



ASTERISKNOW WITH FREEPBX TEST PLAN

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IP PBX Interoperability and Certification Testing

Document Index

Section	Page
Background	1
Configuration	2
<i>Figure 1 — Generic IP PBX Test Configuration</i>	<i>2</i>
Test Cases	3
<i>Table 1 — Software Versions Tested</i>	<i>3</i>
<i>Test Case 1 — SIP Registration</i>	<i>3</i>
<i>Test Case 2 — Basic Call Processing</i>	<i>4</i>
<i>Test Case 3 — Long Duration Call – 60 Minutes</i>	<i>4</i>
<i>Test Case 4 — Call Hold & Retrieval – 15 Minute Duration</i>	<i>5</i>
<i>Test Case 5 — Attended Call Transfer</i>	<i>5</i>
<i>Test Case 6 — Unattended Call Transfer</i>	<i>6</i>
<i>Test Case 7 — DTMF Digit Relay</i>	<i>6</i>
<i>Test Case 8 — Ad Hoc Conference Call</i>	<i>7</i>
<i>Test Case 9 — Voicemail Service Answer, Record, & Release</i>	<i>7</i>
<i>Test Case 10 — G.729 Priority Codec Selection</i>	<i>8</i>
<i>Test Case 11 — Call Admission Control</i>	<i>8</i>
<i>Test Case 12 — Call Forward Scenarios</i>	<i>9</i>
<i>Test Case 13 — Abandoned Call Clearing</i>	<i>10</i>
<i>Test Case 14 — T.38 Facsimile Relay</i>	<i>10</i>
<i>Test Case 15 — CallerID Presentation</i>	<i>11</i>

BACKGROUND

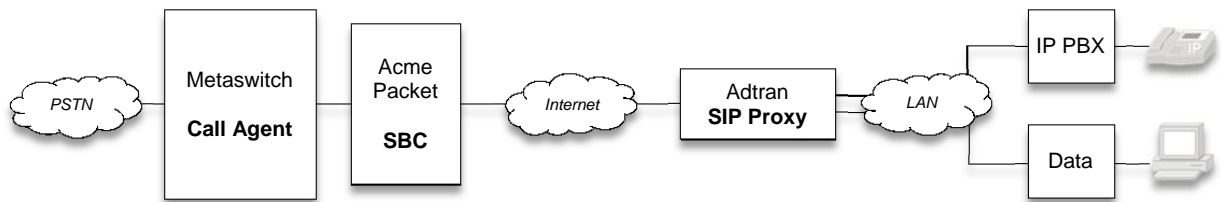
This document records the test scenarios executed to demonstrate interoperability between the customer-supplied IP PBX and Integra Telecom's Session Initiation Protocol (SIP) Solutions Trunking service. Further, the test scenario results are documented herein; along with any operational caveats. The specific software and/or firmware version numbers tested and approved are captured and listed in this document.

The sole focus of Integra Telecom's interoperability certification process is to determine which configuration will properly operate with the Metaswitch Call Agent. No discussion of the IP PBX's extensions, end-user parameters, or suitability to need is contained in this document. The goal is to ensure that, when properly configured, the subject IP PBX will interface to and operate with the Integra Telecom equipment and network.

CONFIGURATION

The generic IP PBX test configuration is shown in Figure 1 below. This configuration ensures proper SIP call handling between the customer-supplied IP PBX platform and the Integra Telecom equipment and network.

Figure 1
Generic IP PBX Test Configuration



Note that some 'schools of thought' like to consider everything outside of or beyond the IP PBX itself to be part of the PSTN. For this testing, the beginning of the PSTN does not matter; as 'in to' and 'out of' the IP PBX are the more important considerations.

TEST CASES

In order to establish a testing baseline, Table 1 below shows the software versions tested for the IP PBX evaluated in the Integra Telecom Lab. Software versions below (earlier than) the tested version are regression tested by the applicable vendor and generally considered to be acceptable.

