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Dialogic® Brooktrout® SR140 Fax Software with Broadvox SIP Trunking Service

Installation and Configuration Integration Note

IMPORTANT NOTE

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1. Scope

This document is intended as a general guide for configuring a basic installation of the ***Broadvox SIP Trunking Service*** for use with Dialogic® Brooktrout® SR140 Fax over IP (FoIP) software platform. The interoperability includes ***SIP*** call control and T.38/T.30 media.

This document is not intended to be comprehensive and thus does not replace the manufacturer's detailed configuration documentation. Users of this document should already have a general knowledge of *how to provision and interface with the* ***Broadvox SIP Trunking Service***.

The sample configuration shown and/or referred in the subsequent sections was used for lab validation testing by Dialogic. Therefore, it is possible and even likely that the example configuration will not match the exact configuration and versions that would be present in a deployed environment. However, the sample configuration does provide a possible starting point to work with the equipment vendor for configuring your device. Please consult the appropriate manufacturer's documentation for details on setting up your specific end user configuration.

For ease of reference, the Dialogic® Brooktrout® SR140 Fax Software and Dialogic® Brooktrout® TR1034 Fax Boards will sometimes be denoted herein, respectively, as SR140 and TR1034. All references to the SDK herein refer to the Dialogic® Brooktrout® Fax Products SDK. The Broadvox SIP Trunking Service will be denoted herein as Broadvox, or some other form thereof.

2. Configuration Details

The following systems were used for the sample configuration described in the document.

2.1 Broadvox SIP Trunking Service

Vendor	***Broadvox***
Model(s)	***Fusion***
Software Version(s)	***N/A***
PSTN Device	***Dialogic® Brooktrout® TR1034***
Protocol to PSTN Device	***Analog***
IP Device	***Dialogic® Brooktrout® SR140***
Additional Notes	***Broadvox SIP Trunking Service only supports PCMU as an RTP codec.***

2.2 Dialogic® Brooktrout® SR140 Fax Software

Vendor	***Dialogic***
Model	***Dialogic® Brooktrout® SR140 Fax Software***
Software Version	***SDK 6.1.1 – used for the interop test suite***
Protocol to Gateway or Call Manager	***SIP***
callctrl.cfg file	The Broadvox SIP trunk only supports PCMU as an RTP codec.

2.3 Dialogic® Brooktrout® TR1034 Fax Board

Vendor	***Dialogic***
PSTN Device	***Dialogic® Brooktrout® TR1034 Fax Board***
Software Version	***SDK 6.1.1***
Protocol to PSTN Device	***Analog Loop Start***
callctrl.cfg file	***All defaults***

2.4 Network System Configuration

The diagram below details the sample configuration used in connection with this document.

