# TABLE OF CONTENTS


**1 INTRODUCTION ..... 2**

1.1 CALL FROM AN IP PHONE TO ANOTHER IP PHONE ..... 3
1.2 INTERNAL CALL FROM AN IP PHONE TO A SIP PHONE ..... 3
1.3 INTERNAL CALL TO AN IP NUMBER UNOBTAINABLE ..... 4
1.4 INTERNAL CALL TO A BUSY IP EXTENSION ..... 4
1.5 OUTGOING CALL FROM AN IP PHONE TO PSTN ..... 4
1.6 OUTGOING CALL TO A BUSY PSTN NUMBER ..... 5
1.7 OUTGOING CALL TO A PSTN NUMBER UNOBTAINABLE ..... 5
1.8 INCOMING CALL FROM PSTN TO AN IP PHONE ..... 5
1.9 INCOMING CALL FROM PSTN TO A BUSY IP PHONE ..... 6
1.10 INCOMING CALL FROM PSTN TO AN IP PHONE WITHOUT ANSWER ..... 6
1.11 INTERNAL CALL TO AN IP PHONE FORWARDED TO A PSTN PHONE ..... 7
1.12 INTERNAL CALL TO AN IP PHONE FORWARDED TO A SIP PHONE ..... 7
1.13 INCOMING CALL TO AN IP PHONE FORWARDED TO ANOTHER IP PHONE ..... 7
1.14 INCOMING CALL TO AN IP PHONE, PARKED AND RETRIEVED FROM ANOTHER IP PHONE ..... 8
1.15 OUTGOING CALL TO TO A PSTN NUMBER, PARKED AND RETRIEVED FROM ANOTHER IP PHONE ..... 8
1.16 INCOMING CALL TO AN IP PHONE PICKED UP FROM ANOTHER IP PHONE ..... 9
1.17 INTERNAL CALL BETWEEN IP PHONES WITH CONSULTATIVE TRANSFER TO A SIP PHONE ..... 9
1.18 INTERNAL CALL BETWEEN IP PHONES WITH CONSULTATIVE TRANSFER TO A PSTN PHONE ..... 10
1.19 INCOMING CALL TO AN IP PHONE WITH CONSULTATIVE TRANSFER TO ANOTHER IP PHONE ..... 11
1.20 CONFERENCE CALL BETWEEN IP PHONES AND SIP PHONE ..... 11
1.21 CONFERENCE CALL BETWEEN IP PHONES AND INCOMING PSTN PHONE ..... 12
1.22 CONFERENCE CALL BETWEEN IP PHONES AND OUTGOING PSTN PHONE ..... 13
1.23 MULTIPLE CALLS PER LINE (CALL WAITING) ..... 14
1.24 BARGE, IP PHONE, ORIGINATED CALL ..... 14
1.25 BARGE, IP PHONE, TERMINATED CALL ..... 15
1.26 CBARGE, IP PHONE, ORIGINATED CALL ..... 15
1.27 CBARGE, IP PHONE, TERMINATED CALL ..... 16
1.28 EXTENSION MOBILITY ..... 17
1.29 IP PHONE CALL ROUTES USING FAC CODES AND THE HASH KEY ..... 17
1.30 CALL WITH AN INCORRECT FAC CODE ..... 18
1.31 IP PHONE CALL ROUTES USING CMC CODES AND THE HASH KEY ..... 18
1.32 CALL WITH AN INCORRECT CMC CODE ..... 19

# 1 INTRODUCTION

Scope of the document is providing the type of most common calls available in a Cisco Unified Communications environment and the way Stonevoice BillyBlues is reporting on these.

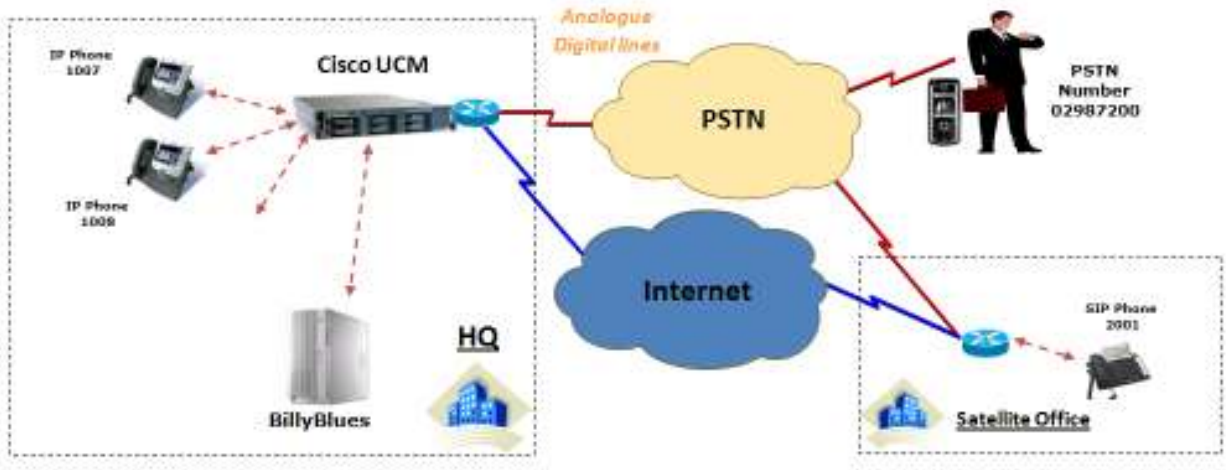



**Figure 1 – Test Setup**

- Cisco Unified CallManager supported are 4.x, 5.x, 6.x, 7.x
- Cisco Unified Voice Gateways supported can use both H.323 and MGCP protocols

# 2 SUPPORTED CALLS ON CUCM 6.X

## 2.1 CALL FROM AN IP PHONE TO ANOTHER IP PHONE

| Test Case Details | |
|---|---|
| **Description** | Internal call from an IP Phone to another IP phone |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1008, place a call to IP phone 1007<br>• Answer the call and after a brief period, hang up. |
| **Result (available in the Call List Report)** | Date / Duration / Traff. / Number / Extension / Ext. name / Cost / Type<br>05/03/09 18:56:52 / 00:00:05 / Int. / 1007 / 1008 / Smith John / 0.0000 / Out<br>05/03/09 18:56:52 / 00:00:05 / Int. / 1008 / 1007 / Neeil Mark / 0.0000 / In |
| **Observations** | Each internal calls between extensions (local or remote) is reported with two records as it represents an outgoing internal for the caller and an incoming internal for the extension receiving the call |

## 2.2 INTERNAL CALL FROM AN IP PHONE TO A SIP PHONE

| Test Case Details | |
|---|---|
| **Description** | Internal call from an IP Phone to a SIP phone |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1008, place a call to IP phone 2001<br>• Answer the call and after a brief period, hang up. |
| **Result (available in the Call List Report)** | Date / Duration / Traff. / Number / Extension / Ext. name / Cost / Type<br>05/03/09 19:21:40 / 00:00:06 / Int. / 2001 / 1008 / Smith John / 0.0000 / Out<br>05/03/09 19:21:40 / 00:00:06 / Int. / 1008 / 2001 / Johnson Tom / 0.0000 / In |
| **Observations** | Each internal calls between extensions (local or remote) is reported with two records as it represents an outgoing internal for the caller and an incoming internal for the extension receiving the call |

## 2.3 INTERNAL CALL TO AN IP NUMBER UNOBTAINABLE

| Test Case Details | |
|---|---|
| **Description** | Internal call to an IP number unobtainable |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1008, place a call to a number outside the CCM range that doesn't exist.<br>• Unobtainable call |
| **Result (available in the Call List Report)** | No call reported |
| **Observations** | |

## 2.4 INTERNAL CALL TO A BUSY IP EXTENSION

| Test Case Details | |
|---|---|
| **Description** | Internal call to a busy IP extension |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1008, place a call to the busy IP phone 1007<br>• Answer the call and after a brief period, hang up. |
| **Result (available in the Call List Report)** | No call reported (the destIPAddress is 0 so call is discarded) |
| **Observations** | |

## 2.5 OUTGOING CALL FROM AN IP PHONE TO PSTN

| Test Case Details | |
|---|---|
| **Description** | Outgoing call from an IP Phone to PSTN |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1008, place a call to the PSTN number 02987200<br>• Answer the call and after a brief period, hang up. |

| | |
|---|---|
| **Result (available in the Call List Report)** | Date \| Duration \| Traff. \| Number \| Extension \| Ext. name \| Cost \| Typ<br>05/03/09 20:25:28 \| 00:00:08 \| Ext. \| 02987200 \| 1008 \| Smith John \| 0.0064 \| Out |
| **Observations** | |

## 2.6 OUTGOING CALL TO A BUSY PSTN NUMBER

| Test Case Details | |
|---|---|
| **Description** | Outgoing call to a busy PSTN number |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1008, place a call to the PSTN number 02987200<br>• Busy tone |
| **Result (available in the Call List Report)** | Date \| Duration \| Traff. \| Number \| Extension \| Ext. name \| Cost \| Typ<br>05/03/09 20:34:18 \| 00:00:00 \| Ext. \| 02987200 \| 1008 \| Smith John \| 0.0000 \| Out |
| **Observations** | |

## 2.7 OUTGOING CALL TO A PSTN NUMBER UNOBTAINABLE

| Test Case Details | |
|---|---|
| **Description** | Outgoing call to a PSTN number unobtainable |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1008, place a call to a not existing PSTN number, ex. 02101010<br>• Unobtainable call |
| **Result (available in the Call List Report)** | |
| **Observations** | |

## 2.8 INCOMING CALL FROM PSTN TO AN IP PHONE

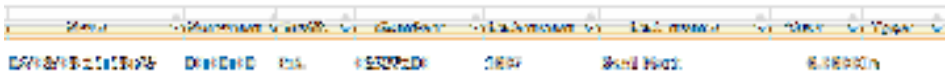
| Test Case Details |
|---|

| | |
|---|---|
| **Description** | Incoming call from PSTN to an IP Phone |
| **Test Setup** | Figure 1 |
| **Procedure** | • IP phone 1007 receives a call from PSTN number 02987200<br>• Answer the call and after a brief period, hang up. |
| **Result (available in the Call List Report)** | Date \| Duration \| Traff. \| Number \| Extension \| Ext. name \| Cost \| Type<br>05/03/09 20:47:10 \| 00:00:05 \| Ext. \| 02987200 \| 1007 \| Neeil Mark \| 0.0000 \| In |
| **Observations** | |

