

IP TEL RESELLER

CALL DETAIL RECORD

INTERFACE SPECIFICATIONS

SEPTEMBER 2018

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DEFINITION, ACRONYMS & ABBREVIATIONS

ACRONYM	DEFINITION
BW	BroadWorks
CDR	Call Detail Record
SFTP	SSH File Transfer Protocol
SSH	Secure Shell
CLID	Calling Line Identification

INTRODUCTION

Vocus IP Tel is a sophisticated range of IP Telephony services that provides enterprise grade telephony services to a customer's entire office network, including:

- > Hosted PBX and Unified Communications add-ons
- > SIP Connect (SIP Trunks)
- > Call Centre Solutions
- > Conferencing Solutions, and
- > IP Handsets, Conferencing Equipment and Customer Premises Equipment.

In summary the services include the supply and installation of Vocus IP Tel Manager products and services, and inbound/outbound call termination services for use by Vocus' customers and partners.

Associated with the services are comprehensive Call Details Records (CDRs) in the form of raw BW CDRs that identify all call data associated with Vocus' customers. Additional to the comprehensive CDRs, Vocus provides a mediation service that captures all billable call events and provides call categorisation and zoning, which is presented as a 'Billing CDR' file for IP Tel Manager services, and a single daily 'Inbound 13/18' file for inbound 13/1300/1800 services.

OVERVIEW

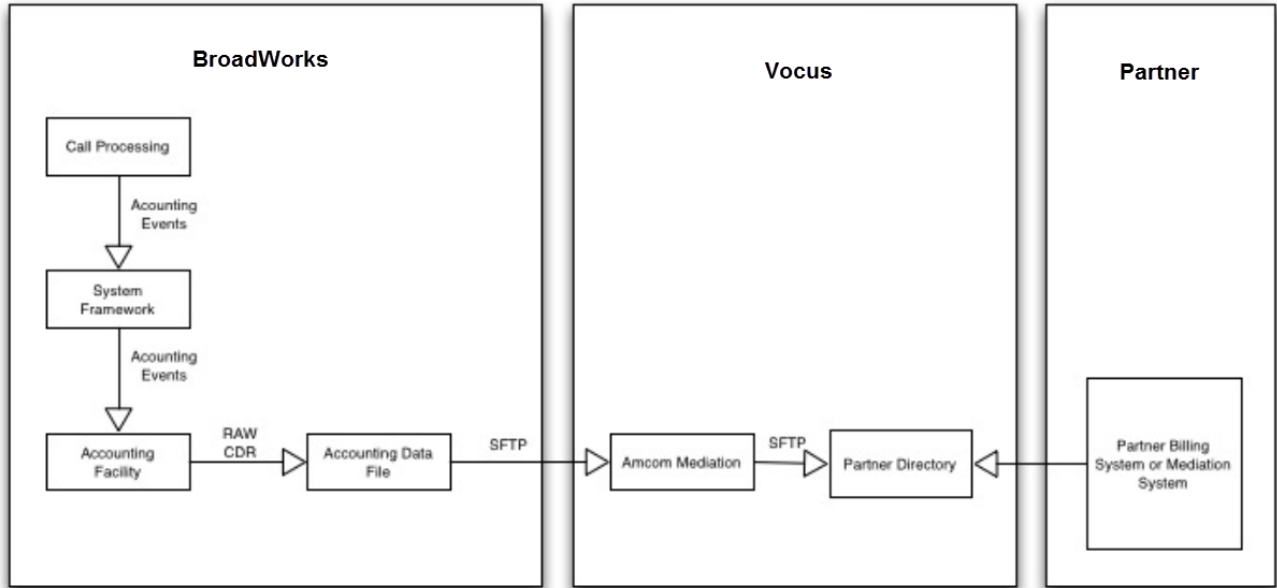
This document describes the Vocus Call Detail Record interface. It covers the following topics:

- > CDR Creation and Retrieval Process
- > CDR Mediation Specifications
- > Example CDRs

FUNCTIONAL DESCRIPTION

INTERFACE

The figure below shows the interface between BroadWorks (BW), Vocus and the Partner. The transmission of CDRs is performed by sending both raw and mediated files each containing multiple CDRs over SFTP.



