

INTERACTIVE INTELLIGENCE®

Dialogic Media Gateway Configuration Note (MG1000 & MG2000) for Messaging Interaction Center

Technical Reference

Customer Interaction Center® (CIC)
VONEXUS Enterprise Interaction Center™ (Vonexus EIC)
Messaging Interaction Center™ (MIC)

Version 2.4

Last updated October 3, 2008
(See Change Log for summary of change made to this document since GA.)

Abstract

This white paper describes configuring the Dialogic Media Gateways for use with Messaging Interaction Center™ (MIC) using the MIC Deployment Wizard to configure the gateways. Included are detailed configuration settings required on the Media Gateways, and on the SIP Line in Interaction Administrator. In sections 7 and 8 are descriptions of interoperability tests performed with the following PBXs:

- Nortel CS-1000M (Succession) (Q.SIG & Digital Set Emulation)
- Mitel 3300 (Q.SIG)
- Mitel SX-2000 (Digital Set Emulation)
- Avaya S8500 (Q.SIG & Digital Set Emulation)
- Siemens HiPath 4000 (Q.SIG)
- NEC 2000 IVS2 (Digital Station)

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Products based on the IC platform include:

- Customer Interaction Center (CIC)
- **VONEXUS** Enterprise Interaction Center (Vonexus EIC)
- Messaging Interaction Center (MIC)

Since these products share common features, this document is intended for use with all IC products, unless specifically stated otherwise.

How do I know if I have a documented feature?

Here are some indications that the documented feature is not available in your version:

- The menu, menu item, or button that accesses the feature appears grayed-out.
- One or more options or fields in a dialog box appear grayed-out.
- The feature is not selectable from a list of options.

If you have questions about feature availability, contact your vendor regarding the feature set available in your version of this product.

Table of Contents

Change Log	6
Dialogic Media Gateway Configuration Note (MG1000 & MG2000) for Messaging Interaction Center.....	6
1 Important Notes	7
2 Vendor Documentation	7
3 Validated Firmware Version.....	8
4 Install.....	8
5 General Media Gateway Configuration	8
5.1 Syslog Setup (5.x Firmware)	23
5.2 Syslog Setup (6.x Firmware)	23
6 How to use ACSyslog for DMG Tracing	24
6.1 Additional Logging Options.....	26
6.1.1 By IP	26
6.1.2 By Date/Time	26
7 Interaction Administrator Configuration.....	26
8 PBX Integrations Tested with MIC.....	27
9 PBX Integration Matrix	31

Change Log

Change Log Date	Changed...
September 6, 2007	Document created
October 2, 2007	Updated screen shots and descriptions of MGConfig to show new Wizard based config tool.
October 8, 2007	Updated description of Test Case 6 failures, and changed xIMG, PIMG, TIMG references to DMG references.
November 1, 2007	Added two new test cases for Zero Out and Forward Rules
November 28, 2007	Added note about Send DNIS to VoIP Endpoint setting in Media Gateway configuration.
December 7, 2007	Updated section on Line Configuration in Interaction Administrator
March 10, 2008	Replaced DTMF Type setting with Audio Path setting in IA Line Configuration section
October 3, 2008	Added Syslog information (section 6), updated section 5 tables to show configuration locations for 5.x and 6.x Firmware
November 24, 2008	Updated NEC Digital Set integration link to Dialogic configuration note.

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Dialogic Media Gateway Configuration Note (MG1000 & MG2000) for Messaging Interaction Center

Supported models:

- DMG2120DTI
- DMG2060DTI
- DMG2030DTI
- DMG1008LSW
- DMG1008DNIW
- DMG1008MTLDNIW
- DMG1008RLMDNIW



1 Important Notes

- Check the *SIP 3rd Party Validation Website* for current validation status. The *SIP 3rd Party Validation Website* can be viewed at:

<http://testlab.inin.com> or <http://testlab.vonexus.com>

- As this unit is a critical piece of the SIP infrastructure, it is highly recommended that DHCP not be used. A static IP address is the preferred method and is how the unit was configured during validation.

2 Vendor Documentation

Documentation on the Dialogic website:

<http://www.dialogic.com/support/helpweb/mg/default.htm>

3 Validated Firmware Version

v5.1.139 (5.1 SU 2)
v5.1.140 (5.1 SU 2 Engineering Special)
v5.1.155 (5.1 SU 3)
v6.0.103 (6.0)

4 Install

Download the Dialogic Media Gateway Configurator from the 3rd Party Validation website:

<http://testlab.inin.com>

Contained in the zip file will be an EXE that can be run to download currently supported firmware, and configure the Supported Media Gateways for use with MIC. Please see the Configuration Note in the zip file for more details.

5 General Media Gateway Configuration

The MIC Deployment Wizard provides for various configurations in a MIC environment, including the configuration of Dialogic Media Gateways. The wizard allows for the upgrade and configuration of multiple Dialogic Media Gateways from a single interface.

The wizard exposes different configuration options depending on what components are installed on the machine it is running on. Possible configuration options are the ADAM directory (only displayed if ADAM SP1 is installed and you are executing on an IC server), Media Gateway configuration (always displayed), configuration of default Interaction Administrator settings (only displayed if on an IC server), installation of MIC Web Components (only displayed if IIS with ASP .Net is available on the machine you are running on).

You must be logged in as a local administrator to run this wizard.

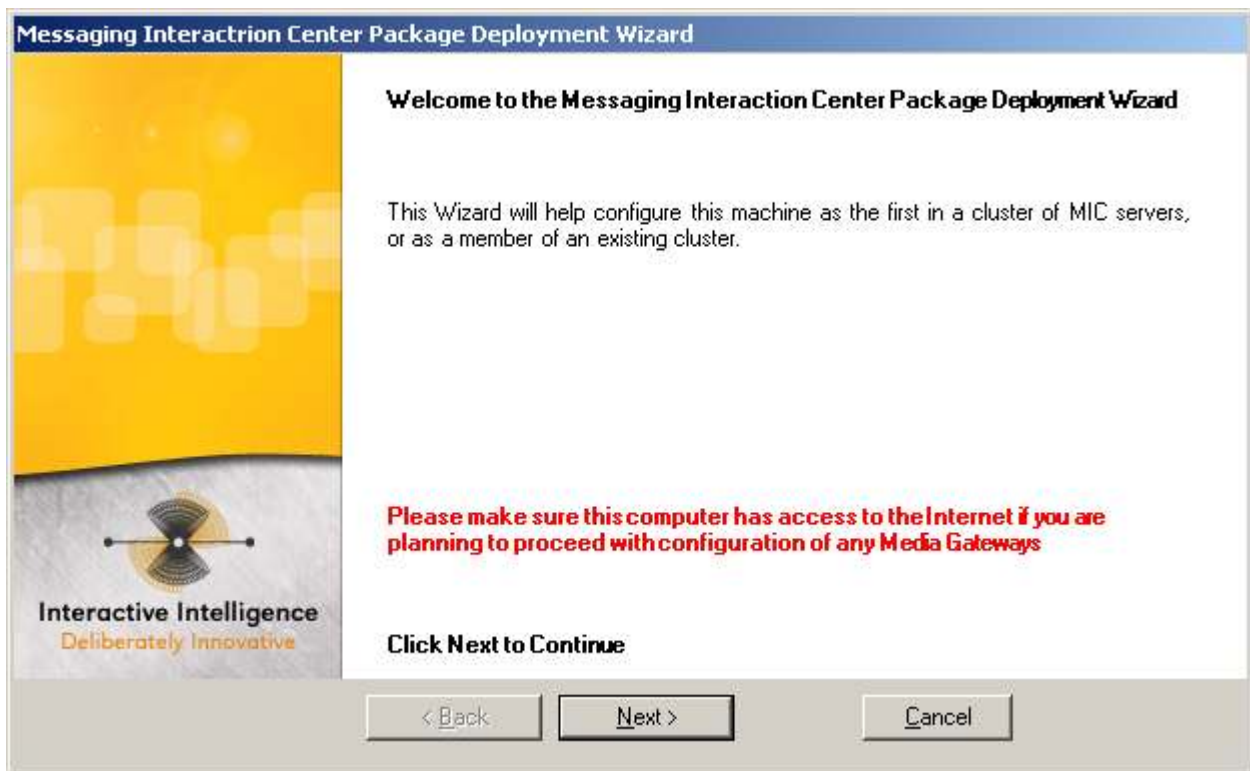
The application pulls the following information down to the pc it is running on:

- An XML Config file that lists the supported devices, their firmware files, and their default command files
- Current Dialogic Firmware for all supported Dialogic Media Gateway devices
- A default Command File, which is a list of commands that are executed against that Media Gateway for all configurations.

