Dialogic

Dialogic® Brooktrout® SR140 Fax Software with babyTEL™ SIP Trunking Service

Installation and Configuration Integration Note

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1. Scope

This document is intended as a general guide for configuring a basic installation of the ***babyTEL™ 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 install and configure the ***babyTEL 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 babyTEL SIP Trunking Service will sometimes be denoted herein as babyTEL or SIP Trunk, or some other form thereof.

2. Configuration Details

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

2.1 babyTEL SIP Trunking Service

Vendor	***babyTEL™***
Model	***SIP Trunking Service***
Software Version	***N/A***
IP Device	***Dialogic® Brooktrout® SR140***
Protocol to IP Device	***SIP***
Additional Notes	***The babyTEL SIP Trunk will not accept traffic from the SR140 when the SR140 is configured to use T.38 version 3. The babyTel network will respond with a "488 – Not Acceptable Here" response to a SIP invite containing T.38 version 3.***

2.2 Dialogic® Brooktrout® SR140 Fax Software

Vendor	***Dialogic***
Model	***Dialogic® Brooktrout® SR140 Fax Software***
Software Version	***SDK 6.2.8***
Protocol to SIP Trunking Service	***SIP***
callctrl.cfg file	***DEFAULT***

2.3 Dialogic® Brooktrout® TR1034 Fax Board

Vendor	***Dialogic***
PSTN Device	***Dialogic® Brooktrout® TR1034 Fax Board***
Software Version	***SDK 6.2.8***
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. On the IP side, the SR140 was configured to send and receive T.38 faxes. On the PSTN side, the TR1034 board was configured to send and receive T.30 faxes over an analog loopstart connection. Carrying traffic between the two was the babyTEL 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.

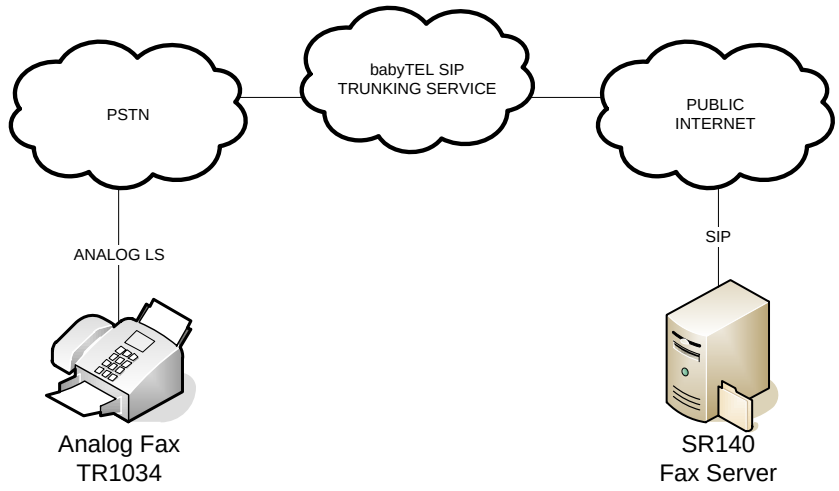


Diagram Notes: SR140 Fax Server = Fax Server including Dialogic® Brooktrout® SR140 Fax Software and third party fax application

3. Prerequisites

The SR140 based fax server must be assigned a public IP address able to be reached by the SIP Trunking service. A fax server that has been assigned a private IP address will have communication issues talking to the babyTEL SIP Trunking service.

4. Summary of Limitations

The babyTEL 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.

5. babyTEL SIP Trunk Setup Notes

For the sample test configuration, the babyTEL SIP Trunk was configured as described below.

5.1 Network Addresses

Device #	Device Make, Model, and Description	Device IP Address
1	BABYTEL PROXY / SIP REGISTRAR SERVER	216.18.125.12:5065

5.2 babyTEL SIP Trunk Configuration

There is no need to configure the IP trunk itself. babyTEL will provide an IP address for the proxy server. The provided IP address should be used as the "Primary Proxy Server" IP address when setting up the SR140 software.

