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BroadWorks

SIP Access Device

Interoperability Test Report

Sonus SBC 1000, Sonus SBC 2000

Release 20.0

Document Version 1.2

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BroadWorks® Guide

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Document Revision History

Version	Reason for Change	Date
1.1	Introduced document for Release 20.0.	January 2014
1.2	Edited changes and published document.	February 2014

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1   Product Versions

Access Device under Test   : Sonus SBC 1000, Sonus SBC 2000

Access Device Type   : IAD

Access Device Version   : 4.1.0 build 15

BroadWorks Version   : R20.0

Completion Date   : September 30, 2014

Completed By (Name)   : Kris Nostrand

Completed By (Company)   : Sonus

2 Test Summary

Executed:	71
Passed:	71
Failed:	0
NA:	1
NS:	75
NT:	7

3 Test Failure Description

List each test case that fails. Provide analysis for what is causing the test failure. Collect and cite a network trace or log that captures the failure scenario. Each test case marked **Fail** should be documented here.

Example:

1) (Test ##) Codec Renegotiation: DUT does not send OFFER SDP in response to RE-INVITE without SDP. See ethereal trace test##.cap.

4 Features Not Supported

List each feature that is not supported, along with tests that cannot be executed as a result. Each test case marked **NS** in the test report should be documented here.

Example:

1) (Test 22) DUT Sends Early UPDATE

2) (Tests 23 – 24) Early Session

3) (Test 35) DTMF Relay

4) (Tests 47 – 51) Message Waiting Indicator

5) (Tests 53 – 57) Advanced Alerting

6) (Test 60) Calling Name with Unicode Characters

7) (Tests 61 – 67) Connected Line ID

8) (Tests 72 – 75) Advice of Charge

9) (Test 77) Meet-Me Conference G722

10) (Test 78) Meet-Me Conference AMR-WB

11) (Tests 82 – 84) DUT Services Call Transfer

12) (Tests 84 – 86) DUT Services Three Way Call

13) (Test 87 – 88) DUT Services Network Based Conference

14) (Test 94) DUT Services Authenticating BroadWorks Invite

15) (Tests 102-105) DUT Services Emergency Call

16) (Tests 106 – 111) DUT Services Miscellaneous Features

17) (Tests 127 - 154) IPv6

5   Anomalies Not Causing Test Failure

List any events/scenarios that do not cause a specific test failure but are otherwise anomalous. This may include unusual or undesirable behavior of the DUT.

Example:

1)   DUT line lamp periodically stays lit (active) after call has been hung up.

6   Test Notes

List test cases that were not executed and why, as well as any limitations or conditions that influenced the testing. Each test case marked **NT** in the test report should be documented here.

Example:

1)   (Tests 112 - 118) Redundancy Package – Awaiting Testing

7 Test Results

Complete the test report by marking an "X" in the appropriate column: **Pass**, **Fail**, **NA** (Not Applicable), **NS** (Not Supported), **NT** (Supported but Not Tested).

Test Case Title	Priority	Pass	Fail	NA	NS	NT
Basic Package						
Basic – Call Origination						
1 DUT to BroadWorks; DUT Hangs Up After Answer	P0	X				
2 DUT to BroadWorks; DUT Hangs Up Before Answer	P0	X				
3 DUT to BroadWorks; BroadWorks Hangs Up After Answer	P0	X				
Basic – Call Termination						
4 BroadWorks to DUT; BroadWorks Hangs Up After Answer	P0	X				
5 BroadWorks to DUT; BroadWorks Hangs Up Before Answer	P0	X				
6 BroadWorks to DUT; DUT Hangs Up After Answer	P0	X				
Basic – Session Audit						
7 BroadWorks to DUT; Wait for Session Audit	P0	X				
8 BroadWorks to DUT; BroadWorks Holds, Wait for Session Audit	P0	X				
9 DUT to BroadWorks; Wait for Session Audit	P0	X				
10 DUT to BroadWorks; DUT Holds, Wait for Session Audit	P0	X				
11 DUT to BroadWorks; DUT Restarts, Wait for Session Audit	P0	X				
Basic – Session Timer						
12 BroadWorks to DUT; Wait for Session Timer	P1	X				
13 BroadWorks to DUT; BroadWorks Holds, Wait for Session Timer	P1	X				
14 DUT to BroadWorks; Wait for Session Timer	P1	X				
15 DUT to BroadWorks; DUT Holds, Wait for Session Timer	P1	X				
Basic – Ringback and Early Media						
Ringback						
16 DUT Generates Local Ringback	P0	X				
17 DUT Receives Remote Ringback	P0	X				
18 DUT Generates Local Ringback, Followed by Receiving Remote Ringback	P0	X				