If you require Proxy Server credentials be specified to access a Web Service from your location, you can set Proxy Credentials as well (Note, these credentials are not saved after the application has been closed.)

This application has the same familiar tracing as any other ININ application. Traceconfig.exe is included to let you turn topics up. If you are experiencing a problem, please send the MICDeploymentWizard.vwvlog file to Support for assistance.

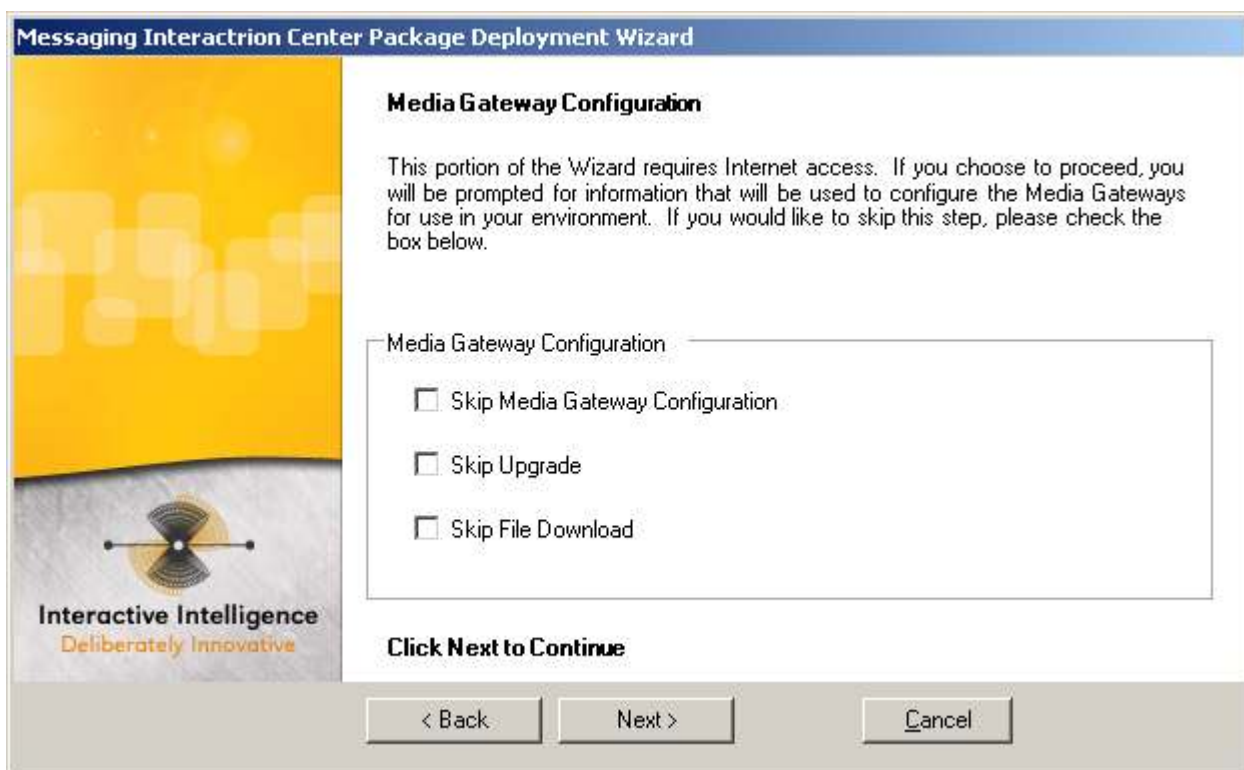
The wizard asks for specific information about the machine and environment to perform its Media Gateway configuration tasks.



Click Next



Click Next

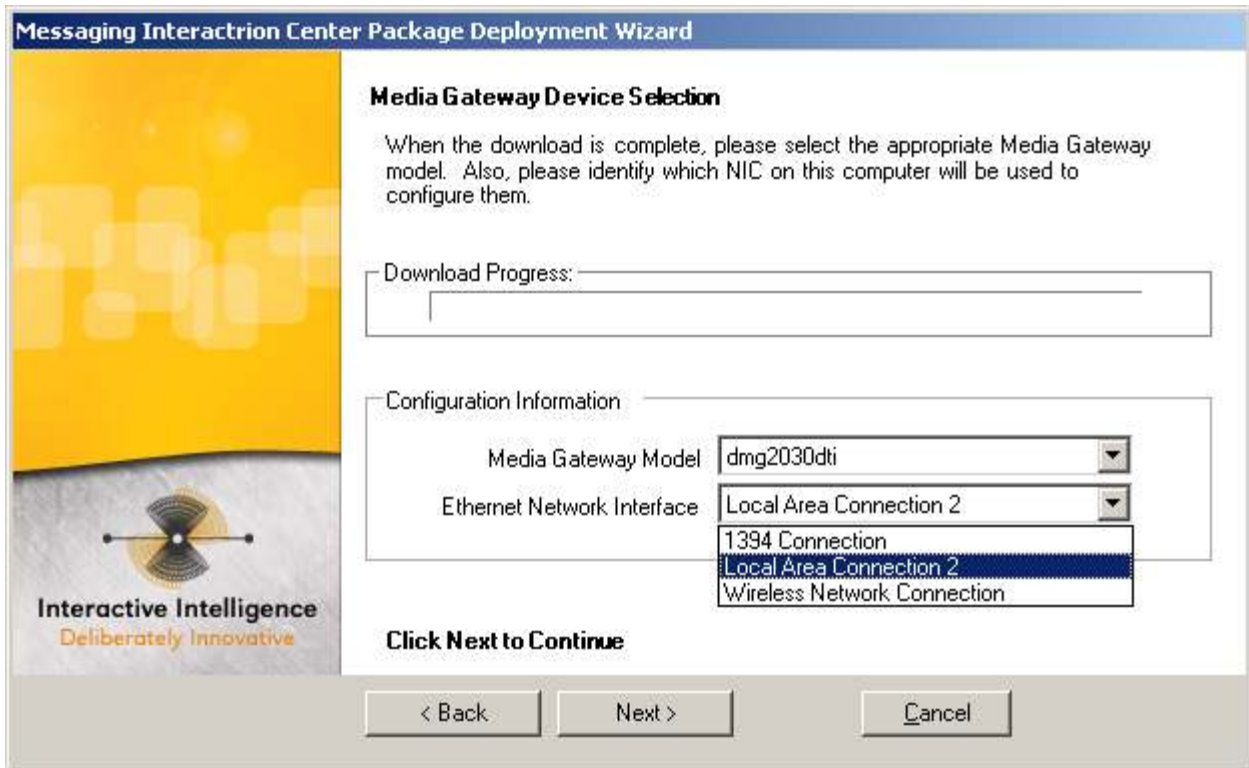


Here, you can opt to skip the Firmware download if you have run this utility from this computer once before. This is generally not recommended as the web service may serve updated files if any time has elapsed since the last time you ran the wizard. However, for

consistency, it is recommended that you keep all gateways at a site on the same release. So, if running this multiple times for the same customer, it is best not to collect newer Firmware files until you are prepared to upgrade all gateways. Also note that you can opt to skip the Media Gateway configuration while still continuing with the Upgrade. These options allow you to perform a bulk upgrade of multiple Media Gateways.