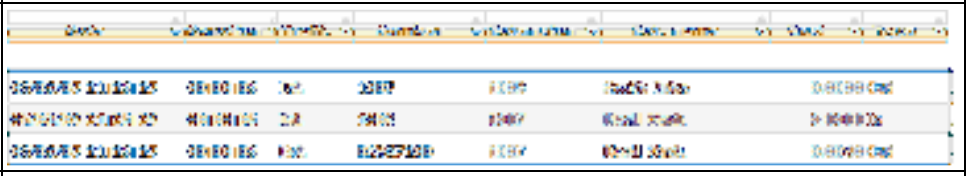
## 2.9 INCOMING CALL FROM PSTN TO A BUSY IP PHONE

| Test Case Details | |
|---|---|
| **Description** | Incoming call from PSTN to a busy IP Phone |
| **Test Setup** | Figure 1 |
| **Procedure** | • IP phone 1007 receives a call from PSTN number 02987200<br>• Caller hears busy tone |
| **Result (available in the Call List Report)** | No call reported (the destIPAddress is 0 so call is discarded) |
| **Observations** | |

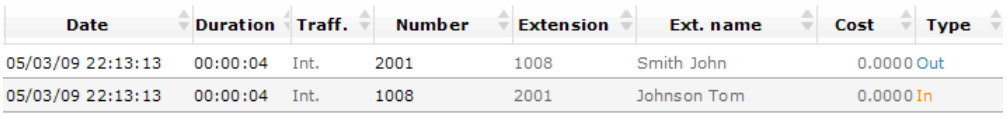
## 2.10 INCOMING CALL FROM PSTN TO AN IP PHONE WITHOUT ANSWER

| Test Case Details | |
|---|---|
| **Description** | Incoming call from PSTN to an IP Phone without answer |
| **Test Setup** | Figure 1 |
| **Procedure** | • IP phone 1007 receives a call from PSTN number 02987200<br>• Call is no answered. |
| **Result (available in the Call List Report)** |  |
| **Observations** | |

## 2.11 INTERNAL CALL TO AN IP PHONE FORWARDED TO A PSTN PHONE

| Test Case Details | |
|---|---|
| **Description** | Internal call to an IP Phone forwarded to a PSTN phone |
| **Test Setup** | Figure 1 |
| **Procedure** | • On IP phone 1007 set the call forward to the PSTN number 02987200<br>• From IP phone 1008, place a call to IP phone 1007<br>• Answer the call at 02987200 and after a brief period, hang up |
| **Result (available in the Call List Report)** |  |
| **Observations** | The PSTN call is correctly billed to the forwarding party. |

## 2.12 INTERNAL CALL TO AN IP PHONE FORWARDED TO A SIP PHONE

| Test Case Details | |
|---|---|
| **Description** | Internal call to an IP Phone forwarded to a SIP phone |
| **Test Setup** | Figure 1 |
| **Procedure** | • On IP phone 1007 set the call forward to the SIP Phone 2001<br>• From IP phone 1008, place a call to IP phone 1007<br>• Answer the call on 2001 and after a brief period, hang up |
| **Result (available in the Call List Report)** |  |
| **Observations** | |

| Date | Duration | Traff. | Number | Extension | Ext. name | Cost | Type |
|---|---|---|---|---|---|---|---|
| 05/03/09 22:13:13 | 00:00:04 | Int. | 2001 | 1008 | Smith John | 0.0000 | Out |
| 05/03/09 22:13:13 | 00:00:04 | Int. | 1008 | 2001 | Johnson Tom | 0.0000 | In |

## 2.13 INCOMING CALL TO AN IP PHONE FORWARDED TO ANOTHER IP PHONE

| Test Case Details | |
|---|---|
| **Description** | Incoming call to an IP Phone forwarded to another IP phone |
| **Test Setup** | Figure 1 |
| **Procedure** | • On IP phone 1007 set the call forward to the IP Phone 1008<br>• IP phone 1007 receives a call from PSTN number 02987200<br>• Answer the call at 1008 and after a brief period, hang up |

| | |
|---|---|
| **Result (available in the Call List Report)** | <table><tr><th>Date</th><th>Duration</th><th>Traff.</th><th>Number</th><th>Extension</th><th>Ext. name</th><th>Cost</th><th>Type</th></tr><tr><td>05/03/09 22:40:42</td><td>00:00:10</td><td>Ext.</td><td>02987200</td><td>1008</td><td>Smith John</td><td>0.0000</td><td>In</td></tr></table> |
| **Observations** | |

## 2.14 INCOMING CALL TO AN IP PHONE, PARKED AND RETRIEVED FROM ANOTHER IP PHONE

| Test Case Details | |
|---|---|
| **Description** | Incoming call to an IP Phone, parked and retrieved from another IP phone |
| **Test Setup** | Figure 1 |
| **Procedure** | • IP phone 1007 receives a call from PSTN number 02987200<br>• Answer the call and after a brief period, park the call through the softkey.<br>• After 10 seconds, IP phone 1008 dial the call park number and retrieve the call.<br>• IP Phone 1008 talks for 12 seconds and then hangs up. |
| **Result (available in the Call List Report)** | <table><tr><th>Date</th><th>Duration</th><th>Traff.</th><th>Number</th><th>Extension</th><th>Cost</th><th>Type</th></tr><tr><td>10/03/09 21:59:49</td><td>00:00:06</td><td>Ext.</td><td>02987200</td><td>1008</td><td>0.0000</td><td>In</td></tr><tr><td>10/03/09 21:59:40</td><td>00:00:09</td><td>Ext.</td><td>02987200</td><td>1007</td><td>0.0000</td><td>In</td></tr><tr><td>10/03/09 21:59:37</td><td>00:00:03</td><td>Ext.</td><td>02987200</td><td>1007</td><td>0.0000</td><td>In</td></tr></table> |
| **Observations** | Read the sequence bottom up |

## 2.15 OUTGOING CALL TO TO A PSTN NUMBER, PARKED AND RETRIEVED FROM ANOTHER IP PHONE

| Test Case Details | |
|---|---|
| **Description** | Outgoing call to to a PSTN number, parked and retrieved from another IP phone |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1007 place a call to PSTN number 02987200<br>• Talk for 11 seconds, park the call through the softkey.<br>• After 14 seconds, IP phone 1008 dial the call park number and retrieve the call.<br>• IP Phone 1008 talks for 14 seconds and then hangs up. |

| | |
|---|---|
| **Result (available in the Call List Report)** | <table><tr><th>Date</th><th>Duration</th><th>Traff.</th><th>Number</th><th>Extension</th><th>Ext. name</th><th>Cost</th><th>Type</th></tr><tr><td>05/03/09 22:55:34</td><td>00:00:14</td><td>Ext.</td><td>02987200</td><td>1008</td><td>Smith John</td><td>0.0112</td><td>Out</td></tr><tr><td>05/03/09 22:55:20</td><td>00:00:14</td><td>Ext.</td><td>02987200</td><td>1007</td><td>Neeil Mark</td><td>0.0112</td><td>Out</td></tr><tr><td>05/03/09 22:55:09</td><td>00:00:11</td><td>Ext.</td><td>02987200</td><td>1007</td><td>Neeil Mark</td><td>0.0088</td><td>Out</td></tr></table> |
| **Observations** | 3 records to be read bottom up:<br>- from 1007 to 02987200 with duration 11 seconds (conversation)<br>- from 1007 to 02987200 with the duration of the park<br>- from 1008 to 02987200 with duration 14 seconds (conversation) |

## 2.16 INCOMING CALL TO AN IP PHONE PICKED UP FROM ANOTHER IP PHONE

| Test Case Details | |
|---|---|
| **Description** | Incoming call to an IP Phone picked up from another IP Phone |
| **Test Setup** | Figure 1 |
| **Procedure** | • IP phone 1007 receives a call from PSTN number 02987200<br>• IP Phone 1008 takes the call selecting the PickUp softkey.<br>• IP Phone 1008 talks for 6 seconds and then hangs up. |
| **Result (available in the Call List Report)** | <table><tr><th>Date</th><th>Duration</th><th>Traff.</th><th>Number</th><th>Extension</th><th>Ext. name</th><th>Cost</th><th>Type</th></tr><tr><td>06/03/09 13:28:42</td><td>00:00:06</td><td>Ext.</td><td>02987200</td><td>1008</td><td>Smith John</td><td>0.0000</td><td>In</td></tr></table> |
| **Observations** | |

## 2.17 INTERNAL CALL BETWEEN IP PHONES WITH CONSULTATIVE TRANSFER TO A SIP PHONE

| Test Case Details | |
|---|---|
| **Description** | Internal call between IP Phones with consultative transfer to a SIP Phone |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1007, place a call to IP phone 1008<br>• After talking 15 seconds, IP Phone 1008, press Transfer to put phone 1007 on hold for consultation<br>• From IP phone 1008, place a call to SIP phone 2001 and talk 17 seconds<br>• From IP phone 1008 transfer the held call<br>• IP Phone 1007 and SIP Phone 2001 talk 23 seconds, then hang up. |

| | |
|---|---|
| **Result (available in the Call List Report)** | |

| Date | Duration | Traff. | Number | Extension | Ext. name | Cost | Type |
|---|---|---|---|---|---|---|---|
| 06/03/09 13:38:04 | 00:00:23 | Int. | 2001 | 1007 | Neeil Mark | 0.0000 | Out |
| 06/03/09 13:38:04 | 00:00:23 | Int. | 1007 | 2001 | Johnson Tom | 0.0000 | In |
| 06/03/09 13:37:47 | 00:00:17 | Int. | 2001 | 1008 | Smith John | 0.0000 | Out |
| 06/03/09 13:37:47 | 00:00:17 | Int. | 1008 | 2001 | Johnson Tom | 0.0000 | In |
| 06/03/09 13:37:27 | 00:00:37 | Int. | 1008 | 1007 | Neeil Mark | 0.0000 | Out |
| 06/03/09 13:37:27 | 00:00:37 | Int. | 1007 | 1008 | Smith John | 0.0000 | In |

| | |
|---|---|
| **Observations** | Read the sequence bottom up, 3 couple of records:<br>- Call from 1007 to 1008 where the duration is the sum of the conversation time + the hold time<br>- Call from 1008 to 2001 where the duration is the conversation time<br>- Call from 1007 to 2001 (transferred call) where the duration is the conversation time |