Test Case Title	Priority	Pass	Fail	NA	NS	NT
Forked Dialog						
19 Early to Confirmed Dialog Forking	P0	X				
20 Early to Early to Confirmed Dialog Forking	P0	X				
Early UPDATE						
21 DUT Receives Early UPDATE	P1	X				
22 DUT Sends Early UPDATE	P2				X	
Early-Session						
23 DUT Receives Early-Session Offer	P2				X	
24 DUT Sends Early-Session Offer	P2				X	
181 Call Being Forwarded						
25 181 Call Being Forwarded	P1	X				
Basic – Dial Plan						
26 Local Operator Dialing (0)	P0	X				
27 International Dialing (011XXXXXXXXX)	P0	X				
28 Casual Access Dialing (1010321-12405550000)	P0	X				
29 Extension Dialing (XXXX#)	P0	X				
30 Feature Access Code Dialing (*XX)	P0	X				
31 Interrogation Feature Access Code Dialing (*XX*)	P0	X				
Basic – DTMF						
32 In-band DTMF	P0	X				
33 RFC 2833 DTMF Offered, In-band DTMF Negotiated	P0	X				
34 RFC 2833 DTMF	P0	X				
35 DTMF Relay	P2				X	
Basic - Codec Negotiation/Renegotiation						
Codec Negotiation						
36 Codec Negotiation: re-INVITE without SDP	P0	X				
37 Codec Negotiation: Initial Answer with HOLD SDP	P0	X				
Codec Renegotiation						
38 Codec Renegotiation: Blind Transfer	P0	X				
39 Codec Renegotiation: Attended Transfer	P0	X				

Test Case Title	Priority	Pass	Fail	NA	NS	NT
40 Codec Renegotiation: Blind Transfer of Call on Hold	P0	X				
BroadWorks Services Package						
BroadWorks Services – Third-Party Call Control						
Basic Call Control						
41 Click-to-Dial	P0	X				
42 Click-to-Hold; DUT Originator	P0	X				
43 Click-to-Hold; DUT Terminator	P0	X				
44 Click-to-Answer; Call Waiting	P0			X		
BroadWorks Services – Voice Messaging						
Voice Message Deposit/Retrieval						
45 Voice Message Deposit	P0	X				
46 Voice Message Retrieval	P0	X				
Message Waiting Indicator						
47 Message Waiting Indicator: Unsolicited	P1				X	
48 Message Waiting Indicator: Solicited, MWI Subscription	P1				X	
49 Message Waiting Indicator: Solicited, Refresh MWI Subscription	P1				X	
50 Message Waiting Indicator: Solicited, NOTIFY for MWI Status Change	P1				X	
51 Message Waiting Indicator: Update During Active Call	P1				X	
Voice Portal Outcall						
52 Voice Portal Outcall	P0	X				
BroadWorks Services – Advanced Alerting						
53 Ring Splash	P2				X	
54 Priority Alert Ringing	P2				X	
55 Priority Alert Call Waiting Tone	P2				X	
56 Alternate Number Ringing	P2				X	
57 Alternate Number Call Waiting Tone	P2				X	
BroadWorks Services – Calling and Connected Line ID						
Calling Line ID						
58 Calling Name and Number	P1	X				

Test Case Title	Priority	Pass	Fail	NA	NS	NT
59 Anonymous Call	P1	X				
60 Calling Name with Unicode Characters	P1				X	
Connected Line ID						
61 Connected Line Presentation	P2				X	
62 Connected Line Presentation with Unicode Characters	P2				X	
63 Connected Line Restriction	P2				X	
64 Connected Line Presentation after Call Forward	P2				X	
65 Connected Line Restriction after Call Forward	P2				X	
66 Connected Line Presentation on UPDATE	P2				X	
67 Connected Line Presentation on Re-INVITE	P2				X	
BroadWorks Services – Diversion and History-Info						
68 DIVERSION Header	P1	X				
69 DIVERSION Header: Multiple Redirects	P1	X				
70 HISTORY-INFO Header	P1	X				
71 HISTORY-INFO Header: Multiple Redirects	P1	X				
BroadWorks Services – Advice of Charge						
72 AoC-D Currency	P2				X	
73 AoC-D Free	P2				X	
74 AoC-E Currency	P2				X	
75 AoC-E Free	P2				X	
BroadWorks Services – Meet-Me Conferencing						
76 Meet-Me Conference	P0	X				
77 Meet-Me Conference – G722	P1				X	
78 Meet-Me Conference – AMR-WB	P1				X	
DUT Services Package						
DUT Services – Call Control Services						
Call Waiting						
79 Call Waiting	P1	X				
Call Hold						