The screenshot shows a software wizard window titled "Messaging Interactrion Center Package Deployment Wizard". On the left is a vertical banner with a yellow top half and a grey bottom half. The grey part features a logo of a stylized eye or lens and the text "Interactive Intelligence" and "Deliberately Innovative". The main content area is titled "Proxy Server Credentials" and contains the following text: "The Wizard will now attempt to contact a Web Service to download the current Media Gateway configuration files. If you require a Proxy Server, please enter the Proxy information here." Below this is a "Proxy Settings" section with four input fields: "Proxy Server Address" (192.168.0.15), "Proxy Server Port" (8080), "Proxy Server Username" (andy.gunther), and "Proxy Server Password" (masked with asterisks). There is an unchecked checkbox labeled "No Proxy Required". At the bottom of the main area is the text "Click Next to Continue". The bottom of the window has a grey bar with three buttons: "< Back", "Connect", and "Cancel".

If Proxy credentials are required to contact a web service, please enter those here. Otherwise, check the box indicating that no Proxy is required.



If you are downloading Firmware files, this page will show an animated status bar until all files have been downloaded. Once valid files are available, select your Media Gateway model, and the Ethernet Interface on the computer you are working on that will be connected to the same network as the Media Gateway(s).

Messaging Interactrion Center Package Deployment Wizard

Media Gateway Upgrade

Select an Optional File

The Wizard will upgrade your Media Gateways to the latest supported firmware release. Please select one or none of the optional files to be applied during the upgrade based on the PBX you are integrating to.

Optional File


Media Gateway Credentials

Username

Password

Click Next to Continue

< Back Next > Cancel



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Depending on the model gateway selected, there may be optional files that can be applied during the upgrade process for tone recognition from various PBXs. See the Dialogic Firmware Upgrade instructions for information about these optional files (<http://www.dialogic.com/support/helpweb/mg/downloads.htm>). Also on this page, if the gateway credentials have been changed from the defaults loaded by Dialogic, you can enter the new login credentials here.

Messaging Interaction Center Package Deployment Wizard

Media Gateway PBX Information

PBX Information

PBX Integration


Line Type

T1 E1

Serial Integration

Click Next to Continue

< Back Next > Cancel



Select the appropriate PBX integration on this page. If using an integration that allows E1, you may select the appropriate line type. If using an integration that can be used with a Serial (RS-232) integration, the Serial Integration Type can be specified.

Messaging Interactrion Center Package Deployment Wizard

Media Gateway Serial Information

COM Settings

BAUD Rate Stop Bits

Parity Data Bits


Serial Settings

Serial Master IP

First LTN Port MCI Type

Click Next to Continue

< Back Next > Cancel



This page only shows if you are using a Serial Integration. Here, you can specify the settings on the COM port that should be configured on the xIMG. You can also specify who the Serial Master is, the First LTN Port, and the type of MCI if using the NEC MCI integration. Note that the LTN Ports are assumed to be sequential, where you only need to specify the value of the first channel here. If this is not the case, you will need to adjust these settings in the xIMG Web Interface after the wizard is complete.

Messaging Interactrion Center Package Deployment Wizard

Media Gateway IP Information

For each Media Gateway you wish to have configured, you need to enter its current IP information, the IP information it should have at the end of configuration, and the host name it should have at the end of configuration. Please note that the Current IPs must all reside on the same subnet as each other, and the Final IPs must all reside on the same subnet as each other.

IP Information


Current IP	<input type="text"/>	Add	192.168.0.110 192.168.0.11
Final IP	<input type="text"/>	Del	
Hostname	<input type="text"/>		

Total number of channels being activated

MWI IP Address (gateway that will process MWI requests)

Click Next to Continue

< Back Next > Cancel



This page maps current gateway IP addresses to their new addresses, as well as lets you specify the hostname. If you don't wish to change the IP of the gateway, just enter the same IP for Current IP and Final IP. Here, you can add as many gateways as are being configured (**NOTE: All gateways must be the same model**). Also on this page, you specify the total number of channels being activated across all of your gateways. They will be enabled sequentially, from the first gateway in your list to the last. This is useful if your last gateway won't be completely full. Also, specify the IP of the gateway that will be used to process MWI requests.

Messaging Interactrion Center Package Deployment Wizard


IP Information

Please provide the IP information that should be assigned to this machine during the different phases of Media Gateway configuration. The Quick Config IP information should reside on the same subnet as the 'Current IP' addresses from the previous screen. The Final IP information should be on the same subnet as the 'Final IP' addresses from the previous screen.

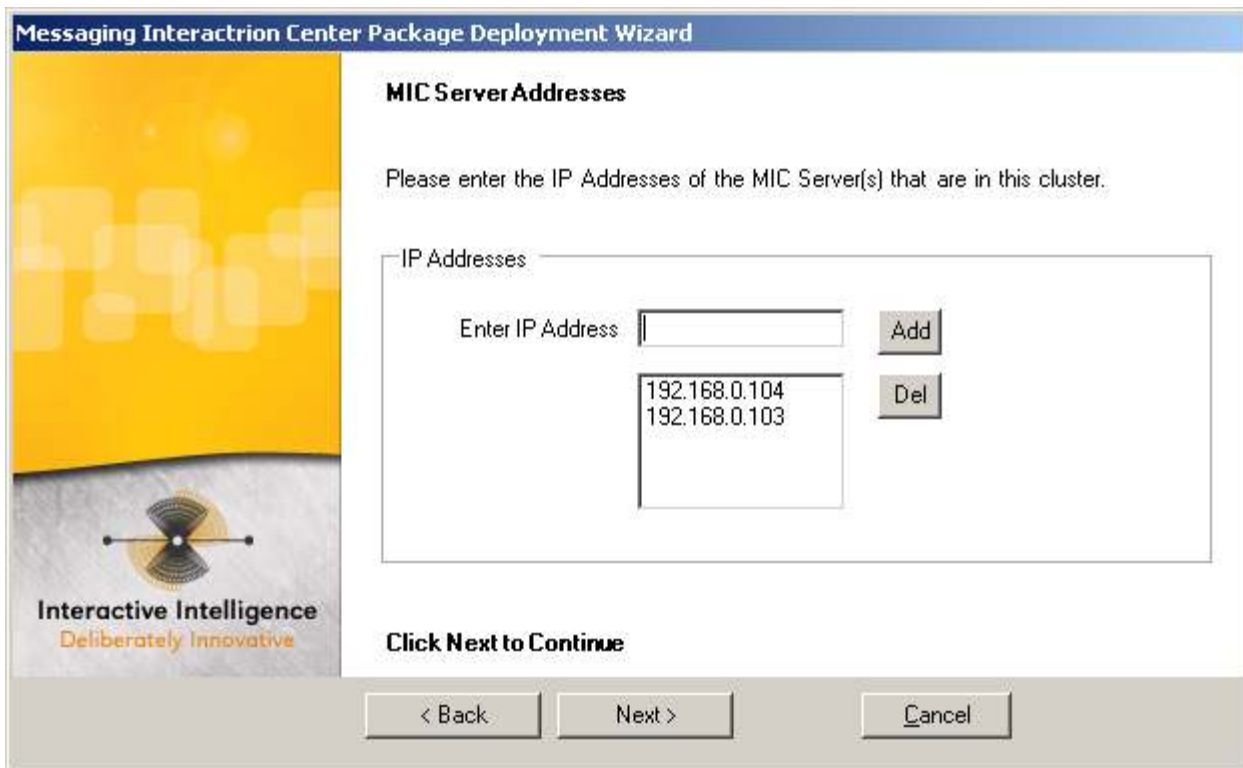
Quick Config	Final
IP: 192.168.0.3	Use DHCP: <input type="checkbox"/> IP: 192.168.0.3
Subnet Mask: 255.255.255.0	Subnet Mask: 255.255.255.0
Default Gateway: 192.168.0.1	Default Gateway: 192.168.0.1

