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Dialogic® Brooktrout® SR140 Fax Software with NEC Philips SOPHO iS3000

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 ***NEC Philips SOPHO iS3000*** 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 should not and 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 ***NEC Philips SOPHO iS3000***.

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. The NEC Philips SOPHO iS3000 will be denoted herein as Philips SOPHO iS3000 and SOPHO iS3000, or some other form thereof.

2. Configuration Details

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

2.1 NEC Philips SOPHO iS3000

Vendor	***NEC Philips***
Model	***SOPHO iS3000 with ISG board installed in SOPHO iS3000***
Software Version	***iS3000 Boot Package: f39a20v1.102 ISG Application Package: fa2010v1.609***
IP Device	***Dialogic® Brooktrout® SR140 Fax Software***
Protocol to Dialogic® Brooktrout® SR140 Fax Software	***SIP***
PSTN Device	***Analog fax machines, internally and externally***
Protocol to PSTN Device	***E1 ISDN***
Additional Notes	***N/A***

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.

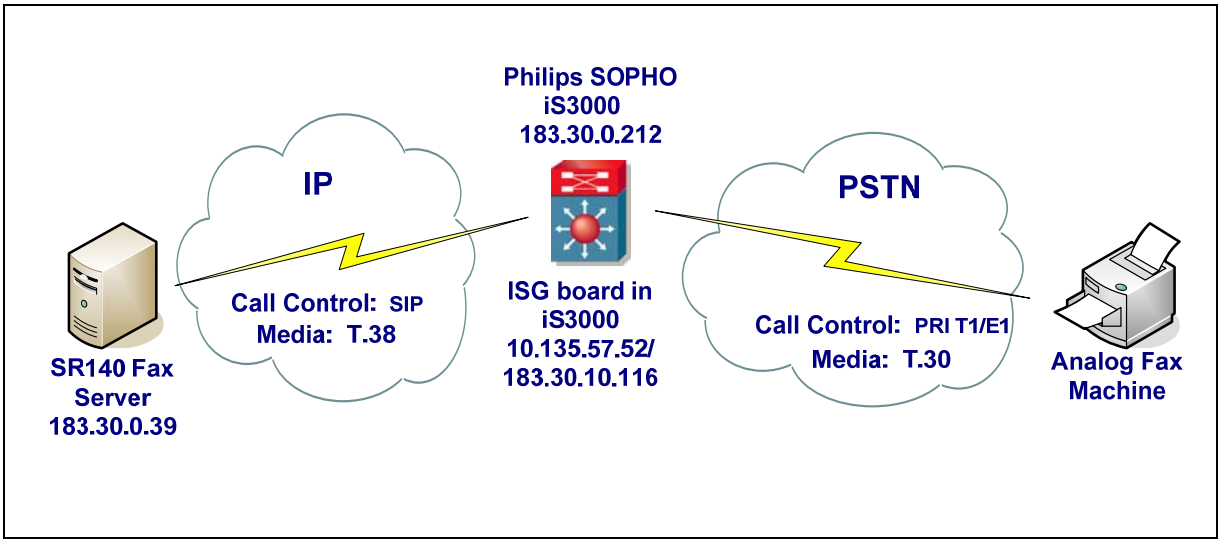


Diagram Notes:

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

2.4 Network Addresses

Device #	Device Make, Model, and Description	Device IP Address
1	SR140	183.30.0.39
2	iS3000 (SIP)	183.30.0.212
3	ISG board in iS3000 PBX (T.38)	10.135.57.52 – used for external calls 183.30.10.116 – used for internal calls

3. Prerequisites

To add T.38 support to the SOPHO iS3000, the Philips ISG board must be installed into the iS3000. Alternatively, a separate SIP T.38 gateway may be used. No special licenses are required for T.38 support.

