Dialogic® Brooktrout® SR140 Fax Software with Broadview Networks Broadspeed 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 ***Broadview Networks Broadspeed 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.444Tw1ns.

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 ***Broadspeed 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 quite possible that the sample configuration will not match an exact configuration or 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.

2. Configuration Details

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

2.1 SIP Trunking Service

Vendor	***Broadview Networks***
Model	***BROADSPEED SIP TRUNKING SERVICE***
IP Device	***Dialogic® Brooktrout® SR140 Fax Software***
Protocol to Dialogic® Brooktrout® SR140 Fax Software	***SIP***

2.2 Dialogic® Brooktrout® SR140 Fax Software

Vendor	***Dialogic***
Model	***Dialogic® Brooktrout® SR140 Fax Software***
Software Version	***SDK 6.1.1***
Protocol to Gateway or Call Manager	***SIP***
callctrl.cfg file	***All defaults***

2.3 Network System Configuration

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

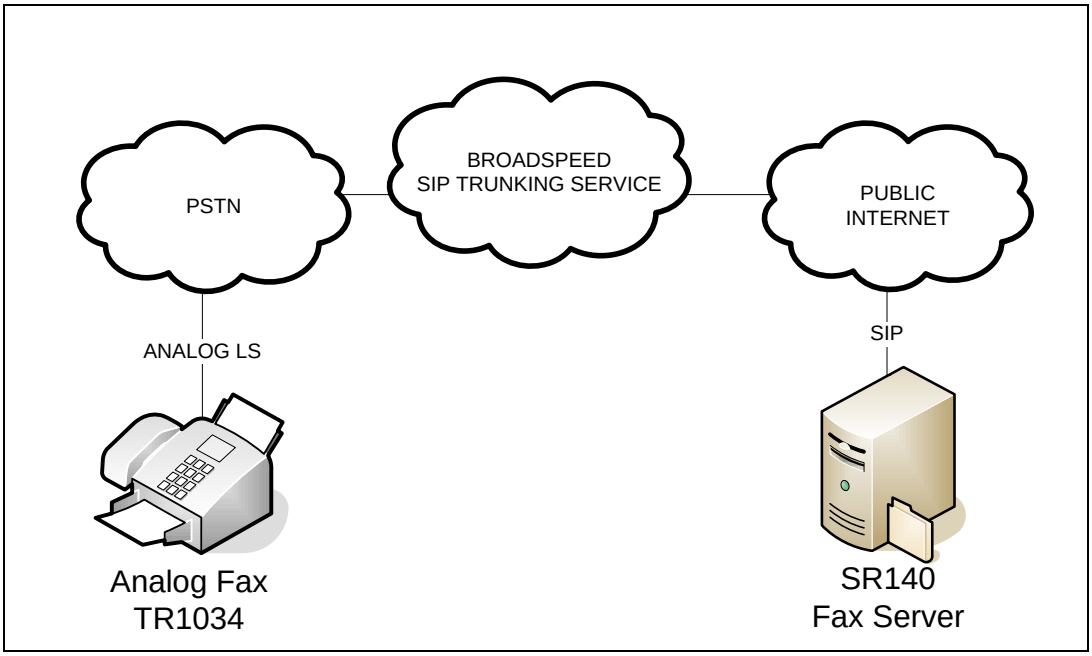


Diagram Notes:

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

3. Prerequisites

The SR140 based fax server must be assigned an IP address that is reachable by the Broadspeed SIP Trunking Service. If the fax server is assigned a private IP address, there will be communication issues talking to Broadview Networks' Broadspeed service.

4. Summary of Limitations

None, at this time

5. Broadspeed SIP Trunking Setup Notes

5.1 Network Addresses

Device #	Device Make, Model, and Description	Device IP Address
1	BROADSPEED SIP TRUNKING SERVICE	64.115.X.X

5.2 IP Trunk Configuration

There is no need to configure the IP trunk itself. Broadview Networks will provide an IP address to use for the Broadspeed SIP Trunking Service. The provided IP address should be used as the "gateway" IP address in setting up the SR140 software.

6. Dialogic® Brooktrout® SR140 Fax Software Setup Notes

For the sample test configuration, the SR140 was configured using the default values. The following screenshots were taken from the SR140 Setup Wizard and are included to illustrate how to configure the SR140 to interop with the Broadspeed SIP Trunking Service.

