



Mediant 2000 Configuration Instructions for Nortel CS2000 and CS2100 H.248/IUA & H.248/ISUP Solutions

Version 4.4 Beta

Document # LTRT-72901



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Abbreviations

Each abbreviation, unless widely used, is spelled out in full when first used. Only industry-standard terms are used throughout this manual. Hexadecimal notation is indicated by 0x preceding the number.

Applicable Products

These Configuration Instructions provides additional information for the following AudioCodes product(s):

TrunkPack Series: Mediant 2000/MGCP-MEGACO

Notice

This **Configuration Guide** provides instructions for the software configuration of the AudioCodes' Mediant 2000 H.248 in Software Release Version 4.4. Information contained in this document is believed to be accurate and reliable at the time of printing. However, due to ongoing product improvements and revisions, AudioCodes cannot guarantee the accuracy of printed material after the Date Published nor can it accept responsibility for errors or omissions.

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Please refer to the current release notes that may be included with your documentation or hardware delivery.

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Reader's Notes

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1 Mediant 2000 Configuration Guide for Nortel H.248 Application

1.1 Purpose

The purpose of this document is to provide information about the configuration settings for the AudioCodes Mediant 2000 as used in the Nortel Networks® (Nortel®) CS2K and SL100 solutions. This document discusses the default settings that are set for each Mediant 2000 and the basic configuration steps and parameters to use in setting up the various control protocols and TDM side configurations. This documentation details the provisioning method to be used by Nortel to reduce or eliminate the need for manual changes to the initialization file.

1.2 Introduction

The AudioCodes product lines are used in a wide variety of applications. In order to have the flexibility to handle this, configuration parameters are used to set the box up for its role in the different applications. AudioCodes has worked closely with Nortel designers to define values for a set of parameters that allow interworking between the Mediant 2000 and Nortel equipment. These default parameters are downloaded to the system through a configuration file referred to as the "*ini*" (initialization) file. The parameters are set in the runtime memory immediately following the loading of the compressed executable (*cmp*) file. In most cases, the parameters found in the *ini* file can also be changed via the Web configuration. For these parameters, inclusion in the *ini* file is a matter of convenience and enables the user to set up the Mediant 2000 in a shorter time since it is not necessary to configure these parameters through the Web interface tool each time the system is loaded. Some of the parameters in the *ini* file are not configurable through any other means than the *ini* file. These parameters typically determine functionality at a low level and are rarely changed for the Nortel application.

Other parameters that need to be set tend to be location specific parameters, such as network settings, trunk configurations, and MGC to GW settings that must be matched for the two to interwork properly. These parameters can only be set with specific site knowledge and are set through the Web interface configuration tool.

This document assumes knowledge of the BootP/TFTP loading process for the Mediant 2000, familiarity with the concepts and settings for the protocols used in the Nortel solution, and a general knowledge of the AudioCodes Mediant 2000 Media Gateway and its Web configuration tool. It is recommended that the user read and understand the Mediant 2000 User's Manual (LTRT-69801 Version 4.4)

1.3 Overview

The following topics are discussed in this document:

- Mediant 2000 Installation and Basic Configuration
- Locality specific parameters
- Setting up Trunk configurations
- Clock Source and Fallback
- Updating ini Configuration Files.

2 Mediant 2000 Installation and Configuration

The default initialization (*ini*) file contains parameters necessary for the inter-working of the AudioCodes Mediant 2000 with the Nortel solution. Descriptions of each parameter are included in the default *ini* file. Any system parameter not included in the file assumes the default setting for the *cmp* file loaded on the system. Section 6.1 on page 30 contains the default *ini* file for the AudioCodes Mediant 2000 in the Nortel solution.

As delivered from AudioCodes, the Mediant 2000 has in memory the latest load approved by Nortel at the time of assembly. Once at site, the box needs to be upgraded with the latest version of the software as well as the default *ini* file, tones file, and any site-specific configurations that need to be made. The new load should be burned to flash. There are two methods in which to load the software and accompanying files: either through the BootP/TFTP application or through http using the Web interface provided on the box. For Nortel solutions it is recommended that Nortel installation documentation be followed in particular documentation for configuring the BootP/TFTP server used for the particular solution in which this unit is being placed.

Refer to the Mediant 2000 User's Manual for information on using other, third- party BootP/TFTP applications.



Note: If the unit is loaded with a software load from the previous release (i.e., the current release is 4.4 and the box was delivered with a 4.2 load), it is mandatory that the unit be upgraded using BootP/TFTP with the upgraded *ini* file from the previous release.

2.1 Upgrading an Existing Server

1. If this is an upgrade procedure for an in-service Mediant 2000, update the *ini* file to add or remove any parameters per the new default *ini* file and the parameter changes detailed in the Version Description Document for the new release. Refer to Section 6 on page 29 of this document describing *ini* file modifications. Put any other files referenced by the *ini* file onto the BootP/TFTP server, (for example, any data files (*.dat)).
2. Take the appropriate action at the call server to disable all traffic to the Mediant 2000.
3. Perform a hard reset on the Mediant 2000. This triggers a BootP request to the BootP server. The Mediant 2000 gets its network configuration from the BootP server and then requests the *cmp* and *ini* files from the TFTP server plus any additional files listed in the *ini* file.
4. After the box resets, access the Web configuration tool to check that the Mediant successfully loaded the *ini* file including the new defaults and previous configuration.
5. The pre-upgrade configuration should now be restored on the new load and the appropriate action can be taken at the call server to resume traffic to the Mediant 2000. This concludes the procedure for upgrading a unit previously in-service.

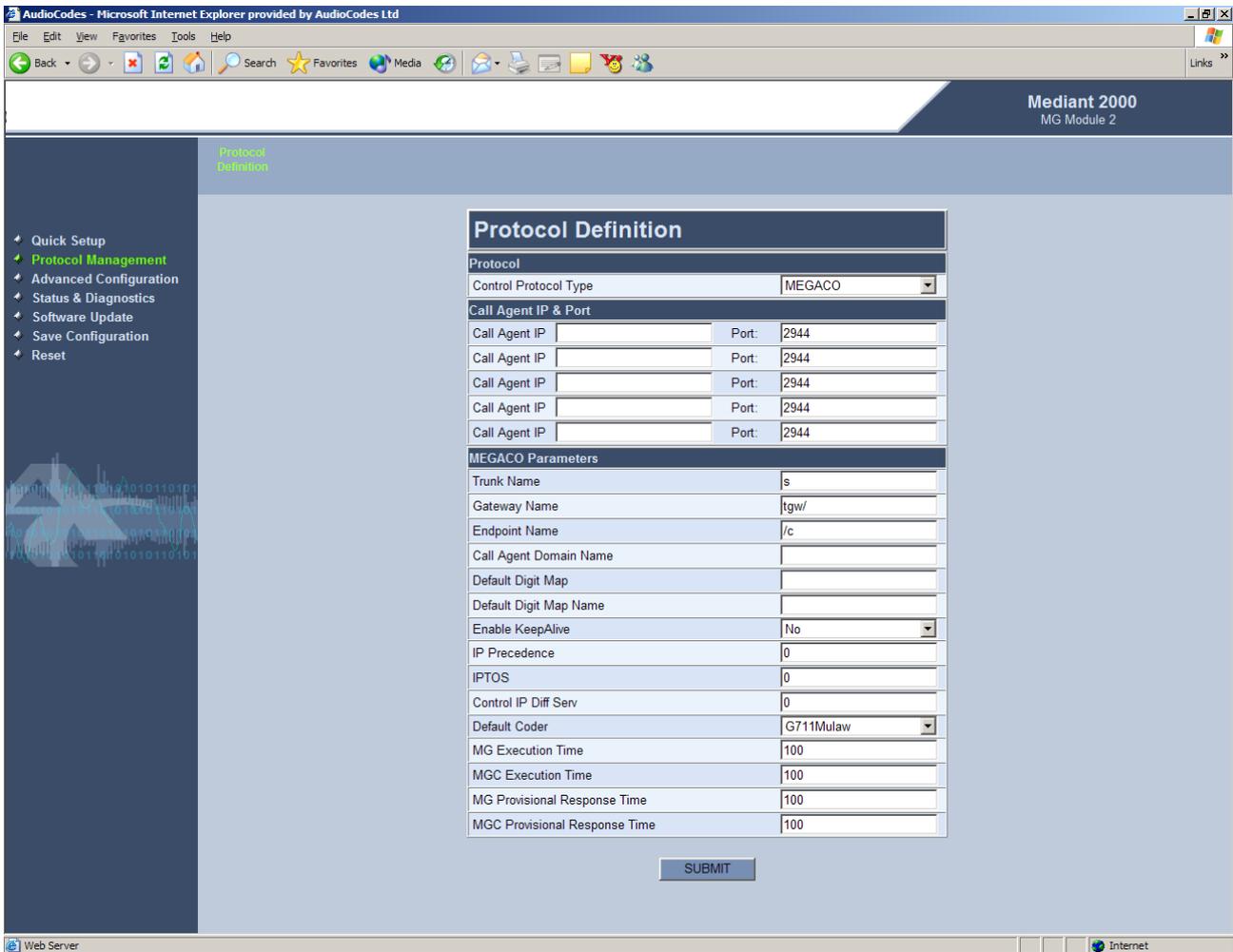
2.2 New Installation

Instructions for setting up the system are provided in this document using the Web interface. These instructions assume that the reader has the latest update for the Mediant 2000 load and the default *ini* file, an example of which is shown in Section 6.1 on page 30. The procedure to configure the Mediant 2000 to work within the Nortel configuration is as follows:

1. Configure the BootP/TFTP server with the latest *cmp* file and the default *ini* file for this release
2. Perform a hard reset on the Mediant 2000. This triggers a BootP request to the BootP server. The Mediant 2000 gets its network configuration from the BootP server and then requests the *cmp* and *ini* files from the TFTP server plus any additional files listed in the *ini* file.
3. After the box resets, access the Web configuration tool to check that the Mediant successfully loaded the default *ini* file and other parameters. Use the Web GUI to configure the Mediant 2000 for its role in the network. Refer to the instructions in this guide in order to quickly configure the Mediant 2000 through the Web configuration tool.