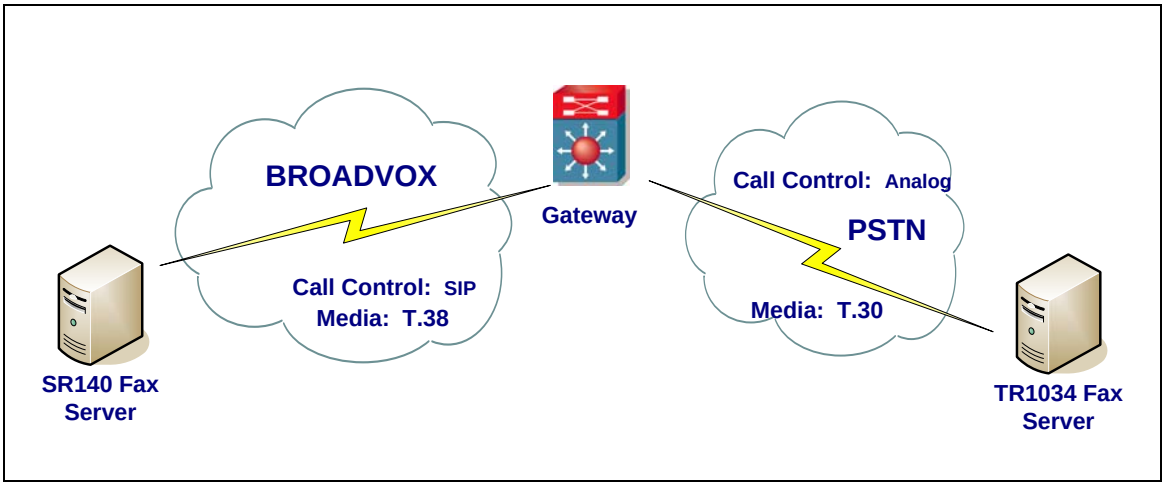


Diagram Notes:

- SR140 Fax Server = Fax Server including Dialogic® Brooktrout® SR140 Fax Software and third party fax application
- TR1034 Fax Server = Fax Server including Dialogic® Brooktrout® TR1034 Fax Board and third party fax application

3. Prerequisites

None.

4. Summary of Limitations

Broadvox SIP Trunking Service does not support T.38 with V.34 (version 3) support. The SR140 default setting for T.38 version will work without issues. Invites that include T.38 Version 3 will be rejected with a '488 Not Supported Here' response from the SIP Trunk.

The Broadvox SIP trunk only supports PCMU as an RTP codec.

5. SIP Trunking Setup Notes

5.1 IP Trunk Configuration

In order for your PBX, IAD, or Gateway to receive signaling and media from Broadvox, you must configure your firewall or NAT to allow the following IP addresses and port ranges:

Traffic Type	IP Addresses	Protocol	Port Range
SIP	208.93.224.224/28 208.93.226.208/28 208.93.227.208/28	UDP and TCP	5060
SIPS (SIP over TLS)	208.93.224.224/28 208.93.226.208/28 208.93.227.208/28	TCP	5061
Media	208.93.224.224/28 208.93.226.208/28 208.93.227.208/28 209.249.3.164 64.158.162.71 64.158.162.100 64.152.60.71 64.152.60.164 209.249.3.71 209.249.3.81 64.156.174.71 208.93.227.5 208.93.226.5	UDP	1024-65535

In order to send traffic to Broadvox, you should create peer / gateway / trunk definitions inside your PBX, IAD, or Gateway device for all three of these locations:

City	DNS A Record	DNS SRV Record	IP Address
New York City, NY	nyc01-01.fs.broadvox.net	nyc01-01.fs.broadvox.net	208.93.226.212
Dallas, TX	dfw01-01.fs.broadvox.net	dfw01-01.fs.broadvox.net	208.93.224.228
Los Angeles, CA	lax01-01.fs.broadvox.net	lax01-01.fs.broadvox.net	208.93.227.212