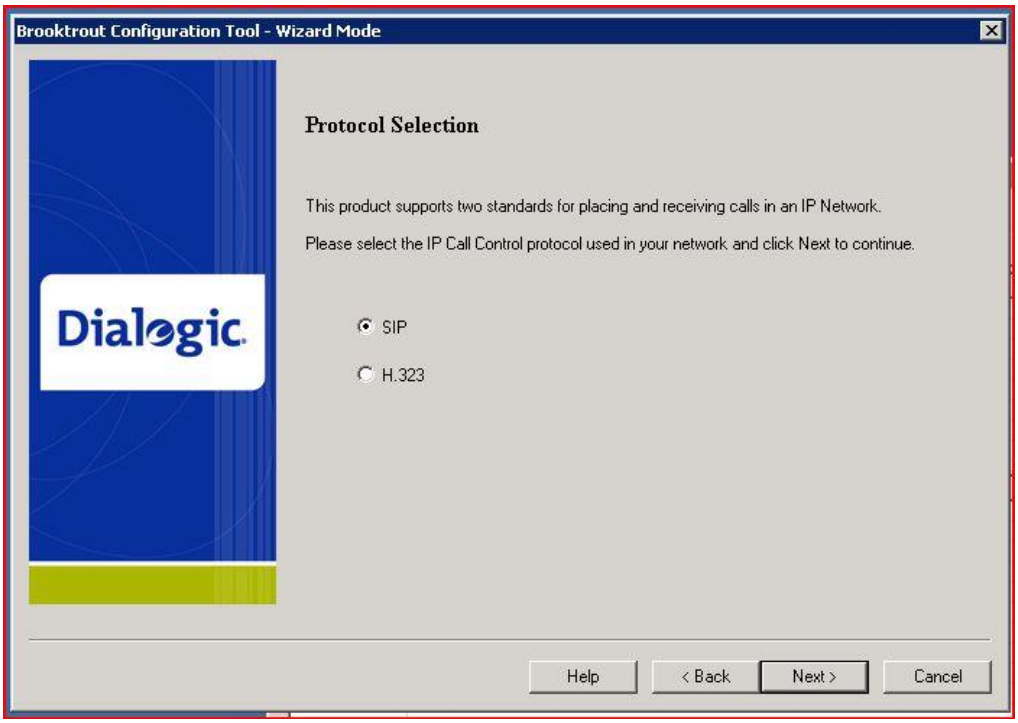
Please note that if you plan to place your fax server behind a firewall, you must keep all necessary ports open so as not to impede fax traffic.

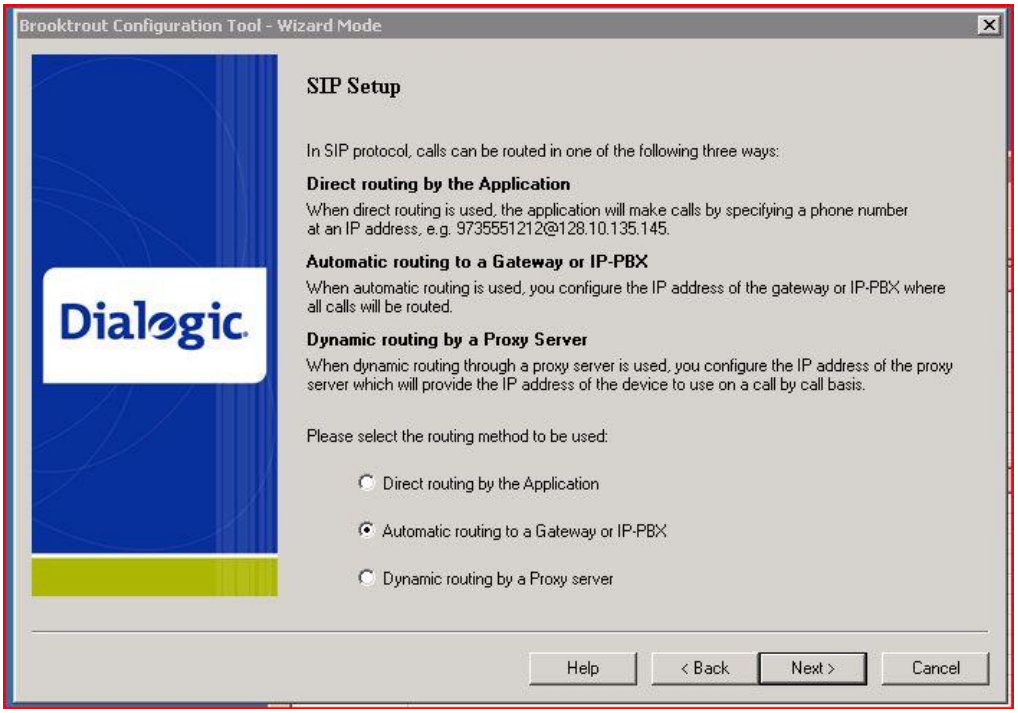
Dialogic SR140 Ports:

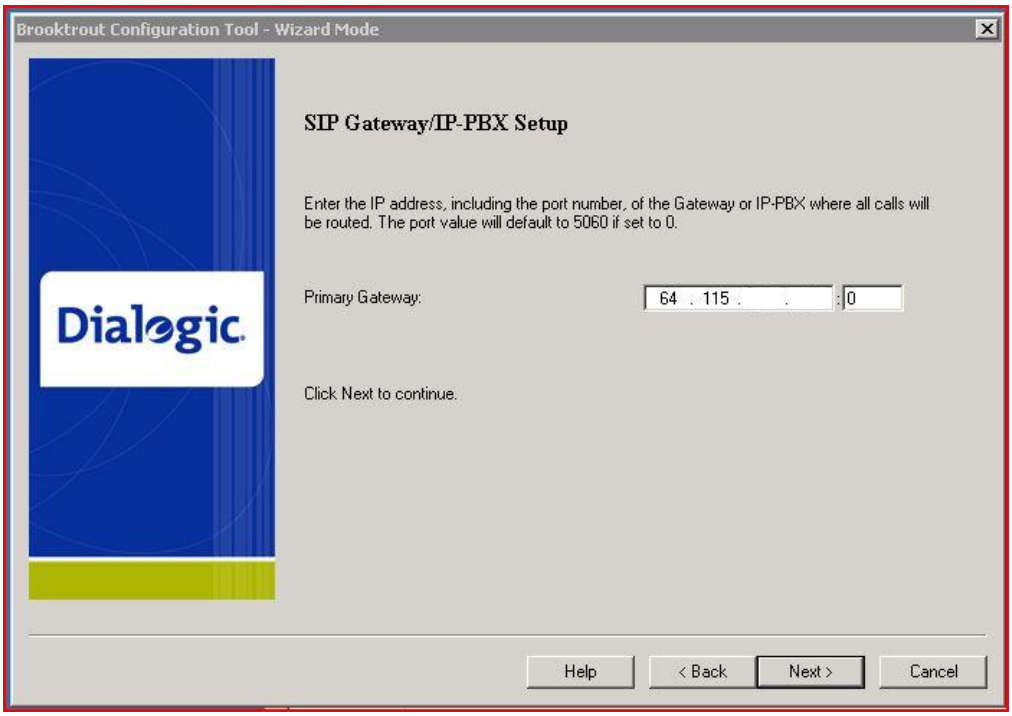
Port 5060 – SIP signaling port
Port 1719 – H.323 gatekeepers
Port 1720 – H.323 signaling port
Ports 56000 to 57000 – UDP ports for FoIP traffic (configurable)

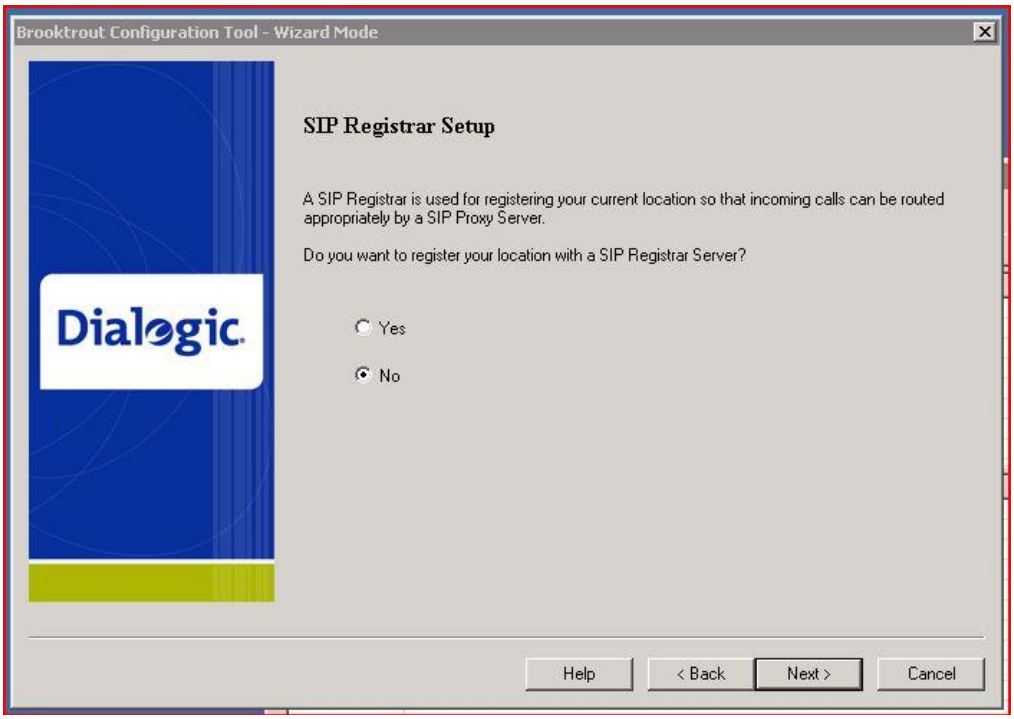
Broadview Ports:

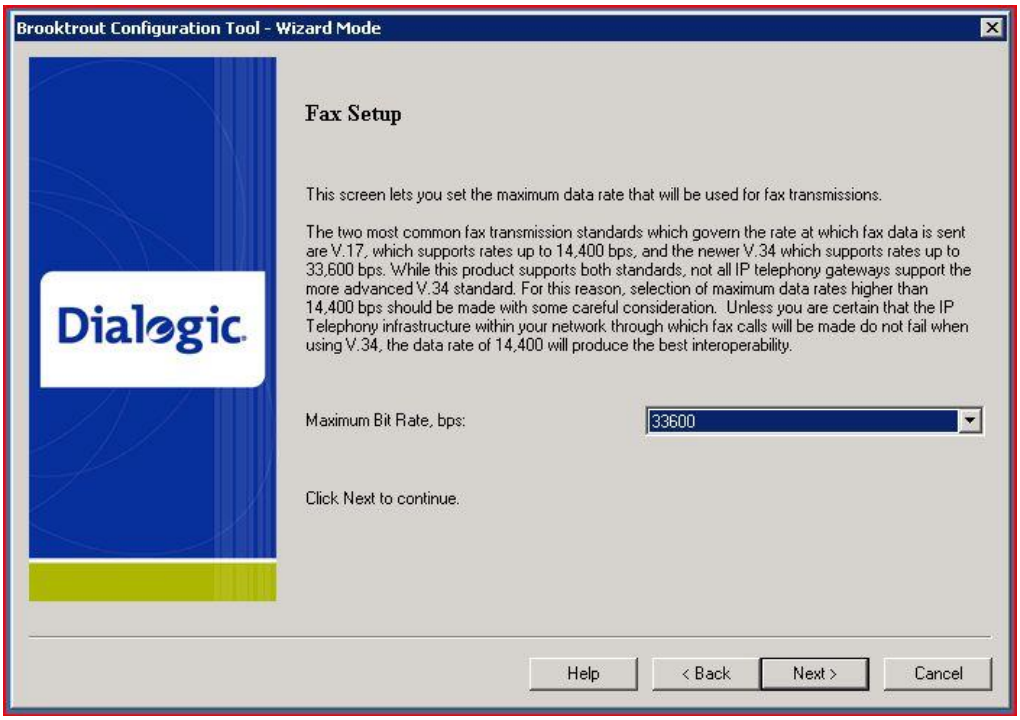
Port 5060 – SIP signaling port (note: UDP)
Ports above 2048 – UDP for media (Broadview recommends not blocking above 2048)


Brooktrout Configuration Tool - Wizard Mode
Protocol Selection
This product supports two standards for placing and receiving calls in an IP Network.
Please select the IP Call Control protocol used in your network and click Next to continue.
SIP
H.323
Help
< Back
Next >
Cancel


Brooktrout Configuration Tool - Wizard Mode
SIP Setup
In SIP protocol, calls can be routed in one of the following three ways:
Direct routing by the Application
When direct routing is used, the application will make calls by specifying a phone number at an IP address, e.g. 9735551212@128.10.135.145.
Automatic routing to a Gateway or IP-PBX
When automatic routing is used, you configure the IP address of the gateway or IP-PBX where all calls will be routed.
Dynamic routing by a Proxy Server
When dynamic routing through a proxy server is used, you configure the IP address of the proxy server which will provide the IP address of the device to use on a call by call basis.
Please select the routing method to be used:
Direct routing by the Application
Automatic routing to a Gateway or IP-PBX
Dynamic routing by a Proxy server
Help
< Back
Next >
Cancel


