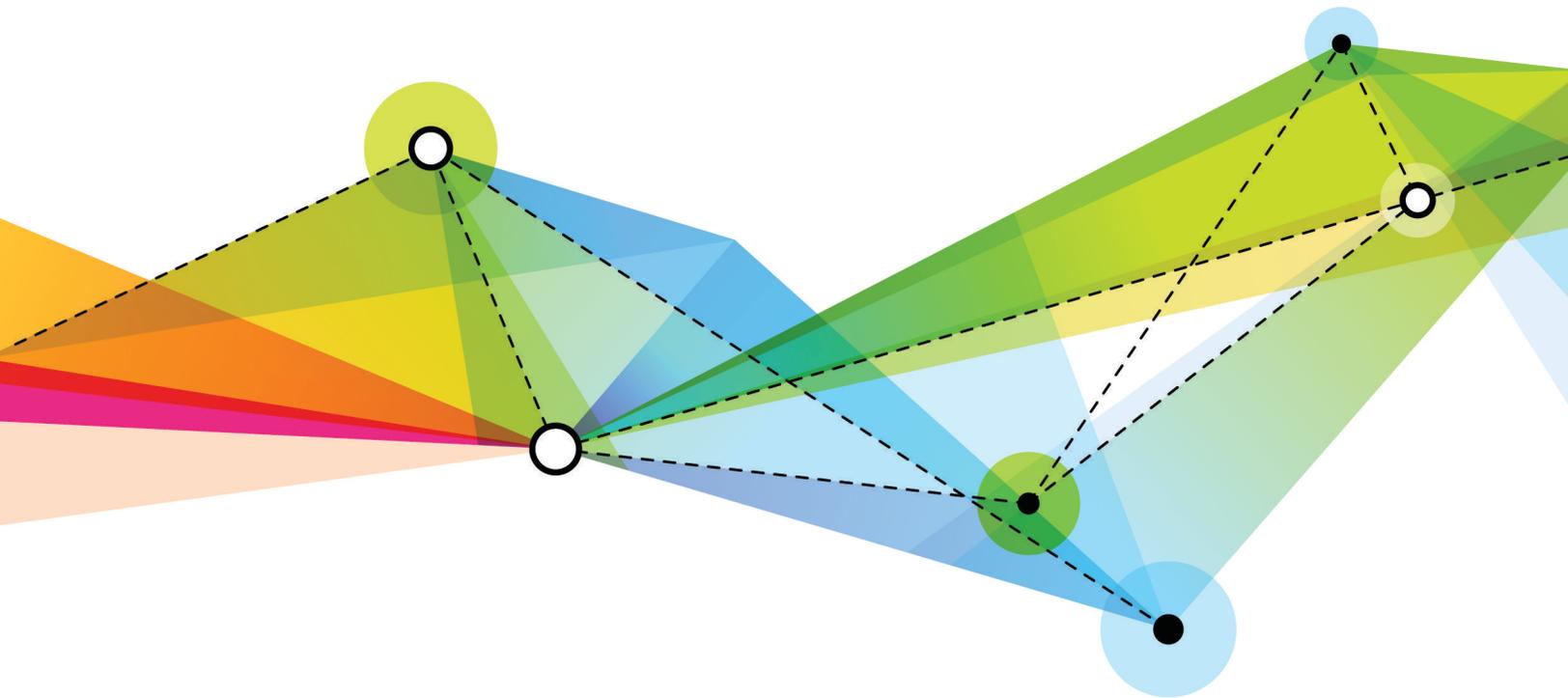




Smile Unrated CDR Export Format

Specification and Documentation



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Unrated usage record specification

Smile provides access to unrated usage records (UURs) to end-users. The UUR is intended to provide an easy method with which customers can reconcile calls and adjustments against their own records.

Multiple Clients

Smile allows multiple end-user clients to call the SOAP methods and download the UURs from a subscription or an account. In this case, the entire set of UURs for all subscriptions are guaranteed to be made available to all end-users. This is implemented in Smile by ensuring that two calls to `getActivityStatementBatch()` with the same input batch ID will return different batches.

This is useful when different (and possibly unrelated) stakeholders need access to the UUR data. Possible scenarios include having both a “live” and “archive” download of the UURs, or where two different departments or unrelated stakeholders require access to the data.

This feature is also extremely useful during integration testing, where live data can be downloaded by the customer without interfering with any existing download mechanism.

Download unrated activity statements

Activity statements, or CDRs, provide an itemised list of subscription usage over a period of time. For example, an unrated activity statement for a telephone subscription contains details of the calls made from the phone, including the call destinations and durations. Because the activity statement is unrated, it does not contain any information about call charges.

Downloading unrated activity statements helps you monitor network use and lets you use the statements in your billing processes. You can download unrated activity statements for an account or subscription at any time after they are created.

The following methods download unrated activity statements for an account or subscription:

- [getActivityStatementRange\(\)](#) downloads unrated activity statements in a given date range. Use this method to display usage data to customers.
- [getActivityStatementBatch\(\)](#) downloads unrated activity statements in batches. Use this method to retrieve activity statements for billing.