Click Next to Continue

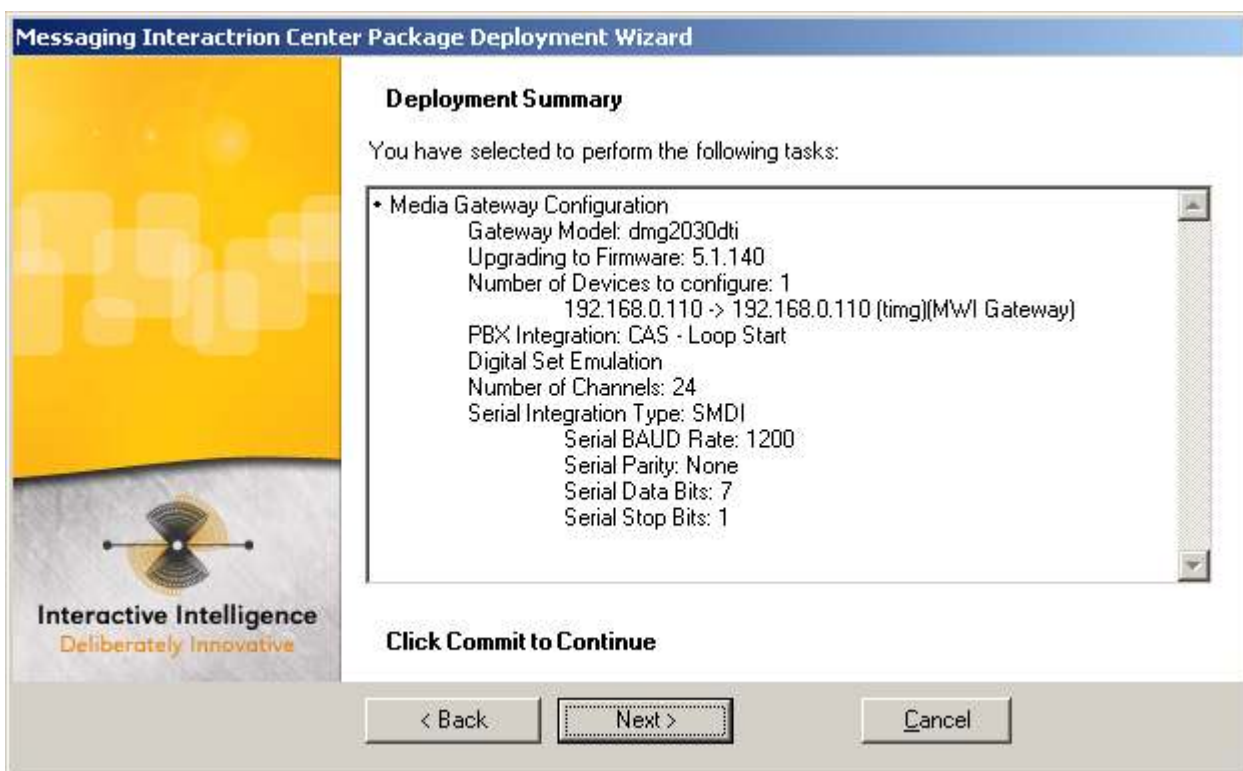
< Back Next > Cancel



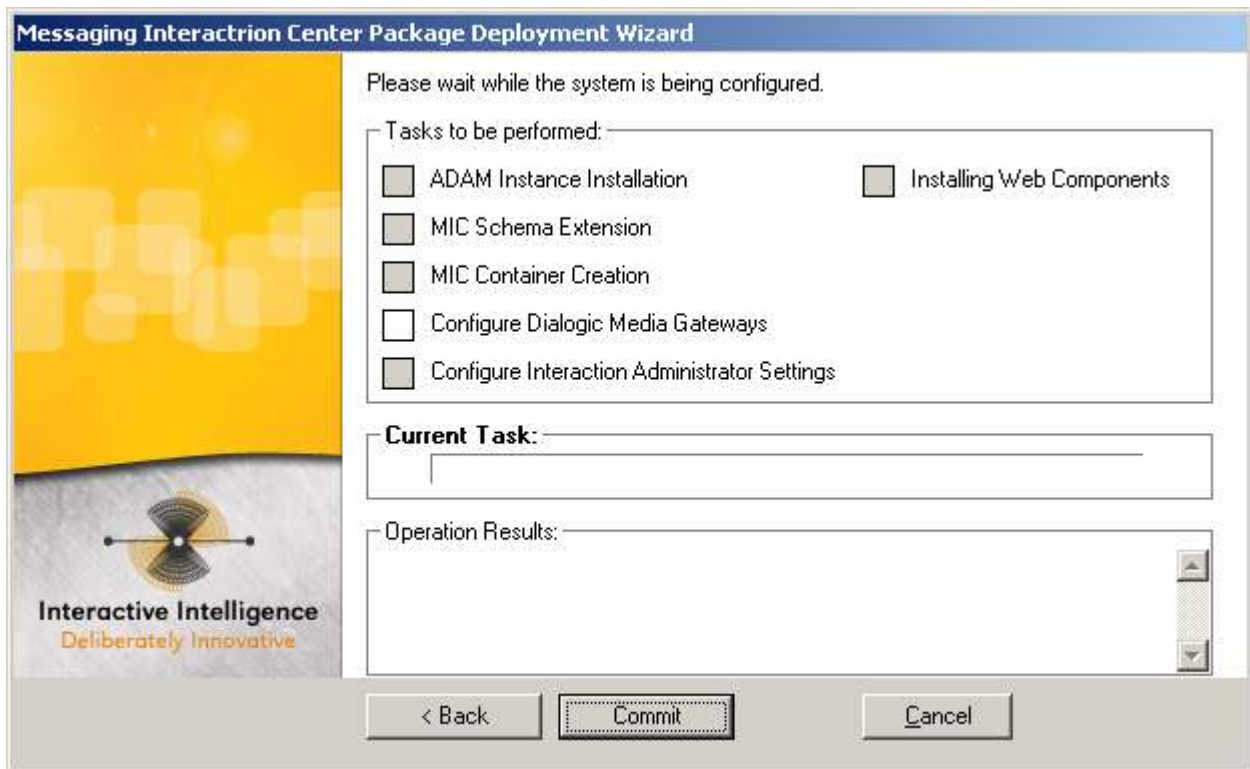
This page is used to let you specify IP information for your computer during the configuration process. The default IP address for a Dialogic Media Gateway is 10.12.13.74, which may not fall into your existing network subnet. So, the Quick Config IP for your computer will need to be something that can communicate with the IP that the gateway has today. The Final IP for your computer will be an IP that can communicate with the gateway(s) after they have been given their Final IP addresses. If DHCP will serve your computer with such an address, you can opt to use DHCP for your Final settings.



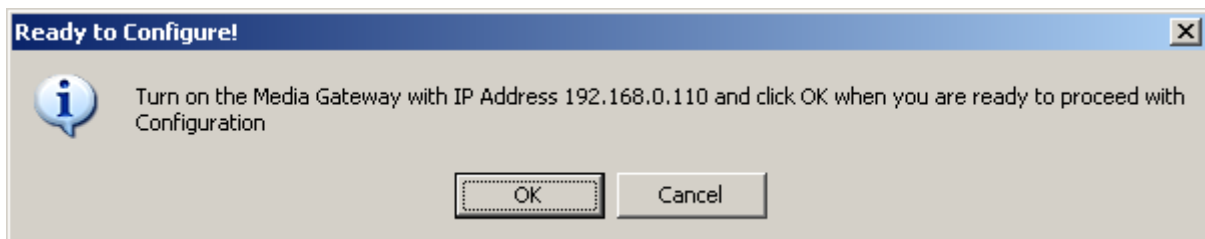
Here, you can enter the IP addresses of each MIC server that will take calls from these gateways. These IP's will be setup as End Points in the gateway configuration.