Brooktrout Configuration Tool - Wizard Mode
Dialogic
SIP Gateway/IP-PBX Setup
Enter the IP address, including the port number, of the Gateway or IP-PBX where all calls will be routed. The port value will default to 5060 if set to 0.
Primary Gateway:
64 . 115 . . :0
Click Next to continue.
Help
< Back
Next >
Cancel


Brooktrout Configuration Tool - Wizard Mode
Dialogic
SIP Registrar Setup
A SIP Registrar is used for registering your current location so that incoming calls can be routed appropriately by a SIP Proxy Server.
Do you want to register your location with a SIP Registrar Server?
Yes
No
Help
< Back
Next >
Cancel



The Installation and Configuration Guides for SDK 6.1.x, SDK 6.2.x and SDK 6.3.x are available from the following site:

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

For the sample test configuration, the SR140 was configured using the default values from SDK 6.1.1 and is shown below for reference.

```
  api_trace=verbose
  internal_trace=verbose
  l3l4_trace=verbose
  l4l3_trace=verbose
  host_module_trace=verbose
  ip_stack_trace=warning
  vtty_trace=true
  max_trace_files=1
  max_trace_file_size=100
  trace_file=test_0004_ecc.log
[host_module.1]
  module_library=brktsip.dll
  enabled=true
[host_module.1/t38parameters]
  t38_fax_rate_management=transferredTCF
  fax_transport_protocol=t38_only
  t38_fax_udp_ec=t38UDPRedundancy
  rtp_ced_enable=true
  t38_max_bit_rate=14400
  t38_fax_version=0
  media_renegotiate_delay_inbound=1000
  media_renegotiate_delay_outbound=-1
  t38_fax_fill_bit_removal=false
  t38_fax_transcoding_jbig=false
  t38_fax_transcoding_mmr=false
  t38_t30_fastnotify=false
```

```
  t38_type_of_service=0
  t38_UDPTL_redundancy_depth_control=5
  t38_UDPTL_redundancy_depth_image=2
[host_module.1/rtp]
  rtp_frame_duration=20
  rtp_jitter_buffer_depth=100
  rtp_codec=pcmu pcma
  rtp_silence_control=inband
  rtp_type_of_service=0
  rtp_voice_frame_replacement=0
[host_module.1/parameters]
  sip_max_sessions=256
  sip_default_gateway=64.115.128.11:0
  sip_proxy_server1=
  sip_proxy_server2=
  sip_proxy_server3=
  sip_proxy_server4=
  sip_registration_server1=
  sip_registration_server1_aor=
  sip_registration_server1_username=
  sip_registration_server1_password=
  sip_registration_server1_expires=3600
  sip_registration_server2=
  sip_registration_server2_aor=
  sip_registration_server2_username=
  sip_registration_server2_password=
  sip_registration_server2_expires=3600
  sip_registration_server3=
  sip_registration_server3_aor=
  sip_registration_server3_username=
  sip_registration_server3_password=
  sip_registration_server3_expires=3600
  sip_registration_server4=
  sip_registration_server4_aor=
  sip_registration_server4_username=
  sip_registration_server4_password=
  sip_registration_server4_expires=3600
  sip_registration_interval=60
  sip_Max-Forwards=70
  sip_From=Anonymous <sip:no_from_info@anonymous.invalid>
  sip_Contact=0.0.0.0:0
  sip_username=-
  sip_session_name=no_session_name
  sip_session_description=
  sip_description_URI=
  sip_email=
  sip_phone=
  sip_Route=
  sip_session_timer_session_expires=0
  sip_session_timer_minse=-1
  sip_session_timer_refresh_method=0
  sip_ip_interface=
  sip_ip_interface_port=5060
  sip_redirect_as_calling_party=0
  sip_redirect_as_called_party=0
[module.41]
  model=SR140
  virtual=1
  exists=1
  vb_firm=C:\Documents and Settings\Administrator\My Documents\Dialogic\interop kit SDK611 v1.2\fdtool-6.1.1\bin\bostvb.dll
  channels=2
[module.41/ethernet.1]
  ip_interface={7BC6172B-3453-40F7-B782-BB44ADBD06E4}:0
  media_port_min=56000
  media_port_max=57000
[module.41/host_cc.1]
  host_module=1
  number_of_channels=2
```

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 Broadview, 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. Broadview needs a public IP to communicate with the server.

8. References

http://www.broadviewnet.com/Products_Solutions/SIPTrunk.asp