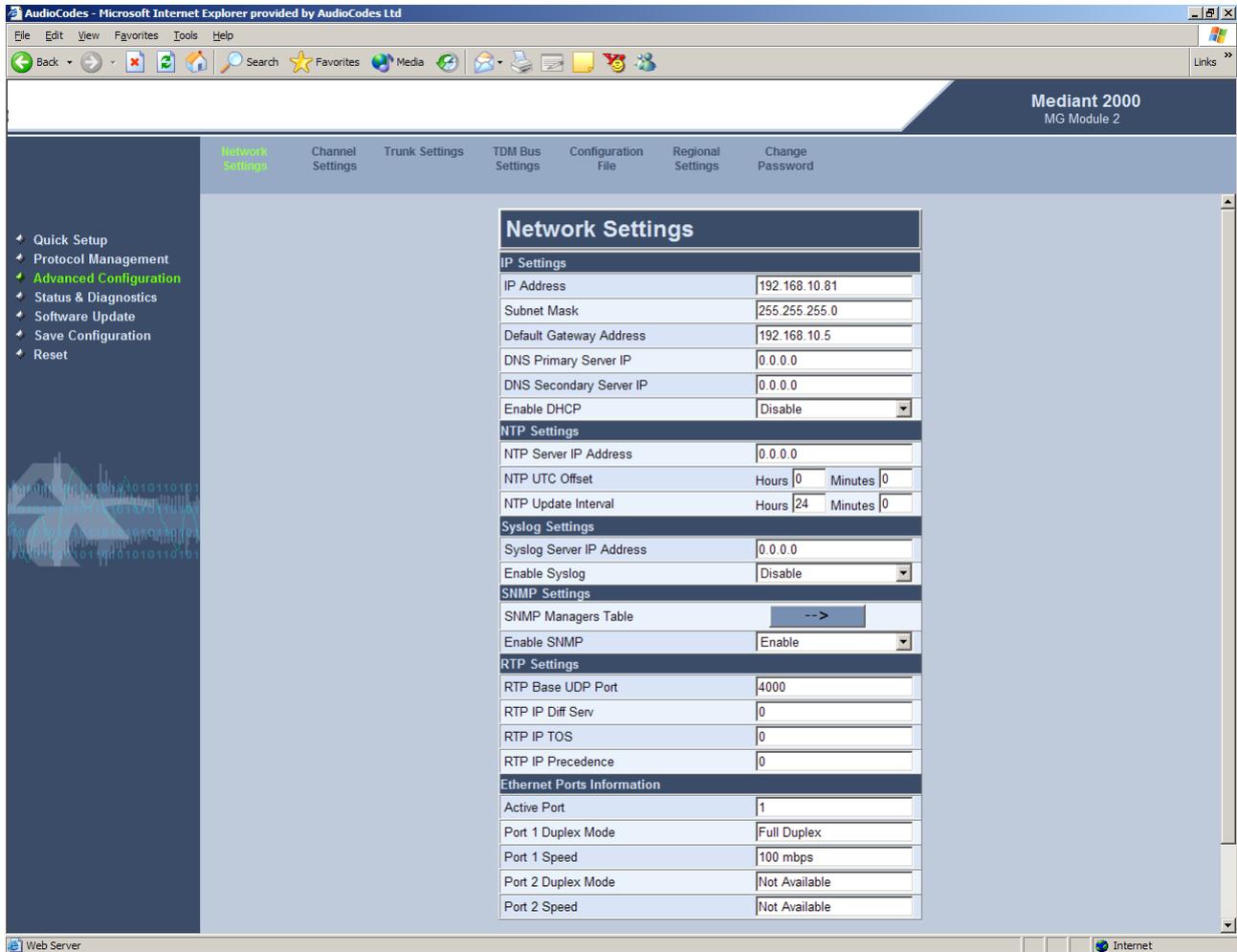
4. Go to Protocol Management ... Protocol Definition. It should look similar to the following in Figure 2-1 below:

Figure 2-1: Protocol Definition



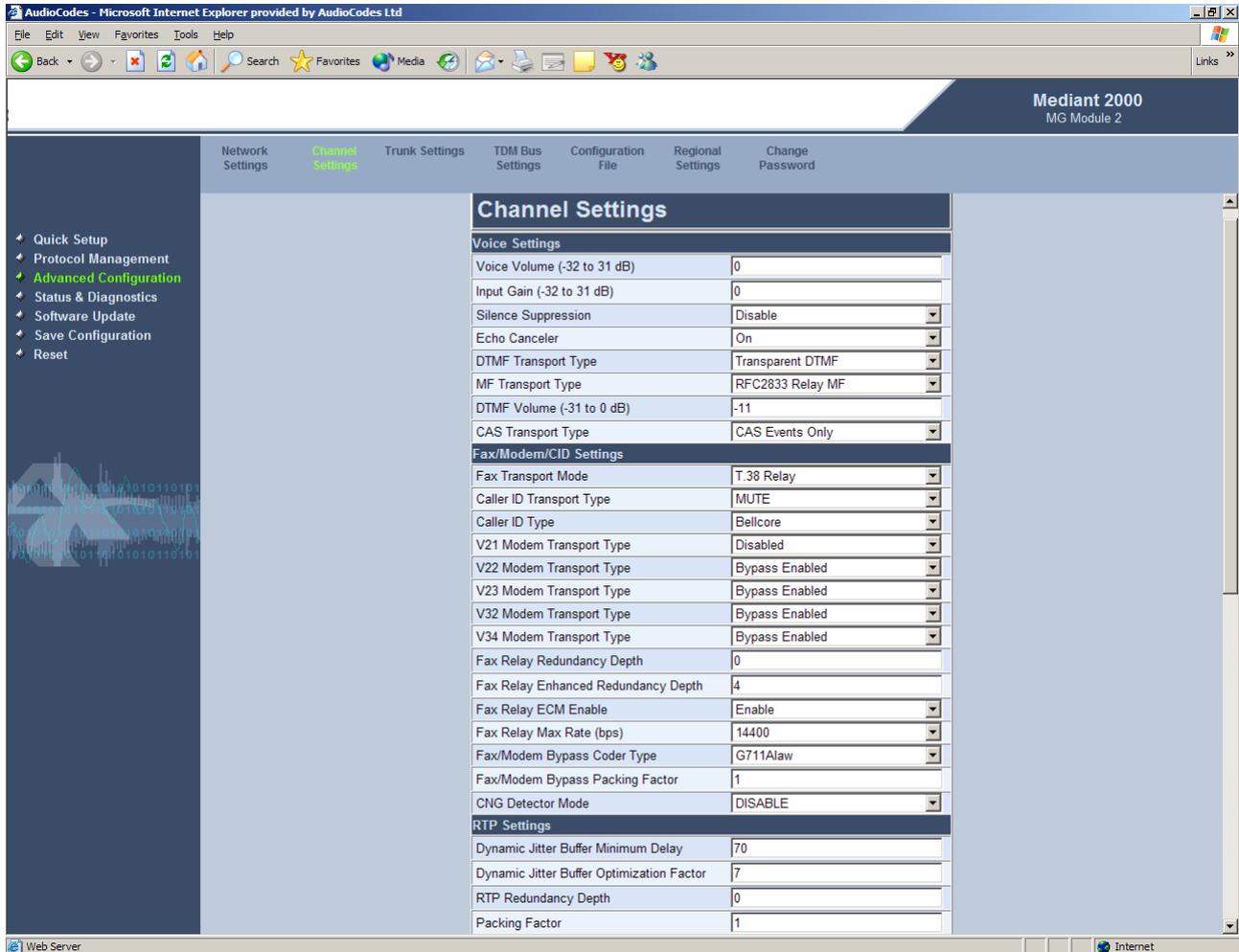
- Go to Advanced Configuration ... Network Settings tab. This window should look as follows (with the exception of IP settings) in Figure 2-2: Network Settings below:

Figure 2-2: Network Settings



- Go to Advanced Configuration ... Channel Settings tab. Ensure that the DTMF Transport Type is set to "Transparent DTMF" (partial screen capture in Figure 2-3 below).