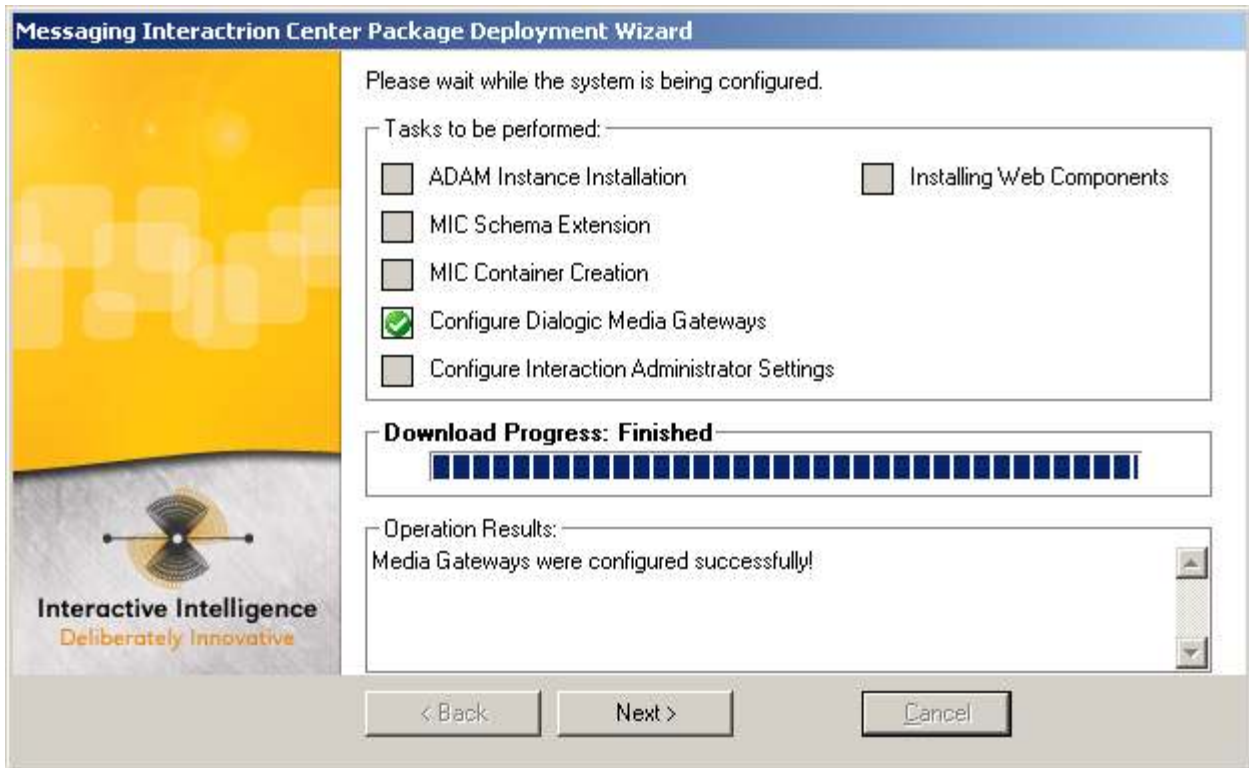
This page summarizes what the gateway is about to configure for you. Click Next if satisfied, or Back if you need to change something.



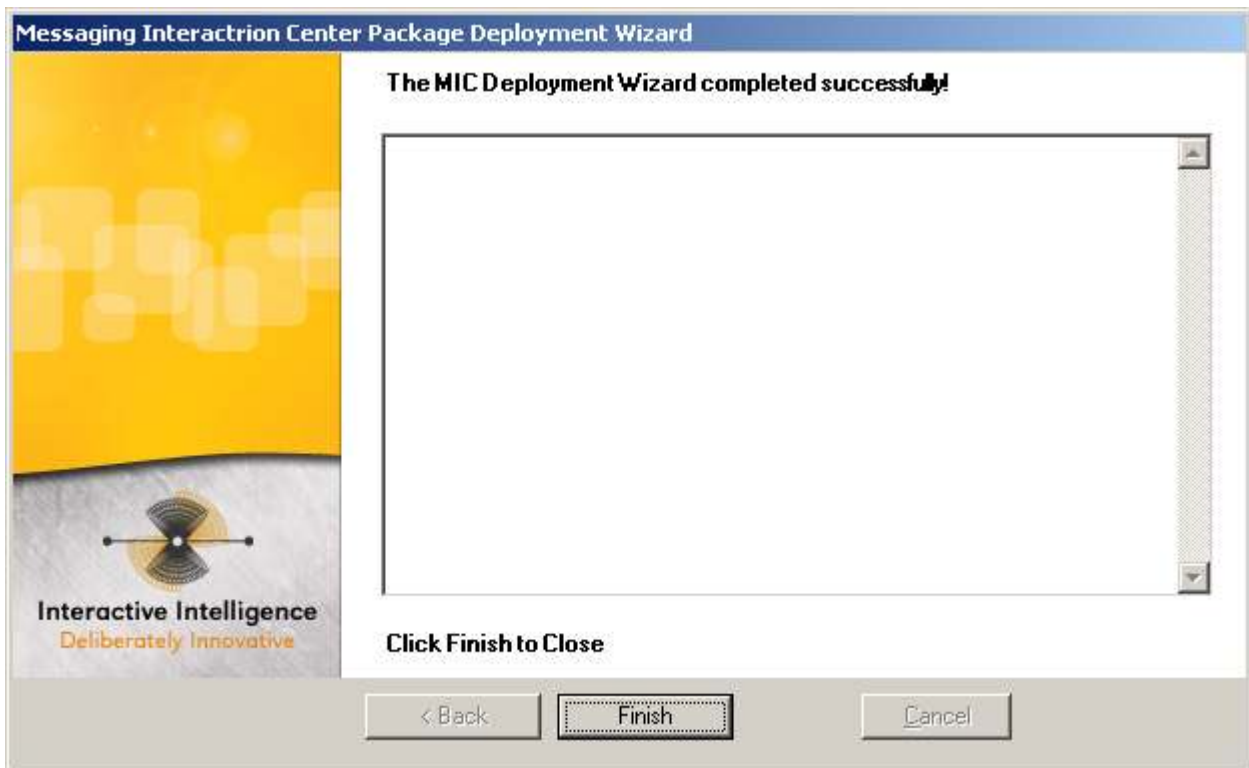
On this page, you see the various tasks that this wizard may perform. Only the white box(es) will be processed when you click Commit. Click Commit when ready to proceed.



Because the default IP of each gateway is the same, you will be prompted to bring them online one at a time during the configuration. If they already have IP's and are on the network, you can just click OK each time this box comes up. Otherwise, power up the gateway, wait about 30 seconds, then click OK.



The green check box indicates that configuration completed without any errors. Click Next.



Should there be any warning or error information, it will be displayed on this page. Click Finish to close the application.

Default Command File

As mentioned earlier, one of the files downloaded from the Web Service is a Default Command File. This is a text file that you may desire to edit at some point (note – backup your edited copy – it will be overwritten the next time you download Current Files from the Web Service).

There is a unique Command File for each device model. Although the default commands are currently the same for each gateway, separating them was required to handle any diversion in the future.

The command files are in the Firmware folder (which is created in the folder that the application executable is started from). Under the Firmware folder is a folder for each supported device. The .commands file for each device is in its respective folder.

The table below shows the current commands that are executed on all gateways (Note that the Page is the page on the xIMG Web Interface where this setting can be manually changed):

Setting	BOOTP Enabled
Value	No
5.x Firmware Page	IP
6.x Firmware Page	IP
Notes	Setting this to No speeds up the boot process
Setting	Call Connect Mode
Value	OnAnswer
5.x Firmware Page	Gateway Advanced
6.x Firmware Page	Deprecated
Notes	Call is considered connected and media is established when voice is detected or ringback tone cadence is broken on the outbound PBX call.
Setting	Send DNIS to VoIP Endpoint?
Value	Yes NOTE: For RS-232 integrated Systems, leave this as NO
5.x Firmware Page	Gateway Advanced
6.x Firmware Page	Deprecated
Notes	Sends the DNIS of inbound calls to Communité in the TO: header. This provides multi-tenancy support where the TO header is used to determine the Org, and the DIVERSION header is used to determine the user or menu.
Setting	RTP Digit Relay Mode
Value	Inband-Tone
5.x Firmware Page	Gateway Advanced
6.x Firmware Page	VoIP -> Media

We have found, especially in long haul situations, that allowing IC to detect DTMF tones is more reliable than depending on the xIMG to detect and relay in RFC2833 mode.