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

getActivityStatementRange()

```
ActivityBatchURL getActivityStatementRange(string usn,
    dateTime startTimestamp, dateTime endTimestamp)
```

This method returns a URL from which you can download unrated activity statements, or CDRs, that occur in a given date range.

You can only download information about activity that starts within the date range. For example, if a phone call begins at 10:59 am on 9 August 2012 and the date range begins at 11:00 am on 9 August 2012, the activity statement for the phone call is not included in the date range.

Use this method to download unrated activity statements for non-billing purposes, for example, to display activity statements to customers in a web interface.



Warning: To ensure that you do not exclude activity statements that are not bound to a subscription in timestamp order, do not use this method to download activity statements for billing. Instead, use the [getActivityStatementBatch\(\)](#) method.

Parameters

usn

Format: string

Purpose: Specifies the USN of the subscription or account. If the USN is an account, Smile makes available the activity statements for all subscriptions associated with the account.

startTimestamp

Format: dateTime

Purpose: Specifies the date and time that starts the date range, for example, 2012-05-01T00:00:00+11:00.

endTimeStamp

Format: dateTime

Purpose: Specifies the date and time that ends the date range, for example, 2012-05-31T23:59:59+11:00.

Results

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

If there is no activity in the date range, 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 specified USN does not match an account or subscription.

Java client syntax

```
java -cp build/smilecsv2-client.jar [options]  
com.inomial.smile.client.v2.examples.SubscriptionActivityRange usn  
startTimestamp endTimestamp
```

usn

Purpose: Specifies the USN of the account or subscription.

startTimestamp

Purpose: Specifies the date and time that starts the date range.

endTimestamp

Purpose: Specifies the date and time that ends the date range.

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

Download activity statements in batches

Downloading activity statements in batches ensures that you download all activity statements associated with a subscription, even if the activity statements are not bound to the subscription in timestamp order. For example, if an upstream provider sends you activity statements in batches, the activity statement may not be bound to the subscription until some time after the activity occurred.

The following process explains how to download activity statements in batches:

1. An application calls `getActivityStatementBatch()` and provides a batch ID of 0.
2. Smile creates a new batch against the USN, and returns a URL to download all activity bound to the subscription.
3. The application downloads the activity statements from the URL and persists the last batch ID in the download.
4. After a period of time, the application calls `getActivityStatementBatch()` and provides the persisted last batch ID.
5. Smile returns a URL to download all activity statements with a batch ID greater than the provided value.
6. The application downloads the activity statements from the URL, and persists the new last batch ID in the download.

The following diagram gives you an overview of how to download activity statements in batches.

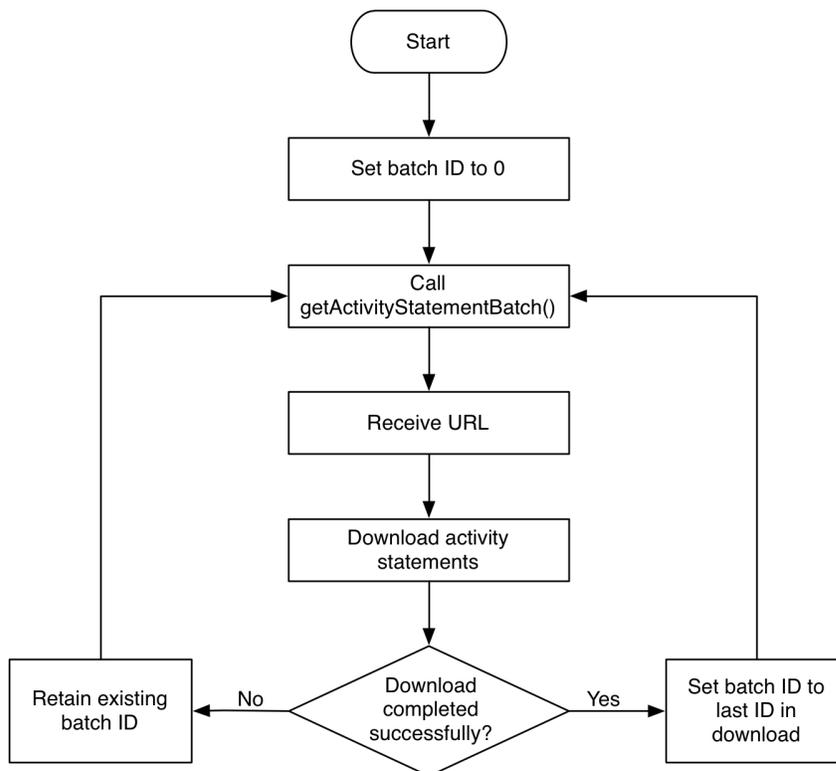


Figure 1: Download activity statements in batches

getActivityStatementBatch()

```
ActivityBatchURL getActivityStatementBatch(string usn, long batchId)
```

This method returns a URL from which you can download a batch of unrated activity statements, or CDRs, for an account or subscription. Downloading activity statements in batches ensures that you download all activity statements for the USN, even if the activity is not recorded in timestamp order.

A caller can create multiple batches against a USN, and multiple callers can create batches against the same USN.