## 2.18 INTERNAL CALL BETWEEN IP PHONES WITH CONSULTATIVE TRANSFER TO A PSTN PHONE

| Test Case Details | |
|---|---|
| **Description** | Internal call between IP Phones with consultative transfer to a PSTN phone (Boss – Secretary) |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1007, place a call to IP phone 1008<br>• After talking 15 seconds, IP Phone 1008, press Transfer to put phone 1007 on hold for consultation<br>• From IP phone 1008, place a call to PSTN number 02987200 and talk 13 seconds<br>• From IP phone 1008 transfer the held call<br>• IP Phone 1007 and PSTN number 02987200 talk 40 seconds, then hang up. |
| **Result (available in the Call List Report)** | |

| Date | Duration | Traff. | Number | Extension | Ext. name | Cost | Type |
|---|---|---|---|---|---|---|---|
| 06/03/09 13:50:30 | 00:00:40 | Ext. | 02987200 | 1007 | Neeil Mark | 0.0433 | Out |
| 06/03/09 13:50:17 | 00:00:13 | Ext. | 02987200 | 1008 | Smith John | 0.0141 | Out |
| 06/03/09 13:49:49 | 00:00:41 | Int. | 1008 | 1007 | Neeil Mark | 0.0000 | Out |
| 06/03/09 13:49:49 | 00:00:41 | Int. | 1007 | 1008 | Smith John | 0.0000 | In |

| | |
|---|---|
| **Observations** | Read the sequence bottom up, 3 records:<br>- Call from 1007 to 1008 where the duration is the sum of the conversation time + the hold time<br>- Call from 1008 to 02987200 where the duration is the conversation time<br>- Call from 1007 to 02987200 (transferred call) where the duration is the conversation time |

## 2.19 INCOMING CALL TO AN IP PHONE WITH CONSULTATIVE TRANSFER TO ANOTHER IP PHONE

| Test Case Details | |
|---|---|
| **Description** | Incoming call to an IP Phone with consultative transfer to another IP Phone |
| **Test Setup** | Figure 1 |
| **Procedure** | • IP phone 1007 receives a call from PSTN number 02987200<br>• After talking 10 seconds, IP Phone 1007, press Transfer to put the PSTN phone 02987200 on hold for consultation<br>• From IP phone 1007, place a call to IP Phone 1008 and talk 13 seconds<br>• From IP phone 1007 transfer the held call<br>• IP Phone 1008 and PSTN number 02987200 talk 16 seconds, then hang up. |
| **Result (available in the Call List Report)** | Date / Duration / Traff. / Number / Extension / Ext. name / Cost / Type<br>06/03/09 14:05:17 / 00:00:16 / Ext. / 02987200 / 1008 / Smith John / 0.0000 / In<br>06/03/09 14:05:04 / 00:00:13 / Int. / 1008 / 1007 / Neeil Mark / 0.0000 / Out<br>06/03/09 14:05:04 / 00:00:13 / Int. / 1007 / 1008 / Smith John / 0.0000 / In<br>06/03/09 14:04:44 / 00:00:33 / Ext. / 02987200 / 1007 / Neeil Mark / 0.0000 / In |
| **Observations** | Read the sequence bottom up, 4 records:<br>- Call from 02987200 to 1007 where the duration is the sum of the conversation time + the hold time<br>- 2 records for the call from 1007 to 1008 where the duration is the conversation time<br>- Call from 02987200 to 1008 (transferred call) where the duration is the conversation time |

## 2.20 CONFERENCE CALL BETWEEN IP PHONES AND SIP PHONE

| Test Case Details | |
|---|---|
| **Description** | Conference call between IP phones and SIP phone |
| **Test Setup** | Figure 1 |
| **Procedure** | • From SIP phone 2001 place a call to IP phone 1008 and talk for 10 seconds.<br>• From IP phone 1008, press ‘Conference’ to place the SIP phone 2001 on hold.<br>• From IP Phone 1008 place a call to IP Phone 1007 and talk 10 seconds.<br>• On phone 1008 press ‘Conference’ to join all three parties together |

| | |
|---|---|
| | • All talk 19 seconds in conference.<br>• Hang up phone 1008<br>• SIP Phone 2001 and IP Phone 1007 talk 12 seconds, then hang up. |
| **Result (available in the Call List Report)** | |
| **Observations** | Read the sequence bottom up, 5 couple of records:<br>- Call from 2001 to 1008 where the duration is the sum of the conversation time + the hold time<br>- Call from 1008 to 1007 where the duration is the conversation time<br>- 2 couple of records (highlighted in the figure) showing all in Conference for 19 seconds. The call directions are respected, 1008 to 1007 and 2001 to 1008<br>- Call from 2001 to 1007 for 12 seconds after 1008 hanged up dropping the conference |

| Date | Duration | Traff. | Number | Extension | Ext. name | Cost | Type |
|---|---|---|---|---|---|---|---|
| 06/03/09 14:11:44 | 00:00:12 | Int. | 1007 | 2001 | Johnson Tom | 0.0000 | Out |
| 06/03/09 14:11:44 | 00:00:12 | Int. | 2001 | 1007 | Neeil Mark | 0.0000 | In |
| 06/03/09 14:11:25 | 00:00:19 | Int. | 1008 | 2001 | Johnson Tom | 0.0000 | Out |
| 06/03/09 14:11:25 | 00:00:19 | Int. | 2001 | 1008 | Smith John | 0.0000 | In |
| 06/03/09 14:11:25 | 00:00:19 | Int. | 1007 | 1008 | Smith John | 0.0000 | Out |
| 06/03/09 14:11:25 | 00:00:19 | Int. | 1008 | 1007 | Neeil Mark | 0.0000 | In |
| 06/03/09 14:11:15 | 00:00:10 | Int. | 1007 | 1008 | Smith John | 0.0000 | Out |
| 06/03/09 14:11:15 | 00:00:10 | Int. | 1008 | 1007 | Neeil Mark | 0.0000 | In |
| 06/03/09 14:10:57 | 00:00:27 | Int. | 1008 | 2001 | Johnson Tom | 0.0000 | Out |
| 06/03/09 14:10:57 | 00:00:27 | Int. | 2001 | 1008 | Smith John | 0.0000 | In |

## 2.21 CONFERENCE CALL BETWEEN IP PHONES AND INCOMING PSTN PHONE

| Test Case Details | |
|---|---|
| **Description** | Conference call between IP phones and incoming PSTN phone |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1008 receives a call from PSTN phone 02987200 and talk for 20 seconds.<br>• From IP phone 1008, press ‘Conference’ to place the PSTN phone on hold.<br>• From IP Phone 1008 place a call to IP Phone 1007 and talk 8 seconds.<br>• On phone 1008 press ‘Conference’ to join all three parties together<br>• All talk 10 seconds in conference.<br>• Hang up phone 1008<br>• IP Phone 1007 and PSTN phone 02987200 talk 13 seconds, then hang up. |

| | |
|---|---|
| **Result (available in the Call List Report)** | |

| Date | Duration | Traff. | Number | Extension | Department | Cost | Type |
|---|---|---|---|---|---|---|---|
| 10/03/09 17:18:09 | 00:00:10 | Ext. | 02987200 | 1007 | | 0.0000 | In |
| 10/03/09 17:18:03 | 00:00:06 | Int. | 1007 | 1008 | | 0.0000 | Out |
| 10/03/09 17:18:03 | 00:00:06 | Int. | 1008 | 1007 | | 0.0000 | In |
| 10/03/09 17:18:02 | 00:00:07 | Ext. | 02987200 | 1008 | | 0.0000 | In |
| 10/03/09 17:17:58 | 00:00:04 | Int. | 1007 | 1008 | | 0.0000 | Out |
| 10/03/09 17:17:58 | 00:00:04 | Int. | 1008 | 1007 | | 0.0000 | In |
| 10/03/09 17:17:46 | 00:00:16 | Ext. | 02987200 | 1008 | | 0.0000 | In |

| | |
|---|---|
| **Observations** | Read the sequence bottom up:<br>- Call from 02987200 to 1008 where the duration is the sum of the conversation time + the hold time<br>- Call from 1008 to 1007 where the duration is the conversation time (10 seconds)<br>- 3 records showing all in Conference for 20 seconds. The call directions are respected, 02987200 to 1008 and 1008 to 1007<br>- Call between 02987200 to 1007 |

## 2.22 CONFERENCE CALL BETWEEN IP PHONES AND OUTGOING PSTN PHONE

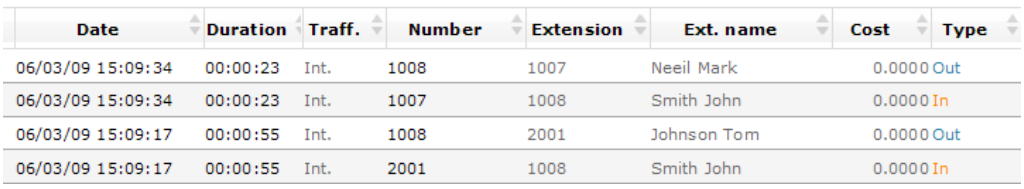
| Test Case Details | |
|---|---|
| **Description** | Conference call between IP phones and outgoing PSTN phone |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1008 place a call to PSTN phone 02987200 and talk for 20 seconds.<br>• From IP phone 1008, press ‘Conference’ to place the PSTN phone on hold.<br>• From IP Phone 1008 place a call to IP Phone 1007 and talk 8 seconds.<br>• On phone 1008 press ‘Conference’ to join all three parties together<br>• All talk 10 seconds in conference.<br>• Hang up phone 1008<br>• IP Phone 1007 and PSTN phone 02987200 talk 13 seconds, then hang up. |
| **Result (available in the Call List Report)** | |

| Date | Duration | Traff. | Number | Extension | Ext. name | Cost | Type |
|---|---|---|---|---|---|---|---|
| 06/03/09 16:29:20 | 00:00:13 | Ext. | 02987200 | 1007 | Neeil Mark | 0.0141 | Out |
| 06/03/09 16:29:10 | 00:00:10 | Ext. | 02987200 | 1008 | Smith John | 0.0108 | Out |
| 06/03/09 16:29:10 | 00:00:10 | Int. | 1007 | 1008 | Smith John | 0.0000 | Out |
| 06/03/09 16:29:10 | 00:00:10 | Int. | 1008 | 1007 | Neeil Mark | 0.0000 | In |
| 06/03/09 16:29:02 | 00:00:08 | Int. | 1007 | 1008 | Smith John | 0.0000 | Out |
| 06/03/09 16:29:02 | 00:00:08 | Int. | 1008 | 1007 | Neeil Mark | 0.0000 | In |
| 06/03/09 16:28:39 | 00:00:31 | Ext. | 02987200 | 1008 | Smith John | 0.0336 | Out |

| | |
|---|---|
| **Observations** | Read the sequence bottom up:<br>- Call from 1008 to 02987200 where the duration is the sum of the |

| | |
|---|---|
| | conversation time + the hold time<br>- Call from 1008 to 1007 where the duration is the conversation time (10 seconds)<br>- 3 records showing all in Conference for 20 seconds. The call directions are respected, 1008 to 02987200 and 1008 to 1007<br>- Call between 1007 and 02987200 |