Notes

Setting	Signaling Digit Relay Mode
Value	Off
5.x Firmware Page	Gateway Advanced
6.x Firmware Page	VoIP -> Media

Notes Per the xIMG online help, this should be set to Off in SIP mode

Setting	Voice Activity Detection
Value	Off
5.x Firmware Page	Gateway Advanced
6.x Firmware Page	VoIP -> Media

Notes This causes choppy audio, and is not suitable for a messaging application. Should ALWAYS be Off for MIC installations.

Setting	G.711 Frame Size
Value	20
5.x Firmware Page	Gateway Advanced
6.x Firmware Page	VoIP -> Media

Notes Set this to 20 so that it matches the default setting for xIC SIP Lines.

Setting	FaxCNG Tone #6
Value	DELETE
5.x Firmware Page	Tones
6.x Firmware Page	Tone Detection

Notes Defining this tone can preempt T.38 functionality. Delete this tone definition to ensure T.38 is reliable.

Setting	Call as Domain Name?
Value	Yes
5.x Firmware Page	SIP
6.x Firmware Page	VoIP -> General

Notes Required for Host and Domain Name value to be specified in the FROM header of inbound calls.

Setting	T1 Timer (ms)
Value	100
5.x Firmware Page	SIP
6.x Firmware Page	VoIP -> General

Notes Shortening this timer allows for better handling of endpoint faults, requiring the caller to hear less ringing.

Setting	T2 Timer (ms)
----------------	----------------------

Value 200
5.x Firmware Page SIP
6.x Firmware Page VoIP -> General

Notes Shortening this timer allows for better handling of endpoint faults, requiring the caller to hear less ringing.

5.1 Syslog Setup (5.x Firmware)

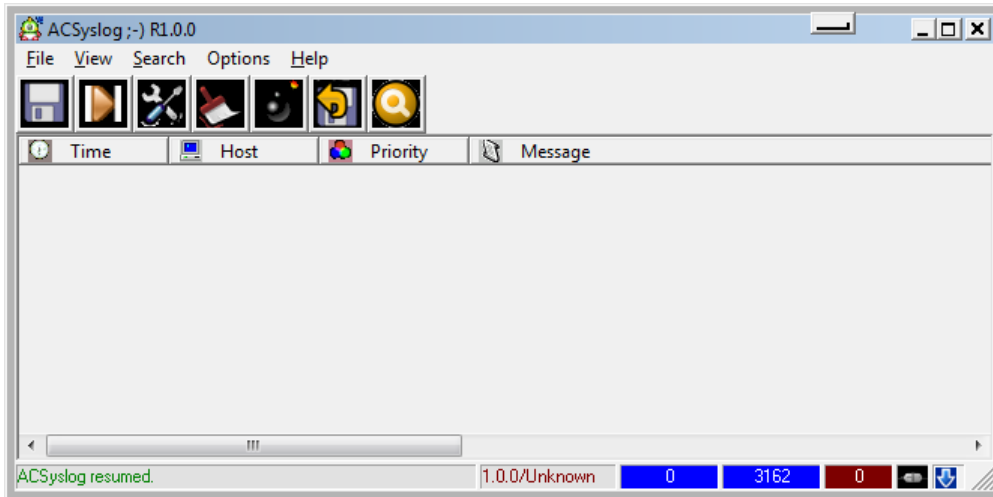
1. Log into the DMG and click Gateway from the navigation bar on the left.
2. The Gateway Advanced Tab contains the section for SysLog setup.
3. The following are the suggested settings under SysLog :
 - a. SysLog Server IP Address
 - b. Alarms to SysLog Enabled
 - c. SysLog Minimum Alarm Severity
 - d. Diagnostics Trace to SysLog Enabled
4. Set the trace masks that will be used to define what data Syslog will transmit.
 - a. Click Diagnostics
 - b. Select the Trace Capture tab
 - c. Enable the following trace mask
 - i. All tel topics on
 - ii. All teldrv topics if ISDN is being used
 - iii. All gw topics on
 - iv. All voip topics checked
 - v. All si topics checked if using SMDI for call information
 - vi. All si IP topics checked if using SMDI for call information and the DMG is NOT the Serial Master
5. Click Apply Changes.

5.2 Syslog Setup (6.x Firmware)

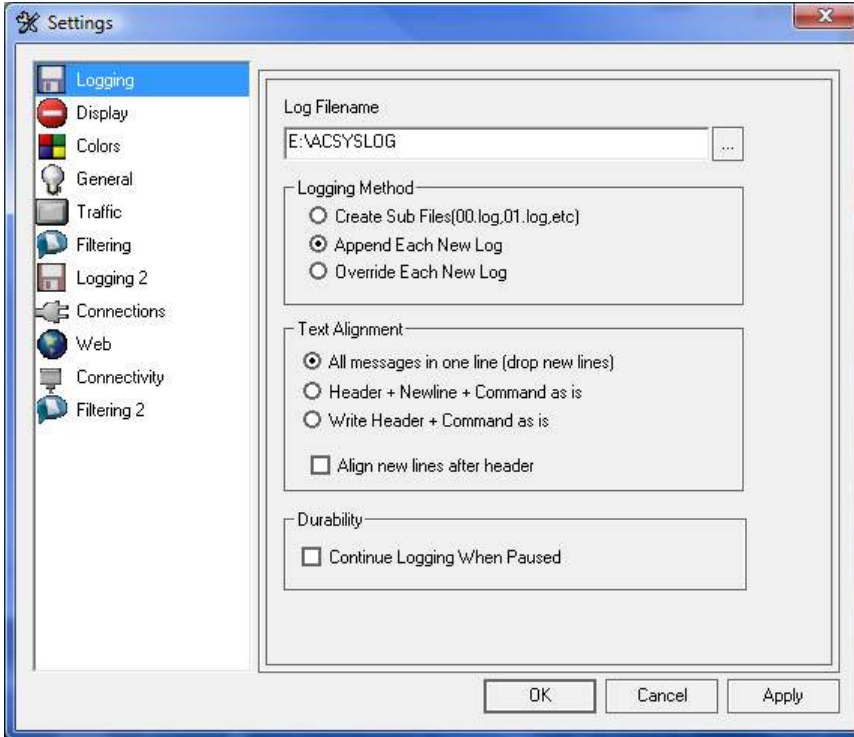
1. Log into the DMG and click MGMT Protocols from the navigation bar on the left.
2. Under the SysLog topic:
 - a. Enter the IP address of the Syslog server.
 - b. Set Alarms to Syslog Enabled to Yes.
 - c. Set the Syslog Minimum Alarm Severity to Error.
 - d. Diagnostics Trace to SysLog Enabled.
3. Set "Diagnostics Trace to Syslog Enabled" to 'Yes' and set the trace masks that will be used to define what data Syslog will transmit.
 - b. Click Diagnostics
 - c. Select the Trace Capture tab.
 - d. Enable the following trace masks:
 - i. All tel topics on
 - ii. All teldrv topics if ISDN is being used
 - iii. All gw topics on
 - iv. All voip topics checked
 - v. All Route Table topics Checked
 - vi. All si topics checked if using SMDI for call information
 - vii. All si IP topics checked if using SMDI for call information and the DMG is not the Serial Master
4. Click Submit. This requires a restart of the DMG to take effect.

