<ActivityBatchURL xmlns="http://xml.inomial.com/smile/2.xsd"
  activity="true">
  <BatchID>1409213</BatchID>
  <URL>https://smile.example.com/activity?
token=12049IASUBF9812p9</URL>
</ActivityBatchURL>
```

Example: A returned ActivityBatchURL XML document without activity

This example shows a returned ActivityBatchURL document with no activity.

```
<ActivityBatchURL xmlns="http://xml.inomial.com/smile/2.xsd"
  activity="false"/>
```

Faults

ActivityException

This fault is returned when Smile cannot produce an activity statement.

NoSuchItemException

This fault is returned when the rating period ID does not match a rating period.

Java client syntax

```
java -cp build/smilecsv2-client.jar [options]
com.inomial.smile.client.v2.examples.GetPeriodRatings ratingPeriodId
```

ratingPeriodId

Purpose: Specifies the rating period to return an activity statement for.

Note: For more information about the Java client and the options it accepts, see [Java client syntax](#).

File format

An RCR file is a CSV formatted document containing three record types:

- **header**—contains the column names for the entry records
- **entry**— contains the actual RCR data of interest, one entry for each RCR
- **footer**—contains summary data that can be used to verify successful transfer of the file

Commas separating unused columns at the end of a line may not be omitted.

Header

The first record is a single header record containing column names for the entry records, separated by commas.

A header record has a Record Type of '**Record Type**'.

```
Record Type,Batch ID,CDR Call ID,Subscription
USN,Username,Subservice ID,CDR Start Timestamp,CDR Call
Duration,CDR Bytes Received[,...]
```

Entry

An entry record contains the actual import data of interest. One entry record for each payment.

An entry record has a Record Type of '**E**'.

Table 1: Entry record field definition

Col	Field name	Data type	Description	Required?
0	Record Type	Text	'E' for a CDR entry	Yes
1	Batch ID	Text	The batch identifier for this RCR.	Yes
2	CDR Call ID	Text	The Call ID for the call	No
3	Subscription USN	Text	The Unique Subscription Number (USN) for the subscription that is being charged	Yes
4	Username	Text	The username of the subscription being charged. This is often the phone number.	Yes
5	Subservice ID	Text	If this call is associated with the subservice of a subscription, this field identifies which subservice	No
6	CDR Start Timestamp	Timestamp ISO Standard	ISO 8601 formatted (in particular YYYY-MM-DDThh:mm:ss.sss+Z) time at which the session started. For example: 2010-01-01T01:00:00.000+11:00.	Yes

Col	Field name	Data type	Description	Required?
7	CDR Call Duration	Number	The duration of the session, in seconds	Yes
8	CDR Bytes Received	Number	The number of bytes sent from the customer to the Service Provider	No
9	CDR Bytes Transmitted	Number	The number of bytes sent from the Service Provider to the customer	No
10	CDR Event Count	Number	The number of events recorded in this RCR. For example, this might record the number of SMSs sent. If not provided, the value is assumed to be 1.	No
11	CDR Page Count	Number	The number of pages transmitted (for fax CDRs)	No
12	CDR Caller Number	Text	The originator of the event that triggered the CDR. For example, the caller of a phone call.	No
13	CDR Called Number	Text	The recipient of the event that triggered the CDR. For example, the called number of a phone call.	No
14	Rated Timestamp	Timestamp ISO Standard	The instant in time at which this RCR was rated, in ISO8601 format (in particular YYYY-MM-DDThh:mm:ss.sss+Z). For example: 2010-01-01T01:00:00.000+11:00.	Yes
15	Rated Caller SZU name	Text	If the calling number is an Australian landline number then this field contains the ACMA name given to the Australian Standard Zone Unit from which the call was made, if Smile is configured with SZUs. Otherwise, this field is empty.	No
16	Rated Called SZU name	Text	If the called number is an Australian landline number then this field contains the ACMA name given to the Australian Standard Zone Unit to which the call was made. Otherwise, this field is empty.	No
17	Rated Tariff Name	Text	This is the name given by the Service Provider to the charging tariff that has been applied to this call	Yes
18	Rated Charge	Decimal (Unbounded)	This is the rated amount of the RCR without taking period-level considerations (for example included usage) into account. Excludes GST	Yes

Col	Field name	Data type	Description	Required?
19	Rated Charge GST Estimate	Decimal (Unbounded)	The estimated GST amount on the rated charge.	Yes
20	Charge Amount	Decimal (Unbounded)	The amount the customer has been charged for this RCR. Excludes GST.	Yes
21	Charge Amount GST Estimate	Decimal (Unbounded)	The estimated GST amount on the charge amount.	Yes
22	Line Item Description	Text	The description field of the invoice line item that this RCR is counted against	Yes
23	CDR Description	Text	The description associated with the CDR, if any	No

Footer

The RCR CSVs last row is always a footer record. The footer records contain summary data that can be used to verify successful transfer of the file.

A footer record has a Record Type of 'F'.

Table 2: RCR Footer field definition

Col	Field name	Data type	Description	Required?
0	Record Type	Text	'F' for footer record	Yes
1	Entry Count	Number	The number of entry records in this file	Yes

Example file

```
"Record Type","Batch Id","Call Id","Subscription
USN","Username","Subservice Id","Timestamp","Seconds","Bytes
In","Bytes Out","Count","Pages","Caller","Called","Rated
Time","Caller SZU","Called SZU","Tariff","Rating","Rating
GST Est","Charge","Charge GST Est","Line Item
Description","Description"
"E","610",,"2142421094","0430109899","0430109898",
"2014-01-09T19:10:00.000+11:00","50","0","0","1",,"61430109898",
"6182131523","2014-01-09T13:10:07.842+11:00",,"National","0",
"0.000000","0","0.000000","National calls",
"E","610",,"2142421094","0430109899",,
"2014-01-09T19:10:00.000+11:00","60","0","0","1",,"61430109899",
"61282131523","2014-01-09T13:10:07.842+11:00",,"Sydney","National","0",
"0.000000","0","0.000000","National calls",
"F","2"
```