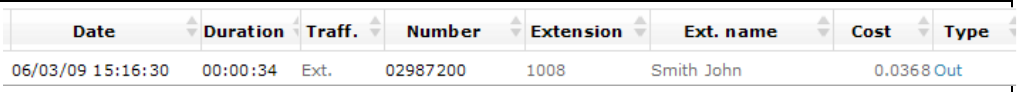
## 2.23 MULTIPLE CALLS PER LINE (CALL WAITING)

| Test Case Details | |
|---|---|
| **Description** | Multiple calls per line (Call waiting) |
| **Test Setup** | Figure 1 |
| **Procedure** | • Place a call from SIP phone 2001 to an IP phone 1008<br>• Place another call from IP phone 1007 to IP phone 1008 (answer the incoming call, placing the original call on hold)<br>• Hangup the current call on IP phone 1008 and resume the call with SIP phone 2001<br>• Hang up. |
| **Result (available in the Call List Report)** |  |
| **Observations** | Read the sequence bottom up, 2 couple of records:<br>- Call from 2001 to 1008 where the duration is the sum of the conversation time + the hold time<br>- Call from 1007 to 1008 where the duration is the conversation time |

| Date | Duration | Traff. | Number | Extension | Ext. name | Cost | Type |
|---|---|---|---|---|---|---|---|
| 06/03/09 15:09:34 | 00:00:23 | Int. | 1008 | 1007 | Neeil Mark | 0.0000 | Out |
| 06/03/09 15:09:34 | 00:00:23 | Int. | 1007 | 1008 | Smith John | 0.0000 | In |
| 06/03/09 15:09:17 | 00:00:55 | Int. | 1008 | 2001 | Johnson Tom | 0.0000 | Out |
| 06/03/09 15:09:17 | 00:00:55 | Int. | 2001 | 1008 | Smith John | 0.0000 | In |

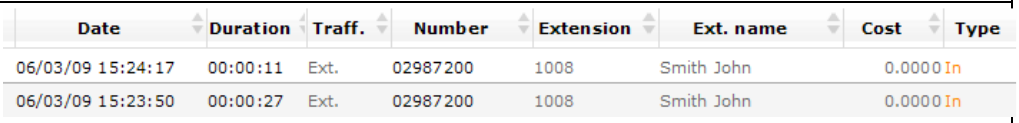
## 2.24 BARGE, IP PHONE, ORIGINATED CALL

| Test Case Details | |
|---|---|
| **Description** | Barge, IP Phone, Originated Call |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone (A) with shared line 1008 place a call to PSTN phone 02987200 and talk 10 seconds<br>• From another IP phone (B) with the 1008 shared line, Barge the established call, talk 14 seconds<br>• From the target phone of the barge hang up (A) |

| | |
|---|---|
| | • Talk additional 10 seconds and hang up Phone B |
| **Result (available in the Call List Report)** |  |
| **Observations** | A single record is displayed, related to the call from 1008 to 02987200 where the duration of 34 seconds is the sum of the Phone A conversation + barged conversation + the Phone B conversation |



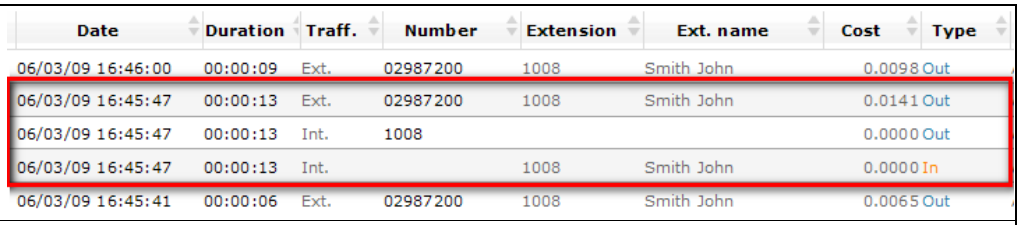
## 2.25 BARGE, IP PHONE, TERMINATED CALL

| Test Case Details | |
|---|---|
| **Description** | Barge, IP Phone, Terminated Call |
| **Test Setup** | Figure 1 |
| **Procedure** | • IP phone (A) with shared line 1008 receives a call from PSTN phone 02987200 and talk 10 seconds<br>• From another IP phone (B) with the 1008 shared line, Barge the established call, talk 20 seconds<br>• From the target phone of the barge hang up (A)<br>• Talk additional 5 seconds and hang up Phone B |
| **Result (available in the Call List Report)** |  |
| **Observations** | Read the sequence bottom up |

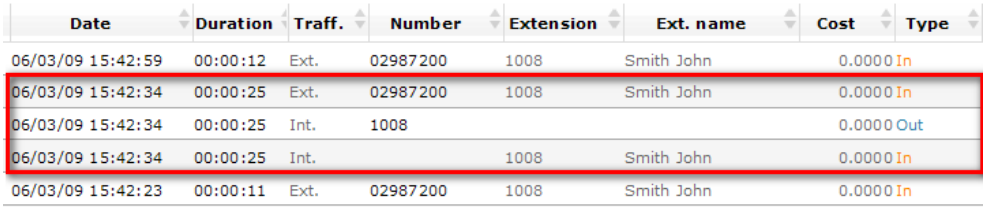


## 2.26 CBARGE, IP PHONE, ORIGINATED CALL

| Test Case Details | |
|---|---|
| **Description** | cBarge, IP Phone, Originated Call |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone (A) with shared line 1008 place a call to PSTN phone 02987200 and talk 6 seconds<br>• From another IP phone (B) with the 1008 shared line, cBarge the established call, talk 13 seconds<br>• From the target phone of the barge hang up (A)<br>• Talk additional 9 seconds and hang up Phone B |

| | |
|---|---|
| **Result (available in the Call List Report)** |  <br>Date / Duration / Traff. / Number / Extension / Ext. name / Cost / Type<br>06/03/09 16:46:00 00:00:09 Ext. 02987200 1008 Smith John 0.0098 Out<br>06/03/09 16:45:47 00:00:13 Ext. 02987200 1008 Smith John 0.0141 Out<br>06/03/09 16:45:47 00:00:13 Int. 1008 0.0000 Out<br>06/03/09 16:45:47 00:00:13 Int. 1008 Smith John 0.0000 In<br>06/03/09 16:45:41 00:00:06 Ext. 02987200 1008 Smith John 0.0065 Out |
| **Observations** | Read the sequence bottom up:<br>- Call from 1008 to 02987200 where the duration is the conversation time (6 seconds)<br>- 3 records showing all in Conference for 16 seconds. The call directions are respected, 1008 to 02987200 and 1008 to the void number (cBarge bridge)<br>- Call between PhoneB and 02987200 for additional 9 seconds |

## 2.27 CBARGE, IP PHONE, TERMINATED CALL

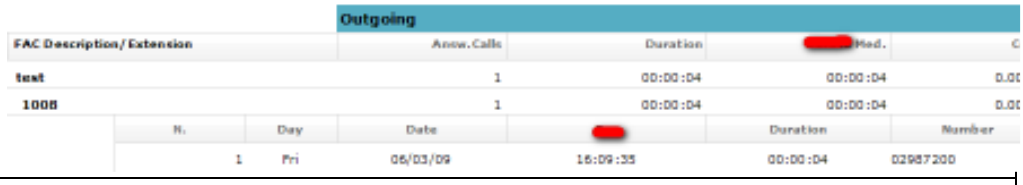
| **Test Case Details** | |
|---|---|
| **Description** | cBarge, IP Phone, Terminated Call |
| **Test Setup** | Figure 1 |
| **Procedure** | • IP phone (A) with shared line 1008 receives a call from PSTN phone 02987200 and talk 11 seconds<br>• From another IP phone (B) with the 1008 shared line, Barge the established call, talk 20 seconds<br>• From the target phone of the barge hang up (A)<br>• Talk additional 12 seconds and hang up Phone B |
| **Result (available in the Call List Report)** |  <br>Date / Duration / Traff. / Number / Extension / Ext. name / Cost / Type<br>06/03/09 15:42:59 00:00:12 Ext. 02987200 1008 Smith John 0.0000 In<br>06/03/09 15:42:34 00:00:25 Ext. 02987200 1008 Smith John 0.0000 In<br>06/03/09 15:42:34 00:00:25 Int. 1008 0.0000 Out<br>06/03/09 15:42:34 00:00:25 Int. 1008 Smith John 0.0000 In<br>06/03/09 15:42:23 00:00:11 Ext. 02987200 1008 Smith John 0.0000 In |
| **Observations** | Read the sequence bottom up:<br>- Call from 02987200 to 1008 where the duration is the conversation time (11 seconds)<br>- 3 records showing all in Conference for 25 seconds (highlighted). The call directions are respected, 02987200 to 1008 and 1008 to the void number (cBarge bridge)<br>- Call from 02987200 to 1008 where the duration is the conversation time (12 seconds) |

## 2.28 EXTENSION MOBILITY

| Test Case Details | |
|---|---|
| **Description** | Extension Mobility |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP Phone A log onto extension mobility:<br>username psdtuser<br>password 123456<br>• IP Phone A takes number 1008<br>• Make a call from IP Phone A to PSTN Phone 02987200 |
| **Result (available in the Call List Report)** | Date \| Duration \| Traff. \| Number \| Extension \| Ext. name \| Cost \| Type<br>06/03/09 15:54:38 \| 00:00:05 \| Ext. \| 02987200 \| 1008 \| Smith John \| 0.0054 \| Out |
| **Observations** | Correctly reported |

## 2.29 IP PHONE CALL ROUTES USING FAC CODES AND THE HASH KEY

| Test Case Details | |
|---|---|
| **Description** | IP Phone call routes using FAC codes and the hash key |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1008, place a call to the FAC enabled PSTN number 02987200<br>• After the beep insert the FAC code number 8888 following by #, corresponding to the FAC code name “TEST”<br>• Talk and after a brief period, hang up. |
| **Result (available in the Call List Report)** | |