SFTP ACCESS

Partners will be provided with access to Vocus’s SFTP server for CDR retrieval during the on-boarding process. Partners will be required to provide Vocus with their public SSH key which will be loaded onto Vocus’s servers as well as loading their private SSH key on the server retrieving the CDR files.

Vocus expects partners to utilise security measures to ensure the integrity of their own systems. Refer to TN-IPTEL-020_Generating a Private & Public SSH Key Pair.docx for a guide to generating a private and public SSH key pair.

DIRECTORY NAMING CONVENTIONS

The following table describes the directory structure under the partner’s home directory. Partners will be restricted from creating, modifying and deleting folders and creating or modifying new files. Only files contained in the directories below can be deleted.

SUBDIRECTORY	DESCRIPTION
--------------	-------------

Broadworks	Stores the raw BW CDR file. Refer to BW-AccountingCDRInterfaceSpec- R17V8.pdf for a detailed description of the file format.
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Mediated	Stores the mediated BW CDR file in the Vocus CDR file format. Files in this directory should be used for on-billing or call reconciliation. Refer to 4.8 Billing CDR Specification for a detailed description of the file format.
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CDR FILE NAMING CONVENTIONS

Vocus will follow the file naming conventions based on the service generating the CDR files. The conventions used for files generated by BW are as follows:

BW-CDR-yyyyymmddhhmmss-pri-systemid-seqnum.csv

The following table describes each component of the file.

COMPONENT	SEMANTICS	TYPE	LENGTH
File ID	Identifies this file as containing CDR accounting data.	BW Literal string "BW-CDR"	6 characters
Timestamp	Time at which file was closed by the network element, in the network element's time zone.	yyyymmddhhmmss	14 characters
Priority	Priority of this file	Integer in the range 1 through 4. Always set to "2".	1 character
System ID	Network-wide unique identifier	Hexadecimal number	12 characters
Sequence Number	Monotonically increasing sequencing number. This sequence number continues incrementing regardless of BW restarts	Integer in the range 000001 through 999999, zero-filled.	6 characters

This table is directly reference from BW-AccountingCDRInterfaceSpec-R17V8.pdf

Each of the file name components are separated by a hyphen "-" character and the extension is ".csv".

FILE ROTATION RULES

File mediation occurs every fifteen minutes and will contain all calls that ended within the fifteen-minute cycle. At file rotation time, the current file is mediated, and both the raw and mediated files are stored in the SFTP directory for retrieval.

As Application Server redundancy has been enabled by Vocus, both servers will generate a CDR file every rotation and both CDR files should be used by the partner for billing, reporting and reconciliation. In the event of a scheduled outage only one file will be generated in the rotation cycle.

*At the current rotation period of 15 minutes, a total 192 CDR files will be generated per day. In the event a back billing file is generated there may be more than 192 files for that day.

CDR RETENTION

The CDR files will be kept in the respective partner's directories (mediated and Broadworks) for 90 days. If the partner fails to download their files in the allocated time, they may contact IP Tel Support to request the re-transmission of the CDR files.

Where a file needs to be retrieved from archives, a fee may be charged for each such request. In certain situations, files retrieved from archive may need to be sent by email, instead of being loaded to the partner's directory. Multiple files may also be concatenated into a single CDR file.

CDR TRANSMISSION

At file rotation time the latest CDR file is transmitted, via SFTP, to the partner's respective directories. In the event of a transmission failure, an alarm is generated, and the CDR file is copied to a temporary directory for manual re- processing.

Vocus will endeavour to process all CDR files as soon as alarm is raised, however in certain circumstances back billing will occur. Clause 6.5.4 (c) of the Telecommunications Consumer Protections Code states that 'a Supplier must not delay the Billing of Charges to another Supplier in the Billing chain by more than 95 days from the date the Charge was incurred by the Customer.