6. Dialogic® Brooktrout® SR140 Fax Software Setup Notes

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

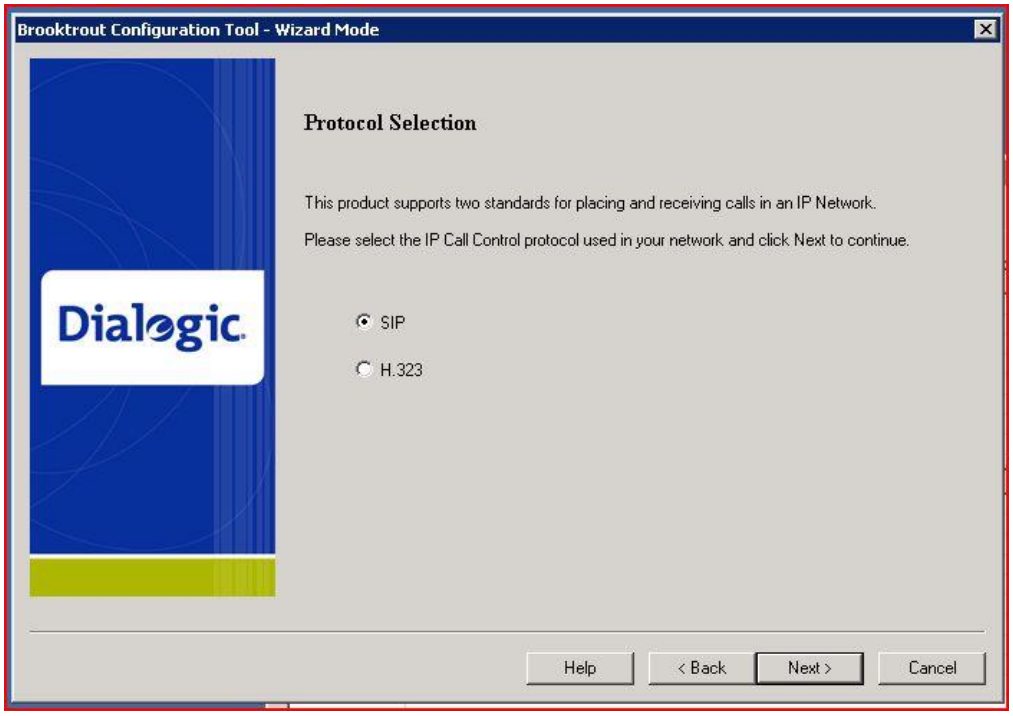
http://www.dialogic.com/manuals/brooktrout/default.htm

Please note that if you plan to place your fax server behind a firewall, you must keep all necessary ports open to not impede fax traffic.

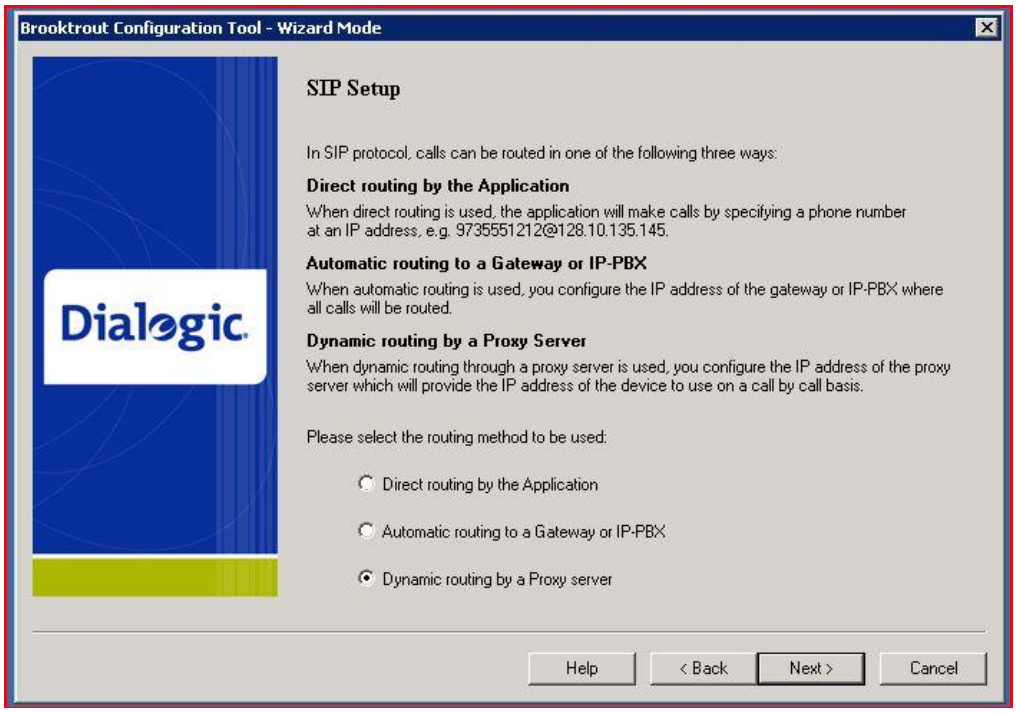
Dialogic SR140 Ports:

Port 5060 – SIP signaling port
Port 8080 – TCP port for HTTP (license activation - required for automatic registration via Internet; otherwise, manual registration via Dialogic Website is required)
Ports 56000 to 57000 – UDP ports for FoIP traffic (configurable)

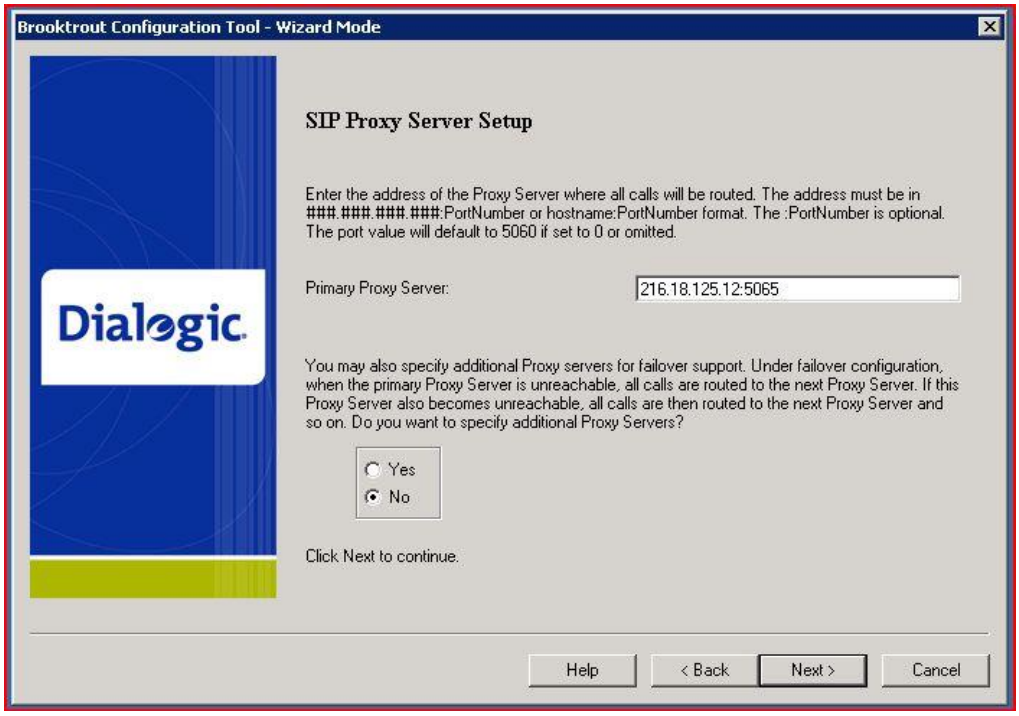
The following SR140 Setup Wizard screen shots illustrate how the test configuration was setup to interop with the babyTEL SIP Trunking Service.



The first selection you will make after starting the setup wizard is choosing a protocol. Choose **SIP** for the protocol, then click **Next.**



In the SIP Setup screen you will have three choices. The babyTEL SIP trunk uses a server for proxy and registrar functions. Choose **Dynamic routing by a Proxy server** then click **Next**.