Figure 2-3: Channel Settings



- Go to Advanced Configuration ...TDM Settings tab. The parameters should be set as shown below. Specifically, the following parameters were set by the provided default *ini* file: TDM Bus Clock Source (Network), TDM Bus PSTN Auto Clock (Enable), and TDM Bus Type (Framers)



Note: PCM Law Select in the example is set up for PCM companding law of type μ -law (default) for input and output. This must be matched to the same type of companding being used on the remote end of the TDM trunks (μ -law or A-law).

Figure 2-4: TDM Bus Settings

The screenshot shows the 'TDM Bus Settings' configuration page in a web browser. The page title is 'Mediant 2000 MG Module 2'. The navigation menu on the left includes: Quick Setup, Protocol Management, **Advanced Configuration**, Status & Diagnostics, Software Update, Save Configuration, and Reset. The top menu bar includes: Network Settings, Channel Settings, Trunk Settings, **TDM Bus Settings**, Configuration File, Regional Settings, and Change Password. The main content area contains the following settings table:

TDM Bus Settings	
Settings	
PCM Law Select	Mulaw
TDM Bus Clock Source	Network
TDM Bus Enable Fallback	Disable
TDM Bus Local Reference	9
TDM Bus PSTN Auto Clock	Enable
Idle PCM Pattern	255
Idle ABCD Pattern	5
TDM Bus Master-Slave Selection	Slave Mode
TDM Bus Net Ref Speed	8 kbps
TDM Bus Output-Starting Channel	0
TDM Bus Output Port	0
TDM Bus Speed	8 mbps
TDM Bus Type	Framers

Below the table is a 'SUBMIT' button. Underneath the button, the text reads: 'Press 'SUBMIT' then the 'Reset' button with flash burn to reboot and apply modified value(s) to the system'.

3 Locality-Specific Parameters

Locality-Specific parameters are parameters that are specific to a particular Mediant 2000 in the network. These parameters include any IP addresses for other nodes that the Mediant comes in contact with or settings that are specific to the logical Mediant in its function within the system. These parameters also include trunk settings which are discussed in the next section.

This section guides the user through datafilling the locality-specific parameters on the Mediant 2000.

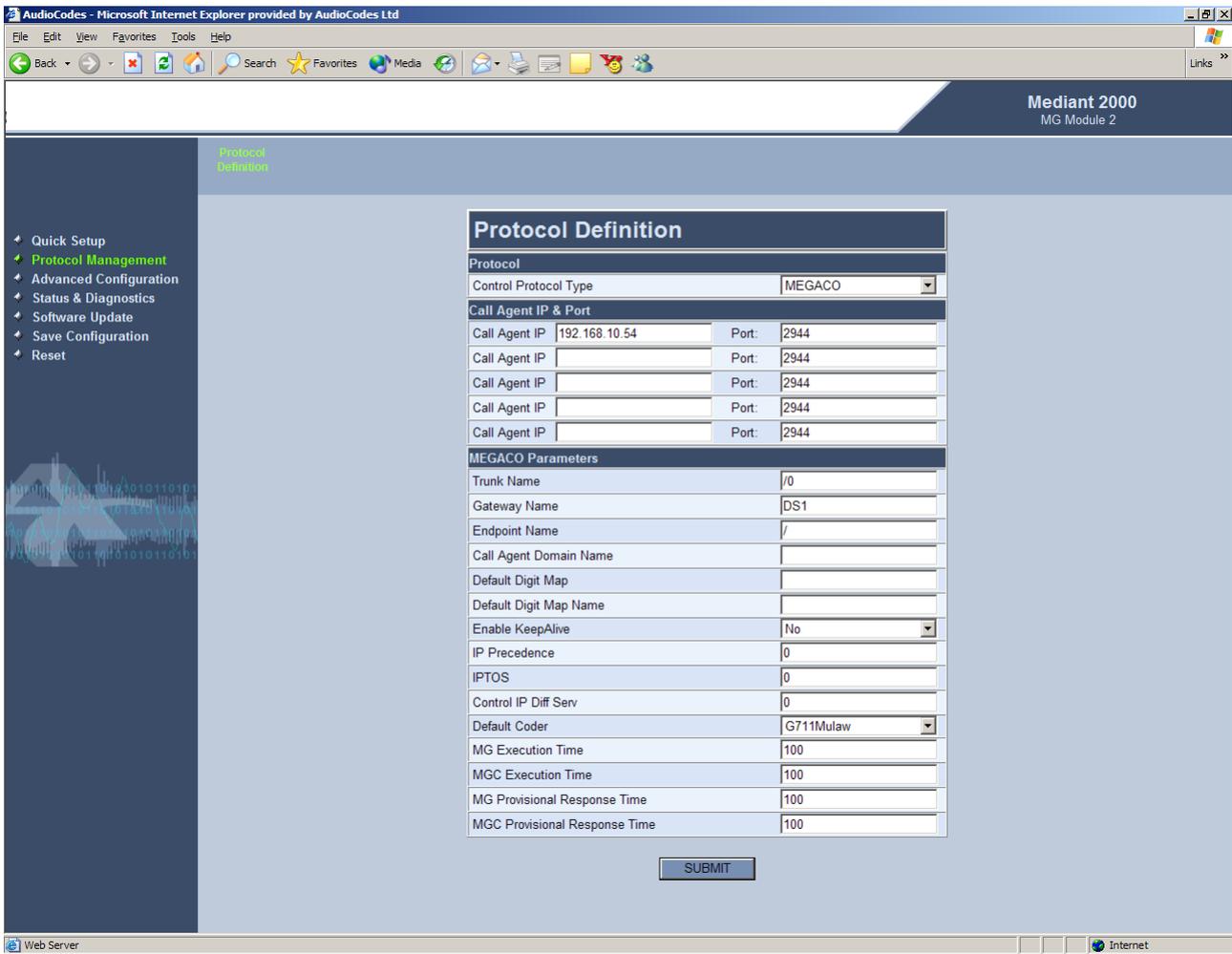
1. Access the Mediant through the Web configuration tool. Go to Protocol Management ... Protocol Definition tab
2. On the first Call Agent IP line, enter in the address of the MGC (GWC) to which this GW should be communicating.
3. Trunk Name, Gateway Name, and Endpoint name should be set to correspond to the values set within the MGC (GWC) to allow for proper interworking between the Nortel GWC and the AudioCodes Mediant 2000. An example is:

Gateway Name = "DS1" (this would be the trunk type on the GWC),
Trunk Name = "/0" (this would be the span name on the GWC),
Endpoint Name = "/"

where the representation would be DS1/0X/Y which would represent timeslot Y on framer X.
Note – a parameter "MEGACOTRUNKIDOFFSET" was set to a value of "1" in the default *ini* file to align the AudioCodes logical mapping (begins with 0) with the Nortel architecture (begins with 1).

4. Select the Submit button to save changes to the Protocol Definition window, which should look similar to Figure 3-1: Protocol Definition on page 16:

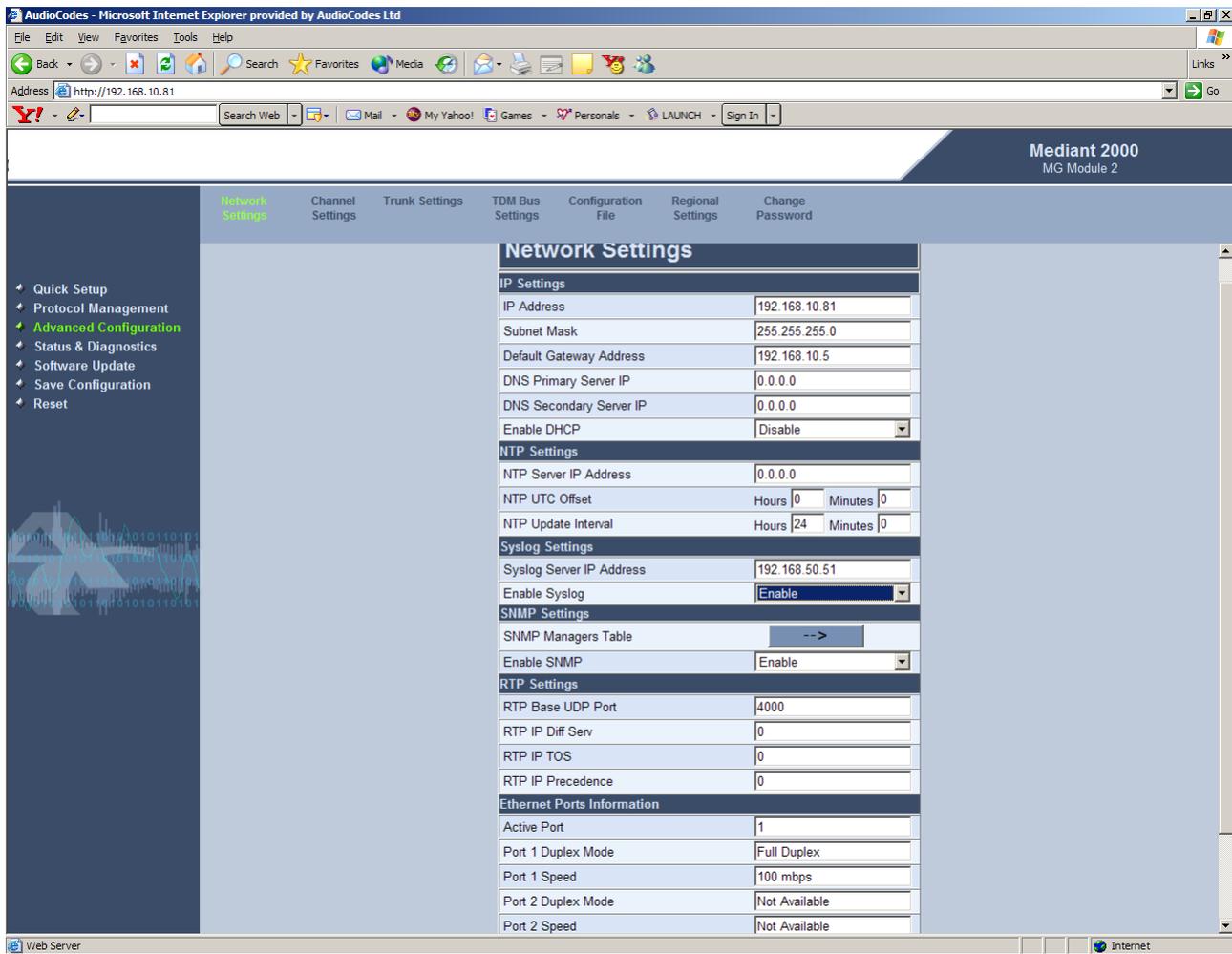
Figure 3-1: Protocol Definition



5. Select Advance Configuration ... Network Settings tab.
6. Enter the Syslog Server IP address and enable the Syslog by setting "Enable Syslog" to Enable.

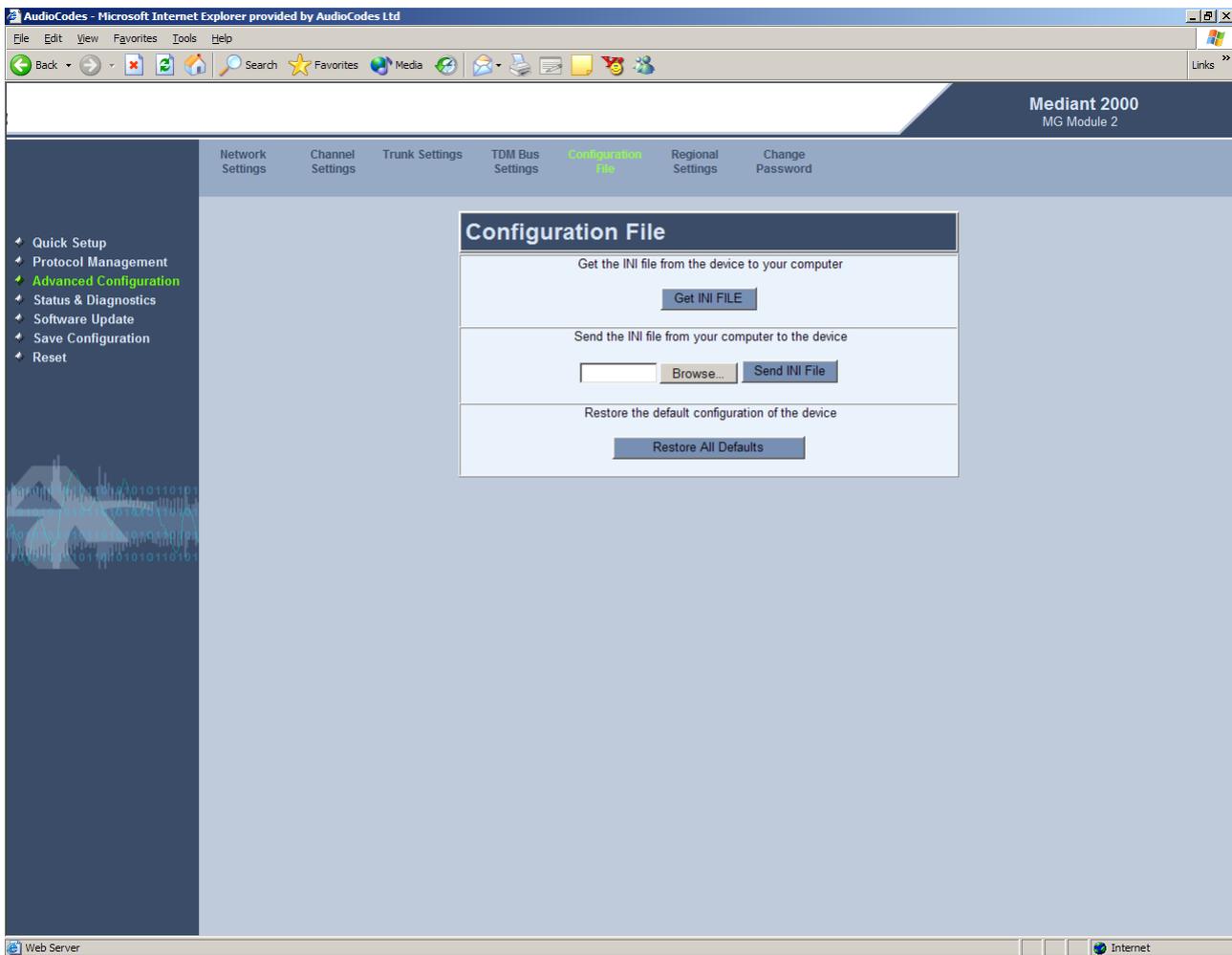
7. Select Submit to apply the values. The Network Settings window should look as Figure 3-2: Network Settings below:

Figure 3-2: Network Settings



8. At this point, the Mediant is ready to have its TDM configuration setup (described in the next section). If this is to be the stopping point for configuration of this box, the user can reset the box and pull the board configuration file back from the Mediant as a backup that can be loaded in later. Continue with the next steps in this section to do that.
9. Select the Reset button, followed by the Restart button to reset the box (Select burn to save the configuration).
10. After the box resets, it comes up with all the default settings from the default *ini* file, plus the additional settings that were configured through the GUI. (You may want to verify).

- Go to Advanced Configuration ... Configuration File tab as shown in Figure 3-3: Configuration File below.

Figure 3-3: Configuration File


- Select the "Get *ini* file" button to pull the board configuration back to your desktop. This file can be saved and loaded back into the box at a later time to bring the unit back to the configuration reached in this section. You may want to name the file appropriately so as to know its content.

4 Setting up Trunk Configurations

This section provides some guidelines and instruction for provisioning the trunk configurations that have been selected for use on the Mediant by Nortel for this release. These include the following protocols on the Mediant 2000:

- T1_IUA – relays ISDN signaling through SIGTRAN IUA and SCTP protocols
- E1_IUA – relays ISDN signaling through SIGTRAN IUA and SCTP protocols
- T1_Transparent – channels 1-24 mapped to DSP channels
- E1_Transparent_30 - channels 1-31, except 16 mapped to DSP channels
- E1_Transparent_31 – channels 1-31 mapped to DSP channels