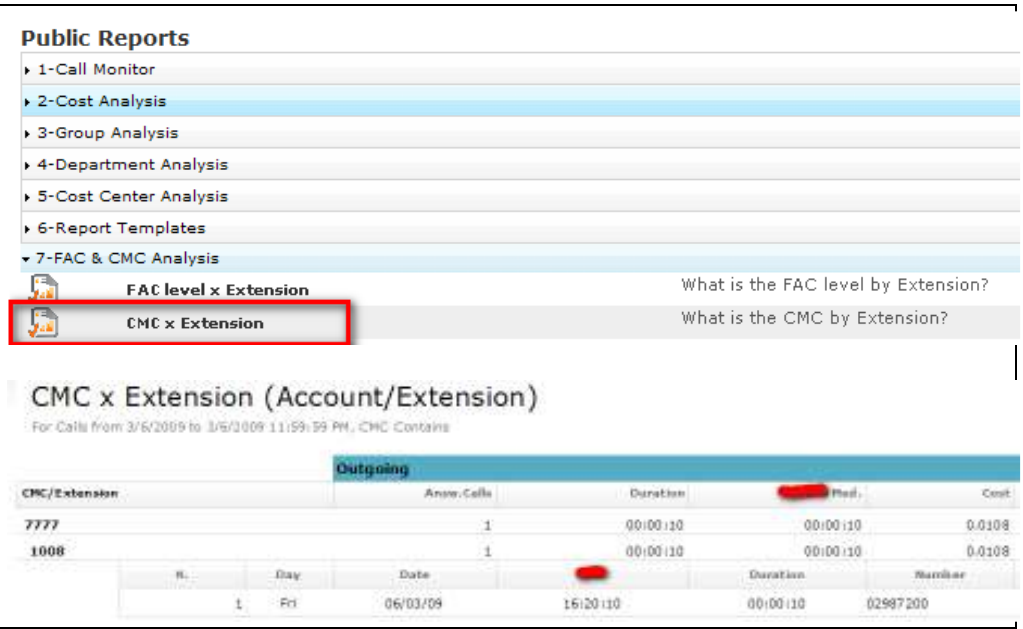
| | |
|---|---|
| |  |
| **Observations** | |

## 2.30 CALL WITH AN INCORRECT FAC CODE

| **Test Case Details** | |
|---|---|
| **Description** | Call with an incorrect FAC code |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1008, place a call to the FAC enabled PSTN number 02987200<br>• After the beep insert the incorrect FAC code number 4312 following by #<br>• Call is NOT established |
| **Result (available in the Call List Report)** | No call reported |
| **Observations** | |

## 2.31 IP PHONE CALL ROUTES USING CMC CODES AND THE HASH KEY

| **Test Case Details** | |
|---|---|
| **Description** | IP Phone call routes using CMC codes and the hash key |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1008, place a call to the CMC enabled PSTN number 02987200<br>• After the beep insert the CMC code number 7777 following by #, corresponding to the CMC code name “CMC TEST”<br>• Talk and after a brief period, hang up. |

| | |
|---|---|
| **Result (available in the Call List Report)** |  |
| **Observations** | |

## 2.32 CALL WITH AN INCORRECT CMC CODE

| Test Case Details | |
|---|---|
| **Description** | Call with an incorrect CMC code |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1008, place a call to the CMC enabled PSTN number 02987200<br>• After the beep insert the incorrect CMC code number 4312 following by #<br>• Call is NOT established |
| **Result (available in the Call List Report)** | No call reported |
| **Observations** | |

# 3 SUPPORTED CALLS ON CUCM 7.X

## 3.1 CALL FROM AN IP PHONE TO ANOTHER IP PHONE

| Test Case Details | |
|---|---|
| **Description** | Internal call from an IP Phone to another IP phone |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1008, place a call to IP phone 1007<br>• Answer the call and after a brief period, hang up. |
| **Result (available in the Call List Report)** | Date \| Duration \| Traff. \| Number \| Extension \| Ext. name \| Cost \| Type<br>05/03/09 18:56:52 \| 00:00:05 \| Int. \| 1007 \| 1008 \| Smith John \| 0.0000 \| Out<br>05/03/09 18:56:52 \| 00:00:05 \| Int. \| 1008 \| 1007 \| Neeil Mark \| 0.0000 \| In |
| **Observations** | Each internal calls between extensions (local or remote) is reported with two records as it represents an outgoing internal for the caller and an incoming internal for the extension receiving the call |

## 3.2 INTERNAL CALL FROM AN IP PHONE TO A SIP PHONE

| Test Case Details | |
|---|---|
| **Description** | Internal call from an IP Phone to a SIP phone |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1008, place a call to IP phone 2001<br>• Answer the call and after a brief period, hang up. |
| **Result (available in the Call List Report)** | Date \| Duration \| Traff. \| Number \| Extension \| Ext. name \| Cost \| Type<br>05/03/09 19:21:40 \| 00:00:06 \| Int. \| 2001 \| 1008 \| Smith John \| 0.0000 \| Out<br>05/03/09 19:21:40 \| 00:00:06 \| Int. \| 1008 \| 2001 \| Johnson Tom \| 0.0000 \| In |
| **Observations** | Each internal calls between extensions (local or remote) is reported with two records as it represents an outgoing internal for the caller and an incoming internal for the extension receiving the call |

## 3.3 INTERNAL CALL TO AN IP NUMBER UNOBTAINABLE

| Test Case Details | |
|---|---|
| **Description** | Internal call to an IP number unobtainable |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1008, place a call to a number outside the CCM range that doesn't exist.<br>• Unobtainable call |
| **Result (available in the Call List Report)** | No call reported |
| **Observations** | |

## 3.4 INTERNAL CALL TO A BUSY IP EXTENSION

| Test Case Details | |
|---|---|
| **Description** | Internal call to a busy IP extension |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1008, place a call to the busy IP phone 1007<br>• Answer the call and after a brief period, hang up. |
| **Result (available in the Call List Report)** | No call reported (the destIPAddress is 0 so call is discarded) |
| **Observations** | |

## 3.5 OUTGOING CALL FROM AN IP PHONE TO PSTN

| Test Case Details | |
|---|---|
| **Description** | Outgoing call from an IP Phone to PSTN |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1008, place a call to the PSTN number 02987200<br>• Answer the call and after a brief period, hang up. |

| | |
|---|---|
| **Result (available in the Call List Report)** | Date \| Duration \| Traff. \| Number \| Extension \| Ext. name \| Cost \| Typ<br>05/03/09 20:25:28 \| 00:00:08 \| Ext. \| 02987200 \| 1008 \| Smith John \| 0.0064 \| Out |
| **Observations** | |

## 3.6 OUTGOING CALL TO A BUSY PSTN NUMBER

| Test Case Details | |
|---|---|
| **Description** | Outgoing call to a busy PSTN number |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1008, place a call to the PSTN number 02987200<br>• Busy tone |
| **Result (available in the Call List Report)** | Date \| Duration \| Traff. \| Number \| Extension \| Ext. name \| Cost \| Typ<br>05/03/09 20:34:18 \| 00:00:00 \| Ext. \| 02987200 \| 1008 \| Smith John \| 0.0000 \| Out |
| **Observations** | |

## 3.7 OUTGOING CALL TO A PSTN NUMBER UNOBTAINABLE

| Test Case Details | |
|---|---|
| **Description** | Outgoing call to a PSTN number unobtainable |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1008, place a call to a not existing PSTN number, ex. 02101010<br>• Unobtainable call |
| **Result (available in the Call List Report)** | |
| **Observations** | |

## 3.8 INCOMING CALL FROM PSTN TO AN IP PHONE

| Test Case Details |
|---|

| | |
|---|---|
| **Description** | Incoming call from PSTN to an IP Phone |
| **Test Setup** | Figure 1 |
| **Procedure** | • IP phone 1007 receives a call from PSTN number 02987200<br>• Answer the call and after a brief period, hang up. |
| **Result (available in the Call List Report)** | Date \| Duration \| Traff. \| Number \| Extension \| Ext. name \| Cost \| Type<br>05/03/09 20:47:10 \| 00:00:05 \| Ext. \| 02987200 \| 1007 \| Neeil Mark \| 0.0000 \| In |
| **Observations** | |

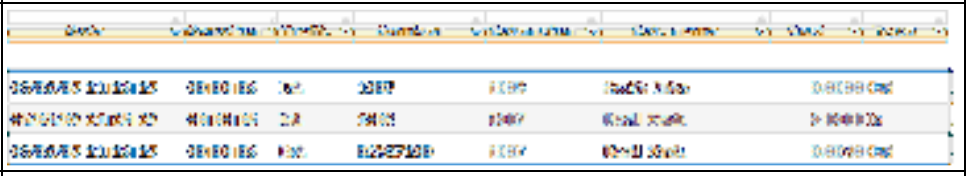
## 3.9 INCOMING CALL FROM PSTN TO A BUSY IP PHONE

| Test Case Details | |
|---|---|
| **Description** | Incoming call from PSTN to a busy IP Phone |
| **Test Setup** | Figure 1 |
| **Procedure** | • IP phone 1007 receives a call from PSTN number 02987200<br>• Caller hears busy tone |
| **Result (available in the Call List Report)** | No call reported (the destIPAddress is 0 so call is discarded) |
| **Observations** | |

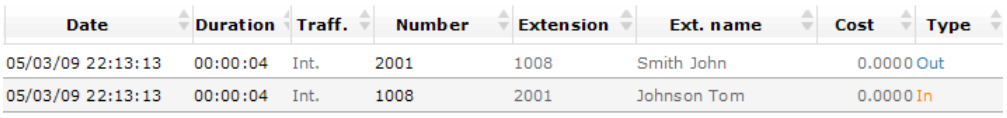
## 3.10 INCOMING CALL FROM PSTN TO AN IP PHONE WITHOUT ANSWER

| Test Case Details | |
|---|---|
| **Description** | Incoming call from PSTN to an IP Phone without answer |
| **Test Setup** | Figure 1 |
| **Procedure** | • IP phone 1007 receives a call from PSTN number 02987200<br>• Call is no answered. |
| **Result (available in the Call List Report)** | |
| **Observations** | No call reported |

## 3.11 INTERNAL CALL TO AN IP PHONE FORWARDED TO A PSTN PHONE

| Test Case Details | |
|---|---|
| **Description** | Internal call to an IP Phone forwarded to a PSTN phone |
| **Test Setup** | Figure 1 |
| **Procedure** | • On IP phone 1007 set the call forward to the PSTN number 02987200<br>• From IP phone 1008, place a call to IP phone 1007<br>• Answer the call at 02987200 and after a brief period, hang up |
| **Result (available in the Call List Report)** |  |
| **Observations** | The PSTN call is correctly billed to the forwarding party. |

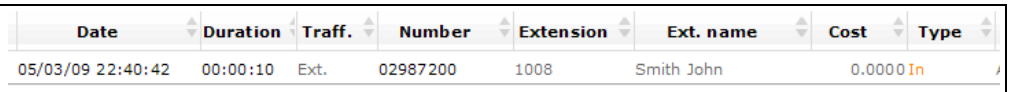
## 3.12 INTERNAL CALL TO AN IP PHONE FORWARDED TO A SIP PHONE

| Test Case Details | |
|---|---|
| **Description** | Internal call to an IP Phone forwarded to a SIP phone |
| **Test Setup** | Figure 1 |
| **Procedure** | • On IP phone 1007 set the call forward to the SIP Phone 2001<br>• From IP phone 1008, place a call to IP phone 1007<br>• Answer the call on 2001 and after a brief period, hang up |
| **Result (available in the Call List Report)** |  |
| **Observations** | |

| Date | Duration | Traff. | Number | Extension | Ext. name | Cost | Type |
|---|---|---|---|---|---|---|---|
| 05/03/09 22:13:13 | 00:00:04 | Int. | 2001 | 1008 | Smith John | 0.0000 | Out |
| 05/03/09 22:13:13 | 00:00:04 | Int. | 1008 | 2001 | Johnson Tom | 0.0000 | In |