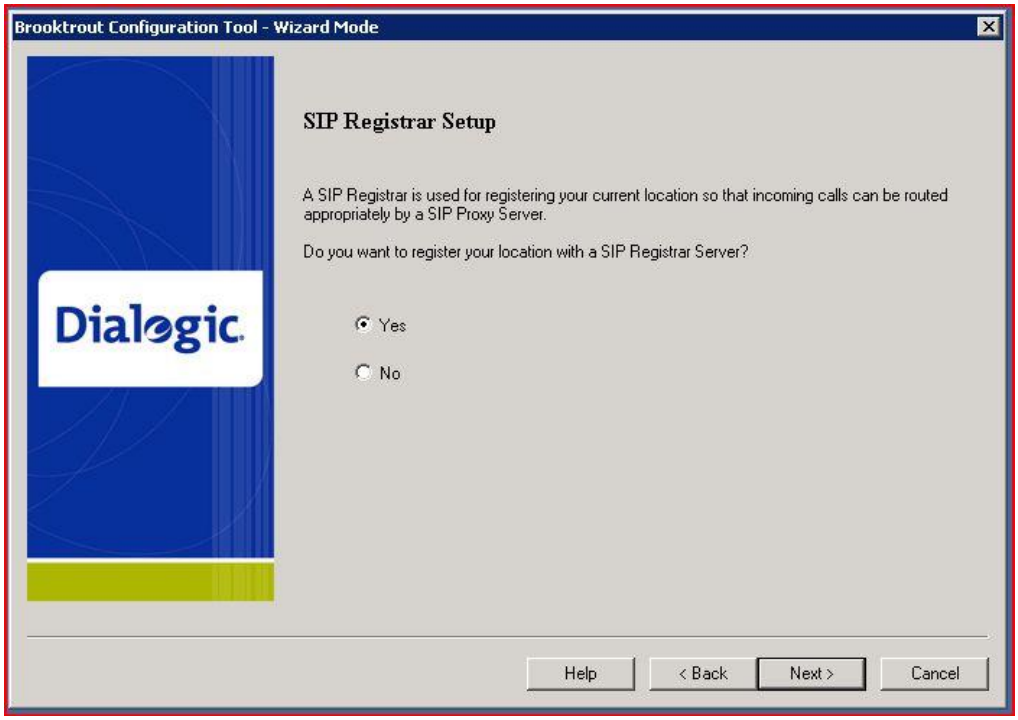


The IP address of babyTEL's proxy server is 216.18.125.12 and it uses port 5065 for communications. Enter **216.18.125.12:5065** in the **Primary Proxy Server Field** of this window. Choose **No** as to whether or not you want to specify an additional proxy server.

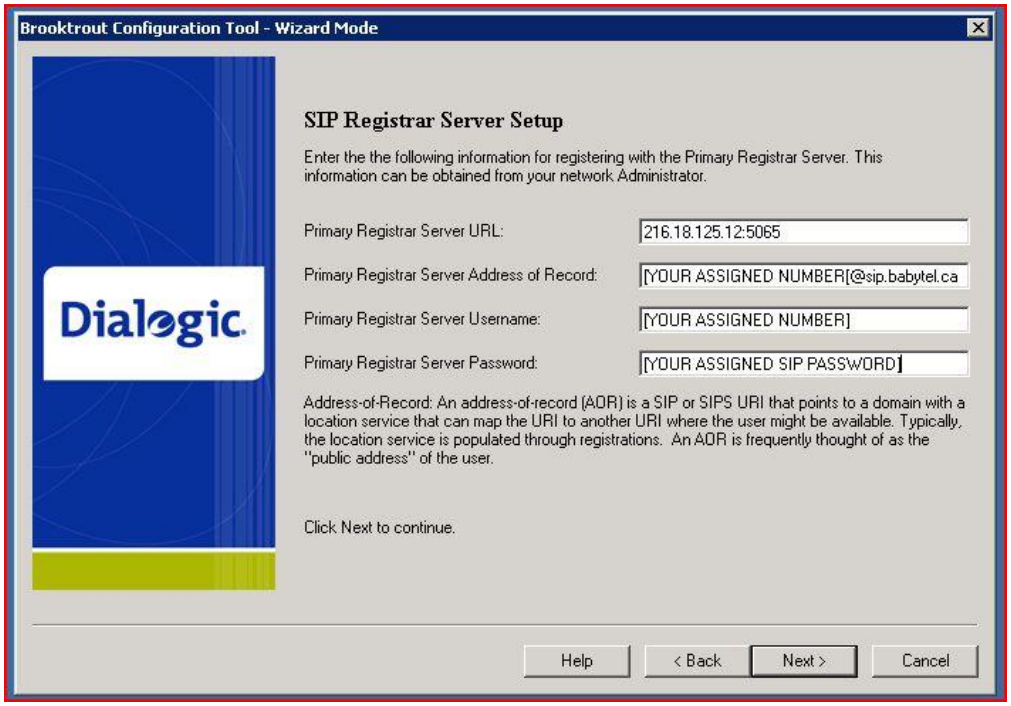
IMPORTANT NOTE: The IP address specified was operational as of the publication of this document. babyTEL has warned that IP addresses can change from time to time without warning. In the case of failed communication with this IP address, the user should visit babyTEL's support website at:

http://www.babytel.ca/HomePhone/Help/FAQ.html

and communicate with babyTEL support to discern the proper IP settings.



babyTEL uses the proxy server as a SIP Registrar Server as well. At the SIP Registrar Setup screen, select **Yes** then click **Next**.