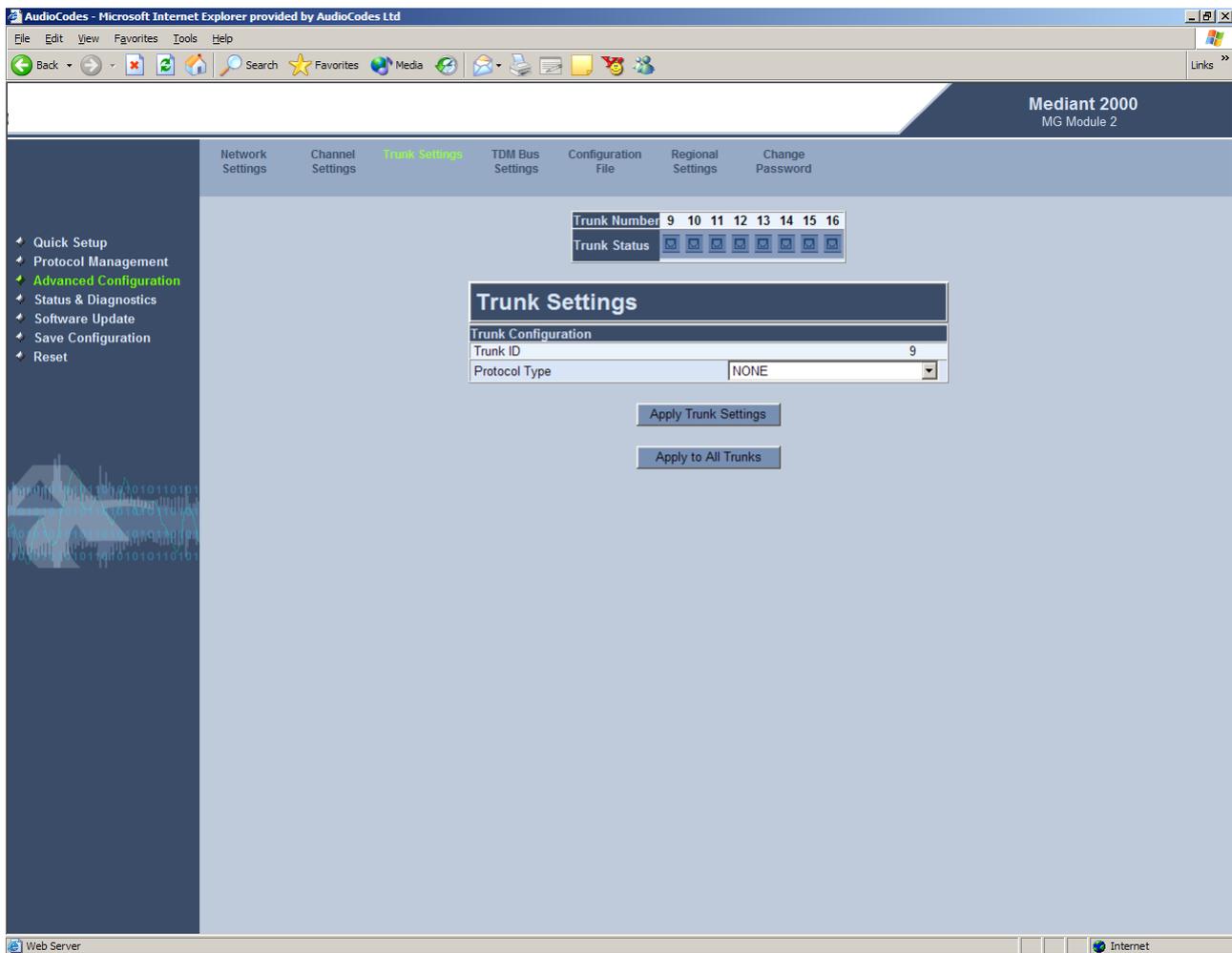
4.1 ISDN Relay

The Mediant 2000 supports the relay of ISDN signaling messages using SIGTRAN IUA and SCTP protocols. A signaling message coming into the Mediant from an ISDN connection goes through the data link layer and the Q.931 protocol data unit is relayed to the Media Gateway Controller (MGC) using IUA over SCTP over IP.

The setup for ISDN Relay involves selecting E1_IUA or T1_IUA protocol types, network or user termination, and datafilling the IUA interface identifier with the correct D-channel mapping. IUA trunks are configured per D-channel. This configuration is done on the Advanced Configuration ... Trunk Settings tab shown in Figure 4-1: Trunk Settings on page 20.

Here are a few notes regarding the use of the IUA protocols.

- E1 and T1 protocols can not be configured on the same logical gateway.
- The IUA Interface ID is unique per logical gateway.
- Q.931 messaging only passes through the Mediant 2000 when set up to transport ISDN messages over IUA. The messages are not manipulated by the Mediant 2000.

Figure 4-1: Trunk Settings - initial


4.1.1 Example 4.1.1: Configuring ISDN Relay for a Single T1

Example 4.1.1 includes a Single T1 trunk, User-side.

➤ **To configure ISDN Relay, take the next 10 steps:**

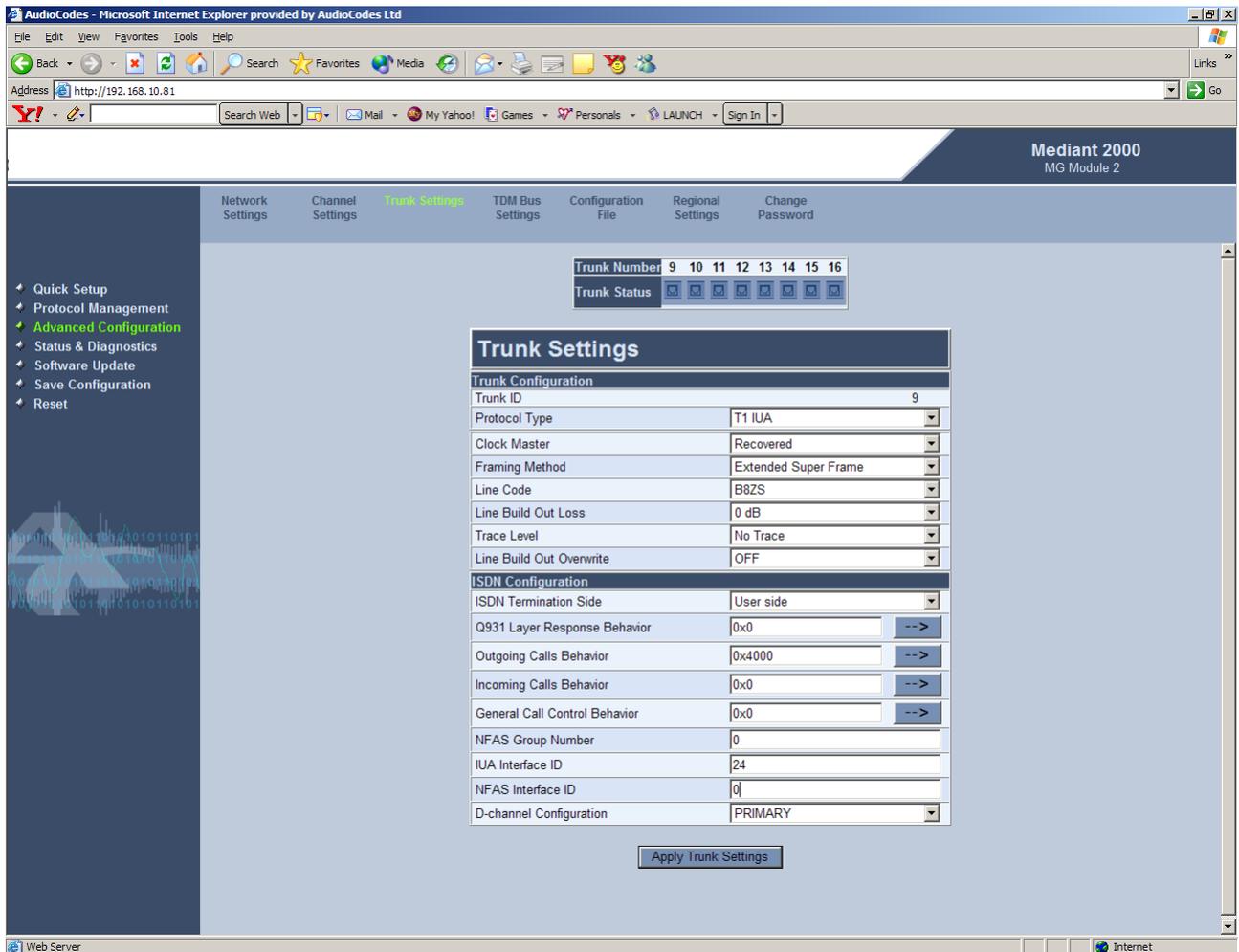
1. Access the Mediant 2000 through the Web configuration tool.
2. Go to the Advanced Configuration ... Trunk Settings page.
3. Acknowledge notice to restart board after changing trunk configuration.
4. For TrunkID 1, select T1_IUA for protocol type.
5. Set the ISDN Termination Side accordingly (user/network). This should be set according to what side the Mediant 2000 should emulate to ensure the proper interworking relationship of the driver with the far end PSTN device.
6. Verify that "Outgoing Calls Behavior" = 0x4000. (This was set in the default *ini* file).