Changes to the Telecommunications Number Plan 1997 may also cause individual CDR records to fail, in which case backbilling will occur. A new CDR file will be generated which will include these backbilled records.

BILLING CDR SPECIFICATION

The Vocus CDR and Mediation Service is designed to simplify the partner billing by providing only billable CDR's. BW CDR files are also made available and include all call types (Terminating, Group, Unanswered etc.) as well as network information. This information may be used for billing, reporting and statistical analysis.

Each file will contain the following record types:

- a) File Header Record (FHR)
- b) Detailed Call Record (DCR)
- c) Trailer Record (TR)

FILE HEADER RECORD

The File Header Record is a single record and will contain the following fields:

FIELD	FIELD NAME	COMMENTS / FIELD OPTIONS
1	Field Type	Value Always "FHR"
2	File ID	Value Always "IPS-CDR"
3	File Creation Date	DDMMYYYY (Local Time)
4	File Creation Time	HHMMSS (24hr format)

DETAILED CALL RECORD

The Detail Call Record contains zero, one, or multiple billable call data records. A file is produced, even if there a no CDRs for the billing rotation.

FIELD	FIELD NAME	COMMENTS / FIELD OPTIONS
1	Field Type	Value Always "DCR"
2	BWGroupID	The BroadWorks Group ID field, this is field 32 from the BW Accounting CDR Specification.
3	BWGroupNumber	The Calling Line ID Group Number as provisioned in BroadWorks. (See Profile under Group). For Terminating Services this is the service number.
4	RecordID	HHMMSS (24hr format)
5	Call Category	Billing Call Category for call, see Section 0 Appendix A: Call Categories for a list of valid values
6	Call Start Date	DDMMYYYY
7	Call Start Time	HHMMSS (Local Time)
8	Call Duration	Number of seconds (3 decimal places), billed to the nearest second.
9	Calling Number	Originating number of the user accountable for the CDR. If this user does not have a number then the Group CLID is used.
10	Called Number	Actual Called Number
12	Calling Party Zone	Zone of Calling Number
13	Called Party Zone	Zone of Called Number. For International Called Party Zones refer to Section 12 Appendix B: International Called Zones
14	Call Cost	Call Cost in dollars (3 decimals), minimum call charge of \$0.01

15	Call Cost 2	Not Used
16	Service Provider ID	The Service Provider ID of the partner.
17	Spare	Spare Field
18	Spare	Spare Field
19	Spare	Spare Field
20	Spare	Spare Field

TRAILER RECORD

FIELD	FIELD NAME	COMMENTS/FIELD OPTIONS
1	Field Type	Value always "TR"
2	Record Count	Number of DCR records in the file

CDR EXAMPLES

VOCUS CSV CDR FILE FORMAT

The following shows an example of the Vocus CSV CDR file format.

```
FHR,IPS-CDR,14122011,151732,14122011
DCR,00004,0396580624,4952042300215E71A25820111214032817.1361+110000,LOCAL,14122011,1128
28,98.176,0396580608,0396580633,Melbourne,Melbourne,0.06,0.06,ABC INC,,,,,
DCR,00005,,4952044000215E71A25820111214032948.4581+110000,FREECALL,14122011,112951,16.72
9,0396580625,1800551702,Melbourne,FreeCall Number,0.00,0.00,ABC INC,,,,,
DCR,00006,0396580626,4952045600215E71A25820111214032912.3261+110000,LOCAL,14122011,1129
21,47.873,0396580610,0396580634,Melbourne,Melbourne,0.06,0.06,ABC INC,,,,,
DCR,00007,,4952047400215E71A25820111214032907.9721+110000,NATIONAL,14122011,135914,55.88
4,0396580611,0881540244,Melbourne,Adelaide,0.06,0.06,ABC INC,,,,,
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41,929.183,0396580612,0396580635,Melbourne,Melbourne,0.06,0.06,ABC INC,,,,,
DCR,00000,0396580600,4952049200215E71A25820111214032931.4991+110000,LOCAL,14122011,1129
59,11.617,0396580614,0396580635,Melbourne,Melbourne,0.06,0.06,ABC INC,,,,,
DCR,00003,0396580623,4952056900215E71A25820111214032603.4361+110000,MOBILE,14122011,142
615,240.278,0396580619,0408000000,Melbourne,Mobile,0.55,0.55,ABC INC,,,,,
```