Table 1
Software Versions Tested

Network Element	Software
Metaswitch Call Agent	7.4.00
Adtran NetVanta 3305	18.01.01.00
Asterisk Core Build	1.6.2.11
AsteriskNOW	1.7.1
FreePBX GUI	2.7.0.10

The following test cases were developed and performed to ensure that the IP PBX under test interoperates properly with the Integra Telecom. Nominal SIP signaling and voice path set up and tear down are confirmed by the test cases below.

Test results are shown as Pass or Fail. A Pass indication indicates that the feature or step performed properly with the Integra Telecom network equipment. A Fail indication indicates that the feature or step was not successfully accomplished.

Note that a Fail does not necessarily mean that the entire IP PBX product is unacceptable. Instead, it sets the reasonable expectation that a feature will not perform properly. Caveats and comments are included as needed.

Test Case 1
SIP Registration

1.1 IP PBX Initial SIP Registration <i>(Authentication at Metaswitch Call Agent)</i>	Result	Caveats & Comments
Verify SIP Trunk Properly Registers	Pass	
Verify Improper Credentials do not Register	Pass	
1.2 IP PBX SIP Reregistration <i>(Re-authentication at Metaswitch Call Agent)</i>	Result	Caveats & Comments
Verify SIP Trunk Automatically Reregisters	Pass	

Test Case 2

Basic Call Processing

2.1 Call from Outside to Inside <i>(Calling Party Disconnects)</i>	Result	Caveats & Comments
Incoming Call from PSTN	Pass	
Calling Party Hears Ringback	Pass	"PBX Plays Ringback" option must be set to False in PBX Lines object.
Called Party Phone Rings/Alerts	Pass	
Called Party Answers	Pass	
Confirm Two-way Audio Present	Pass	
Normal Clearing – Calling Party Disconnects	Pass	
2.2 Call from Outside to Inside <i>(Called Party Disconnects)</i>	Result	Caveats & Comments
Incoming Call from PSTN	Pass	
Calling Party Hears Ringback	Pass	"PBX Plays Ringback" option must be set to False in PBX Lines object.
Called Party Phone Rings/Alerts	Pass	
Called Party Answers	Pass	
Confirm Two-way Audio Present	Pass	
Normal Clearing – Called Party Disconnects	Fail	Outside leg of call does not disconnect. Calling party must hang up. Asterisk sends malformed authenticated BYE message. Digium bug report #17897.
2.3 Call from Inside to Outside <i>(Calling Party Disconnects)</i>	Result	Caveats & Comments
Outgoing Call to PSTN	Pass	
Calling Party Hears Ringback	Pass	
Called Party Phone Rings/Alerts	Pass	
Called Party Answers	Pass	
Confirm Two-way Audio Present	Pass	
Normal Clearing – Calling Party Disconnects	Pass	
2.4 Call from Inside to Outside <i>(Called Party Disconnects)</i>	Result	Caveats & Comments
Outgoing Call to PSTN	Pass	
Calling Party Hears Ringback	Pass	
Called Party Phone Rings/Alerts	Pass	
Called Party Answers	Pass	
Confirm Two-way Audio Present	Pass	
Normal Clearing – Called Party Disconnects	Pass	

Test Case 3

Long Duration Call – 60 Minutes

3.1 Incoming Long Duration Call <i>(IP PBX Ext. Called Party)</i>	Result	Caveats & Comments
Incoming Call from PSTN (Calling Party)	Pass	
Inside Ext. (Called Party) Answers	Pass	
Confirm Two-way Audio Present	Pass	
Confirm Call Active After 60 Minutes	Pass	
Reconfirm Two-way Audio Present	Pass	
Normal Clearing	Fail	Outside leg of call does not disconnect. Calling party must hang up. Asterisk sends malformed authenticated BYE message. Digium bug report #17897.
3.2 Outgoing Long Duration Call <i>(IP PBX Ext. Calling Party)</i>	Result	Caveats & Comments
Outgoing Call to PSTN (Called Party)	Pass	
PSTN Party Answers	Pass	
Confirm Call Active After 60 Minutes	Pass	
Reconfirm Two-way Audio Present	Pass	
Normal Clearing	Fail	Outside leg of call does not disconnect. Calling party must hang up. Asterisk sends malformed authenticated BYE message. Digium bug report #17897.

