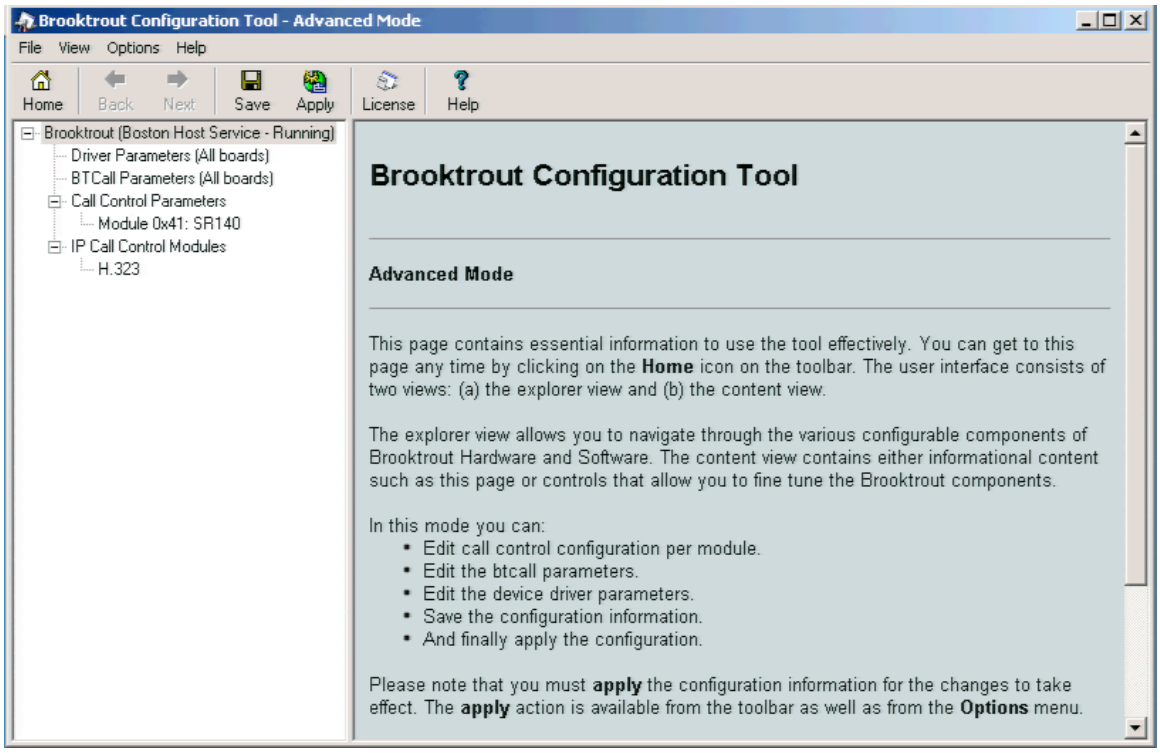
Brooktrout Configuration Tool Settings for Interoperating with Cisco Unified Communications Manager Using H.323

When deploying fax servers based on a Dialogic (formerly Cantata/Brooktrout) fax engine with Cisco Unified Communications Manager (Unified CM) solutions, certain settings are required within the fax engine for reliable interoperability. These fax engine settings are found within the “Brooktrout Configuration Tool” application on the fax server itself.