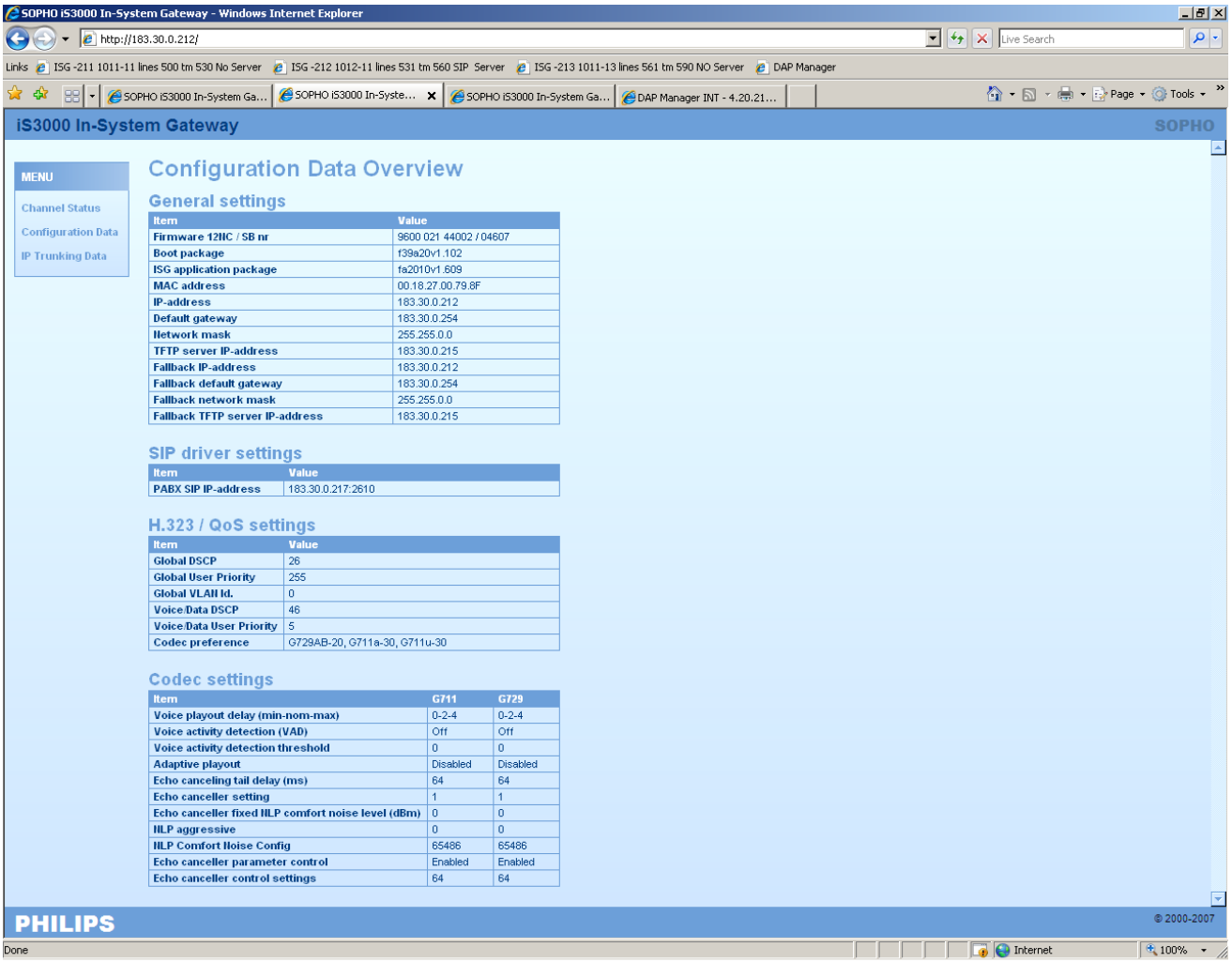
4. Summary of Limitations

The Philips ISG supports 30 channels; however, the iS3000 CPU3000 limits the number of SIP calls handled per sec to 3.

5. Philips SOPHO iS3000 Setup Notes

The Philips SOPHO iS3000 transmits and receives faxes at V.17 (14,400 bps) speeds and with Error Correction Mode.

The NEC Philips SOPHO iS3000 configuration screen is shown below:



6. Dialogic® Brooktrout® SR140 Fax Software Setup Notes

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

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

Default setup for SR140 was used during the tests, varied by the interop test tool during the test runs.

No sip_default_gateway was filled in since the IP address of the gateway was specified in the dial string in the application. The following dial string was used for the outbound calls: 00102846167@183.30.0.212. However, when the application does not allow specifying the gateway's IP address, make sure to fill in the IP address in the sip_default_gateway field. In our test scenario, this would be: sip_default_gateway=183.30.0.212:5060

The callctrl.cfg file used to configure the SR140 sample application used for the interop testing is shown below.

```
  l3l4_trace=none
  l4l3_trace=none
  api_trace=none
  internal_trace=none
  host_module_trace=none
  ip_stack_trace=none
# Most of the time a path should be used for this file name.
  trace_file=ecc.log
  max_trace_files=1
  max_trace_file_size=10
[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=0.0.0.0:0
  sip_proxy_server1=0.0.0.0:0
  sip_proxy_server2=
  sip_proxy_server3=
  sip_proxy_server4=
  sip_registration_server1=0.0.0.0:0
  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=brktfax@brkt.stw
  sip_Contact=0.0.0.0:0
  sip_username=-
  sip_session_name=no_session_name
  sip_session_description=
  sip_description_URI=brktfax
  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:\Program Files\Brooktrout\bostvb.dll
  channels=8
[module.41/ethernet.1]
  ip_interface={1717542B-2D31-4D57-99FE-791D03184D49}:0
  media_port_min=56000
  media_port_max=57000
[module.41/host_cc.1]
  host_module=1
  number_of_channels=8
```

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.