Parameters**usn**

Format: string

Purpose: Specifies the USN of the subscription or account. If the USN is an account, Smile makes available the activity statements for all subscriptions associated with the account.

batchId

Format: long datatype

Purpose: Specifies the batch ID of the last successfully downloaded batch; Smile makes available all activity statements with an ID after this batch ID. If you specify 0, Smile creates a new batch and makes available all the activity statements for the USN.

Results

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

If there is no new activity to download, 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 specified USN does not match an account or subscription, or the specified batch ID does not match an activity batch.

Java client syntax

```
java -cp build/smilev2-client.jar [options]
  com.inomial.smile.client.v2.examples.SubscriptionActivity usn batchID
```

usn

Purpose: Specifies the USN of the subscription or account.

batchID

Purpose: Specifies the batch ID of the last successfully downloaded batch.

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

File format

The UUR file is a Comma Separated Values (CSV) formatted document containing two record types:

- **entry**— contains the actual UUR data of interest, one entry for each UUR
- **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.

Note: The CSV file may contain more fields in the future. The fields documented below will always appear in the same order; new fields will be appended to the end of the line. Clients should implement their importers assuming that more fields may appear at any time without warning. Any fields not documented in this file **must not** be depended upon for any purpose.

Entry

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

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 UUR. See notes above.	Yes
2	UURID	Text	A unique identifier for the UUR	Yes
3	SID	Text	The service ID of the subscription	Yes
4	USN	Text	The USN of the subscription	Yes
5	Start timestamp	Timestamp ISO Standard	The time at which the call/session started. yyyy-MM-dd'T'HH:mm:ss.SSSZZ For example, 2014-01-09T15:20:05.924+11:00	Yes
6	CDR Caller Number	Text	For telephony services, the calling number as received from the call source	No
7	CDR Called Number	Text	For telephony services, the destination number as received from the call source	No
8	Bytes received	Number	The total bytes received from the subscription by the vendor. This number can be very large.	No
9	Bytes sent	Number	The total bytes sent to the subscription by the vendor. This number can be very large.	No

Col	Field name	Data type	Description	Required?
10	Duration	Number	The billable duration of the activity record, in seconds. This is the difference between the start timestamp and the time that the usage finished.	Yes. Can be 0.
11	Pages	Number	For fax services, the number of pages transmitted or received	No
12	Count	Number	If applicable, the event count	No
13	Flagfall	Boolean (case insensitive)	True if this record is the first or only record for this session id. Allowed values: <ul style="list-style-type: none"> • True • False 	Yes
14	Role	Number	A flag indicating the role of the subscriber in this activity record (caller or called). 0 for caller, 1 for called.	Yes
15	IP Address	Text	The IP address allocated to the subscription for this session, if applicable	No
16	Call Type	Text	The type of activity record (see the Call Types table at the end of this document)	Yes
17	Call ID	Text	If available, the SIP (or other) call ID	No
18	Session ID	Text	The session ID for this activity record. Multiple records with the same Session ID belong to the same session.	Yes
19	Subservice ID	Text	The ID of the subservice this activity record belongs to	No
20	Source	Text	If applicable, a string representing the source of the call or session	No
21	Destination	Text	If applicable, a string representing the destination of the call or session	No
22	Originating USN	Text	If available, the USN of the subscription that originated this call or session	No
23	Description	Text	A textual description of the activity record	No
24	Username	Text	If available, a textual identifier representing the end user	No

Footer

The UUR CSVs last row is always a footer record. The values in the footer file should be compared with the downloaded entries to ensure that the entire file has been downloaded without interruption.

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
2	Total Bytes In	Number	The sum of the "bytes in" column	No
3	Total Bytes Out Total Bytes Out	Number	The sum of the "bytes out" column	No
4	Total Seconds	Number	The sum of the "seconds" column	No
5	Total Pages	Number	The sum of the "Pages" column	No
6	Total Flagfall	Number	The number of session start entries in this file	No

Call types

The following table lists the abbreviations used in the Call Type column of the UUR.

Table 3: Call types

Call type	Description
D	Data
V	Voice call
S	SMS
M	MMS
X	Fax
W	WAP
E	Video
N	ISDN
F	Forwarded voice call
C	Event count
U	Unknown
I	Imported charge

Example file

```
"Record Type","Batch ID","SARID","SID","USN","Start
timestamp","CDR Caller Number","CDR
Called Number","Bytes received","Bytes
sent","Duration","Pages","Count","Flagfall","Role","IP
Address","Call Type","Call ID","Session
ID","Subservice ID","Source","Destination","Originating
USN","Description","Username","Reserved"
"E","607","18100","413","2142421136","2014-01-09T15:20:05.924+11:00",
"1800123456","1800111111","476018111","857394768","170","","","true",
"0","10.10.10.106","D","","368","","","","","","",
"joe.smith@example.com","123"
"E","607","18150","413","2142421136","2014-01-09T15:23:04.239+11:00",
"1800123456","1800111111","1050692016","1941675723","450","","","true",
"0","10.10.10.197","D","","369","","","","","","",
"joe.smith@example.com","123"
"F","2","1526710127","2799070491","620","0","0","2"
```