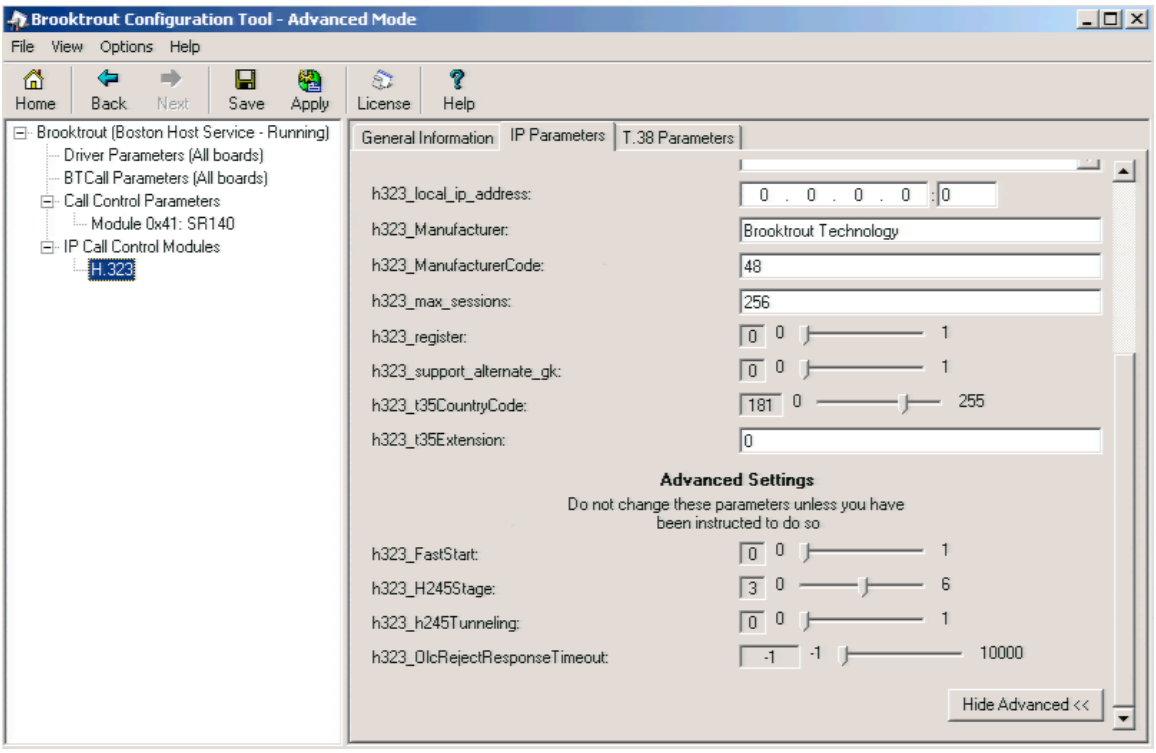
Access to the Brooktrout Configuration Tool can be achieved through a variety of methods depending on which of the many fax server applications are running on top of this fax engine. For example, for the Cisco fax server (running the Captaris Rightfax application), the Brooktrout Configuration Tool can be accessed through the configuration of the “RightFax DocTransport Module” or through the Windows Programs list (Start > Programs > Brooktrout Configuration Tool). Check with the respective fax server vendor for specific instructions on how to access the Brooktrout Configuration Tool for other fax server applications that utilize a Dialogic fax engine.

Note: It is recommended to stop the application service tied to the Brooktrout Configuration Tool before opening and making any changes. In the case of the Cisco fax server, you must stop the RightFax DocTransport Module before using the Brooktrout Configuration Tool. Additionally, to access the Brooktrout Configuration Tool through the RightFax DocTransport Module, you will need to click on the “Configure Brooktrout” button.

Once the Brooktrout Configuration Tool has been opened, a screen such as the following is seen.



From the initial screenshot of the Brooktrout Configuration Tool above, you want to now select **H.323** from the **IP Call Control Modules** section in the left hand column. Then in right part of the frame, select the **IP Parameters** tab. Scroll to the bottom of this **IP Parameters** screen and click on **Show Advanced>>**. You should now see the following screenshot.



The important section of the screenshot above is the **Advanced Settings** section. This is where the parameters are located for configuring the fax engine to interoperate properly with Cisco Unified Communications Manager.

The first parameter is **h323_FastStart**. This parameter controls the H.323 fast start feature. A setting of **0** disables H.323 fast start on the fax server while a setting of **1** enables the feature. To integrate properly with Cisco Unified Communications Manager, please make sure that **h323_FastStart** is disabled and set to a value of **0** as shown above.

The next parameter is **h323_H245Stage**. This parameter controls when during the H.245 negotiation the fax server sends the T.38 media IP address to the remote device (Cisco Unified Communications Manager). This parameter is only in effect when H.245 tunneling has been disabled using the Brooktrout Configuration tool (the **h323_h245Tunneling** parameter is discussed later in this document).

Dialogic's interoperability testing showed that a value of **3** is what should be set and this is their official recommendation. However, Cisco TAC engineers have seen a value of **0** result in better interoperability. According to Dialogic's documentation the values for the **h323_H245Stage** parameter are defined as follows:

0 - *Earliest H.245 possible can send and act on addresses in all messages.*

1 - *Can send the address in the Call Proceeding message.*

2 - *Can send the address in only the Alerting message.*

3 - *Wait for the Connect message.*

4 - *Early H.245 send addresses in Setup and Connect messages only.*

5 - *No automatic sending of the address.*

6 - *No support for H.245 and the NoH245 Facility message is sent.*

The last parameter that may need to be adjusted for interoperability with Cisco Unified Communications Manager is **h323_h245Tunneling**. When this parameter is set to **0** the H.245 Tunneling feature is disabled and when it is set to a value of **1**, H.245 Tunneling is enabled on the fax server. For interoperability with Cisco Unified Communications Manager, the **h323_h245Tunneling** parameter must be set to a value of **0** as shown in the screen shot above.

Once these parameters are properly set, it is critical to then click on **Save Configuration** in the **Options** menu of the Brooktrout Configuration Tool and then click on **Apply Configuration** before exiting the program. Also, remember to restart any services or modules on the fax server application program that were disabled prior to opening the Brooktrout Configuration Tool.

If a fax server is interoperating directly with a Cisco IOS voice gateway, then configuring these parameters is not necessary unless specific configurations on the IOS voice gateway have disabled fast start or H.245 tunneling. A default IOS voice gateway configuration for H.323 voice should interoperate fine with the default settings of these fax engine parameters on the fax server.