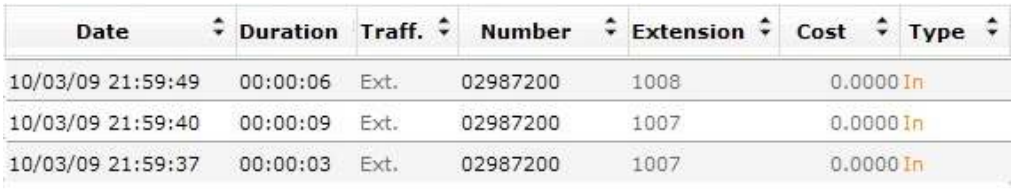
## 3.13 INCOMING CALL TO AN IP PHONE FORWARDED TO ANOTHER IP PHONE

| Test Case Details | |
|---|---|
| **Description** | Incoming call to an IP Phone forwarded to another IP phone |
| **Test Setup** | Figure 1 |
| **Procedure** | • On IP phone 1007 set the call forward to the IP Phone 1008<br>• IP phone 1007 receives a call from PSTN number 02987200<br>• Answer the call at 1008 and after a brief period, hang up |

| | |
|---|---|
| **Result (available in the Call List Report)** |  |
| **Observations** | |

| Date | Duration | Traff. | Number | Extension | Ext. name | Cost | Type |
|---|---|---|---|---|---|---|---|
| 05/03/09 22:40:42 | 00:00:10 | Ext. | 02987200 | 1008 | Smith John | 0.0000 | In |

## 3.14 INCOMING CALL TO AN IP PHONE, PARKED AND RETRIEVED FROM ANOTHER IP PHONE

| Test Case Details | |
|---|---|
| **Description** | Incoming call to an IP Phone, parked and retrieved from another IP phone |
| **Test Setup** | Figure 1 |
| **Procedure** | • IP phone 1007 receives a call from PSTN number 02987200<br>• Answer the call and after a brief period, park the call through the softkey.<br>• After 10 seconds, IP phone 1008 dial the call park number and retrieve the call.<br>• IP Phone 1008 talks for 12 seconds and then hangs up. |
| **Result (available in the Call List Report)** |  |
| **Observations** | Read the sequence bottom up |

| Date | Duration | Traff. | Number | Extension | Cost | Type |
|---|---|---|---|---|---|---|
| 10/03/09 21:59:49 | 00:00:06 | Ext. | 02987200 | 1008 | 0.0000 | In |
| 10/03/09 21:59:40 | 00:00:09 | Ext. | 02987200 | 1007 | 0.0000 | In |
| 10/03/09 21:59:37 | 00:00:03 | Ext. | 02987200 | 1007 | 0.0000 | In |

## 3.15 OUTGOING CALL TO TO A PSTN NUMBER, PARKED AND RETRIEVED FROM ANOTHER IP PHONE

| Test Case Details | |
|---|---|
| **Description** | Outgoing call to to a PSTN number, parked and retrieved from another IP phone |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1007 place a call to PSTN number 02987200<br>• Talk for 11 seconds, park the call through the softkey.<br>• After 14 seconds, IP phone 1008 dial the call park number and retrieve the call.<br>• IP Phone 1008 talks for 14 seconds and then hangs up. |

| | |
|---|---|
| **Result (available in the Call List Report)** | Date \| Duration \| Traff. \| Number \| Extension \| Ext. name \| Cost \| Type<br>05/03/09 22:55:34 \| 00:00:14 \| Ext. \| 02987200 \| 1008 \| Smith John \| 0.0112 \| Out<br>05/03/09 22:55:20 \| 00:00:14 \| Ext. \| 02987200 \| 1007 \| Neeil Mark \| 0.0112 \| Out<br>05/03/09 22:55:09 \| 00:00:11 \| Ext. \| 02987200 \| 1007 \| Neeil Mark \| 0.0088 \| Out |
| **Observations** | 3 records to be read bottom up:<br>- from 1007 to 02987200 with duration 11 seconds (conversation)<br>- from 1007 to 02987200 with the duration of the park<br>- from 1008 to 02987200 with duration 14 seconds (conversation) |

## 3.16 INCOMING CALL TO AN IP PHONE PICKED UP FROM ANOTHER IP PHONE

| Test Case Details | |
|---|---|
| **Description** | Incoming call to an IP Phone picked up from another IP Phone |
| **Test Setup** | Figure 1 |
| **Procedure** | • IP phone 1007 receives a call from PSTN number 02987200<br>• IP Phone 1008 takes the call selecting the PickUp softkey.<br>• IP Phone 1008 talks for 6 seconds and then hangs up. |
| **Result (available in the Call List Report)** | Date \| Duration \| Traff. \| Number \| Extension \| Ext. name \| Cost \| Type<br>06/03/09 13:28:42 \| 00:00:06 \| Ext. \| 02987200 \| 1008 \| Smith John \| 0.0000 \| In |
| **Observations** | |

## 3.17 INTERNAL CALL BETWEEN IP PHONES WITH CONSULTATIVE TRANSFER TO A SIP PHONE

| Test Case Details | |
|---|---|
| **Description** | Internal call between IP Phones with consultative transfer to a SIP Phone |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1007, place a call to IP phone 1008<br>• After talking 15 seconds, IP Phone 1008, press Transfer to put phone 1007 on hold for consultation<br>• From IP phone 1008, place a call to SIP phone 2001 and talk 17 seconds<br>• From IP phone 1008 transfer the held call<br>• IP Phone 1007 and SIP Phone 2001 talk 23 seconds, then hang up. |

| | |
|---|---|
| **Result (available in the Call List Report)** | |

| Date | Duration | Traff. | Number | Extension | Ext. name | Cost | Type |
|---|---|---|---|---|---|---|---|
| 06/03/09 13:38:04 | 00:00:23 | Int. | 2001 | 1007 | Neeil Mark | 0.0000 | Out |
| 06/03/09 13:38:04 | 00:00:23 | Int. | 1007 | 2001 | Johnson Tom | 0.0000 | In |
| 06/03/09 13:37:47 | 00:00:17 | Int. | 2001 | 1008 | Smith John | 0.0000 | Out |
| 06/03/09 13:37:47 | 00:00:17 | Int. | 1008 | 2001 | Johnson Tom | 0.0000 | In |
| 06/03/09 13:37:27 | 00:00:37 | Int. | 1008 | 1007 | Neeil Mark | 0.0000 | Out |
| 06/03/09 13:37:27 | 00:00:37 | Int. | 1007 | 1008 | Smith John | 0.0000 | In |

| | |
|---|---|
| **Observations** | Read the sequence bottom up, 3 couple of records:<br>- Call from 1007 to 1008 where the duration is the sum of the conversation time + the hold time<br>- Call from 1008 to 2001 where the duration is the conversation time<br>- Call from 1007 to 2001 (transferred call) where the duration is the conversation time |

## 3.18 INTERNAL CALL BETWEEN IP PHONES WITH CONSULTATIVE TRANSFER TO A PSTN PHONE

| Test Case Details | |
|---|---|
| **Description** | Internal call between IP Phones with consultative transfer to a PSTN phone (Boss – Secretary) |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1007, place a call to IP phone 1008<br>• After talking 15 seconds, IP Phone 1008, press Transfer to put phone 1007 on hold for consultation<br>• From IP phone 1008, place a call to PSTN number 02987200 and talk 13 seconds<br>• From IP phone 1008 transfer the held call<br>• IP Phone 1007 and PSTN number 02987200 talk 40 seconds, then hang up. |
| **Result (available in the Call List Report)** | |

| Date | Duration | Traff. | Number | Extension | Ext. name | Cost | Type |
|---|---|---|---|---|---|---|---|
| 06/03/09 13:50:30 | 00:00:40 | Ext. | 02987200 | 1007 | Neeil Mark | 0.0433 | Out |
| 06/03/09 13:50:17 | 00:00:13 | Ext. | 02987200 | 1008 | Smith John | 0.0141 | Out |
| 06/03/09 13:49:49 | 00:00:41 | Int. | 1008 | 1007 | Neeil Mark | 0.0000 | Out |
| 06/03/09 13:49:49 | 00:00:41 | Int. | 1007 | 1008 | Smith John | 0.0000 | In |

| | |
|---|---|
| **Observations** | Read the sequence bottom up, 3 records:<br>- Call from 1007 to 1008 where the duration is the sum of the conversation time + the hold time<br>- Call from 1008 to 02987200 where the duration is the conversation time<br>- Call from 1007 to 02987200 (transferred call) where the duration is the conversation time |

## 3.19 INCOMING CALL TO AN IP PHONE WITH CONSULTATIVE TRANSFER TO ANOTHER IP PHONE

| Test Case Details | |
|---|---|
| **Description** | Incoming call to an IP Phone with consultative transfer to another IP Phone |
| **Test Setup** | Figure 1 |
| **Procedure** | • IP phone 1007 receives a call from PSTN number 02987200<br>• After talking 10 seconds, IP Phone 1007, press Transfer to put the PSTN phone 02987200 on hold for consultation<br>• From IP phone 1007, place a call to IP Phone 1008 and talk 13 seconds<br>• From IP phone 1007 transfer the held call<br>• IP Phone 1008 and PSTN number 02987200 talk 16 seconds, then hang up. |
| **Result (available in the Call List Report)** | Date / Duration / Traff. / Number / Extension / Ext. name / Cost / Type<br>06/03/09 14:05:17 / 00:00:16 / Ext. / 02987200 / 1008 / Smith John / 0.0000 / In<br>06/03/09 14:05:04 / 00:00:13 / Int. / 1008 / 1007 / Neeil Mark / 0.0000 / Out<br>06/03/09 14:05:04 / 00:00:13 / Int. / 1007 / 1008 / Smith John / 0.0000 / In<br>06/03/09 14:04:44 / 00:00:33 / Ext. / 02987200 / 1007 / Neeil Mark / 0.0000 / In |
| **Observations** | Read the sequence bottom up, 4 records:<br>- Call from 02987200 to 1007 where the duration is the sum of the conversation time + the hold time<br>- 2 records for the call from 1007 to 1008 where the duration is the conversation time<br>- Call from 02987200 to 1008 (transferred call) where the duration is the conversation time |