6 How to use ACSyslog for DMG Tracing

1. Unzip the ACSyslog100 folder onto the desktop of the server that will be used to receive Syslog data.
2. Double Click on ACSyslog100.exe and the following window will appear

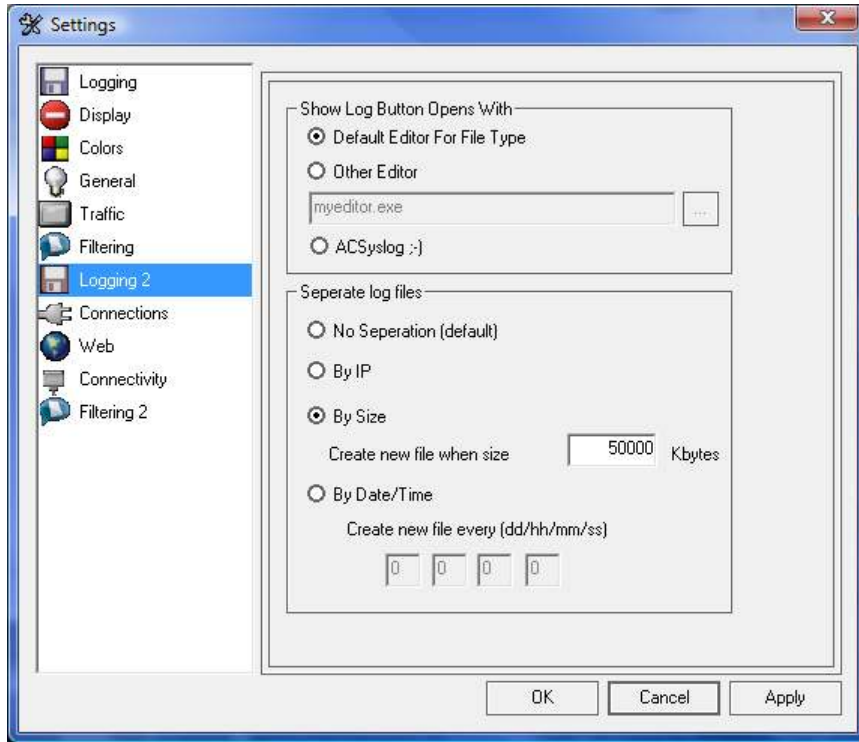


3. Choose Options from the top menu and this window will appear





4. Here one must set the path for the log that will be created.



- a. That setting resides under the first section titled Logging.
- 5. After setting the file path, ensure that the “Logging Method” is set to “Override each new log.”
- 6. Select Logging 2 from the options on the left.
 - a. The frame on the right will now show the following options.



- 7. Here choose to Separate log files by Size and enter an amount such as 524288 which is equivalent to 500 Mb.
 - a. Once that file reaches 500 Mb it will be overwritten.
 - b. That file size limit may need to be increased based upon the number of DMG’s that are in use and the load that is placed upon them. This will create one file with data from each device.
 - c. See Appendix A for other configuration choices for file logging.
- 8. Click OK.

- 9. To begin receiving data ensure that this button shows the Play symbol  and not this symbol  symbol

- 10. To start writing to your file Click this button . Once clicked it will look like this  indicating it is writing to a file.

11. Next click this button to reduce the ACSyslog to the system tray  and once clicked this icon will appear in the systray  and if clicked will reopen the ACSyslog window.

6.1 Additional Logging Options

Other logging options include and may be setup under Options -> Logging 2;

6.1.1 By IP

This will create a separate file based upon the IP address that is sending the data. The only caveat with using this method is that a file size limit cannot be implemented so the files would need to be manually deleted based upon disk space.

6.1.2 By Date/Time

This will create a new log file based upon the following format, dd/hh/mm/ss. If drive space is not an issue this could be used create a new file every so many days or other time period. The same caveat exists for this method as IP.

7 Interaction Administrator Configuration

The Dialogic Media Gateways include SIP Load Balancing and Fault Tolerance in their Firmware. So, SIP Proxies are not required.

Line Configuration:

There should be a single Inbound SIP Line created with enough sessions available to handle all licensed channels. This line should have no Proxies defined.

There should be a separate Outbound SIP Line created for each Media Gateway in the solution, with only enough sessions allowed to correspond to the number of channels available on their DMG. This line won't receive inbound calls, so the Receive Port can be set to something unique to prevent any errors from Interaction Administrator. The only Proxy defined on this line will be the Dialogic Media Gateway for which it has been configured.

When configuring the SIP Lines in IA, the following non-default items are suggested:

Max Invite Retry

2

Transport Section of SIP Line in IA

This speeds up the IC server's recognition of an unusable xIMG for outbound calls, allowing it to proceed to the next available xIMG in 1.5 seconds instead of 19.5 with the default settings.

Enable Putback

Checked

Call Putback Tab

This setting is required to prevent Attendant and Zero Out transfers from hair-pinning through the MIC server, tying up resources.

Audio Path

Always-In

Audio section of SIP Line in IA

The Dialogic Media Gateways don't respond to all Dynamic Audio requests properly. For MIC, this is not a system requirement, so it is best to leave the audio Always In.

Server Parameter Configuration:

For MWI to properly function, the UM_MessageLight handler will look for an "@" in the MWI Address specified on the MIC user through Web Admin.

If there is no @, which is most often the case, then the handler looks for a Server Parameter called 'MWIIPAddress'. This parameter needs to be created on each MIC server, and should contain the IP Address of the Media Gateway responsible for processing MWI requests (port can also be specified if not using 5060. Ex: 1.1.1.1:5061).

Please note, that for any given MIC cluster, only one Dialogic Media Gateway can act as the MWI processing device. To make changes to this will require handler customizations in UM_MessageLight.

8 PBX Integrations Tested with MIC

The following test cases were tested in the Dialogic PBX labs during an integration test that consisted of six (6) different PBX types, and eight (8) different integration methodologies.

The tested PBXs were:

- Nortel CS-1000M (Succession) (Q.SIG & Digital Set Emulation)
- Mitel 3300 (Q.SIG)
- Mitel SX-2000 (Digital Set Emulation)
- Avaya S8500 (Q.SIG & Digital Set Emulation)
- Siemens HiPath 4000 (Q.SIG)
- NEC 2000 IVS2 (Digital Station)

Test cases:

1. Leave a message for a subscriber, verify MWI goes ON)
2. Retrieve message and save/delete it, verify MWI goes (OFF)
3. Call a PBX extension, Ring No Answer, verify proper mailbox is reached when call is forwarded to Voicemail
4. Call a PBX extension, Ring No Answer, verify proper mailbox is reached. Zero out to a PBX extension. Let that call Ring No Answer. Verify that the call goes into the Originally Called Mailbox. *NEW TEST*
5. Call a PBX extension that is forwarded to another PBX extension, Ring No Answer, verify that the Originally Called Mailbox is the one that answers
6. Call an Attendant menu that transfers the call, verify IP and TDM resources released from MIC and from the Dialogic Media Gateway.

7. Call subscriber setup to use Follow Me, and verify whether Follow me call can release IP and TDM resources from MIC and the Dialogic Media Gateway
8. Call subscriber with a Forward rule setup, and verify whether Forward can release IP and TDM resources from MIC and the Dialogic Media Gateway. *NEW TEST*

Please note that these test cases were not designed to test MIC product functionality, but rather to specifically test key components of PBX integrations using the Dialogic Media Gateways.