5.2 Dialing Plan Overview

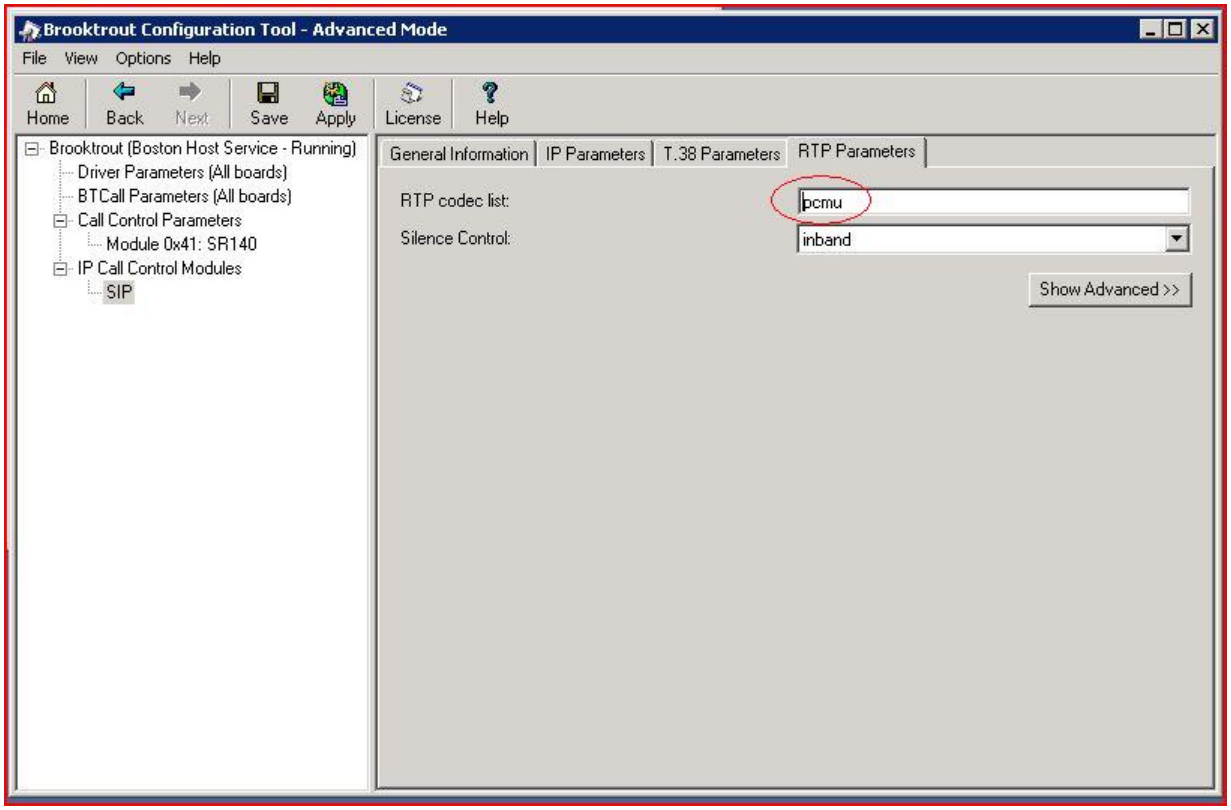
The test environment was very simple. On the IP side, we had a configured SR140 endpoint. On the PSTN side, we had a configured TR1034 board. Carrying traffic between the two was the Broadvox Fusion SIP trunk. Testing consisted of the full suite of interop calls between the two endpoints, first the SR140 sending and the TR1034 receiving, and then the TR1034 sending with the SR140 receiving.

6. Dialogic® Brooktrout® SR140 Fax Software Setup Notes

The Installation and Configuration Guides for the SR140 are available from the site:

http://www.dialogic.com/manuals/brooktrout/default.htm

All settings were default except for RTP codec which was set to PCMU as the Broadvox SIP trunk only supports PCMU as an RTP codec. This setting can be adjusted by selecting the SIP heading under the IP Call Control Modules section. When selecting the “RTP Parameters” tag, one must only change the value in the box to read “pcmu”, as pictured below.



7. Dialogic® Brooktrout® TR1034 Fax Board Setup Notes

For the sample test configuration, the default callctrl.cfg included with SDK 6.1.1 was used.

8. Frequently Asked Questions

- "*I'm configured as near as possible to this the sample configuration described in this document, but calls are still not successful; what is my next step?"*
  - ➔ Provide this document to your gateway support.
  - ➔ Ensure T.38 is enabled on the gateway.
  - ➔ Confirm that basic network access is possible by pinging the gateway.

- "*How do I obtain Wireshark traces?*"
  - ➔ The traces can be viewed using the Wireshark network analyzer program, which can be freely downloaded from *http://www.wireshark.org*.
  - ➔ To view the call flow in Wireshark, open the desired network trace file and select "Statistics->VoIP Calls" from the drop down menu. Then highlight the call and click on the "Graph" button.