FTR,7

BW CSV CDR FILE FORMAT

The corresponding BW CDR file is shown below. The example below directly correlates to Vocus CSV CDR file as shown above in Section 8 Vocus CSV CDR File Format.

```
version=14.9 encoding=ISO-8859-1 4952027800215E71A25820111214033000.1991+110000,,Start
4952029900215E71A25820111214032632.2421+110000,Vocus,Normal,+61396580614,+61396580600,
Originating,+61396580614,Public,0893821862,20111214032632.242,0+080000,No,,20111214033001.66
2,016,VoIP,,0893821862,local,lo,0893821862,,local,202.147.128.98:5060,BW142632295141211-
863935690@202.147.128.2,PCMU/8000,202.147.128.220,SDRkh701-
13cd533b9a2c7f314285570c929dacbc-
au418e3,,,,00000,,,,,,n,public,,746506883:7,,Ordinary,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
,,,,,0396378658@vocusvoice.ipsystems.com.au,,,,,,,,,,,,,,,,,,,,,,,,,,,,,208.091,,,,,,,,,,,,,,,,,,,,,
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
4952031800215E71A25820111214032935.2681+110000,Vocus,Normal,+61396580604,+61396580622,
Terminating,+61396580631,Public,+61396580604,20111214032935.268,0+080000,Yes,2011121403294
0.460,20111214033002.096,016,VoIP,,,,,local,202.147.128.38,ADCD8549-253A11E1-A24BBCAA-
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,,,,,0396325874@vocusvoice.ipsystems.com.au,,,,,,,,,,,,,,,,,,,,,00001/00001-
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PostRedirection,20111214032945.729,20111214033002.546,016,VoIP,,,,,remote,202.147.128.58,A9459 845-
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768,,,,,
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Originating,+61396580632,Public,+61396580606,20111214032945.683,0+080000,Yes,20111214032945.
729,20111214033002.546,016,VoIP,,7699,private,,,,remote,Group,,PCMA/8000,,,,,00002,Offices,,,+6139
6580605,Public,no-answer,+61396580605,Public,no-
answer,n,,746531896:0A,746533013:0,,,,,,,,,,,,,,,,,,,,,,,,,,,,,1478563258
@vocusvoice.ipsystems.com.au,Voice Portal Voice Portal,Public,,,,,,,,,,,,,746531896:0,Call
```

VOCUS | TITLE OF DOCUMENT

Commercial in confidence

Forward No Answer,,,,,,16.768,,,,,
4952032400215E71A2582011214032945.6831+110000,Vocus,Normal,+61396580606,+61396580621,
Terminating,+61396580632,Public,+61396580606,20111214032945.683,1+110000,Yes,2011121403294
5.729,20111214033002.546,016,VoIP,,,,,remote,Group,,PCMA/8000,,,,,00002,,,,+61396580605,Public,
no-answer,+61396580605,Public,no-
answer,n,,746533013:0,746531896:0A,,,,,,173974349_
VMR@vocusvoice.ipsystems.com.au,,,,,,Yes,,,,,,16.768,,,,,
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Originating,+61396580607,Public,606011,20111214033002.483,1+110000,No,,20111214033002.912,00
1,VoIP,,606011,,,,,local,unconfirmed,,PCMA/8000,202.147.128.220,SDa6f0001-
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35687489@vocusvoice.ipsystems.com.au,,,,,,0.279,,,,,
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3007.850,016,VoIP,,1800551702,other,tf,1800551702,,local,202.147.128.98:5060,BW142948460141211
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PostRedirection,20111214032909.238,20111214033015.824,016,VoIP,,,,,,remote,202.147.128.30,9AB14 9CE-
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66.365,,,,,
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.....