Below are links to the Dialogic Unified Messaging Integration Notes for each integration tested, which outline the PBX requirements and configuration settings, as well any test notes from Interactive Intelligence:

Nortel CS-1000M (Succession) (T1 Q.SIG):

URL to Dialogic Integration Note (configuration settings are the same for Option 11C and Succession): <http://www.dialogic.com/support/helpweb/mg/notes/Nortel-Option11c-T1QSIG-TIMGDTI.pdf>

PBX Software Version: Release 25.40

Test Notes:

- Test case 4 not tested
- Test case 5 failed. This is an issue on the Dialogic Media Gateway. Their engineering team is aware, and will resolve in an upcoming SU.
 - **This failure causes this integration not to be recommended. However, if this feature is not employed at the customer site, there are no other issues preventing the integration from succeeding.**
- Test case 7: Call functionality was valid, but resources did not release. This is a limitation on the MIC side, whereby the original call does not specify the SIP Transfer-To header to inform the PBX that this call may have an existing call transferred to it. This feature is optional, and indicates that Follow Me calls will trombone through the MIC server. Please size your systems accordingly.
- Test case 8 not tested

Nortel CS-1000M (Succession) Digital Set Emulation (Set Type: M2616):

URL to Dialogic Integration Note (configuration settings are the same for Option 11C and Succession): <http://www.dialogic.com/support/helpweb/mg/notes/Nortel-Option11c-DNI2616-PIMG80DNI.pdf>

PBX Software Version: Release 25.40

Test Notes:

- Test case 4 not tested
- Test case 7: Call functionality was valid, but resources did not release. This is a limitation on the MIC side, whereby the original call does not specify the SIP Transfer-To header to inform the PBX that this call may have an existing call transferred to it. This feature is optional, and indicates that Follow Me calls will trombone through the MIC server. Please size your systems accordingly.

- Test case 8 not tested

Mitel 3300 Q.SIG:

URL to Integration Note: <http://www.dialogic.com/support/helpweb/mg/notes/Mitel-3300-T1QSIG-TIMGDTI.pdf>

PBX Software Version: 3300 Universal NSU - 50001270

Test Notes:

- Test case 4 not tested
- Test case 7: Call functionality was valid, but resources did not release. This is a limitation on the MIC side, whereby the original call does not specify the SIP Transfer-To header to inform the PBX that this call may have an existing call transferred to it. This feature is optional, and indicates that Follow Me calls will trombone through the MIC server. Please size your systems accordingly.
- Test case 8 not tested

Mitel SX-2000 Digital Set Emulation (Set Type: SuperSet 430):

URL to Integration Note: <http://www.dialogic.com/support/helpweb/mg/notes/Mitel-SX200-DNISS430-PIMG80MTLDNI.pdf>

PBX Software Version: Lightware 29

Test Notes:

- Test case 4 not tested
- Test case 7: Call functionality was valid, but resources did not release. This is a limitation on the MIC side, whereby the original call does not specify the SIP Transfer-To header to inform the PBX that this call may have an existing call transferred to it. This feature is optional, and indicates that Follow Me calls will trombone through the MIC server. Please size your systems accordingly.
- Test case 8 not tested

Avaya S8500 T1 Q.SIG:

URL to Integration Note: <http://www.dialogic.com/support/helpweb/mg/notes/Avaya-S8500-T1QSIG-TIMGDTI.pdf>

PBX Software Version: Comm Manager 3.0 - R013x.00.1.346.0

Test Notes:

- Test case 4 not tested
- Test case 7: Call functionality was valid, but resources did not release. This is a limitation on the MIC side, whereby the original call does not specify the SIP Transfer-To header to inform the PBX that this call may have an existing call

transferred to it. This feature is optional, and indicates that Follow Me calls will trombone through the MIC server. Please size your systems accordingly.

- Test case 8 not tested

Avaya S8500 Digital Set Emulation (Set Type: 7434ND "Numeric Display"):

URL to Integration Note (configuration settings are the same for Definity G3 and S8500):
<http://www.dialogic.com/support/helpweb/mg/notes/Avaya-DefinityG3-DNI7434-PIMG80DNI.pdf>

PBX Software Version: Comm Manager 3.0 - R013x.00.1.346.0

Test Notes:

- Test case 4 not tested
- Test case 7: Call functionality was valid, but resources did not release. This is a limitation on the MIC side, whereby the original call does not specify the SIP Transfer-To header to inform the PBX that this call may have an existing call transferred to it. This feature is optional, and indicates that Follow Me calls will trombone through the MIC server. Please size your systems accordingly.
- Test case 8 not tested

Siemens HiPath 4000 T1 Q.SIG:

URL to Integration Note: <http://www.dialogic.com/support/helpweb/mg/notes/Siemens-Hipath4000-T1QSIG-TIMGDTI.pdf>

PBX Software Version: Version 2.0 SMR9 SMP0

Test Notes:

- Test case 4 not tested
- Test case 5 failed. This is an issue on the Dialogic Media Gateway. Their engineering team is aware, and will resolve in an upcoming SU.
 - **This failure causes this integration not to be recommended. However, if this feature is not employed at the customer site, there are no other issues preventing the integration from succeeding.**
- Test case 7: Call functionality was valid, but resources did not release. This is a limitation on the MIC side, whereby the original call does not specify the SIP Transfer-To header to inform the PBX that this call may have an existing call transferred to it. This feature is optional, and indicates that Follow Me calls will trombone through the MIC server. Please size your systems accordingly.
- Test case 8 not tested

NEC 2000 IVS2 Digital Set Emulation (Set Type: DTerm III):

URL to Integration Note: <http://www.dialogic.com/support/helpweb/mg/notes/NEC-NEAX2400IPXandIMX-DNIDTERMIII-PIMG80DNI.pdf>

Test Notes:

- Test case 4 not tested
- Test case 7: Call functionality was valid, but resources did not release. This is a limitation on the MIC side, whereby the original call does not specify the SIP Transfer-To header to inform the PBX that this call may have an existing call transferred to it. This feature is optional, and indicates that Follow Me calls will trombone through the MIC server. Please size your systems accordingly.
- Test case 8 not tested

9 PBX Integration Matrix

The table below shows the different PBX integrations that have been tested for Unified Messaging either by Dialogic or Interactive Intelligence. Detailed Configuration Notes can be found at:

<http://www.dialogic.com/support/helpweb/mg/integration.htm>

Key:

- No – means this integration has not been tested
- Dialogic Verified – Dialogic has tested this integration and produced an integration note. Interactive Intelligence has not yet confirmed this functionality specifically with MIC.
- ININ Confirmed – Interactive Intelligence has confirmed this integration through tests at the Dialogic PBX labs.
- ININ Failed – after verification testing in Dialogic PBX labs, a limitation was found preventing certification of this integration.

<u>PBX Manufacturer</u>	<u>PBX Model</u>	<u>(DMG2xxx) T1 CAS</u>	<u>(DMG2xxx) Q.SIG</u>	<u>(DMG1xxx) Digital Station</u>	<u>Digital Station Type</u>	<u>Known Issues</u>
Alcatel	Omni PCX 4400	No	Dialogic Verified	No	N/A	
Avaya	G3	No	No	Dialogic Verified	7434ND "Numeric Display"	
Avaya	S8500	Dialogic Verified (InBand DTMF)	ININ Confirmed	ININ Confirmed	7434ND "Numeric Display"	
Ericsson	MD 110	No	Dialogic Verified	Dialogic Verified	Analog w/ Serial	

Mitel	SX-2000	No	No	ININ Confirmed	Super Set 430	
Mitel	3300	No	ININ Confirmed	No		
NEC	2400 IPX	No	Dialogic Verified	Dialogic Verified	DTerm III	
NEC	2400 IMX	Dialogic Verified (Serial)	No	Dialogic Verified	DTerm III	
NEC	2000 IVS2	No	No	ININ Confirmed	DTerm III	
Nortel	Meridian 1 Option 11C	No	Dialogic Verified	Dialogic Verified	M2616	Q.SIG limitation: Original Called Party not sent if station is forwarded to another station before forwarding to Voicemail
Nortel	Succession	No	ININ Failed	ININ Confirmed	M2616	
Rolm	9751	No	No	Dialogic Verified	RolmPhone 400	
Siemens	HiPath 4000	No	ININ Failed	Dialogic Verified	Analog w/ InBand DTMF	Q.SIG limitation: Original Called Party not sent if station is forwarded to another station before forwarding to Voicemail
Siemens	HiCom 300	Dialogic Verified (InBand DTMF)	No	Dialogic Verified	Optiset EAdvance+	
Toshiba	CTX	No	No	Dialogic Verified	Analog w/ Serial or Analog w/ InBand DTMF	