- Set the "IUA Interface Id" = X, where X is the logical mapping for IUA interface to the D-channel between the MGC and the Mediant 2000. In this example, we are using 24. The window should appear as shown in Figure 4-2: Trunk Settings below:



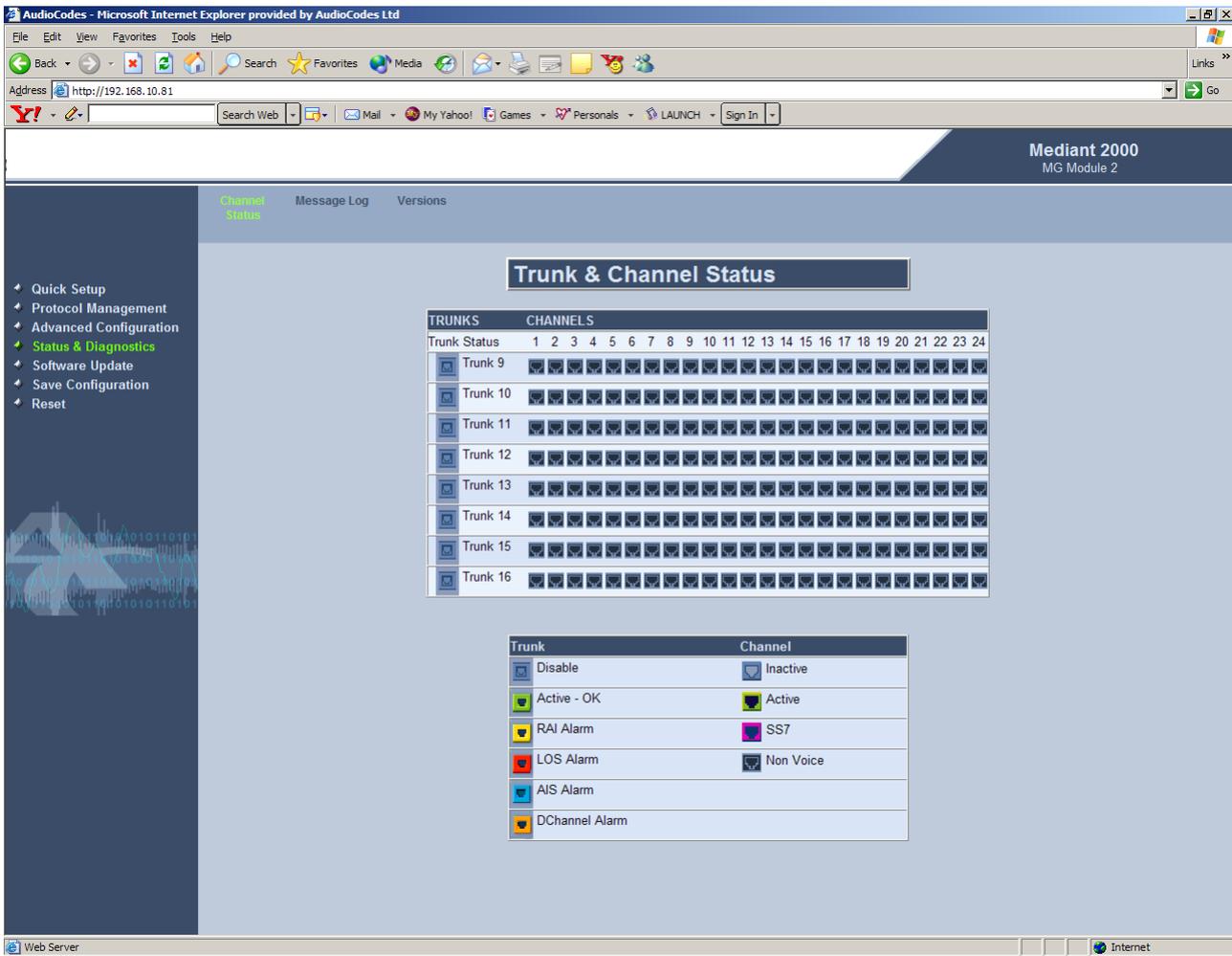
Note: The IUA Interface ID is the logical mapping assigned to the D-channel on the GWC and is commonly referred to as the terminal identifier (tid) in CS2K

Figure 4-2: Trunk Settings



- Apply the Trunk Settings and save the configuration by selecting Save Configuration.
- Once trunk settings are applied, the board must be restarted using the reset button (choosing burn to save your settings). Thereafter, datafill changes to IUA trunks after the IUA protocol has been started for a particular trunk require that the trunk be stopped, the configuration changed and saved, and the board restarted.
- Once the board has been restarted, if configured correctly, the IUA Trunk Status icon is orange meaning that the D-channel is configured but still not yet synchronized with the far end. After getting an IUA Establish Request from the CS2K, and the D-Channel is synchronized with the far end, the icon changes to green, indicating that the D-channel was established. In practice, this is indicated by green icons in the "Trunk & Channel Status" tab of the Status and Diagnostic page as shown in Figure 4-3: Trunk & Channel Status on page 22:

Figure 4-3: Trunk & Channel Status



For this configuration, if the *ini* file were retrieved from the board through the Advanced Configuration ... Configuration File ... Get *ini* file option, the portion of the file relevant to the trunk configuration would resemble the following:

```
ProtocolType_0 =      28
TerminationSide_0 =    0
IUAInterfaceID_0 =    24
```

Note that the default for TerminationSide for all trunks is 0. See the next example where when one becomes different from the rest, the parameter is broken out to TerminationSide_0, TerminationSide_1, etc

4.1.2 Example 4.1.2: Configuring ISDN Relay for Multiple Trunks

Example 4.1.2 includes 2 T1 trunks, 1 User-side, 1 Network-side

This configuration is the same as the example 1, except 2 T1_IUA trunks would be configured (each with its own IUA interface ID).

For this configuration, if the *ini* file were retrieved from the board through the Advanced Configuration ... Configuration File ... Get *ini* file option, the portion of the file relevant to the trunk configuration would resemble the following:

```
ProtocolType_0      = 28
ProtocolType_1      = 28
TerminationSide_0   = 0
```

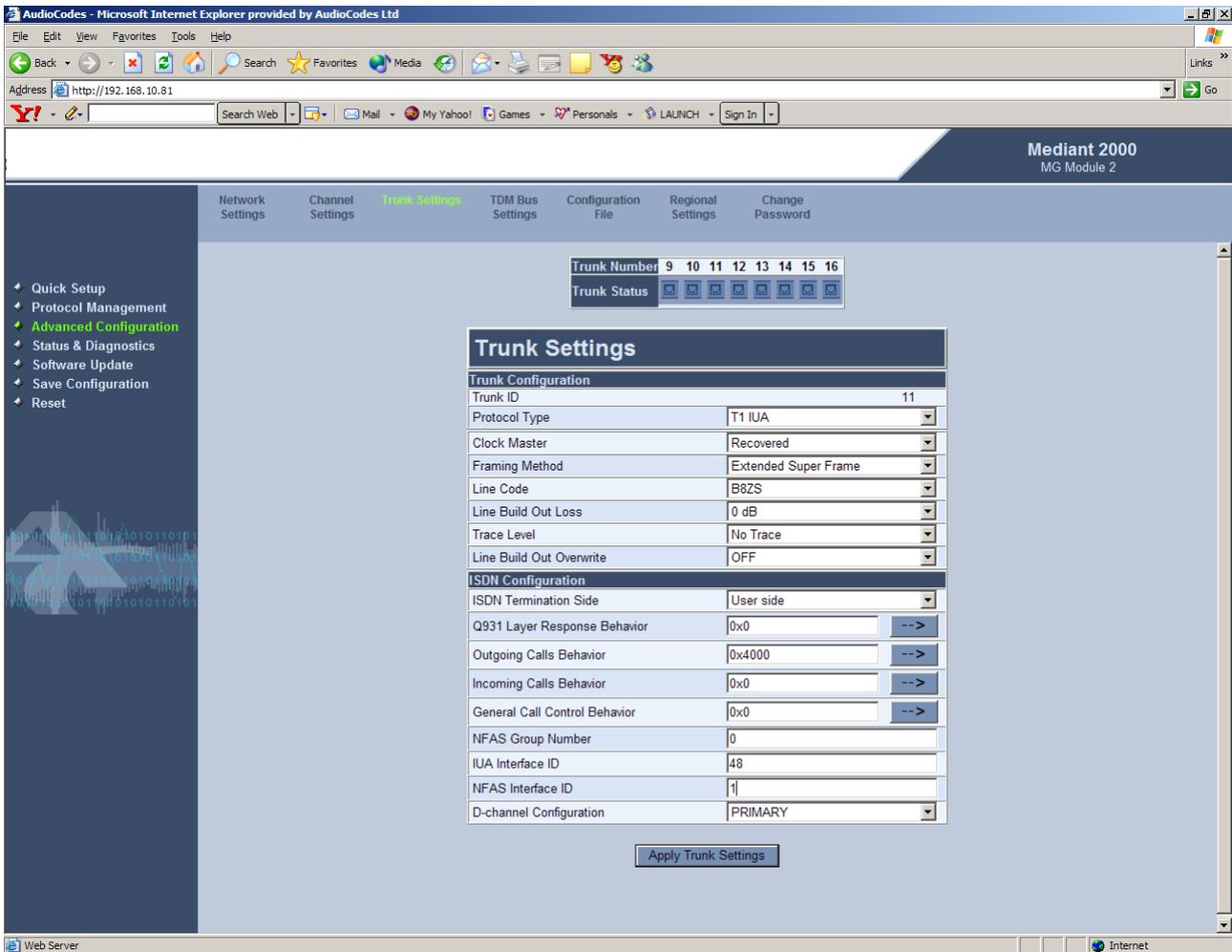
TerminationSide_1 = 1
 IUAInterfaceID_0 = 24
 IUAInterfaceID_1 = 48

4.1.3 Example 4.1.3: Configuring ISDN relay for NFAS trunks with Backup D-channel

Example 4.1.3 includes 2 T1 trunks, User-side and a Backup D-channel

This example is the same as Example 4.1.2, except the designated backup span should also be configured as a T1_IUA trunk. Below is a screen shot of a second T1_IUA trunk set up to handle the signaling for a backup D-channel. Note that this is the same configuration used for the primary channel except for the IUA interface ID. The screens of the GUI are used for many protocols. With the IUA protocols, layer 3 does not terminate on the Mediant 2000, and so, not all fields are used. (Note that the “D-channel Configuration” field has no meaning in this context).