## 3.20 CONFERENCE CALL BETWEEN IP PHONES AND SIP PHONE

| Test Case Details | |
|---|---|
| **Description** | Conference call between IP phones and SIP phone |
| **Test Setup** | Figure 1 |
| **Procedure** | • From SIP phone 2001 place a call to IP phone 1008 and talk for 10 seconds.<br>• From IP phone 1008, press ‘Conference’ to place the SIP phone 2001 on hold.<br>• From IP Phone 1008 place a call to IP Phone 1007 and talk 10 seconds.<br>• On phone 1008 press ‘Conference’ to join all three parties together |

| | |
|---|---|
| | • All talk 19 seconds in conference.<br>• Hang up phone 1008<br>• SIP Phone 2001 and IP Phone 1007 talk 12 seconds, then hang up. |
| **Result (available in the Call List Report)** | |
| **Observations** | Read the sequence bottom up, 5 couple of records:<br>- Call from 2001 to 1008 where the duration is the sum of the conversation time + the hold time<br>- Call from 1008 to 1007 where the duration is the conversation time<br>- 2 couple of records (highlighted in the figure) showing all in Conference for 19 seconds. The call directions are respected, 1008 to 1007 and 2001 to 1008<br>- Call from 2001 to 1007 for 12 seconds after 1008 hanged up dropping the conference |

| Date | Duration | Traff. | Number | Extension | Ext. name | Cost | Type |
|---|---|---|---|---|---|---|---|
| 06/03/09 14:11:44 | 00:00:12 | Int. | 1007 | 2001 | Johnson Tom | 0.0000 | Out |
| 06/03/09 14:11:44 | 00:00:12 | Int. | 2001 | 1007 | Neeil Mark | 0.0000 | In |
| 06/03/09 14:11:25 | 00:00:19 | Int. | 1008 | 2001 | Johnson Tom | 0.0000 | Out |
| 06/03/09 14:11:25 | 00:00:19 | Int. | 2001 | 1008 | Smith John | 0.0000 | In |
| 06/03/09 14:11:25 | 00:00:19 | Int. | 1007 | 1008 | Smith John | 0.0000 | Out |
| 06/03/09 14:11:25 | 00:00:19 | Int. | 1008 | 1007 | Neeil Mark | 0.0000 | In |
| 06/03/09 14:11:15 | 00:00:10 | Int. | 1007 | 1008 | Smith John | 0.0000 | Out |
| 06/03/09 14:11:15 | 00:00:10 | Int. | 1008 | 1007 | Neeil Mark | 0.0000 | In |
| 06/03/09 14:10:57 | 00:00:27 | Int. | 1008 | 2001 | Johnson Tom | 0.0000 | Out |
| 06/03/09 14:10:57 | 00:00:27 | Int. | 2001 | 1008 | Smith John | 0.0000 | In |

## 3.21 CONFERENCE CALL BETWEEN IP PHONES AND INCOMING PSTN PHONE

| Test Case Details | |
|---|---|
| **Description** | Conference call between IP phones and incoming PSTN phone |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1008 receives a call from PSTN phone 02987200 and talk for 20 seconds.<br>• From IP phone 1008, press ‘Conference’ to place the PSTN phone on hold.<br>• From IP Phone 1008 place a call to IP Phone 1007 and talk 8 seconds.<br>• On phone 1008 press ‘Conference’ to join all three parties together<br>• All talk 10 seconds in conference.<br>• Hang up phone 1008<br>• IP Phone 1007 and PSTN phone 02987200 talk 13 seconds, then hang up. |

| | |
|---|---|
| **Result (available in the Call List Report)** | |

| Date | Duration | Traff. | Number | Extension | Department | Cost | Type |
|---|---|---|---|---|---|---|---|
| 10/03/09 17:18:09 | 00:00:10 | Ext. | 02987200 | 1007 | | 0.0000 | In |
| 10/03/09 17:18:03 | 00:00:06 | Int. | 1007 | 1008 | | 0.0000 | Out |
| 10/03/09 17:18:03 | 00:00:06 | Int. | 1008 | 1007 | | 0.0000 | In |
| 10/03/09 17:18:02 | 00:00:07 | Ext. | 02987200 | 1008 | | 0.0000 | In |
| 10/03/09 17:17:58 | 00:00:04 | Int. | 1007 | 1008 | | 0.0000 | Out |
| 10/03/09 17:17:58 | 00:00:04 | Int. | 1008 | 1007 | | 0.0000 | In |
| 10/03/09 17:17:46 | 00:00:16 | Ext. | 02987200 | 1008 | | 0.0000 | In |

| | |
|---|---|
| **Observations** | Read the sequence bottom up:<br>- Call from 02987200 to 1008 where the duration is the sum of the conversation time + the hold time<br>- Call from 1008 to 1007 where the duration is the conversation time (10 seconds)<br>- 3 records showing all in Conference for 20 seconds. The call directions are respected, 02987200 to 1008 and 1008 to 1007<br>- Call between 02987200 to 1007 |

## 3.22 CONFERENCE CALL BETWEEN IP PHONES AND OUTGOING PSTN PHONE

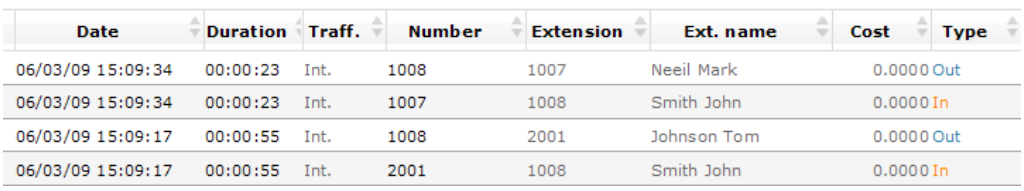
| Test Case Details | |
|---|---|
| **Description** | Conference call between IP phones and outgoing PSTN phone |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1008 place a call to PSTN phone 02987200 and talk for 20 seconds.<br>• From IP phone 1008, press 'Conference' to place the PSTN phone on hold.<br>• From IP Phone 1008 place a call to IP Phone 1007 and talk 8 seconds.<br>• On phone 1008 press 'Conference' to join all three parties together<br>• All talk 10 seconds in conference.<br>• Hang up phone 1008<br>• IP Phone 1007 and PSTN phone 02987200 talk 13 seconds, then hang up. |
| **Result (available in the Call List Report)** | |

| Date | Duration | Traff. | Number | Extension | Ext. name | Cost | Type |
|---|---|---|---|---|---|---|---|
| 06/03/09 16:29:20 | 00:00:13 | Ext. | 02987200 | 1007 | Neeil Mark | 0.0141 | Out |
| 06/03/09 16:29:10 | 00:00:10 | Ext. | 02987200 | 1008 | Smith John | 0.0108 | Out |
| 06/03/09 16:29:10 | 00:00:10 | Int. | 1007 | 1008 | Smith John | 0.0000 | Out |
| 06/03/09 16:29:10 | 00:00:10 | Int. | 1008 | 1007 | Neeil Mark | 0.0000 | In |
| 06/03/09 16:29:02 | 00:00:08 | Int. | 1007 | 1008 | Smith John | 0.0000 | Out |
| 06/03/09 16:29:02 | 00:00:08 | Int. | 1008 | 1007 | Neeil Mark | 0.0000 | In |
| 06/03/09 16:28:39 | 00:00:31 | Ext. | 02987200 | 1008 | Smith John | 0.0336 | Out |

| | |
|---|---|
| **Observations** | Read the sequence bottom up:<br>- Call from 1008 to 02987200 where the duration is the sum of the |

| | |
|---|---|
| | conversation time + the hold time<br>- Call from 1008 to 1007 where the duration is the conversation time (10 seconds)<br>- 3 records showing all in Conference for 20 seconds. The call directions are respected, 1008 to 02987200 and 1008 to 1007<br>- Call between 1007 and 02987200 |

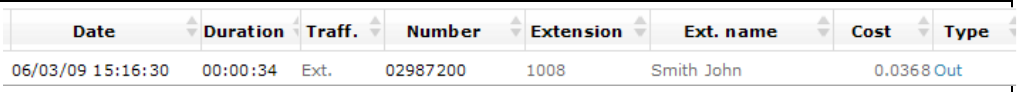
## 3.23 MULTIPLE CALLS PER LINE (CALL WAITING)

| Test Case Details | |
|---|---|
| **Description** | Multiple calls per line (Call waiting) |
| **Test Setup** | Figure 1 |
| **Procedure** | • Place a call from SIP phone 2001 to an IP phone 1008<br>• Place another call from IP phone 1007 to IP phone 1008 (answer the incoming call, placing the original call on hold)<br>• Hangup the current call on IP phone 1008 and resume the call with SIP phone 2001<br>• Hang up. |
| **Result (available in the Call List Report)** |  |
| **Observations** | Read the sequence bottom up, 2 couple of records:<br>- Call from 2001 to 1008 where the duration is the sum of the conversation time + the hold time<br>- Call from 1007 to 1008 where the duration is the conversation time |

| Date | Duration | Traff. | Number | Extension | Ext. name | Cost | Type |
|---|---|---|---|---|---|---|---|
| 06/03/09 15:09:34 | 00:00:23 | Int. | 1008 | 1007 | Neeil Mark | 0.0000 | Out |
| 06/03/09 15:09:34 | 00:00:23 | Int. | 1007 | 1008 | Smith John | 0.0000 | In |
| 06/03/09 15:09:17 | 00:00:55 | Int. | 1008 | 2001 | Johnson Tom | 0.0000 | Out |
| 06/03/09 15:09:17 | 00:00:55 | Int. | 2001 | 1008 | Smith John | 0.0000 | In |

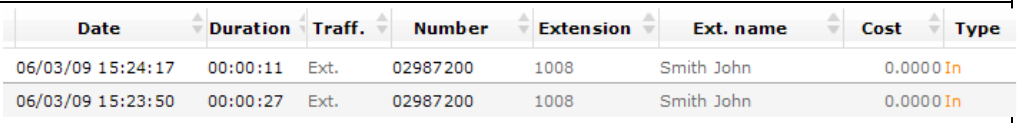
## 3.24 BARGE, IP PHONE, ORIGINATED CALL

| Test Case Details | |
|---|---|
| **Description** | Barge, IP Phone, Originated Call |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone (A) with shared line 1008 place a call to PSTN phone 02987200 and talk 10 seconds<br>• From another IP phone (B) with the 1008 shared line, Barge the established call, talk 14 seconds<br>• From the target phone of the barge hang up (A) |

| | |
|---|---|
| | • Talk additional 10 seconds and hang up Phone B |
| **Result (available in the Call List Report)** |  |
| **Observations** | A single record is displayed, related to the call from 1008 to 02987200 where the duration of 34 seconds is the sum of the Phone A conversation + barged conversation + the Phone B conversation |