Test Case 4

Call Hold & Retrieval – 15 Minute Duration

4.1 Called Party Hold <i>(IP PBX Ext. Called Party)</i>	Result	Caveats & Comments
Incoming Call from PSTN (Calling Party)	Pass	
Inside Ext. (Called Party) Answers	Pass	
Confirm Two-way Audio Present	Pass	
Inside Ext. Places Call on Hold – 15-minutes	Pass	
Inside Ext. Retrieves Call from Hold	Pass	
Confirm Two-way Audio Present	Pass	
Normal Clearing	Fail	Outside leg of call does not disconnect. Calling party must hang up. Asterisk sends malformed authenticated BYE message. Digium bug report #17897.
4.2 Calling Party Hold <i>(IP PBX Ext. Calling Party)</i>	Result	Caveats & Comments
Outgoing Call to PSTN (Called Party)	Pass	
PSTN Party Answers	Pass	
Inside Ext. Places Call on Hold – 15-minutes	Pass	
Inside Ext. Retrieves Call from Hold	Pass	
Confirm Two-way Audio Present	Pass	
Normal Clearing	Fail	Outside leg of call does not disconnect. Calling party must hang up. Asterisk sends malformed authenticated BYE message. Digium bug report #17897.

Test Case 5

Attended Call Transfer

5.1 Attended Call Transfer – Outside to Inside <i>(PSTN Calling Party: 2 IP PBX Ext.)</i>	Result	Caveats & Comments
Incoming Call from PSTN (Calling Party)	Pass	
First Inside Ext. (Called Party) Answers	Pass	
First Inside Ext. Calls Second Inside Ext.	Pass	
Confirm Two-way Audio Present	Pass	
First Inside Ext. Completes Transfer	Pass	Note: Caller ID does not update.
Confirm Two-way Audio Present	Pass	
Normal Clearing	Fail	Outside leg of call does not disconnect. Calling party must hang up. Asterisk sends malformed authenticated BYE message. Digium bug report #17897.
5.2 Attended Call Transfer – Outside to Outside <i>(PSTN Calling Party: 1IP PBX Ext. to PSTN)</i>	Result	Caveats & Comments
Incoming Call from First PSTN (Calling Party)	Pass	
Inside Ext. (Called Party) Answers	Pass	
Inside Ext. Calls Second PSTN Party	Pass	
Confirm Two-way Audio Present	Pass	
First Inside Ext. Completes Transfer	Pass	Note: Caller ID does not update.
Confirm Two-way Audio Present	Pass	
Normal Clearing	Fail	Outside leg of call does not disconnect. Calling party must hang up. Asterisk sends malformed authenticated BYE message. Digium bug report #17897.
5.3 Attended Call Transfer – Inside to Inside <i>(IP PBX Calling Party: 1 PSTN to 1IP PBX Ext.)</i>	Result	Caveats & Comments
Outgoing Call to PSTN (Called Party)	Pass	
PSTN Party Answers	Pass	
First Inside Ext. Calls Second Inside Ext.	Pass	
Confirm Two-way Audio Present	Pass	
First Inside Ext. Completes Transfer	Pass	Note: Caller ID does not update.
Confirm Two-way Audio Present	Pass	
Normal Clearing	Pass	