Test Case Title	Priority	Pass	Fail	NA	NS	NT
80 Call Hold: DUT Terminator	P1	X				
81 Call Hold: DUT Originator	P1	X				
Call Transfer						
82 Blind Transfer	P1				X	
83 Attended Transfer After Answer	P1				X	
84 Attended Transfer Before Answer	P1				X	
Three-Way Call						
85 Three-Way Call After Answer	P1				X	
86 Three-Way Call Before Answer	P1				X	
Network-based Conference						
87 Network-based Three-Way Call	P2				X	
88 Network-based N-Way Call	P2				X	
DUT Services – Registration and Authentication						
89 REGISTER Authentication	P1	X				
90 Maximum Registration Time	P1	X				
91 Minimum Registration Time	P1	X				
92 INVITE Authentication	P1	X				
93 Re-INVITE/UPDATE Authentication	P1	X				
94 REFER Authentication	P1				X	
95 DUT Authenticating BroadWorks INVITE	P2				X	
DUT Services – Fax						
G711 Fax Passthrough						
96 G711 Fax Passthrough: DUT Originator	P1	X				
97 G711 Fax Passthrough: DUT Terminator	P1	X				
G711 Fax Fallback						
98 G711 Fax Fallback: DUT Originator	P1	X				
99 G711 Fax Fallback: DUT Terminator	P1	X				
T38 Fax Messaging						
100 T38 Fax Messaging: DUT Originator	P1	X				

Test Case Title	Priority	Pass	Fail	NA	NS	NT
101 T38 Fax Messaging: DUT Terminator	**P1**	X				
DUT Services – Emergency Call						
102 Emergency Call; Originator Hang Up	**P1**				X	
103 Emergency Call; Originator Hang Up; Ringback Unanswered	**P1**				X	
104 Emergency Call; Originator Hang Up; Ringback Answered	**P1**				X	
105 Emergency Call; Howler Tone	**P1**				X	
DUT Services – Miscellaneous Features						
106 Do Not Disturb	**P1**				X	
107 Call Forward Always	**P1**				X	
108 Call Forward Always Diversion Inhibitor	**P1**				X	
109 Anonymous Call	**P1**				X	
110 Anonymous Call Block	**P1**				X	
111 Remote Restart via Notify	**P1**				X	
Redundancy Package						
112 DNS SRV Lookup: Proxy Address	**P1**					X
113 DNS SRV Lookup: CONTACT Header	**P1**					X
114 REGISTER Failover	**P1**					X
115 REGISTER Failback	**P1**					X
116 INVITE Failover	**P1**					X
117 INVITE Failback	**P1**					X
118 BYE Failover	**P1**					X
SBC/ALG Package						
119 REGISTER	**P1**	X				
120 Outgoing INVITE	**P1**	X				
121 Incoming INVITE	**P1**	X				
TCP Package						
122 DUT REGISTER	**P1**	X				
123 DUT to BroadWorks; DUT Hangs Up Before Answer	**P1**	X				
124 DUT to BroadWorks; DUT Hangs Up After Answer	**P1**	X				

Test Case Title	Priority	Pass	Fail	NA	NS	NT
125 BroadWorks to DUT; BroadWorks Hangs Up Before Answer	P1	X				
126 BroadWorks to DUT; BroadWorks Hangs Up After Answer	P1	X				
IPV6 Package						
IPV6 – Basic						
127 DUT to BroadWorks; DUT Hangs Up After Answer	P1				X	
128 DUT to BroadWorks; DUT Hangs Up Before Answer	P1				X	
129 BroadWorks to DUT; BroadWorks Hangs Up After Answer	P1				X	
130 BroadWorks to DUT; BroadWorks Hangs Up Before Answer	P1				X	
131 BroadWorks to DUT; Wait for Session Audit	P1				X	
132 DUT to BroadWorks; Wait for Session Audit	P1				X	
133 DUT Receives Remote Ringback	P1				X	
134 Codec Negotiation: Initial Answer with HOLD SDP	P1				X	
135 Codec Renegotiation: Attended Transfer	P1				X	
IPV6 – BroadWorks Services						
136 Voice Message Deposit	P1				X	
137 Voice Message Retrieval	P1				X	
IPV6 – DUT Services						
138 Call Hold: DUT Terminator	P1				X	
139 Attended Transfer After Answer	P1				X	
140 Three-Way Call After Answer	P1				X	
141 Network-based Three-Way Call	P1				X	
142 REGISTER Authentication	P1				X	
143 T38 Fax Messaging: DUT Originator	P1				X	
144 T38 Fax Messaging: DUT Terminator	P1				X	
IPV6 – Redundancy						
145 REGISTER Failover	P1				X	
146 INVITE Failover	P1				X	
IPV6 – SBC						
147 REGISTER	P1				X	
148 Outgoing INVITE	P1				X	

Test Case Title	Priority	Pass	Fail	NA	NS	NT
149 Incoming INVITE	**P1**				X	
IPV6 – Dual Stack with Alternate Connectivity						
150 DUT Call Origination with ALTC; IPv4 Negotiated	**P1**				X	
151 DUT Call Origination with ALTC; IPv6 Negotiated	**P1**				X	
152 DUT Call Termination with ALTC; IPv4 Negotiated	**P1**				X	
153 DUT Call Termination with ALTC; IPv6 Negotiated	**P1**				X	
154 DUT Call Origination with ALTC to BroadWorks Auto Attendant	**P1**				X	