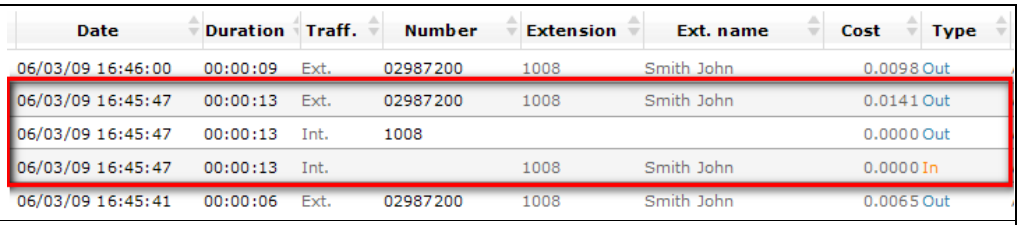
## 3.25 BARGE, IP PHONE, TERMINATED CALL

| Test Case Details | |
|---|---|
| **Description** | Barge, IP Phone, Terminated Call |
| **Test Setup** | Figure 1 |
| **Procedure** | • IP phone (A) with shared line 1008 receives a call from PSTN phone 02987200 and talk 10 seconds<br>• From another IP phone (B) with the 1008 shared line, Barge the established call, talk 20 seconds<br>• From the target phone of the barge hang up (A)<br>• Talk additional 5 seconds and hang up Phone B |
| **Result (available in the Call List Report)** |  |
| **Observations** | Read the sequence bottom up |

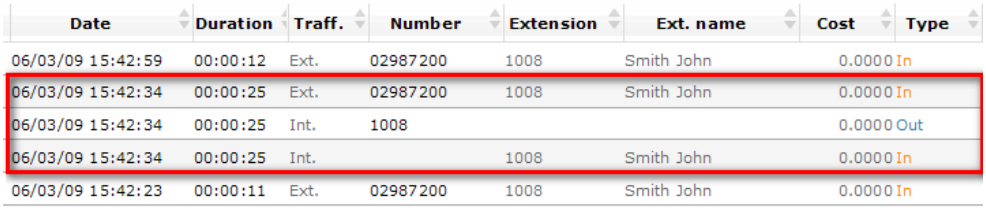


## 3.26 CBARGE, IP PHONE, ORIGINATED CALL

| Test Case Details | |
|---|---|
| **Description** | cBarge, IP Phone, Originated Call |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone (A) with shared line 1008 place a call to PSTN phone 02987200 and talk 6 seconds<br>• From another IP phone (B) with the 1008 shared line, cBarge the established call, talk 13 seconds<br>• From the target phone of the barge hang up (A)<br>• Talk additional 9 seconds and hang up Phone B |

| | |
|---|---|
| **Result (available in the Call List Report)** |  <br>Date / Duration / Traff. / Number / Extension / Ext. name / Cost / Type<br>06/03/09 16:46:00 00:00:09 Ext. 02987200 1008 Smith John 0.0098 Out<br>06/03/09 16:45:47 00:00:13 Ext. 02987200 1008 Smith John 0.0141 Out<br>06/03/09 16:45:47 00:00:13 Int. 1008 0.0000 Out<br>06/03/09 16:45:47 00:00:13 Int. 1008 Smith John 0.0000 In<br>06/03/09 16:45:41 00:00:06 Ext. 02987200 1008 Smith John 0.0065 Out |
| **Observations** | Read the sequence bottom up:<br>- Call from 1008 to 02987200 where the duration is the conversation time (6 seconds)<br>- 3 records showing all in Conference for 16 seconds. The call directions are respected, 1008 to 02987200 and 1008 to the void number (cBarge bridge)<br>- Call between PhoneB and 02987200 for additional 9 seconds |

## 3.27 CBARGE, IP PHONE, TERMINATED CALL

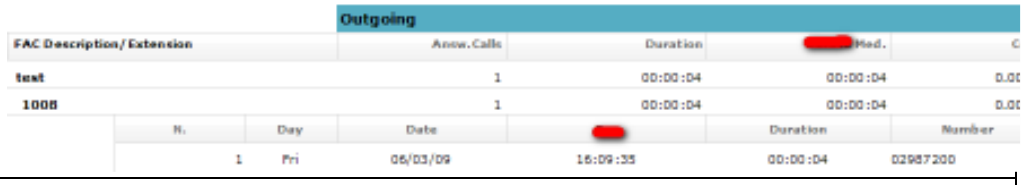
| **Test Case Details** | |
|---|---|
| **Description** | cBarge, IP Phone, Terminated Call |
| **Test Setup** | Figure 1 |
| **Procedure** | • IP phone (A) with shared line 1008 receives a call from PSTN phone 02987200 and talk 11 seconds<br>• From another IP phone (B) with the 1008 shared line, Barge the established call, talk 20 seconds<br>• From the target phone of the barge hang up (A)<br>• Talk additional 12 seconds and hang up Phone B |
| **Result (available in the Call List Report)** |  <br>Date / Duration / Traff. / Number / Extension / Ext. name / Cost / Type<br>06/03/09 15:42:59 00:00:12 Ext. 02987200 1008 Smith John 0.0000 In<br>06/03/09 15:42:34 00:00:25 Ext. 02987200 1008 Smith John 0.0000 In<br>06/03/09 15:42:34 00:00:25 Int. 1008 0.0000 Out<br>06/03/09 15:42:34 00:00:25 Int. 1008 Smith John 0.0000 In<br>06/03/09 15:42:23 00:00:11 Ext. 02987200 1008 Smith John 0.0000 In |
| **Observations** | Read the sequence bottom up:<br>- Call from 02987200 to 1008 where the duration is the conversation time (11 seconds)<br>- 3 records showing all in Conference for 25 seconds (highlighted). The call directions are respected, 02987200 to 1008 and 1008 to the void number (cBarge bridge)<br>- Call from 02987200 to 1008 where the duration is the conversation time (12 seconds) |

## 3.28 EXTENSION MOBILITY

| Test Case Details | |
|---|---|
| **Description** | Extension Mobility |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP Phone A log onto extension mobility:<br>username psdtuser<br>password 123456<br>• IP Phone A takes number 1008<br>• Make a call from IP Phone A to PSTN Phone 02987200 |
| **Result (available in the Call List Report)** | Date \| Duration \| Traff. \| Number \| Extension \| Ext. name \| Cost \| Type<br>06/03/09 15:54:38 \| 00:00:05 \| Ext. \| 02987200 \| 1008 \| Smith John \| 0.0054 \| Out |
| **Observations** | Correctly reported |

## 3.29 IP PHONE CALL ROUTES USING FAC CODES AND THE HASH KEY

| Test Case Details | |
|---|---|
| **Description** | IP Phone call routes using FAC codes and the hash key |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1008, place a call to the FAC enabled PSTN number 02987200<br>• After the beep insert the FAC code number 8888 following by #, corresponding to the FAC code name “TEST”<br>• Talk and after a brief period, hang up. |
| **Result (available in the Call List Report)** | |

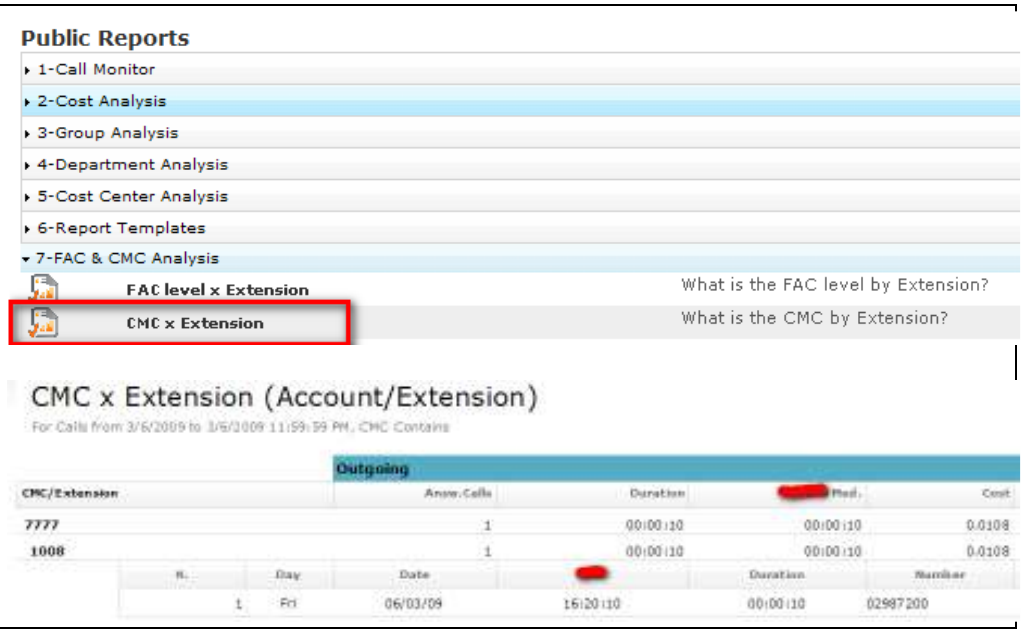
| | |
|---|---|
| |  |
| **Observations** | |

## 3.30 CALL WITH AN INCORRECT FAC CODE

| **Test Case Details** | |
|---|---|
| **Description** | Call with an incorrect FAC code |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1008, place a call to the FAC enabled PSTN number 02987200<br>• After the beep insert the incorrect FAC code number 4312 following by #<br>• Call is NOT established |
| **Result (available in the Call List Report)** | No call reported |
| **Observations** | |

## 3.31 IP PHONE CALL ROUTES USING CMC CODES AND THE HASH KEY

| **Test Case Details** | |
|---|---|
| **Description** | IP Phone call routes using CMC codes and the hash key |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1008, place a call to the CMC enabled PSTN number 02987200<br>• After the beep insert the CMC code number 7777 following by #, corresponding to the CMC code name “CMC TEST”<br>• Talk and after a brief period, hang up. |

| | |
|---|---|
| **Result (available in the Call List Report)** |  |
| **Observations** | |

## 3.32 CALL WITH AN INCORRECT CMC CODE

| Test Case Details | |
|---|---|
| **Description** | Call with an incorrect CMC code |
| **Test Setup** | Figure 1 |
| **Procedure** | • From IP phone 1008, place a call to the CMC enabled PSTN number 02987200<br>• After the beep insert the incorrect CMC code number 4312 following by #<br>• Call is NOT established |
| **Result (available in the Call List Report)** | No call reported |
| **Observations** | |