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.....66.365,.....
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au418e3,,,00003,Bayswater,,,,,,y,public,,746519471:0,,Ordinary,,,,,
.....,65432132@vocusvoice.ipsystems.com.au,,,,,,248.691,,,,,
.....
4953185800215E71A2582011214033957.8961+110000,Vocus,Normal,+61396580620,+61396580630,
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7,021,VoIP,,0423000000,national,mob,0423000000,,remote,202.147.128.178:5060,BW14395789814121
1-952654794@202.147.128.2,PCMA/8000,202.147.128.220,SDp04v501-f55d539834c391216ecd915223d25de6-
au418e3,,,00010,,,,,,n,public,,746571549:0,,Ordinary,,,,,
.....,4654162165@vocusvoice.ipsystems.com.au,,,,,,28.900,,,,,
....., 4953684900215E71A2582011214034500.1061+110000,,End

APPENDIX A: CALL CATEGORIES

CATEGORY NAME

13Number
Call Connect
Freecall
International
Local
Mobile
National
Satelitemobile

APPENDIX B: INTERNATIONAL CALLED ZONES

Category Name

INTL Afghanistan FIXED

INTL Afghanistan MOBILE

INTL Albania FIXED

INTL Albania MOBILE

INTL Algeria FIXED

INTL Algeria MOBILE

INTL American Samoa FIXED

INTL American Samoa MOBILE

INTL Andorra FIXED

INTL Andorra MOBILE

INTL Angola FIXED

INTL Angola MOBILE

INTL Anguilla FIXED

INTL Anguilla MOBILE

INTL Antigua Fixed

INTL Antigua MOBILE

INTL Argentina FIXED

INTL Argentina MOBILE

INTL Armenia FIXED

INTL Armenia MOBILE

INTL Aruba FIXED

INTL Aruba MOBILE

INTL Ascension Island FIXED

INTL Australian External Territories FIXED

INTL Austria FIXED

INTL Austria MOBILE

INTL Azerbaijan FIXED

INTL Azerbaijan MOBILE

INTL Bahamas FIXED

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INTL Bahrain FIXED
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INTL Bangladesh FIXED
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INTL Barbados FIXED
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INTL Canada - Toronto FIXED
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INTL Chad FIXED
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INTL Iran FIXED
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INTL Iridium Satellite FIXED
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INTL Tanzania - includes Zanzibar FIXED

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INTL Uganda FIXED
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INTL Ukraine FIXED
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INTL Uruguay FIXED
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INTL USA FIXED
INTL Uzbekistan FIXED
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INTL Vanuatu - New Hebrides FIXED
INTL Vanuatu - New Hebrides MOBILE
INTL Venezuela FIXED

INTL Venezuela MOBILE

INTL Vietnam FIXED

INTL Vietnam MOBILE

INTL Virgin Islands - US FIXED

INTL Wallis and Futuna FIXED

INTL Western Samoa FIXED

INTL Western Samoa MOBILE

INTL Yemen Arab Republic - North Yemen FIXED

INTL Yemen Arab Republic - North Yemen MOBILE

INTL Zambia FIXED

INTL Zambia MOBILE

INTL Zimbabwe FIXED

INTL Zimbabwe MOBILE

REFERENCED DOCUMENTS

DOCUMENT NAME	LOCATION
Telecommunications Consumer Protections Code	http://www.acma.gov.au/webwr/telcomm/industry_codes/codes/c628_2007.pdf
Generating a Private & Public SSH Key Pair	Refer document IP TEL Generating a SSH Key Pair or contact your Account Manager.
BroadWorks Accounting Call Detail Record, R17.0V8	Contact your Account Manager.
Telecommunications Numbering Plan 1997	http://www.comlaw.gov.au/Series/F2005B00940