Test Case 6

Unattended Call Transfer

6.1 Unattended Call Transfer – Outside to Inside <i>(PSTN Calling Party: 2 IP PBX Ext.)</i>	Result	Caveats & Comments
Incoming Call from PSTN (Calling Party)	Pass	
First Inside Ext. (Called Party) Answers	Pass	
First Inside Ext. Calls Second Inside Ext.	Pass	
First Inside Ext. Hangs Up to Complete Transfer	Pass	Note: Caller ID does not update.
Confirm Two-way Audio Present	Pass	
Normal Clearing	Fail	Outside leg of call does not disconnect. Calling party must hang up. Asterisk sends malformed authenticated BYE message. Digium bug report #17897.
6.2 Unattended Call Transfer – Outside to Outside <i>(PSTN Calling Party: IP PBX Ext. to PSTN)</i>	Result	Caveats & Comments
Incoming Call from First PSTN (Calling) Party	Pass	
Inside Ext. (Called Party) Answers	Pass	
Inside Ext. Calls Second PSTN Party	Pass	
First Inside Ext. Hangs Up to Complete Transfer	Pass	Note: Caller ID does not update.
Confirm Two-way Audio Present	Pass	
Normal Clearing	Fail	Outside leg of call does not disconnect. Calling party must hang up. Asterisk sends malformed authenticated BYE message. Digium bug report #17897.
6.3 Unattended Call Transfer – Inside to Inside <i>(IP PBX Calling Party: PSTN to IP PBX Ext.)</i>	Result	Caveats & Comments
Outgoing Call to PSTN (Called Party)	Pass	
PSTN Party Answers	Pass	
First Inside Ext. Calls Second Inside Ext.	Pass	
First Inside Ext. Hangs Up to Complete Transfer	Pass	Note: Caller ID does not update.
Confirm Two-way Audio Present	Pass	
Normal Clearing	Pass	

Test Case 7

DTMF Digit Relay

7.1 Call from Outside to Inside <i>(DTMF Digit Send and Receive)</i>	Result	Caveats & Comments
Incoming Call from PSTN	Pass	
Called Party Answers	Pass	"PBX Plays Ringback" option must be set to False in PBX Lines object.
Called Party Sends DTMF Digits	Pass	
Verify Proper DTMF Digits Received	Pass	RFC2833 Relay verified with Wireshark.
Calling Party Sends DTMF Digits	Pass	
Verify Proper DTMF Digits Received	Pass	RFC2833 Relay verified with Wireshark.
Normal Clearing	Fail	Outside leg of call does not disconnect. Calling party must hang up. Asterisk sends malformed authenticated BYE message. Digium bug report #17897.
7.2 Call from Inside to Outside <i>(DTMF Digit Send and Receive)</i>	Result	Caveats & Comments
Outgoing Call to PSTN	Pass	
Called Party Answers	Pass	"PBX Plays Ringback" option must be set to False in PBX Lines object.
Called Party Sends DTMF Digits	Pass	
Verify Proper DTMF Digits Received	Pass	RFC2833 Relay verified with Wireshark.
Calling Party Sends DTMF Digits	Pass	
Verify Proper DTMF Digits Received	Pass	RFC2833 Relay verified with Wireshark.
Normal Clearing	Pass	

Test Case 8

Ad Hoc Conference Call

8.1 Ad Hoc Conference Outside to Inside <i>(PSTN Calling Party: 2 IP PBX Ext.)</i>	Result	Caveats & Comments
Incoming Call from PSTN (Calling Party)	Pass	
First Inside Ext. (Called Party) Answers	Pass	
First Inside Ext. Calls Second Inside Ext.	Pass	
Confirm Two-way Audio Present	Pass	
First Inside Ext. Adds Second Inside Ext.	Pass	
Confirm Two-way Audio Present: All Parties	Pass	
Normal Clearing	Fail	Outside leg of call does not disconnect. Calling party must hang up. Asterisk sends malformed authenticated BYE message. Digium bug report #17897.
8.2 Ad Hoc Conference Outside to Inside <i>(PSTN Calling Party: 1IP PBX Ext. + 1 PSTN)</i>	Result	Caveats & Comments
Incoming Call from First PSTN (Calling) Party	Pass	
Inside Ext. (Called Party) Answers	Pass	
Inside Ext. Calls Second PSTN Party	Pass	
Confirm Two-way Audio Present	Pass	
Inside Ext. Adds Second PSTN Party	Pass	
Confirm Two-way Audio Present: All Parties	Pass	
Normal Clearing	Fail	Outside leg of call does not disconnect. Calling party must hang up. Asterisk sends malformed authenticated BYE message. Digium bug report #17897.
8.3 Ad Hoc Conference Inside to Outside <i>(IP PBX Calling Party: 1 PSTN, + 1IP PBX)</i>	Result	Caveats & Comments
Outgoing Call to PSTN (Called Party)	Pass	
PSTN Party Answers	Pass	
First Inside Ext. Calls Second Inside Ext.	Pass	
Confirm Two-way Audio Present	Pass	
First Inside Ext. Adds Second Inside Ext.	Pass	
Confirm Two-way Audio Present: All Parties	Pass	
Normal Clearing	Pass	
8.4 Ad Hoc Conference Inside to Outside <i>(IP PBX Calling Party: 2 PSTN)</i>	Result	Caveats & Comments
Outgoing Call to PSTN (Called Party)	Pass	
First PSTN Party Answers	Pass	
Inside Ext. Calls Second PSTN Party	Pass	
Confirm Two-way Audio Present	Pass	
Inside Ext. Adds Second PSTN Party	Pass	
Confirm Two-way Audio Present: All Parties	Pass	
Normal Clearing	Pass	