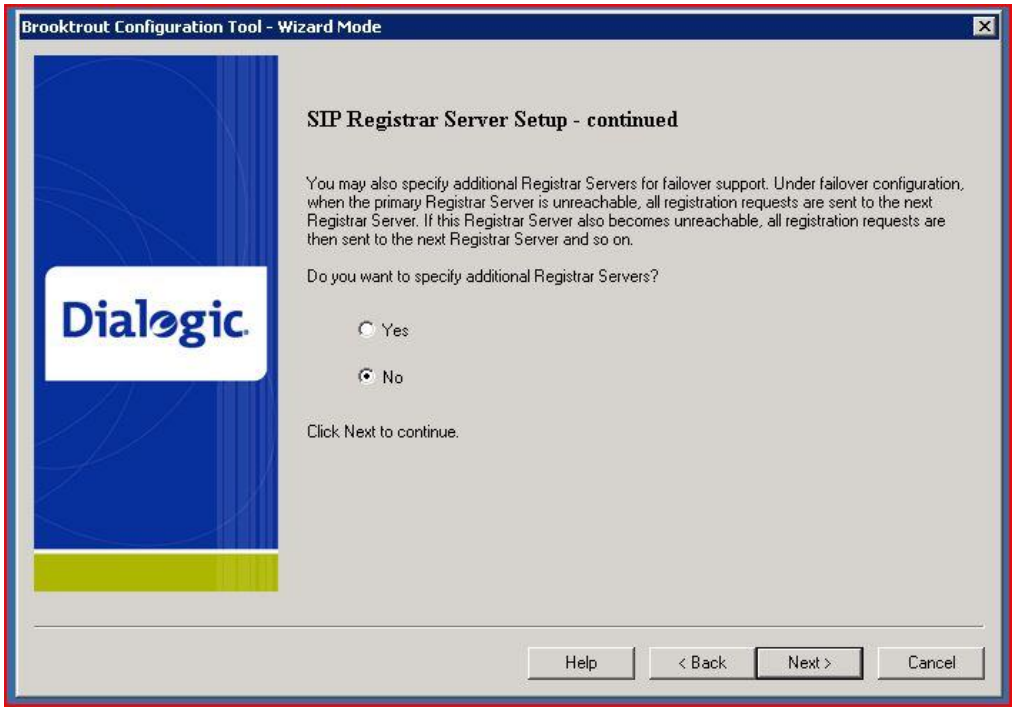
The SIP Registrar Server Setup screen should be filled out as shown above.

- The **Primary Registrar Server** should be specified as **216.18.125.12:5065** as of the publication of this document.
- The **Primary Registrar Server Address of Record** will be filled out as the DID number you were assigned by babyTEL: for example: **15551234567@sip.babytel.ca.**
- The **Primary Registrar Server Username** will be your DID number, for example., **15551234567**.
- The **Primary Registrar Server Password** will be your assigned SIP Password, and can be acquired by logging in to your babyTEL account.

From the babyTEL FAQ page:

Account Number: is the same as User ID. It is an 11-digit number you receive with the babyTEL subscription Starter Kit. This number is the same as your telephone number. It is needed (along with your password) when you log into your online babyTEL User Account.

SIP Password: is a secure access code used to activate the babyTEL service and subsequently used to configure your Softphone and VoIP devices."



Choose **No** as to whether or not you want to specify an additional Registrar Server.

7. 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.

- "*I try to call the SR140 port, but I get a network busy - why?*"
  - ➔ Most likely you do not have the proper ports open on your firewall. Check settings against the above recommendations and be sure your efforts match up.

- "*I've followed this guide to the letter, but I can't connect to babyTEL, why?*"
  - ➔ Above all make sure your fax server is assigned a non-private IP reachable from the Internet. If you're assigning a private IP to the FoIP server, that will be communicated in the "connection information" of the SDP message. babyTEL needs a public IP to communicate with the server.

8. References

http://www.babytel.ca/HomePhone/Help/FAQ.html