Figure 4-4: T1_IUA trunk for a Backup D-channel



For this configuration, if the *ini* file were retrieved from the board through the Advanced Configuration ... Configuration File ... Get *ini* file option, the portion of the file relevant to the trunk configuration would resemble the following:

```

ProtocolType_0    = 28
ProtocolType_1    = 28
TerminationSide_0 = 0
TerminationSide_1 = 0
IUAInterfaceID_0 = 24
IUAInterfaceID_1 = 48
  
```



Note: The Mediant 2000 is the Signaling Gateway and the GWC is the MGC. The Mediant is handling layer 2 (Q.921) and not layer 3 (Q.931). The Mediant passes the Q.931 through SIGTRAN (IUA) to the MGC. NFAS intelligence is in the Q.931 layer, so the Mediant is unaware whether the signaling is over a primary or back-up channel. The Mediant just knows that it is receiving messaging in the IUA pipe.

4.2 Transparent Protocols

The Mediant 2000 supports bearer path termination using the transparent protocols. For ISDN, these protocols would be used for spans that do not host the D-channel for a trunk group, such as the b-channel spans for an NFAS trunk group where the Q.931 signalling is being passed over the IUA on another span. Refer to example 4.2.1. Additionally, the transparent protocols can be used for support of SS7 bearer path terminations. In this case, the protocol type for the spans would be set to the appropriate transparent protocol T1 or E1. For E1_Transparent, there are options for reclaiming timeslot 16. Nortel typically reclaims this timeslot for use, so the setting would be E1_Transparent_31. If E1_Transparent_30 were used, attempts to establish a bearer path on timeslot 16 would be rejected.

Here are a few notes regarding the use of the transparent protocols:

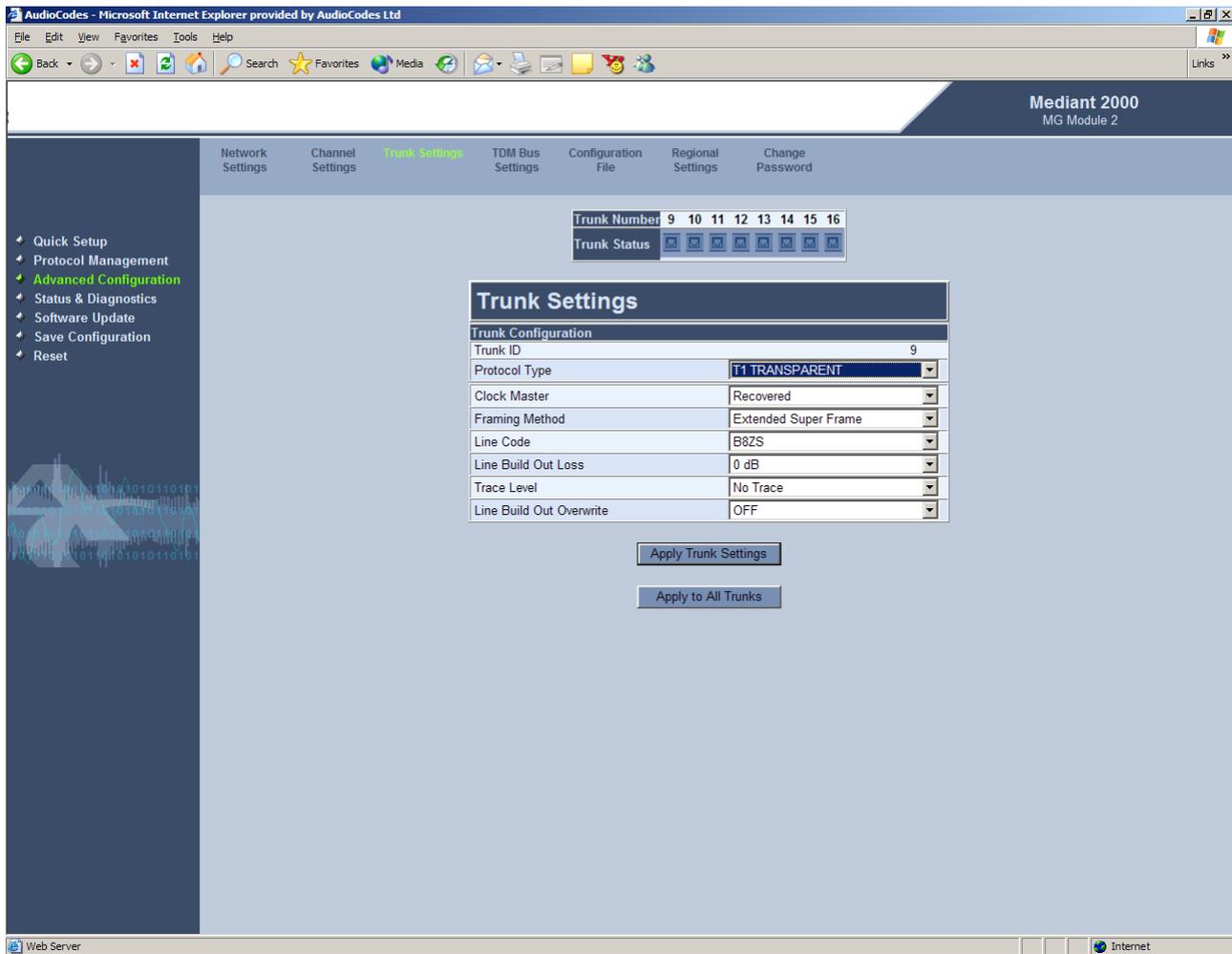
- If using E1_Transparent_31, it is the only protocol type that can be used on that logical gateway.
- The number of DSP resources per logical GW (8 span) is 240. If using Transparent_31, the first 240 channels requesting a DSP will have those resources allocated. Attempts to open bearer channels beyond that will be denied.
- The E1_Transparent protocols can not be configured on the same logical gateway as either T1_Transparent or T1_IUA protocols.
- The T1_Transparent protocol can not be configured on the same logical gateway as either E1 Transparent or E1_IUA protocols.

4.2.1 Example 4.2.1: Configuring Transparent Protocol for NFAS Trunks

Example 4.2.1 includes 4 T1 trunks, Single D-channel, User-side

This configuration is similar to Example 4.1.1 in that one T1_IUA trunk is configured to handle the D-channel, but along with that, 3 T1_Transparent trunks are configured for the 3 remaining B-channel only trunks. Below is a screen shot of a T1_Transparent span.

Figure 4-5: Transparent Trunk



For this configuration, if the *ini* file were retrieved from the board through the Advanced Configuration ... Configuration File ... Get *ini* file option, the portion of the file relevant to the trunk configuration would resemble the following:

```

ProtocolType_0    = 28
ProtocolType_1    = 4
ProtocolType_2    = 4
ProtocolType_3    = 4
TerminationSide_0 = 0
IUAInterfaceID_0 = 24
    
```



Note: TerminationSide_1, TerminationSide_2, TerminationSide_3, IUAInterfaceID_1, IUAInterfaceID_2, and IUAInterfaceID_3 values are not listed here because when the ProtocolType is set to 4, those values are irrelevant.

4.2.2 Example 4.2.2: Configuring Transparent Protocol for ISUP Trunks

Example 4.2.2 includes 4 ISUP trunks

For this configuration, if the *ini* file were retrieved from the board through the Advanced Configuration .. Configuration File .. Get *ini* file option, the portion of the file relevant to the trunk configuration would resemble the following:

```
ProtocolType_0 = 4
ProtocolType_1 = 4
ProtocolType_2 = 4
ProtocolType_3 = 4
```



Note: TerminationSide_0, TerminationSide_1, TerminationSide_2, TerminationSide_3, IUAInterfaceID_0, IUAInterfaceID_1, IUAInterfaceID_2, and IUAInterfaceID_3 values are not listed here because when the ProtocolType is set to Transparent (4), those values are irrelevant.

5 Clock Source and Fallback

The ability to set or derive a timing reference for the Mediant 2000 can be done from the PSTN interfaces. Clock is derived off of a predefined framer when properly set, or can be set to automatically synchronize the internal oscillator based on setting allowable PSTN interfaces to be used as a possible clock source.