Test Case 9

Voicemail Service Answer, Record, & Release

9.1 Incoming Voicemail Call <i>(Voicemail Answers, Records, and Drops Call)</i>	Result	Caveats & Comments
Incoming Call from PSTN (Calling Party)	Pass	
Inside Ext. (Called Party) Alerts	Pass	
Confirm Call Rolls Over to Voicemail	Pass	
Confirm Call Clears from Inside Ext.	Pass	
Confirm Voicemail Answers and Announces	Pass	
Review Voicemail Message Before Sending	Pass	
Send Voicemail Message Manually	Pass	
Normal Clearing (Voicemail Disconnects)	Fail	Outside leg of call does not disconnect. Calling party must hang up. Asterisk sends malformed authenticated BYE message. Digium bug report #17897.

Test Case 10

G.729 Priority Codec Selection

10.1 Call from Outside to Inside <i>(G.711 only Codec Advertised)</i>	Result	Caveats & Comments
Incoming Call from PSTN	Pass	
Called Party Answers	Pass	
Confirm Two-way Audio Present	Pass	
Verify G.711 Codec Selected	Pass	G.711 Codec verified with Wireshark.
Normal Clearing	Fail	Outside leg of call does not disconnect. Calling party must hang up. Asterisk sends malformed authenticated BYE message. Digium bug report #17897.
10.2 Call from Inside to Outside <i>(G.711 only Codec Advertised)</i>	Result	Caveats & Comments
Outgoing Call to PSTN	Pass	
Called Party Answers	Pass	
Confirm Two-way Audio Present	Pass	
Verify G.711 Codec Selected	Pass	G.711 Codec verified with Wireshark.
Normal Clearing	Pass	
10.3 Call from Outside to Inside <i>(G.729 Primary + G.711 Codes Advertised)</i>	Result	Caveats & Comments
Incoming Call from PSTN	Pass	
Called Party Answers	Pass	
Confirm Two-way Audio Present	Pass	G.729 Codec license required from Digium.
Verify G.729 Codec Selected	Pass	G.729 Codec verified with Wireshark.
Normal Clearing	Pass	Outside leg of call does not disconnect. Calling party must hang up. Asterisk sends malformed authenticated BYE message. Digium bug report #17897.
10.4 Call from Inside to Outside <i>(G.729 Primary + G.711 Codes Advertised)</i>	Result	Caveats & Comments
Outgoing Call to PSTN	Pass	
Called Party Answers	Pass	
Confirm Two-way Audio Present	Pass	G.729 Codec license required from Digium.
Verify G.729 Codec Selected	Pass	G.729 Codec verified with Wireshark.
Normal Clearing	Pass	

Test Case 11

Call Admission Control

11.1 Calls from Inside to Outside <i>(Maximum Simultaneous Calls)</i>	Result	Caveats & Comments
Set IPPBX Call Admission to 2	Pass	
Place Outbound Calls 1 & 2	Pass	
Answer Calls 1 & 2 and Hold Open	Pass	
Confirm Outbound Call 3 Blocked	Pass	All Trunks Busy Recording
Normal Clearing	Pass	
11.1 Calls from Outside to Inside <i>(Maximum Simultaneous Calls)</i>	Result	Caveats & Comments
Set Metaswitch Call Admission to 2	Pass	
Place Inbound Calls 1 & 2	Pass	
Answer Calls 1 & 2 and Hold Open	Pass	
Confirm Inbound Call 3 Blocked	Pass	Fast Busy Treatment
Normal Clearing	Pass	Outside leg of call does not disconnect. Calling party must hang up. Asterisk sends malformed authenticated BYE message. Digium bug report #17897.

Test Case 12

Call Forward Scenarios

12.1 Call Forward All Calls (Call Forward All Calls to Inside Ext.)	Result	Caveats & Comments
Set Inside Ext. Fwd. All Calls to 2nd Ext.	Pass	
Incoming Call from PSTN	Pass	
Confirm Second Inside Ext. Alerts	Pass	
Second Inside Ext. (Called Party) Answers	Pass	
Confirm Two-way Audio Present	Pass	The appropriate number of G.729 licenses must be present to allow for enough sessions to include call forward legs.
Normal Clearing	Fail	Outside leg of call does not disconnect. Calling party must hang up. Asterisk sends malformed authenticated BYE message. Digium bug report #17897.
12.2 Call Forward All Calls (Call Forward All Calls to PSTN Line)	Result	Caveats & Comments
Set Inside Ext. Fwd. All Calls to 2nd PSTN	Pass	
Incoming Call from First PSTN	Pass	
Confirm Second PSTN Line Alerts	Pass	
Second PSTN Line (Called Party) Answers	Pass	
Confirm Two-way Audio Present	Pass	The appropriate number of G.729 licenses must be present to allow for enough sessions to include call forward legs.
Normal Clearing	Fail	Outside leg of call does not disconnect. Calling party must hang up. Asterisk sends malformed authenticated BYE message. Digium bug report #17897.
12.3 Call Forward Busy (Call Forward Busy to Inside Ext.)	Result	Caveats & Comments
Set Inside Ext. Busy Fwd. to 2nd Ext.	Pass	
Incoming Call from PSTN	Pass	
Confirm Second Inside Ext. Alerts	Fail	PBX configuration overrides extension setting and sends call to voicemail when busy.
Second Inside Ext. (Called Party) Answers	Fail	PBX configuration overrides extension setting and sends call to voicemail when busy.
Confirm Two-way Audio Present	Fail	The appropriate number of G.729 licenses must be present to allow for enough sessions to include call forward legs.
Normal Clearing	Fail	Outside leg of call does not disconnect. Calling party must hang up. Asterisk sends malformed authenticated BYE message. Digium bug report #17897.
12.4 Call Forward Busy (Call Forward Busy to PSTN Line)	Result	Caveats & Comments
Set Inside Ext. Busy Fwd. to 2nd PSTN	Pass	
Incoming Call from First PSTN	Pass	
Confirm Second PSTN Line Alerts	Fail	PBX configuration overrides extension setting and sends call to voicemail when busy.
Second PSTN Line (Called Party) Answers	Fail	PBX configuration overrides extension setting and sends call to voicemail when busy.
Confirm Two-way Audio Present	Fail	The appropriate number of G.729 licenses must be present to allow for enough sessions to include call forward legs.
Normal Clearing	Fail	Outside leg of call does not disconnect. Calling party must hang up. Asterisk sends malformed authenticated BYE message. Digium bug report #17897.
12.5 Call Forward No Answer (Call Forward No Answer to Inside Ext.)	Result	Caveats & Comments
Set Inside Ext. No Answer Fwd. to 2nd Ext.	Pass	
Incoming Call from PSTN	Pass	
Confirm Second Inside Ext. Alerts	Pass	
Second Inside Ext. (Called Party) Answers	Pass	
Confirm Two-way Audio Present	Pass	The appropriate number of G.729 licenses must be present to allow for enough sessions to include call forward legs.
Normal Clearing	Fail	Outside leg of call does not disconnect. Calling party must hang up. Asterisk sends malformed authenticated BYE message. Digium bug report #17897.
12.6 Call Forward No Answer (Call Forward No Answer to PSTN Line)	Result	Caveats & Comments
Set Inside Ext. No Answer Fwd. to 2nd PSTN	Pass	
Incoming Call from First PSTN	Pass	
Confirm Second PSTN Line Alerts	Pass	
Second PSTN Line (Called Party) Answers	Pass	
Confirm Two-way Audio Present	Pass	The appropriate number of G.729 licenses must be present to allow for enough sessions to include call forward legs.
Normal Clearing	Fail	Outside leg of call does not disconnect. Calling party must hang up. Asterisk sends malformed authenticated BYE message. Digium bug report #17897.