The following parameters are used to control clock source and fallback on the Mediant 2000.

ClockMaster = 0

This means that the clock is recovered from the framer. A value of '1' would tell the unit to use the internal oscillator for the timing reference. Any framer one would wish to use as a potential clock source should have the value '0' set to it for its clockmaster definition (see below),

TDMBusPSTNAutoClockEnable = 1

This allows the TPM module to synchronize off of a different framer if the 'preferred' framer selected fails. It would then attempt to synchronize off of another framer that had the clockmaster_x value of '0'. If this is not set to 1, then the unit free runs if the timing reference is lost.

TDMBusClockSource = 4

This is stating that the clock should be taken from the PSTN network interface (framers). The default value is 0. If the default value is used then the TPM would take the timing reference from framer 0 only. The Nortel default *ini* file sets this value to 4.

TDMBusType = 2

This is stating that the bus type used is to interface the framers.

TDMBusLocalReference = 0

This is the preferred timing reference for the unit. It is telling the unit that based on the above setting, take the incoming timing reference from span 0 and drive the internal oscillator and use it to drive the rest of the TPM module framers.

Clock Reference Example

Following is an example of the *ini* file settings to configure the board to derive the clock source from a specific span and allow automatic fall back of the timing reference. The timing parameters would be as follows to reference the first PSTN driver and allow the last as a fall back if the first was to fail.

TDMBusClockSource	= 4
TDMBusType	= 2
TDMBusPSTNAutoClockEnable	= 1
ClockMaster_0	= 0
ClockMaster_1	= 1
ClockMaster_2	= 1
ClockMaster_3	= 1
ClockMaster_4	= 1
ClockMaster_5	= 1
ClockMaster_6	= 1

ClockMaster_7 = 0
TDMBusLocalReference = 0

6 Updating *ini* Configuration Files

This section contains information on how to upgrade an existing 4.2 *ini* file to a 4.4 version *ini* file. Refer to section 7.2 of the AudioCodes document LTRT 69081 Mediant 2000 User's Manual for more detailed information on editing *ini* files.

Additional features sometimes require the addition, removal, or change of some parameters in the default *ini* files. To update the parameters and save the existing configuration, the default changes must be merged with the existing *ini* file. Following is the recommended method for accomplishing this. This method assumes that the Mediant 2000 was at the standard of the previous load version's default *ini* file.

➤ **To upgrade an existing 4.2 *ini* file to a 4.4 *ini* file, take the next 7 steps:**

1. Prior to the upgrade, upload the latest saved configuration from the Mediant 2000. Open this up in a text editor such as Notepad.
2. Open the 4.4 default *ini* file. Starting at the top of this file, for each parameter in the file, confirm that the setting in the 4.2 *ini* file is the same.
3. Update the IniFileVersion parameter to reflect that the *ini* file has been updated to the latest standard. For moving from 4.2 to 4.4, this version should be at version 7 and for 4.4, it is changed to version 12. If the 4.2 *ini* file does not indicate a 7 for this parameter, it is recommended that the starting *ini* file be checked against version 7 of the default *ini* file
4. If there are any parameters defined in the version 12 default file that are not in the starting *ini* file, add those and the associated params to the *ini* file. For 4.4, it is anticipated that the following parameters should be added to the *ini* file from the previous load:

BrokenConnectionEventTimeout = 2684354

5. In the 4.4 default *ini* file, the following parameters were removed (from the previous load). Remove these from the starting *ini* file.

KeepAliveEnabled	= 1	{replaced by support of H248 it package}
ModemBypassPayloadType	= 0	{work around no longer needed in release 4.4}
ModemBypassPayloadType	= 8	{work around no longer needed in release 4.4}
BurnCallProgressTonesFile	= 1	{cpt files always burned beginning in release 4.4}

6. Additional parameters that are not required to be added to the *ini* file for 4.4, but may be set in the *ini* file in this version are:

ControlDiffServ - set the DiffServ value of the IP header for the control path; range: 0 to 63
PrerecordedTonesFilename – contains the name of the new pre-recorded tones file name

7. Save the *ini* file to the location on the BootP/TFTP server where it can be used during the loading of the Mediant 2000.



Note: In 4.2, a parameter ISDNInCallsBehavior has a default value of 32768. In 4.4 it has a default value of "0". These values have the same meaning. This is not an error.

6.1 Default *ini* File for Version 4.4

As an example, this section contains the default *ini* file specified for version 4.4 of the Mediant 2000 for use in Nortel H.248 GW applications at the time of the printing of this document.

```

*****
;
;** Ini File **
;
*****

*****
;
;** The parameters set up in this ini file allow the M2K to be used within
;** the Nortel SL100 and CS2K solutions.
*****
;
    
```

[BSP Params]

```

; Setting BOOTPRETRIES to 3 will configure the board to see a bootp response 3 times
; over the course of 6 seconds following a hard reset
BOOTPRETRIES = 3
    
```

```

; BOOTPDELAY is the amount of time the board will delay before sending bootp
BOOTPDELAY = 1
    
```

```

; TDMBUSCLOCKSOURCE selects the clock source on which the board synchronizes
; A value of 4 = PSTN Network
TDMBUSCLOCKSOURCE = 4
    
```

```

; INIFILEVERSION is the version of this default ini file
INIFILEVERSION = 12
    
```

```

; CallProgressTonesFilename is the name (and path) of the file containing the Call
; Progress Tones definition. The tones.dat file should be present in the same directory
; as the ini file in which it is defined when using bootp/tftp to download files to
; the M2K.
CALLPROGRESSTONESFILENAME = 'tones.dat'
    
```

[ControlProtocols Params]

```

; MGCPCompatibilityProfile controls profiling of various MEGACO features including
; T.38 and Bypass support and characteristics of servicechange request, ptime, and
; notify transaction requests.
MGCPCOMPATIBILITYPROFILE = 20
    
```

```

; ProvisionedCallAgentsPorts is the list of ports for the CallAgents.
PROVISIONEDCALLAGENTSPORTS = 2944, 2944, 2944, 2944, 2944
    
```

```

;MGControlProtocolType determines the protocol type to be used for the MG.
;MGControlProtocolType = 2 is the setting for MEGACO
MGCONTROLPROTOCOLTYPE = 2
    
```

[MEGACO Params]

```

; MegacoTrunkIDOffset is a logical integer that is added to the internal integer
; value for a respective trunk element. This value helps to map the internal logical
; number of the framer to the physical numbering. Internally, the M2K starts at 0
; logically. Nortel framers start numbering at 1.
MEGACOTRUNKIDOFFSET = 1
    
```

[PSTN Params]

;TDMBusPSTNAutoClockEnable enables or disables the auto fallback PSTN clock feature.
; When set to 1, fallback is enabled.
TDMBUSPSTNAUTOCLOCKENABLE = 1

; ISDNOutCallsBehavior is a bit field that determines behavior options, influencing
; how the ISDN Stack OUTGOING calls behave. The value 16384 (0x4000) in this parameter
; enables reversed DLCI TEI support like in the RFC (see RFC3057 p.21 Figure 6).
; For Nortel interworking this parameter must be set to 16384 (15th bit in binary).
; If not the DLCI TEI representation will not be presented for interworking and the
; IUA interfaces will not align.
ISDNOUTCALLSBEHAVIOR = 16384

; Q931RelayMode set to 3 is used to port all Q931 (layer 3) messages via IUA handling
; up to the signaling element of the Gateway Controller rather than terminating the Q931
; protocol on the board itself
Q931RELAYMODE = 3

[Voice Engine Params]

; These parameters support the detection of COT tones within the DSP associated to the
; physical element within a context and report the detection back to the H248
; interworking control protocol stack. This is used for SS7 interworking support of
; continuity tones on the physical paths. COT support is supported for Transparent
; framer definitions when applied by use of the protocoltype definitions per framer.
; EnableContinuityTones enables (1) or disables (0) Continuity Test tone detection and
; generation according to the ITU-T Q.724 recommendation.
ENABLECONTINUITYTONES = 1
ENABLECONTINUITYTEST = 1

; DTMFTransportType set to transparent enables the M2K to negotiate for RFC2833
; dynamically (via parsing of the SDP data provided by the GWC embedded within
; the H248 messaging). If the two sides *do not* agree, the unit will leave the
; DTMF digits within the bearer path and it will be passed to the distant RTP
; device within the codec that was established for the bearer path. If the SDP
; information *is negotiated*, then the dtmf detected digits will be removed from
; the bearer path and relayed to the remote RTP device by use of RFC2833 DTMF relay.
DTMFTRANSPORTTYPE = 2

; added 3/16/2004 - BrokenConnectionEventTimeout - this parameter should be
; set to a high value (e.g. 2684354 = 3 days) in order to prevent the
; nt/netfail event generation
BROKENCONNECTIONEVENTTIMEOUT = 2684354

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