Test Case 13

Abandoned Call Clearing

13.1 Call from Outside to Inside <i>(Calling Party Abandons)</i>	Result	Caveats & Comments
Incoming Call from PSTN	Pass	
Confirm Inside Ext. Alerts	Pass	
Calling Party Hangs Up	Pass	
Normal Clearing	Pass	
13.2 Call from Inside to Outside <i>(Calling Party Abandons)</i>	Result	Caveats & Comments
Outgoing Call to PSTN	Pass	
Confirm PSTN Line Alerts	Pass	
Calling Party Hangs Up	Pass	
Normal Clearing	Pass	

Test Case 14

T.38 Facsimile Relay

14.1 Fax Document from Outside to Inside <i>(Three Page Fax Using T.38 Protocol)</i>	Result	Caveats & Comments
Incoming Fax Call from PSTN	Pass	
Confirm Inside Fax Ext. Alerts	Pass	
Confirm Inside Fax Ext. Answers	Pass	
Verify Fax Tones Initiate Transition to T.38	Fail	No T.38 Protocol verified with Wireshark. Requires Digium Fax for Asterisk (FFA) license installation. One FFA license installed for test.
Determine Fax Transmission Rate	Fail	Unsuccessful transmission attempt. Call dropped. Fax failed.
Confirm Successful Fax Reception	Fail	Unsuccessful transmission attempt. Call dropped. Fax failed.
Normal Clearing		Outside leg of call does not disconnect. Calling party must hang up. Asterisk sends malformed authenticated BYE message. Digium bug report #17897.
14.2 Fax Document from Inside to Outside <i>(Three Page Fax Using T.38 Protocol)</i>	Result	Caveats & Comments
Outgoing Fax Call to PSTN	Pass	
Confirm PSTN Fax Alerts	Pass	
Confirm PSTN Fax Answers	Pass	
Verify Fax Tones Initiate Transition to T.38	Pass	T.38 Version 0 confirmed with Wireshark. Requires Digium Fax for Asterisk (FFA) license installation. One FFA license installed for test.
Determine Fax Transmission Rate	Pass	Class 2.0 Modem transmission at 14,400 bps (full rate).
Confirm Successful Fax Reception	Pass	125 successful 3-page fax documents received.
Normal Clearing	Pass	

Test Case 15
CallerID Presentation

15.1 Call from Outside to Inside <i>(Inbound CallerID Presentation)</i>	Result	Caveats & Comments
Incoming Call from PSTN	Pass	
Confirm Inside Ext. Alerts	Pass	
Called Party Answers	Pass	
Confirm Outside CallerID Presented	Pass	
Normal Clearing	Pass	Outside leg of call does not disconnect. Calling party must hang up. Asterisk sends malformed authenticated BYE message. Digium bug report #17897.
15.2 Call from Inside to Outside <i>(Outbound CallerID Presentation)</i>	Result	Caveats & Comments
Outgoing Call to PSTN	Pass	
Confirm PSTN Line Alerts	Pass	
Called Party Answers	Pass	
Confirm Inside CallerID Presented	Pass	Only main IP PBX CallerID presented. Individual extension CallerID not presented.
Normal Clearing	Pass	